



# Jornadas Monetarias y Bancarias, 2007

## *La Política Monetaria ante la Incertidumbre*

4 y 5 de Junio de 2007

**Jornadas Monetarias y Bancarias**  
**La Política Monetaria ante la Incertidumbre**  
**Banco Central de la República Argentina**  
**4 y 5 de junio de 2007**

**Programa**

**1. Redrado, Martín**

Discurso de apertura

**2. Draghi, Mario**

Monetary policy and new financial instruments

**3. Ignatiev, Sergey**

The macroeconomic situation and monetary policy in Russia

**4. Reddy, Y.V.**

The growing influence of the emerging world

**5. Redrado, Martín**

La influencia creciente de los países emergentes

**6. Liikanen, Erkki**

Globalization: declining risks but increasing uncertainty?

**7. Viñals, José**

Globalization, innovation and the conduct of monetary policy

**8. Prasad, Eswar ; Rajan, Raghuram ; Subramanian, Arvind**

Foreign capital, financial development, and economic growth

**9. Stiglitz, Joseph**

Reforming the global reserve system

**10. Tracy, Joseph**

Uncertainty and monetary policy: theory and practice

**11. Heymann, Daniel**

Incetidumbre y política macroeconómica: teoría y práctica

**12. Blejer, Mario I.**

Regímenes monetarios en economías emergentes: consideraciones analíticas

**13. Curia, Eduardo L.**

Régimen monetario y banco central. “Desarrollistas”. En una “economía emergente”

**14. Corbo, Vittorio**

Transición hacia el régimen monetario chileno actual

**15. McKinnon, Ronald I.**

Changing doctrinal perspectives on central banks and post-crisis monetary policies in Argentina and Korea

**16. Buiter, Willem H.**

Monetary economics and the political economy of central banking: inflation targeting and central bank independence revisited

**17. Issing, Otmar**

Monetary aggregates in an uncertain framework

**18. Levy Yeyati, Eduardo**

Agregados bajo fuego: los costos de la popularidad

**19. Aizenman, Joshua**

Tradeoffs between monetary and financial stability: international reserves hoarding and the emerging global economic architecture

**20. Leijonhufvud, Axel**

So far from Ricardo, so close to Wicksell

**21. Sibert, Anne C.**

Financial stability and central banks: do announcements help?

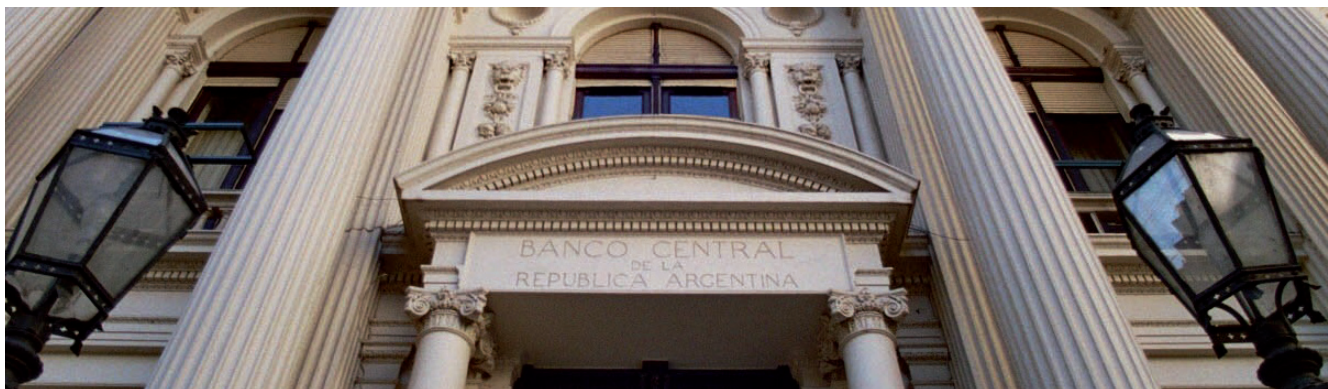
**22. Crocket, Andrew**

Forthcoming challenges for monetary policy

**23. Redrado, Martín**

Discurso de cierre

**Galería de Fotos**



## Jornadas Monetarias y Bancarias

4 y 5 de junio de 2007

“La Política Monetaria ante la Incertidumbre”



## Desafíos en los mercados financieros mundiales

8:15 - 9:00	ACREDITACIONES
9:00 - 09:30	<b>POLÍTICA MONETARIA Y NUEVOS INSTRUMENTOS FINANCIEROS</b> Mario Draghi   <i>Gobernador, Banco de Italia- Presidente, Foro de Estabilidad Financiera</i>
09:30 - 11:00	<b>LA CRECIENTE INFLUENCIA DE LOS PAÍSES EMERGENTES</b> Chair: Ernest Brown   <i>Jefe de Estudios, Santander Investment</i>
09:30 - 10:00	Sergey Ignatiev   <i>Presidente, Banco Central de Rusia</i>
10:00 - 10:30	Y. V. Reddy   <i>Gobernador, Banco de la Reserva de India</i>
10:30 - 11:00	Martín Redrado   <i>Presidente, Banco Central de la República Argentina</i>
11:00 - 11:15	Intervalo
11:15 - 12:45	<b>LAS FUERZAS SUBYACENTES EN LA ECONOMÍA GLOBAL</b> Chair: Gustavo Cañonero   <i>Jefe de Estudios, Deutsche Bank</i>
11:15 - 11:45	Nout Wellink   <i>Presidente, Banco de Holanda</i>
11:45 - 12:15	Erkki Liikanen   <i>Miembro del Consejo de Gobierno, Banco Central Europeo</i>
12:15 - 12:45	José Viñals   <i>Subgobernador, Banco de España</i>
12:45 - 15:00	RECESO PARA EL ALMUERZO
15:00 - 16:00	<b>DESARROLLO FINANCIERO Y CRECIMIENTO ECONÓMICO</b> Chair: Alberto Ades   <i>Jefe de Estudios, Citigroup</i>
	Raghuram Rajan   <i>Profesor, Universidad de Chicago</i>
16:00 - 16:30	<b>RIESGOS FINANCIEROS: LA VISIÓN DEL BIS</b> Chair: Zenón Biagosch   <i>Vicesuperintendente, Banco Central de la República Argentina</i>
	Malcolm Knight   <i>Gerente General, Banco de Pagos Internacionales</i>
16:30 - 16:45	Intervalo
16:45 - 17:45	<b>FLUJOS DE CAPITAL, ESTABILIDAD FINANCIERA Y POLÍTICA MONETARIA</b> Joseph Stiglitz   <i>Profesor, Universidad de Columbia</i>
17:45 - 19:15	<b>INCERTIDUMBRE Y POLÍTICA MONETARIA: TEORÍA Y PRÁCTICA</b> Chair: Alberto Bernal   <i>Jefe de Estudios, Bear Stearns</i>
17:45 - 18:15	Joseph Tracy   <i>Economista Jefe, Reserva Federal de Nueva York</i>
18:15 - 18:45	Daniel Heymann   <i>Economista Jefe, Comisión Económica para América Latina y el Caribe (CEPAL)</i>
18:45 - 19:15	Hernán Lacunza   <i>Jefe de Estudios, Banco Central de la República Argentina</i>

## Dilemas de los Bancos Centrales: la relación entre política monetaria, estabilidad financiera y crecimiento económico

8:15 - 9:00	ACREDITACIONES
09:00 - 10:30	<b>RÉGIMEN MONETARIO: ALTERNATIVAS PARA LOS PAÍSES EMERGENTES</b> Chair: Jorge Levy   <i>Director, Banco Central de la República Argentina</i>
09:00 - 09:30	Mario Blejer   <i>Director, Centro de Estudios sobre Banca Central del Banco de Inglaterra</i>
09:30 - 10:00	Eduardo Curia   <i>Presidente, Centro de Análisis Social y Económico</i>
10:00 - 10:30	Vittorio Corbo   <i>Gobernador, Banco Central de Chile</i>
10:30 - 10:45	Intervalo
10:45 - 11:45	<b>MODIFICANDO LAS PERSPECTIVAS DOCTRINARIAS EN BANCA CENTRAL</b> Chair: Luis Corsiglia   <i>Director, Banco Central de la República Argentina</i>
10:45 - 11:15	Ronald McKinnon   <i>Profesor, Universidad de Stanford</i>
11:15 - 11:45	Willem Buiter   <i>Profesor, Universidad de Economía y Ciencias Políticas de Londres</i>
11:45 - 12:45	<b>LOS AGREGADOS MONETARIOS EN UN MARCO INCIERTO</b> Chair: Luciano Laspina   <i>Director, Macrovisión</i>
11:45 - 12:15	Otmar Issing   <i>Ex Miembro de Directorio, Banco Central Europeo</i>
12:15 - 12:45	Eduardo Levy-Yeyati   <i>Director, Centro de Investigaciones en Finanzas de la Universidad Torcuato Di Tella</i>
12:45 - 15:00	RECESO PARA EL ALMUERZO
15:00 - 16:30	<b>TRADEOFFS ENTRE ESTABILIDAD MONETARIA Y ESTABILIDAD FINANCIERA</b> Chair: Arnab Das   <i>Jefe de Estudios, Dresdner Kleinwort</i>
15:00 - 15:30	Joshua Aizenman   <i>Profesor, Universidad de California - Santa Cruz</i>
15:30 - 16:00	Axel Leijonhufvud   <i>Profesor, Universidad de California</i>
16:00 - 16:30	Anne Sibert   <i>Profesor, Universidad de Londres</i>
16:30 - 16:45	Intervalo
16:45 - 17:45	<b>UNA ARQUITECTURA FINANCIERA PARA LA ECONOMÍA GLOBAL</b> Chair: Arturo O'Connell   <i>Director, Banco Central de la República Argentina</i>
	Richard Cooper   <i>Profesor, Universidad de Harvard</i>
17:45 - 18:45	<b>DESAFÍOS FUTUROS PARA LA POLÍTICA MONETARIA</b> Chair: Arnaldo Bocco   <i>Director, Banco Central de la República Argentina</i>
17:45 - 18:15	Andrew Crockett   <i>Presidente, JPMorgan Chase</i>
18:15 - 18:45	Martín Redrado   <i>Presidente, Banco Central de la República Argentina</i>



# Jornadas Monetarias y Bancarias, 2007

**Martín Redrado**

Discurso de apertura

4 y 5 de Junio de 2007

**JORNADAS MONETARIAS Y BANCARIAS 2007**  
**DISCURSO DE APERTURA**  
**MARTÍN REDRADO**  
**PRESIDENTE DEL BANCO CENTRAL DE LA REPÚBLICA ARGENTINA**

**EN ESTAS HORAS CELEBRAMOS SETENTA Y DOS AÑOS DE LA FUNDACIÓN DE NUESTRO BANCO CENTRAL POR LO QUE AGRADEZCO EL ACOMPAÑAMIENTO DE TODOS LOS PARTICIPANTES EN LA CONSTRUCCIÓN DE ESTA INSTITUCIÓN CLAVE PARA LOS ARGENTINOS.**

**QUIERO AGRADECER ESPECIALMENTE A AQUELLOS QUE NOS VISITAN DESDE EL EXTERIOR: A LOS BANCOS CENTRALES DE BRASIL, CHILE, URUGUAY, COLOMBIA, PERÚ, BOLIVIA, PARAGUAY, HONDURAS, A LAS AUTORIDADES MONETARIAS DE ALEMANIA, ITALIA, ESPAÑA, HOLANDA, FINLANDIA, INGLATERRA, INDIA, RUSIA, POLONIA, GRECIA, TURQUÍA, PAKISTÁN, SUDÁFRICA, INDONESIA Y ZAMBIA, A LA RESERVA FEDERAL DE LOS ESTADOS UNIDOS, AL BANCO CENTRAL EUROPEO, A ORGANISMOS MULTILATERALES COMO EL CONSEJO MONETARIO CENTROAMERICANO, FONDO LATINOAMERICANO DE RESERVAS, EL FMI, EL BANCO MUNDIAL, EL BID, NACIONES UNIDAS Y EL BANCO DE PAGOS INTERNACIONALES; A CASAS DE ALTOS ESTUDIOS DE LA TALLA DE UNIVERSIDADES COMO HARVARD, CHICAGO, COLUMBIA, UCLA, STANFORD; Y A REPRESENTANTES DEL SECTOR PRIVADO DE TODO EL MUNDO QUE NOS ACOMPAÑAN HOY AQUÍ.**

**LA TEMÁTICA PARA ESTAS JORNADAS PROCURA FOCALIZAR NUESTRA ATENCIÓN EN UN TEMA CENTRAL PARA EL ACCIONAR DE LA BANCA CENTRAL: LA CONDUCCIÓN DE POLÍTICA MONETARIA BAJO INCERTIDUMBRE.**

**LA INCERTIDUMBRE SE ENCUENTRA EN EL NÚCLEO MISMO DE LA CONDUCCIÓN DE LA POLÍTICA MONETARIA POR LO QUE LA IGNORANCIA ACERCA DE CÓMO FUNCIONA LA POLÍTICA MONETARIA DEBE FORMAR PARTE DEL DISEÑO DEL MARCO BAJO EL CUAL NUESTRAS POLÍTICAS SE DESENVUELVEN.**

**TANTO LAS FUENTES DE INCERTIDUMBRE PROPIAS DE LOS PROCESOS DE DESARROLLO DE LAS ECONOMÍAS DOMÉSTICAS COMO LA ASOCIADA A LA TRANSFORMACIÓN QUE EXPERIMENTA LA ECONOMÍA GLOBAL A PARTIR DE LA INNOVACIÓN FINANCIERA SUMADO A LA MAYOR INTEGRACIÓN DE LOS PAÍSES EMERGENTES, TIENEN EFECTOS QUE PLANTEAN UN NUEVO HORIZONTE PARA EL DISEÑO Y LA EJECUCIÓN DE LA POLÍTICA MONETARIA. HORIZONTE AL QUE PROCURAREMOS ACERCARNOS EN ESTE ESPACIO PARA LA REFLEXIÓN Y PARA EL ANÁLISIS. TAMBIÉN, POR SUPUESTO, PARA COMPARTIR EXPERIENCIAS YA QUE LA COMPLEJIDAD DE LA TEMÁTICA NOS EXIGE PONDERAR NO**



**SÓLO LA SOLIDEZ TEÓRICA DE LOS MODELOS DE DISEÑO DE POLÍTICA QUE SE UTILIZAN SINO TAMBIÉN LA FORMA PRÁCTICA EN LA QUE LOS MISMOS SON IMPLEMENTADOS.**

**EN FORMA TAL VEZ ALGO TARDÍA, LA LITERATURA HA VUELTO A PRESTAR ATENCIÓN AL HECHO OBVIO DE QUE LA INCERTIDUMBRE ES NO SÓLO UN RASGO IMPORTANTE DEL ENTORNO DE LA POLÍTICA MONETARIA, SINO SU CARACTERÍSTICA ESENCIAL.**

**PESE A LA EXISTENCIA DE ALGUNOS ANTECEDENTES IMPORTANTES COMO LOS ESTABLECIDOS POR BRAINARD EN 1967 Y CRAINE EN 1979, SÓLO RECIENTEMENTE LA REFLEXIÓN TEÓRICA SOBRE POLÍTICA MONETARIA HA COMENZADO A INCORPORAR EN FORMA SISTEMÁTICA LAS DIFICULTADES CONCRETAS QUE LOS HACEDORES DE POLÍTICA ENFRENTAMOS EN NUESTRO ACCIONAR COTIDIANO EN UN CONTEXTO INCIERTO Y CAMBIANTE.**

**DE HECHO, HASTA NO HACE MUCHO TIEMPO, EL CONSENSO EXISTENTE EN LA INVESTIGACIÓN ACADÉMICA SOBRE POLÍTICA MONETARIA –TAL COMO LO REFLEJÓ, POR EJEMPLO, LA PONENCIA DE LARS SVENSSON EN JAKCSON HOLE EN 1999- IGNORABA EN SU GRAN MAYORÍA LAS CUESTIONES ASOCIADAS AL CAMBIO ESTRUCTURAL Y LA INCERTIDUMBRE. EN DICHA LITERATURA SE ASUMÍA IMPLÍCITAMENTE QUE LOS BANCOS CENTRALES CONOCIAMOS EL VERDADERO MODELO DE FUNCIONAMIENTO DE LA ECONOMÍA, QUE ERAMOS CAPACES DE OBSERVAR CORRECTAMENTE TODAS LAS VARIABLES RELEVANTES Y QUE CONOCIAMOS CON PRECISIÓN LA NATURALEZA Y LAS FUENTES DE LOS DIFERENTES IMPULSOS ALEATORIOS QUE AFECTABAN AL SISTEMA ECONÓMICO.**

**LA ÚNICA “INCERTIDUMBRE” REMANENTE EN ESTA CONCEPTUALIZACIÓN ERA, EN REALIDAD, EL VALOR EFECTIVO DE ESAS PERTURBACIONES ESTOCÁSTICAS. PUESTO EN TÉRMINOS DE LA DISTINCIÓN KNIGHTIANA ENTRE RIESGO E INCERTIDUMBRE SE TRATABA, A LO SUMO, DE UNA SITUACIÓN DE RIESGO EN LA QUE LOS HACEDORES DE POLÍTICA PARECÍAN CONOCER LA DISTRIBUCIÓN ALEATORIA QUE GENERABA LAS DIFERENTES CONTINGENCIAS Y SER CAPACES DE CUANTIFICAR LAS PROBABILIDADES DE OCURRENCIA DE LOS DISTINTOS EVENTOS CONCEBIBLES, PRESUPONIENDO, EN ÚLTIMA INSTANCIA, QUE EL FUTURO REPLICARÍA AL PASADO. SIN EMBARGO, ES EVIDENTE QUE LA SITUACIÓN REAL QUE CONFRONTAMOS LOS BANCOS CENTRALES ES, EN MUCHOS CASOS, DE NATURALEZA BIEN DIFERENTE: MUCHOS RIESGOS SON ESENCIALMENTE NO CUANTIFICABLES EN LA MEDIDA EN QUE EN VARIAS CIRCUNSTANCIAS SE DESCONOCE NO SÓLO LA PROBABILIDAD DE CADA EVENTO INDIVIDUAL SINO, INCLUSO, EL RANGO COMPLETO DE CONTINGENCIAS CONCEBIBLES.**

**EN SUMA, LA PRESENCIA DE INCERTIDUMBRE HACE QUE LA CONDUCCIÓN DE LA POLÍTICA MONETARIA SEA UNA LABOR SUMAMENTE ARDUA, AUN EN ECONOMÍAS CONSOLIDADAS. EN ECONOMÍAS EMERGENTES -DONDE LAS INSTITUCIONES TODAVÍA ESTÁN EN PROCESO DE CONSTRUCCIÓN- LA LABOR DEL BANQUERO CENTRAL PRESENTA MÁS DIFICULTADES: EL PODER DE LOS INSTRUMENTOS ES LIMITADO Y LOS LÍMITES ENTRE LAS SITUACIONES QUE REPRESENTAN EXTERNALIDADES Y AQUELLAS QUE SON PARTE DE LAS TURBULENCIAS NORMALES DE UN MERCADO DINÁMICO SON POCO CLAROS. Y ESPECIALMENTE EN AQUELLOS PAÍSES QUE HAN TENIDO TIPO DE CAMBIO FIJO POR DÉCADAS Y, POR DIVERSAS RAZONES (DOMINANCIA FISCAL, FINANCIERA O EXTERNA), HAN SUFRIDO INESTABILIDAD MACROECONÓMICA SIGNADA POR LA SUSTITUCIÓN DE MONEDAS Y LA DOLARIZACIÓN DE PASIVOS QUE HAN DIFICULTADO LA INSTRUMENTACIÓN DE LA POLÍTICA.**

**LA INCERTIDUMBRE ACERCA DE CÓMO REALMENTE FUNCIONA LA ECONOMÍA Y DE CUÁL ES EL VERDADERO VALOR DE LOS PARÁMETROS EN CONJUNCIÓN CON LA CALIDAD Y OPORTUNIDAD DE LOS DATOS (Y CONSECUENTEMENTE DE LA ROBUSTEZ DE LAS ESTIMACIONES) REPRESENTA UNA LIMITACIÓN FUNDAMENTAL Y NO SÓLO AQUEJA AL BANCO CENTRAL SINO TAMBIÉN AL SECTOR PRIVADO. HAY ENORME INCERTIDUMBRE CON RESPECTO A LA EVOLUCIÓN DE LAS PRINCIPALES LAS VARIABLES DOMÉSTICAS, FUNDAMENTALMENTE EN RELACIÓN A LA DINÁMICA DE LOS PRECIOS RELATIVOS (TANTO DE BIENES COMO DE FACTORES) Y DE LOS DISTINTOS SECTORES DE LA ECONOMÍA.**

**MÀS AÙN, DEBE SEÑALARSE QUE OTRA RESTRICCIÓN NO MENOR ESTÁ DADA POR LA DIFICULTAD PARA IDENTIFICAR LA NATURALEZA DE LOS SHOCKS, ESPECIALMENTE AQUELLOS QUE SE TRASMITEN DEL EXTERIOR.**

**HOY EL MUNDO CONTINÚA TRANSITANDO UN SENDERO DE SOSTENIDA EXPANSIÓN EN UN CONTEXTO DE ESTABILIDAD. ESTE PATRÓN DE CRECIMIENTO SE MUESTRA INCLUSO MÁS SALUDABLE QUE EL DE AÑOS ATRÁS AL ESTAR MEJOR BALANCEADO CON EL RELATIVO DEBILITAMIENTO DE ESTADOS UNIDOS Y EL BUEN DESEMPEÑO DE LA ZONA EURO Y LAS ECONOMÍAS DE ASIA EMERGENTE Y AMÉRICA LATINA.**

**EL CONTEXTO INTERNACIONAL NOS OFRECE UNA EXTRAORDINARIA LIQUIDEZ CON TASAS DE INTERÉS QUE CONTINÚAN EN NIVELES HISTÓRICAMENTE BAJOS.**

**LA AVERSIÓN AL RIESGO SE ENCUENTRA EN NIVELES MÍNIMOS PARA CUALQUIER ESTÁNDAR (EL ÍNDICE VIX –VOLATILIDAD IMPLÍCITA EN OPCIONES DE DEL S&P 500- PROXY DE LA ACTITUD DE LOS INVERSORES FRENTE AL RIESGO, POR EJEMPLO). LO MISMO SUCEDE CON LA PRIMA POR PLAZO. TODOS LOS INDICADORES MUESTRAN UN EXCESO DE AHORRO CON RELACIÓN A LA DEMANDA DE CAPITAL EN UN MUNDO SEDIENTO DE OPORTUNIDADES DE INVERSIÓN ATRACTIVAS.**

**PARA ELLO, MUCHO TAMBIÉN HA CONTRIBUIDO LA CONTINUA INNOVACIÓN FINANCIERA QUE DEFINITIVAMENTE ESTÁ CAMBIANDO EL PROCESO TRADICIONAL DE INTERMEDIACIÓN. LA EMISIÓN DE CRÉDITOS ESTRUCTURADOS Y SUS DERIVADOS (CREDIT DEFAULT SWAPS) SUPERA YA EL UNDERWRITING DE BONOS Y ACCIONES. EN ESTE ESCENARIO, TOMAN MAYOR PONDERACIÓN AQUELLOS PARTICIPANTES CON UN ALTO GRADO DE APALANCAMIENTO EN PARTICULAR, DE HEDGE FUNDS, COMO FUENTE DE LIQUIDEZ.**

**LA RAPIDEZ EN LA INTRODUCCIÓN DE NOVEDOSOS PRODUCTOS Y LA PROFUNDIZACIÓN DE LAS COLOCACIONES *CROSS BORDER* PERMITEN UNA MAYOR OFERTA DE FONDOS ANTE LA INCORPORACIÓN DE UN NUEVO UNIVERSO DE INVERSORES A LOS MERCADOS FINANCIEROS, POSIBILITANDO UNA MAYOR DIVERSIFICACIÓN Y UNA MAYOR DIFUSIÓN DEL RIESGO ENTRE LOS TENEDORES DE ACTIVOS. ESTA TRANSFERENCIA DE RIESGO DISMINUYE LA VULNERABILIDAD DEL SISTEMA FINANCIERO Y FORTALECE SU CAPACIDAD PARA AMORTIGUAR SHOCKS.**

**ASIMISMO, EL DEBILITAMIENTO EN EL *HOME BIAS* EN LAS CARTERAS DE INVERSIONES Y LA PROLIFERACIÓN DE ESTRATEGIAS COMO EL *CARRY TRADE* HAN INFLUIDO EN LA REDUCCIÓN DE RIESGO EN LOS ACTIVOS DE RENTA FIJA EN LOS PAÍSES EMERGENTES.**

**EN ESTE CONTEXTO, LATINOAMÉRICA MUESTRA LA EXPANSIÓN MÁS VIGOROSA DE LOS ÚLTIMOS TREINTA AÑOS A PARTIR DE UN MEJOR MANEJO MACROECONÓMICO QUE INCLUYE LA DISCIPLINA FISCAL, LA SUSTENTABILIDAD EXTERNA, LA ADOPCIÓN DE TIPOS DE CAMBIO FLEXIBLES Y POLÍTICAS MONETARIAS CONSISTENTES. ESTO HA CONTRIBUIDO SENSIBLEMENTE PARA MEJORAR LA POSICIÓN FINANCIERA DE LA REGIÓN, CON SU CORRELATO EN MENORES SPREADS.**

**NO OBSTANTE, LA EXPLICACIÓN DE LOS AJUSTADOS SPREADS QUE VEMOS HOY DÍA A MI JUICIO VA MÁS ALLÁ DE LOS CAMBIOS EN EL MERCADO PRODUCTO DE LA INNOVACIÓN FINANCIERA O DE LOS BUENOS FUNDAMENTALS QUE MUESTRAN LOS PAÍSES EMERGENTES EN GENERAL.**

**MI VISIÓN ES QUE MUCHAS DE LAS CAUSAS HAY QUE BUSCARLAS EN EL PAULATINO AJUSTE DE LOS DESEQUILIBRIOS GLOBALES. CIERTO DETERIORO EN LA PRODUCTIVIDAD DE LA ECONOMÍA NORTEAMERICANA TIENE ASOCIADO UNA EXPECTATIVA DE DEPRECIACIÓN DEL DÓLAR QUE LLEVA A LOS INVERSORES A LA BÚSQUEDA DE ACTIVOS DENOMINADOS EN OTRAS MONEDAS. ESTO SE REFLEJA EN UN FUERTE ATRACTIVO HACIA ACTIVOS DE ECONOMÍAS EN DESARROLLO (PRINCIPALMENTE DE ASIA PERO TAMBIÉN DE AMÉRICA LATINA) Y, CONSECUENTEMENTE, EN MENORES SPREADS, MERCADOS BURSÁTILES TOCANDO MÁXIMOS: EN DEFINITIVA, REDUNDA EN MAYORES POSIBILIDADES DE FINANCIAMIENTO PARA TODO EL ARCO EMERGENTE.**

**ESTE PROCESO -QUE TIENE LUGAR EN FORMA GRADUAL- Y AL QUE SE LE SUMA EL MOVIMIENTO HACIA UNA CARTERA DE ACTIVOS MÁS DIVERSIFICADA POR PARTE DE LOS BANCOS CENTRALES, BRINDA INMENSAS OPORTUNIDADES PERO TAMBIÉN PLANTEA GRANDES DESAFÍOS PARA NUESTROS PAÍSES.**

**POR UN LADO, SE REFLEJA EN UN INFLUJO DE CAPITALES DEL EXTERIOR QUE GENERA DIVERSOS EFECTOS SOBRE LAS ECONOMÍAS:**

- 1) NUESTRA REGIÓN, A PESAR DE SUS RECIENTES LOGROS, SIGUE SIENDO MUY SENSIBLE A LOS MOVIMIENTOS EN EL CRECIMIENTO GLOBAL, A LAS FLUCTUACIONES EN LOS PRECIOS DE LAS MATERIAS PRIMAS Y A LOS CAMBIOS SÚBITOS (POR MÍNIMOS QUE SEAN) EN LAS CONDICIONES FINANCIERAS INTERNACIONALES. POR LO TANTO, LO QUE EN LOS PAÍSES DESARROLLADOS ES UNA "CORRECCIÓN", EN LOS PAÍSES DE LA REGIÓN –DONDE ADEMÁS LAS POSIBILIDADES DE CONTAGIO SON MAYORES- PUEDE SER UNA CRISIS.**
- 2) POR OTRA PARTE, NUESTRAS PARIDADES CAMBIARIAS TIENDEN A SOBRE-RREACCIONAR PUDIENDO AFECTAR ESTO AL SECTOR PRODUCTIVO Y AL SISTEMA FINANCIERO AFECTANDO LA ESTABILIDAD.**
- 3) POR LA NATURALEZA PROPIA DEL PROCESO, RESULTA DIFÍCIL DETERMINAR EX ANTE EL CARÁCTER PERMANENTE O TRANSITORIO A LOS EFECTOS DE TOMAR DECISIONES DE POLÍTICA EN FORMA ACORDE. RAJAN Y SUBRAMANIAN (2006) HAN DESTACADO LA DIFERENCIA DE TRATAMIENTO SI LA TENDENCIA OBEDECE A CAUSAS PERMANENTES O TRANSITORIAS. EN REALIDAD, ESTE DILEMA NO ES NUEVO YA QUE FUE DISCUTIDO POR KEYNES Y OHLIN DURANTE LOS AÑOS '30, AL ANALIZAR LA PROBLEMÁTICA DE LAS INDEMNIZACIONES EN LA ALEMANIA DE**

**LA PRIMERA POSGUERRA (CONOCIDO COMO "EL PROBLEMA DE LA TRANSFERENCIA"). MI VISIÓN ES QUE ES PREFERIBLE CONSIDERAR TODO SHOCK POSITIVO COMO TEMPORARIO.**

**4) TAMBIÉN ES IMPORTANTE RECONOCER QUE, DEPENDIENDO DEL GRADO DE DESARROLLO DE LOS PAÍSES EMERGENTES (PROFUNDIDAD Y RECURRENCIA QUE HAN TENIDO LAS CRISIS EN EL PASADO, TIMING CON RESPECTO A LA SALIDA DE LA CRISIS, NIVEL DE NORMALIZACIÓN DE LA ECONOMÍA, DESARROLLO INSTITUCIONAL, ETC), NI NUESTROS MERCADOS FINANCIEROS NI NUESTRAS MONEDAS MUCHAS VECES ESTÁN PREPARADOS PARA CANALIZAR TALES FLUJOS DE CAPITAL (Y SU VOLATILIDAD INHERENTE). LOS SISTEMAS FINANCIEROS SON AÚN PEQUEÑOS, LOS MERCADOS DE DEUDA EN MONEDA LOCAL TODAVÍA SON INCIPIENTES Y LOS MERCADOS SECUNDARIOS NO TIENEN SUFICIENTE LIQUIDEZ. DE HECHO, PRASAN, RAJAN Y SUBRAMANIAN (2006) CONCLUYEN QUE, EN CONTRASTE CON LAS PREDICCIONES DE LOS MODELOS ESTÁNDAR USUALMENTE CALIBRADOS PARA PAÍSES DESARROLLADOS, LOS PAÍSES EMERGENTES QUE APOSTARON AL AHORRO EXTERNO NO HAN CRECIDO MÁS RÁPIDO EN EL LARGO PLAZO, ATRIBUYENDO LA DIFERENCIA A LA INCAPACIDAD DE LOS SISTEMAS FINANCIEROS LOCALES PARA ASIGNAR PRODUCTIVAMENTE LOS FONDOS EXTERNOS.**

**5) FINALMENTE, "BÚSQUEDA DE OTRAS MONEDAS" INTRODUCE "VOLATILIDAD IMPORTADA" QUE DISTORSIONA LAS SEÑALES DE PRECIOS RELATIVOS PARA LAS DECISIONES DE CONSUMO, AHORRO E INVERSIÓN EN NUESTRAS ECONOMÍAS. ECONOMÍAS PEQUEÑAS QUE DE POR SÍ TIENEN FUENTES DE INESTABILIDAD PROPIAS Y DONDE ES DIFÍCIL CONOCER EL NIVEL DE EQUILIBRIO DE LAS VARIABLES REALES.**

**EN ESTE CONTEXTO, VEMOS QUE TODOS LOS PAÍSES EMERGENTES (EN MAYOR O MENOR MEDIDA DE ACUERDO A SUS NECESIDADES), ESTÁN TOMANDO PRECAUCIONES. ALGUNOS DE ELLOS HAN PUESTO CONTROLES AL INGRESO DE CAPITAL OTROS, EN CAMBIO, PROCURAMOS MORIGERAR LA VOLATILIDAD CAMBIARIA, ACUMULANDO RESERVAS INTERNACIONALES EN UN MOMENTO EN EL QUE NUESTRA SITUACIÓN PATRIMONIAL NOS LO PERMITE. EN EL CASO DE CHILE O MÉXICO, APROVECHANDO PARA ACUMULAR RECURSOS FISCALES A TRAVÉS DE LAS OPERACIONES CON LAS EMPRESAS EXPORTADORAS ESTATALES Y LA TESORERÍA.**

**PARA UNA ECONOMÍA EN TRANSICIÓN HACIA SU VELOCIDAD CRUCERO DE LARGO PLAZO, UN SISTEMA DE FLOTACIÓN ADMINISTRADA SURGE**

**COMO UNA HERRAMIENTA ÚTIL PARA MODERAR ESTOS EFECTOS AL TIEMPO QUE SE AVANZA EN EL DESARROLLO DE LA INFRAESTRUCTURA FINANCIERA QUE PERMITA APROVECHAR AL MÁXIMO ESTE ESCENARIO (CREAR CONDICIONES PARA QUE LOS RECURSOS SE CANALICEN EN FORMA EFICIENTE HACIA EL FINANCIAMIENTO DE PROYECTOS DE INVERSIÓN QUE LO MEREZCAN) Y, A SU VEZ, DARLE PODER A LOS INSTRUMENTOS TRADICIONALES DE POLÍTICA MONETARIA.**

**SI BIEN TUVIMOS ALGUNAS TURBULENCIAS UN AÑO ATRÁS (E INCLUSO UN PAR DE MESES ATRÁS) CON EFECTOS POCO SIGNIFICATIVOS, ESTE PROCESO DE AJUSTE HACIA EL EQUILIBRIO AÚN NO FUE SEVERAMENTE TESTEADO. ESTO NOS EXIGE APLICAR POLÍTICAS QUE SÓLIDAS Y CONSISTENTES QUE CONSTITUYAN UNA PROTECCIÓN INTEGRAL PARA NUESTRAS ECONOMÍAS FRENTE A LAS TURBULENCIAS EXTERNAS.**

**EN EL CASO DE NUESTRO PAÍS, ESTO IMPLICA POR EJEMPLO DARLE UNA SUSTENTABILIDAD DE LARGO PLAZO A LA POLÍTICA MONETARIA Y FINANCIERA A PARTIR DE CUATRO PILARES CENTRALES: UNA POLÍTICA MONETARIA CONSISTENTE QUE GARANTICE EL EQUILIBRIO EN EL MERCADO MONETARIO, UN ENFOQUE PRUDENCIAL ANTICÍCLICO, UN SISTEMA INDEPENDIENTE DE LAS NECESIDADES FINANCIERAS DEL SECTOR PÚBLICO, Y UN MARCO NORMATIVO QUE IMPULSA EL CRÉDITO A LAS EMPRESAS Y FAMILIAS.**

**EL PRIMERO DE ELLOS ESTÁ DETERMINADO EN GRAN MEDIDA POR NUESTRA HISTORIA RECIENTE: LOS ESQUEMAS MONETARIOS EN ARGENTINA HAN PASADO, SIN ÉXITO, DE UN EXTREMO A OTRO. MIENTRAS QUE EN LOS AÑOS 80 LA OFERTA DE DINERO CRECÍA DESCONTROLADAMENTE AL RITMO DE LA MONETIZACIÓN DEL DÉFICIT FISCAL, EN LA ÚLTIMA DÉCADA, LA RIGIDEZ DE LA CONVERTIBILIDAD NO GUARDABA CONSISTENCIA CON EL NIVEL DE FLEXIBILIDAD DE LA ECONOMÍA NI CON EL COMPORTAMIENTO FINANCIERO QUE EXHIBÍA EL FISCO. LO RELEVANTE NO ERA LA ETIQUETA DEL RÉGIMEN, SINO LA CONSISTENCIA INTERNA DE SUS POLÍTICAS.**

**EN UNA ECONOMÍA DONDE LAS VARIABLES MACROECONÓMICAS ESTÁN BUSCANDO SU SENDERO DE EQUILIBRIO DE LARGO PLAZO Y LOS MECANISMOS DE TRANSMISIÓN A TRAVÉS DEL CRÉDITO SON TODAVÍA ACOTADOS, LA POLÍTICA MONETARIA ACTUAL NOS PERMITE MANTENER UN ESTRICTO Y CONTINUO EQUILIBRIO EN EL MERCADO DE DINERO.**

**A FIN DE PRESERVAR ESTE EQUILIBRIO, EL BANCO CENTRAL LLEVA ADELANTE UNA PROFUNDA ABSORCIÓN MONETARIA QUE ACOMPAÑA LA COMPRA DE DIVISAS CON MOTIVOS PRUDENCIALES. DE ESTA FORMA, DESDE 2005 SE HAN ABSORBIDO ALREDEDOR DE \$80.000 MILLONES DE PESOS. ESTA ESTRATEGIA SE VIENE INSTRUMENTANDO MEDIANTE**

**DIVERSOS MECANISMOS QUE COMPRENDEN LA EMISIÓN DE LETRAS Y NOTAS, LA CONCERTACIÓN DE OPERACIONES DE PASE, EL COBRO DE ASISTENCIAS POR ILIQUIDEZ OTORGADAS A LOS BANCOS DURANTE LA CRISIS Y LA POLÍTICA DE ENCAJES.**

**POR EJEMPLO, TOMEMOS LOS REDESCUENTOS -QUE HISTÓRICAMENTE HAN REPRESENTADO UN ACTIVO CON ALTO RIESGO DE RECUPERO PARA EL BANCO CENTRAL-. LAS CANCELACIONES DE LOS BANCOS A PARTIR DE LOS INCENTIVOS PROVISTOS POR LA AUTORIDAD MONETARIA, TANTO MEDIANTE EL PAGO DE LAS CUOTAS MENSUALES DEL ESQUEMA DE MATCHING COMO MEDIANTE PAGOS ANTICIPADOS, HAN ACTUADO CON UN EXTRAORDINARIO MECANISMO DE ABSORCIÓN MONETARIA EN LOS ÚLTIMOS AÑOS.**

**POR SU PARTE, A TRAVÉS DE LAS LICITACIONES SEMANALES DE LETRAS Y NOTAS, DESDE 2005 HEMOS ESTERILIZADO ALREDEDOR DE \$32.000 MILLONES, INCREMENTANDO TANTO LA VARIEDAD DE INSTRUMENTOS COMO LOS PLAZOS PROMEDIO DE LA CARTERA.**

**ASIMISMO, ESTAMOS DESARROLLANDO EL MERCADO DE PASES, A FIN DE DISPONER DE UN MERCADO CUYA TASA DE INTERÉS SE CONVIERTA EN UNA EFICAZ HERRAMIENTA DE POLÍTICA MONETARIA, AMPLIANDO LA MODALIDAD DE OPERACIONES HABILITADAS CON EL OBJETO DE CONTRIBUIR A HACER MÁS EFICIENTE LA GESTIÓN DE LA LIQUIDEZ DE LOS BANCOS.**

**EN SÍNTESIS, LA POLÍTICA MONETARIA ADOPTADA POR EL BANCO CENTRAL HA PERMITIDO MANTENER BAJO CONTROL EL CRECIMIENTO DE LOS MEDIOS DE PAGO DENTRO DE LAS METAS AUTOIMPUESTAS AÑO TRAS AÑO. DE ESTA FORMA, EL CRECIMIENTO DE LOS MEDIOS DE PAGO, CONSIGUIÓ POR PRIMERA VEZ DESDE LA SALIDA DE LA CRISIS UBICARSE POR DEBAJO DEL AUMENTO DEL PIB NOMINAL REFLEJANDO EL SESGO PRUDENCIAL DE NUESTRO ENFOQUE.**

**LA INCERTIDUMBRE SOBRE LA POTENCIA QUE PUDIERAN TENER LOS MECANISMOS DE TRANSMISIÓN EXIGE QUE EL SESGO PRUDENCIAL DE LA POLÍTICA MONETARIA SEA GRADUAL PERO PERSISTENTE. DE ESTA MANERA -Y ENTENDIENDO QUE LA MANIFESTACIÓN DEL FENÓMENO INFLACIONARIO ACTUAL ES MULTICAUSAL Y QUE SE DERIVA DE UNA ECONOMÍA EN TRANSICIÓN QUE HA SUFRIDO UNA CRISIS ECONÓMICA SIN PRECEDENTES, CON CAMBIOS ESTRUCTURALES FENOMENALES (INCLUYENDO LA DESTRUCCIÓN DEL SISTEMA FINANCIERO Y DE MUCHAS DE LAS INSTITUCIONES ECONÓMICAS) Y DONDE LOS CANALES DE TRANSMISIÓN DE LA POLÍTICA MONETARIA RECIÉN SE ESTÁN RECONSTRUYENDO- LA PRUDENCIA Y EL GRADUALISMO CONTRIBUYEN**

**POSITIVAMENTE PARA ALCANZAR LA ESTABILIDAD EN TÉRMINOS INTERTEMORALES.**

**POR OTRA PARTE, Y AL IGUAL QUE LO VIENEN HACIENDO LA MAYORÍA DE LOS PAÍSES EMERGENTES, EL BANCO CENTRAL CONTINÚA IMPLEMENTANDO UNA POLÍTICA PRUDENCIAL DE ACUMULACIÓN DE RESERVAS INTERNACIONALES. EL NIVEL ACTUAL DE MÁS DE 40.000 MILLONES DE DÓLARES CONSTITUYE UN MÁXIMO HISTÓRICO Y MÁS QUE TRIPLICA EL MÍNIMO REGISTRADO A PRINCIPIOS DE 2003. DE ESTA FORMA, GENERAMOS UN VERDADERO SEGURO ANTICRISIS QUE PERMITE REDUCIR LA VULNERABILIDAD EXTERNA, DAR CERTIDUMBRE A LA INVERSIÓN PÚBLICA Y PRIVADA Y DESARROLLAR UN MERCADO DE CAPITALES DOMÉSTICO EN PESOS, ACTUANDO COMO GARANTÍA PARA EL EQUILIBRIO MACROECONÓMICO.**

**LAS RESERVAS INTERNACIONALES CONSTITUYEN EL RESPALDO IMPRESCINDIBLE DE LA POLÍTICA MONETARIA Y FINANCIERA QUE LLEVA A CABO EL BANCO CENTRAL. ELLO IMPLICA QUE CONSTITUYEN TAMBIÉN EL SOPORTE DE LAS OPERACIONES DE REGULACIÓN MONETARIA QUE REALIZAMOS PARA MANTENER BAJO ESTRICTO CONTROL EL EQUILIBRIO ENTRE OFERTA Y DEMANDA EN EL MERCADO MONETARIO.**

**AL CONTAR CON UN STOCK CRECIENTE DE DIVISAS, LAS EXIGENCIAS PARA UNA ADECUADA ADMINISTRACIÓN SON MAYORES. ASÍ, DURANTE EL AÑO 2006 Y LO QUE VA DE 2007 OBTUVIMOS UN RESULTADO POR LA INVERSIÓN DE SUS RESERVAS INTERNACIONALES QUE FUE EL MÁS ALTO DESDE LA SALIDA DE LA CRISIS Y QUE RONDA EL 6,5% ANUAL.**

**UN TERCER ELEMENTO QUE LA SOCIEDAD RECLAMA COMO POLÍTICA DE ESTADO ESTÁ VINCULADO A LA EXPOSICIÓN DEL SISTEMA MONETARIO-FINANCIERO AL SECTOR PÚBLICO. EN ESTE ASPECTO, ESTAMOS AVANZANDO EN MINIMIZAR LA PROBABILIDAD DE QUE EL SISTEMA FINANCIERO SE VUELVA UNA FUENTE DE INESTABILIDAD, REDUCIENDO LOS DESCALCES DE MONEDA, REDUCIENDO LA EXPOSICIÓN AL SECTOR PÚBLICO Y MEJORANDO LA SOLVENCIA.**

**EN EL PASADO EL BANCO CENTRAL Y EL SISTEMA FINANCIERO TERMINARON SIENDO MEROS INSTRUMENTOS DE UNA POLÍTICA MACROECONÓMICA INSOSTENIBLE. EN LOS AÑOS 80 EL BANCO CENTRAL BRINDABA ASISTENCIA INDISCRIMINADA AL TESORO Y AL SISTEMA FINANCIERO EN EL MARCO DE UNA ECONOMÍA ESCASAMENTE COMPETITIVA Y CON UN CRECIENTE DESEQUILIBRIO FISCAL, LO CUAL DESEMBOCÓ EN HIPERINFLACIÓN. EN LOS 90, SI BIEN LA INFLACIÓN ESTABA CONTENIDA, UNA SITUACIÓN DE DÉFICIT FISCAL Y EXTERNO CRECIENTES ERA INCONSISTENTE CON EL ESQUEMA CAMBIARIO**



**VIGENTE. EL BANCO CENTRAL GENERÓ NORMAS QUE FAVORECÍAN EL FINANCIAMIENTO AL GOBIERNO SIN NINGÚN LÍMITE, DESINCENTIVANDO EL CRÉDITO AL SECTOR PRIVADO.**

**DESDE LA AUTORIDAD MONETARIA HEMOS FIJADO ESTRUCTAS PAUTAS PARA REDUCIR LA EXPOSICIÓN AL SECTOR PÚBLICO NACIONAL, PROVINCIAL Y MUNICIPAL. POR UN LADO, ESTABLECIMOS MÁXIMOS EN FUNCIÓN DEL CAPITAL DE LA ENTIDAD Y DE LA JURISDICCIÓN CORRESPONDIENTE. POR OTRO LADO, DETERMINAMOS UN LÍMITE MÁXIMO GLOBAL DE 40% DEL ACTIVO TOTAL DEL BANCO, EL CUAL TIENE VIGENCIA EFECTIVA A PARTIR DE ENERO DE 2006 Y QUE A PARTIR DE JULIO DEL CORRIENTE AÑO YA ESTÁ PREVISTO QUE SE REDUZCA A 35%. ESTAS MEDIDAS ESTÁN PRODUCIENDO UN CAMBIO ESTRUCTURAL EN NUESTRA HISTORIA: UN SISTEMA MONETARIO Y FINANCIERO INDEPENDIENTE DEL SECTOR PÚBLICO.**

**EN LOS ÚLTIMOS DOS AÑOS LA PARTICIPACIÓN DEL CRÉDITO AL GOBIERNO EN EL TOTAL DE ACTIVOS DEL SISTEMA SE REDUJO SIGNIFICATIVAMENTE Y EL CRÉDITO A LAS FAMILIAS Y EMPRESAS CONSTITUYE HOY EL FOCO DEL ACCIONAR DE LOS BANCOS.**

**LA CUARTA ARISTA DE ESTA ARQUITECTURA CONSISTE EN PONER A LOS BANCOS EN SU LUGAR: EL CRÉDITO DEBE ESTAR FOCALIZADO EN FACILITAR LAS DECISIONES DE CONSUMO E INVERSIÓN DE LAS EMPRESAS Y FAMILIAS. DE ESTE MODO, LA POLÍTICA DEL BANCO CENTRAL HA GENERADO LOS INCENTIVOS DE MERCADO PARA EL RESURGIMIENTO DEL CRÉDITO AL SECTOR PRIVADO A PARTIR DE UN CONJUNTO DE MEDIDAS ESPECÍFICAS QUE HAN ESTIMULADO EL FINANCIAMIENTO Y AMPLIADO LA BASE DE POTENCIALES TOMADORES DE CRÉDITO.**

**EN PARTICULAR, LAS FINANCIACIONES A PEQUEÑAS Y MEDIANAS EMPRESAS REGISTRARON UN CRECIMIENTO POR ENCIMA DEL PROMEDIO, ALCANZANDO A UN UNIVERSO DE CASI MEDIO MILLÓN DE EMPRESAS QUE RECIBEN ASISTENCIA DEL SISTEMA FINANCIERO. DE ESTA MANERA, EL CRECIMIENTO DEL CRÉDITO AL SECTOR PRIVADO ES GENERALIZADO EN TODAS LAS LÍNEAS Y LA MOROSIDAD DISMINUYÓ HASTA UN NIVEL MÍNIMO HISTÓRICO QUE AHORA TAMBIÉN ESTÁ POR DEBAJO DEL PROMEDIO DE AMÉRICA LATINA.**

**EN RESUMIDAS CUENTAS, DEBEMOS PROFUNDIZAR LAS POLÍTICAS QUE NOS PERMITAN ENFRENTAR CAMBIOS EN EL CONTEXTO EXTERNO Y QUE A LA VEZ NOS POSIBILITEN IR DESARROLLANDO NUESTRAS INSTITUCIONES ECONÓMICAS PARA CANALIZAR DE LA MEJOR MANERA LOS ESCENARIOS BENIGNOS Y PARA MEJORAR EL PODERÍO DE NUESTROS INSTRUMENTOS DE POLÍTICA MONETARIA A FIN DE SER**

**PLENAMENTE RESPONSABLES POR EL CUMPLIMIENTO DE LOS OBJETIVOS QUE NOS PLANTEAMOS Y, DE ESTE MODO, PODER PLANTEARNOS OBJETIVOS CADA VEZ MÁS AMBICIOSOS.**

**EL RETO ES LOGRAR QUE ESTAS ACCIONES SE CRISTALICEN COMO VERDADERAS POLÍTICAS DE ESTADO. DE LO CONTRARIO TODO ESFUERZO SERÁ EN VANO Y CAEREMOS EN EL CLÁSICO PÉNDULO ARGENTINO, DONDE PASAMOS SIN SOLUCIÓN DE CONTINUIDAD DE UN EXTREMO AL OTRO DEL ARCO DE POLÍTICAS POSIBLES. SE TRATA, EN REALIDAD DE UN DOBLE DESAFÍO QUE NO ES SECUENCIAL SINO SINCRÓNICO: AVANZAR EN EL CUMPLIMIENTO DE NUESTROS OBJETIVOS Y CONSTRUIR INSTITUCIONES EN FORMA SIMULTÁNEA. PARA ELLO LA CONSISTENCIA Y EL GRADUALISMO RESULTAN ESENCIALES Y CONSTITUYEN, A MI JUICIO, EL ÚNICO CAMINO POSIBLE PARA ASEGURAR SU EFECTIVIDAD EN BENEFICIO DE FUTURAS GENERACIONES.**

**BIENVENIDOS Y MUCHAS GRACIAS.-**



# Jornadas Monetarias y Bancarias, 2007

**Mario Draghi**

Monetary policy and new financial instruments

4 y 5 de Junio de 2007

## **Conduct of Monetary Policy under Uncertainty**

### **Session I: Challenges in the World's Financial Markets**

#### **Monetary Policy and New Financial Instruments**

**Mario Draghi, Governor, Bdl and Chairman, FSF**

##### **1. Introduction**

In my talk on “*Monetary Policy and New Financial Instruments*” I will first review some of the most important financial innovations we have seen in recent years, and the consequences they have had for financial markets and institutions. Then I'll discuss some of the implications for financial stability policies, before closing with some thoughts on the implications for monetary policy.

##### **2. The recent wave of financial innovation**

While there have been many changes in how financial markets function in recent years, perhaps the most striking changes have come in the area of credit risk. Large banks in the developed markets are rapidly moving away from the traditional business of making loans and holding them to maturity. Increasingly they see their business model as originating credit claims (or packaging claims originated by others) and selling them, often in seniority-based tranches, to investors. As a result, the process of disintermediation – which was already well underway in many markets in the 1980s and 1990s – has accelerated. Credit is now something that is largely bought and sold on markets, rather than held for the long term on the balance sheets of financial intermediaries.

The increased trading of securitized credit instruments has accompanied, as both cause and effect, the explosive growth in the market for credit derivatives. Meanwhile, derivatives and structured products in other risk categories, such as interest rates, foreign exchange and equities, have also continued to grow in volume and complexity.

Rapid innovation in financial instruments has accompanied – again, both as cause and effect – increased activity by non-traditional financial players, notably hedge funds and private equity funds. As institutions, of course, these are not themselves new. But there has been a qualitative shift in the size and scope of their activity. They have gone from being niche players to being key participants and drivers of innovation in a broad range of markets and transactions.

The growth of hedge funds is part of an ongoing realignment of the roles of different categories of financial institutions. Hedge funds now account for a large share of trading in many core market segments, and manage a steadily increasing share of the assets of the world's pension funds and university endowments. At the same time, traditional asset managers have adopted hedge-fund-like strategies, including taking on leverage and adopting short positions. Some hedge funds are taking a prominent role in credit markets, either as direct providers, as investors in the riskiest tranches of funded or synthetic CDOs, and by providing liquidity to the credit derivative market. The rise of stand-alone CDO vehicles as a channel for credit intermediation in turn has altered and potentially reduced the role of traditional banks in credit markets. Private equity funds have assumed an important role in restructuring corporate assets, with the help of innovative loan structures and financing techniques that rely on hedge funds as traders and investors. And the boundaries between the functions and behaviour of private equity funds and hedge funds have blurred as well.

In some respects it's still too early to forecast the full consequences of these developments. But we can already see some of the changes in financial systems that have resulted. Let me suggest some of the consequences that these changes may have, for financial markets, for financial institutions, and for how we go about fulfilling our responsibilities as central bankers.

With respect to markets, the most critical change has been the increased liquidity and transferability of risk. Not only are there ever more instruments and markets in which all kinds of risks can be hedged or traded; there is also a growing pool of counterparties willing to take one or the other side of a risk-transfer transaction – as long as the price is right. When analysts talk about the increased liquidity of

markets, this is what they're referring to: in more and more markets, an asset can readily find a buyer at a price that does not command too great a liquidity premium.

One reason for this is that many of the new instruments are capital-efficient, meaning that traders do not need to allocate a large amount of up-front capital to adopt the relevant exposure. A second factor helping to increase market liquidity is that more and more players are structurally better at providing it. For example, institutional investors with long investment horizons have now become the largest investors in private equity and hedge funds. Because these investors can agree to lengthier "lock in" periods, in normal times, hedge funds and private equity funds can provide ready liquidity to markets because they themselves do not need to worry about meeting the liquidity needs of their investors. The funds may, however, face liquidity demands from other counterparties, particularly in times of stress – a point I'll come back to in a moment.

The greater diversity of players and instruments, and the increase in liquidity, have had a profound impact on how financial markets function. Volatility and risk premia have fallen steadily over this period of rapid innovation. To a degree, this has reflected reduced real volatility. But, more fundamentally, markets have become structurally more efficient at pricing risks and arbitraging valuation differences across assets. Financial prices are now driven more actively towards fundamentals than before.

One consequence of this is that we are moving to a world where financial shocks are more easily absorbed than they used to be, because there is a larger pool of players available who are willing and able to switch quickly from one market to another. As a result, liquidity shortages in one market or financial sector can rapidly be made up by transfers of liquidity from another. This helps ensure that prices for related assets are broadly in line with one another.

But at the same time the risk of a broader shock, affecting several markets at once, may have increased. Such a shock could result from a fall in risk appetites of a broad range of participants, perhaps in conjunction with a fall in the liquidity available to hedge funds and other active traders. Hedge funds may be shielded from liquidity demands from their investors, by lock-up periods and withdrawal

gates, but they still need liquid funds to meet margin calls on their positions. Those demands are likely to rise most steeply at times when markets are turbulent and the supply of liquidity, whether from other traders or from dealers and prime brokers, is likely to be reduced. If initial price movements trigger counterparty concerns, this could well generate deeper and more broad-based liquidity erosions that can pose risks of a systemic nature.

What are the implications of this new environment for financial institutions, particularly the ones that are subject to regulation? One important development is that improved trading and pricing of risks enable financial institutions of all kinds to manage their risks better. For the official sector, this is clearly good news. At the same time, however, competitive pressures from new players and new ways of doing “old business” pose challenges. Greater risk management capacity also means it is easier for participants to take on risks, which can reinforce moral hazard problems. The operating environment has also become riskier, with complex instruments posing risk management and valuation challenges even for the most sophisticated firms. A shock to profitability that reduces the credit standing of one or more large institutions, or leads banks to take on riskier strategies in order to reach a desired level of profits, could have systemic implications that authorities need to be aware of.

A critical question for the stability of global financial markets is whether the core intermediaries – the fifteen or twenty large global firms that make markets in the most widely traded derivatives and act as prime brokers to hedge funds – are adequately managing their counterparty and principal-based trading activities. The large dealers firms manage counterparty exposures through a combination of initial margin, variation margin, and allocations of their own capital. So far, these firms seem to be keeping their *direct* credit exposures to hedge funds and principal trading under control. However, there is evidence that competition for hedge fund business may be putting margining arrangements under pressure. It is also unclear whether firms have adequately protected themselves against *indirect* exposures to the consequences of greater leveraged activity, such as the risk of a sudden global shock to liquidity as I mentioned a moment ago. Firms are still devising

methodologies to model such events and incorporate them in stress tests. But ultimately the best safeguard will be adequate capital and liquidity cushions.

### **3. Implications for financial stability policy**

What do these developments mean for financial stability policy? In the new environment, risks seem to be dispersed more widely, but transparency about where risks are located has declined. This reduces the sectoral impact of real and financial shocks, but may also make it harder to anticipate which sectors are vulnerable to a shock. Even more than before, policy needs to move from a reactive orientation, where we intervene in response to problems and threats, to a preventative stance in which systems are made more robust to potential shocks.

Certainly it's not the task of the official sector to stand in the way of innovation or improved efficiency. However, we do need to minimize the moral hazard risks that might come from the increased risk capacity of regulated firms. One way to do this is to redouble our efforts to use regulatory tools – risk-based capital requirements, prudential rules, disclosure that is aimed towards strong market discipline – to align the decisions of regulated firms more closely to market signals.

New instruments and trading patterns also call for the expansion or adaptation of the market infrastructure that underpin financial activity. Here, collective action problems among market participants can arise that prevent the market from finding appropriate solutions on its own. Giving the impetus that the markets need to resolve collective action problems is a key task of central banks and financial regulators. We've seen some creative examples of this in the last few years, for example the efforts of the Federal Reserve Bank of New York and the Financial Services Authority in London to press large dealers to reduce their backlogs of unconfirmed credit derivatives contracts and to create more resilient settlement arrangements for these transactions.

The approach to regulation of hedge funds has been much discussed over the years. After extensive debate following the 1998 LTCM crisis, political and financial authorities agreed an "indirect approach". This approach relies on the counterparties who provide hedge funds with leverage - largely regulated banks or investment banks - to exercise appropriate discipline in their lending and dealing



with hedge funds. Counterparties are expected to impose limits on their exposure to a hedge fund that takes on excessive leverage, is engaged in excessively risky strategies, or is not sufficiently forthcoming with information about their risk exposures.

This indirect approach has generally worked well in containing the financial stability risks posed by hedge funds. It is a joint effort, involving first and foremost the exercise of discipline by the private sectors, with supervisors buttressing that discipline when competitive pressures erode it. As markets grow and evolve we need to work constantly to ensure that all of the relevant parties are doing what they need to do.

This is the message that came out of the Financial Stability Forum's recent update of its 2000 report on highly leveraged institutions. In the update we set out five recommendations – addressed to supervisors, hedge fund counterparties, investors, and the hedge fund industry - that FSF members agree are likely to be most effective in financial stability risks related to hedge-funds. Three of the recommendations are addressed to supervisors. They are urged to press dealer firms to strengthen counterparty risk measurement and management, especially where instruments are new and complexity is high. They will also work with firms to strengthen their capacity to assess and mitigate their exposures to the market liquidity erosions I mentioned earlier. Lastly, supervisors will evaluate the case for developing more systematic data on core institutions' global credit exposures to hedge funds. A fourth recommendation calls on counterparties and investors in hedge funds to demand and act upon appropriate information from hedge fund managers, while a fifth urges the hedge fund industry to review and enhance existing sound practice benchmarks for hedge fund managers.

I would like to dispel the notion that this indirect approach is a light approach. In particular, for supervisors to be able to judge the adequacy of firms' risk management processes and to induce more conservatism where this is needed, they must establish – continuously – where the frontier in terms of risk management practices is. And they must then set out expectations about changes that firms individually and collectively must make, and oversee firms' implementation of necessary changes. An extensive review by the main

supervisory authorities of how the largest banks and prime brokers in the world manage their hedge fund related risks is now underway. Separately, the hedge fund industry has begun to take steps to strengthen existing sound practice guidance, notably in the areas of risk management, valuation practices and disclosures to investors and counterparties. We will be following progress in these areas very closely in period ahead.

#### **4. Implications for monetary policy**

The widespread innovations in the financial markets that I just mentioned – the expansion in the use of marketable instruments, the rise of new players, the development of derivatives and structured products markets – have brought important changes in the way monetary policy is conducted, communicated and transmitted to the economy.

First of all, the transmission mechanism is changing. While the effect of monetary policy on the availability and cost of bank credit is decreasing, monetary policy actions have prompter effects on a whole range of financial market yields and asset prices. The latter development may be positive, if our intentions are communicated well and correctly interpreted by investors. It could be detrimental, if it causes more volatility.

Our decision-making process is also changing. We have at our disposal a wide range of new information from asset prices, which enables us to gauge market expectations more carefully and take them into account. However, the interpretation of other crucial variables, such as monetary and credit aggregates, is more difficult than in the past, although by no means less important, and calls for renewed research efforts.

Let me address some of these issues in turn.

##### *4.1 Monetary policy, asset securitization and the changing role of banks*

The role of the banking system in the transmission of monetary policy decisions to the economy – the so called “bank lending channel” - was once central. It is now

rapidly diminishing. Compared with the traditional way of thinking, this is a sea change.

Banks were previously at the centre of the monetary transmission process. The existence of asymmetric information on the quality of borrowers assigned a special role to banks in assessing firms' creditworthiness and providing external finance; the sensitivity of banks' checking deposits to interest rate changes gave monetary policy a powerful tool with which to affect banks' funding and intermediation activity.

The development of new financial products and intermediaries is radically reshaping this environment. Banks are taking on a new role in originating, pooling and distributing credit risks outside the banking system. In most markets the securitization of bank loans is booming, and this is affecting the way monetary policy operates. By disseminating information about firms, loan securitization is helping to reduce the spread between the cost of internal and external finance. The possibility to securitize loans and sell them to institutional investors, such as hedge funds, insurance companies and pension funds, eases banks' funding constraints for new lending. It also allows banks to transfer a substantial part of credit risk and reduce their capital requirements, making possible, other things being equal, a further increase in loans supplied.

We are devoting a good deal of research to the implications of securitization on the role of banks in the transmission mechanism. Ongoing research by the Bank of Italy and the ECB (using microdata on 3,000 euro-area banks over the last eight years)<sup>1</sup> finds that banks that make greater use of securitization are more sheltered from the effects of monetary policy changes: in response to increases in official rates, their lending activity shrinks less than does that of other institutions. Securitization therefore appears to reduce the overall effect of monetary policy on loan supply significantly.

This finding has important implications on how we assess policy. We can no longer limit ourselves to examining the state of the banking system and its credit risk in order to evaluate the effect of monetary policy on credit conditions and the stability

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<sup>1</sup> Y. Altunbas, L. Gambacorta and D. Marqués, "Securitisation and monetary policy", mimeo, May 2007.

of the financial system. While the banking system may still be the lever by which the entire financial system is controlled, other actors, often located far from where the loans are originated, have an increasing influence on credit supply. The changing distribution of credit risk in the economy may affect the way the transmission mechanism operates, in ways we do not yet completely understand.

The resilience of the financial system in the face of larger shocks has yet to be fully tested. Although credit risk will be less concentrated on banks, the financial risks that are being created by the system may actually be greater. It cannot be precluded that episodes of credit risk mispricing may be followed by abrupt adjustments, posing new challenges to the stability of the financial system as a whole. It is too early to tell whether the changes on the financial markets have determined the end of “credit cycles”.

#### *4.2 Monetary policy and asset markets*

While the role of banks in monetary policy transmission is diminishing, other channels are gaining in importance. To the extent that financial innovation makes markets more complete and more efficient, actual and expected changes in official interest rates are readily transmitted to a wide range of financial assets. Overall, the effects of policy decisions on financial markets are stronger and faster.

A more immediate impact of monetary policy on a wide range of asset prices may have favourable implications, since it provides monetary authorities with a powerful instrument for affecting the economy. Market expectations on future policy intentions move long-term rates and affect financing conditions, even before official interest rates are changed. The modification of asset prices affects consumption and investment decisions. If policy communication is effective, these changes may partly “do the job” for central banks.

At the same time, unless we are suitably careful the consequences may be disruptive. Policy actions that diverge from the pace expected by economic agents, which is built into long-term interest rates and other yields as well as into positions taken on the market, may upset markets, increase volatility and, in extreme cases, induce a simultaneous revision in positions, with potentially disorderly effects on liquidity and asset prices.

The concern not to destabilize financial markets is one reason why many central banks have striven in recent years to reduce the uncertainty arising from policy decisions. They are paying more attention to proper communication of their objectives, strategies and, with different nuances and practices, future intentions. A trend to greater gradualism in policy action has emerged in all the main industrialized economies (policy moves in excess of 25 basis points are now quite rare for major central banks) partly in response to the greater uncertainty over the impact of rate changes on the financial markets.

As the interplay between policy actions and market expectations gathers importance, we should also guard against the risk of what has been described by Alan Blinder as the “dog chasing its tail”. It is fundamental that we to avoid a situation in which financial markets look at the central bank and the central bank looks at financial markets, both losing sight of the underlying factors that determine inflation.

In the Eurosystem, we consider it definitely desirable that our policy be predictable in order to reduce uncertainty and volatility in financial markets. However, our actions are ultimately dictated by the economic outlook, not the view of the financial market. In general it is better to avoid surprising the market, but there are times when it cannot be avoided, because we have new information or, more simply, different views from market participants. In these cases, effective communication is even more important. To deliver price stability over the medium term, it is essential that the leadership remain with the monetary authorities.

#### *4.3 Monetary policy and financial market indicators*

Let me further observe that the development of financial markets and the introduction of new instruments affect not only monetary transmission but also our decision-making process. The availability of a wide range of new products gives us a wealth of information that we lacked even just a few years ago. By contrast, the traditional indicators are now harder to interpret.

We have at our disposal a large set of information from derivatives markets (futures, options, swaps) that is key to our decision-making. Prices on these markets allow us to estimate, with a degree of precision that a few years ago would have been unthinkable, the entire distribution of market expectations about crucial variables. We now have indicators of market expectations about inflation, growth and policy decisions, of the uncertainty surrounding those expectations, and even of investors' attitude towards risk. This helps us to produce better policy decisions: investors' expectations shape the way the economy is likely to react to our actions and are a source of information on the underlying economic trends.

However, the diffusion of new financial instruments is also likely to affect the information content of some of the indicators that central banks regularly monitor and that serve as a basis for policy decisions. The behaviour of money and credit is particularly affected by the emergence of new products and new players.

Ten years ago, most of M3 in the euro area was held by households and firms, whose behaviour as money-holders we could understand reasonably well. Only around 6 per cent was held by so-called non-bank intermediaries (which include mutual funds and "financial vehicle corporations" that purchase, pool and repackage bank loans as marketable securities). This percentage is now almost twice as large, and about one fifth of M3 growth is accounted for by these intermediaries.<sup>2</sup> Their demand for money is likely to respond to different motives, and is harder to interpret. Moreover, marketable instruments (such as money market funds) now represent 14 per cent of M3, as against 10 per cent at the beginning of the nineties and only 5 per cent in the mid-eighties. They are held for portfolio purposes and are less directly connected to transactions and spending on goods and services.

These developments call for deeper analysis. It would be wrong to conclude, as some commentators seem to have done, that they require a reduction in the role of money in the strategy of central banks, and of the ECB in particular. The dynamics of monetary aggregates still conveys important information on the future evolution of prices, but in order to extract this information it is necessary to process a larger

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<sup>2</sup> G. Ferrero, A. Nobili and P. Passiglia, "The sectoral distribution of money supply in the euro area", Banca d'Italia, *Temì di discussione*, No. 627, 2006.

set of monetary data and take account of the significant impact of the recent financial innovations. All the central banks in the Eurosystem are committed to improving their analysis in this direction.

Ongoing research at the Bank of Italy is aimed at developing techniques to extract information from the common trend of a large set of monetary indicators (M3, but also its components, the monetary holdings of different sectors of the economy, and the counterparts of M3, including credit developments), using multivariate techniques (dynamic factor analysis) to get rid of noise. Our results indicate that the common trend derived from the various monetary components conveys useful information on the behaviour of inflation a few years down the road.<sup>3</sup> This confirms that the analysis of monetary variables remains essential in the conduct of monetary policy, provided it is based on the assessment of a large information set and sound economic interpretation.

This implies that we should not be complacent about the value of our current tools, which are clearly affected by the ongoing change in the euro-area financial landscape. However, playing down the importance of monetary and credit analysis would be a dangerous mistake. In this respect I believe that the “full-information” strategy adopted by the Eurosystem, based on cross-checking the signals derived from real and monetary variables, is probably the best to deal with the challenges posed by a changing environment.

## **5. Conclusions**

I have offered a few thoughts on how financial innovation may affect monetary policy. Certainly, I have not exhausted the issues, but sought rather to highlight the key themes and the main lines of current thinking among central banks and other official institutions. We need the experience of a full credit cycle before drawing conclusions. As with any period of rapid innovation, there is a great deal of uncertainty about how critical variables – including credit aggregates, consumption, fixed investment, and inflation – will behave under different scenarios. Policy-makers will need to be humble about what they do not know, and to be creative and flexible in dealing with the changes to the traditional relationships that are

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<sup>3</sup> A. Nobili, “A composite indicator for monetary analysis”, Banca d’Italia, mimeo, May 2007.

rapidly taking place. Conferences like this one are of vital importance to foster understanding of these developments and exchange views on what they mean for the tasks we face as central bankers.





# Jornadas Monetarias y Bancarias, 2007

**Sergey Ignatiev**

The macroeconomic situation and monetary policy  
in Russia

4 y 5 de Junio de 2007

**The Money and Banking Conference  
“Monetary Policy under Uncertainty”**

**Dr. Sergey Ignatiev**

**Chairman of the Bank of Russia**

**(The 4<sup>th</sup> of June 2007,**

**Central Bank of Argentina,**

**Buenos Aires)**

**The Macroeconomic Situation and Monetary Policy in Russia**

Ladies and Gentlemen,

First of all, allow me to thank you for the opportunity to speak at this conference.

Since the severe financial and economic crisis of August 1998, the Russian economy has recovered quite fast.

During the past eight years – from 1999 to 2006 the annual average GDP growth was 6.7%.

High economic growth rates have sustained during recent years. In 2005, GDP grew by 6.4%, in 2006 by 6.7%, and in the first quarter of 2007, GDP gained 7.9% year-on-year.

Investments in the fixed assets have increased at an even faster pace, mounting up to 11-14% annually over the past four years.

Meanwhile, investments to GDP ratio remains fairly low, at approximately 18%.

Real income of the population is also rapidly growing. For the past four years, it has risen by an average of 12% annually. Rapid growth in real personal incomes

(compared to GDP) is due to dramatic improvements in terms of trade, caused by world oil price growth.

From 2000 onwards, the federal budget enjoyed a surplus of revenue over expenditure.

The last two years have seen a particularly large federal budget surplus. In 2005 and 2006, the budget surplus equalled to 7.5% and 7.4% of GDP, respectively.

As you probably know, Russia took on the entire external debt of the former Soviet Union, despite the fact that Russia accounted then for only half of the Soviet Union's population. This debt totalled around 100 billion dollars.

Russia has completed advance repayment of all its debt to Paris Club creditors, and to the International Monetary Fund.

Government external debt reduced from 158 billion dollars as of the end of 1998 to about 45 billion dollars beginning of 2007. At present it totals to approximately 4% of GDP.

Russia's international reserves are expanding rapidly.

The reserves increased from around 12 billion dollars at the end of 1998, to the current total of about 400 billion dollars.

Clearly, Russia's economic success in recent years is largely due to high world prices of the country's exported commodities, particularly oil and gas.

However, it is also the result of implemented economic reforms as well as the consequence of general social and political stability in Russia.

Tax reforms carried out from 2002 to 2004 are worth noting.

1. The income tax rate for individuals was lowered, and fixed at a flat rate of 13%.
2. Corporate profit tax rate was lowered from 35% to 24%.
3. The so-called "turnover taxes", levied at each sale of an item and equalled to 4% of the item's price, were cancelled. These taxes posed obstacles to effective production specialization.
4. Sales tax, levied in retail at a rate of 5%, was cancelled.
5. The base value added tax rate was brought down from 20% to 18%.

At the same time, many tax privileges were removed. Improvements were made to tax administration.

Taxes on the production and export of oil and gas were raised. These tax rates are linked to the world oil prices.

In general the tax system has been made simpler and fairer.

The process of preparing and executing both federal and local budgets has been substantially improved.

At the beginning of 2004, the Stabilization Fund of the Russian Federation was set up. The Stabilization Fund receives the part of the taxes, paid to the federal budget by producers and exporters of crude oil. This part is the result of the high world oil prices. The purpose of the Stabilization Fund is to provide a substantial level of backup for the federal budget expenditures in the event of a sharp decline in the oil price on the world market. It currently holds a total of around 110 billion dollars. The Stabilization Fund resources are held in the Finance Ministry's foreign exchange deposits with the Central Bank. These resources can be used to repay external debt. The funds can only be spent on current budget needs if there is a sharp decline in budget revenue due to a large drop in world oil prices.

Besides, the Stabilization Fund plays an important role in sterilizing excess liquidity and restraining money supply growth.

In recent years, due to the strong balance of payments, foreign currency purchasing by the Central Bank has become the sole channel for increasing money supply. The Central Bank does not provide loans to the Government, nor does it expand its government securities portfolio. The refinancing of commercial banks is carried out by the Central Bank on an insignificant scale. In order to sterilize excess money supply caused by growth in international reserves, the Central Bank uses a range of instruments; specifically, it attracts deposits from commercial banks and issues its own bonds.

The Stabilization Fund's role in sterilizing excess liquidity was particularly prominent between 2004 and 2005, when the Stabilization Fund resources increase was about 60% of the total increase of Russia's international reserves. In 2006, and

especially in 2007, international reserves have increasingly boosted by the inflow of private capital.

Even though inflation in Russia remains high, it is gradually going down. In 2004, consumer price growth (December-to-December) was 11.7%; in 2005, the figure was 10.9%, and in 2006, 9.0%. In 2007, inflation is expected to be reduced to 6.5-8.0%. From April 2006 till April 2007 the inflation rate was 7.6%.

Russia applies a managed floating exchange rate regime.

The Central Bank aims to attain two goals in implementing its monetary policy.

The first principal goal is to gradually reduce inflation.

The second task is to prevent a sharp real effective appreciation of the ruble, so as not to harm the conditions for economic growth.

I would like to stress that we understand that the Central Bank can only exert a temporary influence on the real effective exchange rate of the national currency. For example, if there is a strong balance of payments and the Central Bank doesn't allow nominal appreciation of the ruble, this will inevitably lead to growth in foreign exchange reserves, a rise in money supply, and eventually, after a certain period, to higher inflation. This means a real strengthening of the national currency.

Besides, we acknowledge that the set goals are contradictory in principle. Given that the world prices for exported goods are very high and there is a strong inflow of capital, to attain the two goals simultaneously may be impossible.

The Central Bank of Russia gradually enhances the focus on achieving its inflation goal and reduces its responsibility for preventing a sharp rise in the real effective ruble exchange rate.

We think that with the development of market mechanisms, increased flexibility of the economy, greater production factors mobility, and the development of the financial system, the degree of negative impact on economic growth caused by ruble real appreciation should decrease.

In the future we intend to stop taking on any obligations in restricting appreciation of the real effective ruble rate, and to move on to inflation targeting, and free floating regime.

It is not easy to achieve considering our strong dependency on world commodity prices.

In order to reduce inflation, the Central Bank allowed the increase of the nominal effective ruble rate: from December 2004 to December 2005, by 3,2%, and from December 2005 to December 2006 – by 2,2%.

The real effective ruble exchange rate grew 10.5% in 2005, and another 7.4% in 2006.

Analysis of the economic situation does not yet allow us to definitely state that appreciation in the real effective ruble rate has negatively affected GDP growth to date.

However, it should be noted that growth in industries producing tradable goods is slower than in sectors producing non-tradables. In 2006, industrial output grew 3.9%, while retail trade went up to 13.9%, and construction volume increased by 15.7%.

An important and quite unexpected factor for us, which influenced the macroeconomic situation over the past 18 months, has been the large inflow of foreign private capital.

Previously, up to and including 2004, we saw a net outflow of private capital. For example, the outflow totalled 25 billion dollars in 2000, and 15 billion dollars in 2001.

The year 2005 saw the first net inflow of private capital in a volume of 1 billion dollars.

In 2006 the net inflow of private capital grew sharply, reaching around 42 billion dollars. During the first four months of 2007, it exceeded 30 billion dollars.

Private capital inflow has been boosted by anticipations of further nominal ruble appreciation. In 2006, the volume of foreign currency held in cash by the population and non-financial institutions shrank by 12 billion dollars. The process of de-dollarization of the economy has been intensively developing. According to the Central Bank estimates, the proportion of foreign currency at the end of 2006 (both in cash and in bank deposits) in overall money supply was around 15%, while at the end of 1999 this share exceeded 60%.

The powerful inflow of private capital was partly due to the fact that as of July 1, 2006 all restrictions and burdens on foreign currency operations linked to movement

of capital and effective until then were removed. The process of foreign exchange liberalization was fully completed.

The improved investment climate and the stable economic situation also contributed to net private capital inflow.

The powerful private capital inflow boosted money supply. The M2 aggregate rose by 39% in 2005, and by 49% in 2006.

In order to restrict money supply growth, the Central Bank raised interest rates on commercial banks' deposits with the Central Bank several times in 2006 and 2007. Currently, the interest rate on one-week deposits is 3%. We are very cautious here, and are closely monitoring interest rates on international markets. A large rise in interest rates on deposits attracted by the Central Bank could lead to an additional inflow of speculative capital and make deposit operations useless.

Recently, in May 2007, the Central Bank raised the required reserve ratio from 3.5% up to 4.0-4.5%. Here, we are also trying to avoid radical changes.

While adjusting the ruble exchange rate, the Central Bank considers the following as significant.

The import of goods grows very fast under the influence of a high real ruble appreciation. In 2006, goods imports expanded by 31%. During the first quarter of 2007, they gained 39% compared to the first quarter of 2006.

According to our estimates, if the nominal effective exchange rate of ruble remains unchanged, and oil prices stay at the level of the first five months of 2007, by 2010 imports of goods could exceed exports. In principle there is nothing wrong with it. But this will force us to consider very carefully the possibility of further nominal appreciation of the ruble.

Thank you for your attention.



# Jornadas Monetarias y Bancarias, 2007

**Y.V. Reddy**

The growing influence of the emerging world

4 y 5 de Junio de 2007



# The Growing Influence of the Emerging World<sup>1</sup>

Governor Redrado and distinguished participants,

I am honoured by the kind invitation of Governor Redrado to visit Argentina and participate in the Annual Money and Banking Seminar at the Central Bank of Argentina with focus on 'monetary policy under uncertainty'. I must compliment Governor Martin Redrado for assembling a galaxy of central bank Governors and globally renowned academics. The assemblage is a tribute to the charm, popularity, knowledge and wisdom of Governor Redrado. I look forward to participation in the two-day seminar as an enlightening and enriching experience. While speaking on the topic of growing influence of the emerging world, I shall devote a good part of my presentation to India's economic policy and development experience, in response to the interest evinced by this forum.

My presentation is broadly in two parts. In the first part, I address certain general issues relating to the EMEs covering (i) the growing importance of the EMEs in the global context; (ii) distinguishing features of both convergence and divergence, in these economies; and (iii) some current concerns of the EMEs. I devote the second part to discuss India's development and reform experience.

## **I. The Growing Importance of the EMEs**

A group of economies having some distinct market features was perceived and termed as 'emerging markets' in 1981 by Antoine W. van Agtmael of the International Finance Corporation, the affiliate of the World Bank. Broadly, an EME is described as an economy with low-to-middle per capita income levels, characterised as transitional, *i.e.*, in the process of moving from a closed to an open-market economy and embarking on an economic reform program that leads it to a stronger and more competitive economic performance, and simultaneously, to higher levels of transparency and efficiency in the functioning of the factor markets, including the financial markets. More generally, it can be held that what is and what is not an "emerging market" depends on the maturity of its institutions, that is, the

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<sup>1</sup> Speech delivered by Dr. Y. V. Reddy, Governor, Reserve Bank of India at the Central Bank of Argentina, Buenos Aires, on June 4, 2007 at a conference on "Monetary Policy under Uncertainty".

rules of the economic market game – the law and the culture – and the institutions enforcing adherence to these rules (Kolodko, 2003). From an operational point of view, the EMEs may be considered to be the fast-growing economies, gradually transiting from the developing to the developed status. In the view of market-participants, the EMEs are the countries that are restructuring their economies towards greater market orientation and thus, offering a wealth of opportunities in trade, technology transfers and investment.

While the fast-growing economies are operationally grouped together as emerging market economies (EMEs)<sup>2</sup>, the group of countries constituting EMEs has not been clearly defined and hence, a discussion about the EMEs, at times, becomes difficult. Nevertheless, the major countries amongst the EMEs are very well-recognised and an increased focus has been placed upon monitoring the performance and market conditions of the EMEs by the international financial institutions, leading economic intelligence agencies, credit rating agencies, leading multinational securities firms and financial journals. Academic and policy research on EMEs have also mushroomed, focusing particularly upon the monetary, financial and regulatory policies and the issues relating to trade, financial integration and liberalisation of capital accounts.

The EMEs represent the fast-growing group of countries and their share in world output is increasing. They are geographically spread across the world encompassing diverse cultures — Asia, Middle East, Europe, Africa and Latin America. On account of increasing trade flows, intra-EMEs as well as with the rest of the world, they play a critical role in determining the course of bilateral, regional and multilateral trade policies and developments. They have become the destinations for large movements of international private capital, attracted by high-return possibilities, dwarfing the official flows, including those from multilateral financial institutions.

Today, the EMEs as a group are reported to constitute about 80 per cent of

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<sup>2</sup> There is no single acceptable definition of EMEs, although they are commonly referred to as economies with high growth prospects. The IMF in its Global Financial Stability Report has categorised the following 26 countries as EMEs spread over: **Latin America** – Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela; **Asia** – China, India, South Korea, Indonesia, Malaysia, Pakistan, Philippines, Taiwan Province of China and Thailand; **Europe, Middle East and Africa** – Czech Republic, Egypt, Hungary, Israel, Jordan, Morocco, Poland, Russia, South Africa and Turkey. There are other categorisations such as by Institute of International Finance taking the number of countries up to around 34.

the global population, representing about 20 per cent of the world's output. The share of the EMEs in the global GDP is increasing and is also a tribute to their sound macroeconomic policies, improving fiscal positions, stronger external sectors, increasing productivity, *etc.* According to some recent estimates, the EMEs will soon account for more than half of the world's PPP-based GDP. The EMEs are also becoming crucial to the supply-demand dynamics of oil and food apart from services and manufacturing products, as also for improving environmental cooperation.

The rise of the EMEs, in general, has thus, made the globalisation a two-way process in which the emerging economies are changing from passive recipients to being part of active participants in global economy.

It is useful to recognise that some of the EMEs are becoming hubs of regional economic activity with sizeable populations, large resource bases, and huge markets. Their economic success is considered to have positive externalities for the neighboring countries and spurs their development process.

From the perspective of public policy, managing the transition of the EMEs to the mature market economies is a challenging task. Compared to the transition-path traversed by the currently industrialised economies, the policy-makers in the EMEs face several pressures – in terms of compressed time frame for transition, technological compulsions towards more openness, the socio-political pressures, etc.

It is useful to note that implicit in the word "emerging" in the very title given to the EMEs as a group, is the notion that they are undergoing a rapid change or transition. We must recognise that the transition embraces demographics, political institutions, social dimensions and related attitudes. These all-encompassing changes have an in-built potential for uncertainties, possibly some volatility, but it gets exacerbated by the international capital flows, particularly when the changes in such flows happen to be unrelated to domestic fundamentals. In such a situation, managing the transition turns out to be a critical challenge for policy-making, and the management requires a more difficult and dynamic trade-off between commitment and flexibility in policy. In fact, several unprecedented policy initiatives amongst many EMEs in the recent months in managing capital flows should be viewed in the context of the compulsions of dynamic trade-off between commitment and flexibility of policies in the external sector of the EMEs.

## II. Some Distinguishing Features of the EMEs

The emerging markets and developing economies grew by 5.8 per cent during the past ten years as against 2.7 per cent growth in the advanced economies. This phenomenon is currently lending credence to the argument that growth in the emerging countries can perhaps help, to some extent, offset an economic slowdown in the US.

Second, in recent years, the inflation environment in the EMEs remained benign despite a significant rise in commodity prices. Average inflation in the EMEs has declined dramatically since the early 1990s, in many cases from double- and triple-digit levels, to about five per cent at present. This decline in inflation in the EMEs, now sustained for more than half a decade, is impressive.

Third, the EMEs have grown faster than the advanced economies in terms of volume of trade as well. Thus, the volume of exports from the emerging and developing economies had grown at an average rate of 9.4 per cent during 1998-2006 as against 5.7 per cent growth in the advanced economies.

Fourth, the EMEs attract significant capital flows. The net inflows of foreign private capital to the EMEs reached a level of US\$ 256 billion in 2006. Foreign-investor demand for emerging market assets is reflected in a broad-based rise in inflows into dedicated bond and equity markets of the EMEs. Emerging-market corporate bond issuance in international bond markets rose to a record level of US\$ 125 billion in 2006.

Fifth, as a result of persistently rising capital flows, foreign exchange reserves of the EMEs have increased significantly. Consequently, seven of the EMEs hold more than double the foreign exchange reserves of the G-7 group and account for 43.7 per cent of the global foreign exchange reserves, while the G-7 group of countries account for 21.1 per cent of the total. Similarly, while seven of the EMEs' foreign exchange reserves amount to about 38 per cent of their aggregate GDP, reserves held by the G-7 group are four per cent of their total GDP.

Sixth, along with the accretion of foreign exchange reserves from exports and capital account, most, though not all, of the EMEs also have high savings rates,

which are also steadily increasing in many Asian and emerging market countries. In these countries, savings are rising faster than investment.

Seventh, the considerable surge in market financing has been buttressed by substantial efforts to modernise the financial sector, enabling the EMEs to offer investors an increasingly wide and sophisticated range of financial instruments and, thus, to attract new types of investors. Overall, the EMEs are tending to put in place financial structures similar to those in the advanced countries.

Although the EMEs as a group have these common characteristics, they are also quite distinct from each other in certain respects. The overall improvement in the fundamentals of the EMEs masks a significant dispersion in most of the benchmark indicators, *viz.*, GDP growth, inflation, balance of payments, foreign currency reserves and public finances. Therefore, now, I would like to enumerate some of the divergent features of the EMEs.

First, some of the countries are growing at a robust pace while growth in some others has been relatively slower in some of the recent years. Similarly, sources of growth are quite dissimilar across the EMEs. For instance, India has distinguished itself in the area of services while China has built up a strong manufacturing base. Likewise, not all the emerging countries have experienced gains in the manufacturing-sector employment, as evident from the striking differences amongst the EMEs in Asia and Latin America.

Second, as reflected in the export-GDP ratio, external demand has been a more dominant driver of growth in recent years for the EMEs like Malaysia, Hong Kong and China than for several oil-importing Asian economies including India and Latin America. Some of the EMEs like India, Brazil and Russia seem to be more domestic-demand-driven economies.

Third, another contrasting pattern found amongst the EMEs is that China, Singapore and Hong Kong are high-saving economies with savings rates of above 40 per cent whereas Brazil, India, South Africa and Mexico have savings rates in the range of 20 to 35 per cent.

Fourth, as far as private capital flows in the EMEs are concerned, divergent trends in the direction of flows have been observed in some of the recent years. For

instance, net private capital flows to EMEs of central Europe and Latin America increased significantly during the last two years, while the net private capital flows to Asian EMEs decreased substantially during this period vis-à-vis 2004.

Fifth, there is a divergence in the external sector performance of the EMEs, as reflected in parameters like current account balances, level of external debt, *etc.* The EMEs including China, Indonesia, Malaysia and Russia have been maintaining current account surpluses since 1998 while some others have maintained current account deficits. External debt reductions have been particularly significant in Indonesia, Russia, Turkey and Brazil, and also in Argentina following the 2005 debt exchange.

Sixth, the contrast in the pace of institutional development has been quite marked. For instance, the EMEs have a wide variety of exchange rate arrangements, with a tendency for many, but by no means all, to move towards increased exchange rate flexibility. Such diversity is only expected in view of the wide differences amongst these countries in economic and financial circumstances. However, as these countries have adapted to the expanding opportunities arising from deeper involvement in an increasingly integrated global economy and to the changes in their own economic environments, there has been a gradual movement towards greater flexibility.

Seventh, there are variations in terms of economic endowments. For example, Brazil, the largest country in Latin America, has high growth potential because of its very rich natural resources, which attract major investments. Russia, apart from natural resources also has strong human capital in certain fields, especially science and engineering. India and China have significant human capital and their economies are also developing rapidly.

Eighth, institution building plays an important role in sustained development. Since the major EMEs have adopted the path of reforms at different points in time under different historical circumstances, their institutional strengths vary. For example, both China and Russia are transiting from a centrally-planned economy to a more open-market economy but their approach to reforms has been different and, thus, the level of institutional strength also differs. A contrasting level of institutional development is also evident from the fact that while some of the emerging markets

witnessed financial crises in the 1990s, some others, like China and India, could avoid the contagion effect.

Finally, another contrast within the group of the EMEs is that not all of them are equally exposed to similar shocks. For instance, if we look at oil trade of the EMEs, some of them are net exporters of oil (*viz.*, Russia, Malaysia and Mexico) and are benefiting from oil price spikes, while some others are net importers of oil, *viz.*, China, Thailand, Taiwan, Korea and India, and thus, remain relatively vulnerable to high and volatile international oil prices. Hence, the EMEs, which are oil-importing consumers, face greater energy-security concerns in financing their long-term growth, while others are relatively better off to tackle the growing energy needs.

The EMEs exhibit very diverse characteristics to investors, whether in terms of country size, the size of financial markets, energy dependence, the level of forex reserves and, more generally, macroeconomic performance. Thus, not all the EMEs are equally impacted by the ongoing developments in the global economy and investors appear to differentiate between them. The advantage of such diversity is that the possibility of any synchronised behaviour or a potential for contagion amongst the EMEs is to some extent moderated.

### **III. Current Concerns of the EMEs**

In the emerging market economies, growth has continued to be firm on account of availability of financial resources, strong commodity prices and abundant global liquidity. Concerns have, however, arisen regarding the sustainability of some of these factors. High investment growth, excessive lending, overhang of liquidity, strengthening retail demand and imbalances in trade and international payments are some of the factors causing concern in some of the EMEs.

In addition, there are a number of downside risks emanating from the behaviour of oil prices, adverse developments in the US housing market, persistence of global imbalances, large leveraged positions in financial markets and possible emergence of inflationary pressures. It is important to recognise the risk of an abrupt and disorderly adjustment of global payments imbalances. The exposure of emerging markets to risky financial assets of the mature markets has increased, and therefore, the overall global financial risks have increased. In the event of loss of or moderation in the risk appetite and the consequent unwinding of leveraged

positions, there could be serious adverse impact on the emerging markets.

Global equity markets are also getting integrated irrespective of the stage of development of the markets. Volatility in international financial markets has increased in recent months with deterioration in the sub-prime segment of the US mortgage market in early 2007. Concerns over the systemic implications of hedge-fund failures and the wide diffusion of risks through derivative markets have also increased in recent years. Consequently, monitoring of risks has become much more complex than before. There are, therefore, serious concerns that financial markets/investors may be assigning insufficient weight to the downside risks.

The integration of the EMEs into the global markets has resulted in a wider diversity of financial institutions operating in the EMEs and a broader range of business strategies. With financial institutions in the advanced economies increasingly searching for profit opportunities at the customer and product level, foreign direct investment from the financial sector provides a route for accessing the EMEs, which offer attractive strategic business opportunities to expand. The growing involvement of foreign firms in the financial systems of the EMEs has given rise to certain concerns, especially when in the majority of the EMEs, banks' assets have become progressively foreign-owned.

Finally, the recent rise in agriculture prices could potentially represent the beginning of a structural increase in prices. Impressive growth performance and consequent improvement in food-demand of large populations, particularly in India and China, on a historically unprecedented scale in a short span, puts huge pressure on demand. This extends to edible oil and pulses. The growing demand for animal protein could put further pressure on demand for agricultural products. The supply-side is also affected by diversion of corn and oil-seeds to generate bio-fuel as energy-substitute; mandated by law in some countries. The tendencies towards global-warming are adding to uncertainties on the supply side. The mismatch between supply and demand, if it arises from some large EMEs, could potentially have a large impact on prices of specific commodities and the consequent impact on inflation-perceptions and hence, expectations could be disproportionately large even in the industrialised economies. At the same time, there are several challenges to public policy in managing this problem.



First, there are invariably strong domestic political economy considerations in managing food-production and security.

Second, the financialisation of commodity prices could help, but it could also potentially add to volatility. It is noticed that in recent years, there has been a growing presence of financial investors in the markets of financial instruments based on commodities.

Third, those EMEs, which are coping with second order effects of recent oil price increases, may find any possible shock on food prices, somewhat burdensome. In case, adverse developments on this account occur and happen at a time when global liquidity is withdrawn or risk-premia increase sharply, there could be serious policy dilemmas, even after accounting for upside risks, both in terms of efficiency and resilience.

#### **IV. India**

With only 2.3 per cent of the world's land area, India is the second most populous country, but among the youngest in the world. The 'demographic dividend' is expected to extend over the next few decades of this millennium. India is unique in pluralism in terms of languages, religions, ideologies and traditions spread over twenty-eight provinces and seven federally governed union territories, each with its distinct identity and socio-cultural ethos. The Constitution of India recognises 22 languages as the official languages. India is well endowed with natural resources, human resources and varied climatic regions, which is reflected in the institutional architecture: uniquely flexible federalism, democracy with universal adult suffrage, and coexistence of public and private sector.

##### Growth

The growth rate of Indian economy has accelerated over the years and now it is one of the fast growing economies in the world. The average growth rate of the Indian economy over a period of 25 years since 1980-81 has been about 6.0 per cent – a significant improvement over the annual growth rate of 3.5 per cent over the previous three decades from 1950-51 to 1979-80. In the more recent period, the Indian economy has entered a high-growth phase with the growth rate averaging 8.6 per cent in the last four years over nine per cent per annum during the last two years. The growth rate is expected to be about 8.5 per cent for 2007-08.

Over the years, while the GDP growth has accelerated, the population growth rate has moderated, giving a sharp impetus to the growth in per capita income. Since the 1990s, per capita income has been growing at an average rate of around 4.0 per cent, implying that a person's income will double in nearly 18 years. A person with a life expectancy of, say, 72 years could thus see his income doubling at least three times in his adult life. If the current GDP growth rate of around 9 per cent is maintained, a person can hope to see the standard of living multiplying by almost five times in his lifetime.

The industrial sector constituted 19.6 per cent of GDP in 2006-07. Indian industry has emerged from a period of restructuring and organisational change during 1996-2003. In the subsequent years, there is a growing realisation of productivity and efficiency gains and is increasingly becoming internationally competitive.

The main driver of the Indian economy currently is the services sector, which constitutes 61.9 per cent of GDP in 2006-07 and contributed two-thirds of average real GDP growth for the period 2002-07.

The strengthening of economic activity has been supported by persistent increase in domestic investment rate from 22.9 per cent of GDP in 2001-02 to 33.8 per cent 2005-06 coupled with an efficient use of capital. It must also be noted that over 95 per cent of investment during this period was financed by the domestic savings only. Domestic saving rate has also improved from 23.5 per cent to 32.4 per cent over the same period. The contribution to improvement in savings has come both from private corporate sector and public sector.

### Inflation

While growth has picked up, over the years, inflation rate has been moderated to lower levels ensuring price stability. Initially, the inflation rate accelerated steadily from an annual average of 1.7 per cent during the 1950s to 6.4 per cent during the 1960s and further to 9.0 per cent in the 1970s before easing marginally to 8.0 per cent in the 1980s. The inflation rate declined from an average of 11.0 cent during 1990-95 to 5.3 per cent during the second half of the 1990s.

In the recent years, inflation rate has averaged around 5 per cent. In recognition of India's evolving integration with the global economy and societal preferences, the resolve, going forward, is to condition policy and expectations in the range of 4.0 - 4.5 per cent in the medium term. This objective is expected to be

conducive for maintaining self-accelerating growth over the medium-term. Historically, India has not experienced runaway inflation, but, it is useful to recognise that the tolerance level to inflation has been low, relative to many developing countries, especially on account of the democratic pressures in the country. It may be of interest to note that, since independence, the Wholesale Price Inflation on average basis was above 15 per cent in only five out of fifty years. In thirty six out of fifty years, inflation was in single digit and on most occasions high inflation was due to shocks – food or oil.

### Stability

An important characteristic of the growth phase of over a quarter of century is the country's resilience to shocks and during this period, we have witnessed only one balance of payments crisis triggered largely by the Gulf war in the early 1990s. The Indian economy in later years, could successfully avoid any adverse contagion impact of shocks from the East Asian crisis, the Russian crisis during 1997-98, sanction like situation in post-Pokhran scenario, and border conflict during May-June 1999. Seen in this context, this robust macroeconomic performance, in the face of recent oil as well as food shocks, demonstrates the vibrancy and resilience of the Indian economy. Acceleration in growth rate in India has been accompanied by stability. The dominance of domestic consumption, contributing on an average to almost two-thirds of the overall demand, has helped in reducing the volatility of GDP. Services sector is dominant and less volatile compared to agriculture and this phenomenon has also been imparting stability to the Indian growth process.

### External Sector

The Indian economy has evolved from a virtually closed economy until early 1980s to one that is opening up and rapidly integrating into the global economy since the commencement of major reforms in early 1990s. In terms of a traditional measure of openness, the ratio of exports and imports (both goods and invisibles) to GDP has risen steadily from 21.1 per cent in 1991-92 to over 50 per cent in 2005-06 and is expected to have gone up further in 2006-07. Both exports and imports have been rising above long-term trend in recent years. The merchandise trade deficit is currently close to 7 per cent of GDP; however, the current account deficit is under 1.5 per cent of GDP, mainly due to the knowledge and competitive advantage we have in services and the steady support from remittances from Indians working

abroad. Besides being a world leader in exports of software and IT enabled services, we also receive the highest flows of remittances in the world. These factors provide an in-built cushion to the balance of payments and help to keep the current account gap within sustainable limits. In this sense, the Indian economy has not contributed to the current global imbalances. It is expected that the current account balance in 2007-08 will be broadly consistent with recent trends.

The liberalisation of the current account took place in the early part of the reforms and we attained current account convertibility in August 1994 by accepting Article VIII of the Articles of Agreement of the IMF. In India, capital account liberalisation is sequenced in response to domestic developments, especially monetary and financial sector, and the evolving international financial architecture. As liberalization advanced, administrative measures were reduced and price-based measures were increased, though the freedom to change the mix and reimpose controls was demonstrably retained by the Reserve Bank. There has been a significant liberalization over the years on the outflows from individuals, corporate and mutual funds, consequent upon, among other things, comfortable level of foreign exchange reserves and greater two way movement in exchange rate.

### *Fiscal Federalism*

Under India's federal system of government, the Constitution allocates the revenue powers and expenditure functions between the Central and State Governments. The borrowing by the sub-national governments is in effect subordinated to prior approval by the national government. Furthermore, State Governments are not permitted to directly borrow externally. However, recently, it has been decided that external loans from multilateral agencies would be passed on to the States (in Indian rupee terms) on a back-to-back basis. Consequently, the State Governments would now have to bear the foreign exchange risk in the context of such loans.

The fiscal management in the country has significantly improved in the last few years, especially, after the adoption of the Fiscal Responsibility and Budget Management Act, 2003 by the Central Government. The State Governments are also adopting similar Acts and have made consistent efforts to improve fiscal management. The fiscal consolidation, in terms of reduction in fiscal deficit, is taking place in the finances of both the Central and State Governments.

The fiscal-management of Central Government is broadly in the direction of achieving the targeted ratio of gross fiscal deficit (GFD) to gross domestic product (GDP) to three per cent and eliminate revenue deficit (RD) by 2008-09. It may be noted that the GFD / GDP and RD / GDP ratios are already budgeted to reduce to 3.3 per cent and 1.5 per cent in 2007-08. In the recent years, there has been a significant improvement in State level finances also. The GFD of all States declined from 4.7 per cent of GDP in 1999-2000 to 2.7 per cent of GDP in 2006-07, while the RD came down from 2.7 per cent of GDP to 0.1 per cent of GDP. Most States have also enacted fiscal responsibility legislations. As a result, the combined fiscal deficit of the Central and State governments has declined to around 6 per cent of GDP in 2006-07 from around 10 per cent in the early 2000s.

The Reserve Bank plays two crucial roles in relation to the Indian fiscal system, namely as banker to and debt manager of both the Central and State Governments. While undertaking the role of banker for, both the Central and State Governments, the RBI also provides temporary support to tide over mismatches in their receipts and payments in the form of short-term advances.

The Reserve Bank plays a significant role as Advisor to Central and State governments on federal fiscal relations. The Reserve Bank sensitizes the State Government on important fiscal issues. Since 1997, the Reserve Bank has been organizing a biannual Conference of Finance Secretaries of State Governments. This Conference, right from its inception, has provided a very useful forum for interaction among all the stakeholders (State Governments, Central Government and the Reserve Bank) on matters related to State finances and arriving at consensual solutions of issues of policy and operational significance. The Reserve Bank also organizes workshops on specific issues like foreign exchange rate risk, risk from government guarantees, *etc.* for the benefit of State Government officials.

### Public Debt

The Reserve Bank manages the market loans, which constitute around 50 per cent of public debt of the Centre and States. In the pre-reforms period, the primary objective of the debt management was to minimize costs of borrowing. This, however, resulted in repression of the financial sector on account of statutory provisions requiring banks and financial institutions to invest in government securities at pre-determined rates. Recognising the criticality of the impact of such a

system on financial sector development, the Reserve Bank has undertaken a series of measures since the early 1990s to move to a market determined interest rate from the administered interest rate regime. The automatic monetisation of budget deficits of Central Government was also discontinued from 1997-98.

It is true that the aggregate stock of public debt of the Centre and States as a percentage of GDP is high, currently at around seventy five per cent. It is also useful to note that there are several unique features of management of public debt in India, which imparts overall stability to macro-economy. First, States have no direct exposure to external debt. Second, almost the whole of public debt is local currency denominated and held almost wholly by residents. Third, public debt, of both Centre and States is actively and prudently managed by the Reserve Bank of India ensuring comfort to financial markets without any undue volatility. Fourth, the government securities market has developed significantly in recent years in terms of turnover, depth and participants, and significant further improvements are underway. Fifth, most debt carry fixed coupons and not indexed to inflation or exchange rates. Sixth, the Government has not yet ventured into sovereign marketable debt issues in foreign currency. Seventh, stable contractual savings supplement marketable debt in financing deficits. Finally, direct monetary financing of primary issues of debt has been discontinued since April 2006. Hence, the high stock of public debt relative to GDP as also the relatively higher fiscal deficits in the past have not so far been a matter of concern as far as stability is concerned, while it is recognised that long term sustainability would call for a gradual reduction of both debt and deficits to prudential levels.

### Financial Sector Reforms

The Indian financial system of the pre-reform period, before 1991, essentially catered to the needs of planned development in a mixed-economy framework, where the Government sector had a predominant role in economic activity. Interest rates on Government securities were artificially pegged at low levels, which were unrelated to the market conditions. The system of administered interest rates was characterised by detailed prescriptions on the lending and the deposit side, leading to multiplicity and complexity of interest rates. As would be expected, the environment in the financial sector in those years was characterised by segmented and underdeveloped financial markets coupled with paucity of financial instruments. Consequently, by the end of the eighties, directed and concessional availability of

bank credit to certain sectors adversely affected the viability and profitability of banks. Thus, the transactions between the *de facto* joint balance sheet of the Government, the Reserve Bank and the commercial banks were governed by fiscal priorities rather than sound principles of financial management and commercial viability. It was then recognised that this approach, which, conceptually, sought to enhance efficiency through a co-ordinated approach, actually led to loss of transparency, accountability and incentive to seek efficiency.

### *Banking*

The banking system in India has undergone significant changes during last 16 years. There have been new banks, new instruments, new windows, new opportunities and, along with all this, new challenges. While deregulation has opened up new vistas for banks to augment incomes, it has also entailed greater competition and consequently greater risks. The capital adequacy ratio has increased to 12.4 per cent for scheduled commercial banks as at end March 2006, which is much above the international norm. Commercial banks' net profits remained at 0.9 per cent of total assets during 2004-05 and 2005-06, up from 0.16 per cent in 1995-96. The ratio of NPLs to total loans of scheduled commercial banks, which was as high as 15.7 per cent at end-March 1997, declined steadily to 3.3 per cent by end-March 2006. The net non-performing assets declined to 1.3 per cent of net advances during 2005-06 from 2.0 per cent in 2004-05. According to the preliminary financial results available for most of the banks for the year 2006-07, the financial soundness has improved further.

India adopted prudential measures aimed at imparting strength to the banking system and ensuring its safety and soundness, through greater transparency, accountability and public credibility. The efficacy of financial sector reforms is reflected in the significant improvement in the asset quality of the banking sector. Currently, all scheduled commercial banks are compliant with the minimum capital adequacy ratio (CRAR) of 9 per cent. The overall CRAR for all scheduled commercial banks stood at 12.4 per cent at end-March 2006.

Our banking sector reform has been unique in the world in that it combines a comprehensive reorientation of competition, regulation and ownership in a non-disruptive and cost-effective manner. Indeed our banking reform is a good illustration of the dynamism of the public sector in managing the overhang problems

and the pragmatism of public policy in enabling the domestic and foreign private sectors to compete and expand.

The Reserve Bank issued guidelines in 1993 for establishment of new banks in the private sector. Since 1993, 12 new private sector banks have been set up. Likewise, foreign banks have been permitted more liberal entry into India. Foreign direct investment in the private sector banks is now allowed up to 74 per cent, subject to the prescribed guidelines. The co-existence of the public sector, private sector and the foreign banks has generated competition in the banking sector leading to a significant improvement in efficiency and customer service. The share of private and foreign banks in total assets increased to 27.6 per cent at end-March 2006 from 24.7 per cent at end-March 2005 and less than 10.0 per cent at the inception of reforms.

The Government took steps to reduce the Government ownership in nationalised banks and inducted private ownership but without altering their public sector character. The underlying rationale of this approach is to assure that the salutary features of public sector banking were not lost in the transformation process. On account of healthy market value of the banks' shares, the capital infusion into the banks by the Government has turned out to be profitable for the Government.

An independent Banking Codes and Standards Board of India was set up on the model of the UK in order to ensure that comprehensive code of conduct for fair treatment of customers is evolved and adhered to. With a view to achieving greater financial inclusion, since November 2005, all banks need to make available a basic banking 'no frills' account either with 'nil' or very low minimum balances as well as charges that would make such accounts accessible to vast sections of population. Banks were urged to review their existing practices to align them with the objective of 'financial inclusion'.

There is a scheme of Ombudsman, located in fifteen cities to provide redressal to grievances of the bank customers. Customer-service is accorded high priority in the supervisory evaluation and according regulatory comfort to the Reserve Bank.

To strengthen the supervisory framework within the RBI, a Board for Financial Supervision (BFS) was constituted in 1994, comprising select members of



the Reserve Bank's Central Board with a variety of professional expertise to exercise 'undivided attention to supervision' and ensure an integrated approach to supervision of commercial banks and financial institutions. The Reserve Bank has also instituted Off-site Monitoring and Surveillance system for banks in 1995, which provides for Early Warning System as also a trigger for on-site inspections of vulnerable institutions. The scope and coverage of off-site surveillance has since been widened to capture various facets of efficiency and risk management of banks.

### *Development of Financial markets*

Financial markets in India in the period before the early 1990s were marked by administered interest rates, quantitative ceilings, statutory pre-emptions, captive market for government securities, excessive reliance on central bank financing, pegged exchange rate, and current and capital account restrictions. As a result of various reforms, the financial markets have now transited to a regime characterised by market-determined interest and exchange rates, price-based instruments of monetary policy, current account convertibility, phased capital account liberalisation and auction-based system in the government securities market. A noteworthy feature is that the government securities and corporate debt market are essentially domestically driven since FII and non-resident participation in these markets are limited and subjected to prudential ceilings.

The Reserve Bank has taken a proactive role in the development of financial markets. Development of these markets has been done in a calibrated, sequenced and careful manner such that these developments are in step with those in other markets in the real sector. The sequencing has also been informed by the need to develop market infrastructure, technology and capabilities of market participants and financial institutions in a consistent manner.

A wide range of regulatory and institutional reforms was introduced in a planned manner over a period to improve the efficiency of financial markets. These included development of market micro structure, removal of structural bottlenecks, introduction/ diversification of new players/instruments, free pricing of financial assets, relaxation of quantitative restrictions, better regulatory systems, introduction of new technology, improvement in trading infrastructure, clearing and settlement practices and greater transparency. Prudential norms were introduced early in the reform phase, followed by interest rate deregulation and gradual lowering of

statutory pre-emptions. These policies were supplemented by strengthening of institutions, encouraging good market practices, rationalised tax structures and enabling legislative and accounting framework.

The Reserve Bank has accorded priority to the development of the money market as it is the key link in the transmission mechanism of monetary policy to financial markets and finally, to the real economy. The Reserve Bank has special interest in the development of government securities market as it also plays a key role in the effective transmission of monetary policy impulses in a deregulated environment.

The Indian foreign exchange market has been widened and deepened with the transition to a market-determined exchange rate system in March 1993 and the subsequent liberalisation of restrictions on various external transactions leading up to current account convertibility in 1994. A qualitative change was brought about in the legal framework by the enactment of the Foreign Exchange Management Act (FEMA) in June 2000 by which the objectives of regulation have been redefined as facilitating trade and payments as well as orderly development and functioning of foreign exchange market in India. The legal framework envisages both the developmental dimension and orderliness or stability. The legislation provides power to the government to re-impose controls if public interest warrants it.

The RBI has undertaken various measures towards development of spot as well as forward segments of foreign exchange market. Market participants have also been provided with greater flexibility to undertake foreign exchange operations and manage their risks.

Linkage between the money, government securities and forex markets has been established and is growing. The price discovery in the primary market is more credible than before and secondary markets have acquired greater depth and liquidity. The number of instruments and participants has increased in all the markets, the most impressive being the government securities market. The institutional and technological infrastructure has been created by the Reserve Bank to enable transparency in operations and to provide secured payment and settlement systems.

*Monetary Policy*

The preamble to the Reserve Bank of India Act, 1934 sets out in a way broadly the tone of Reserve Bank's monetary policy objectives: "*to regulate the issue of Bank notes and the keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage*". Thus, unlike the current trend in many advanced and emerging countries, there is no explicit mandate for price stability or formal inflation targeting in India.

The broad objectives of monetary policy in India have been – a) to maintain a reasonable degree of price stability, and b) ensuring adequate flow of credit to help accelerate the rate of economic growth. The relative emphasis placed on price stability and economic growth is modulated according to the prevalent circumstances in the economy. Of late, considerations of macroeconomic and financial stability have assumed an added importance in view of the increasing openness of the Indian economy.

The recognition of change in the financial market dynamics in the wake of financial market reform also prompted a change in the operative procedure of the monetary policy. The framework of monetary policy has been accorded greater flexibility with the adoption of the multiple indicator approach since 1998-99 moving away from a monetary targeting framework.

In the new operating environment, the Reserve Bank has been increasingly relying on a mix of market-based instruments and changes in reserve requirements, when necessary, for the conduct of monetary policy. Reliance on direct instruments has generally been reduced and a policy preference for indirect instruments has become the cornerstone of current monetary policy operations. However, there is no hesitation in using direct instruments whenever appropriate. The Reserve Bank currently uses multiple instruments to ensure that appropriate liquidity is maintained in the system, consistent with the objective of price stability, so that all legitimate requirements of credit are met. Towards this end, the Reserve Bank pursues, *inter alia*, a policy of active management of liquidity through open market operations including liquidity adjustment facility (LAF), market stabilisation scheme and cash reserve ratio, and deploys the policy instruments at its disposal, flexibly, as warranted by the situation. Changes in fixed reverse repo/repo rates set by the Reserve Bank from time to time for the conduct of its LAF, under which the central

bank conducts daily auctions for the banks, have emerged as the main instruments for interest rate signaling in the Indian economy. Institutional mechanisms have been evolved in parallel to improve transparency and communication of monetary policy.

Traditionally, four key channels of monetary policy transmission are identified, viz., interest rate, credit aggregates, asset prices and exchange rate channels. The interest rate channel emerges as the dominant transmission mechanism of monetary policy. Nevertheless, it is fair to regard the credit channel as running alongside the interest rate channel to produce monetary effects on real activity. Changes in interest rates by the monetary authorities also induce movements in asset prices to generate wealth effects in terms of market valuations of financial assets and liabilities. The exchange rate channel is less important in the Indian context. In the recent period, a fifth channel – expectations – has assumed prominence in the conduct of forward-looking monetary policy in view of its influence on the traditional four channels.

### *Economic Prospects*

The growth prospects of Indian economy have strengthened considerably and appear well entrenched to build on the current momentum. According to the Approach Paper to the 11th Five Year Plan for the period 2007-08 to 2011-12, the economy can accelerate to an average of around 9 per cent over the 11th Plan period.

While we envisage future growth prospects, one has to keep in view that India is relatively young demographically as it has one of the youngest and fastest growing working-age population, which will continue in the next few decades. This 'demographic dividend' is seen as an inevitable advantage, provided the prerequisites such as skill-upgradation and sound governance are put in place to capitalise on it. More importantly, the demographic transition is likely to be stretched over a longer period since various states in India are at different stages of such transition - from Kerala to Uttar Pradesh. The large potential of young human capital, which is talented and well-educated English speaking workforce, could be one of the major drivers of future economic growth.

There is evidence of improvements in total factor productivity and the

efficiency of capital use. Thus, while there are cyclical factors underlying the current growth momentum, there is a growing confidence that a structural acceleration of growth is underway.

The strengthening of economic activity in the recent years has been supported by persistent increase in domestic investment rate. The acceleration of growth would require significant acceleration in investment from 27.8 per cent in the Tenth Five Year Plan (2002-03 to 2006-07) to 35.1 per cent in the Eleventh Five Year Plan, which is proposed to be financed by some combination of increased domestic savings and increased foreign savings. A significant portion of the required increase in domestic savings is expected to come from an improvement in government savings. Given the fact that Indian per capita income is increasing rapidly and policy efforts towards financial deepening for achieving a more inclusive growth are underway, savings rate in India could even rise further in the medium to long run.

It is useful to recognise that, historically, while there is no explicit inflation targeting, the tolerance level to inflation has been low, relative to many developing countries, especially on account of democratic pressures. The inflation rates since the second half of the 1990s have been, by and large, benign despite sustained external capital inflows and surges in commodity prices. For the year 2007-08, the Reserve Bank's policy endeavour would be to contain inflation close to 5.0 per cent in 2007-08. Going forward, the resolve is to condition policy and perceptions for inflation in the range of 4.0-4.5 per cent over the medium term.

There is strong commitment on the part of the Government to pursue the process of fiscal correction and consolidation. The task ahead for the central Government is to achieve the FRBM targets, especially the elimination of revenue deficit by 2008-09. Favourable factors towards this end are buoyancy in tax-GDP ratio and turnaround in public sector dissaving from 2003-04 onwards. In this context, it is recognised that further efforts are needed at accelerated pace to create a quality social infrastructure in terms of education and health and also generate employment which can help the easy and productive absorption of the prospective "youth bulge". The high stock of public debt relative to GDP has not so far been a matter of concern as far as stability is concerned, while it is recognised that long-term sustainability would call for a gradual reduction to prudential levels.

The broad feature of external sector has been cautious and gradual approach towards liberalization. Recognising the macro economic implications of volatility associated with capital flows, India has adopted a policy of managing the capital account with a preference for non-debt flows. Consistent with the principle of hierarchy of capital flows, India has been making efforts towards encouraging more inflows through FDI and enhancing the quality of portfolio flows by strict adherence to 'Know Your Investor' principle. Going forward, the pace of further liberalization will critically depend on the reforms in real and fiscal sectors as also global developments.

While the broad objectives of the financial sector reforms were to enhance efficiency and productivity, the approach has been to consistently upgrade the financial sector by adopting the international best practices through a consultative process. For the way ahead, for the financial sector as whole, given the strong foundations and basic institutional framework, the issues relate to the pace of further deregulation and liberalization, consistent with the progress of reform in the real and fiscal sectors. The Reserve Bank and the commercial banks have been preparing to implement Basel II. In practice, within the given legal framework, priorities have to be formulated to ensure implementation in tune with the evolving domestic and external developments.

With respect to the financial markets, going forward, a judicious mix of appropriate policy, strong macro economy and sound and resilient financial system would be necessary as the Indian economy moves up in the ladder from an emerging market economy towards a more mature economy. As development of financial markets is an ongoing process, initiatives to further deepen and widen the various segments of financial markets would have to be continuously pursued. Since the overall objective of maintaining price stability in the context of economic growth and financial stability will remain, the effort will be to harmonise the deregulation and liberalisation of financial markets with the domestic developments in real as well as fiscal sectors and global developments in international financial architecture.

### Current Challenges

First, a critical constraint to economic growth in India in recent years has been the infrastructure deficit. The Approach Paper to the 11<sup>th</sup> Five Year Plan has

estimated that for accelerating the GDP growth from 7 to 9 per cent, there is a need for accelerating the current level of investment in infrastructure from 4.6 per cent of GDP to 8 per cent during the Plan period. The issue of providing adequate and quality infrastructure has already attracted attention of policy makers at all levels. The most important issues here are regulatory framework and overall investment climate, which are being addressed by the Government. Apart from higher levels of investment, issues of governance and management including policies relating to appropriate pricing and user charges are being addressed to achieve satisfactory results.

Second, the most complex and challenging issue relates to development of agriculture. While over 60 per cent of the workforce is dependent on agriculture, the sector accounts for barely 20 per cent of the GDP. Further, the GDP growth generated from agriculture is only marginally above the rate of growth of the population, which is not adequate to ensure rapid poverty reduction. On May 29, 2007, our Honourable Prime Minister announced a major scheme to double the growth rate of agriculture to 4.0 per cent over the 11th Plan period. The Government would provide Rs. 250 billion for new farm initiatives launched by States. A time-bound Food Security Mission was also announced to counter rising prices of food products and to ensure visible changes in their availability over three years.

Third, delivery of essential public services such as education and health to large parts of our population is a major institutional challenge. It is strongly felt that education will empower the poor to participate in the growth process and the large gaps in availability of health care, in terms of minimum access to the poor, need to be filled.

Fourth, the growth story in any developing country can not be complete without assessing its impact on the poverty and employment situation. The Planning Commission has stressed that India should strive for 'more inclusive growth'. The number of people living below the poverty line has decreased from 36 per cent in 1993-94 to 22.0 per cent in 2004-05. Again, the issue is to bring more and more people out of poverty by providing them the productive employment opportunities. The Approach Paper to 11th Five Year Plan suggests that doubling the growth of agricultural GDP to 4 per cent per annum will improve rural employment conditions, by raising real wages and reducing underemployment. However, even if this is

attained, an overall growth of 9 per cent will further increase income disparity between agricultural and non-agricultural households, unless around 10 million workers currently in agriculture find remunerative non-agricultural employment. This poses a major challenge not only in terms of generating non-agricultural employment but also in matching its required location and type.

## **V. Summing Up**

Let me conclude by expressing my deep appreciation and thanks for the courtesies extended by the Central Bank of Argentina and personally by Governor Redrado.





# Jornadas Monetarias y Bancarias, 2007

**Martín Redrado**

La influencia creciente de los países emergentes

4 y 5 de Junio de 2007

**JORNADAS MONETARIAS Y BANCARIAS 2007**  
**"LA INFLUENCIA CRECIENTE DE LOS PAÍSES EMERGENTES"**

**MARTÍN REDRADO**

**PRESIDENTE DEL BANCO CENTRAL DE LA REPÚBLICA ARGENTINA**

**EN LAS ÚLTIMAS DOS DÉCADAS SE OBSERVÓ EN MUCHOS PAÍSES EMERGENTES UNA PROGRESIVA LIBERALIZACIÓN FINANCIERA QUE, JUNTO CON UNA MAYOR APERTURA AL COMERCIO INTERNACIONAL, ESTIMULÓ UNA CRECIENTE PARTICIPACIÓN EN LA ECONOMÍA GLOBAL.**

**LA APERTURA A LOS MOVIMIENTOS DE CAPITAL MOSTRÓ MÁS DIFICULTADES QUE EN EL CASO DEL COMERCIO INTERNACIONAL. ASÍ, LA MAYOR INTEGRACIÓN FINANCIERA DERIVÓ EN SUCEASIVAS CRISIS A LO LARGO DEL MUNDO EMERGENTE, QUE EMPAÑARON LAS VENTAJAS ESPERADAS DE UNA MAYOR APERTURA DE LA CUENTA DE CAPITAL.**

**SIN EMBARGO, LA RESPUESTA A ESTA VOLATILIDAD EXTERNA NO FUE EL AISLAMIENTO, SINO QUE LOS PAÍSES EMERGENTES INSISTIERON EN EL PROCESO DE INTEGRACIÓN, BÁSICAMENTE SIGUIENDO UN MECANISMO DE CORRECCIÓN DE ERRORES. ES DECIR, BUSCANDO LA FORMA DE FORTALECER LAS ECONOMÍAS DOMÉSTICAS, DE MANERA DE APROVECHAR LOS BENEFICIOS QUE GENERA LA GLOBALIZACIÓN, AL TIEMPO DE REDUCIR SUS POTENCIALES COSTOS.**

**POR OTRA PARTE, A DIFERENCIA DE LA DÉCADA PASADA, LOS FLUJOS NETOS DE CAPITAL SE MUEVEN DESDE LOS EMERGENTES HACIA LOS PAÍSES DESARROLLADOS, CONVIRTIÉNDOSE EN ACTORES RELEVANTES EN LOS ACTUALES DESEQUILIBRIOS GLOBALES. REFLEJO DE ESTA DINÁMICA ES QUE LAS RESERVAS INTERNACIONALES DE LOS PAÍSES EMERGENTES COMO PROPORCIÓN DEL TOTAL CRECIERON DESDE UN 38% EN PROMEDIO DURANTE LA DÉCADA DEL 80 A UN 71% EN 2006.**

**LOS PAÍSES EMERGENTES REGISTRARON UN SUPERÁVIT CONJUNTO DE CUENTA CORRIENTE DEL ORDEN DE LOS 640.000 MILLONES DE DÓLARES EN 2006 (FLUJO NETO DE CAPITALES HACIA LOS PAÍSES DESARROLLADOS). ESTÁ SITUACIÓN CONTRASTA FUERTEMENTE CON LA OBSERVADA ANTES DE LA CRISIS ASIÁTICA, EN 1996, CUANDO LOS PAÍSES EN DESARROLLO MOSTRABAN UN DÉFICIT CONJUNTO DE CUENTA CORRIENTE DE 80.000 MILLONES DE DÓLARES (INGRESO NETO DE CAPITALES DESDE LOS PAÍSES CENTRALES).**

**LOS FLUJOS NETOS DE CAPITAL HACIA LOS PAÍSES DESARROLLADOS ESTÁN CONCENTRADOS EN UN GRUPO DE PAÍSES. ASÍ, CHINA, RUSIA, LOS MIEMBROS DE LA OPEP, OTROS PAÍSES ASIÁTICOS Y, EN MENOR MEDIDA LATINOAMÉRICA, EXPLICARON LA MAYOR PARTE DEL FINANCIAMIENTO A LAS ECONOMÍAS INDUSTRIALIZADAS.**

**EL NUEVO PATRÓN DE LOS FLUJOS DE CAPITAL CONTRADICE LO QUE INDICA LA INTUICIÓN ECONÓMICA: ES DECIR, SE ESPERARÍA QUE LOS FLUJOS DE CAPITALES SE MOVIERAN HACIA LOS PAÍSES CON UNA MAYOR RENTABILIDAD DEL CAPITAL, DADA POR LA MENOR DOTACIÓN RELATIVA DE CAPITAL O POR EL MAYOR POTENCIAL DE CRECIMIENTO.**

**SIN EMBARGO, UNA MIRADA MÁS FINA MUESTRA QUE LA DINÁMICA OBSERVADA EN LOS FLUJOS DE CAPITALES DE LOS PAÍSES EN DESARROLLO NO SE DEBE A MENORES INGRESOS BRUTOS DE CAPITAL (POR EL CONTRARIO, ESTOS FLUJOS HAN DUPLICADO SU NIVEL DE 1996), SINO A MAYORES SALIDAS BRUTAS (SE HAN TRIPLICADO CON RESPECTO AL MISMO AÑO). A SU VEZ, DE ESTAS ÚLTIMAS, LA MITAD ESTÁ EXPLICADA POR LA ACUMULACIÓN DE RESERVAS INTERNACIONALES LLEVADA A CABO POR LOS BANCOS CENTRALES EMERGENTES. ASÍ, LAS RESERVAS INTERNACIONALES EN LOS PAÍSES EN DESARROLLO SE HAN TRIPLICADO DESDE 2002.**

**COMO RESPUESTA A LAS SUCESIVAS CRISIS FINANCIERAS, LA PERCEPCIÓN DE ACTIVOS FINANCIEROS MÁS SEGUROS Y LÍQUIDOS EN LOS PAÍSES DESARROLLADOS HA LLEVADO A LOS PAÍSES EMERGENTES A ACUMULAR ESTOS ACTIVOS PARA REDUCIR SU VULNERABILIDAD. MÁS AÚN CUANDO NO EXISTE UN PRESTAMISTA INTERNACIONAL DE ÚLTIMA INSTANCIA Y NO ESTÁ DEFINIDA UNA NUEVA ARQUITECTURA FINANCIERA INTERNACIONAL QUE ATIENDA POSIBLES PROBLEMAS DE LIQUIDEZ.**

**ESTE MAYOR PESO DE LAS ECONOMÍAS EMERGENTES EN LA ECONOMÍA GLOBAL GENERA CIERTOS DESAFÍOS PARA LOS POLICYMAKERS:**

**EN EL PLANO FINANCIERO, EL ENTORNO EN EL CUAL SE DESENVUELVE LA POLÍTICA MONETARIA EN EL MUNDO DESARROLLADO HA CAMBIANDO CON EL NUEVO PATRÓN QUE SIGUEN LOS CAPITALES, LO CUAL EXPLICA EN PARTE QUE LAS TASAS DE INTERÉS INTERNACIONALES DE LARGO PLAZO HAYAN PERMANECIDO EN NIVELES HISTÓRICAMENTE BAJOS POR RAZONES QUE NO SIEMPRE ESTÁN RELACIONADAS CON EL SESGO DE LA POLÍTICA MONETARIA Y SUS EFECTOS SOBRE LAS EXPECTATIVAS DE TASAS DE INTERÉS FUTURAS.**

**EN EL PLANO REAL, LA GLOBALIZACIÓN TAMBIÉN HA AFECTADO EL MANEJO DE LA POLÍTICA MONETARIA A TRAVÉS DEL CAMBIO DE LOS FACTORES QUE AFECTAN LA INFLACIÓN DOMÉSTICA. SE HA OBSERVADO EN LOS ÚLTIMOS AÑOS EL IMPACTO SOBRE LA INFLACIÓN DE LA PRESIÓN A LA BAJA EN LOS PRECIOS DE LOS BIENES MANUFACTURADOS Y TAMBIÉN EL EFECTO DEL AUMENTO DE PRECIOS DE LOS COMMODITIES.**

**EN CONSECUENCIA, YA NO BASTA SOLAMENTE CON ANALIZAR LOS FACTORES DOMÉSTICOS. UNA CONSECUENCIA DIRECTA DE LA MAYOR IMPORTANCIA DE LOS PAÍSES EMERGENTES ES QUE PARA EL DISEÑO DE LA POLÍTICA ECONÓMICA LOS POLICYMAKERS DEBEN PRESTAR ATENCIÓN TAMBIÉN A LO QUE OCURRE EN TODO EL ARCO EMERGENTE Y A SU INTERRELACIÓN CON LA ECONOMÍA DOMÉSTICA. ADEMÁS, DEBEN TENER EN CUENTA POSIBLES EFECTOS DE LA POLÍTICA DE LOS PAÍSES DESARROLLADOS EN LOS EMERGENTES, YA QUE UNA CRISIS EN ESTOS ÚLTIMOS PUEDE AFECTAR A LOS PRIMEROS.**

**EN ESTE PUNTO RESULTA DIFÍCIL LLEGAR A UNA CONCLUSIÓN SOBRE EL EFECTO DEL MAYOR PESO DE LAS ECONOMÍAS EMERGENTES SOBRE LA VOLATILIDAD FINANCIERA. HAY FACTORES QUE DERIVAN EN UNA MENOR VOLATILIDAD, MIENTRAS QUE OTROS PODRÍAN SIGNIFICAR UN INCREMENTO DE LA MISMA.**

**POR UN LADO, LA MAYOR PARTICIPACIÓN DE LOS EMERGENTES EN LA ECONOMÍA MUNDIAL PERMITE AMPLIAR LA BASE DE INVERSORES PARA UN DETERMINADO ACTIVO FINANCIERO, GENERANDO MAYORES POSIBILIDADES DE DIVERSIFICACIÓN Y AYUMENTANDO LA ESTABILIDAD.**

**POR OTRO LADO, APARECEN NUEVAS FUENTES DE VOLATILIDAD EN LOS FLUJOS FINANCIEROS: ASÍ, PARTE DE LA EXPORTACIÓN DE CAPITALES DE LOS PAÍSES EMERGENTES ESTÁ RELACIONADA CON LOS INGRESOS GENERADOS POR COMMODITIES, CON LO CUAL LOS MOVIMIENTOS DE CAPITALES PASAN A DEPENDER DE LAS CONDICIONES PARTICULARES DEL MERCADO DEL RESPECTIVO BIEN Y DE LA VOLATILIDAD DE SU PRECIO.**

**ASIMISMO, ALGUNOS BANCOS CENTRALES SE HAN TRANSFORMADO EN IMPORTANTES PARTICIPANTES EN MERCADOS DE DETERMINADOS ACTIVOS FINANCIEROS. DE ESTA FORMA, CAMBIOS DE GRAN MAGNITUD EN SUS PORTAFOLIOS PUEDEN TENER EFECTOS BRUSCOS EN LOS PRECIOS DE DICHSO ACTIVOS Y GENERAR PERÍODOS DE TURBULENCIA. SI BIEN LOS MERCADOS EMERGENTES SE PERCIBEN COMO DE MAYOR RIESGO QUE LOS DESARROLLADOS, LA MEJORA RECIENTE EN LAS POLÍTICAS MACROECONÓMICAS APLICADAS POR LOS PRIMEROS REDUJO LA VULNERABILIDAD DE ESTAS ECONOMÍAS A SHOCKS EXTERNOS EN COMPARACIÓN A LO QUE OCURRÍA EN LA DÉCADA PASADA.**

**ASÍ, HOY EXISTE UN SOSTENIDO INTERÉS POR EL RIESGO EMERGENTE EN UN CONTEXTO DONDE A LA MARCADA MEJORA EN LOS**

**FUNDAMENTALS SE LE SUMA UNA ABUNDANTE LIQUIDEZ QUE INCENTIVA LA BÚSQUEDA DE RENDIMIENTOS.**

**ESTE CONTEXTO DE PARTICIPACIÓN CRECIENTE Y MENOR RIESGO PERCIBIDO PERMITIÓ UNA MAYOR MADUREZ DE LOS ACTIVOS EMERGENTES COMO ASSET CLASS. EN EFECTO, SE OBSERVA UNA BASE MÁS AMPLIA DE INVERSORES, LA INCLUSIÓN DE ACTIVOS EMERGENTES EN ÍNDICES BENCHMARK Y UNA MENOR VOLATILIDAD.**

**ADICIONALMENTE, LAS POLÍTICAS DE REASEGURO IMPLEMENTADAS PERMITEN QUE LAS ECONOMÍAS EMERGENTES SE MUESTREN MENOS DEPENDIENTES DE LOS FLUJOS EXTERNOS DE CAPITALES. LA MEJORA EN LOS FUNDAMENTALS HA PERMITIDO ADEMÁS UN MERCADO DESARROLLO DE LOS ACTIVOS DENOMINADOS EN MONEDA LOCAL. EN EFECTO, LAS CRECIENTES EMISIONES EN MONEDA DOMÉSTICA PERMITEN DESAFIAR AL "PECADO ORIGINAL" Y REDUCIR LA EXPOSICIÓN DE LOS EMISORES AL RIESGO CAMBIARIO.**

**ADEMÁS, LOS PAÍSES EMERGENTES APROVECHAN ASÍ LAS FAVORABLES CONDICIONES INTERNACIONALES PARA PROFUNDIZAR UN MERCADO QUE PUEDA MANTENERSE CUANDO ESTAS CONDICIONES EVENTUALMENTE CAMBIEN. ESTO PUEDE ESTAR MOSTRÁNDONOS UN NUEVO ENFOQUE EN LA MANERA DE INTEGRARSE, EN LA CUAL NO TOMAN COMO DADAS LAS CONDICIONES EN LAS CUALES DEBEN RELACIONARSE CON EL MUNDO, SINO QUE APROVECHAN LAS OPORTUNIDADES PARA INTEGRARSE DE UNA MANERA SUSTENTABLE.**

**PAÍSES COMO MÉXICO Y SUDÁFRICA HAN LOGRADO NO SÓLO EXTENDER LA CURVA EN MONEDA LOCAL CON SINGULAR ÉXITO SINO TAMBIÉN CONCENTRAR LA MAYOR PARTE DE SU FONDEO EN INSTRUMENTOS DENOMINADOS EN SUS PROPIAS MONEDAS. EL DEBILITAMIENTO DEL DÓLAR Y EL CONSIGUIENTE INTERÉS POR DIVERSIFICAR LAS CARTERAS DE INVERSIÓN HA JUGADO EN TAL SENTIDO A FAVOR DE ESTE PROCESO, PERMITIENDO QUE SU INCIDENCIA SEA CADA VEZ MAYOR.**

**EL MENCIONADO CONTEXTO DE INTERÉS CRECIENTE POR ACTIVOS EMERGENTES SE TRADUJO EN UNA SOSTENIDA APRECIACIÓN DE ESTE TIPO DE INSTRUMENTOS Y UNA MARCADA CONTRACCIÓN EN LOS SPREADS. LOS PRECIOS DE LOS CREDIT DEFAULT SWAPS PARA LAS ESPECIES MÁS LÍQUIDAS (POR EJEMPLO, BRASIL Y MÉXICO A 5 AÑOS) TAMBIÉN SE ENCUENTRAN EN NIVELES HISTÓRICAMENTE BAJOS, MIENTRAS QUE LOS MÁRGENES BID-OFFER DE ESTE MERCADO SON CADA VEZ MÁS ESTRECHOS INDICANDO UNA MAYOR LIQUIDEZ, UN MAYOR DESARROLLO Y UNA MENOR INCERTIDUMBRE PREVALECIENTE.**

**MI PREOCUPACIÓN ESTÁ DADA POR LA POSIBILIDAD DE UNA SOBREPREENCIACIÓN (DADO EL RIESGO AÚN IMPLÍCITO EN ESTE TIPO DE ACTIVOS) EN UN CONTEXTO DE ABUNDANTE LIQUIDEZ, Y LA CONSECUENTE VULNERABILIDAD ANTE CAMBIOS EN LAS EXPECTATIVAS CON LA CHANCE DE REVERSIÓN Y AJUSTE ABRUPTO EN LOS PORTAFOLIOS, QUE PODRÍA SER AUN MÁS DAÑINA SI EXISTE UN IMPORTANTE NIVEL DE APALANCAMIENTO EN EL MERCADO.**

**NO OBSTANTE, EN LOS ÚLTIMOS EPISODIOS DE VOLATILIDAD (MAYO-JUNIO DE 2006, FEBRERO-MARZO DE 2007), EL *SELL-OFF* FUE ACOTADO Y SE OBSERVÓ UNA RÁPIDA RECUPERACIÓN. ESTO FUE PARTICULARMENTE DESTACABLE ENTRE LOS ACTIVOS DE RENTA FIJA (ESPECIALMENTE EN AQUELLOS DENOMINADOS EN MONEDA LOCAL), LO QUE SEÑALA CIERTA MADUREZ ALCANZADA POR ESTE TIPO DE ACTIVOS COMO *ASSET CLASS*.**

**LA MAYOR IMPORTANCIA RELATIVA DE LOS PAÍSES EMERGENTES LLEVA NECESARIAMENTE A UN MAYOR INTERÉS POR LA "CALIDAD" DE LAS POLÍTICAS MACRO QUE APLICAN.**

**EN ESTE SENTIDO, EN LOS ÚLTIMOS AÑOS LOS PAÍSES EMERGENTES HAN PROFUNDIZADO SU GRADO DE DISCIPLINA MACROECONÓMICA Y SE ENCUENTRAN MEJOR PREPARADOS QUE EN LA DÉCADA PASADA PARA ENFRENTAR SHOCKS. ASÍ, EN GENERAL LOS PAÍSES EMERGENTES ESTÁN:**

- **APLICANDO POLÍTICAS MONETARIAS CONSISTENTES;**
- **MOSTRANDO CUENTAS PÚBLICAS MÁS ORDENADAS;**
- **REDUCIENDO LOS DESCALCES DE MONEDA;**
- **MEJORANDO LA REGULACIÓN Y SUPERVISIÓN FINANCIERA (HOY LOS SISTEMAS FINANCIEROS DE LOS PAÍSES EMERGENTES SE ENCUENTRAN MÁS SÓLIDOS, MOSTRANDO MENORES TASAS DE IRREGULARIDAD, CONSOLIDADO SUS GANANCIAS Y UBICÁNDOSE POR ENCIMA DE LAS RECOMENDACIONES INTERNACIONALES).**
- **APLICANDO RÉGIMENES CAMBIARIOS MÁS FLEXIBLES;**
- **REGISTRANDO CUENTAS EXTERNAS SUPERAVITARIAS;**
- **REDUCIENDO LOS NIVELES DE DEUDA;**
- **ACUMULANDO RESERVAS INTERNACIONALES;**
- **Y DESARROLLANDO EL MERCADO DE CAPITAL LOCAL.**

**EN EL CASO DE LA ACUMULACIÓN DE RESERVAS, EN UN ESTUDIO QUE RECIENTEMENTE PUBLICAMOS EN EL BANCO CENTRAL, OBSERVAMOS QUE LA ECONOMÍA MONETARIA INTERNACIONAL HA SIDO TESTIGO DURANTE ESTE ÚLTIMO DECENIO DE UN NOTABLE FENÓMENO: EL CRECIMIENTO EXPLOSIVO A NIVEL GLOBAL DE LAS RESERVAS**

**INTERNACIONALES, PRINCIPALMENTE MOTORIZADO POR LAS ECONOMÍAS EMERGENTES Y EN MENOR MEDIDA POR PAÍSES INDUSTRIALIZADOS.**

**ESTOS EPISODIOS DE ACUMULACIÓN SISTEMÁTICA OCURRIERON BAJO DISTINTOS TIPOS DE RÉGIMEN CAMBIARIO Y MONETARIO. AL MISMO TIEMPO, LA ESTERILIZACIÓN PARECE SER LA REGLA GENERAL, CON MAYORES NIVELES EN PAÍSES CON METAS DE INFLACIÓN PLENAS Y MENORES EN AQUELLOS QUE TIENEN ANCLAS DÉBILES. EN TANTO, LA ACUMULACIÓN FUERTE DE RESERVAS PARECE SER CARACTERÍSTICA DE PAÍSES EN UNA ETAPA DE DESARROLLO INTERMEDIO, EN LA CUAL BUSCAN REDUCIR SU VULNERABILIDAD MIENTRAS SE INSERTAN EN LOS MERCADOS FINANCIEROS INTERNACIONALES.**

**SON VARIAS LAS RAZONES QUE EXPLICAN ESTE COMPARTIMIENTO. POR UN LADO, RESULTA UNA ESTRATEGIA RAZONABLE PARA REDUCIR LA EXPOSICIÓN A SHOCKS EXTERNOS EN EL CASO DE LOS PAÍSES EN DESARROLLO DONDE LA PROFUNDIDAD FINANCIERA ES REDUCIDA, LA INESTABILIDAD CONTRACTUAL FRECUENTE Y EL ACCESO AL FINANCIAMIENTO CONTINGENTE EN CASO DE CRISIS SISTÉMICAS ESCASO.**

**ASIMISMO, LAS RESERVAS INTERNACIONALES SE UTILIZAN PARA EVITAR LA VOLATILIDAD EXCESIVA EN EL TIPO DE CAMBIO. ESTO ES IMPORTANTE PORQUE AÚN CUANDO VARIOS PAÍSES EN DESARROLLO SE DECLARAN OFICIALMENTE COMO FLOTADORES, EN LA PRÁCTICA SE COMPORTAN DE OTRA MANERA, UNA DE LAS RAZONES PARA ELLO ES PRECISAMENTE LA RELACIONADA A DICHA VOLATILIDAD Y EL CONTAGIO.**

**NUESTRO DESAFÍO COMO REGIÓN CONSISTE EN APROVECHAR ESTA FASE FAVORABLE PARA IMPLEMENTAR POLÍTICAS QUE PERMITAN UNA TRAYECTORIA DE CRECIMIENTO MÁS ESTABLE EN EL MEDIANO Y LARGO PLAZO Y QUE PERMITAN REDUCIR LA VULNERABILIDAD MACROECONÓMICA.**

**LOS CICLOS DE CRECIMIENTO ESPASMÓDICO SEGUIDOS DE CRISIS QUE HAN EXPERIMENTADO LOS PAÍSES DE NUESTRA REGIÓN NO SON INOCUOS, SINO QUE HAN TENIDO NOTABLES COSTOS EN TÉRMINOS DE LOS INGRESOS DE NUESTRA POBLACIÓN –LA PRODUCTIVIDAD MUNDIAL AVANZA SIN ESPERAR NUESTROS VAIVENES-. ESTAS OSCILACIONES MUCHAS VECES HAN TENIDO SU CORRELATO EN PROCESOS DEVASTADORES, ESPECIALMENTE PARA LOS SECTORES MÁS DESPROTEGIDOS DE LA SOCIEDAD Y SIN ACCESO A INSTRUMENTOS FINANCIEROS SOFISTICADOS.**

**SI COMPARAMOS, POR EJEMPLO, EL CRECIMIENTO ECONÓMICO A TRAVÉS DEL TIEMPO DE ASIA Y AMÉRICA LATINA PODEMOS OBSERVAR UN PATRÓN MUCHO MÁS ESTABLE EN LOS PAÍSES DE ASIA QUE SE REFLEJA EN NIVELES DE INGRESO Y DESARROLLO ECONÓMICO MUY SUPERIORES. EN ESTE MARCO ES IMPORTANTE CONSTRUIR ESTABILIZADORES AUTOMÁTICOS DEL CICLO INTERNO, Y MECANISMOS DE RESGUARDO FRENTE A LA VOLATILIDAD MACROECONÓMICA.**

**MUCHAS VECES CUANDO VIVIMOS UN SHOCK POSITIVO, HA SIDO UNA TENTACIÓN TOMARLO COMO DE DURACIÓN INDEFINIDA, OLVIDANDO QUE UNA POSIBLE REVERSIÓN NUNCA PUEDE DESCARTARSE. DEBEMOS TENER SIEMPRE PRESENTE QUE EL CICLO ES, EFECTIVAMENTE, UN FENÓMENO TRANSITORIO, Y TRABAJAR PARA PODER PONER EN PRÁCTICA POLÍTICAS ANTICÍCLICAS ROBUSTAS. EN ESTE SENTIDO, CREO QUE HEMOS INTERNALIZADO EL CONCEPTO DE INTERTEMPORALIDAD Y HOY ESTAMOS ESPECIALMENTE DISPUESTOS A MIRAR *ACROSS THE CYCLE*, PENSANDO EN LOS POSIBLES ESCENARIOS MÁS ALLÁ DE LA FASE POR LA QUE ESTAMOS ATRAVESANDO.**

**LA CLAVE ESTÁ EN FORTALECER LOS PILARES DE LO QUE PODRÍAMOS DENOMINAR EL *NUEVO PARADIGMA ECONÓMICO REGIONAL* EN AMÉRICA LATINA: SOLVENCIA FISCAL, PRUDENCIA MONETARIA, POLÍTICA COMERCIAL EXPORTADORA, REDUCCIÓN DEL ENDEUDAMIENTO EXTERNO NETO Y PROFUNDIDAD FINANCIERA; PERO SOBRE TODO, EN PREVER EN TODOS LOS FRENTES POLÍTICAS QUE NOS PERMITAN REDUCIR LA VULNERABILIDAD MACROECONÓMICA QUE HISTÓRICAMENTE NOS CARACTERIZÓ Y ASÍ PODER ALCANZAR EL CRECIMIENTO ECONÓMICO SOSTENIDO CON INCLUSIÓN SOCIAL.**

**MUCHAS GRACIAS.-**





# Jornadas Monetarias y Bancarias, 2007

**Erkki Liikanen**

Globalization: declining risks but increasing uncertainty?

4 y 5 de Junio de 2007



Governor Erkki Liikanen  
Bank of Finland

Buenos Aires, 4 June 2007

## **2007 Money and Banking Conference hosted by the Central Bank of Argentina**

### **"Monetary Policy Under Uncertainty"**

Session on **Underlying Forces in the Global Economy**

**Speech by Governor Liikanen: "Globalization: Declining Risks but Increasing Uncertainty?"**

#### **Introduction**

Globalization is the big story of our times. Forces of globalization change the domestic inflation process and the way in which monetary policy measures are transmitted in the domestic economy.

The uncertain nature and magnitude of these changes makes the job of the central bankers more demanding. But at the same time, globalization has helped central bankers by exerting some dampening effect on prices.

On balance, the low and stable inflation we have witnessed in recent years gives confidence that central bankers can cope with this uncertain and changing operating environment as long as the process of globalization remains orderly. Therefore, I will not today talk much about how globalization is changing the domestic inflation process and the transmission mechanism of monetary policy.

Instead, in my remarks today, I will mainly talk about how globalization is changing the landscape of risks and what this implies for central banks and other policymakers. In particular, I will discuss the somewhat paradoxical phenomenon of a broad-based decline in risk premia at the time when uncertainty, i.e., those risks that cannot be readily quantified, may in fact be increasing.

## **Globalization: the big picture**

It is often claimed that there is nothing new about globalization. While this may be true in some sense, it seems to me that the current phase of globalization differs markedly from the previous ones in its extent, speed, intensity and impact.

It is not possible to pinpoint the exact start of the current phase of globalization. But still, we can say that, the demise of centrally-planned economies—most notably the internal transformation of China and the dissolution of the Soviet Union unleashed the forces of globalization which had been building up during the 1980's.

The obvious result of this was that the former communist block countries opened up and became integrated into the world economy. The failure of the centrally-planned economic models profoundly changed the political landscape in already democratic countries. Specifically, it enabled and prompted them to adopt increasingly market-oriented policies conducive to competition and improvements in productivity.

The point which I want to stress here is that, although globalization is nowadays often seen as an inevitable and irreversible "force of nature", its present phase was triggered by political events and needs some global institutions and international political support to be sustained.

If the collapse of central planning was the main trigger, then rapid advances in technology have been the main driving force behind globalization. In particular, the explosive development of information and communication technologies has played a central role. By reducing dramatically the cost of transporting and sharing information and services, it has made the world more interconnected and interdependent than any reasonable observer could have thought possible just 20 years ago.

## **Unprecedented economic benefits**

The economic benefits of globalization are clear and widespread. The ongoing global economic expansion is the longest in 30 years. The robust global growth is reducing the number of people living in extreme poverty. And, for the first time in decades, the average incomes of developing and developed countries are converging.

Forces of globalization have intensified competition and fostered rapid improvements in productivity; these factors have exerted downward pressure on prices. Financial globalization, in turn, has contributed to a broad-based decline in risk premia on various markets and asset classes, which has enabled much greater access to financing for households, firms and countries around the globe.

On the whole, despite many structural changes brought about by globalization, the economic environment has become more stable and seemingly more predictable. We have witnessed what has been rightly coined "the Great Moderation", a significant decline in variability of both output and inflation.

A significant part of the credit has been attributed to improved monetary policies. Institutional reform and thereby enhanced credibility of monetary policy has anchored inflation expectations, and this has been a major factor in ensuring the low level of long-term interest rates.

### **So why the rising anxiety?**

Despite these resoundingly positive effects, anxiety about globalization and uncertainty about its continued smooth progress is on the rise. One much-publicized source of concern is global current account imbalances and the risk of their abrupt and disorderly unwinding.

Moreover, two other "imbalances" seem to be emerging.

First, uneven distribution of benefits of globalization, combined with increased feeling of job insecurity, is starting to erode also middle classes' support for globalization in some countries, notably in the United States. This disillusionment of the key segment of the electorate raises the specter of protectionism.

Second, there are indications that the narrowing of risk premia observed in many markets and asset categories may not be fully on a sustainable basis. This implies the possibility of an abrupt and broad-based widening of risk premia. Given the unprecedented degree of financial interdependence, the consequences might be serious.

So, somewhat paradoxically, we are in a situation in which the baseline economic outlook remains benign, and many measurable risks remain low or are even receding, while uncertainty, i.e., those risks that cannot be readily quantified, timed, priced or hedged in the markets, may in fact be on the rise.<sup>1</sup>

It is this apparent dichotomy and its implications that I will focus on in the rest of my remarks. I will first look at in more detail the various forces that have been driving down the risk premia. Then I will discuss what implications and challenges the constellation of low risks and heightened uncertainty has for central banks. I will conclude by highlighting some broader policy implications.

### **Declining risk premia**

A broad-based compression of risk premia has been an important force in supporting global growth in recent years. Much of this decline in price of risks seems to have reflected developments that are on a sound basis.

- "The great moderation", lower volatility of output and inflation, has played an important role in reducing risk premia, in particular inflation risk premium. Central banks have clearly contributed to this by credibly anchoring inflation expectations.
- Whether reflecting a "savings glut" or "monetary overhang", the ample global supply of funds—as reflected in the growth of monetary aggregates and their counterparties—has also contributed to lower long-term interest rates, as well as the compression of risk premia more generally.
- Improved market liquidity, reflecting a host of different factors, such as development of market infrastructure, broadening of investor base, and more prudent macroeconomic policies in many emerging market countries, has reduced liquidity risk premia.
- More prevalent use of portfolio diversification has increased demand for assets that have relatively high unsystematic risk, pushing down the price of idiosyncratic risks in many asset categories (e.g. equities and sovereign debt). This is reflected especially in emerging markets.

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<sup>1</sup> According to Frank H. Knight's famous distinction, "*risk*" refers to situations where the decision-maker can assign mathematical probabilities to the randomness which he is faced with (e.g., risk premia and volatility based on historical data), while "*uncertainty*" refers to situations when this randomness cannot be expressed in terms of specific mathematical probabilities (e.g., disruptive unwinding of global imbalances, possibly accompanied by unprecedented widening of risk premia). To put it slightly differently, uncertainty is a type of ambiguity where the probability of an act or outcome cannot be calculated whereas a risk has some element of calculation - there is a certain probability of some *known* act or outcome occurring.

- Financial innovation, such as unbundling of risk with the help of some time complex derivatives, has improved the allocation of risk bearing and increased demand for many types of risky assets. This has exerted downward pressure on various risk premia, most notably credit risk. Similarly, increased ability to transfer risks through securitization has reduced risk premia.

Most of these developments are welcome and reflect improved fundamentals and development and innovation in financial markets. At the same time, some of these may not be permanent and others may help feed some unsustainable developments with systemic implications. As such, they need careful monitoring.

There are also some more worrying developments that have compressed risk premia. One such development has been "search for yield", or higher returns in riskier assets, in its many manifestations.

- In some cases, declines in risk premia arising from search for yield may have been reinforced by circular relationships between cause and effect. That is, perceptions about lower risks may have shaped the reality, leading to self-reinforcing cycles of narrowing risk premia.
- There is a risk that modern quantitative risk management tools could in some cases be contributing to excessive compression of risk premia. If used mechanically, falling volatility leads to an increase in a trader's risk budget, which in turn may encourage further risk taking, thus contributing to the compression of risk premia. Measuring on the basis of past developments, statistical tools may also underestimate risks stemming from rare, but big events - such as natural catastrophies or major political events.
- In some cases investment managers' incentive structure leads a rational manager to take knowingly excessive risks.<sup>2</sup> Raghuram Rajan has written and spoken extensively about how some investment managers may be tempted to take excessive hard-to-quantify "tail risks" that pay positive return most of the time to compensate for relatively rare but very negative returns. The situation is exacerbated because other managers may take on board increased risk just in order to avoid performing poorly relative to their peers.

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<sup>2</sup> See e.g., Rajan, R.G. (2005); "Has Financial Development Made the World Riskier", paper presented at the Jackson Hole symposium sponsored by the Federal Reserve Bank of Kansas City, August 25-27, 2005; and Rajan, R.G. (2007); "Financial conditions, alternative asset management and political risks: trying to make sense of our times", Banque de France, Financial Stability Review – Special issue on hedge funds, No. 10, April 2007.

It is impossible to know how wide-spread this type of unhealthy risk taking is, or what is its significance in quantitative terms. However, this type of behavior is likely to be most prevalent during times of abundant liquidity and general stability, i.e., conditions that we currently have. Moreover, it seems likely that the volume of funds managed by managers with potentially unhealthy incentive structures has grown with the increased popularity of hedge funds.

### **But increased uncertainty about durability of benign conditions?**

To sum up, there has been a broad-based decline in many measurable risks and much of this development reflects factors that are welcome and sound. Moreover, the markets seem to expect that global economic conditions will remain broadly favorable going forward. At the same time, one could argue that uncertainty may in fact have increased.

One source of uncertainty is that the decline in risk premia may have become excessive due to unhealthy under-pricing of risks. The increasingly integrated global financial markets imply that a major retrenchment of risk taking in one market has a potential to feed rapidly to other markets. Therefore, a large enough shock could bring about a broad-based and potentially disruptive widening of risk premia.

A related concern is that the resiliency of the new global financial system in the face of a major shock remains untested. Financial innovations have enabled transferring various risks to the investor with the biggest appetite for a particular type of risk. During calm and predictable market conditions, this compresses risk premia. At the same time, financial innovations may well have created new types of systemic risks that will only become evident in more turbulent conditions.

Finally, the combination of large global imbalances and signs that political support for globalization may be beginning to wane is a clear cause for concern and a source of uncertainty.

We should avoid sounding alarmist, but one of the lessons of history is that when the consensus view is becoming very optimistic, a prudent person should become worried.

## Implications for central banks

What does this dichotomous view of the world, a benign baseline underpinned by continued smooth globalization and the apparent increase in uncertainty mean for central banks?

I will look at this only from two different angles. First, what would an increased uncertainty and possibly more adverse operating environment imply for central banks? And second, I will briefly touch upon the role of monetary analysis in the apparently low risk environment characterized by heightened uncertainty.

### *Key trends in central banking: increased independence and transparency*

During the past couple of decades there has been a clear trend towards greater central bank independence. The increased independence has naturally been accompanied with mandates that have given more clarity to central banks' objectives and required from them increased democratic accountability and transparency.

Over time, many central banks have chosen to define their objectives more narrowly than their mandates in some cases would absolutely require, including through the adoption of quantitative definitions of price stability, or numerical inflation targets.

There has also been a general trend towards greater transparency. Central banks have become much more open about their analysis and decision making. In general, the central banks have sought to become more predictable. To this effect, many central banks have started to publish macroeconomic forecasts, together with their underlying assumptions and other supporting analysis. Central banks have also increased transparency by holding press conferences following the meetings of their decision making bodies, publishing minutes, or releasing written statements explaining the policy stance.

Much of the recent debate has centered on the issue of how and to what extent central banks should communicate on their views and intentions regarding future interest rates. A few have started to publish their views on the future path of short term interest rates. Most central banks have, however, opted for qualitative statements regarding their future intentions.

To sum up, in the past couple of decades we have witnessed a trend towards independent central banks that are becoming increasingly specific and open regarding their objectives, analysis and intentions. In a significant and successful act of delegation, political decision-makers have been giving central banks more leeway to act, while central banks have accepted - not involuntarily - constraints of various degrees of rigidity regarding their policy goals.



Are we likely to see these trends continue going forward, even in the face of heightened uncertainty? To answer this question, it is useful to recall the main forces that have underpinned these trends during the current phase of globalization.

### *Role of monetary policy research*

The evolution of central banking during the past two decades has been greatly influenced by findings of monetary policy research. The findings have underscored the need to insulate monetary policy decision making from political pressures and the importance of clearly defined objectives in stabilizing inflation expectations. Moreover, after research in the early 1980s suggested that central banks could influence the real economy only by being unpredictable, it is nowadays generally accepted that central banks should focus on achieving price stability, and there it pays to be predictable.

Here it is important to note that although more transparency does not imply any explicit commitment from the part of a central bank, transparency goes hand in hand with consistency. Therefore, in many respects, the tradeoff between transparency and opaqueness is similar and parallel to the more "traditional" tradeoff between (binding) rules and discretion.

### *Role of economic and political operating environment*

During the current phase of globalization central banks have greatly benefited from a confluence of benign economic and politically environment.

As noted earlier, central banks clearly contributed to the Great Moderation. However, the causality ran also the other way round. Namely, by making the central banks' economic environment increasingly predictable, the Great Moderation driven by forces of globalization enabled and encouraged central banks to become more transparent and specific about the objectives and intentions.

Increasingly benign economic environment played also a role in the trend toward more independent central banks. This is because without the increasingly predictable environment brought about by the Great Moderation, political decision makers would have been less likely to put their trust in the central banks ability to deliver on their mandates at politically acceptable cost.

Against this background, one could argue that if the central banks' operating environment were to become more uncertain and less benign, we could well expect to see a reversal in trends described above.

The increase of political pressure in less benign and less predictable environment is inevitable and largely beyond central banks' control. However, it underscores the need to give central bank independence solid legal basis when times are good. Without the support of solid de jure independence, de facto independence enjoyed during "fair weather" may vanish with arrival of "rainy days". But de jure institutions are durable only if supported by a well-rooted policy culture and a general consensus of the public at large. When central banks invest in public trust by demonstrating their transparency and accountability, and by promoting economic literacy, they are in fact investing in financial and macroeconomic stability "for the rainy day".

### *Financial stability and role of monetary analysis*

Financial globalization and the related phenomenon of declining risk premia have required central banks to attach increasing weight on financial stability considerations.

Therefore, let me just make a few points about financial stability from central banks' perspective, and the role of monetary analysis in this context.

One set of important issues relates to the need to ensure that central banks' role in, and strategies for crisis management and resolution are sufficiently clear. While moral hazard considerations demand some constructive ambiguity vis-à-vis the markets, it is imperative that the rules of the game and the division of responsibilities is made clear among the relevant authorities.

Another set of important issues relates to crisis prevention. While most issues in this area belong to the realm of supervision, in which central banks' competences vary widely, I would like to highlight one aspect that is directly related to monetary policy—namely that of the role of monetary analysis.

As we all know, instability in the short-run relationship between money and inflation has resulted in much pressure to downgrade the role of monetary analysis in monetary policy deliberations at various central banks.

I concede that the relative value of monetary analysis may well have declined with respect to analysis of short-term pressures on price stability. At the same time, monetary aggregates, credit growth, asset prices etc. contain valuable information that remains relevant for assessing longer-term future inflation developments and, importantly, potential emerging threats for financial stability.

First, I would argue that "money matters" especially during conditions of possibly excessively compressed risk premia. Indeed, here I would like to quote Charles Goodhart who in his recent paper notes how in booms "*official policy rate may rise, but risk premia may fall. Against this background it would be short-sighted not to cross-check for the combined effect that a combination of official policy measures and changing risk aversion may have by looking carefully at the time path of the monetary aggregates.*"<sup>3</sup>

Second, uncertainty underscores the need for a broad-based monetary analysis that takes into account other relevant economic information. In addition to monetary aggregates, and perhaps even more importantly, such an analysis needs to pay particular attention to credit developments. Clearly, the rate and composition of credit expansion can contain valuable information about factors affecting developments of risk premia. Moreover, such analysis can offer hints about possible build up of uncertainty.

### **Broader policy implications**

While the exact anatomy of the next major crisis can not be known in advance—otherwise the crisis could be avoided—it seems reasonable to assume that one feature could well be a possibly broad-based reversal in risk premia resulting in financial instability. Moreover, the policymakers have to be prepared for the various challenges arising from weaker economic growth.

We have a shared obligation to address tensions that could conceivably trigger adverse outcomes. Much can also be done to minimize the damage caused by adverse events by increasing the resilience of the systems and ensuring orderly resolution of crises. This calls for strengthening policies and institutions, both at international and national levels.

#### *International level*

The multilateral arrangements, which play an important role in underpinning global growth, need to be safeguarded and strengthened.

It goes without saying that we need a successful completion of the WTO Doha round.

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<sup>3</sup> Goodhart, C.A.E (2007) "Whatever became of the monetary aggregates?", National Institute Economic Review, 2007; 200; 56.

I would also want to emphasize the importance of the IMF. First, despite its shortcomings, the IMF's surveillance can play a role in reducing the risk of disruptive adjustments, including as regards global imbalances. Its FSAP (Financial Sector Assessment Program) contributes to more resilient financial systems. Moreover, the IMF can provide a unique forum for crisis resolution. As we all know, many important reforms, both related to the tools at the IMF's disposal as well as the IMF's governance structure, are now at a critical juncture and compromises are needed to make progress.

Another issue is the need for strengthened supervision of cross-border financial institutions. We need more clarity on how to divide the tasks, powers, and responsibilities between different countries in supervising cross-border financial institutions and dealing with these institutions in financial distress. We have been making progress on these issues within EU, but more work is clearly needed within EU as well as at the more global level. In particular we have to think of ways to close the gap, on the one hand, between legal powers and mandates and, on the other hand, the abilities and responsibilities of the home and host supervisors. (These issues are already particularly relevant for the Nordic and Baltic region where cross-border ownership of financial institutions is perhaps ahead of that anywhere else in the world.)

#### *National level*

There are some issues that are relevant for all countries, despite big differences in country-specific circumstances.

First, there is a need to reduce fiscal vulnerability through sufficient fiscal consolidation and prudent debt management practices. In the event of a crisis, fiscal balances could be hit through many channels: weaker economy, higher debt service as a result of higher interest rates and possibly also weaker currencies. Moreover, possible problems in the domestic financial systems could also force governments to incur additional liabilities.

Second, there is a need to reduce financial sector vulnerability through enhanced supervision. One key challenge related to the financial sector is to ensure that domestic private sector balance sheets are resilient enough to withstand interest rate shocks.

Some issues are of particular relevance to those countries that are still in the process of fully integrating to the global financial system. In other words, those countries whose access to the global financial system could be interrupted, or become severely constrained at a time of a crisis.

The only way to fully and securely integrate into the global financial system is to build strong enough institutional infrastructure that ensures a well-functioning domestic financial system, even in times of stress. Rick Mishkin, who has worked extensively on globalization and financial development, put it well when he argued that the following steps need to be taken to ensure a well-functioning financial system: i) develop strong property rights; ii) strengthen the legal system; iii) reduce corruption; iv) improve the quality of financial information; v) improve corporate governance; and vi) get government out of the business of directing credit.<sup>4</sup>

Clearly, many countries here in Latin America have in recent years made impressive progress in implementing institutional reform on many areas mentioned in this list. For this, and for increasingly prudent macroeconomic policies, the markets have rewarded them handsomely in the form of declining cost of funding and more secure access to international and domestic capital markets. These achievements should be consolidated.

### **Concluding remarks**

In my remarks today, I have discussed the important role of uncertainty in the interplay between monetary policy and its economic and political operating environment.

During the current phase of globalization central banks have benefited from a very benign economic and political environment. This benign environment, characterized by declining risks and increased predictability, has underpinned and strengthened the trends toward more independent and transparent central banks.

Current economic outlook remains generally favorable and many measurable risks remain low or are even receding. However, I have argued that uncertainty, or those risks that cannot be readily quantified, may in fact be on the rise.

If this uncertainty were at some point to translate into a more unpredictable and less benign operating environment, we could expect to see breaks or even reversals in some of the key trends I have discussed. This could apply to development of risk premia, evolution of central banking, and the political support for domestic and multilateral institutions that have lent support to the current phase of globalization.

This all emphasizes the need to take advantage of the current favorable conditions by solidifying the gains made by strengthening institutions that have been underpinning the favorable developments, both at the global and national level.

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<sup>4</sup> See Mishkin F.S. (2006), "The Next Great Globalization, How Disadvantaged Nations Can Harness Their Financial Systems to Get Rich", Princeton University Press.

The founder of Intel, Andy Grove, titled his memoirs: "Only the paranoids survive"

Central banks' operating environment appears more stable and predictable than that in the IT business. Nevertheless, we have to avoid the risk of becoming complacent. Therefore, we have to be willing to continuously question and reassess our analysis and the way in which we conduct monetary policy.

In this regard, events such as this where central bank practitioners, members of academia and representatives of financial institutions can come together to exchange views about the topical issues/challenges are most valuable.

With these remarks I wish to conclude and thank our hosts for organizing this excellent conference.



# Jornadas Monetarias y Bancarias, 2007

**José Viñals**

Globalization, innovation and the conduct of monetary policy

4 y 5 de Junio de 2007

## Globalisation, innovation and the conduct of monetary policy

**José Viñals**

Deputy Governor, Banco de España

BCRA 2007 Money and Banking Conference “Monetary Policy Under Uncertainty”

Buenos Aires, Argentina

June 4-5, 2007



## Outline

### 1. Globalisation and innovation: two-way links

### 2. Globalisation and monetary stability

- Globalisation and productivity
- Globalisation and inflation

### 3. Challenges for monetary policy

## 1. Globalisation promotes innovation



- ❑ **Expansion of goods trade introduces stronger competitive pressure and bigger rewards to innovation**
  - “Survival of the fittest”
  - Economies of scale in a global world
  
- ❑ **FDI flows allow technology transfer**
  
- ❑ **Openness of capital account allows easier financing of investment.**
  
- ❑ **Openness of financial sectors promotes adoption of best practices and improved corporate governance**
  
- ❑ **But this is conditional on good domestic policies, to reap their benefits**
  - Standing on the shoulders of giants vs. having a giant stand on your shoulders

## Innovations allow and spur global integration

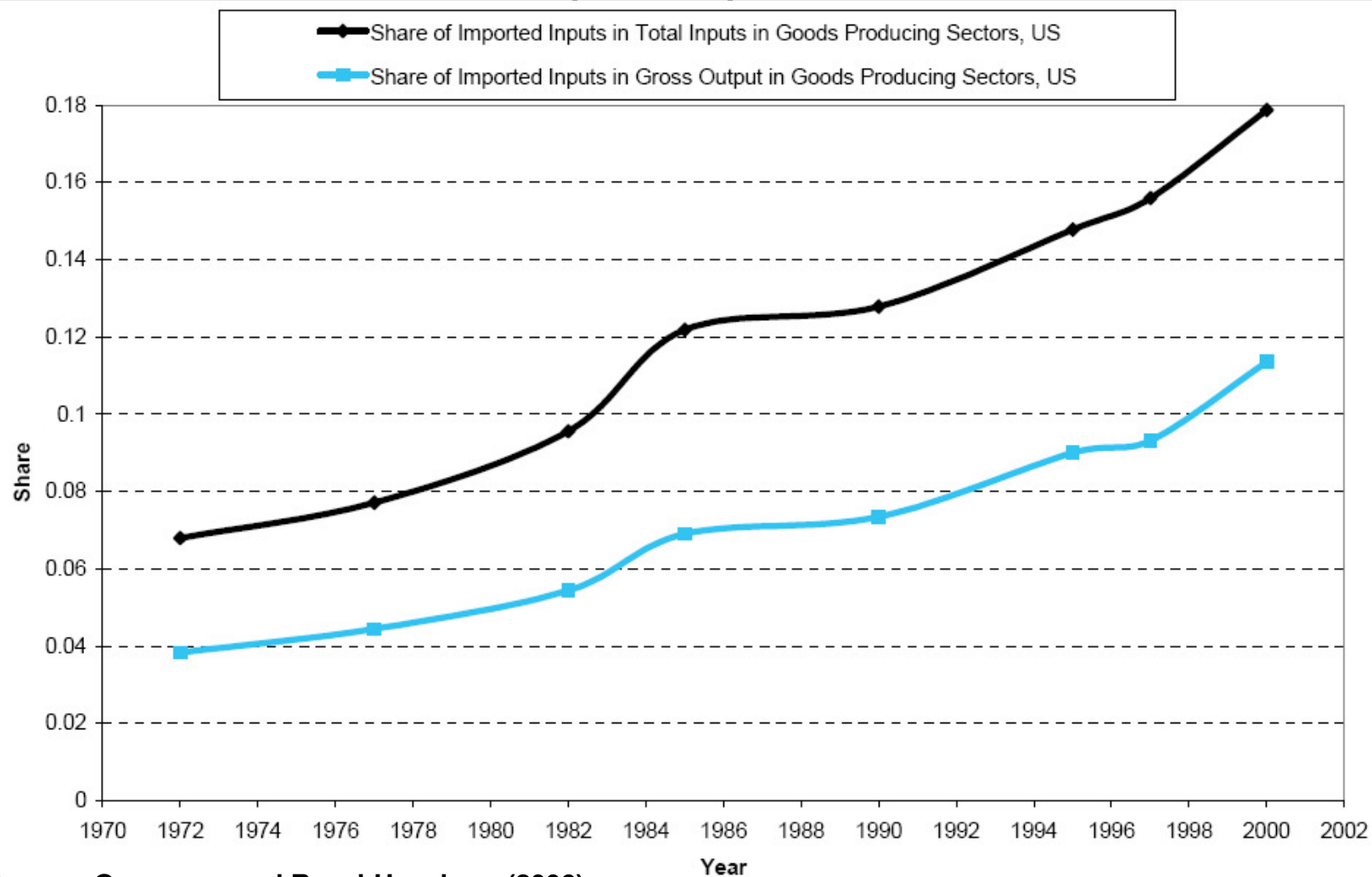


- ❑ **Advances in transportation allow easier movement of goods (“death of distance”)**
  - From steam ship and railroads to containerisation in modern times
  
- ❑ **Advances in ICT allow breaking up the production chain (“trade in tasks”)**
  - Surge of trade in services, outsourcing/off-shoring
  
- ❑ **Financial innovations also spur real and financial globalisation**
  - Example: the introduction of the euro
  
- ❑ **Again, these effects are multiplied by good policies**

## Increase in outsourcing / off-shoring



### US: Imported inputs



Source: Grossman and Rossi-Hansberg (2006)

## 2. Globalisation and monetary policy



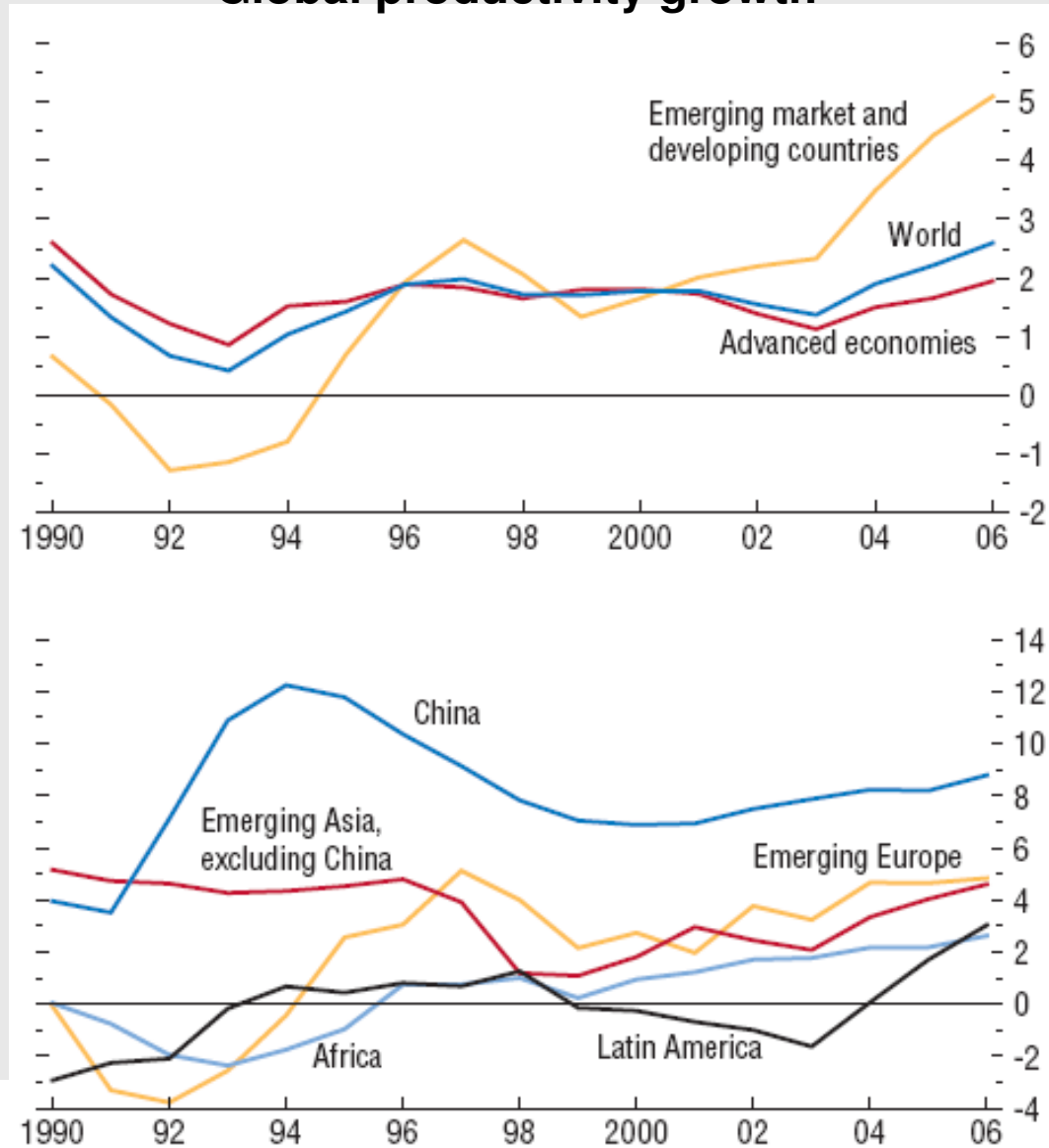
### ❑ Globalisation may impact variables of relevance for the conduct of monetary policy

- Productivity and potential output
- Inflation

## Fact: global productivity growth



### Global productivity growth



## Globalisation and productivity (thus, potential output)



### ❑ Expanded trade increases productivity

- Directly and through incentives for more innovation

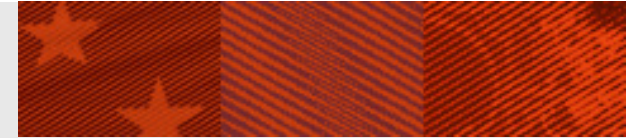
### ❑ Open capital account increases productivity

- Capital inflows and outflows allow productivity increases
- Also spreads innovations and fosters new ones, additional effect on productivity

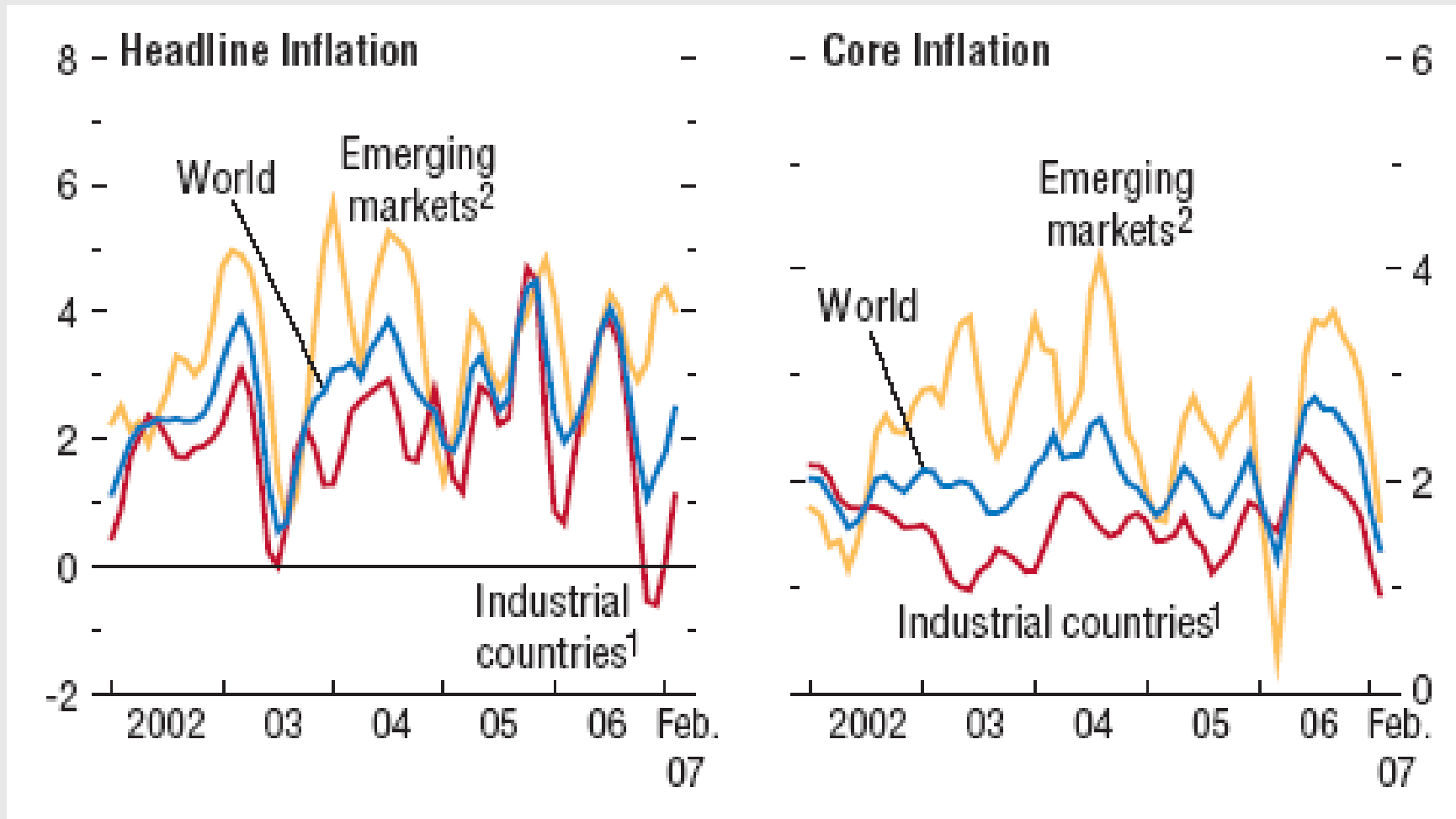
### ❑ Another factor that promotes productivity: agglomeration of economic activity

- Persists in spite of lowering transportation and communication costs
- Increased coastal urbanisation and the “East-Asia manufacturing corridor”

## Fact: moderate global inflation in the last expansionary cycle



### Global inflation



Source: IMF WEO, 2007



## Globalisation and inflation

### ❑ Does globalisation have an impact on inflation?

- Transitory but persistent (continuing changes in relative prices)
  - *Commodities vs. manufactures*
- Other impacts may be more permanent
  - *Competition, wage and price formation, discipline*

### ❑ Channels

- Increased trade in goods
- Increased trade in tasks
- Immigration
- Capital account liberalisation

### ❑ But remember that inflation is, in the long run, a monetary phenomenon

- Key role played by anti-inflationary policies to reduce inflation in recent past (CB independence, commitment to price stability, better strategies)

### 3. Challenges for monetary policy

#### ❑ Globalisation makes a central banker's task easier

- Insofar as it contributes to low inflation
- Insofar as it disciplines monetary policy

#### ❑ ... but it also makes it harder at the same time

- Globalisation increases uncertainty:
  - *How to measure inflationary trends?*
  - *Changed price-unemployment dynamics?*
  - *How to measure output gaps?*
  - *What neutral interest rate?*
  - *Has the monetary transmission mechanism changed?*

## Sources of increased uncertainty:

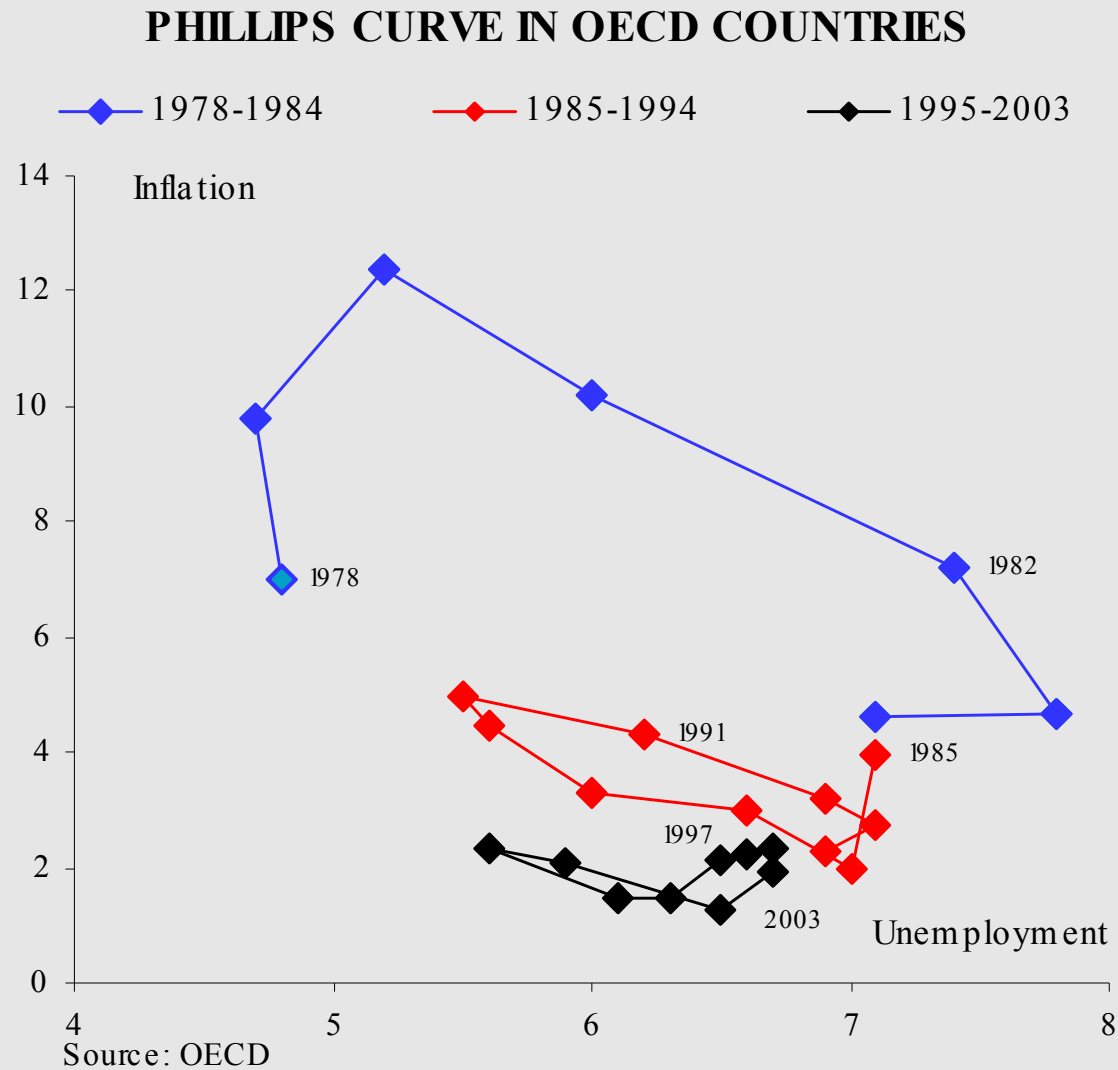
### I. Measuring inflationary trends



- ❑ **What is the right choice of price index to measure inflationary trends?**
  - Headline vs. core
  - Which core?

## Sources of increased uncertainty: II. Inflation-unemployment dynamics

### □ A flatter Phillips Curve?

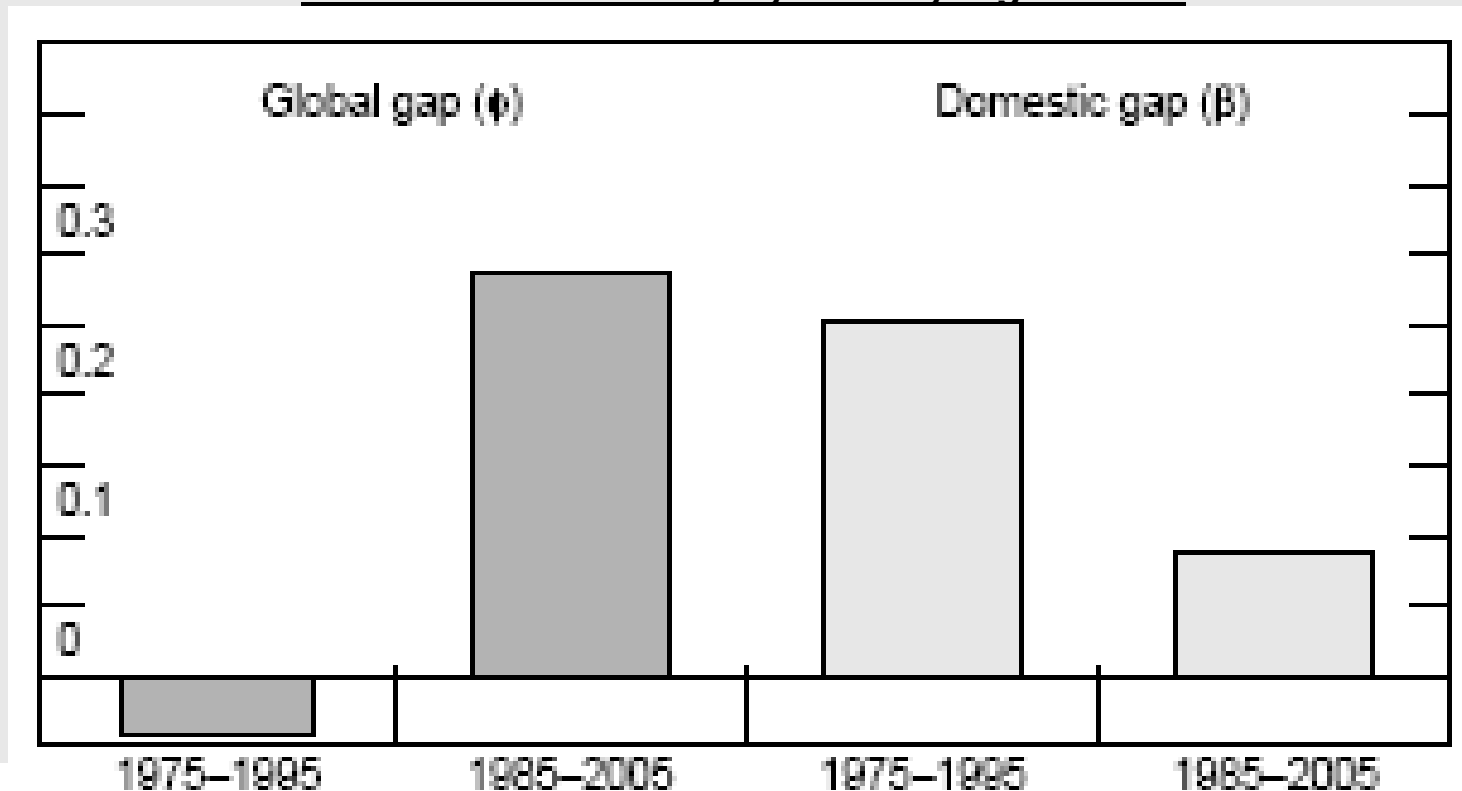


## Sources of increased uncertainty: III. Measurement of output gap

### □ At least two dimensions of uncertainty:

- How to measure output gaps?
- What is the relative importance of domestic vs global output gap?

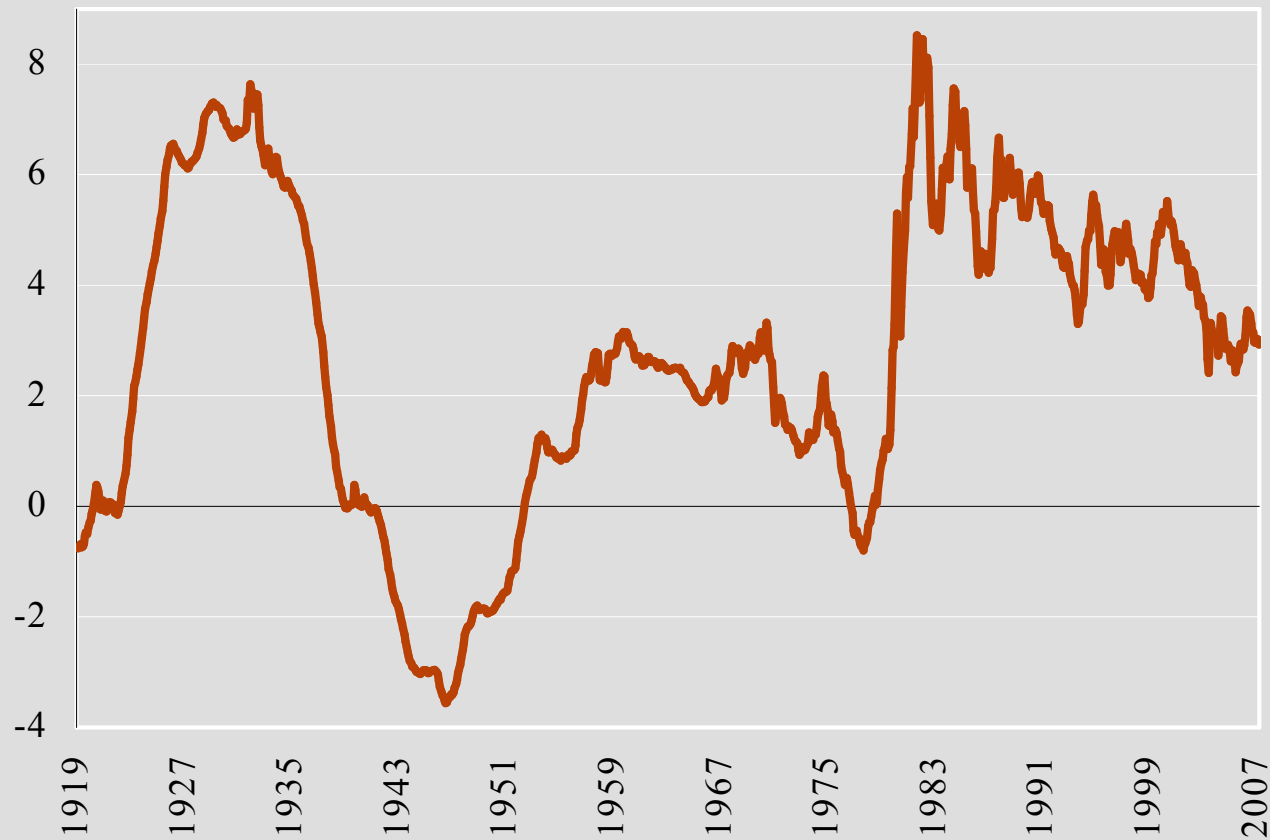
**Average Phillips Curve parameter change  
across time in country-by-country regressions**



## Sources of increased uncertainty: IV. What is the neutral interest rate?



**US: REAL 10-YEAR INTEREST RATES (a)**



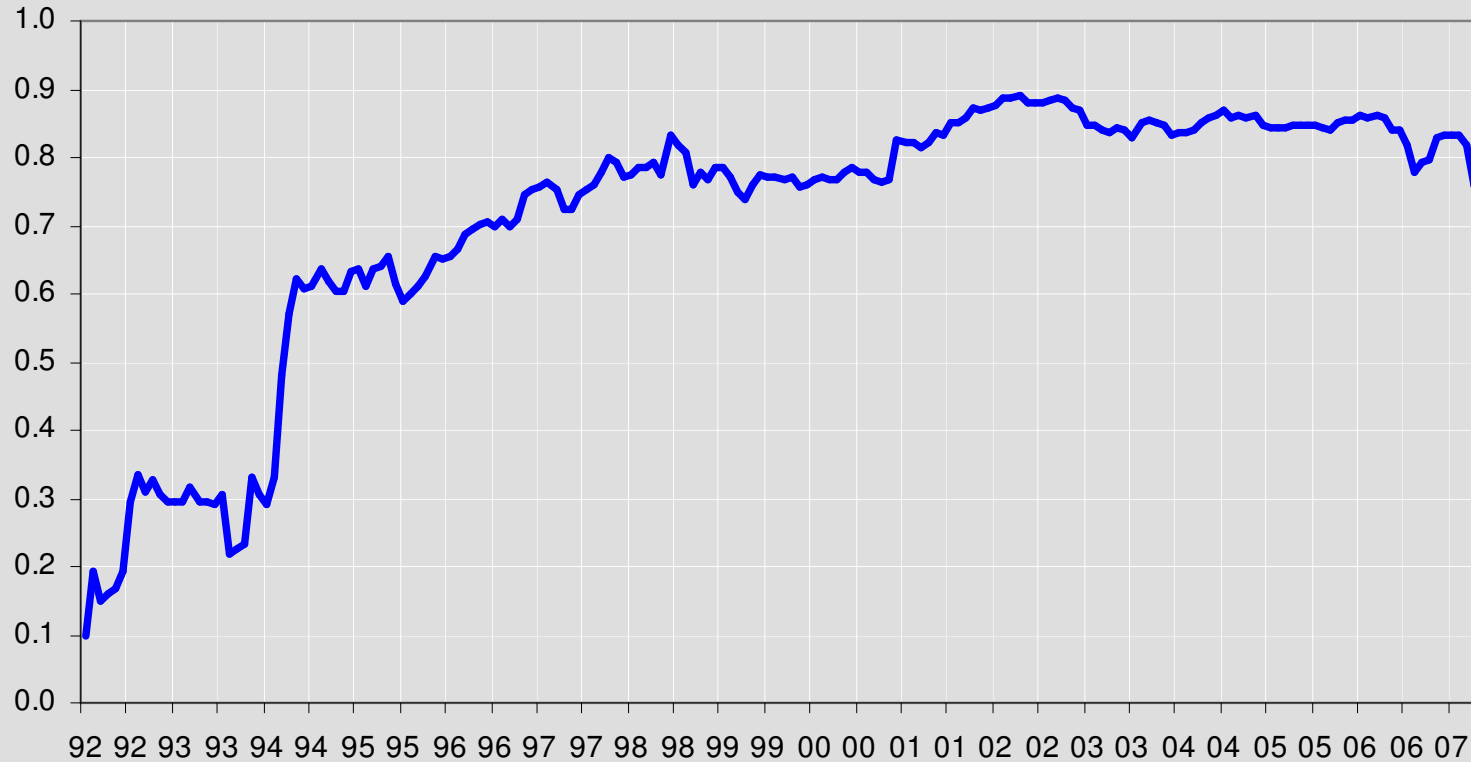
BANCODEES SOURCE: Bureau of Labor Statistics, St. Louis Fed Economic Research and Consensus.  
Eur (a) Nominal rates deflated by 10-year moving average of CPI inflation.

## Sources of increased uncertainty: V. A changing transmission mechanism?



### ☐ Increased transmission of international financial conditions?

**NEW ZEALAND: CORRELATION OF DOMESTIC LONG-TERM  
INTEREST RATES WITH US RATES\***



\*Monthly changes using a 36 month moving window. Source: Datastream

## Conclusions and monetary policy implications (I)



- Globalisation and sound, stable policies reinforce each other
- Globalisation does not reduce the ability of monetary policy to control inflation over the long run
- No need to rethink the monetary policy framework because of globalisation, although new uncertainties are created.
- Monetary authorities should think global, even if they continue to act domestically
- In a more uncertain environment, be cautious



## Conclusions and monetary policy implications (II)



### ❑ **Avoid complacency**

- Beneficial effects of globalisation on inflation may be weaker in future
  - Building up of financial imbalances in a low inflation and globalisation context
  - A flatter Phillips curve could make policy errors both easier to commit and more costly to repair
- ⇒ Prevention even more important than before

### ❑ **Take advantage of low inflation and economic bonanza to prepare for more difficult times**

- More firmly anchoring of expectations
  - *Central bank independence*
  - *Determined pursuit of price-stability oriented monetary policies*
- Improve overall macro policy framework



JOSÉ VIÑALS

THANK YOU FOR YOUR ATTENTION

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# Jornadas Monetarias y Bancarias, 2007

**Eswar Prasad; Raghuram Rajan y Arvind Subramanian**

Foreign capital, financial development, and economic growth

4 y 5 de Junio de 2007

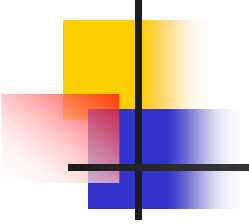
# Foreign Capital, Financial Development, and Economic Growth



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Eswar Prasad, Raghuram Rajan, and Arvind  
Subramanian

# Outline

- 
- Traditional view
    - Poor countries are starved of capital
    - Marginal productivity of capital should be high
    - Opening up to foreign capital should increase investments and move poor countries faster to their steady state, thereby increasing their growth rates, at least temporarily.
  
  - Implications
    - Capital should flow from rich to poor countries
    - Amongst poor countries, capital should flow to the most productive
- Also, for poor countries
- Capital inflow should be strongly positively correlated with growth (and investment)
- **Are these implications observed in the data? If not, why not?**

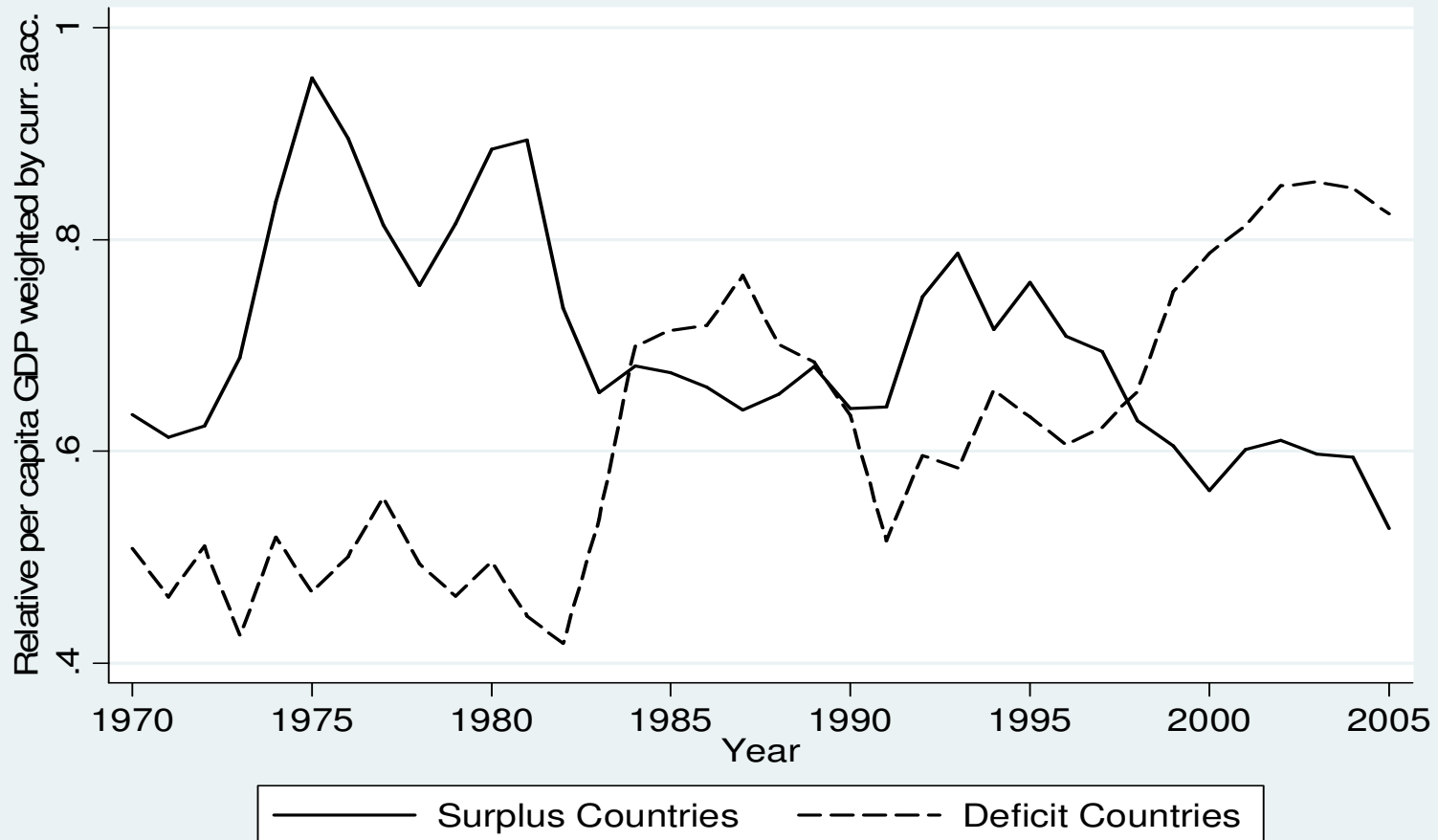


# Facts

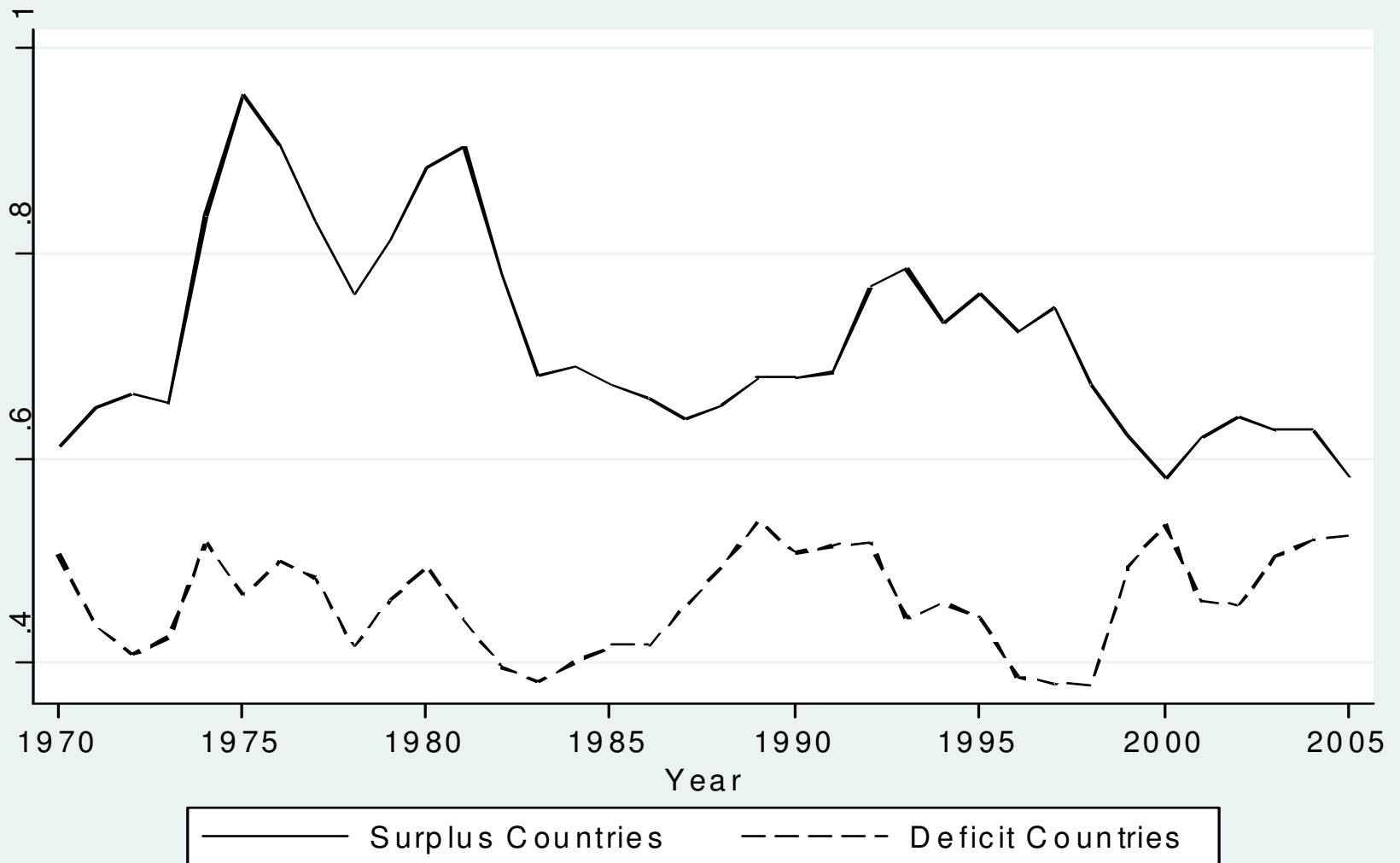
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- Capital not just not flowing to poor, flow reversing in recent times.
- Not just a US/China phenomenon

## Figure 2A. Relative Incomes of Capital-Exporting and Capital-Importing Countries



# Relative Incomes of Capital-Exporting and Capital-Importing Countries: Leaving out the US and China





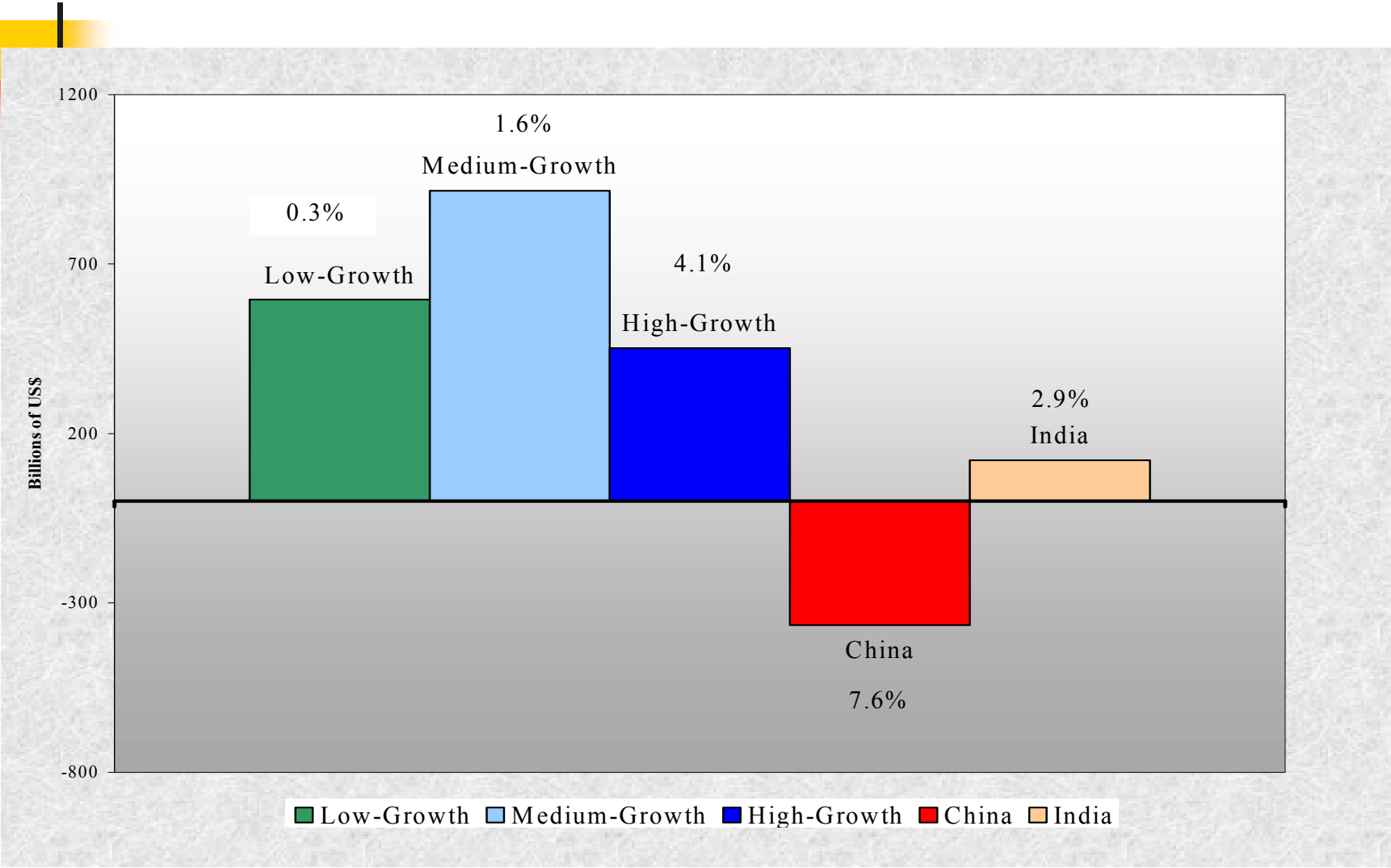


## Facts contd.

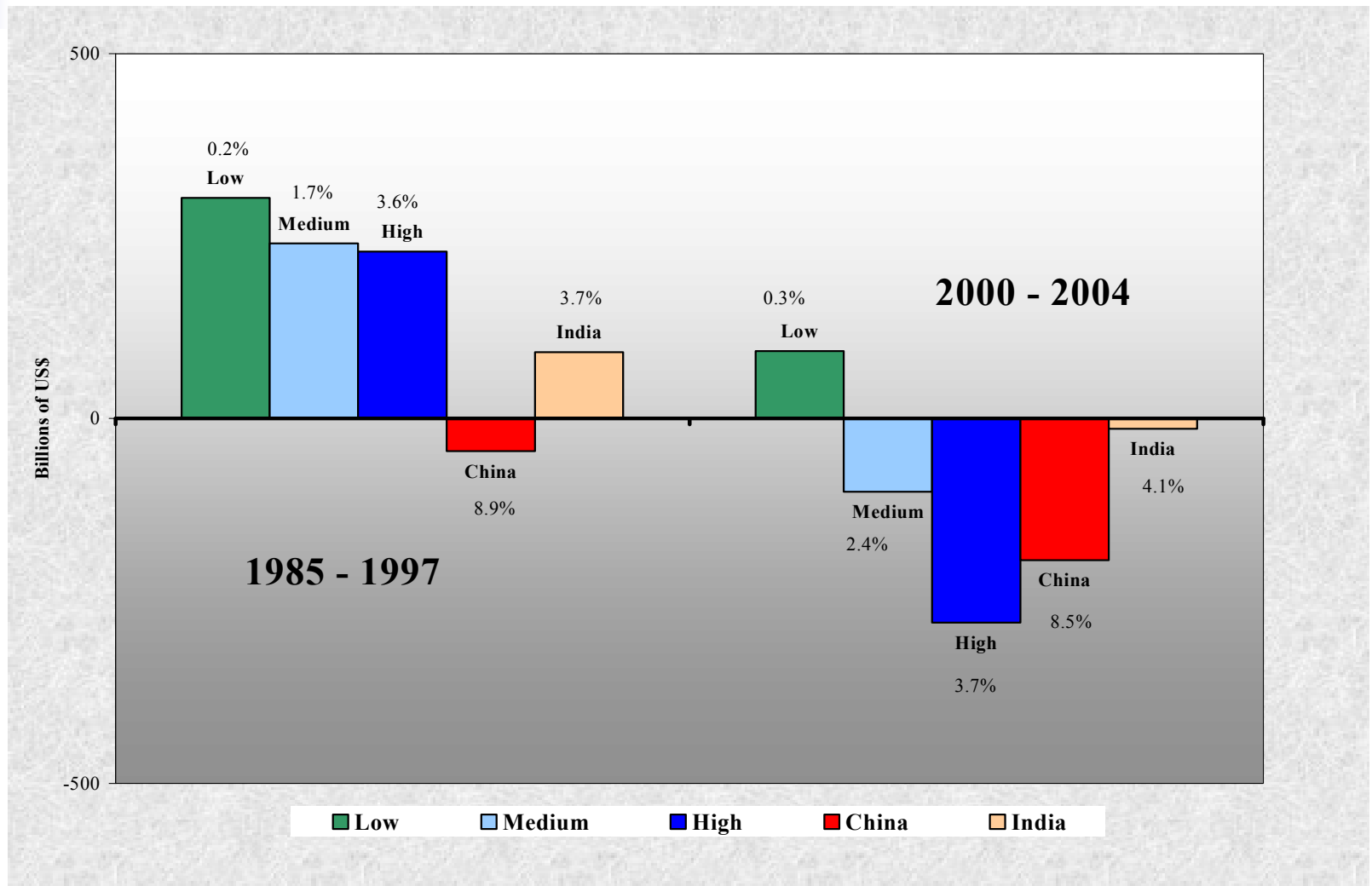
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- Amongst the poor countries, capital has not flowed to the fastest growing amongst them (“Allocation paradox”: Gourinchas and Jeanne, 2006).
  - Capital inflow measured by CA deficit
- But some forms of capital, such as FDI, have followed a more “conventional” path.

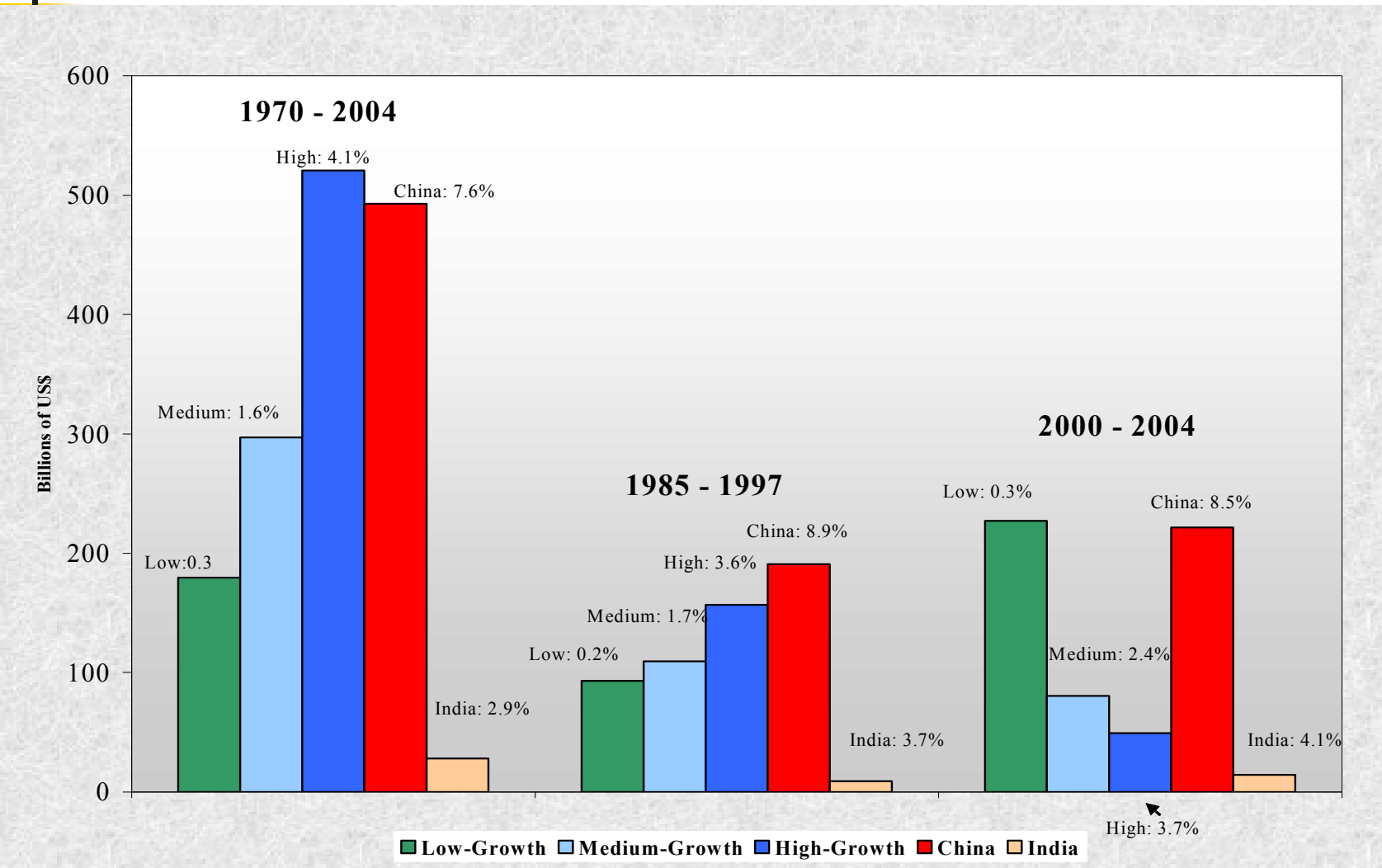
# The Allocation of Capital Flows to Non-Industrial Countries 1970-2004



# The Allocation of Capital Flows to Non-Industrial Countries 1985-1997 and 2000-2004



# The Allocation of Net FDI Flows to Non-Industrial Countries



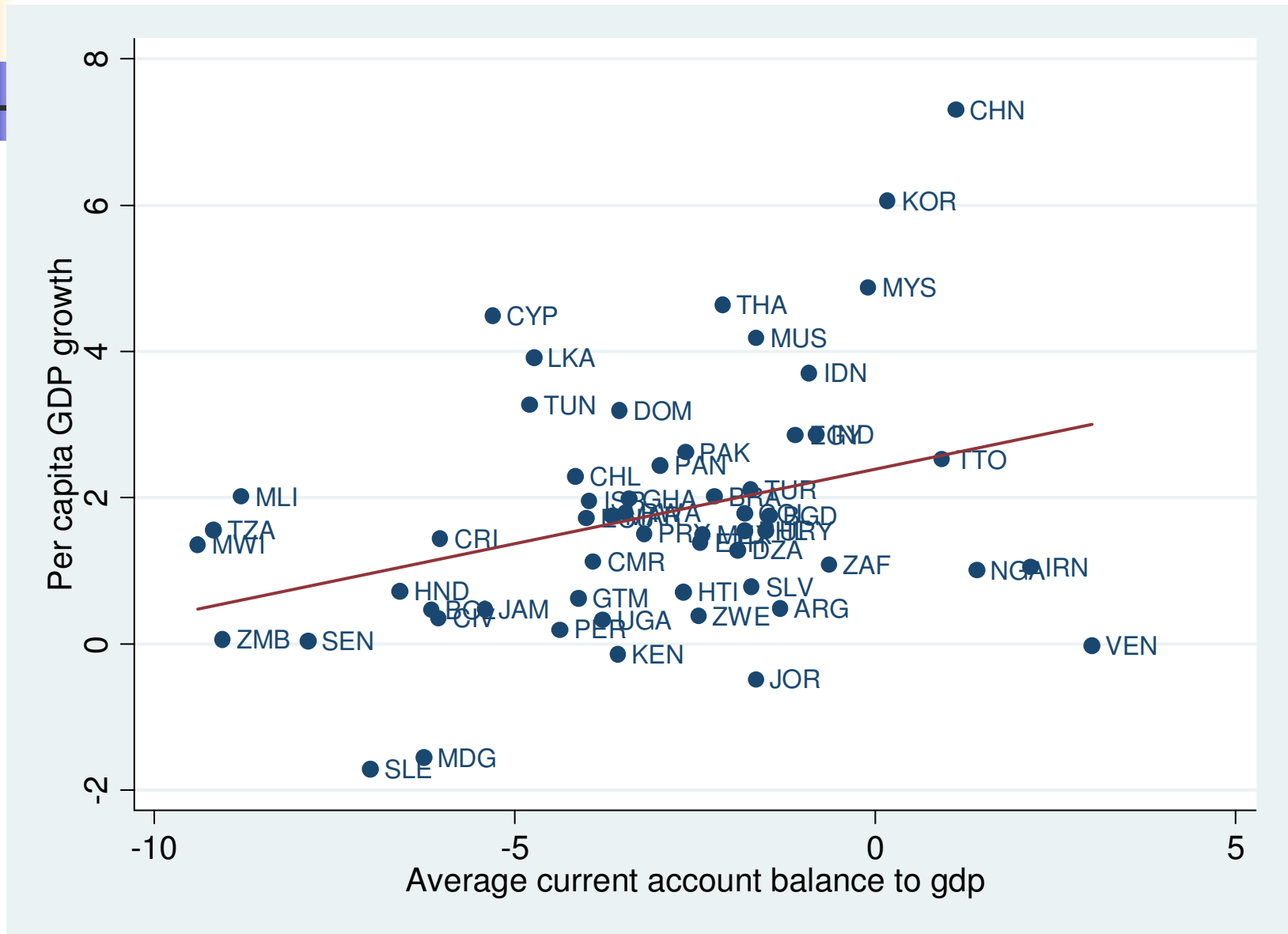


## Facts contd.

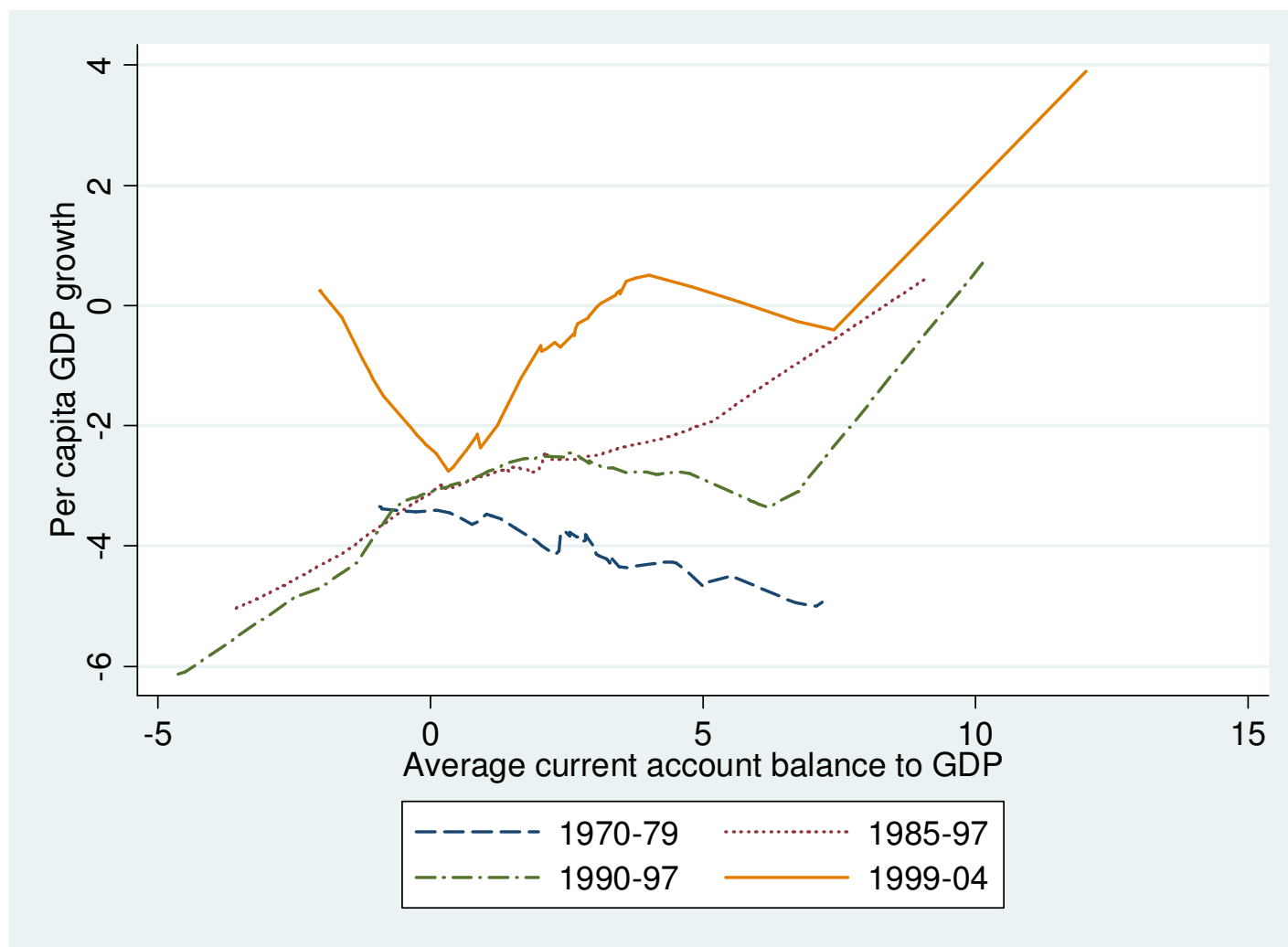
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- Non-industrial countries that have utilized the most foreign capital have tended to grow more slowly.
- Not just a recent phenomenon, though pattern different from the 1970s.

# Correlation Between Growth and the average Current Account Balance, non-industrial countries, 1970-2004



# Growth and the Current Account Balance over Time: Non-parametric Relationship





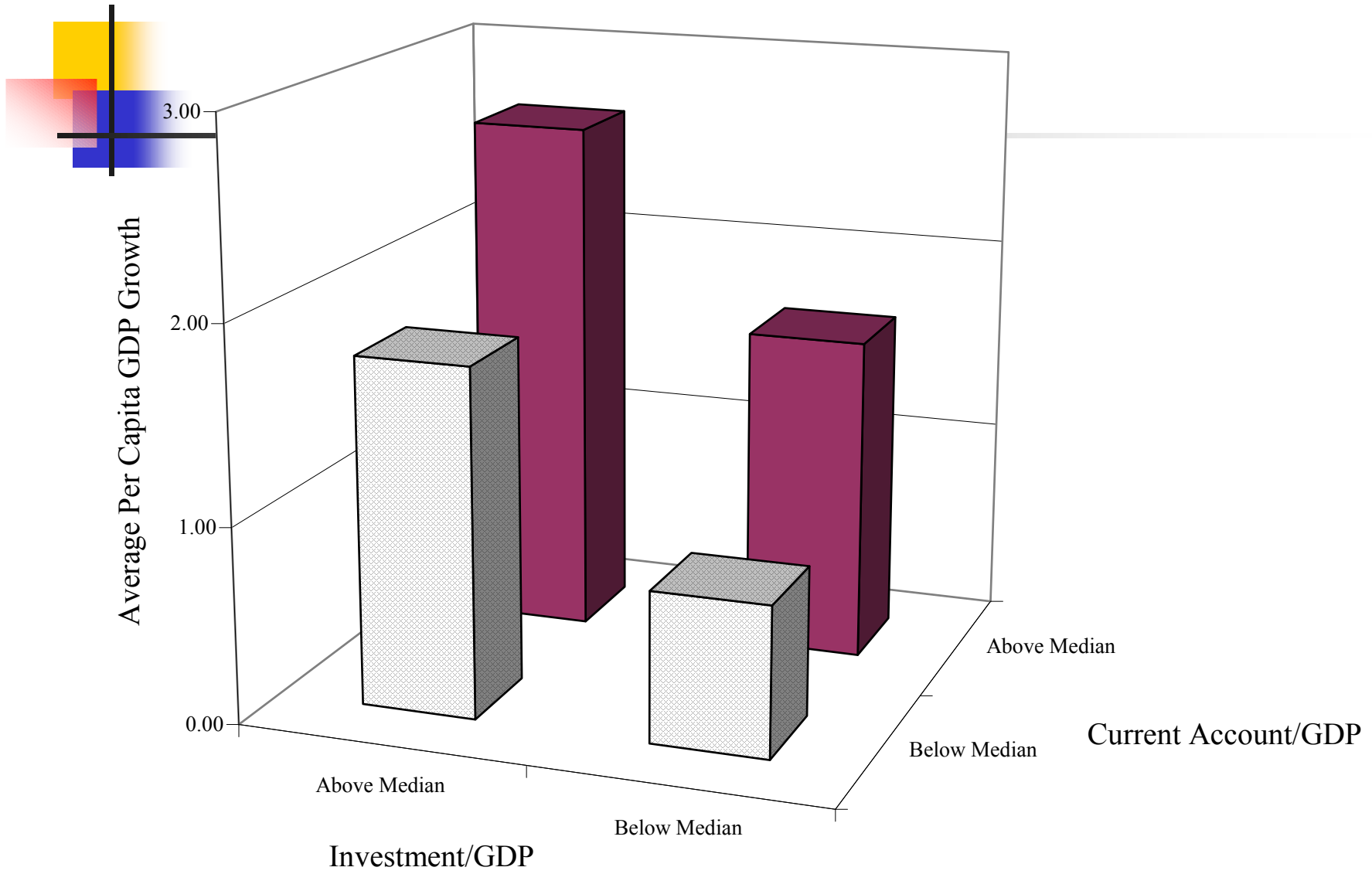
## Facts contd.

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- Traditional model: Given a level of investment, how it is financed – through domestic or foreign savings – should not matter for growth.
- Fact: For non-industrial countries, given a level of investment, the more it is financed through domestic savings, the higher the associated growth is.
- No claims about causality at present.



Figure 6. Current Accounts, Investment and Growth in Developing Countries



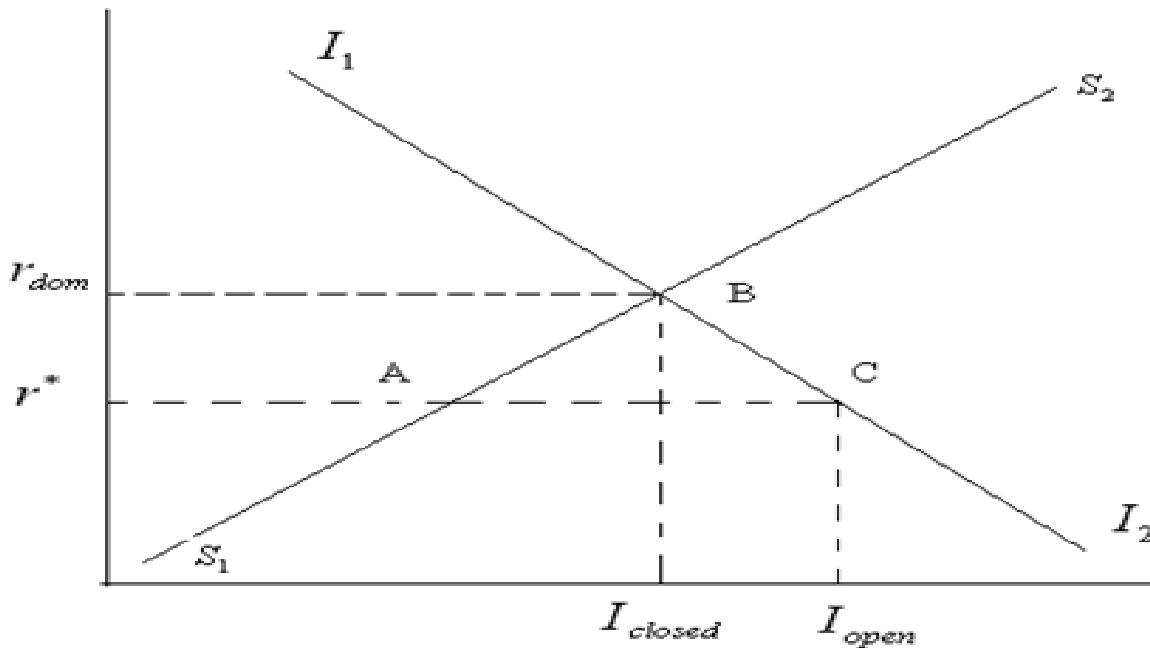


## What explains these facts?

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- Foreign capital usage negatively correlated with growth
- Seems to run through savings rather than investment
- Seems to be a phenomenon associated with non-industrial countries.

# Textbook model



- Opening leads to higher investment, current account (CA) deficit, and greater growth: i.e., negative relation between CA balance and growth



Thus far I have presented motivating facts

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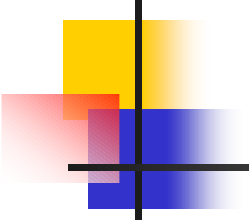
- Is the inflow of foreign capital associated with growth?

# Foreign Capital and Growth in the Cross-Section, 1970-2004

CA to GDP	0.107 (0.056)*		0.107 (0.053)*	-0.041 (0.085)	0.069 (0.055)	0.105 (0.051)**
Gross assets to GDP		0.013 (0.007)*				
Gross liabilities to GDP		-0.007 (0.005)				
Investment to GDP			0.074 (0.050)			
Domestic savings to GDP				0.108 (0.040)***		
Share of working age population					0.194 (0.072)***	
Industrial country indicator*CA to GDP						-0.202 (0.063)***
Observations	56	55	56	56	56	78
R-squared	0.69	0.66	0.70	0.73	0.77	0.68

- Controls include: initial per capita GDP, fiscal balance to GDP, Sachs-Warner trade policy, institutional quality, life expectancy; oil exporter dummy; and sub-Saharan Africa dummy

# Robustness

- 
- 
- The key findings are robust to a variety of alternative specifications

**BUT:**

- Does the cross-sectional pattern averaged over many years obscure a more natural time pattern?
  - Non-industrial countries run current account deficits, grow rich, and run current account surpluses
  - Those who have become rich have lower deficits than those who stayed relatively poor.

# Panel : Foreign Capital and Growth

CA to GDP	0.127 (0.112)	0.166 (0.124)	-0.001 (0.111)	-0.009 (0.093)	0.086 (0.109)
Investment to GDP		0.288 (0.110)***			
Savings to GDP			0.167 (0.092)*		
Share of working age population				0.296 (0.158)*	
Industrial country indicator*CA to GDP					-0.292 (0.126)**
Observations	320	311	294	320	462
Hansen test for OID restrictions (p-value)	0.546	0.400	0.466	0.828	0.225
Arellano-Bond AR(2) test (p-value)	0.676	0.514	0.357	0.725	0.630

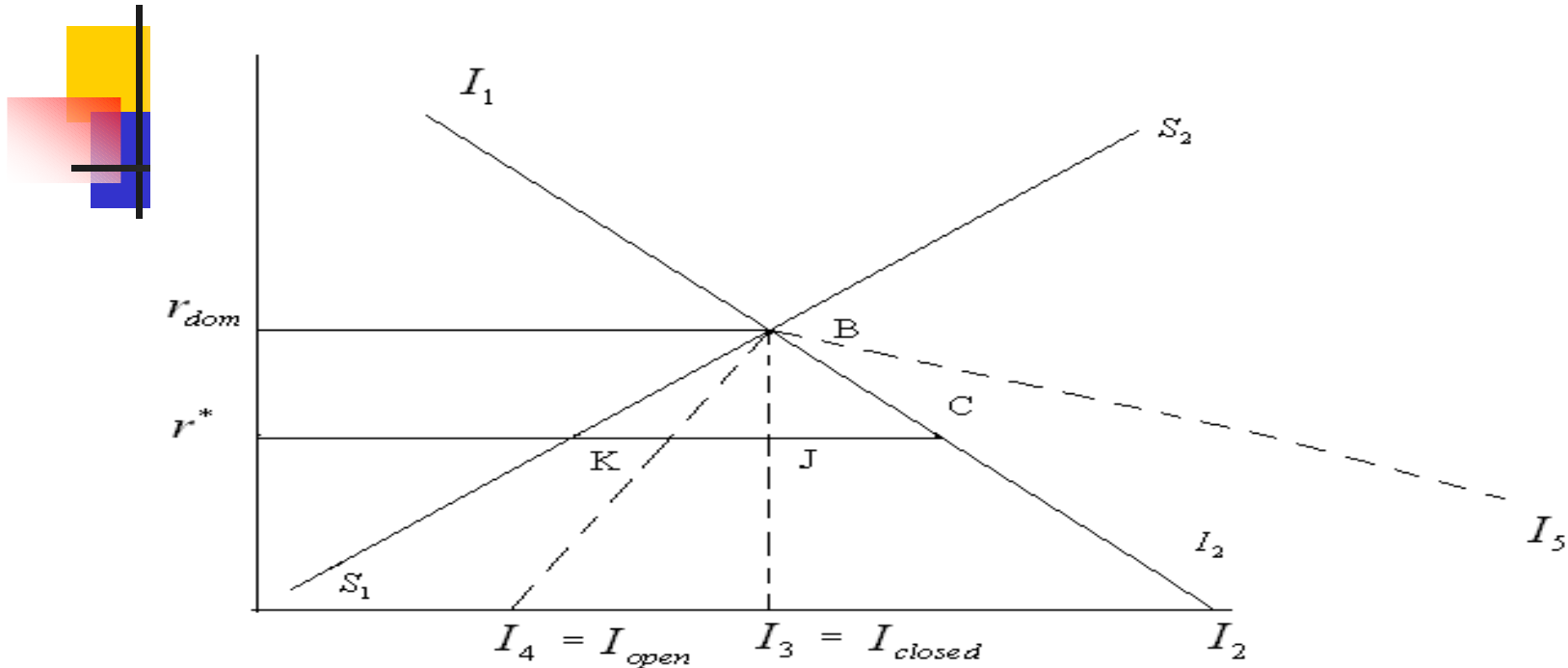
- Panel data are 5-year averages of annual data. Estimation uses system-GMM procedure due to Blundell and Bond (1998), with 3<sup>rd</sup> and 4<sup>th</sup> lags used as instruments; same controls as cross-section

# The absence of positive correlation between foreign capital and growth: Reasons?

1. Financial system cannot effectively intermediate foreign capital
  - Investment not helped by foreign resources
  - Foreign capital does not help growth, but does not hurt either
2. Foreign capital leads to overvaluation, and hence lower exports, returns to investment, and overall growth
  - Greater use of foreign capital instead of domestic savings could hurt growth.
- Explanations not mutually exclusive
  - With an underdeveloped financial sector, foreign capital may gravitate towards the collateralizable non-traded sector (e.g., real estate), thus leading to greater real exchange rate overvaluation



# Adapting the text-book model



- Correlation in the data can be generated if foreign savings reduce the marginal return to investment for example through real appreciation: capital inflow will lead to less investment and growth

# Foreign Finance: Industry-level Evidence

- Industry-level evidence:
  - Useful complement to macro-level data
  - Can partially address concerns that macro-specifications are prone to (omitted variables, endogeneity etc.)
- Adapt the basic Rajan-Zingales (1998) methodology and intuition.
- Assuming that channel through which foreign capital works is by providing additional resources for investment, then:
- In countries that receive more foreign capital,
  - Sectors that have a greater dependence on external finance should grow more;
  - And this effect of foreign capital on growth will be diluted or eliminated in countries with poor domestic financial development.

## Foreign Finance: Industry-level Evidence (contd.)

- Growth  $ij = \alpha$  (Foreign Capital Flows Country  $j^*$  Dependence of industry  $i$  on finance) +
- $\alpha_1$  (Foreign Capital Flows Country  $j^*$  Dependence of industry  $i$  on finance\* indicator if country is below median level of financial development) +
- + Controls+  $\epsilon_{ij}$
- Controls: country and industry fixed effects; domestic financial development interacted with external finance plus allowance for this effect to vary across levels of financial development
- $\alpha > 0 \rightarrow$  Foreign capital helps growth of dependent industries
- $\alpha_1 < 0 \rightarrow$  Foreign capital does not help growth of dependent industries to same extent in countries with less developed financial systems
- $\alpha_1 + \alpha \leq 0 \rightarrow$  Foreign capital does not help growth in countries with less developed financial systems

## Foreign Capital and Growth: Industry-level Evidence, 1980s

Net FDI+portfolio flows to GDP of country j*ED of sector i	0.485 (0.334)		
Net FDI+portfolio flows to GDP of country j*ED of sector i*Less FD countries	-2.004 (0.952)**		
CA to GDP of country j*ED of sector i		<b>-0.128</b> <b>(0.183)</b>	
CA to GDP of country j*ED of sector i*Less FD countries		<b>0.994</b> <b>(0.336)***</b>	
Capital account openness (Chinn-Ito) of country j*ED of sector i			0.003 (0.003)
Capital account openness (Chinn-Ito) of country j*ED of sector i* Less FD countries			-0.005 (0.007)
Observations	918	929	929
R-squared	0.47	0.47	0.47



# Implications

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- $\alpha > 0$  in the cross-section

=> In countries with developed financial systems, foreign capital helps dependent industries grow in the long run.

- $\alpha_1 < 0$  and  $\alpha_1 + \alpha < 0$  in the cross-section

=> Finance-dependent industries in countries with underdeveloped financial systems grow more slowly with more foreign capital

=> Foreign capital goes elsewhere than financing capital-starved industries

⇒ Not simply a feature of underdevelopment.



# Panel estimates

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- Improvements in domestic financial development lead to increases in the relative growth of finance dependent industries, especially for countries with underdeveloped financial sectors.
- Increases in foreign capital lead to decreases in the relative growth of finance dependent industries, especially for countries with underdeveloped financial sectors.

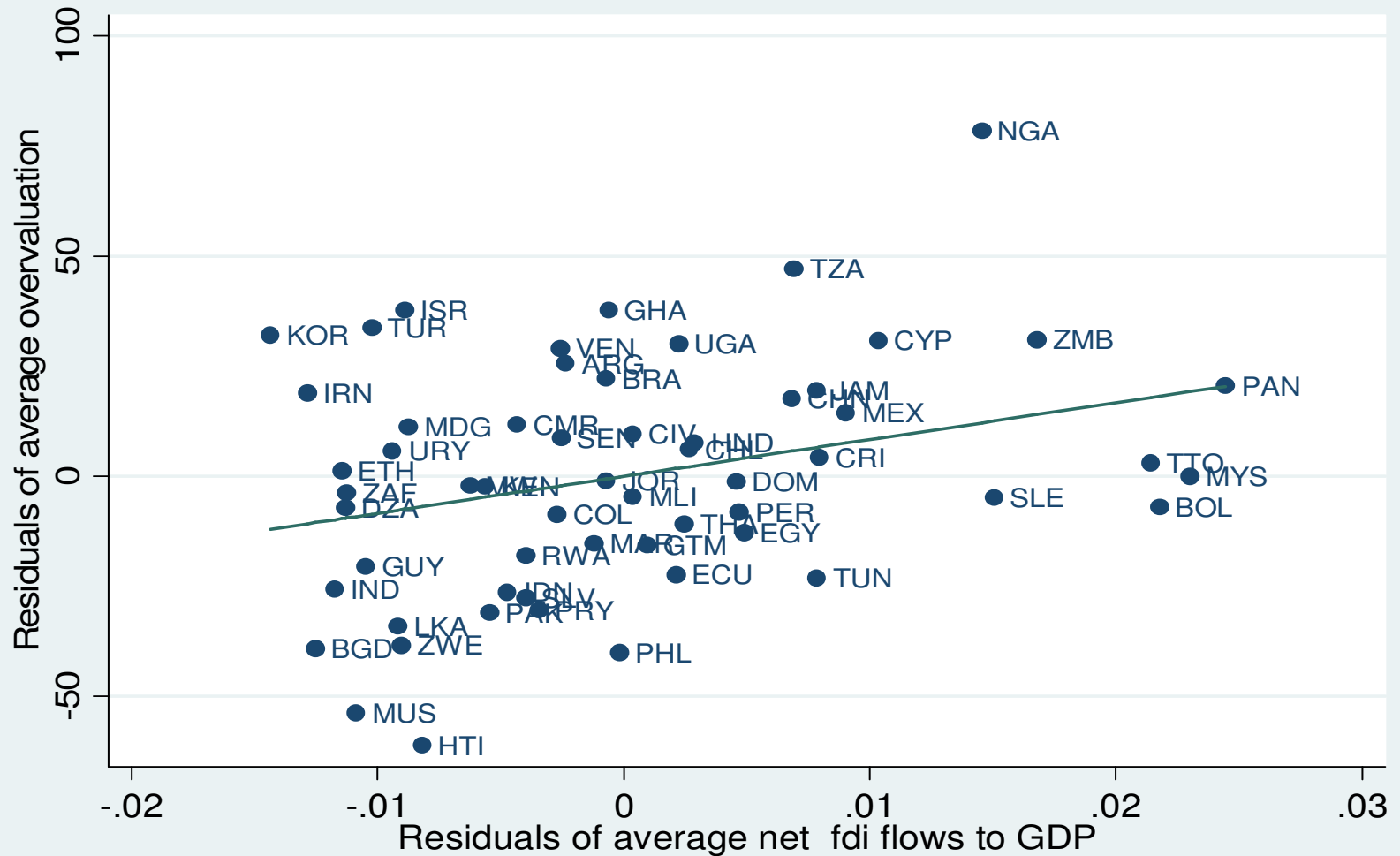
# Foreign Capital, Overvaluation and Growth

- Three pieces of evidence:
  - Foreign capital → Overvaluation
  - Overvaluation → Lower overall growth
  - Possible channel from overvaluation to overall growth is manufacturing exports
- Overvaluation measure from Johnson, Ostry and Subramanian (2007). We estimate:

- $$\log p_i = \alpha + \beta \log y_i + \varepsilon_i$$

$$\text{overval}_i = \log p_i - (\alpha + \beta \log y_i)$$

# 1: Foreign capital and Overvaluation, 1970-2004



coef = 837.49992, (robust) se = 363.32526, t = 2.31



## 2: Overvaluation and Growth

	Cross-section		Panel		
Current account balance to GDP	0.086 (0.058)	0.061 (0.055)	-0.004 (0.159)	-0.049 (0.132)	0.011 (0.106)
Share of working age population		0.181 (0.072)**		0.143 (0.156)	
Overvaluation of the exchange rate	-0.011 (0.006)*	-0.005 (0.004)	-0.037 (0.024)	-0.038 (0.015)***	
Overvaluation * indicator for overvaluation > 0					-0.044 (0.025)*
Overvaluation * indicator for overvaluation < 0					-0.021 (0.026)
Observations	56	56	320	320	320
R-squared	0.71	0.78			
Hansen test for OID restrictions (p-value)			0.802	0.975	0.912
Arellano-Bond AR(2) test (p-value)			0.537	0.509	0.529

# 3: Overvaluation and Export Growth

- Adapt Rajan and Subramanian (2005): In countries with more overvalued exchange rates, do sectors with more export potential (“exportable sectors”) grow slower?
- $\text{Growth}_{ij} = \alpha$  (Overvaluation of real exchange rate of country  $j$  \* Exportability of industry  $i$ ) + Controls +  $\epsilon_{ij}$
- Controls: country and industry fixed effects; initial share of value added
- Define exportability in 3 ways:
  - revealed exportability
  - textiles and leather
  - textiles.
- Key finding:  $\alpha$  is indeed negative

# 3: Overvaluation and exports

<i>Time period</i>	<i>1980s</i>	<i>1990s</i>	<i>1980s</i>	<i>1990s</i>	<i>1980s</i>	<i>1990s</i>
Overvaluation in country j* exportability of sector i	-0.0006 (0.0003)**	-0.0006 (0.0003)**				
Overvaluation in country j* exportability2 of sector i			-0.0012 (0.0006)**	-0.0006 (0.0003)*		
Overvaluation in country j* exportability3 of sector i					-0.0013 (0.0010)	-0.0009 (0.0005)*
Observations	619	751	619	751	619	751
R-squared	0.37	0.25	0.37	0.24	0.37	0.24

# Conclusions

- Foreign capital, *as a form of net financing*, does not play much of a role in the growth of non-industrial countries, while it does play a role in industrial countries
- Non-industrial countries may have limited ability to absorb it
  - Financial sector may not be able to allocate arm's length capital.
  - Countries may be more prone to exchange rate overvaluation.
- This does not necessarily mean countries should close themselves to capital flows – foreign capital could play a role in enhancing absorptive capacity.
- It does suggest, though, a greater focus on enhancing absorptive capacity.

# Methodology, Data and Sample

- Methodology: Key correlations established in the cross-section. But for robustness and channels:
  - Within country across time
  - Within country across sectors
  - Within country, within sectors across time
- Cross-Section: Bosworth and Collins (2003) sample and data updated:
  - 59 non-industrial and 22 industrial countries (plus 7 transition countries)
  - Penn World tables v6.2 for growth and overvaluation
  - Current account, S and I from WDI
  - Our preferred measure of foreign capital is the current account balance (inverse of foreign savings)
- Industry-Level: UNIDO (2005) data for 20 industrial and 30 developing countries; and 28 3-digit sectors and 10 4-digit sectors



# Jornadas Monetarias y Bancarias, 2007

**Joseph Stiglitz**

Reforming the global reserve system

4 y 5 de Junio de 2007

# REFORMING THE GLOBAL RESERVE SYSTEM

Joseph Stiglitz  
Central Bank of Argentina  
Buenos Aires  
June 2007

# Global Imbalances and Instability

- Problems with global financial system highlighted by persistent global imbalances, high levels of instability
  - Feb 27 episode, where a rumor in China led to largest declines in stock markets since 9/11
- Standard discussion involves shared blame
  - U.S. fiscal and trade deficit
  - European slow growth
  - China's undervalued currency



# Putting imbalances in perspective

- U.S. deficit is more than \$850 billion
  - China's multilateral surplus is only about \$150 billion
  - So even if eliminating China's surplus fully translated into a reduction in U.S. deficit, U.S. deficit would still be more than \$700 billion
  - Likely would have no effect—U.S. just buys textiles from Cambodia and Bangladesh
  - But Cambodia and Bangladesh less likely to be willing to finance U.S. deficits
  - So global instability might actually be increased
    - U.S. may face problem financing deficit
      - Will be financed
      - But adjustments may be "painful"—large changes in asset prices

# Do the imbalances represent a problem?

- “Normal” economics has some countries borrowing from others. Why worry about U.S. borrowing?
  - Something peculiar about richest country in the world not being able to live within its means
    - \$500 billion last year flowed from poor countries to rich countries
  - Deficits OK when money is being spent on investment to make economy more productive
    - Problematic in the U.S.
  - Given demography, this is a period in which the U.S. should be saving, not borrowing
- Worry is that there will be a disorderly adjustment

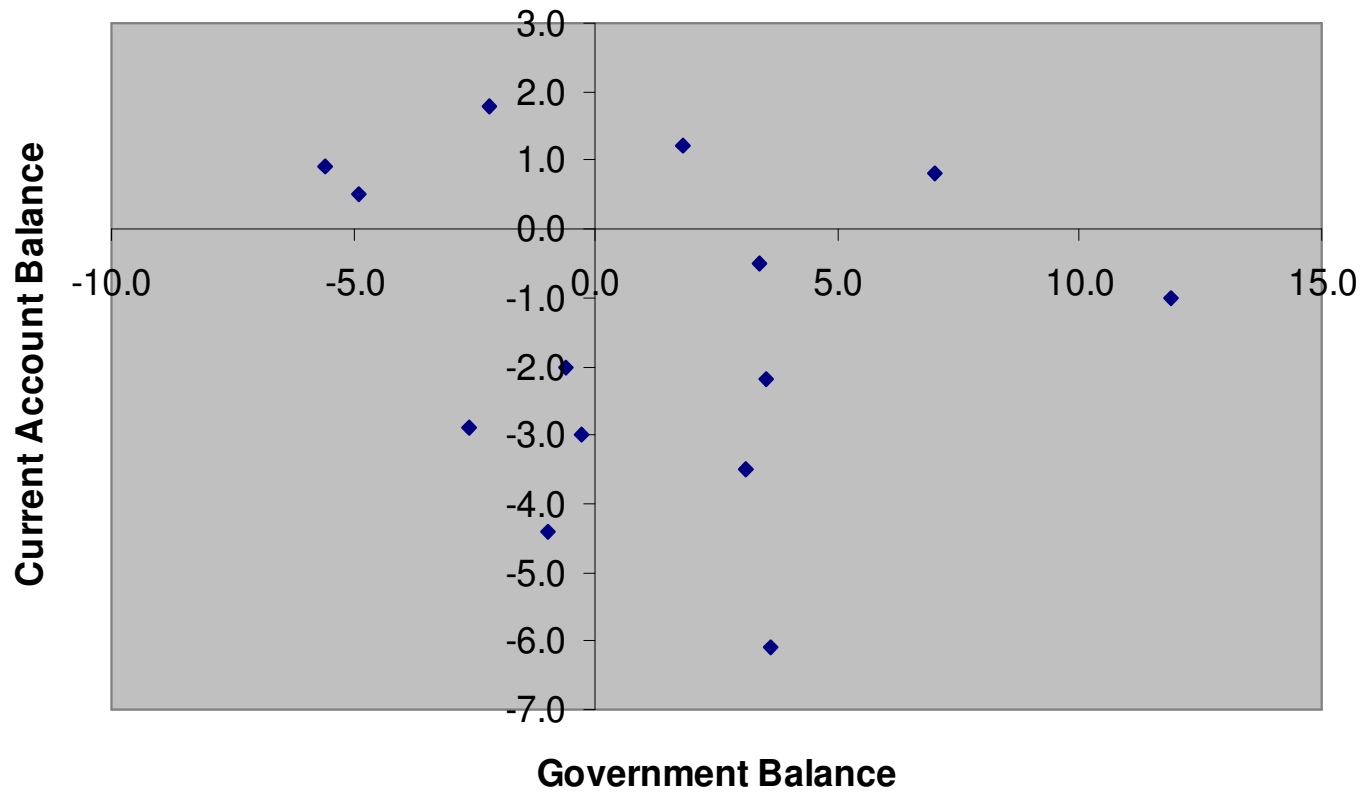
# But is Bush to blame?

- Standard argument—twin deficits
  - Fiscal deficit leads to trade deficits
  - In partial equilibrium setting, relationship is clear
    - $TD = CF = \text{Investment} - \text{Domestic Savings}$
    - *Ceteris Paribus*, an increase in the government deficit reduces domestic savings, and exacerbates the trade deficit (TD)/Capital inflows (CF)
      - Of course, in Barro-Ricardo world, public borrowing is offset by increased private savings
      - But even if there is *some* effect, not large enough
    - More to the point: we are not in a *ceteris paribus* world

# The data

- Time series
  - U.S. has been steadily increasing its Trade Deficit, regardless of what happens to fiscal deficit
    - In 90s, investment increased
    - From a balance sheet perspective, it makes a big difference—borrowing to finance an asset rather than a consumption binge
- Cross section
  - No relationship across countries

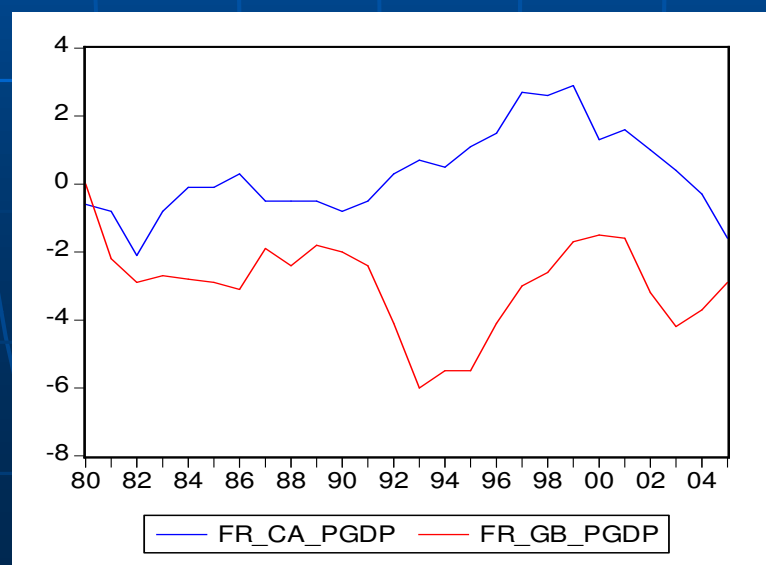
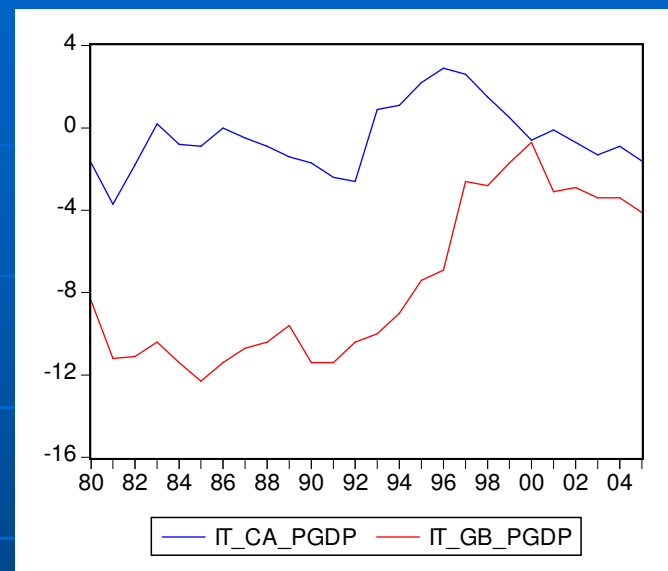
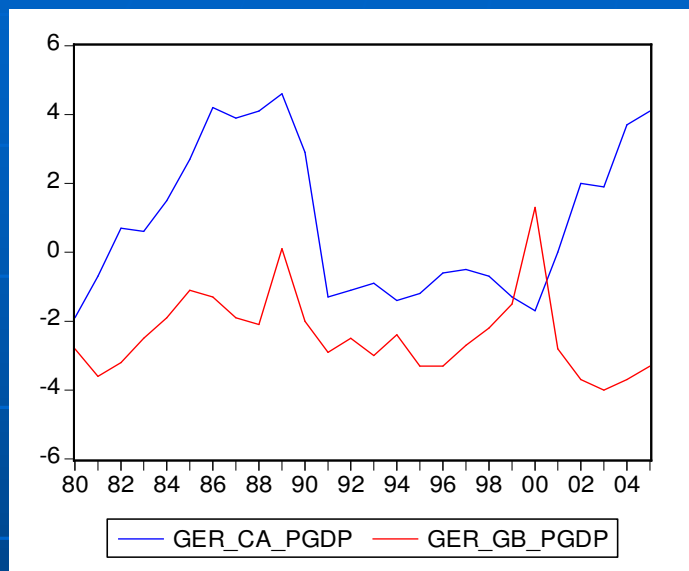
### Global Double Deficits 2004 (%GDP)



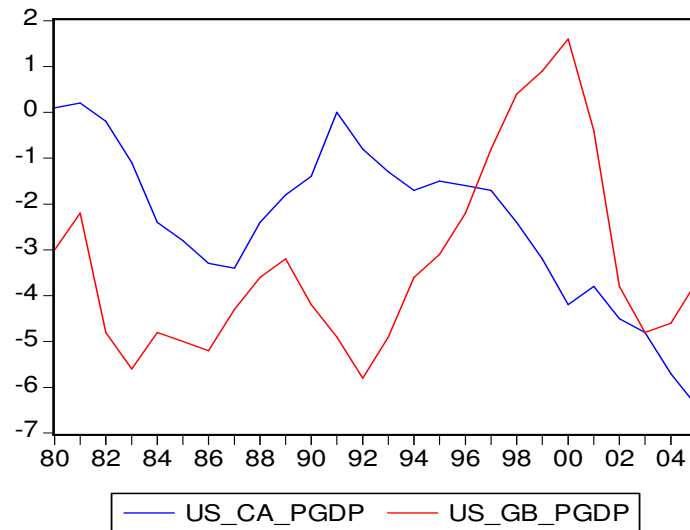
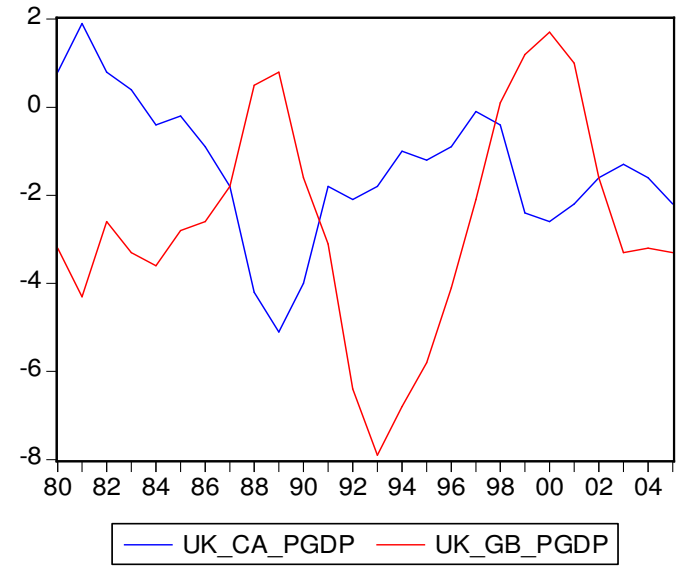
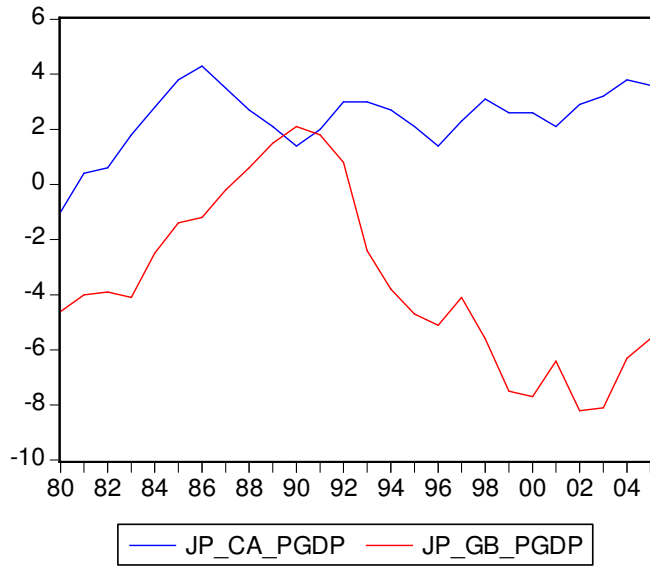
# No Systematic Relationship

- With the exception of Canada, the data shows no systematic relationship between the Current Account Balance and the Government Balance
- In the case of Canada, the Current Account Balance appears to cause the Government Balance, but not vice versa

# Germany, France, Italy

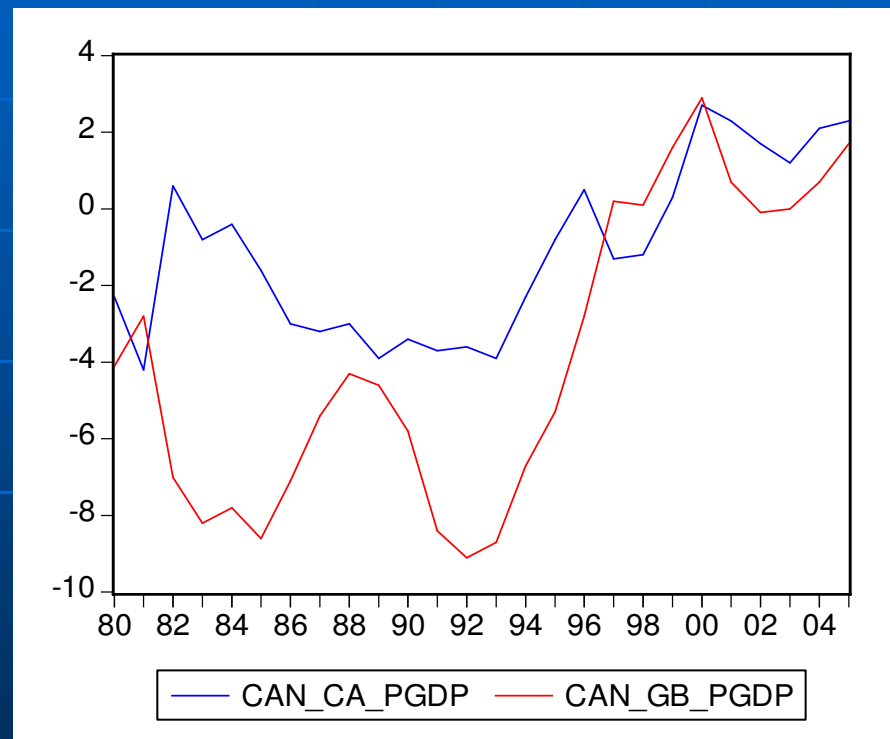


# Japan, US, and UK





# Canada displays apparent causality



# An alternative View

- Fiscal deficits are endogenous
  - What is required to maintain the economy at full employment
  - Capital inflows are *exogenous*
    - Foreigners want to hold T-bills in reserves
    - Exchange rates and other asset prices adjust to make sure this is possible
  - But since Trade deficit = CF, that means trade deficit is effectively exogenous
    - Negative effect on aggregate demand
      - U.S. is exporting T-bills rather than automobiles
      - But T-bills do not generate employment
    - Government must offset this, either through monetary or fiscal policy
    - It is in this sense that trade deficit *causes* fiscal deficit
    - In the 90s, irrational investor boom meant government deficit was not needed—but that is an exception

# Implications

- It is the dollar reserve system that is at the root of the problem
  - UK had a similar problem when sterling was reserve currency
- The U.S.—and world—would be better off shifting to a global reserve currency
  - Current system is inherently unsustainable
  - As IOU's accumulate, confidence in dollar erodes
  - If confidence erodes, Central Banks may move out of dollar, dollar weakens, reinforcing problem
  - Is there a tipping point? Are we near there?
  - The dollar reserve system is fraying

# Current system is fraying

- Process may be unstable
- Growing lack of confidence in dollar
  - Feeding on itself
- Asia major source of global savings
  - Paying high price for re-circulating savings in West
  - Beginning to explore alternatives

# Problems getting worse

- Risk of crises and IMF intervention has led countries to accumulate huge amounts of reserves, mostly in dollars
- Increase in reserves one of major underlying factors in reserve increases

# Further problems: Insufficiency of global demand

- Purchasing power “buried” in ground
- In past, deficiency was made up by loose monetary and fiscal policies
  - But countries who provided this global service were punished
- U.S. has become consumer of last resort
  - Prides itself on providing this global service
  - But something is wrong with a global financial system which requires the richest country of the world to spend beyond its means to maintain global prosperity

# Further problems: Inequities

- Developing countries are lending U.S. trillions of dollars at low interest rate
  - Consequences most clear at micro-level, with standard prescription—keep dollar reserves equal to short term dollar denominated debt
    - Firm in poor country borrows \$100 million from U.S. bank at 20% interest
    - Country has to put \$100 million in reserves—\$100 million T-bills implies lending to US
    - Net flow zero *except* interest received 5%, interest paid 20%
    - Form of foreign aid by poor countries to U.S.
      - Magnitude greater than U.S. aid to developing country

# Instability

- Basic trade identity:  $\text{sum of surpluses} = \text{sum of deficits}$ 
  - If some countries insist on having a surplus, some others must have deficit
  - Hot potato of deficits: as one country eliminates its deficit, it appears somewhere else in the system
  - US has become deficit of last resort
    - Apparent in statistic
    - But is this sustainable?



# Implication

- Surplus countries are as much a part of systemic problem as deficit countries
  - Keynes emphasized negative effect on global aggregate demand
  - Should “tax” surplus countries to provide appropriate incentive

# PROPOSAL:

## Global reserve currency

- Issued in amount commensurate with reserve accumulation
  - Offsetting negative effect on aggregate demand
  - Would thus not be inflationary, would avoid deflationary bias of current system
- Would enhance global stability
  - Inherent in any single country being reserve currency
  - But provide an additional degree of flexibility
    - Countries could run a small trade deficit without having a problem
    - Net reserves would still be increasing

- Could provide incentives *not* to have surplus by reducing surplus country's allocations of global reserve currency
- New allocations could be used to finance global public goods and development
- Would not be inflationary as long as annual emissions were less than or equal to increases in reserves

- There are two actual precursors—IMF SDR's and Chang Mai Initiative
  - SDR's episodic, and U.S. has vetoed last expansion
  - Proposal can be thought of as globalization and refinement of Chang Mai initiative
  - A Europe/Asia joint endeavor would be a way of introducing it
  - U.S. will resist, since it thinks it gains from low interest loans
  - But it loses from high instability
  - And amounts of loans will in any case be decreasing

- Some in Europe aspire for the Euro to become global reserve currency
  - Europe would have same problem—high price to pay for getting cheap loans
  - Worse—because Europe's hands are tied
    - Growth and Stability Pact
    - Central Bank focusing only on inflation
  - Two-country reserve system may be even more unstable
- Can only hope that wish is not realized

- Ideas are developed at greater length in
  - J. E. Stiglitz, *Making Globalization Work*, especially Chapter 9
  - Bruce Greenwald and J. E. Stiglitz, "A Modest Proposal for the Reform of the Global Financial System," presented at AEA meetings, January, 2006.

# Summary

- Reform of global reserve system is essential if we are to deal effectively with global imbalances
- A global reserve system is required
- Many alternative institutional arrangements
- Likely to lead to a more stable—and more equitable—global financial system



# Jornadas Monetarias y Bancarias, 2007

**Joseph Tracy**

Uncertainty and monetary policy: theory and practice

4 y 5 de Junio de 2007



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# Uncertainty and Monetary Policy: Theory and Practice

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Central Bank of Argentina, 2007  
Money and Banking Conference

Joseph Tracy, Federal Reserve Bank of NY

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# Monetary Policy under Uncertainty

- Alan Greenspan, Jackson Hole WY, 29 Aug 2003
    - “Uncertainty is not just an important feature of the monetary policy landscape; it is the defining characteristic of that landscape. As a consequence, the conduct of monetary policy in the United States at its core involves crucial elements of risk management, a process that requires an understanding of the many sources of risk and uncertainty that policymakers face and the quantifying of those risks when possible. It also entails devising, in light of those risks, a strategy for policy directed at maximizing the probabilities of achieving over time our goal of price stability and maximum sustainable growth that we associate with it.”
-

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# Risk management approach to monetary policy

- Objective is *not* to maximize the benefits based the expected evolution of the economy
  - Rather, to maximize the probability of achieving the goals of the Central Bank
  - Essential elements
    - Understanding of risks to the forecast
    - Consequences associated with each risk
    - Focus on the distribution of possible outcomes for inflation and growth
-

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# Examples illustrating this approach

- Russia Default, Fall 1998
    - FOMC eased policy despite view that economy was expanding at a satisfactory pace and would likely continue to do so even without easing
    - Insurance against any “contagion”
  
  - Deflation scare, Spring 2003
    - FOMC eased policy even though deflation was not viewed as the most probable outcome given the existing policy stance
    - Insurance against the downside risk
-

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# Decisionmaking under Uncertainty

- Monetary policymakers must make decisions under uncertainty
    - Where has the economy been (interpretation, measurement)
    - Where is it now (interpretation, measurement)
    - **Where will it be in the future (interpretation, expectations, transmission mechanism, future shocks)**
  - Quantifying uncertainty and monetary policy is controversial, difficult and an area of active research
  - Presentation will describe current methods used to quantify future uncertainty at FRBNY
-

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## When Uncertainty Matters

- Central Banks can ignore uncertainty if **certainty equivalence (CE)** holds
    - **Strong assumptions required:** Policymaker has a quadratic loss function, linear economy with all aspects known except future value of Gaussian shocks
  - Many Central Banks act and communicate as if certainty equivalence does not hold
  - Policy actions implemented in non-CE environments require dealing with uncertainty
    - Bayesian approach quantify uncertainty through forecast distributions
    - Robust Control approach does not quantify uncertainty
-

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# Methods for Constructing Forecast Distributions

- Use structural economic models
- Use reduced form time series models
- Using quantified judgment, present a forecast distribution that uses a wide range of formal and informal information.
- Elements from all 3 approaches can (and should) be combined

*Before explaining our judgmental approach need to agree on some terminology*

---

## Balance of Risks

- No consensus method of describing balance of risks or uncertainty around the judgmental forecast
- Central Bank **point forecasts** often interpreted as the *mode*: most likely outcome
- Other measures of “central tendency” are the *mean* (expected value) and *median* (50% above, 50% below)
  - When the median is not equal to mean, information content in stating “balance of risks”
  - For now focus on mean versus mode/judgmental forecast
    - **upside risk** to judgmental forecast:  $mean > mode$
    - **downside risk** to judgmental forecast:  $mean < mode$



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# Bank of England Fan Charts

- Quantify uncertainty and balance of risks with forecast origin  $T$  (eg 2007Q1) and horizon  $h$  (eg 4 quarters) with 3 numbers:
    - $\mu_{T+h}$  is BoE central forecast, mode of forecast distribution
    - $\sigma_{T+h}$  is a measure of outcome dispersion around forecast
    - $\lambda$  percent of the time values lower than mode value are expected to occur
  - If  $\lambda = 0.5$  □ mean=mode: *risks are balanced*
  - If  $\lambda > 0.5$  □ mean less than mode: *downside risk*
  - If  $\lambda < 0.5$  □ mean greater than mode: *upside risk*
-

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# Implementing Bank of England Approach

- Choose central forecast, dispersion and amount of downside risk.
  - If risks are balanced then generate realizations from a distribution centered at central point forecast with given dispersion
    - $\mu_{T+h}^i = \mu_{T+h} + \varepsilon^i$ , where  $\varepsilon^i \sim N(0, \sigma_{t+h})$
  - If risks are unbalanced
    - $\lambda$  percent of realizations given by
$$\mu_{T+h}^i = \mu_{T+h} - |\varepsilon^i|$$
    - $(1 - \lambda)$  percent of realizations given by
$$\mu_{T+h}^i = \mu_{T+h} + \varepsilon^i$$
-

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# First Generalization of BoE Approach

- Allow for dynamically varying balance of risks
  - Interpret the upside and downside risks as scenarios
  - Place positive probability on a scenario associated with judgmental forecast
    - Now three scenarios: central bank forecast, downside scenario, upside scenario
  - Uncertainty now varies, consider two extreme cases:
    - 50% weight on upside scenario, 50% weight on downside scenario – maximum uncertainty
    - 100% weight on central scenario – minimum uncertainty
  - Same implications for mean but very different implications for uncertainty and changes in central forecast
-

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# Implementing Generalization

- Choose central forecast, dispersion and dynamic weights on central scenario ( $\lambda_{0,T+h}$ ) and downside ( $\lambda_{1,T+h}$ )
- At each horizon  $h$

- $\lambda_{0,T+h}$  percent of realizations generated by

$$\mu_{T+h}^i = \mu_{T+h} + \varepsilon^i, \text{ where } \varepsilon^i \sim N(0, \sigma_{t+h})$$

- $\lambda_{1,T+h}$  percent of realizations generated by

$$\mu_{T+h}^i = \mu_{T+h} - |\varepsilon^i|$$

- $(1 - \lambda_{0,T+h} - \lambda_{1,T+h})$  percent of realizations generated by

$$\mu_{T+h}^i = \mu_{T+h} + |\varepsilon^i|$$

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# Constraints on Forecast Distributions

- Usually risks are balanced at forecast origin
  - Eventually probability on central scenario goes to 1
  - Central scenario at longer horizons constrained
    - mean=mode=median ( long-run balanced risks )
    - expected inflation at implicit target ( CB expects to achieve inflation objective )
    - expected output gap at zero ( CB expects to achieve growth objective )
    - uncertainty around these values close to historical averages
-

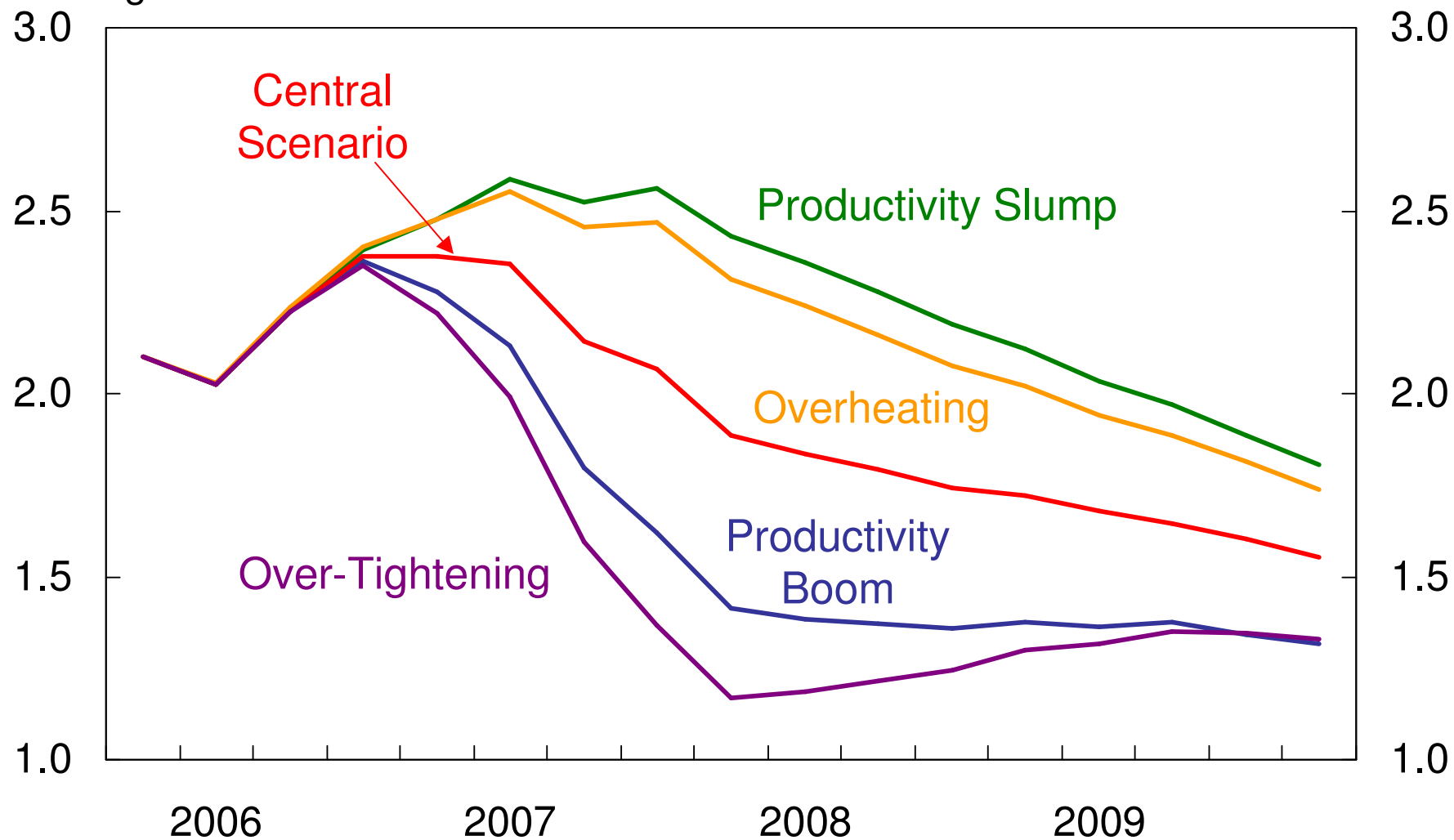
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# Further Generalization of BoE Approach

- Replace upside and downside risk scenarios with general scenarios about inflation and output
  - Integrate scenarios with the assessment of uncertainty
  - No fixed number of scenarios – keep to most important
  - Examples:
    - *Productivity Boom*: draw values of output  $>$  mode, inflation  $<$  mode
    - *Productivity Slump*: draw values of output  $<$  mode, inflation  $>$  mode
    - *Overheating*: draw inflation  $\gg$  mode; initial output  $>$  mode, then output  $<$  mode
    - *Over-Tightening*: output  $\ll$  mode, inflation  $\ll$  mode
-

# Alternative Scenarios of Core PCE Inflation

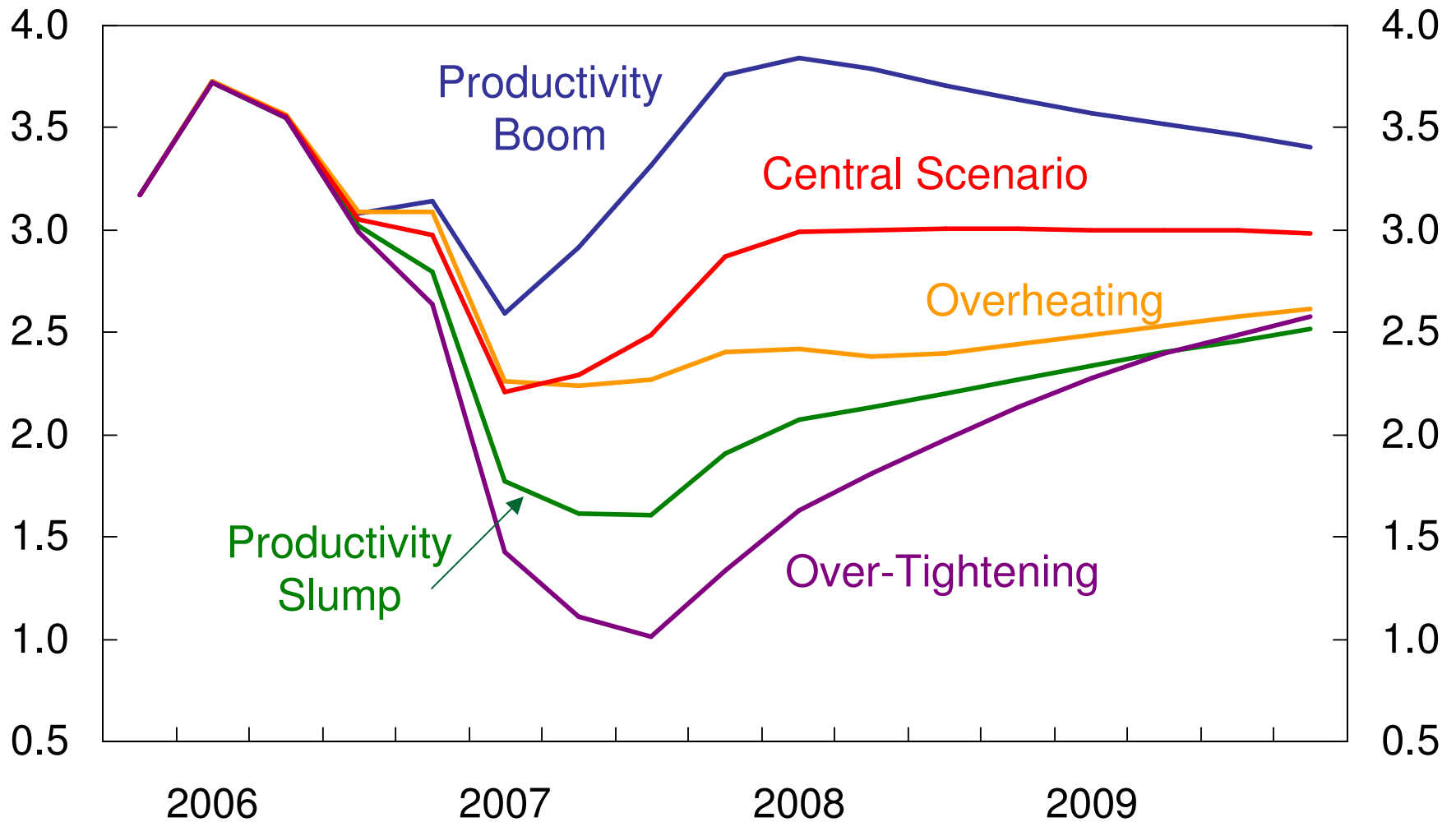
% Change – Year to Year



Source: MMS Function (FRBNY)

# Alternative Scenarios of Real GDP Growth

% Change – Year to Year



Source: MMS Function (FRBNY)

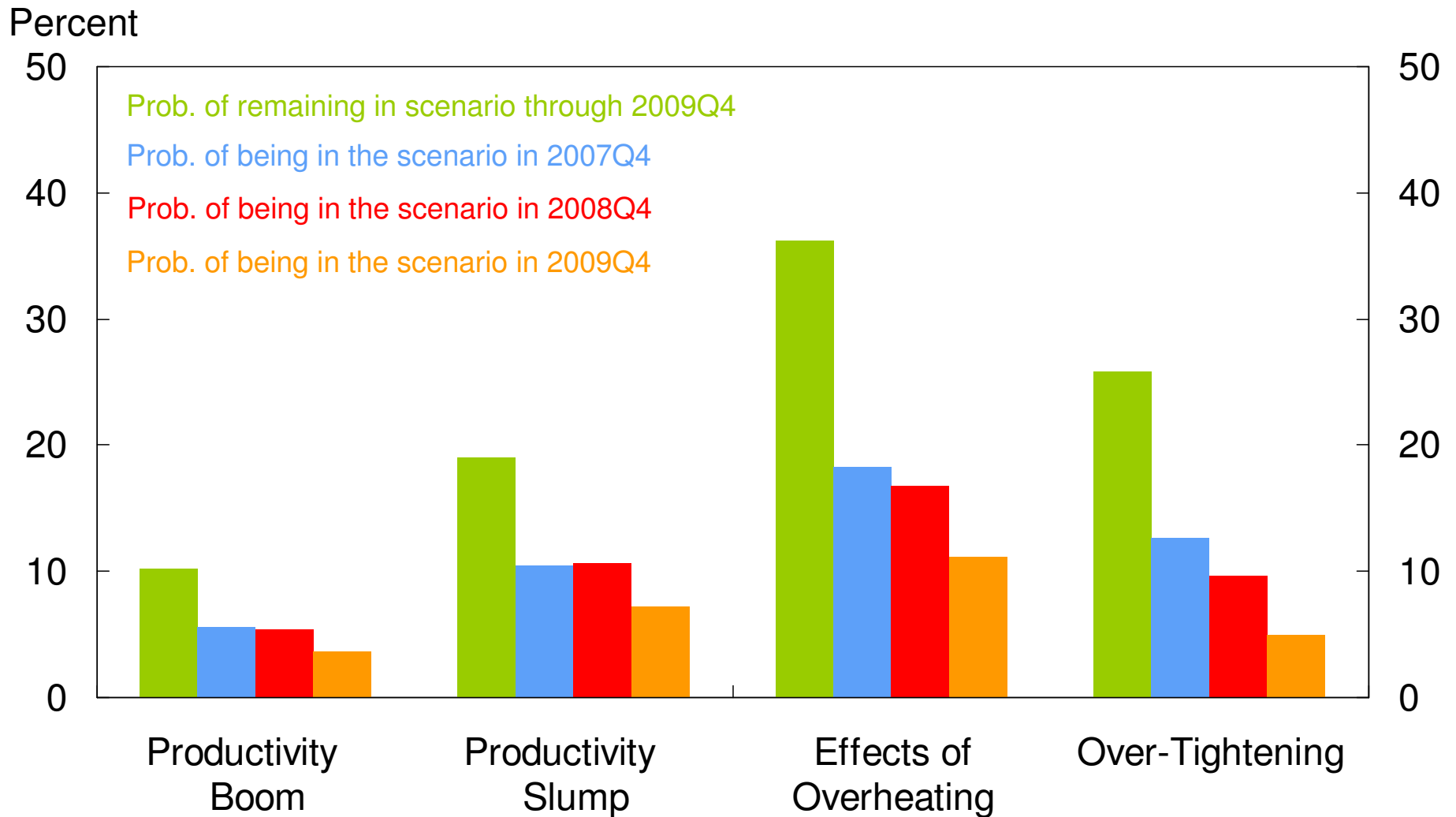


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# Probability Weights on Scenarios

- Retain the same restrictions on dynamic evolution:
    - ❑ Risks are balanced, usually at forecast origin, with initial weight 1 on central scenario
    - ❑ Choose an initial probability weight for each scenario
    - ❑ Choose how long each scenario will last if it occurs
    - ❑ As forecast horizon increases, probability weight on central scenario goes to 1
  - Generalize over earlier method by allowing for uncertainty over probabilities and duration of scenario
-

# Scenario Probabilities



Source: MMS Function (FRBNY)

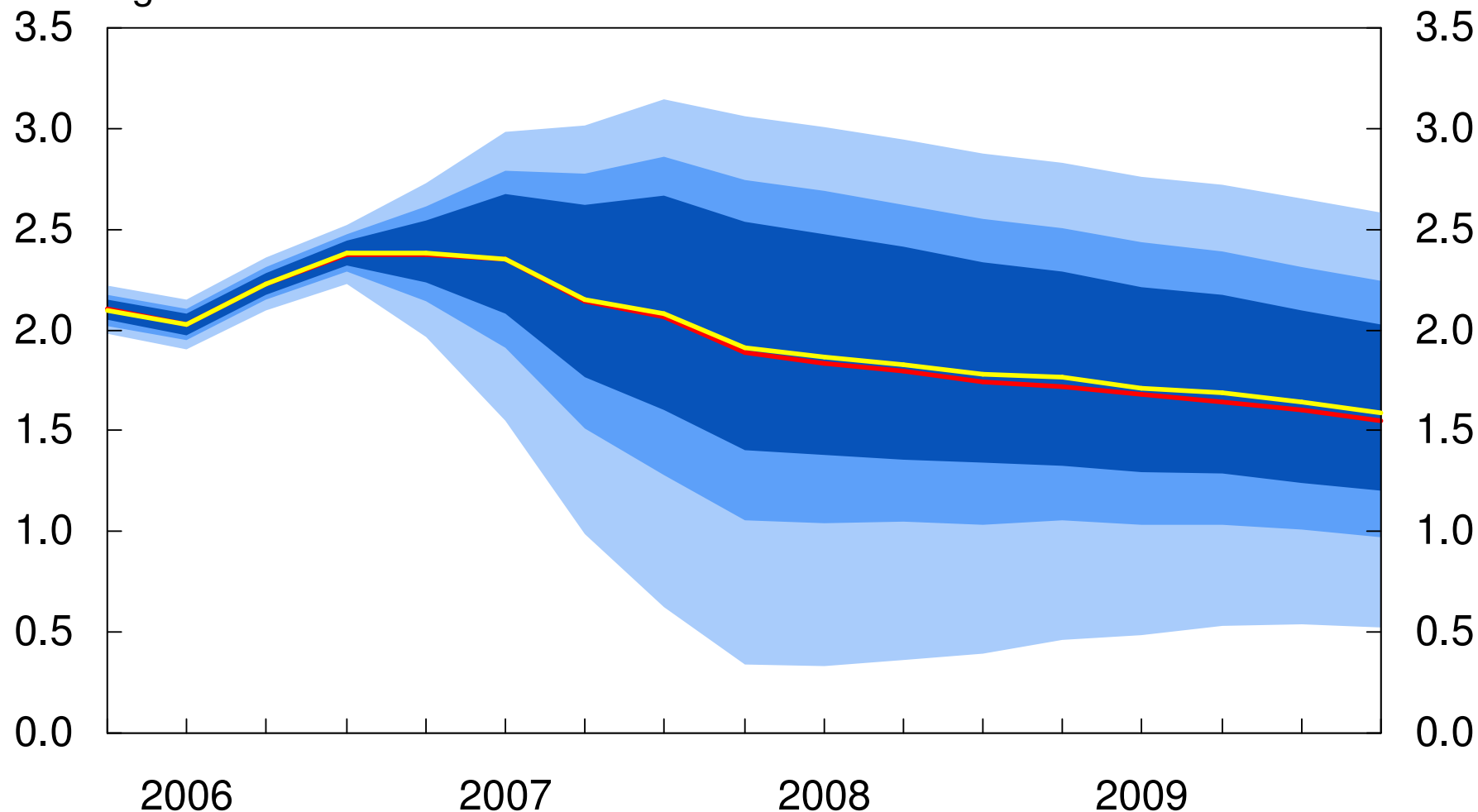
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# Reliability Checks

- Plausibility of results based on introspection
    - Does "continuing expansion" probability look sensible?
    - Do inflation risks look sensible?
  - Comparison with other measures
    - Time series models
      - No forward judgment but allows for structural change in past
-

# Core PCE Inflation Forecast Distribution

% Change – Year to Year

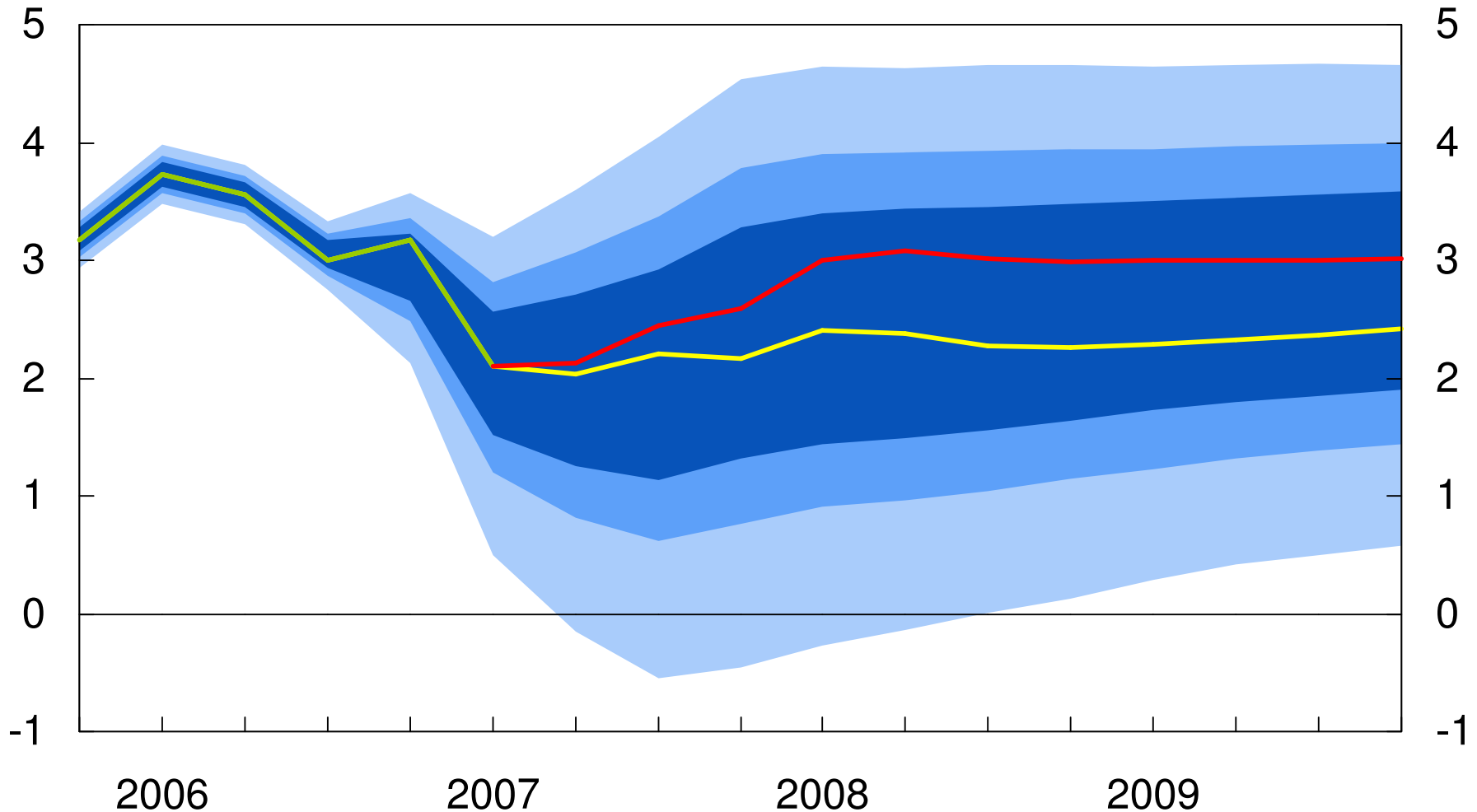


Note: The probability interval shows the 50, 75, and 90 percent chance that the four quarter change in core PCE inflation will be within the respective range. The yellow line represents the expected value of the forecast, while the red line represents the actual FRBNY forecast.

Source: MMS Function (FRBNY)

# Real GDP Growth Forecast Distribution

% Change – Year to Year



Note: The probability interval shows the 50, 75, and 90 percent chance that the four quarter change in real GDP growth will be within the respective range. The yellow line represents the expected value of the forecast, while the red line represents the actual FRBNY forecast.

Source: MMS Function (FRBNY)

# Distributions for Fed Funds Rate (FFR)

- Assume central bank uses a Taylor-type rule to determine FFR from inflation and output gaps
  - In the short run, adjust to discreteness of FOMC moves
  - Choice of a particular rule and forecast distribution for inflation and output produces a forecast distribution for FFR
  - Examine variants on baseline policy rule
    - *Opportunistic Disinflation*: slower rate cuts than baseline rule if inflation above 2%
    - *Dove*: faster rate cuts than baseline if negative output gap
-

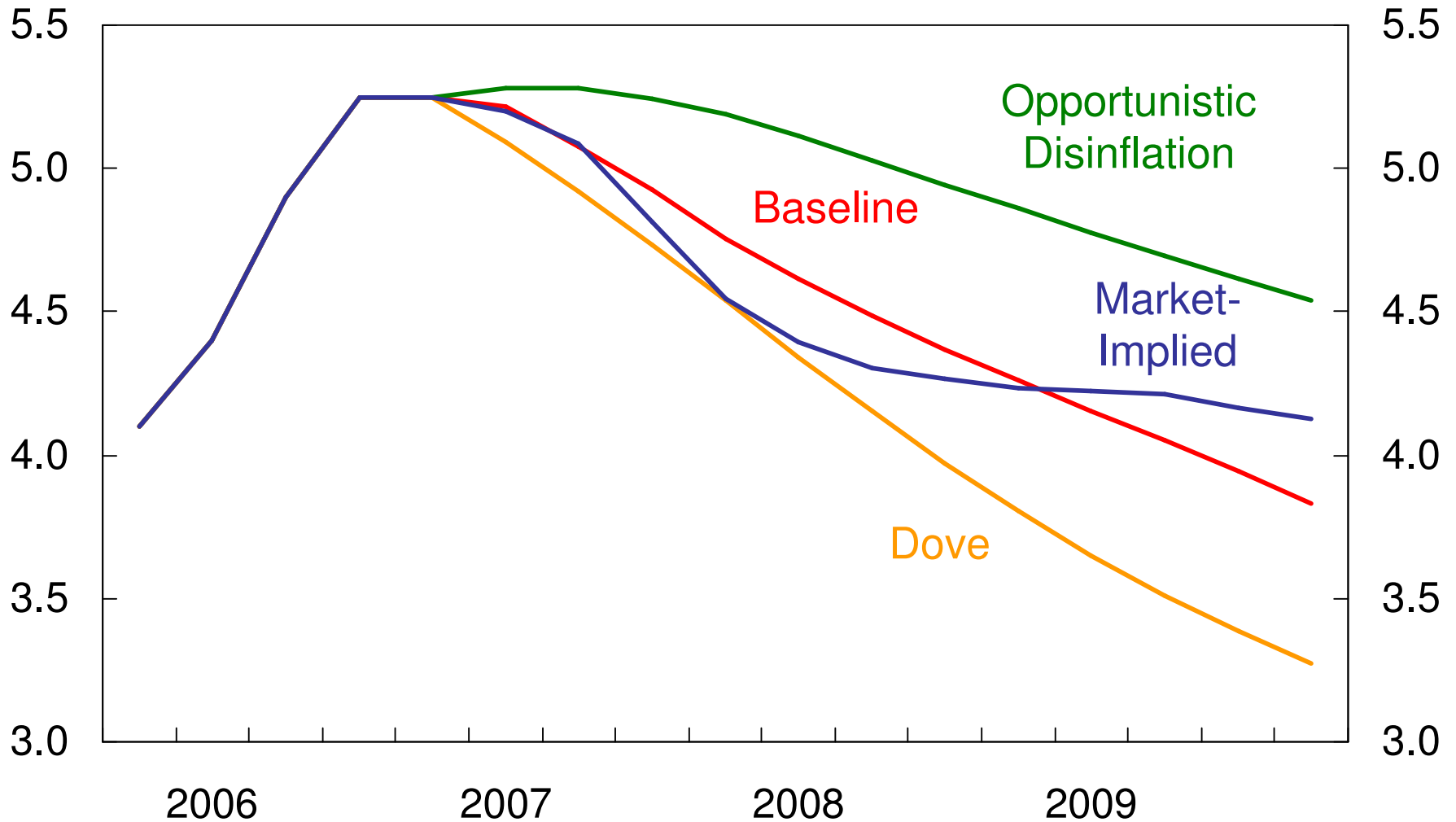
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# Comparison to Market Forecast Distribution

- Use futures and options prices to generate a forecast distribution for the FFR
    - Market distribution affected by
      - Compensation for risk
      - Market misunderstanding FOMC communication on objectives, reaction function or outlook
      - Markets view of the outlook and risks on real activity and inflation
  - FRBNY distribution has been close to markets
    - Sensitive to weight on productivity scenarios
  - Another reliability check
    - Do changes in market distribution and in our distribution line up?
-

# Nominal FFR under Different Policy Rules

Percent



Source: MMS Function (FRBNY)



---

# Comparison with BoE and BoG

- Bank central forecast
    - FRBNY judgment but at further horizons converges to assumed inflation target and zero output gap
    - BoG judgment, FRBUS, etc.
    - BoE produced by numerous economists, MPC members and a large number of models
  - Dispersion
    - FRBNY forecast error behavior, implied volatility and introspection
    - BoG given by last 18-20 years of forecast errors for GB or residuals from FRBUS
    - BoE exponential smoother of last 10 years of observed forecast errors
  - Balance of Risks around forecast
    - FRBNY as described above
    - BoG does not allow explicitly for unbalanced risks
    - BoE produced by the MPC
-

---

# Comparison with BoE and BoG

## Role of scenarios and information from option prices

- Scenarios
    - FRBNY scenarios produce forecast distribution
    - BoG scenarios unrelated to forecast distribution
    - BoE no explicit scenario analysis
  - Option price information
    - FRBNY forecast distribution converted to FFR using policy rule, dispersion calibrated to be similar to markets
    - BoG forecast distribution of FFR from estimated policy rule in FRBUS compared to implied volatility
    - BoE present implied volatility on short-term interest rate only
-



# Jornadas Monetarias y Bancarias, 2007

**Daniel Heymann**

Incertidumbre y política macroeconómica: teoría y práctica

4 y 5 de Junio de 2007



**BANCO CENTRAL DE LA REPÚBLICA ARGENTINA**  
**Jornadas Monetarias y Bancarias**  
**2007**  
**"La Política Monetaria ante la Incertidumbre"**  
4 y 5 de Junio de 2007

# Incertidumbre y Política Macroeconómica: Teoría y Práctica



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**Daniel Heymann**

Junio 2007

CEPAL

# Introducción

- **Vaivenes en perspectivas:**
  - i) política económica basada en conocimiento mayor que el del público,
  - ii) expectativas de conjunto de agentes perfectamente adaptadas a entorno,
  - iii) reconocimiento de incertidumbres sobre mecanismos y parámetros.
- **Objetivo general:** comentarios sobre diseño y gestión de política macro cuando efectos de aprendizaje son apreciables.

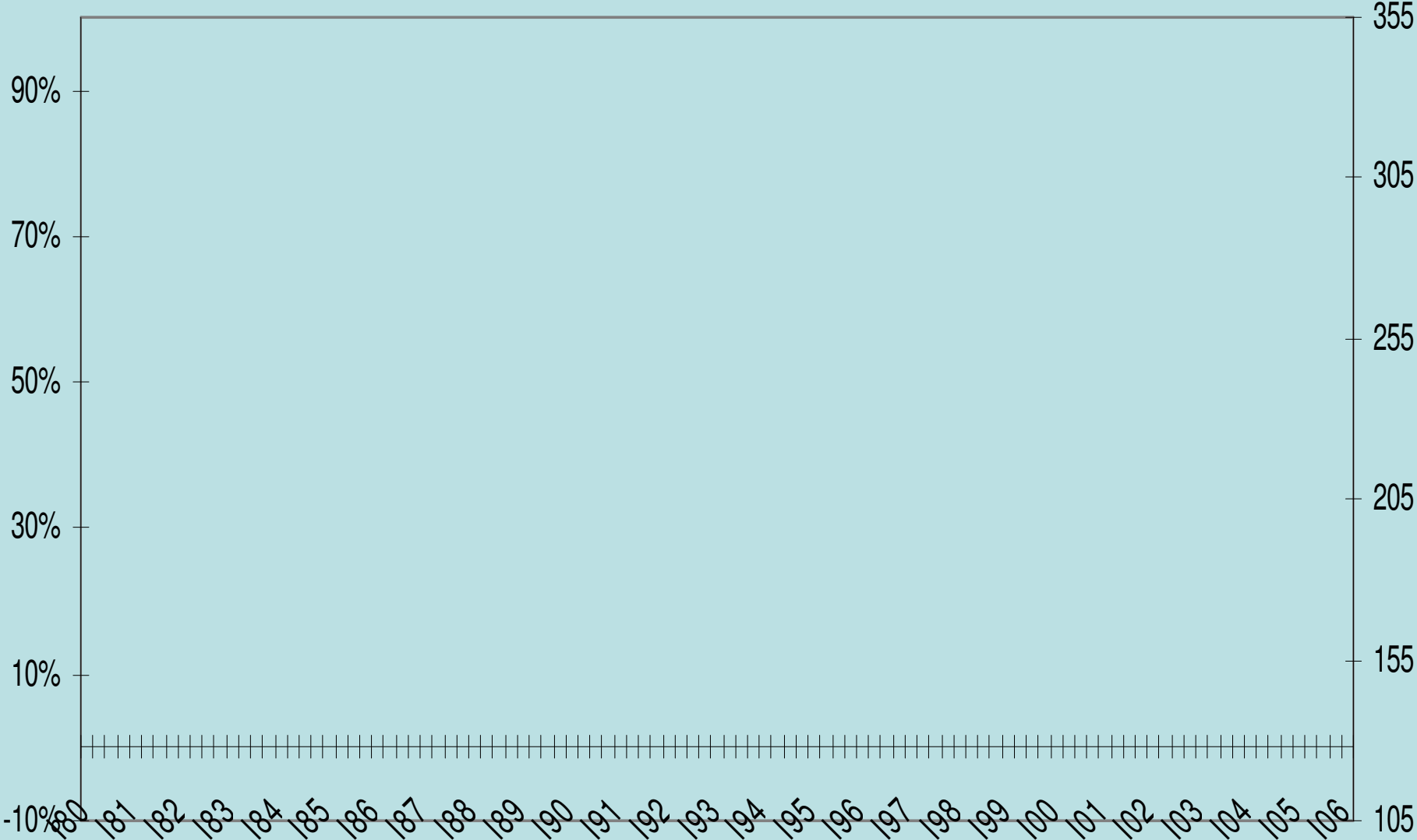
# Introducción

- Varias cuestiones conexas:
  - Representación de formación de expectativas y comportamientos. Notar: grado de incertidumbre, potencial punto en discusión.
  - Temas de lógica: problemas de consistencia, especialmente en ejercicios de análisis de alternativas de política.
  - Tratamiento de disyuntivas: flexibilidad y previsibilidad, objetivos/anclas únicas o múltiples

# Comportamientos y Aprendizaje

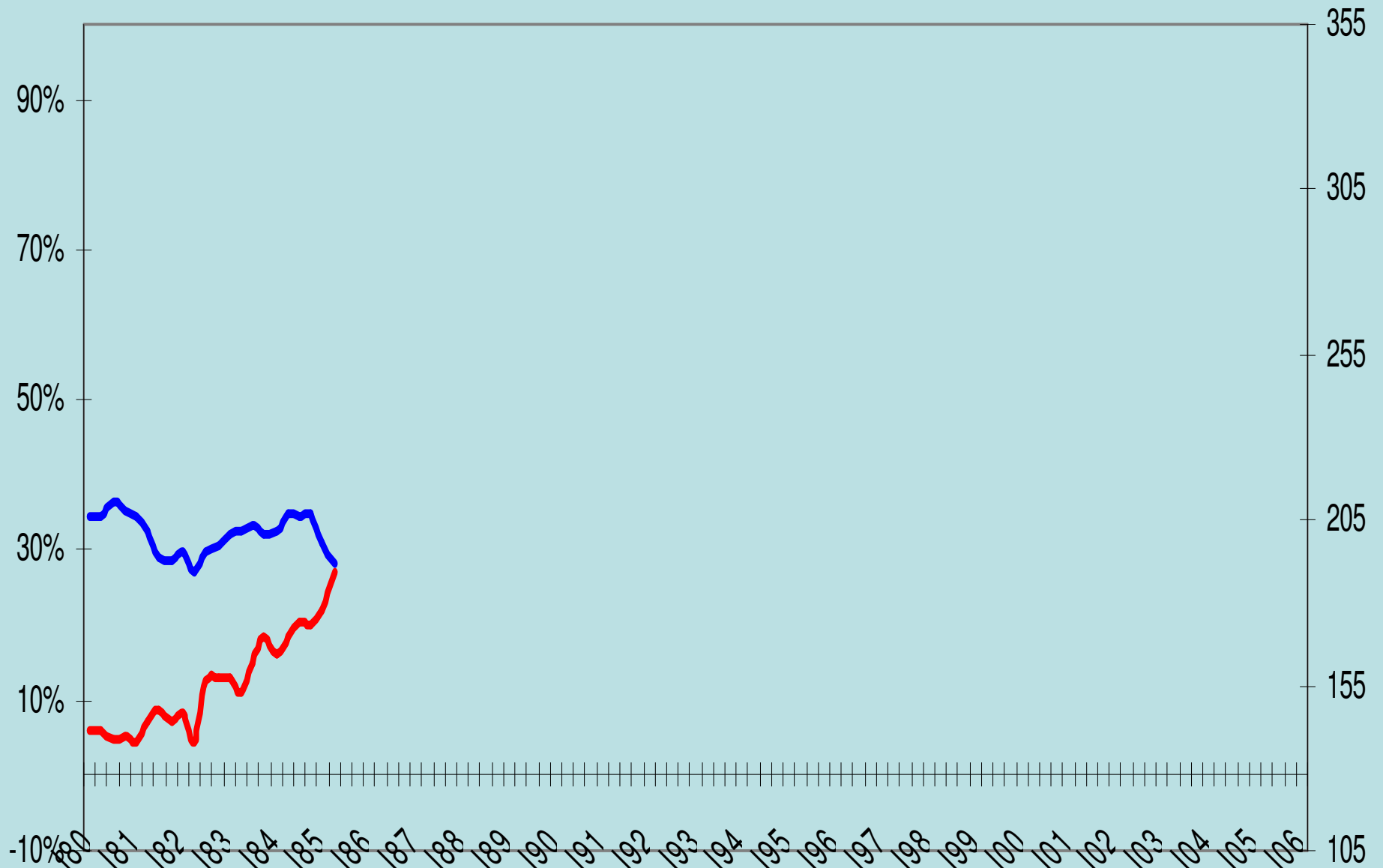
- Problema analítico, y también práctico. Especialmente en economías en transición, donde se dificulta discernir tendencias o valores normales o permanentes.
- Preguntas sobre mecanismos de funcionamiento “estructurales”, en evolución, y sobre procesamiento de info de los agentes

# GDP at constant prices and CPI inflation rates

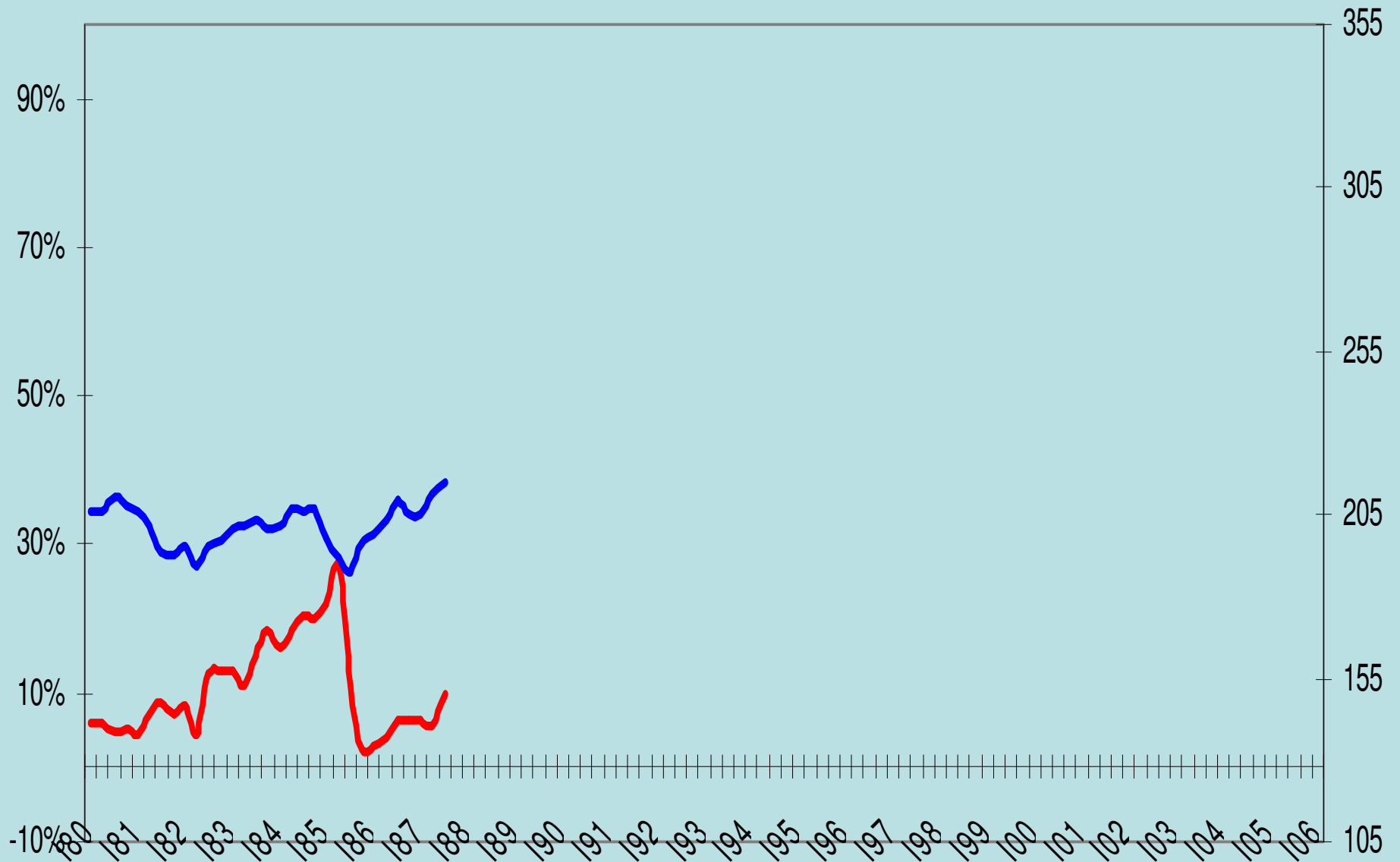




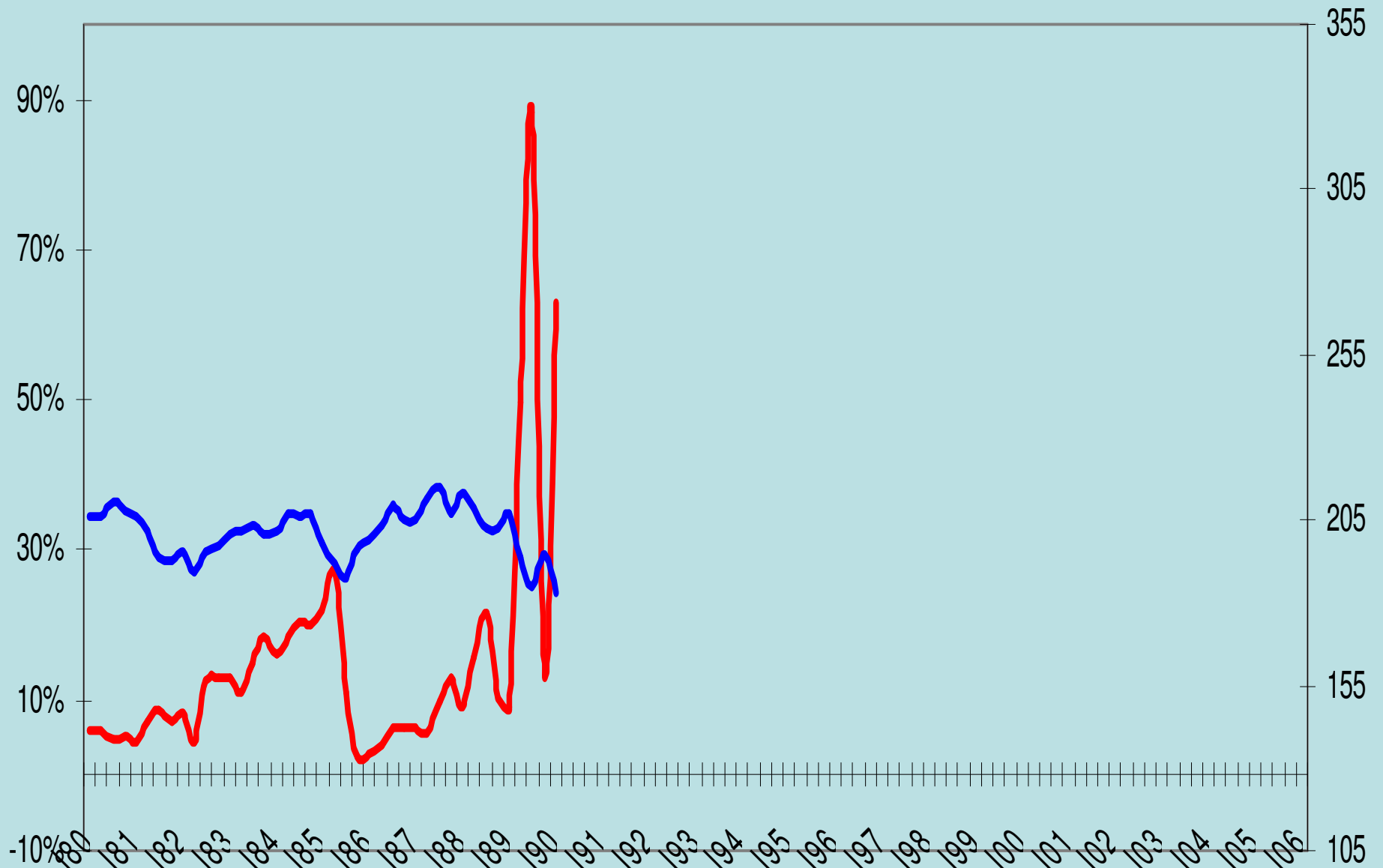
# GDP at constant prices and CPI inflation rates



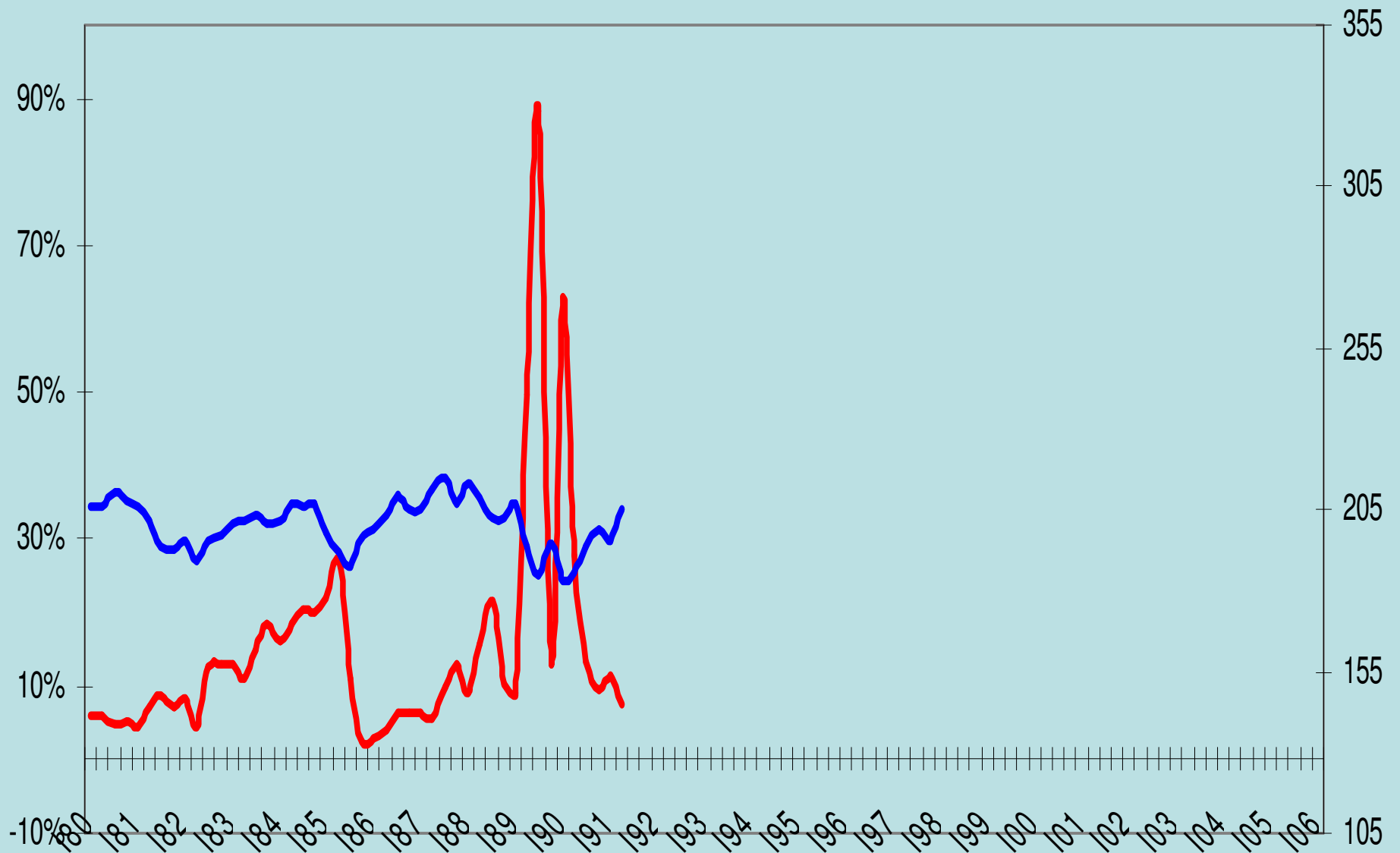
# GDP at constant prices and CPI inflation rates



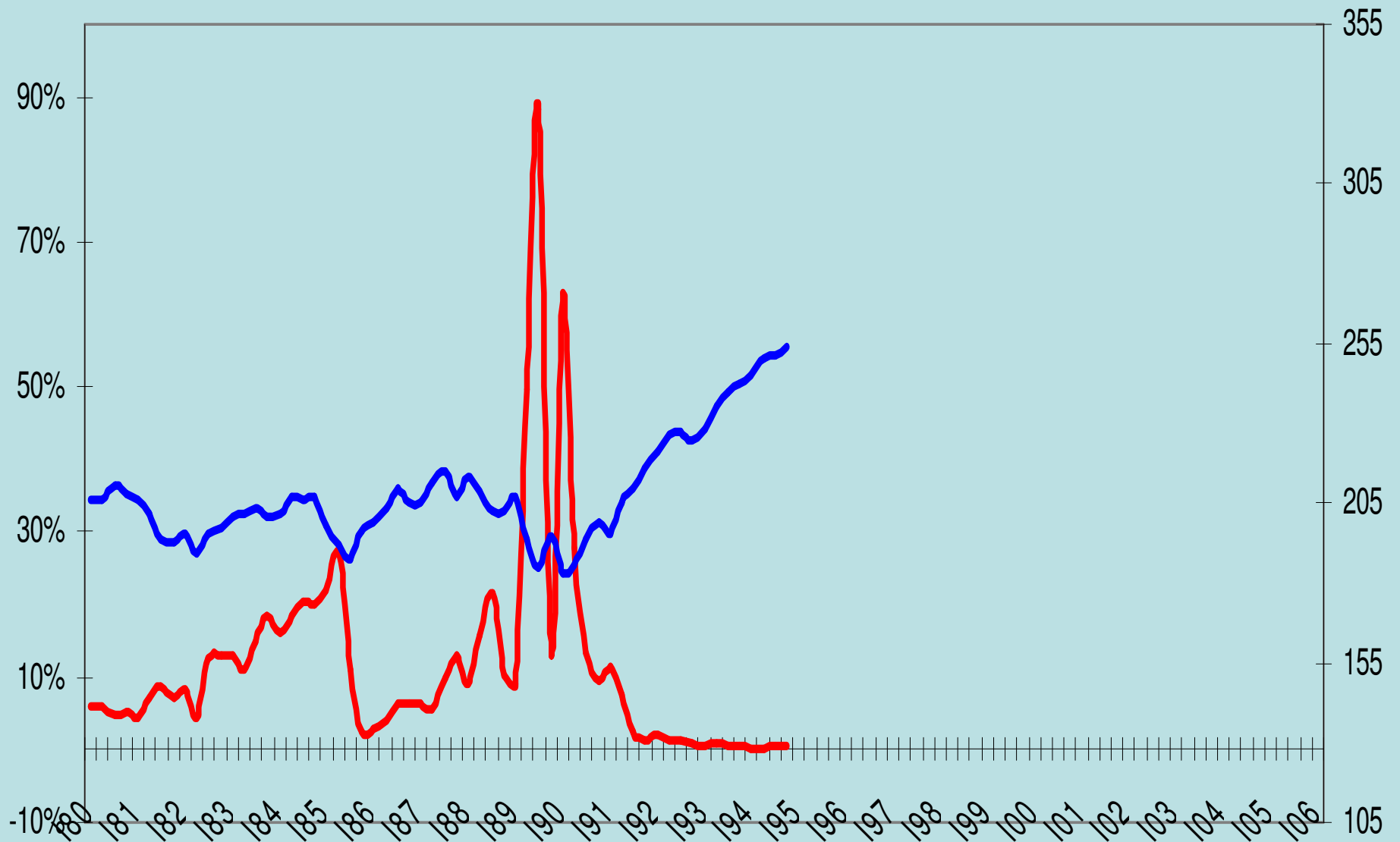
# GDP at constant prices and CPI inflation rates



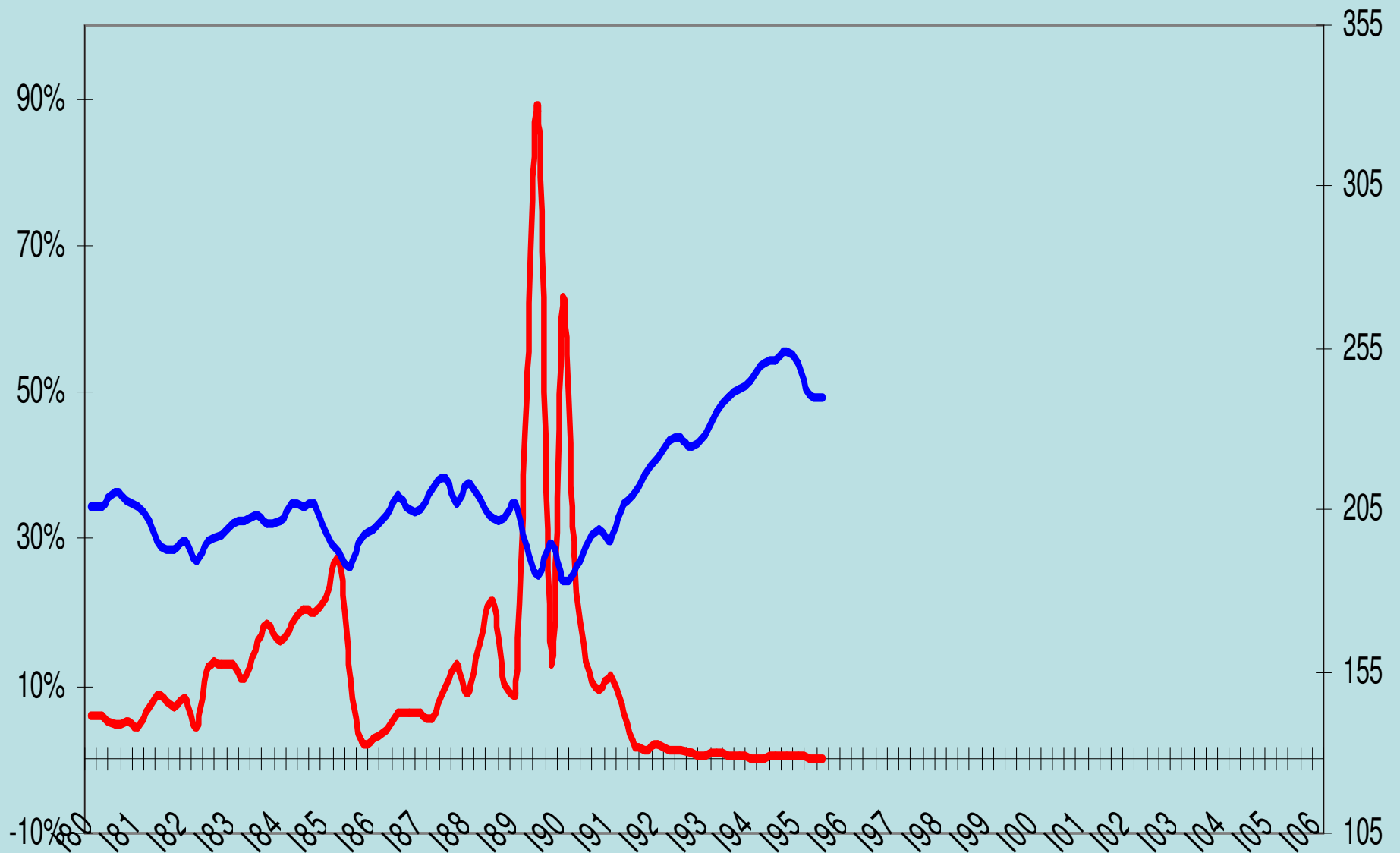
# GDP at constant prices and CPI inflation rates



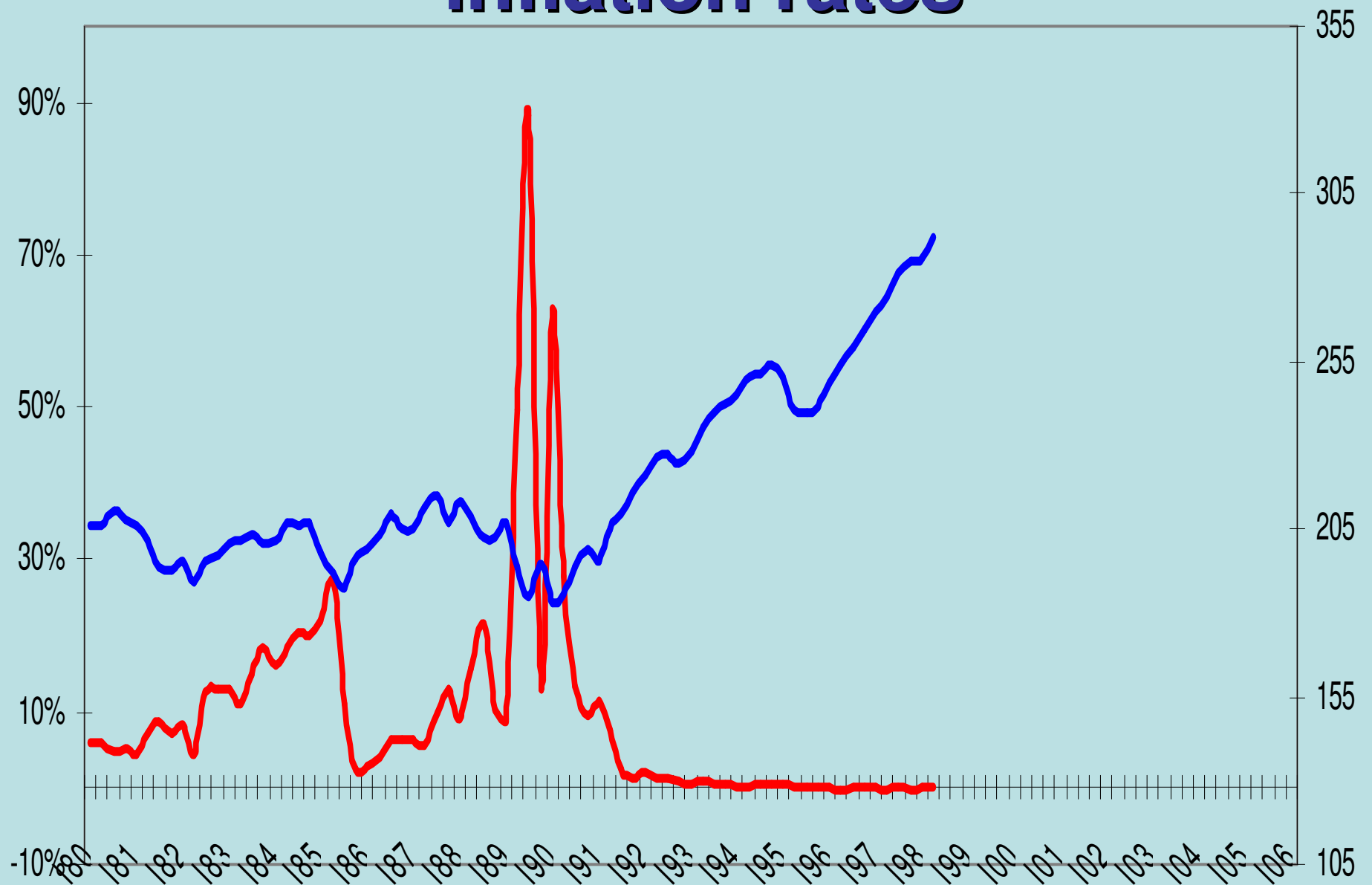
# GDP at constant prices and CPI inflation rates



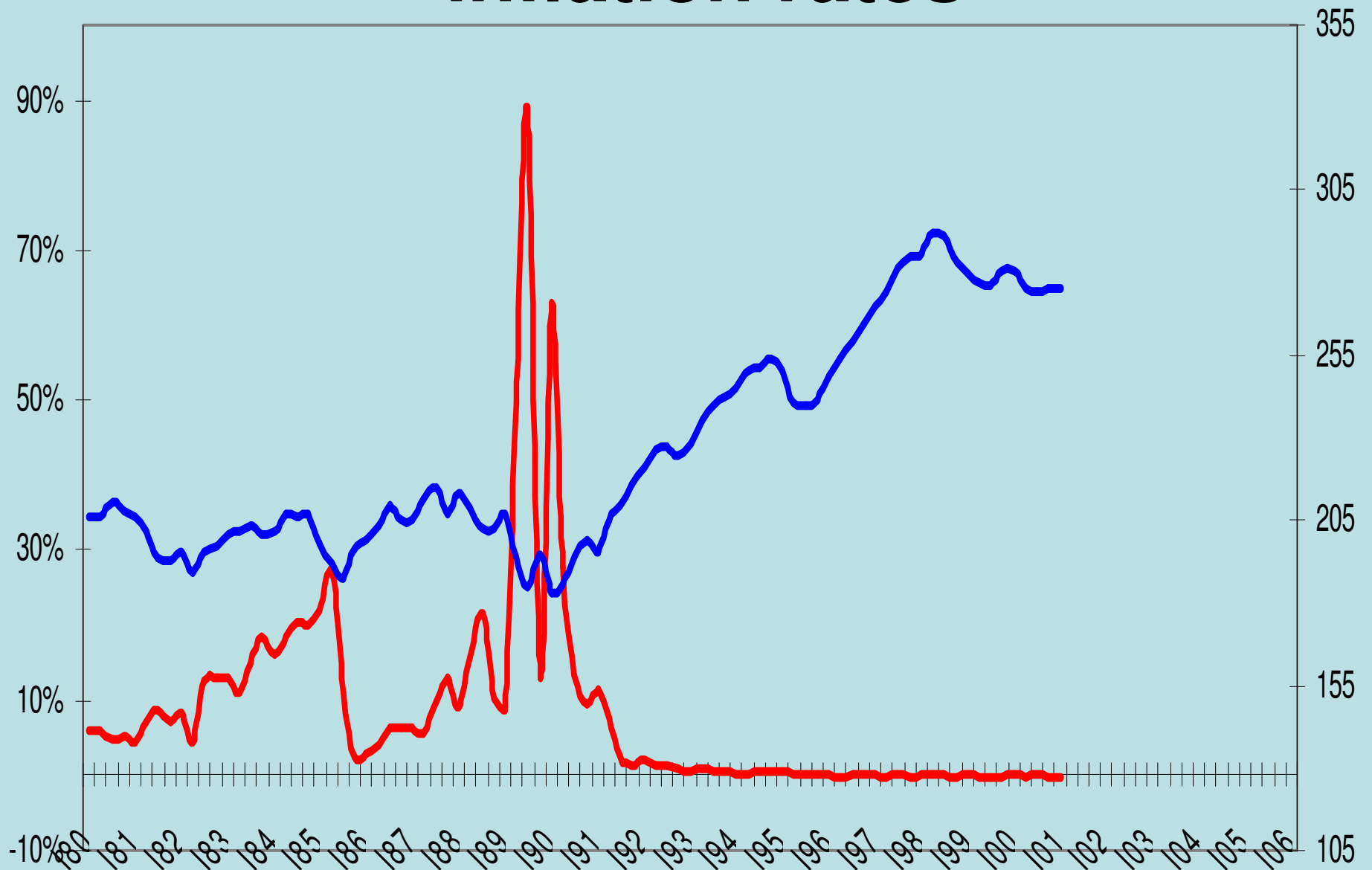
# GDP at constant prices and CPI inflation rates



# GDP at constant prices and CPI inflation rates

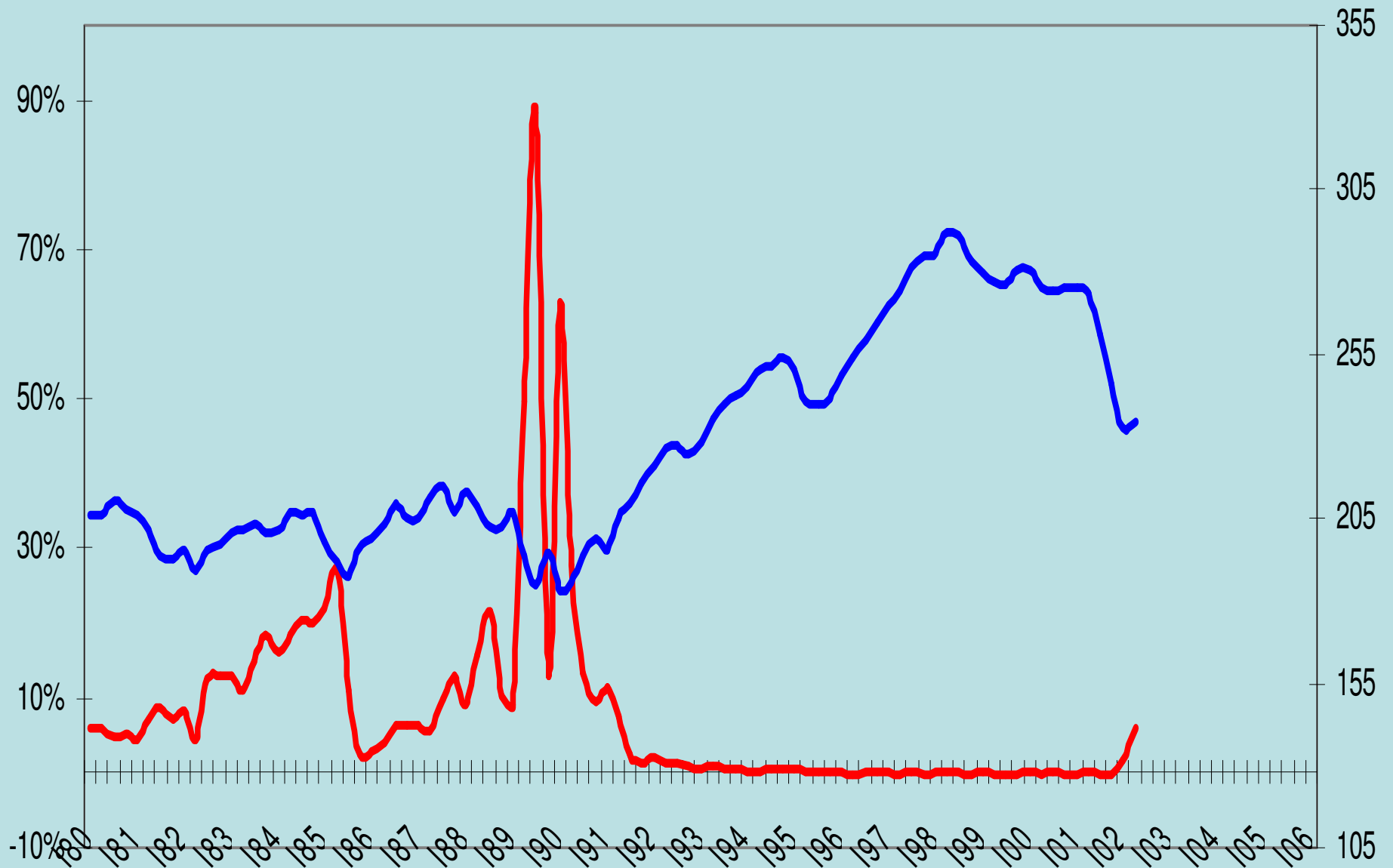


# GDP at constant prices and CPI inflation rates

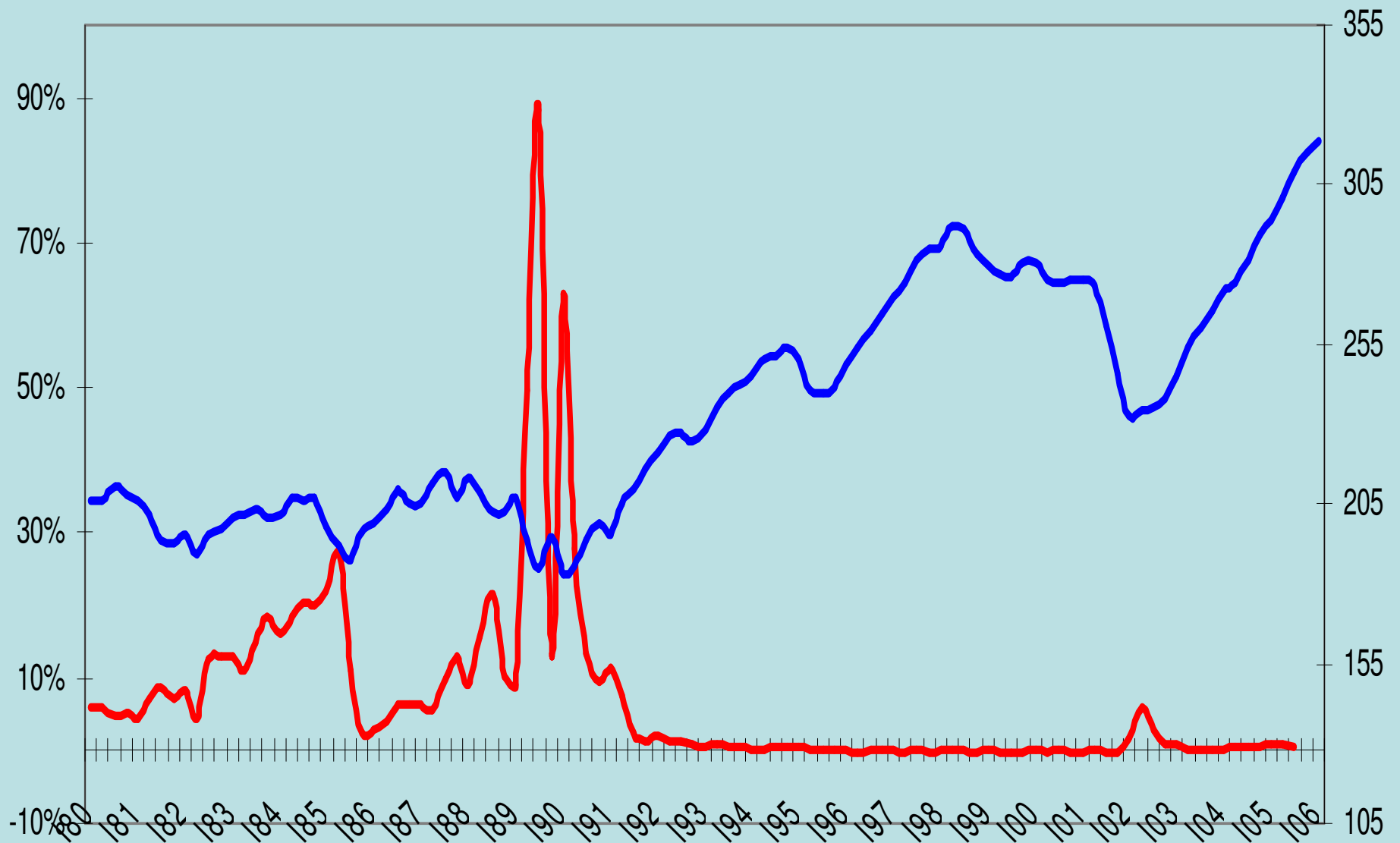




# GDP at constant prices and CPI inflation rates



# GDP at constant prices and CPI inflation rates



# Comportamientos y aprendizaje

- Exploración de conductas basadas en heurísticas y procedimientos aproximativos: búsqueda de regularidades generalizables. Sin embargo, resultados incipientes.
- Política económica: en principio, dirigida a optimizar, según fuera factible, algún tipo de función objetivo social.

# Comportamientos y aprendizaje

- Corresponde a política macroeconómica estar libre de efectos como framing o inconsistencias temporales, admitiendo que conductas de agentes pueden estar sujetas a esos efectos.

# Comportamientos y aprendizaje

- Al margen de posibles criterios formales, heurísticas útiles para decisiones bajo incertidumbre:
  - Comportamiento prudencial, contemplando acontecimientos desfavorables.
  - Algún tipo de esquema adaptativo de revisión de creencias y expectativas, de modo de “aprender de errores”.

# Comportamientos y aprendizaje

- En todo caso: incertidumbre sobre parámetros y potenciales aprendizajes demandaría flexibilidad; pero también, comportamiento previsible para facilitar decisiones privadas. Tensión para ser encarada de algún modo.
- Implícitamente reconocido. Por caso: IT deja flexibilidad instrumental, con pre-determinación de objetivos. Pero presumiría “divina coincidencia” (Blanchard y Galí, 2005), lo cual no es obvio. Tema abierto.

# Temas de consistencia

- Revisiones de modelos usados en política económica, recálculos de parámetros, análisis de sensibilidad con distintos modelos/ especificaciones, muestran explícitamente actividad de aprendizaje.
- Conviene prestar atención a consistencia en diseño, interpretación y uso de modelos y construcciones analíticas.

# Temas de consistencia

- Experimentos de política económica: búsqueda de nuevas y mejores reglas de decisión, en función de aprendizaje sobre operación de la economía.
- En general: modelos “de expectativas racionales” resuelven, hacia adelante, suponiendo previsiones basadas en el modelo y en el esquema de política económica “como si” fueran permanentes.



# Temas de consistencia

- En rigor, procedimiento inconsistente con el ejercicio mismo. Más todavía cuando analista admite relevancia de modelos múltiples y supone “expectativas racionales” de agentes de cada modelo basadas en esa única especificación.
- No invalida necesariamente uso práctico, pero lleva a interpretación como heurísticas, sin pretensiones de generalidad ni de particular coherencia analítica. Lejos de valer como prescripciones metodológicas.

# **Incertidumbre y tratamiento de disyuntivas**

- Difícil establecer esquema formal que reconozca elementos de incertidumbre y aprendizaje de analista, agentes privados y responsables de política, y sirva para deducir reglas de decisión. En todo caso: posible discutir criterios.
- Limitaciones en conocimiento sobre modelo restringen utilidad de reglas pre-anunciadas sobre instrumentos: flexibilidad para aprovechar aprendizaje.

# **Incertidumbre y tratamiento de expectativas**

- Potenciales “funciones de bienestar” dependerían en general de múltiples variables macroeconómicas (en una “forma semi-reducida”). División de trabajo no necesariamente implica asignación de objetivos únicos a instrumentos específicos.
- Ponderaciones, percepción de disyuntivas entre objetivos, posiblemente dependientes de configuración de economía, y variables por aprendizaje.

# Incertidumbre y tratamiento de disyuntivas

- Por contraste: imprecisión respecto de orientaciones de política económica agrega incertidumbre al sector privado y consecuentemente complica a la misma política económica.
- Vale en particular para la trayectoria de la inflación y las expectativas respectivas. Previsiones inciertas pueden sesgar al uso de unidades de contratación (como moneda extranjera) sujeta a shocks reales.

# **Incertidumbre y tratamiento de disyuntivas**

- Tensión flexibilidad- comportamiento sistemático y previsible. Prioridades dependen de parámetros y condiciones.
- En todo caso: objetivos, instrumentos múltiples no implica ausencia de anclas. Requerimiento de manejo que cuide disyuntivas observadas y preste atención a efectos futuros.

# **Incertidumbre y tratamiento de disyuntivas**

- En crisis, problemas de decisión, públicos y privados, concentrados en atención de problemas inmediatos.
- Temas a la salida de crisis: recuperación, búsqueda de tendencia. Posibilidad, y requerimiento, de alargar horizonte de expectativas, y de graduar acciones presentes en función de percepciones sobre el sendero al que se iría convergiéndola.

# Incertidumbre y tratamiento de disyuntivas

- Incertidumbres sobre desemboques de transiciones cuando economías modifican funcionamiento. No se deduce que es imposible o innecesario tratar de ir identificando tendencias.
- También: interesa evaluación de beneficios/costos de errores por exceso o por defecto (por ejemplo, en crecimiento de demanda agregada), y exploración de escenarios contingentes.

# Incertidumbre y tratamiento de disyuntivas

- La Argentina, caso claro de oscilaciones: hiperinflación de un lado, convertibilidad de otro.
- Rasgos de políticas macroeconómicas: atención en sostenibilidad externa- fiscal, preferencia por flexibilidad, no utilización de ancla nominal única, o definición de metas estrictas, énfasis en crecimiento rápido de producto e ingresos.
- Percepción de disyuntivas crecientes: actividad, tipo real de cambio, inflación.



# **Incertidumbre y tratamiento de disyuntivas**

- Avanzada recuperación, importancia de señales sobre trayectoria futura, prevención de sobre-reacciones y vaivenes, guías para expectativas.
- En particular: sendero avizorado de demanda agregada compatible con perspectivas de oferta y evolución moderada y previsible de precios de mercado, para alargar horizontes.
- Relevancia de política fiscal. Más allá de instrumentos específicos: indicaciones sobre características previstas de esquema de crecimiento y criterios de gestión macro.



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# Jornadas Monetarias y Bancarias, 2007

**Mario I. Blejer**

Regímenes monetarios en economías emergentes:  
consideraciones analíticas

4 y 5 de Junio de 2007



BANK OF ENGLAND

# **Regimenes Monetarios en Economías Emergentes – Consideraciones Analíticas**

Mario I. Blejer

Director, CCBS, Bank of England



# Tres elementos de consenso

1. El objetivo fundamental de la política monetaria en el largo plazo es la estabilidad de precios.
2. Para obtener este objetivo es necesaria la adopción de un régimen que implique la presencia de un ***“ancla nominal”***



# Tres elementos de consenso

3. El sistema tenderá a sobredeterminarse si se multiplican las anclas nominales – ***“La Trilogia Imposible”***



# Tres elementos abiertos al debate

1. Economías emergentes requieren regimenes monetarios diferenciados.
2. Reglas monetarias explícitas son la única forma de evitar la discreción monetaria.
3. Los regimenes monetarios no son evolutivos—requieren gran sostenibilidad temporal.



# El Rol del “*Ancla Nominal*”

El ancla nominal es una restricción sobre el valor de la moneda local. Es necesaria para:

- La determinación del nivel de precios
- Estabilizar las expectativas de inflación
- Restringe la discrecionalidad y de esta manera debilita el problema de la ***inconsistencia temporal***





En este contexto, la selección de un régimen monetario equivale a decidir cual es el ancla nominal preferida.

En el “universo monetario” actual, hay basicamente 4 tipos de anclas nominales que resultan en 4 regimenes monetarios alternativos.



# Regimenes Monetarios

- **Metas de Tipo de Cambio**
- **Metas Monetarias Cuantitativas**
- **Metas de Inflación**
- **Ancla Nominal “Implícita”**



# I. Metas de Tipo de Cambio

Estrictas o flexibles:

- Restringen la independencia monetaria por lo que limitan la capacidad de banco central para reaccionar a los shocks nominales y reales.
- Aumentan la inestabilidad financiera al alentar ataques especulativos y descalces de moneda.



# I. Metas de Tipo de Cambio

Al mismo tiempo:

- Reducen el potencial de discrecionalidad
- Ayudan a generar credibilidad
- Aumentan la certidumbre en el sector real (al restringir la volatilidad de los precios relativos)



# I. Metas de Tipo de Cambio

Limitantes:

- Necesidad de consistencia macroeconómica.
- Rigidez en el ajuste de la tasa real de equilibrio.
- Capacidad limitada de esterilización por parte del banco central.



## II. Metas Monetarias Cuantitativas

Permite el uso de la política monetaria para obtener objetivos domésticos y amortiguar shocks locales y exógenos.

Sin embargo tiene serios cuestionamientos:

- Bajo nivel de transparencia
- La relación con la variable objetivo es inestable.
- Falta de control sobre la variable monetaria.



## III. Metas de Inflación

- Permite focalizarse en las variables domesticas sin los problemas del mecanismo de transmisión.
- Altamente transparente, aumentando la responsabilidad y la credibilidad del banco central.
- Flexibilidad en la elección de los instrumentos.



# III. Metas de Inflación

Pero no exento de problemas:

- Tiende a ser inapropiado para reducir la inflación desde niveles relativamente altos.
- Puede exacerbar la rigidez con respecto a objetivos intermedios de corto plazo.
- Requiere estabilidad e información sobre el mecanismo de transmisión. (Problemas en la post-crisis).





## IV. Ancla Nominal “Implícita”

Hay países (EEUU) que han obtenido buenos resultados sin un ancla nominal “explícita” sino con un objetivo(s) implícito.

Mishkin llama a este sistema **“just do it”**

Sistema flexible pero poco transparente.

Puede desestabilizar las expectativas y causar inestabilidad financiera.

Funciona solamente si el ancla nominal es la credibilidad del banco central.



# Tres elementos abiertos al debate

1. Economías emergentes requieren regimenes monetarios diferenciados.
2. Reglas monetarias explícitas son la única forma de evitar la discreción monetaria.
3. Los regimenes monetarios no son evolutivos—requieren gran sostenibilidad temporal.



**Muchas Gracias**

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# Jornadas Monetarias y Bancarias, 2007

**Eduardo L. Curia**

Régimen monetario y banco central. “Desarrollistas”. En una  
“economía emergente”

4 y 5 de Junio de 2007

# **REGIMEN MONETARIO y BANCO CENTRAL**

## **"DESARROLLISTAS"**

*En una "economía emergente"*

por

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Junio de 2007

*Preparado para las Jornadas Monetarias y Cambiarias del Banco  
Central de la República Argentina. Junio de 2007.*

## REGIMEN MONETARIO y BANCO CENTRAL

### "DESARROLLISTAS"

#### *En una "economía emergente"*

**Resumen.** *La realidad de las llamadas economías emergentes puede imponer especificaciones importantes en lo referido al diseño del régimen monetario y a la propia funcionalidad del banco central. En especial, en el caso de países como la Argentina, con una historia económica de arrastre desfalleciente, incluido el megadesempleo, lo que lleva a procurar, por ende, una senda sostenida de expansión a un ritmo bastante superior al de la media de comportamiento mundial. En consecuencia, se requieren fórmulas dotadas de matices diferentes con relación a las de cuño más convencional. Así se impone un régimen monetario y un banco central "desarrollistas" como la articulación más apropiada para propender a los enfatizados objetivos de crecimiento y de empleo, de la mano de un nivel de inflación atendible.*

#### **1. Las especificaciones de las economías emergentes y el caso argentino**

La realidad de los llamados países o economías emergentes puede imponer especificaciones al diseñar el régimen monetario. Tanto más para una economía como la argentina, con una historia reciente signada por décadas de una expansión pusilánime, por megadesempleo y por episodios críticos. En una economía así es legítimo aspirar a "recuperar el tiempo perdido", apostando por un lapso extendido a un crecimiento sostenido y sustentable bastante superior al promedio mundial, como vino sucediendo en el curso del último quinquenio. Al fenómeno en cuestión, cabe calificarlo como *desarrollo* o *sobrecrecimiento*.

Con este marco, se impone la reflexión acerca del régimen monetario adecuado al efecto. Lo que se facilita si se asume un contraste dialéctico con el *esquema de metas de inflación canónico*, en adelante: EMIC. Aquí se tratará de arrimar algunas ideas al respecto.

#### **2. La tasa de interés real favorable a la aceleración del crecimiento**

Así, el primer aspecto en debate es el concerniente al *alcance* de la política monetaria. Recomendando al respecto un *régimen monetario pro desarrollo*, algo que el EMIC no puede

**Eduardo L. Curia**

ofrecer, en tanto es un esquema pensado para economías ya desarrolladas o bien para las aun no desarrolladas pero que son menos sensibles en el momento a la tensión del desarrollo.

Un régimen por el estilo, a diferencia de la visión convencional, y como lo expresa Smithin (1), encara "cómo la política monetaria podría afectar al desempleo y al crecimiento". Esa política, pues, es entendida como *no neutral* de cara al horizonte más largo (2), resaltándose el rol *activista* de la misma.

La autoridad monetaria, entonces, no asume una senda de crecimiento pre dada, la que, junto con una referencia inflacionaria asociada, opere como atractor ineludible de su accionar. Por el contrario, el mayor crecimiento se erige en un objetivo de su gestión.

En la óptica tradicional o convencional, como por ejemplo señalan Bernanke y Walsh (3), la política monetaria se atiene a un *trade off* o compromiso relativo a las *variaciones*, más que a sus *niveles* en el tiempo, de las variables inflación y producto (empleo), atendiendo a distintos shocks y condiciones de la economía.

El mensaje que proyecta el EMIC es claro. Según la función de reacción del banco central, que encaja con las ecuaciones de brecha de producto y de curva de Phillips (incluida en su caso la de paridad de interés descubierta), la autoridad monetaria manipula la tasa de interés nominal (de corto plazo) en ocasión de los eventuales desvíos de producto y de inflación con respecto de las metas establecidas (mandato dual). Dicha manipulación apunta a preservar el tipo de interés real que traduzca, en hipótesis, la tasa de interés de equilibrio de largo plazo, a la que se reputa conocida de algún modo. Subyace una visión neowickselliana de *tasa natural*, reflejando, se aduce, las posibilidades productivas predefinidas de la economía, con un producto potencial "de arrastre".

*Este criterio, desde la visual del desarrollo, no entusiasma.* Porque, según esta visual, el banco central, efectivamente, controla la tasa de interés nominal, pero orientándola hacia un nivel real favorable, por lo bajo, a una aceleración del decurso expansivo de la economía y del empleo. De esta manera, se perfila un ajuste viable de la tasa de interés real capaz de reforzar el crecimiento y el empleo (4).

### **3. Papel relevante del tipo de cambio competitivo sostenible para el desarrollo**

Naturalmente, en el caso considerado, dada una economía abierta y pequeña, el tipo de cambio gravita, conectándose con el tipo de interés, fenómeno al que se suele receptor a través del llamado *índice de condiciones monetarias* (ICM), el que adolecería de cierta rigidez.

No pocos análisis atienden a la reacción -ante diversos shocks, incluidos los eventos ligados a las grandes crisis financieras (5)- del tipo de cambio y de otras variables de la economía. Cuando, a la vez, el tipo de cambio es examinado en el ámbito del EMIC, como no se lo concibe en general como un objetivo de política, no sorprende entonces una probablemente mayor volatilidad, tanto más en economías emergentes, lo que puede acarrear molestos efectos en cuanto a las perspectivas de crecimiento de la actividad económica (6). Todo lo cual, dicho sea de paso, está suscitando en la materia cierta reconsideración teórica (7).

*Esta postura canónica tampoco calza con la visión pro desarrollo.* Para esta visión, el tipo de cambio real es un recurso instrumental clave (sentado el carácter de exogeneidad correspondiente), articulable con otras políticas concurrentes. Como dicen algunos autores (8), importa establecer y defender un nivel cambiario real que favorezca el despliegue de la demanda (con un comportamiento básicamente adaptativo de la oferta) y de la inversión de

**Eduardo L. Curia**

manera de asegurar tasas expansivas pronunciadas y la progresiva absorción de los recursos laborales ociosos. Este tipo de cambio de equilibrio relevante es el tipo de cambio *competitivo sostenible*, y que las expectativas perciben como tal; es un equilibrio *inherente al proceso mismo de desarrollo en marcha (path dependence)*. En tanto planteo de política, a implementar por vía de un régimen cambiario *intermedio*, tiene un perfil más bien *normativo (9)*, aunque no arbitrario, al coincidir con las posibilidades concretas del sobrecrecimiento con fuerte predicamento industrial. No es, por ejemplo, un *simple* promedio de comportamiento relativo a un determinado período, como lo plantea la postura del BEER (*behavioral equilibrium exchange rate*).

#### **4. El banco central, coordinación macroeconómica y estrategia pro desarrollo**

Las implicancias del asunto son claras: el régimen monetario pro desarrollo persigue a modo de *targets* una cierta combinación de tipo de cambio real alto y de tasa de interés real baja, accionando políticamente al efecto las variables nominales pertinentes. No se aplica, así, el *dictum* convencional, expresado por M. Friedman, entre otros, de que las variables nominales no pueden inducir a las de tenor real.

No obstante, adviértase lo siguiente: el EMIC procura siempre que el manejo de la tasa de interés nominal permita asegurar un nivel de tasa de interés real coincidente con el considerado de equilibrio. O sea: la variable nominal persigue la real. Lo que ocurre es que ese manejo opera *al límite* consecuente con la tasa de interés real que se asimila a un estadio *normalizado*, en el plano histórico, del despliegue productivo. Por el contrario, en el desarrollo, este despliegue se somete a *una tensión acelerante*, por lo que las variables nominales apuntan a las reales compatibles con la tal instancia (perfilándose un nuevo equilibrio; *hystéresis*). En ningún caso hay una dicotomía entre factores reales y monetarios, reñida con los términos de una economía planetaria ontológicamente monetaria, en el sentido del célebre artículo de Keynes de 1933.

El banco central comprometido con este enfoque -el banco central *desarrollista*- no sorprende ni viola la fe de nadie cuando asume las políticas monetaria y cambiaria activas. Toda la jerigonza en torno al banco central *independiente* (en lo político), al banquero central conservador y/o a los compromisos tanto unilaterales como formales y colectivos para evitar "sorpresas" y atentados contra la consistencia intertemporal, se coloca entre paréntesis. Porque en un marco en el que hay incertidumbre, racionalidad concreta e interdependencia fuerte de las conductas de los agentes, se suscita un reto de coordinación macroeconómica. Así las cosas, el activismo monetario y cambiario bien puede ayudar, como expresa F. Hahn (10), a que el juego involucrado resulte *cooperativo*, en este caso, en pro del desarrollo. Siendo que, a la vez, se entronque aquel activismo con una política de ingresos (11).

#### **5. Desarrollo e inflación bajo un marco plausible**

El enfoque activista pro desarrollo referido, puede coincidir en su desenvolvimiento con la presencia de niveles de inflación algo superiores a los que serían propios del EMIC. Y a los que tienden a identificarse con el promedio mundial (12). Esta circunstancia es algo así como la "contracara" del sesgo retractivo imputable al EMIC y que, tanto B. Friedman como Mishkin, señalan (13). Y sin olvidar aquí la cuestión del mayor grado de volatilidad de variables a la que antes se hizo mención.



**Eduardo L. Curia**

De todos modos, corresponde hacer algunas oportunas aclaraciones. En primer lugar, y como lo resalta Smithin (14), una inflación superior -que no tiene por qué ser *extremadamente* superior- no es sinónimo de "inestabilidad inflacionaria".

En segundo lugar, el aludido activismo toma nota de que un cierto compromiso entre expansión económica e inflación, en base al accionar de la demanda y definiendo un producto potencial más como perspectiva a futuro que como variable "de arrastre", es capaz de gravitar de cara al largo plazo, reforzando el sendero de crecimiento. Entonces, como dice Libanio (15), ya no es alegable que el banco central no puede afectar las variables reales en el largo plazo.

Al inducir el activismo -aun conllevando algo más de inflación- una mayor expansión del *output* o producto corriente de la mano de la presión de la demanda, cabe esperar implicancias positivas intensificadas en materia de acumulación de capital, de aprendizaje productivo, de progreso técnico y de mejora general de los recursos laborales. Por lo tanto, *la oferta misma se beneficia de un proceso así*, sin desmedro del acople de políticas más específicas. Por lo que, y como alegan algunos autores (16), la tasa natural se convierte en una función de la demanda y del producto corriente, al revés de lo defendido por la postura convencional. A su vez, y tal cual lo estudió Ball (17), políticas restrictivas de la demanda pueden elevar la tasa natural de paro (o la denominada NAIRU). Por lo demás, en tanto la expansión del producto corriente es, como se expresó, capaz de alentar una mayor formación de capital (18), ampliando así la capacidad productiva, *bajo una perspectiva mediata, se proyectaría un efecto antiinflacionario*.

Frente a una trayectoria como la recién descrita, desde la óptica del EMIC podría denunciarse en el caso un fenómeno de *persistencia*, entendida en términos de desvíos perdurables -vía brecha de producto y una inflación más elevada- respecto de un predefinido equilibrio de largo plazo, despertándose así inquietudes rectificatorias. En cambio, desde la óptica del desarrollo, se trata de la búsqueda del nuevo equilibrio inherente a aquél, o sea, de una instancia de *hystéresis*.

## **6. Política antiinflacionaria en la estrategia pro desarrollo**

Según lo expuesto, una inflación algo superior no es sinónimo ni de inestabilidad inflacionaria ni de una superioridad desmedida de los niveles comprendidos. Más aun, como vengo propugnando desde tiempo atrás (19), es perfectamente adoptable un *esquema de metas de inflación alternativo*, naturalmente, afecto al enfoque de sobrecrecimiento. Con los planteos pertinentes en términos de determinación de la distribución de probabilidad inflacionaria, del horizonte de reacción instrumental, de las vías de transmisión monetaria y de la comunicación.

Por supuesto, en él, y atendiendo a la función de reacción del banco central, al lado del objetivo de inflación congruente, la meta de *output* o producto debe ser consistente con el referido planteo de aceleración de la senda de crecimiento. Y, por su alta conexión con este factor, sobre todo en cuanto a su sustentabilidad, también debe figurar en aquella función de reacción un *target* de tipo de cambio real básicamente preservable en el tiempo. Por eso, suelo aludir a un esquema de metas de inflación *tridimensional* a manera de encuadre del esfuerzo de armonización de la autoridad monetaria.

Una inquietud que surgiría aquí es la concerniente al grado de *determinación* del nivel de inflación. Recuérdense que, en este plano, la regla de Taylor, afin a la óptica más convencional, evolucionó hacia la exigencia de un ajuste alcista de la tasa de interés nominal en una proporción mayor a la de la suba de la inflación verificada. Como en el esquema de metas de

**Eduardo L. Curia**

inflación alternativo, por su diseño, la tasa de interés tiende a actuar de una manera menos recia, ¿cómo responder al citado reto de la determinación?

La respuesta sobre el particular es plural y convergente. Un aporte proviene de la *esterilización monetaria* que puede usar el banco central como correlato de la probable intervención en el mercado de cambios, mecanismo aquél que también reclama recaudos para su sostenibilidad. Otra contribución la da la política de ingresos, apuntando a colocar límites a manifestaciones excesivas del poder de mercado de las empresas en los precios y a asegurar el respeto del criterio de los *costos laborales unitarios* en el plano salarial. Cooperaría, asimismo, el accionar destinado, en materia de crédito y de financiación, a evitar que el apoyo a la inversión productiva quede muy rezagado respecto del otorgado al consumo. Por fin, es relevante en el caso considerado una fuerte disciplina fiscal, la que no sólo luce funcional a la estabilidad de precios -evitándose así "sobrecargar" a la política (directa) de precios-, sino que también opera a modo de estabilizador sistémico y en el ámbito de la asignación dinámica de recursos.

Con estos antecedentes, y retomando el punto, se hace evidente que en el contexto aludido, vale la independencia operativa del banco central, pero no la política. La densa correspondencia de políticas involucrada exige de los centros de decisión de esas esferas un *concierto deliberado activo* (20). Un mutuo conocimiento de las decisiones asumidas en cada caso y un juego de reacciones por separado, no bastan. Al EMIC puede resultarle admisible y hasta suficiente que, ante un eventual debilitamiento del equilibrio del sector fiscal que propulse la demanda global "más allá de lo previsto", la autoridad monetaria, por ejemplo, reaccione elevando la tasa de interés referencial. Para la visión alternativa, en cambio, las implicancias de esto serían más negativas ante la falta del concierto deliberado activo.

## **7. La cuestión de la estabilidad financiera**

La llamada estabilidad financiera también importa a un buen régimen monetario. La propia política monetaria, por medio del manejo de las tasas de interés de corto y la posibilidad de proyectar la influencia sobre las tasas de largo, puede incidir en la dinámica financiera, afectando los precios de los activos, las hojas de balance, la situación de endeudamiento y la evolución misma del apalancamiento crediticio. Incluso, puede darse una repercusión económica más general. La sensibilidad de un cuadro de este tenor se intensifica al comprobarse que los diversos factores se articulan en el seno de una densa red de posiciones de acreencias y de valorizaciones recíprocas, un fenómeno propicio para alentar reacciones en cadena de diverso tipo (21).

Desde ya, los mecanismos específicos de supervisión -recaudos en materia de capital y de liquidez- y de detección de vulnerabilidades, los criterios relativos al "calce" de distintas posiciones financieras, el seguimiento del desalineamiento de los precios de los activos y de la dinámica de apalancamiento crediticio, conservan su importante lugar.

De todas maneras, hay que recalcar el rol al respecto de la disponibilidad de un marco macroeconómico sano. La experiencia crítica argentina de años atrás, a título ilustrativo, combinó perversamente la acusada volatilidad que suele acompañar al movimiento de capitales internacionales, con la presencia de un esquema macroeconómico doméstico sumamente expuesto en lo externo y sensible en lo interno a los perjuicios de aquella exposición (22). Frente a esto, un esquema más sólido en lo externo, ligado a un tipo de cambio competitivo, al enfoque de desendeudamiento y, como recalca el BCRA, al aporte del stock de reservas a modo de *collateral*, parece proyectar una opción preferible. También existe evidencia en el sentido que una dinámica positiva sostenible de la actividad económica funge como un recaudo de base de la estabilidad financiera, sin desmedro de los casos en los que ésta demande una cura

***Eduardo L. Curia***

especial, obligando a que, por ejemplo, se ajusten los tiempos de reacción de las variables instrumentales (23).

## **8. Conclusiones: régimen monetario y banco central desarrollistas**

El análisis efectuado en este *paper* permite inferir que la realidad de las llamadas economías emergentes puede imponer especificaciones importantes a la hora de diseñar el régimen monetario aplicable y la propia funcionalidad del banco central. En especial, en el caso de países como la Argentina, con una historia económica de arrastre desfalleciente y con megadesempleo. Esto lleva, por ende, a procurar resueltamente una senda sostenida y sustentable de expansión a un ritmo bastante superior al de la media de comportamiento mundial. En consecuencia, se requieren fórmulas con rasgos diferentes a los propios de las posturas más convencionales. Así se imponen un régimen monetario y un banco central *desarrollistas*, como la articulación más aconsejable para apuntar a los enfatizados objetivos de crecimiento y de empleo, de la mano de un nivel de inflación atendible.

**Eduardo L. Curia**

**Eduardo L. Curia**

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- (7) Edwards, S. (2006). *The relationship between exchange rate and inflation targeting, revisited*, NBER W P, no. 12.163. Por otro lado, se alega que la disponibilidad de mecanismos financieros de *hedging* acota el grado de perjudicialidad de la volatilidad cambiaria.
- (8) Bouveret, A. *et al* (2006). *The renminbi equilibrium exchange rate: an agnostic view*, OFCE, Document de travail, 13. Vale la pena atender, asimismo, la evidencia presentada, con relación a una amplia muestra de países en desarrollo, en el sentido de una destacable asociación entre crecimiento, resultados más favorables de la cuenta corriente y tipos de cambio reales relativamente altos, que obra en el trabajo de Prasad, E. *et al* (2005). *Foreign capital and economic growth*, IMF, Research Department.
- (9) Dada la perspectiva normativa, la categoría de FEER (*fundamental equilibrium exchange rate*), originada en Williamson, merece una atención especial. Naturalmente, para cualquier intento de "computación" al respecto, se requiere especificar las condiciones que atañen al equilibrio interno y externo de la economía involucrada y caracterizar el modelo que sigue la misma, de modo que se pueda determinar la solución que defina, por de pronto, el tipo de cambio de equilibrio de mediano plazo. En verdad, el enfoque en cuestión puede padecer de ciertas limitaciones, algunas apegadas a ciertos rasgos emparentados con planteos más bien convencionales, responsables de subestimar el rol del activismo de las políticas monetaria y cambiaria. Una extensión interesante a evaluar la aporta el DEER (*desired equilibrium exchange rate*).

Las vacilaciones en la materia que aquejan a algunos distinguidos autores pueden advertirse, por ejemplo, en Eichengreen, B. (2007). *The real exchange rate and economic growth*, W. Arthur Lewis Institute. Este autor rechaza la apelación a la política monetaria de cara a la utilización del tipo de cambio real como objetivo aplicable al largo plazo. Pero, reconoce la importancia del tipo de cambio real para el crecimiento en lo que atañe al "mediano plazo". Debe aceptar, asimismo, la relevancia del "tipo de cambio competitivo" para la estrategia de crecimiento de China, pero, tras cartón, señala limitaciones sobrevinientes. En fin...

Queda en claro, asimismo, por un lado, que el planteo cambiario recomendado en el texto supone un régimen *intermedio*, con lo que se hace poco caso al epitafio que algunos apresuradamente colgaron de este tipo de régimen; y, por el otro, que los famosos

**Eduardo L. Curia**

*fundamentals*, si cabe hablar así de los elementos pretendidamente determinantes, no son extraños a la influencia de la política.

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(18) Lavoie. *A post keynesian...*; Curia. *Metas de inflación...* En la Argentina se habría venido verificando últimamente en el sector industrial un aumento del stock de capital implícito a un ritmo superior en términos de comparativa internacional. El crecimiento industrial, a su vez, superaría en ritmo al del uso de la capacidad instalada. Ver *Industria Manufacturera, Producción y Utilización de Capacidad Instalada*, Ministerio de Economía, 2007. Sin duda, se necesitarán mayores especificaciones para un perfilamiento pleno del fenómeno. De todos modos, el dato *alienta la hipótesis de la expansión del producto potencial de la mano del mayor producto corriente*. Este tipo de proceso debería consolidarse.

(19) Curia (2005). *Macroeconomía del Desarrollo*, B. Aires, Ediciones Realidad Argentina; (2006) *El modelo ante un dilema clave a superar. La "tensión" crecimiento-inflación*, B. Aires, CASE.

(20) Curia. *Política monetaria...* Aclárese que, en cuanto al EMIC en la práctica, no abundan los casos de independencia política del banco central. Por supuesto, el concierto deliberado activo desborda, de todos modos, el alcance del EMIC.

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# Jornadas Monetarias y Bancarias, 2007

**Vittorio Corbo**

Transición hacia el régimen monetario chileno actual

4 y 5 de Junio de 2007



# Transición hacia el régimen monetario chileno actual

Vittorio Corbo  
Presidente



# Agenda

1. Antecedentes
2. Construcción gradual del régimen monetario
3. Resultados
4. Conclusiones





# Antecedentes



# Antecedentes

- Historia chilena con tasas de inflación altas e inestables. ⇒
- Reducción de la inflación ha sido un proceso gradual.
- Régimen monetario pasó desde:
  - objetivos de agregados monetarios y anclas cambiarias;
  - banda cambiaria con metas anuales de inflación;
  - flexibilización cambiaria en 1999 y adopción plena del régimen de metas de inflación en 2000.



# Introducción

- Para llegar al régimen vigente, fue esencial:
  - Dar autonomía al BCCh (1989) con mandato constitucional de alcanzar y mantener la estabilidad de precios;
  - Construir un marco macroeconómico coherente:
    - Situación fiscal sólida que liberara en forma creíble al BC de financiar sus déficits;
    - Un régimen cambiario que no contribuyera a exacerbar los desalineamientos del TCR;
  - Reconstruir el sistema financiero luego de la severa crisis financiera de la primera mitad de los ochenta.



# Construcción gradual del régimen monetario



# Avances y desafíos

- A principios de los noventa:
  - Altas tasas de crecimiento económico gracias a reformas estructurales;
  - Situación fiscal controlada;
  - Sistema financiero en proceso de reconstrucción.
- Gran preocupación por las altas tasas de inflación, por:
  - Políticas expansivas previas;
  - Efectos del *shock* de precios del petróleo durante la guerra del Golfo.
- Problemas para bajar la inflación:
  - Baja credibilidad de la PM;
  - Alta indexación de precios.



# Construcción gradual del régimen monetario actual

- El recién estrenado Consejo del BCCh (1990) decide cumplir su mandato constitucional —la estabilidad de precios— con una mezcla de PM activa y flexibilización creciente de la política de TC (ensanchamiento gradual de la banda cambiaria).
- Como forma de influir en las expectativas y tener un objetivo claro, se adopta una meta inflacionaria y se elige la tasa de interés como instrumento para conseguirla.
- La gradualidad era fundamental para minimizar los costos en términos de producto, dada la alta indexación de la economía y la necesidad de construir credibilidad.



# Primera fase del esquema de metas de inflación (1991-1999)

- Primera fase se introdujo de manera parcial en 1991:
  - Anuncios anuales (septiembre) de la meta inflacionaria para el siguiente año (dic-dic).
  - Anuncio de rango meta (1990 y 1996) o meta puntual (1997 y 1999).
  - Entre 1991 y 2001, la meta fue rebajada 1,5pp por año (en promedio). [⇒](#)



# Conflicto con meta cambiaria

- De las tres precondiciones para un régimen de metas de inflación exitoso (ausencia de dominancia fiscal, independencia de instrumentos y ancla nominal única) sólo las dos primeras se cumplían en los noventa.
- Como en Israel y Colombia, en Chile coexistía la meta de inflación con un ancla cambiaria y controles de capitales:
  - Ante conflictos, primaba el objetivo inflacionario.
- Así, las metas se alcanzaron con bastante éxito: Inflación cayó desde 20-30% anual a tasas de un dígito.
- La dificultad de manejar la Crisis Asiática a través de políticas monetarias y cambiarias restrictivas convencieron de la necesidad de reformar el marco de política.





# Esquema pleno de metas de inflación (desde 2000)

- La transición a un esquema pleno de MI se dio con:
  - Tasa de inflación que convergía a niveles cercanos a 3%.
  - Alta credibilidad por buen cumplimiento de metas anuales.
  - Régimen de TC flotante que reemplazaba la banda cambiaria.
- Entre los años 2001 y 2006:
  - Se adoptó una meta de inflación indefinida y simétrica para el IPC entre 2 y 4% anual, centrado en 3%.
  - Operacionalmente, significaba orientar la PM para alcanzar una inflación anual de 3% en un horizonte de política de 12 a 24 meses.
  - El horizonte y el rango dan flexibilidad dados los rezagos de los efectos de la PM, la posibilidad de acomodar *shocks* transitorios y los costos de corto plazo en producto de la reducción de inflación.



# Esquema pleno de metas de inflación (desde 2000)

- A partir de 2007:
  - Objetivo de la PM es que la inflación IPC se ubique la mayor parte del tiempo en torno a 3%, con un rango de tolerancia de más/menos un punto porcentual.
- El cambio se dio para fortalecer el anclaje en 3%.
- Operacionalmente, la PM se orienta de manera que la inflación proyectada sea 3% en un horizonte de dos años.
- El cambio no fue abrupto, pues en la práctica ya se había avanzado en esa dirección.
- Los cambios fueron hechos públicos en un documento oficial disponible en la web y en una conferencia de prensa.



# Comunicación y transparencia

- Este marco de política se ha acompañado de una creciente transparencia orientada a informar sobre la forma como se hace PM:
  - Desde mayo de 2000 se publica el Informe de Política Monetaria tres veces al año.
  - Las reuniones de PM se anuncian con seis meses de antelación y concluyen con un comunicado de prensa.
  - Se publican las minutas que resumen los temas discutidos en las Reuniones de Política Monetaria, las opciones de política que se consideraron y la votación de los Consejeros.
  - Se publica el libro de Modelos y se actualiza el documento de Política Monetaria.



# Comunicación y transparencia

- Los esfuerzos en transparencia:
  - Proveen legitimidad y facilitan la fiscalización de las acciones del BCCh.
  - Contribuyen a aumentar la efectividad de la política monetaria, guiando las expectativas del mercado.



# Resultados del régimen monetario



# Control inflacionario

- Sin duda, la estabilidad de precios ha sido un objetivo difícil de alcanzar. Sin embargo, el marco de política monetaria vigente ha logrado un gran avance en reducir la inflación, estabilizarla y romper la inercia. ➡
- En términos comparativos, Chile destaca por su gran avance en control inflacionario y crecimiento post independencia del BCCh y más fuertemente durante el período de metas de inflación. ➡
- Aislar la contribución del régimen monetario de otras reformas y cambios en los *shocks* enfrentados es complejo, pero hay claros indicios de que la PM y, específicamente el régimen de metas de inflación, han contribuido a los avances logrados.



# Resultados del esquema de MI

- Expectativas de inflación se encuentran bien ancladas. ➡
- La meta de inflación se ha alcanzado la mayor parte del tiempo. ➡
- Entre los países con esquema de metas de inflación, Chile tiene un buen historial de alcanzar la meta de inflación. ➡
- PM ha contribuido al desempeño macroeconómico. ➡
- Lo anterior ha permitido utilizar la PM como instrumento contracíclico. ➡



# Independencia y transparencia

- Esfuerzos continuos por aumentar independencia, responsabilidad y transparencia han sido reconocidos por evaluaciones internacionales. [⇒](#)
- En términos de entrega de información económica, Chile también aparece bien catalogado. [⇒](#)





# Conclusiones



# Conclusiones

- El control de la inflación es un proceso gradual que requiere avanzar en varios frentes:
  - Independencia del banco central con mandato constitucional de alcanzar y mantener la estabilidad de precios;
  - Un marco macroeconómico coherente:
    - Situación fiscal robusta;
    - Régimen cambiario que no contribuya a exacerbar los desalineamientos del TCR;
  - Un sistema financiero sólido.



# Conclusiones

- Un Banco Central creíble puede reducir significativamente los costos de lograr una estabilidad sostenible en el tiempo.
- La transparencia es importante para la credibilidad y la efectividad de la PM.
- El éxito alcanzado por la estabilización chilena es un activo valioso. Su preservación requiere de un esfuerzo continuo.
- Una inflación baja y estable es la mayor contribución que un Banco Central puede hacer al crecimiento sostenido.



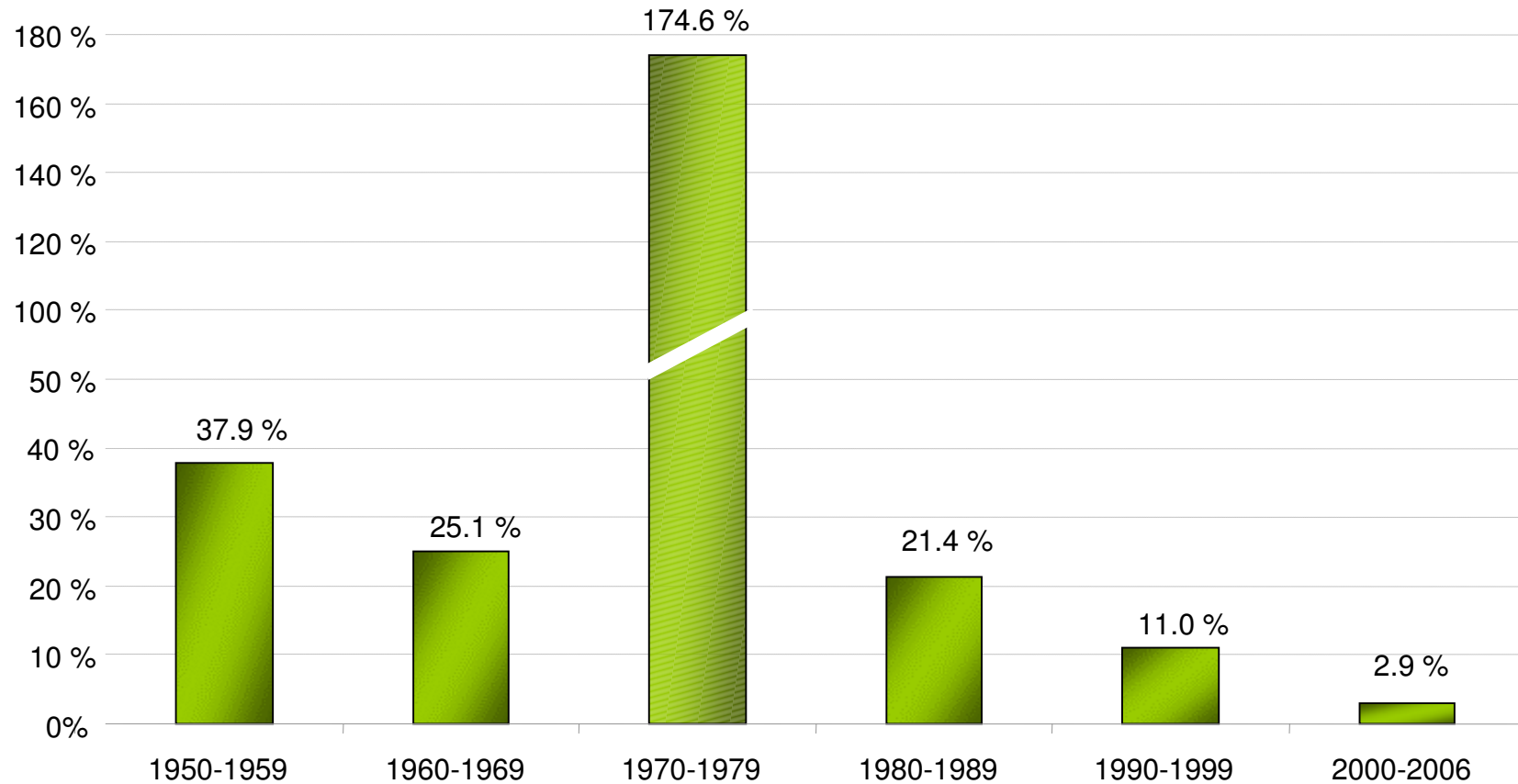
# Transición hacia el régimen monetario chileno actual

Vittorio Corbo  
Presidente



# Inflación IPC

(promedios anuales del período)



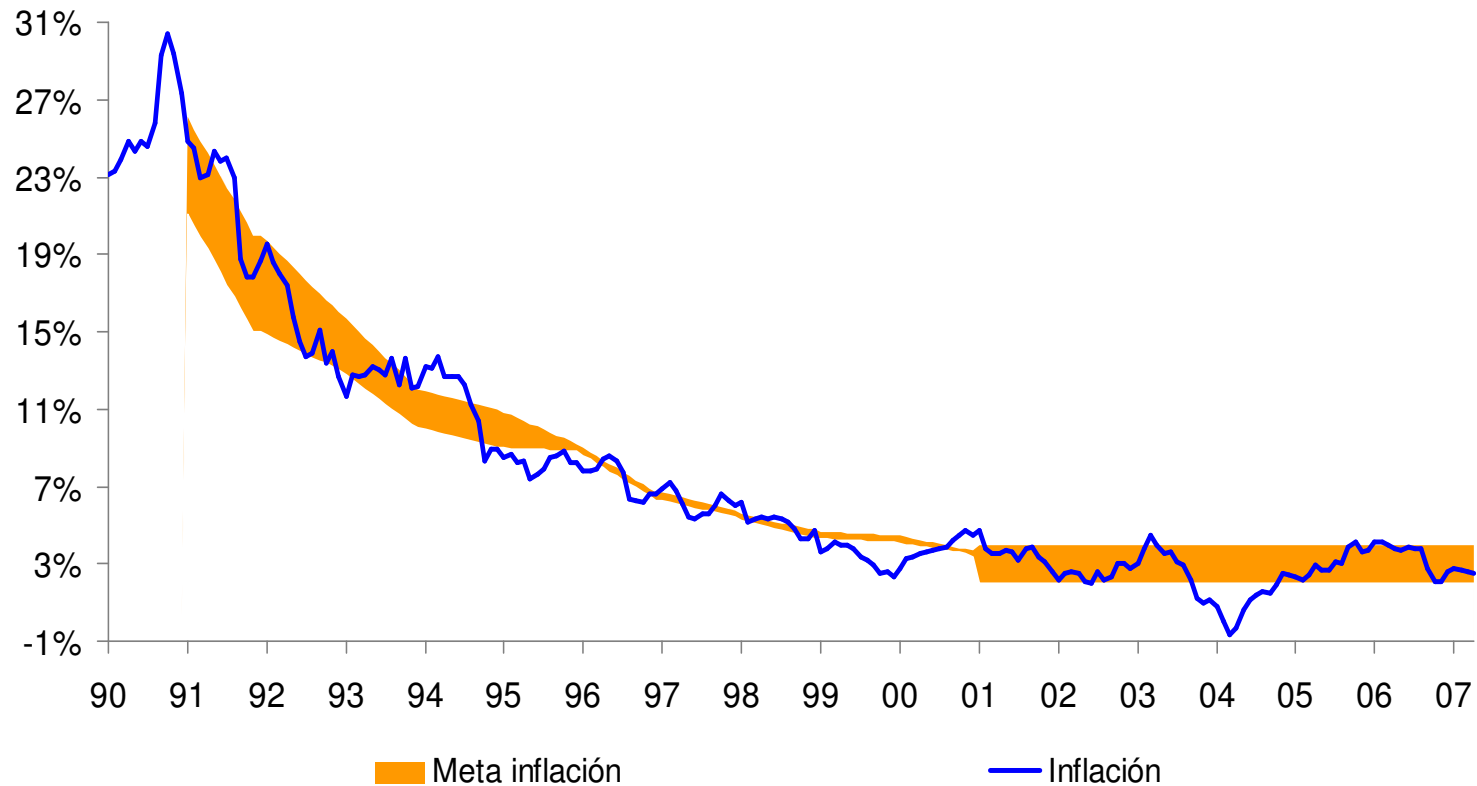
Fuentes: *International Financial Statistics* (FMI) y Banco Central de Chile.





# Inflación y meta 1990-2007

(variación anual)



Fuente: INE y Banco Central de Chile.





# Dinámica inflacionaria

(promedio anual basado en datos trimestrales)

	<b>1960-1989</b>	<b>1990-1999</b>	<b>2000-2007</b>
Promedio	76.1	11.8	2.9
Desviación estándar	135.2	7.3	1.1
Persistencia I (1)	0.957	0.981	0.806
	<b>1986-1989</b>	<b>1990-1999</b>	<b>2000-2006</b>
Persistencia II (2)	1.010	1.063	0.467
	<b>1985-1989</b>	<b>1990-1999</b>	<b>2000-2007</b>
Expectativas de inflación promedio (3)	20.0	13.4	3.1

(1) Persistencia I considera el coeficiente del rezado en la estimación  $\text{inflación} = \text{constante} + \text{inflación}(-1)$ .

(2) Persistencia II considera el coeficiente del rezago de la estimación  $\text{inflación} = f[\text{inflación}(-1), \text{brecha producto}]$ .

(3) Compensación inflacionaria, mide la diferencia entre las tasas de interés de depósitos nominales e indexados a IPC en operaciones de 1 a 3 años.

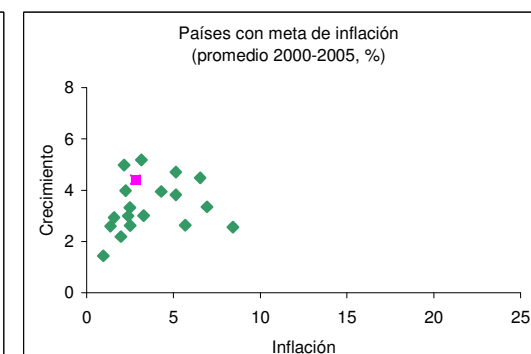
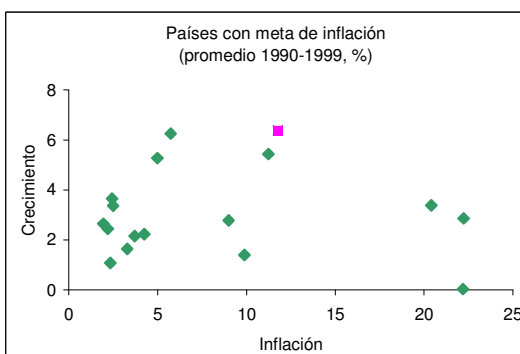
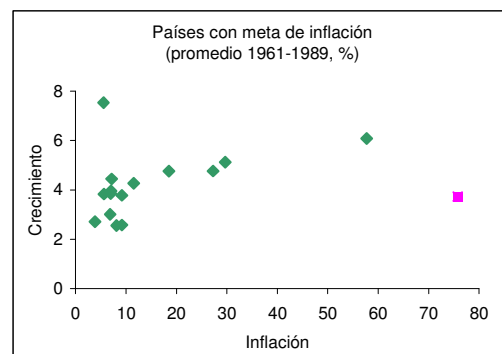
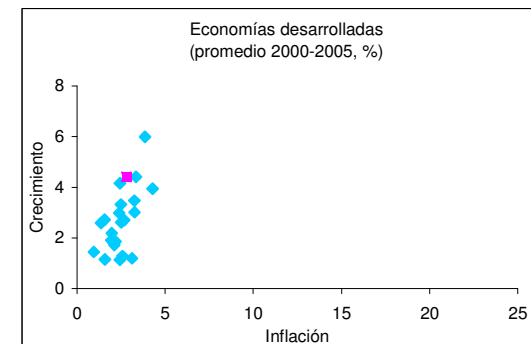
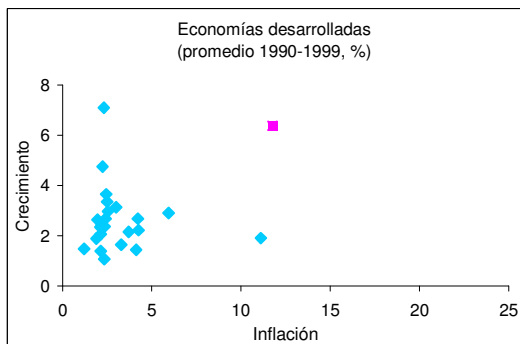
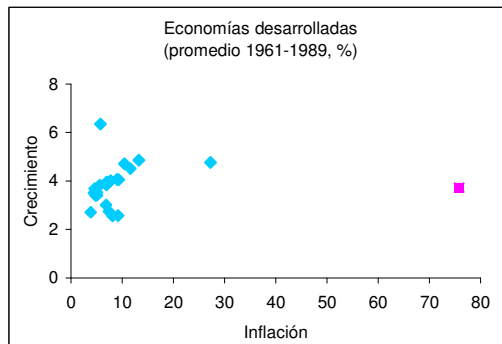
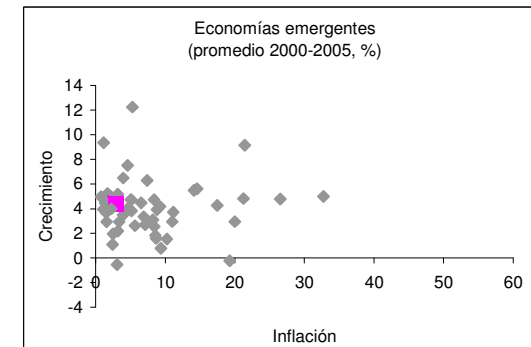
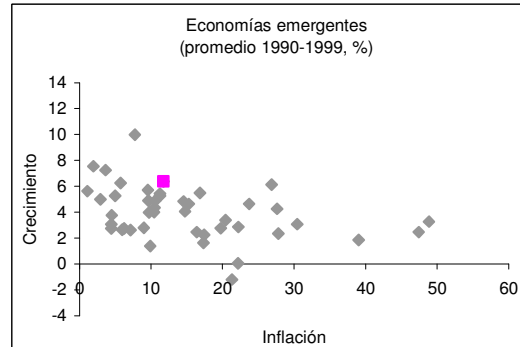
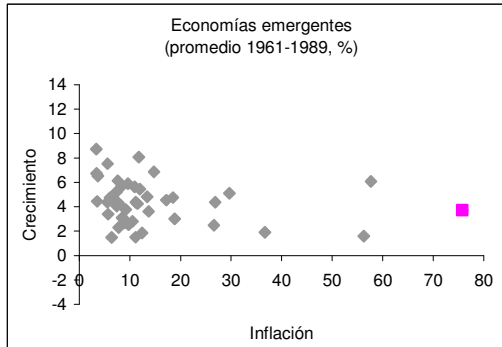
Fuente: Banco Central de Chile.





# Crecimiento e inflación

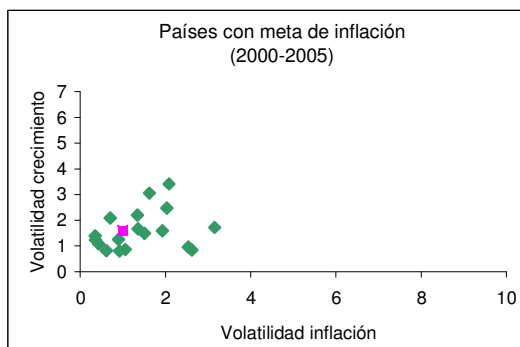
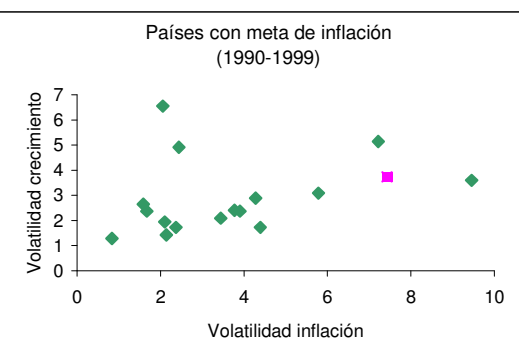
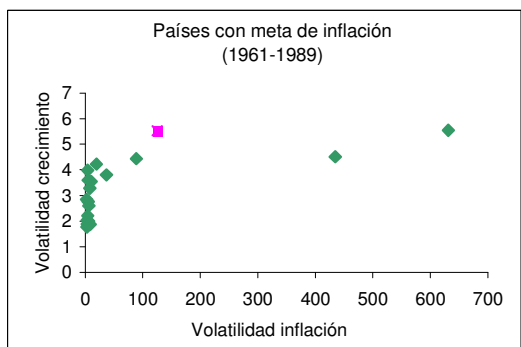
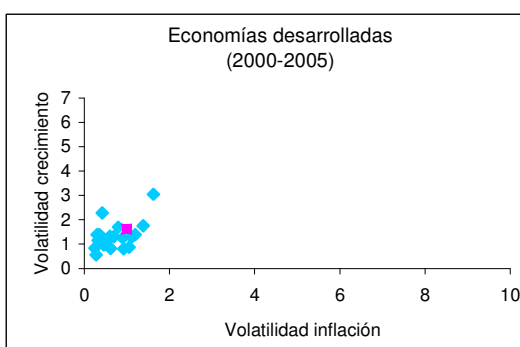
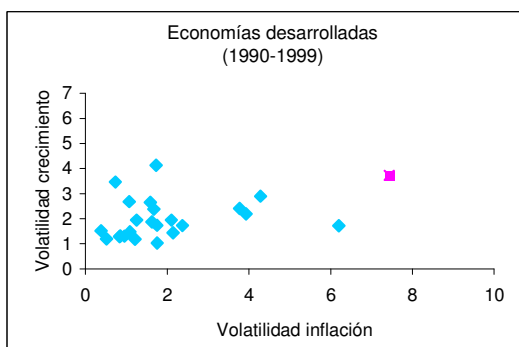
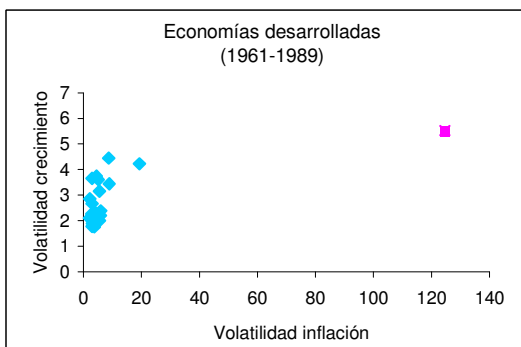
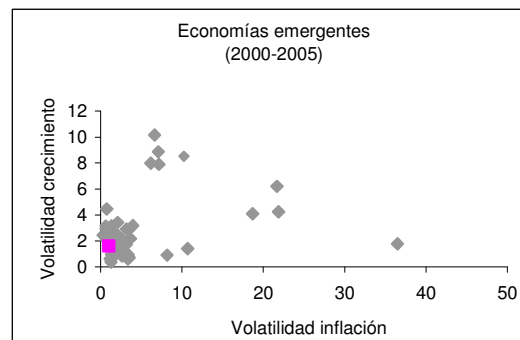
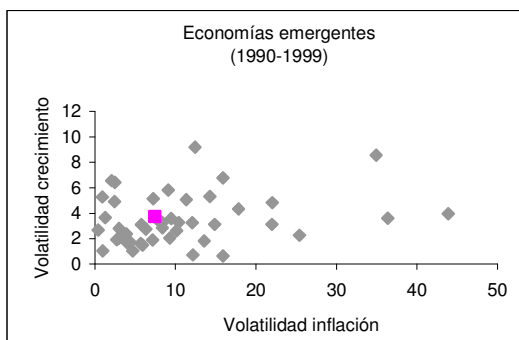
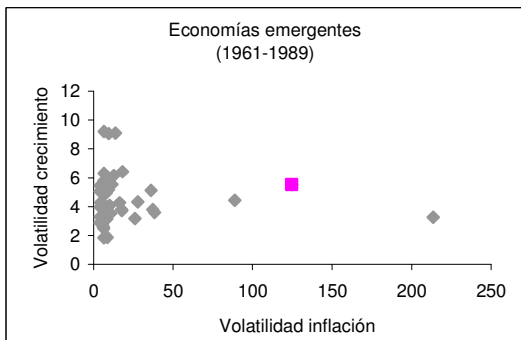
(variación porcentual anual, *WDI 2007*)





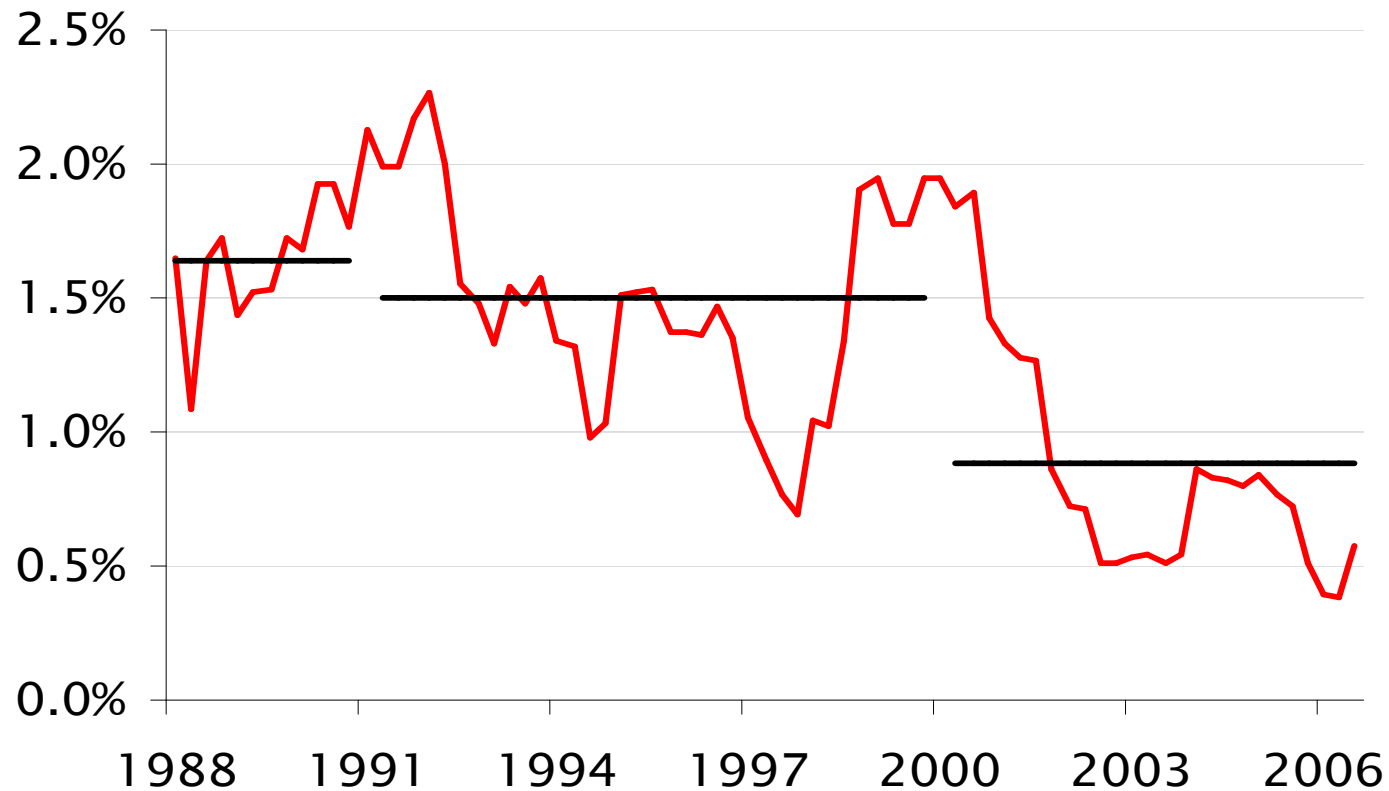


# Volatilidad del crecimiento y la inflación (desviación estándar, *WDI 2007*)





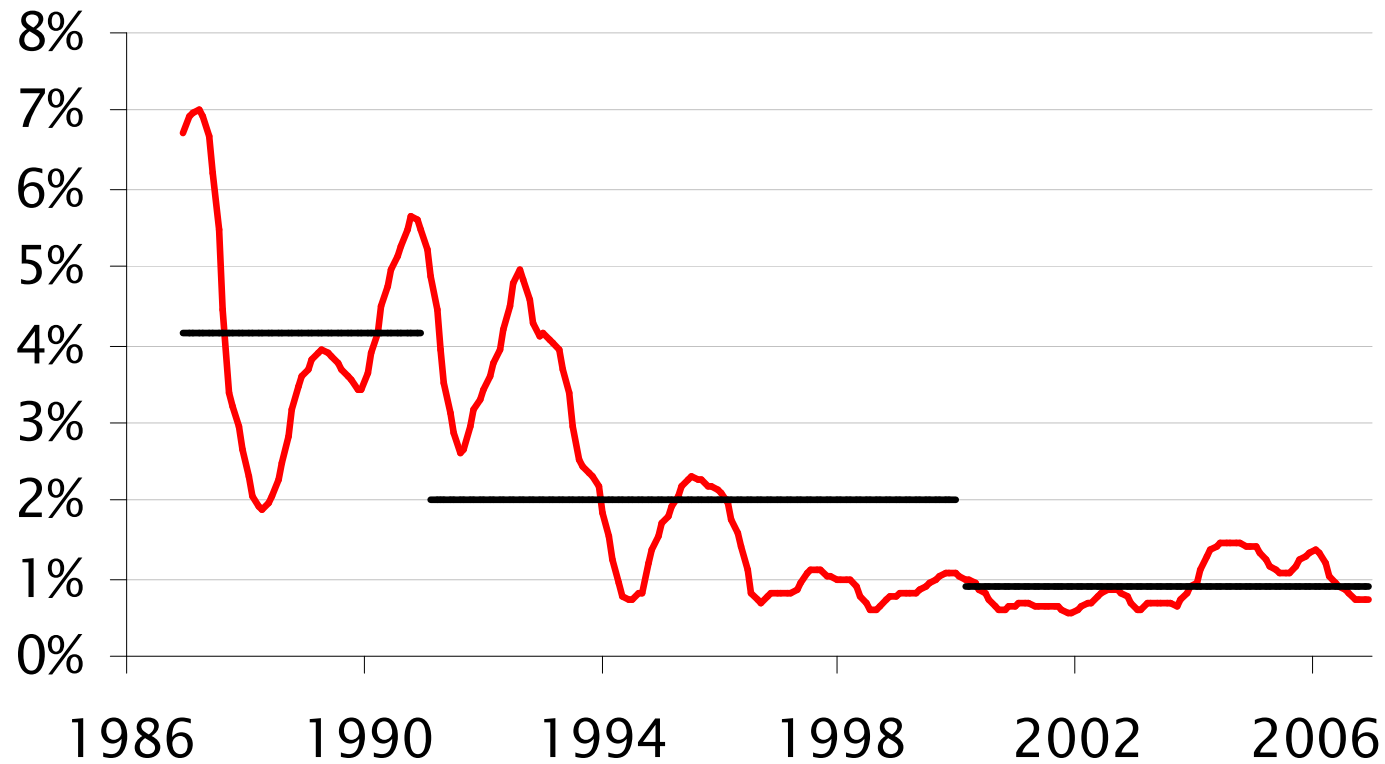
# Volatilidad del crecimiento del PIB



Nota: Desv. estándar del crecimiento trimestral del PIB utilizando ventanas móviles de dos años.



# Volatilidad de la inflación anual

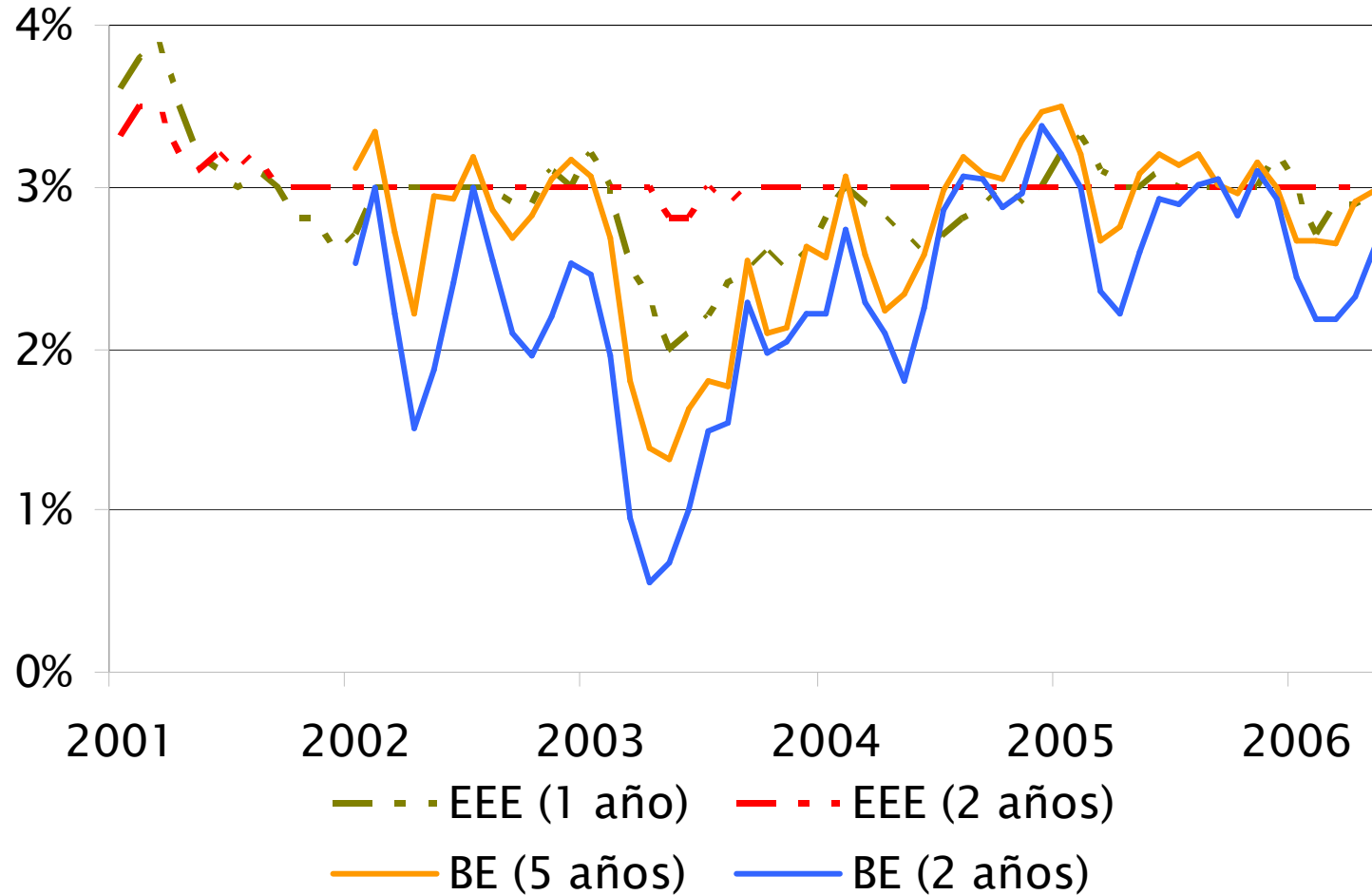


Nota: Desv. estándar del crecimiento trimestral del PIB utilizando ventanas móviles de dos años.





# Expectativas de inflación ancladas

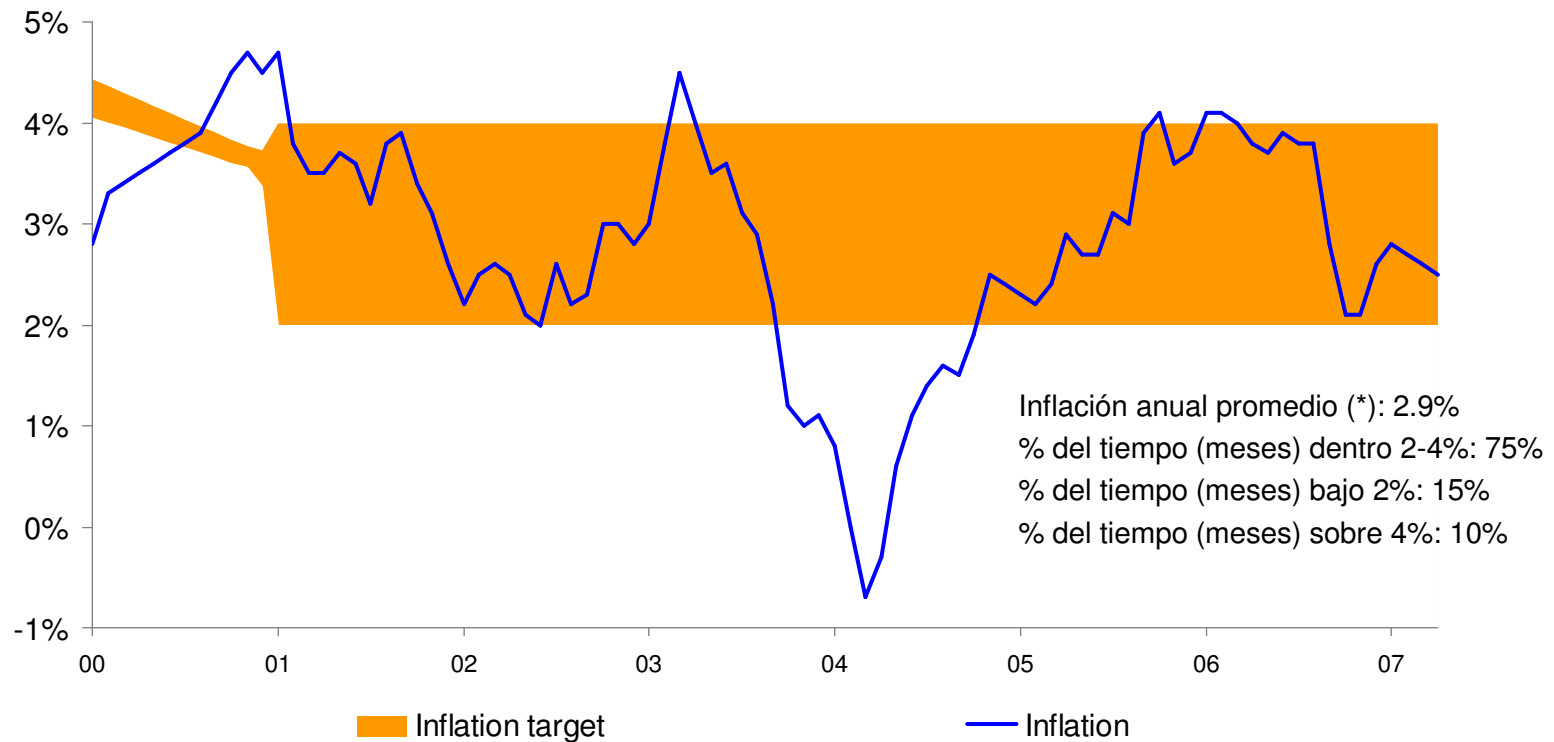


Fuente: Banco Central de Chile.





# Desvíos de la meta de inflación



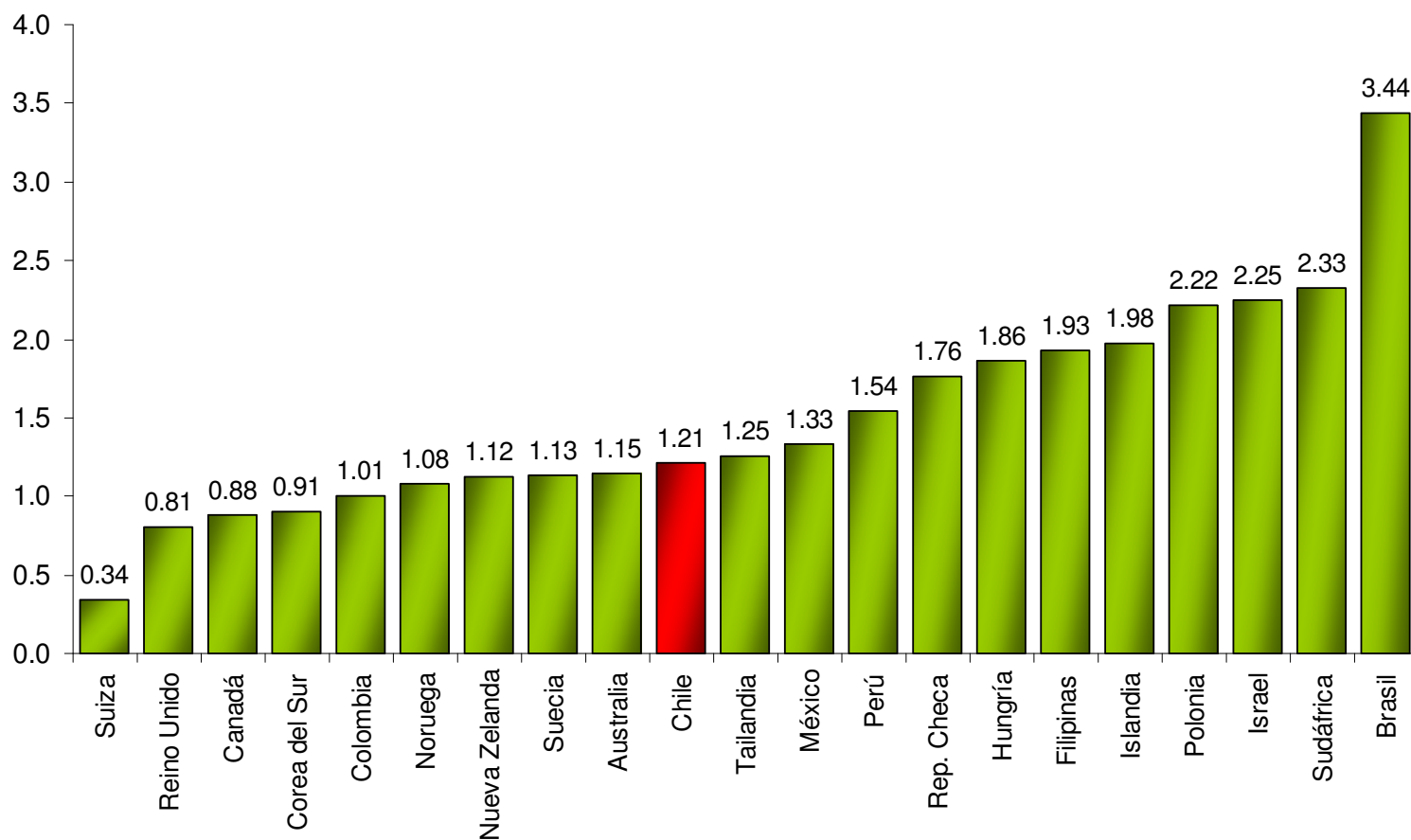
(\*) Enero 2000- Abril 2007.

Fuente: INE y Banco Central de Chile..





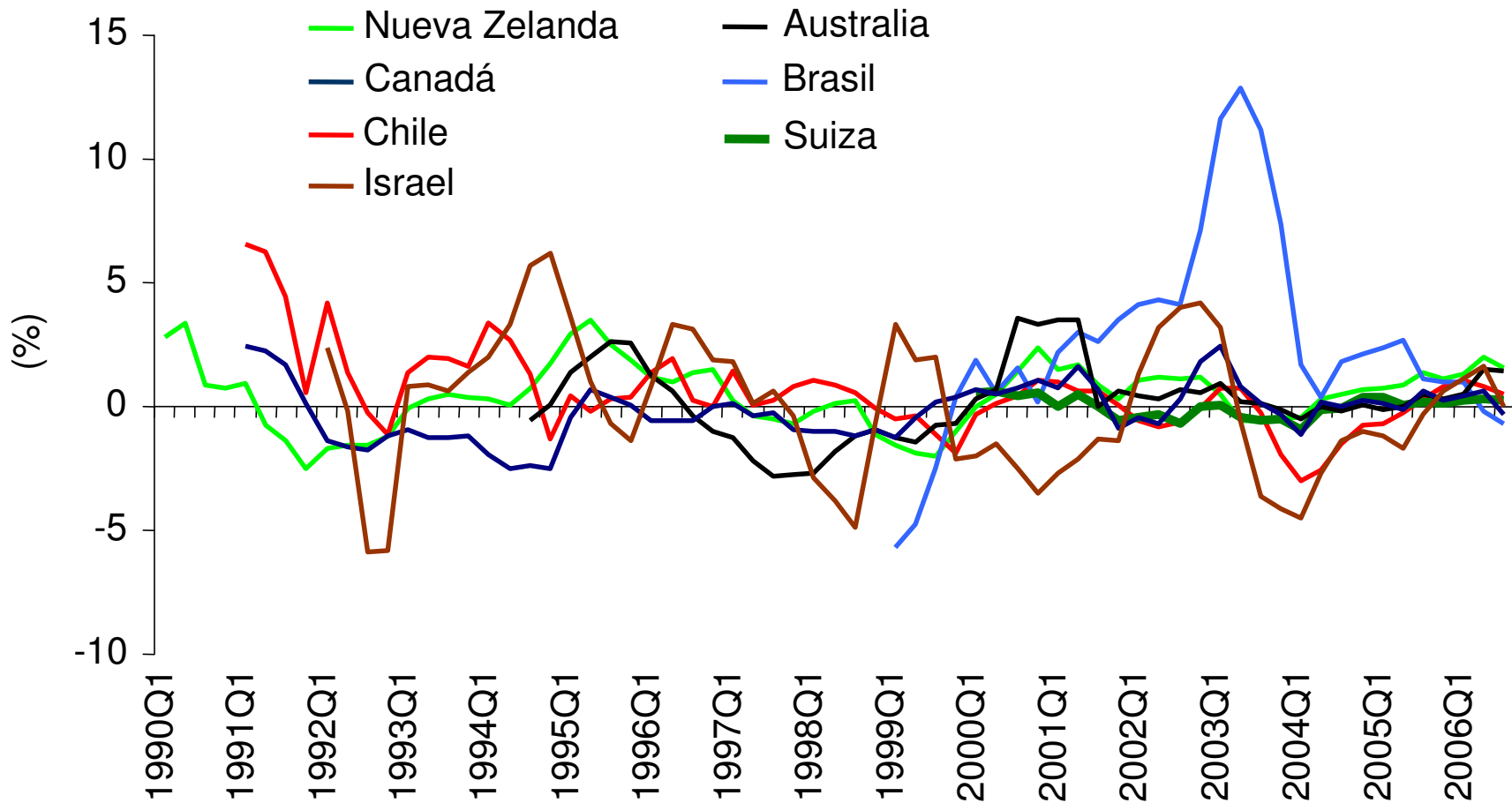
# Desviación absoluta de la tasa de inflación de su meta (desde el inicio de la meta hasta septiembre 2006)



Nota: El periodo de inicio del esquema de metas de inflación varía entre países.

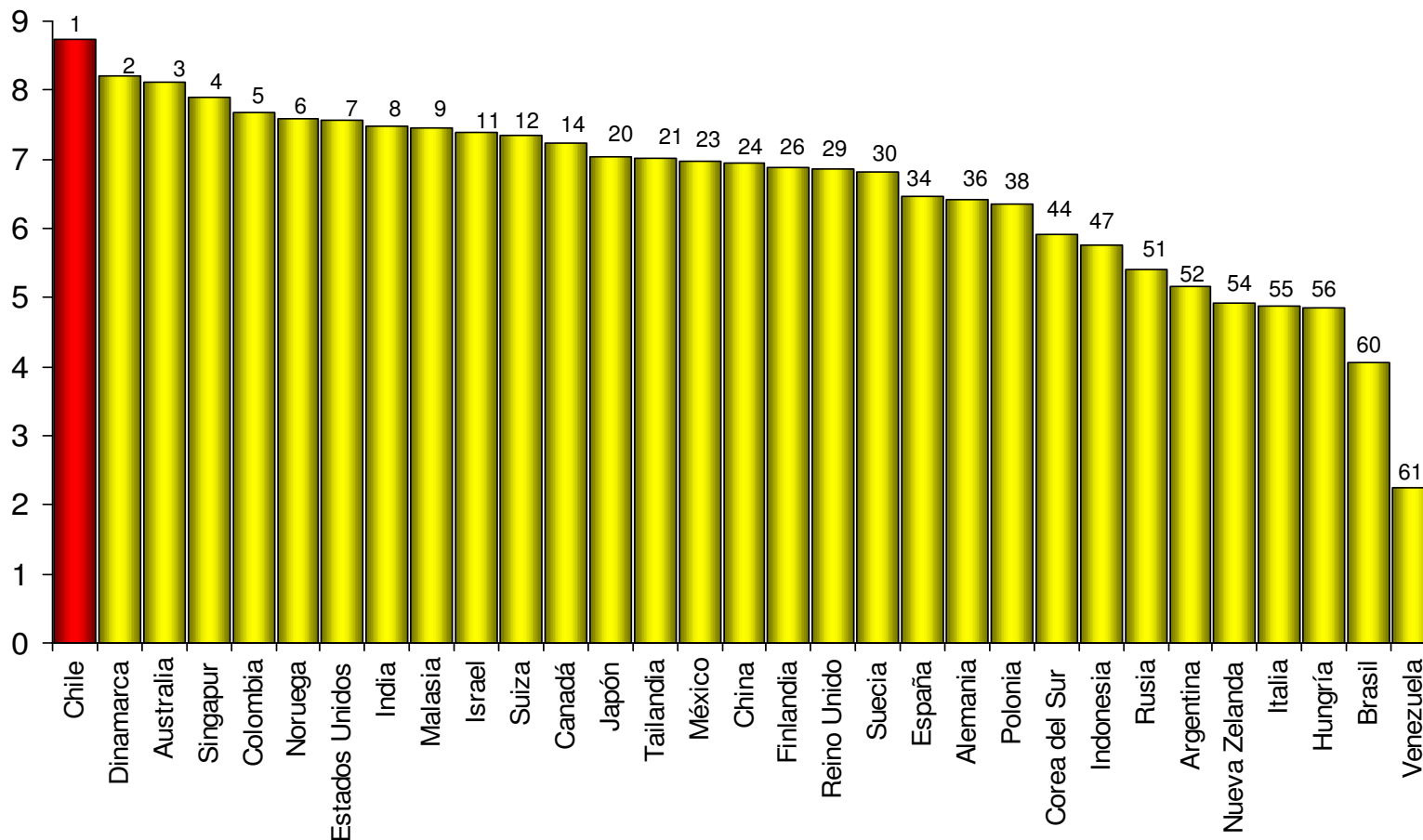


# Desviaciones de la inflación de la meta





# Contribución de la PM al desempeño macroeconómico



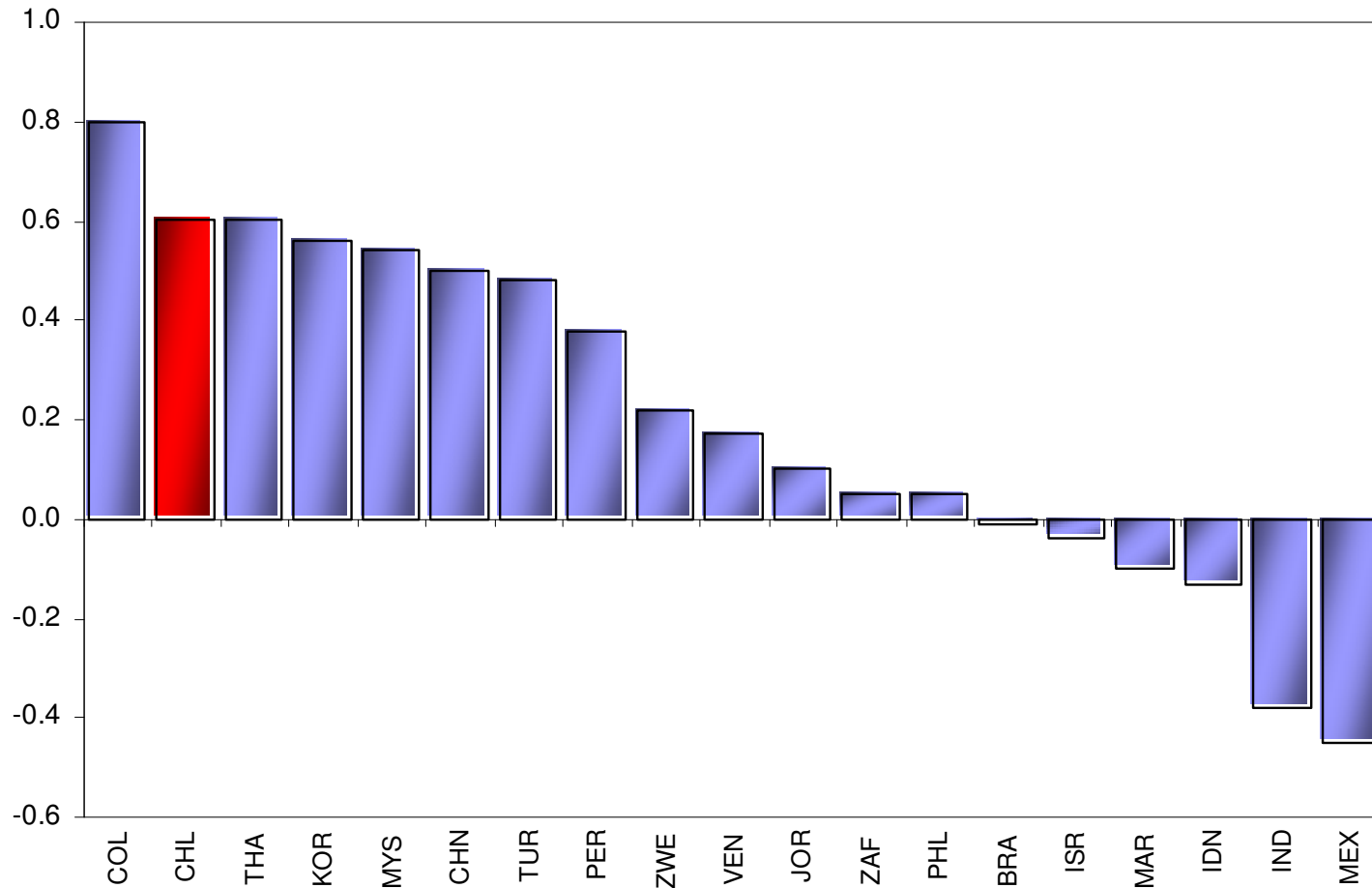
Nota: La calificación se encuentra entre 1 y 9. El número sobre cada barra representa el lugar en el ranking.  
Fuente: *Institute for Management Development* (2006).







# Correlación entre la tasa de interés y la brecha del producto, 1990-2003



Fuente: Calderón, Duncan y Schmidt-Hebbel (2003).





# Independencia del Banco Central

Indicador	1980			2003		
	Política	Económica	Total	Política	Económica	Total
Economías desarrolladas (27)	0.36	0.49	0.42	0.69	0.80	0.75
Economías emergentes (135)	0.26	0.37	0.31	0.45	0.66	0.55
Países con esquema de metas de inflación (21)				0.50	0.83	0.66
Chile	0.17	0.20	0.18	0.50	0.88	0.69

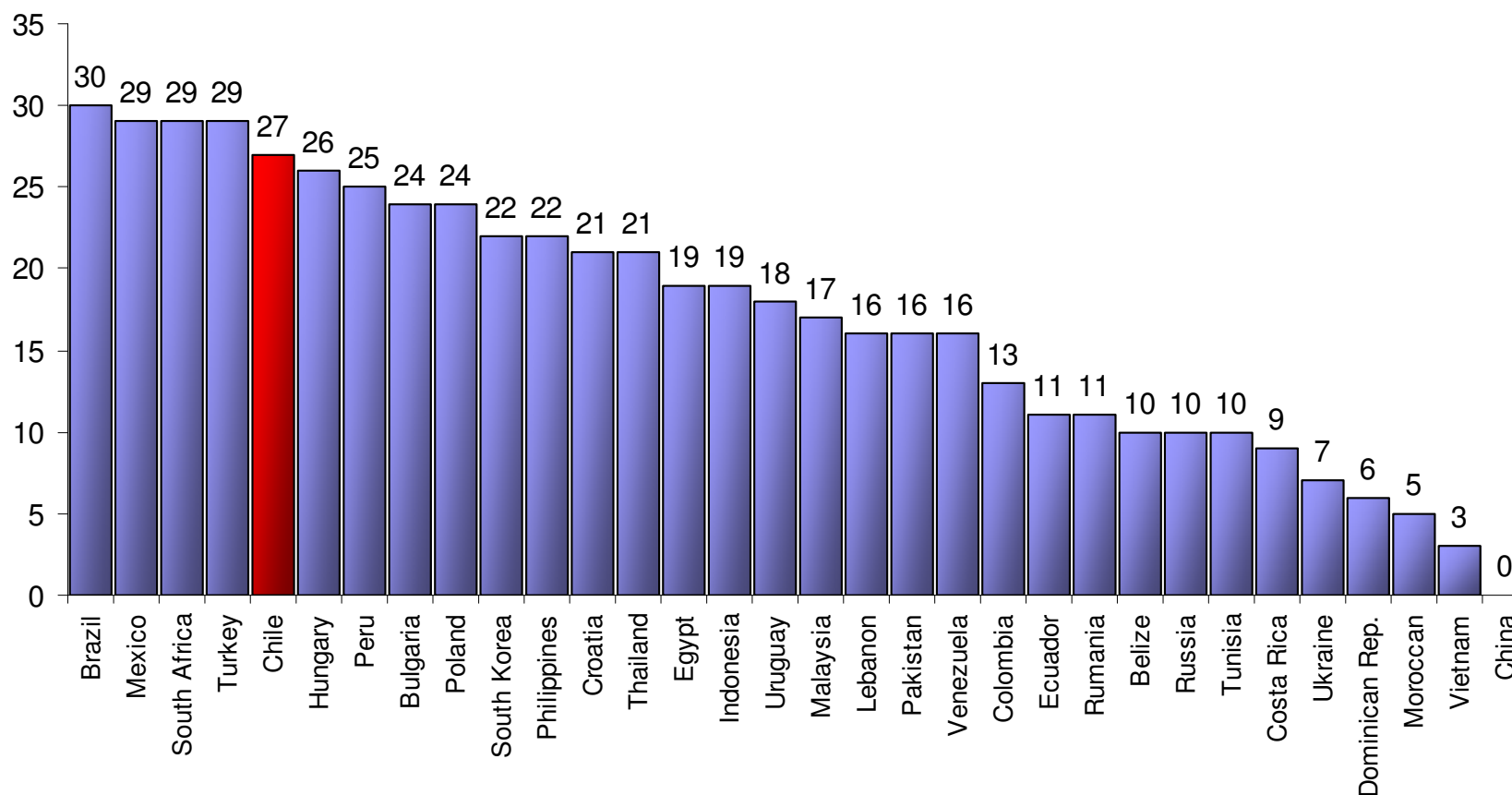
Nota: El componente de política mide el nivel de independencia del presidente del banco central (nombramiento, duración, reemplazo y restricción) y de los consejeros (nombramiento y duración) y si existe un miembro representativo del gobierno. Además considera la independencia en la formulación de política monetaria y si la estabilidad de precio es un objetivo primario del banco central. El componente de independencia económica considera si el banco central otorga préstamos al gobierno y si es efectivo a que tasas, plazo y monto. Además, el componente considera si el banco central tiene la responsabilidad exclusiva en fijar la tasa de interés y si tiene responsabilidad en la supervisión del sistema bancario. El índice total resume todos estos aspectos.

Fuente: Arnone et all (2007).





# Transparencia del BC en entrega de información (2006)



Source: International Institute of Finance (2006).





# Jornadas Monetarias y Bancarias, 2007

**Ronald I. McKinnon**

Changing doctrinal perspectives on central banks and post-crisis  
monetary policies in Argentina and Korea

4 y 5 de Junio de 2007

Changing Doctrinal Perspectives on Central Banks  
And Post-Crisis Monetary Policies in Argentina and Korea

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Money and Banking Conference  
“Monetary Policy Under Uncertainty”  
June 4-5, 2007

Central Bank of Argentina  
Buenos Aires

## Changing Doctrinal Perspectives on Central Banks

By

Ronald I. McKinnon

*The ideas of economists, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who imagine themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.*

John Maynard Keynes

Although economic development was not even a separate academic specialty in Keynes's time, his remarkable insight applies even more strongly to this field than to other branches of economics. Without often realizing it, policy makers in developing countries—particularly central bankers—have been subjected to great shifts in prevailing academic doctrines on how best to implement and sustain economic growth. Nowhere have these shifts in ideas been more pronounced than in the perceived role of the monetary system in domestic finance and in the management of the foreign exchanges.

Often buffeted by events in the international economy, Argentina has suffered more than its share of doctrinal changes on how its central bank should be managed to secure domestic financial stability and foster economic growth. However, to better understand both the problems and conflicting ideas that central banks more generally now face, a time-line of economic events that shaped and re-shaped the doctrinal perspective of economic theorists and “practical” men in authority everywhere will prove helpful.

At the end of this general historical retrospective, I will comment briefly on Argentina's current monetary and exchange rate doctrine for overcoming the great trauma from the currency crisis of 2001-02. The somewhat different monetary cum exchange rate strategy used by Korea, in overcoming its crisis of 1997-98, is then used as standard of comparison.

### **Crisis Management under the Classical Gold Standard**

The first great era of high-growth globalization, which ended in August 1914 with the advent of World War I, was under girded by the international gold standard. But the mores, the “rules of the game”, of the classical gold standard with open international trade and capital flows carried over through the 1920s—even though the gold standard itself was never satisfactorily re-established on a sustainable basis. (Silver remained an important part of the monetary base in China and India.)

Throughout Latin America, Europe, Japan, and most European overseas colonies, domestic monetary policies were subordinated to maintaining fixed exchange rates—either directly with gold parities or through some currency board arrangement that set fixed exchange rates with the “mother” country, which itself was tied to gold. With currency boards, as in much of Africa, the Caribbean, and Malay states, central banks as such did not (need not) exist because the money supply was endogenously determined by foreign exchange accumulation—with private commercial banks being the money changers and financial intermediaries. Even in mature industrial countries such as Britain and France where central banks had long existed, their role was seen as primarily as lenders of last resort for dealing with short-term liquidity squeezes from gold drains (of which there were many) so as to preserve the fixed gold parities.

To mitigate liquidity crises, central banks were increasingly formed on the periphery of the European center of the gold standard. The U.S. Federal Reserve Bank was formed in 1913. Less well known were liquidity crises in South and Central American countries, Turkey, and some Asian countries. Between 1903 and 1934, Edwin Kemmerer of Princeton University—the famous “money doctor”—helped to set up currency regimes or central banks in the Philippines, Colombia, South Africa, Ecuador, Bolivia, China, Poland, Peru, Mexico, Guatemala, and Turkey. Invariably, he advised governments to consolidate their public finances and (re)establish a gold exchange standard. Then with Professor Kemmerer’s blessing, private investment banks such as J.P. Morgan or Rothschild would provide external finance to help overcome the liquidity crisis, stabilize the exchange rate, and restore the country’s external credit.

If they could, central banks subordinated domestic monetary policy to maintaining external gold convertibility while remaining lenders of last resort for domestic commercial banks. Moreover, the rule of the game for domestic lending was the so-called real bills doctrine: a central bank should lend (discount) only when a commercial bank or bill broker presented marketable commercial paper or prime trade bills that were fully collateralized at its discount window. In principle, the central bank had no leeway to initiate lending—let alone unsecured lending—on its own. A central bank’s role in fostering economic growth was only indirect, i.e., to maintain monetary and exchange rate stability.

### **The Implosion of the Gold Standard in the 1930s**

Explanations abound for why the Great Depression of the 1930s was so broad and so deep. With the spread of restrictions on both international trade and capital flows, by 1934, world trade had imploded to about one third of its level in 1929. Putting aside purely U.S. based explanations such as the stock market crash of 1929 and the Smoot-Hawley Tariff of 1930, the most convincing unified explanation for the *international* character of this economic catastrophe was the implosion of the world gold standard.

At the outset of World War I, European belligerent countries suspended their commitments to gold convertibility, imposed exchange controls, and began to inflate at

different rates. Despite this inflation, the British tried to restore the gold standard in 1925 by setting the sterling price of gold at its pre-war parity. The United States had retained its traditional dollar-gold parity throughout the war, as had a number of other countries outside of Europe. The upshot was that the world's monetary gold base shrunk in real terms: its purchasing power over goods and services became too small to support the superstructure of national (currency) note issues and deposit money that were directly or indirectly convertible into gold at the pre-war parities. In most countries, commercial bank deposits grew relative to national incomes. Even in the decades before 1914, growth in deposit money was faster than growth in the (gold) monetary base so that a collapse in the gold standard was probably inevitable. But the inflationary shock from World War I, and the attempt to return to pre-war gold parities, certainly accelerated the process.

Throughout the 1920s, the Bank of England, to protect its unduly slender gold reserves, followed a very tight monetary policy that depressed the British economy. However, Britain was forced off the gold standard in 1930 with a deep devaluation of the pound against other major currencies—which had (temporarily) maintained their gold parities. Although inadvertent, this beggar-thy-neighbor devaluation—which improved the British balance of payments—led to a gold drain from other countries, notably from the United States. To protect its falling gold reserves, the U.S. Federal Reserve Bank maintained a tight money policy and actually raised its discount rate of interest in 1931 thus worsening the Great Depression. In 1933, however, the U.S. was also forced to devalue (raise the dollar price of gold). This reduced the international competitiveness of other countries and caused their balance of payments to deteriorate.

The result was a general flight from deposit money into gold, with banking crises everywhere. Strong deflationary pressure was felt throughout the industrial world but even more so in less developed countries where primary commodity prices turned down sharply. Exchange controls and restrictions on foreign trade proliferated as the gold standard imploded along with world trade. By the end of the 1930s, gold had been largely demonetized for domestic circulation.

### **After the Debacle: The Changed Mores of Central Banks**

After the Great Depression and World War II, national monetary autonomy became the new mantra. No longer would domestic monetary policy be subordinated to an international monetary standard through a fixed exchange rate. Instead, to avoid beggar-thy-neighbor devaluations, domestic monetary policy would be insulated from the vicissitudes of the balance of payments by exchange controls and internationally managed supporting changes in exchange rates.

The principal intellectual force behind this new view was John Maynard Keynes. His *General Theory of Employment Interest and Money*, published in 1936, outlined how to use monetary and fiscal policy to achieve full employment as if the economy was virtually closed to foreign trade and capital flows. (In contrast, his earlier books had focused on reconciling domestic monetary management with adherence to an



international monetary standard.) As Britain's chief negotiator with the Americans over post-World War II foreign exchange arrangements, Keynes was adamant that national monetary and fiscal authorities should be free from balance of payments constraints. Each nation was to be free to pursue full employment, and if necessary, inflate at a different rate from its neighbors. In the so-called Keynes Plan for an international clearing union presented at Bretton Woods, New Hampshire, in 1944, he proposed keeping wartime controls on international capital movements so that all international payments would be funneled through national central banks in the clearing union. With the agreement of the International Monetary Fund, each national monetary authority would be able to continually adjust its pegged exchange rate to overcome any "fundamental disequilibrium" in the balance of payments *without* having to adjust its national macroeconomic policy unless it wanted to.

The Keynes Plan differed in many respects from the articles of agreement of the International Monetary Fund, ratified in 1945. The Americans insisted on (a gradual) reopening of private foreign exchange markets. Nevertheless, his new philosophy greatly influenced(s) the ideas of economists and policy makers. National macroeconomic autonomy, unconstrained by foreign exchange considerations, became the new mantra among academics and policy makers down to the present day.

But how was this autonomy to be exercised? For almost three decades in the aftermath of World War II, national autonomy became associated with belief in the so-called Phillips Curve: an inverse correlation between the level of unemployment and the rate of inflation—a trade-off that could differ across countries. So national governments with different tastes could choose higher inflation with lower unemployment (say, Britain), or low inflation and higher unemployment (say, Germany). By this reasoning, it was undesirable to bind countries together with a fixed exchange rate.

Ironically, in view of the Keynesian emphasis on national macroeconomic autonomy, by 1950 the Bretton Woods System of dollar parities for exchange rates had become fairly rigidly fixed. Given the postwar inflationary disarray in the monetary systems of Western European countries and Japan, the United States found it a practical necessity to have the dollar become their nominal monetary anchor. Under the Marshall Plan, which financed setting up of the European Payments Union in 1950, exchange rates of 15 European countries were rigidly fixed to the dollar in order to dampen inflation and secure mutual exchange stability. Under the 1949 Dodge Plan (or Dodge Line) for Japan, a fixed exchange rate of 360 yen per dollar was the centerpiece for unifying the currency—eliminating multiple exchange rates—while phasing out a wild inflation.

More by accident than design, therefore, most of the world (apart from the communist bloc) had again backed into a system of fixed exchange rates. As the center country under the Bretton Woods dollar standard, the U.S. alone had some autonomy—although surprisingly constrained—to pursue an independent monetary policy. However, because central banks on the American periphery more or less subordinated their national monetary policies to maintaining their dollar exchange rates, the new regime lasted for 20 years. So, despite the misgivings of academic theorists—whether monetarists or

Keynesians—who favored more flexible exchange rates and national monetary autonomy, a common international monetary standard was re-established. This new monetary order was incredibly successful in achieving the high productivity growth with low inflation that undergirded the Western World’s remarkable economic recovery from the ravages of World War II. But recovery from the postwar monetary disorder only really began after 1949, when exchange rates were more or less securely fixed and controls on foreign exchange contracting were liberalized—but only gradually.

Unfortunately, the absence of a sufficient doctrinal underpinning for how national central banks should behave, and the desire for national macroeconomic autonomy, eventually undermined the ethic of stable exchange rates. From belief in the Phillips Curve, if a country found itself with uncomfortably high inflation, it would be more loathe to disinflate because of the fear of unemployment. In August 1971, the final collapse of the Bretton Woods dollar exchange parities arose from the unwillingness of the United States to disinflate from its inflation arising out of the Vietnam war. Instead of disinflating and thus incidentally preserving the fixed rate dollar standard, President Nixon insisted that the dollar be devalued against the currencies of America’s main industrial competitors. This “Nixon Shock” ushered in the era of high and volatile worldwide inflation, with sharp exchange rate fluctuations, throughout the 1970s into the early 1980s.

This collapse of the 1950s and 1960s system of stable dollar exchange rates was particularly hard on developing countries, many of which had used a fixed exchange rate to the dollar to anchor their own price levels. In most of these countries, from fear of unemployment, central bankers remained philosophically averse to take resolute action on their own to curb domestic inflation. So in the 1970s into the 1980s, inflationary outbreaks with wild fluctuating exchange rates were often amplified on the periphery. Consequently, the great slowdown in productivity growth and rise in unemployment in these two decades was virtually worldwide, and encompassed the industrial as well as most developing countries.

### **A Partial Philosophical Recovery**

Fortunately, even economists learn from experience! The great inflation of the 1970s, where average unemployment rates rose rather than fell, provoked a comprehensive rethinking, led by Milton Friedman, of the Phillips Curve doctrine and the Keynesian rationale for macroeconomic fine tuning. In his 1968 address to the American Economics Association, Friedman demonstrated that if wage earners begin to anticipate inflationary policies by the central bank (and distrust its motives), they will bargain for even higher money wages to keep their real wages from falling, and unemployment persists. Under uncertainty and distrust of the inflationary motives of the central bank, trade unions could even “over bargain” for higher money wages so that real wages remain higher than if the price level were credibly stable—thus leading to even higher unemployment as inflation proceeds.

Today, most central banks target inflation to be low and stable—although they may disagree on how best to do it. Laws have been changed to make national monetary authorities more resistant to political pressure to inflate. Independence for the central bank is now the accepted economic doctrine. And inflation worldwide has indeed come down.

### **Dismantling and Re-mantling Currency Boards (Box Insert)**

In the late 1940s and early 1950s, the American government pressured the British to dismantle the old prewar sterling area—a trading zone free of exchange controls based on the pound sterling as a key currency—in favor of the new “worldwide” Bretton Woods order based on the dollar. An incidental consequence was to undermine the system of fixed-exchange-rate currency boards that the British had set up in East and West Africa, Malaya, some of the Indian subcontinent, and the Caribbean. Wanting to preserve the sterling area, the U.K Treasury and tried to resist this American pressure. But the spirit of nationalism in newly independent former British colonies was too great. Each wanted direct control over its own central bank, and anticolonial advisors from Britain itself, such as Thomas Balogh of Cambridge University, advised a number of African countries to dismantle their passive currency boards and replace them with activist central banks. This led to excessive issues of domestic monies, often associated with corruption from lending to “friends of the government”, so as to further aggravate domestic inflations and hinder inter-regional trade.

Ironically, the French Treasury was much more resistant to American pressure than the British. And the French CFA franc zone still exists in most of the former French colonies. Civil wars aside, the former French colonies have had greater monetary stability than the former British ones.

One further irony is that the currency boards have somewhat come back into favor as a way of taming inflation. Various Latin American countries have experimented with currency boards (as with the initial success in Argentina in the early 1990s), and some have introduced dollarization (as in Ecuador) to replace a discredited domestic currency.

Nevertheless, the tenet of national macroeconomic autonomy remains intact. Only in unusual political circumstances, such as the formation of the European Monetary Union, will governments in industrial countries give up national monetary autonomy in order to better stabilize their exchange rates by harmonizing their monetary policies with neighboring countries. With each industrial country autonomously targeting its own national price level, exchange rates among them fluctuate surprisingly widely. Indeed, economists have likened fluctuations in the U.S. dollar against the euro, yen, pound sterling, Swiss franc, or the Canadian or Australian dollars to random walks. However, industrial countries’ have highly developed domestic bond markets which, in the absence

of exchange controls, encourages fairly robust markets in forward foreign exchange. Thus their exporters and importers find it easier to hedge their foreign exchange risks by forward contracting. But such hedging, while helpful, is only partially effective and residual foreign exchange risk remains substantial.

In contrast, developing countries—now often called “emerging markets”—show a much greater aversion to exchange rate fluctuations. With immature domestic financial markets, their firms find it harder to hedge their exchange risks, and their central banks find it harder to target domestic rates of price inflation independently. Fear of floating is widespread, so central banks intervene continually to smooth exchange rate fluctuations—mainly against the dollar, as in East Asia. China intervened intensively to keep its dollar exchange rate fixed from 1995-2005. (In the transitional economies of eastern Europe, central banks more often intervene to stabilize their currencies against the euro with the prospect of joining it.)

By the advent of the new millennium, the mores of central banks in determining macroeconomic policy for controlling inflation and keeping markets open have again become more conservative—as under the 19<sup>th</sup>-century gold standard. But today’s regime differs from the high gold standard in being more nationalistic: governments are less willing to harmonize national monetary policies with their neighbors. And exchange stability is an important international public good, if now an underprovided one.

## **Financial Repression**

After World War II, belief in the Phillips Curve affected all countries—industrial and developing. This false doctrine eventually had inflationary consequences everywhere, as we have seen. But in developing countries, there was a further shift in banking philosophy away from the fetters of external convertibility, which the gold standard had imposed on central banks. Beginning in the 1940s, in Latin America, Africa, and Asia, central banks were now to be agents of change. Instead of defending the exchange rate regime, they were to use their power as financial intermediaries to actively promote development.

In the immediate postwar, governments in less developed countries and many academics also became convinced that if a country remained specialized in producing primary commodities, the international terms of trade would inevitably turn against it—as had happened in the 1920s and 1930s. Thus, under Article XVIII of the old General Agreement on Tariffs and Trade (GATT), LDCs were exempted from the general obligation to reduce tariff barriers in successive rounds of trade negotiations among the industrial countries. They could maintain import quotas or raise their own tariffs as long as such protectionist policies were represented as necessary for “development”. Even so they could take advantage of tariff reductions negotiated among the industrial countries, i.e., they were accorded “most favored nation” (MFN) status. (Fortunately, with advent in 1995 of the World Trade Organization [WTO], the successor organization to the GATT, this exemption no longer holds.)

From the 1940s into the 1970s, the upshot was forced industrialization through import substitution, as in Jawaharlal Nehru's India or Raul Prebisch's protectionist drive in Latin America. Whether in the Indian subcontinent, Latin America, or Africa, this autarchic approach to development, where more or less centralized decision making aimed to replace foreign manufactures with domestically produced ones was considered to be an acceptable development strategy. Tariffs or quotas on competing foreign imports, mainly of manufactures, provided the main commercial incentive. One consequence was that the internal terms of trade in each protectionist country turned against its exporters. Thus, during the great trade-led economic boom among the industrial economies of the 1950s and 1960s, the foreign trade of most LDCs languished. Apart from the four small high-growth East Asian tigers—Hong Kong, Korea, Singapore, and Taiwan, who followed a more open economic strategy—foreign trade in most LDCs, remained repressed for several decades after World War II.

Although this story of repressed foreign trade is hardly new, less well recognized was (is) the *financial repression* that accompanied it. Central banks, perhaps subordinated to the planning ministry, were to use their money creating authority and their regulatory powers to direct flows of bank credit to favored industries—often to the (newly) protected industries—and support the national plan. In several World Bank missions from the 1950s into the 1960s, Robert Triffin was a leading exponent of using the central banks to mobilize resources for national development goals.

What methods of resource mobilization did a typical central bank use? High non-interest-bearing “reserve” requirements, often of the order of 30 to 40 percent, were imposed on deposit-taking commercial and savings banks. Sometimes there were also secondary reserve requirements that could be satisfied by commercial banks holding interest-bearing government bonds. (Private bond issues in open capital markets might be restricted to prevent them from attracting resources from the deposit banks.) Because these mandatory commercial bank reserves had to be deposited in the national central bank, its lending powers were greatly augmented beyond what it could traditionally get by just issuing coin and currency. In addition, the central bank might over issue base money—currency plus commercial bank reserves—beyond what was compatible with price level stability. The resulting price inflation, over a certain range, then further augmented the lending capacity of the central bank. In effect, it could use the inflation tax to further mobilize resources available to the government or its designees.

What were the institutional mechanisms for directing the flow of central bank credit? Government development banks or finance bureaus, which did not take deposits from the general public, proliferated. These state-sponsored lending agencies would discount their loans with, i.e., simply borrow from, the central bank. They appeared in a wide variety of formats. For example, in Colombia in the 1970s, there were an export promotion agency, an agency to encourage the distribution of fertilizer, a longer term industrial development bank, a special mortgage bank, one for coffee marketing, and so on. In addition to directing the flow of credit through various state-sponsored entities,

commercial banks could be further commandeered to direct their credit flows to specific “priority” sectors—possibly designated by a government planning commission.

Part and parcel of directing the *flow* of credit in the economy was further detailed official intervention to set the *price* of credit. Often the central bank played a dual role as the regulatory authority. First was the traditional concern with the safety and soundness of commercial banks, and willingness to act as a lender of last resort to stave off banking crises. But secondly, the central bank, usually under orders from the government, was often the arbiter for setting below-market interest rates for different classes of borrowers—both from the different state development banks and directed credit from the commercial banks. The spread between most-favored borrowers paying very low interest rates market rates to the increasingly narrow tranche of borrowers paying market interest rates could be enormous—as much as 20 to 30 percentage points. The overall result of ceilings on lending rates, and costly administrative complexity, was to depress returns to depositors at the bottom of the pyramid. Unsurprisingly, the deposit base shrank, and so did the distorted flow of loanable funds based on it. The result was what Edward Shaw and I called (in books published in 1973) *financial repression*.

With differentiated ceilings on nominal interest lending rates in the developing countries, financial repression was then deepened by the worldwide inflations of the 1970s. The result was further fragmentation in the structure of real interest rates. Favored borrowers from the state-owned development banks, where nominal interest rates for different classes of loans were more or less fixed, often found themselves borrowing at highly negative real interest rates. Whereas, unsubsidized borrowers in the narrow open part of the bank-based capital markets would have to pay exceedingly high rates—often more than 30 percent in real terms. At the bottom of the financial pyramid, returns to depositors turned strongly negative and ordinary holders of coin and currency were completely unprotected from the inflation tax. This led to a disintermediation: a squeeze in the flow of real bank lending and further fragmentation in the structure of real interest rates. The upshot was a steep fall in productivity growth and the efficiency of investment throughout most of the developing world in the 1970s through the 1980s.

Financial repression also led to a much stronger interaction between politics and central banking. Because favored recipients of low interest credits in industry or agriculture were so heavily subsidized, political pressure to direct such credits one way or another was naturally intense. The institutional makeup of the board of governors of the central bank often reflected this pressure. For example, in Colombia in the 1970s, members of the cabinet dominated the board of governors. The board could include the minister for highways and public works, the minister for agriculture, the head of the export promotion agency, along with the ministers of finance and commerce, and so on. The head of the central bank then had very little autonomy, and became little more than a recording secretary for how his political masters wanted subsidized credits to be directed—directions that often changed from one week to the next.

Unsurprisingly, in such a politically charged atmosphere, macroeconomic control was easily lost. The state-owned development banks and special credit agencies made too

many low-interest loans that were automatically eligible to be discounted with the central bank. The resulting undue growth in the monetary base often led to high and variable inflation. With low ceilings on nominal interest rates and negative real rates, the commercial banks' deposit base and the superstructure of loanable funds based on it would shrink as a proportion of GDP. In this way, good (and bad) domestic investment projects would often go unfinanced: a credit squeeze.

Domestic financial repression generated a sometimes fatal attraction to borrow from foreigners. If domestic firms could not bid for funds from the constipated domestic financial system, those who could might well borrow abroad. They often used domestic banks, which were relatively untaxed in their foreign borrowing, as international financial intermediaries. But this induced a risky buildup of foreign exchange liabilities that, in the presence of undeveloped or repressed domestic financial markets, could not be hedged. The problem was aggravated by moral hazard in the banks themselves. Because deposit insurance led to lower capital-to-asset ratios in commercial and savings banks, they were sometimes induced to take on too much risk—particularly foreign exchange risk. The whole banking system could be in jeopardy if there was a major exchange rate devaluation. The cost of servicing the banks' foreign exchange liabilities would then rise relative the earning on its domestic currency assets. In Latin America, East Asia, Russia and other transitional economies in Eastern Europe, such currency cum banking crises were commonplace from the 1970s through the 1990s.

### **Central Bank Independence in the New Millennium**

Fortunately, by the end of the 1990s, this dismal financial picture began to change. In emerging markets, inflation in consumer prices on average fell from more than 50 percent in the 1990s to less than 8 percent from 2000 to 2004. Despite (because of?) a buoyant world economy, declining average inflation rates continue into 2006-07.

This remarkable downturn in average inflation rates in LDCs is not easy to explain. Apparently, most have recoiled from their earlier unfortunate experiences with fiscal expansiveness and directing the flow of credit to private entities—both of which led to financial repression and inflation. Their post-World War II enthusiasm for having the central bank be an active financial intermediary for financing both the government's direct fiscal deficit (by buying government bonds) and its off-budget directed credits through the banking system, has waned. The new mantra for World Bank and IMF advising has been to secure more independence for each national central bank, with its mission as a national financial intermediary to be more limited so it can better focus on keeping domestic inflation low.

In the industrial countries, the move to central bank independence with strict inflation targeting began in the 1990s. The Bank of England, the European Central Bank, and the Bank of Canada all have legislated or otherwise formalized inflation targets of about two percent per year. The United States had already used a form of inflation targeting, sometimes described as "Taylor's rule", but the precise rate of inflation has not

been formalized or legislated as in Europe. However, inflation control in these industrial countries is fairly straightforward. The central bank can limit national money growth by targeting some key short-term interest rate, such as the federal funds rate in the U.S., through open-market operations. Government fiscal deficits can be financed separately from the banking system because national markets in government bonds are broad and deep. Thus, these central banks were (are) not forced to lend to their governments—and can more easily control national money supplies. Nor do they intervene to direct the flow of private-sector domestic credit in one direction or another.

However, establishing the independence of a central bank in a typical emerging market is more difficult. First, is the need to undo the repression of the domestic banking system and secure fiscal control. Second, the question of what are the best monetary instrument(s) for targeting the domestic price level is unresolved. Consider each in turn.

When low interest ceilings with special credit allocations remain in place, the size of the (consolidated) banking system remains small—and inflation aggravates the problem. Moreover, the rate of inflation itself will be more sensitive to the size of the fiscal deficit, which, in the absence of large open markets in government bonds, also must be largely financed through the shrunken (repressed) banking system. Thus the key to stabilizing the price level in an emerging market is to reduce the size of the fiscal deficit relative to the size of the banking system. To increase the deposit (lending) base of banking system, a reforming government needs to improve the state of the public finances while reducing the flow of off-budget subsidized bank credits.

The International Monetary Fund in its *World Economic Outlook* May 2001, has provided just such evidence (pages 124-25). For a sample of 23 emerging market economies for the period 1970-99, the IMF noted the strong statistical correlation between inflation and the ratio of the fiscal deficit to the narrowly defined money stock. To explain the sharp fall in inflation from the late 1990s into the new millennium, emerging markets appear to have reduced their fiscal deficits on the one hand while alleviating financial repression on the other. On average, their fiscal deficits have become smaller relative to the size of their banking systems.

In addition, the success of the industrial countries in taming inflation starting in the 1990s makes it easier for any developing country on the periphery to follow suit—perhaps by pegging their exchange rates to a major currency as a “nominal anchor” (see below). In its new *World Economic Outlook* (September 2005, p162 ), the IMF lists a group of 13 emerging markets that are using inflation targeting—with more likely to follow as their fiscal conditions improve and financial repression is relaxed.

### **Currency Asymmetry and Inflation Targeting**

What are the monetary instruments best suited for stabilizing inflation at some low, but positive, level in an emerging market? The term “inflation targeting” is sometimes used to exclude, or to be the antithesis of, “exchange rate targeting”. Indeed,



the self-styled new mission of the International Monetary Fund has been to wean developing countries away from exchange rate targeting toward inflation targeting. The IMF's presumption is that inflation targeting is best done by relying exclusively on domestic monetary instruments—such as short-term interest rates or direct controls over bank credit. In this view, targeting the exchange rate is a potential distraction from what should be an independent's central bank's primary mission of keeping domestic inflation low and stable. The IMF's view is superficially consistent with the general move toward national macroeconomic autonomy after the implosion of the international gold standard in the 1930s—as discussed above.

However, once one takes asymmetries across countries—and most particularly asymmetries across currencies due to the operation of the world dollar standard—into account, then a peripheral country's dollar exchange rate sometimes surfaces as a potentially useful instrumental variable for anchoring its inflation. To simplify the issues involved, let us ignore Western Europe and the small economies to its east that more or less peg to the euro. Instead, suppose the world consists of the United States at the monetary center with a group of Asian and Latin American countries on its periphery. In these peripheral regions, the U.S. dollar is the dominant form of international money. It is the clearing or vehicle currency that private banks use to make cross-country payments, and it is the dominant intervention currency for governments wanting to accumulate or decumulate official exchange reserves—which they then hold largely in dollars.

Most importantly, the dollar is the invoice currency for most intra- and inter-regional trade—as well as for flows of financial capital. Indeed, exporters of manufactures, say from Korea or China, will try to keep their dollar prices fairly stable through time for the convenience of potential buyers in other countries in Asia and elsewhere. And primary commodity prices, which fluctuate from one day (hour) to the next, are universally quoted in dollar terms.

For this dollar-based order of international exchange to work well, only the center country can and should follow an independent monetary policy—where it ignores what is going on in the foreign exchanges (except in very major crises) and does not try to target the dollar's exchange rate against other currencies. The reasons for this monetary asymmetry are twofold.

First, in a world of “N” currencies, only N–1 can have independent exchange rate policies without causing conflict. If there are only two countries in the world, only one of them can target its exchange rate against the other—and so on up to a world of N currencies. Since the beginning in the Bretton Woods era of the 1950s and 1960s, this “N–1” problem of potential conflict has been largely resolved by each peripheral country officially or implicitly agreeing to intervene, if it does intervene at all, only against the dollar—and, if necessary, to adjust its domestic monetary policy to support the intervention. In contrast, as custodian of the Nth or center currency, the U.S. Federal Reserve Bank typically does not intervene in the foreign exchange market. It uses only domestic monetary instruments, as per Taylor's Rule, to stabilize its own price level. At the base of the dollar standard, the Fed thus provides an independent monetary

benchmark—a stable domestic price level—that peripheral countries may or may not want to use to stabilize their own price levels.

Secondly, in a world where exchange rates sometimes do fluctuate, the center country can most easily afford to ignore the exchange rate risk. Under the dollar standard, both the liquid liabilities and assets of American financial institutions are denominated in dollars. For example, in the heavy American borrowing from foreigners to support its huge current account of recent years, the liabilities are largely dollar denominated U.S. Treasury bonds and a build up of foreign owned dollar deposits in American banks and similar institutions. Because bank assets are also denominated in dollars, there is no risk of a major institutional bankruptcy should the dollar depreciate or appreciate.

Contrast this with the position of emerging markets, with less developed domestic capital markets, on the dollar standard's periphery. If their commercial banks borrow abroad, they typically build up net dollar liabilities even though the banks' assets are largely denominated in the domestic currency. Thus they are vulnerable to bankruptcy should the domestic currency depreciate. Conversely, suppose, by running current account surpluses, an emerging market becomes a net creditor. Then it cannot lend abroad in its own currency: the Chinese do not lend abroad in renminbi nor the Koreans in won, and so on across all developing countries—including oil rich sheikdoms. Instead, these international creditor countries build up liquid dollar claims which are held either as official exchange reserves or internally by domestic financial institutions such as banks or insurance companies. These latter institutions are then vulnerable to an appreciation of the domestic currency against the dollar, which would then devalue their dollar assets relative to their domestic-currency liabilities.

Because financial institutions in the United States are virtually invulnerable to exchange risk, American monetary economists advise the Fed to ignore exchange rate fluctuations when it targets domestic inflation. And this is all well and good for the center country. However, rather myopically, they then try to transfer the American (or European) guidelines for targeting inflation to emerging markets where exchange rate fluctuations pose more serious financial risks and where direct pass through effects into the domestic price level can be more pronounced. (Because international exporters tend to price to market in dollar terms, fluctuation in the dollar's exchange rate against other currencies have relatively limited pass-through effects on the American price level.) In effect, the new mantra that exchange rate fluctuations should be ignored in targeting domestic inflation fails to take the great currency asymmetry across countries, and the spill over effects of exchange rate changes from one country to another, into account.

### **The Exchange Rate as a Monetary Anchor**

So how should a central banker in an emerging market interpret the sometimes conflicting foreign advice on how best to target inflation at some low and stable level? Short of trying to reestablish an international gold standard, under what circumstances

would targeting, or even fixing, an exchange rate against the center country's currency be useful for helping to anchor its domestic price level?

First, the center country's currency, i.e., the dollar in our example, must itself be have stable purchasing power over a broad range of tradable goods and services. This was manifestly not true in the 1970s, but has held reasonably well since the mid 1980s..

Second, the emerging market in question should be highly open to foreign trade although not necessarily to capital flows.

Third, important trading partners should themselves have fairly stable dollar exchange rates. This condition is better satisfied in East Asia where most countries (with the possible exception of Japan) can softly peg to the dollar without major breakdowns (aside from the crisis of 1997-98). So the effective dollar zone in East Asia is much broader than what just bilateral trade with the U.S. would suggest. Because the region has become so highly integrated in foreign trade, mutually stable exchange rates are an important regional public good. That is, if any one Asian country pegs to the dollar such as China has done, this reduces exchange risk in neighboring countries, which also peg to the dollar. Also, in a broader dollar area, if one any one East Asian country pegs steadfastly to the dollar, the anchoring effect on the domestic price level is more pronounced. Starting from high inflation in 1993-96 but a fixed exchange rate after 1994, China's domestic inflation came down and converged down to close to that in the United States by 2005—as per the principle of relative purchasing power parity.

Although in desperate monetary circumstances, Latin American countries sometimes adopt hard currency boards or even dollarize completely to gain credibility and overcome a bad financial history, this strategy is risky. When Argentina was pegged to the dollar in the 1990s, major devaluations in the neighboring country of Brazil were an upsetting influence. In contrast, the most economically successful South American country has been Chile: a highly open economy with good internal fiscal control but with a flexible exchange rate that enables it to better offset shocks from its less stable neighbors.

In conclusion, pegging the exchange rate has two facets.

On the one hand, the exchange rate can be a useful *instrument* for monetary control when domestic financial markets are underdeveloped (or even repressed) so that setting some short term rate of interest cannot be used to control base-money growth or the economy—unlike what Taylor's Rule would require. Then, having the central bank buy or sell foreign exchange at a fixed dollar exchange rate, and altering the domestic monetary base accordingly, is an alternative (but not necessarily an exclusive) method of exercising monetary control. In order to allow the clearing of international payments to devolve from the central bank to the commercial banks, the market exchange rate can still be left free to vary within some narrow band, say 2 percent, around the central parity.

On the other hand, a stable exchange rate can be a useful *target* in of itself—particularly when one takes regional neighborhood effects—cross country spillover effects of exchange rate changes—into account. And this target has the advantage of being very transparent. Everyone knows when the central bank succeeds in maintaining its central dollar parity, but judging the course of domestic inflation and projecting it into the future is more fraught with ambiguity.

### **Argentina's Current Monetary Regime: A Comparison with Korea**

Because Argentina's monetary system is still in transition from the great crisis and deep devaluation of 2002, the principles behind its current monetary regime cannot be compared to other emerging markets or industrial economies which are more or less in steady states. Instead, it is necessary to look at the monetary options available to the Central Bank of Argentina (BCRA) after the 2002 currency depreciation and the restructuring of external debts. In this respect, an insightful alternative scenario is to compare Korea's management of its exchange rate after its great crisis and depreciation in late 1997.

Argentina's initial massive depreciation, as measured from the third quarter of 2001 to the second quarter of 2002, was 275 percent—as shown in figure 1. Then by mid 2003, the nominal exchange rate had bounced back somewhat to a depreciation of just 200 percent (from 3Q 2001) and has subsequently remained remarkably stable. Since 2002, the nominal exchange rate has remained at 3 pesos per U.S. dollar,  $\pm$  3 percent.

Because the crisis induced a collapse in domestic spending including for imports, Argentina's foreign trade balance turned sharply positive in 2002—and has remained positive as exports have picked up. From the surplus in the balance of payments, exchange rate stabilization has required heavy official intervention and a large buildup of dollar reserves. The monetary base in 2006-07 is increasing more than 30 percent per year—and, after partial sterilization, growth in M2 is now about 20 percent. But the velocity of M2 has pretty well stabilized: nominal GDP is growing at 19 percent while real growth is 8 to 9 percent. However, the banking system remains shrunken in real terms: M2 is less than 20 percent of GDP, and bank credit outstanding to the private sector is only about 10 percent of GDP.

What monetary rule is Argentina now following? BCRA is targeting the exchange rate as a nominal anchor for its monetary policy; and, as Governor Retrado emphasizes (quite correctly), it is not targeting any particular real exchange rate—and certainly no real interest rate. Although the nominal exchange rate is the target, it is not by itself a *sufficient* instrument to stabilize the rate of inflation—at least not for many years after the large devaluation. In addition, heavy intervention to sell central bank bonds and raise reserve requirements have been necessary to prevent an explosion in money growth that would have led to even higher inflation than the present 9 to 10 percent increase in the CPI (figure 2).

If one presumed that the pre-crisis exchange rate in early 2001 was roughly at purchasing power parity, then a sustained 200 percent devaluation (the value of the dollar rises from 1 to 3 pesos) will eventually show up as a 200 percent increase in the domestic price level. Producer prices, which are more directly affected by the exchange rate, will react faster than consumer prices. And by early 2007, producer prices have already risen more than 180 percent while consumer prices rose by just 90 percent. Thus, at 3 pesos to the dollar, Argentina faces several more years of substantial inflation in its CPI before the fixed nominal exchange rate eventually ends it.

How fast Argentina's economy should inflate before this new equilibrium is achieved is something of an arbitrary choice. But the government has apparently settled on allowing nominal GNP to grow 19 percent per year, which is partitioned between approximately 9 percent real growth and 10 percent inflation. So, under the current monetary regime, six or more years will elapse before the CPI stabilizes at the "international", i.e., U.S., level. Nevertheless, the fixed nominal exchange-rate, with supporting interventions to control the excess money growth, is a consistent monetary strategy. Whether it is sustainable remains to be seen.

Korea followed a somewhat different monetary cum exchange rate policy following its great crisis of late of 1997-98. To be sure, Korea's crisis was less intense than what Argentina experienced four years later—at least as measured by the initial depreciation, where the won per dollar rate rose "just" 85 percent (figure 3). However, Korea also had a huge debt restructuring problem—and domestic aggregate demand also fell, leading to a sharp fall in imports and a quick turnaround in the trade balance from deficit to surplus. The government then intervened heavily to prevent the won from appreciating "too fast" and quickly rebuilt its official dollar reserves; this led to the need to sterilize some of the impact on the monetary base—as in Argentina.

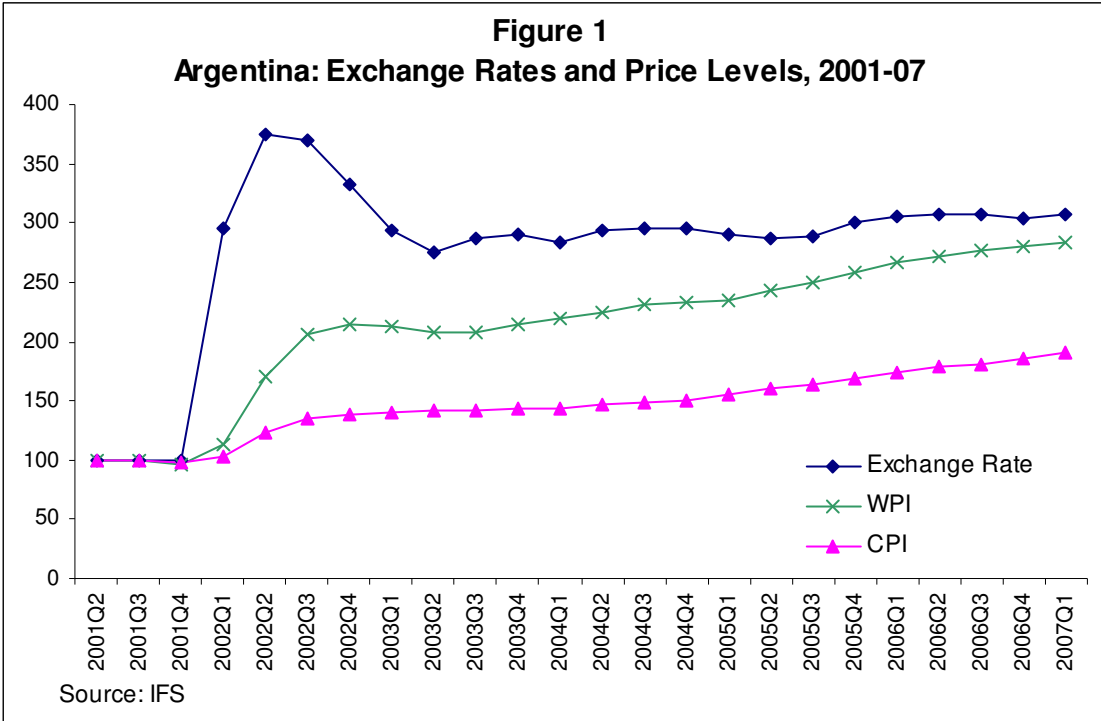
However, the big difference between the two countries in their post-crisis experiences is that Korea opted not to stabilize the nominal value of the won at a highly depreciated level, as Argentina did. Rather the Bank of Korea opted to let the won continue appreciating, albeit somewhat erratically, as shown in figure 3. Today, the nominal won/dollar rate has returned (within 4 percent) of its pre-crisis level. True, in making this Argentina-Korea comparison in figures 1 and 3, we are considering a 10-year recovery period for Korea (1997-2007) versus just 6 years (2001-2007) for Argentina. Nevertheless, Argentina does not seem to be about to abandon its dollar peg—and it is reasonable to project that its inflationary trajectory will continue.

Because of the won's greater nominal appreciation, post-crisis inflation in Korea has been much less than in Argentina (figure 2). And Korea's wholesale and consumer price indexes, measuring inflation, move closely together (figure 3). In Argentina, by contrast, the CPI still has a lot of catching up to do (figure 1). Finally, the real size of Korea's banking system recovered faster and is being sustained at a higher level. Without much inflation tax being levied on won bank deposits, Korea's M2/GDP ratio stabilized at about 70 percent of GDP four years after the crisis (figure 4). In Argentina, four years after the crisis, this ratio, measuring the size and potential lending capacity of the banking system, has stabilized at less than 20 percent.

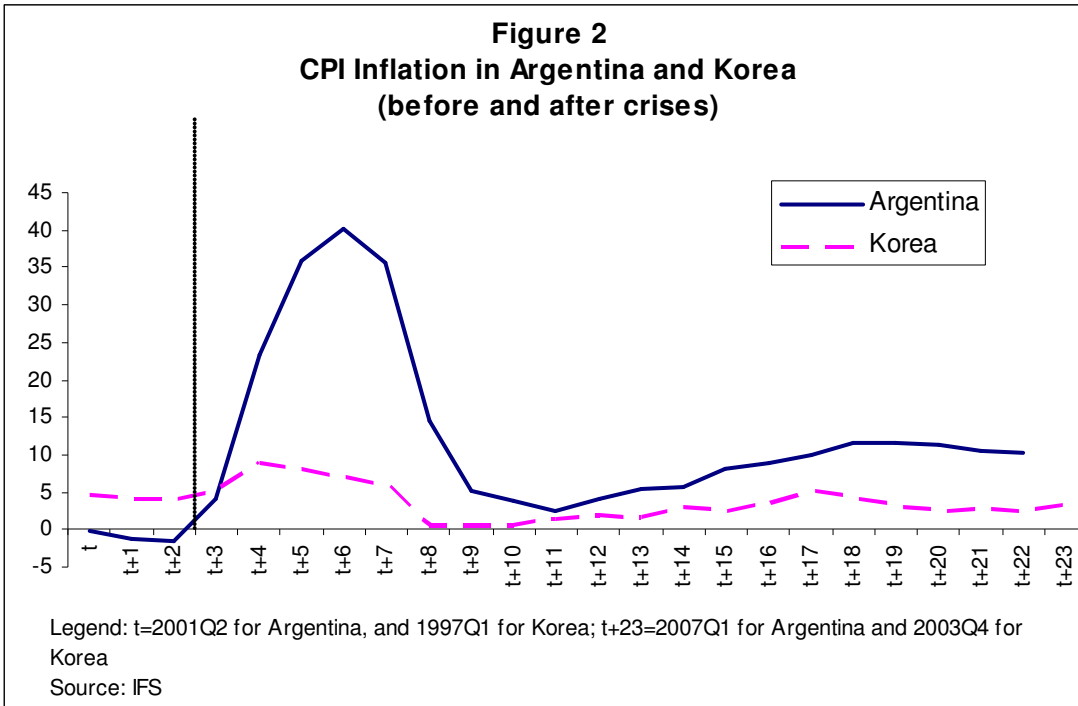
However, Argentina's current monetary cum exchange rate regime has been remarkably successful in overcoming the great trauma of the 2001-02 crisis. Exchange reserves have been replenished, exports are growing, and confidence in the financial system is partially restored. Nevertheless pent up inflation is the greatest threat to the sustainability of the current regime.

With the benefit of hindsight, should Argentina have allowed its nominal exchange rate to appreciate more and sooner in the Korean mode? The answer is still not clear because of mitigating circumstances beyond what can be included in this short note. For example, Argentina's default crisis and impasse with the IMF impaired its external credit more than what Korea experienced. Thus Korea could rebuild its exchange reserves faster as foreign capital swiftly flowed back into the economy—and could better risk having its currency appreciate. Against this, the boom in primary commodity prices since 2003 has helped Argentina and hurt Korea. If this boom continues, Argentina could better risk having its nominal exchange rate appreciate.

That said, however, the current stable exchange rate of 3 pesos per dollar has gained credibility in the market. One wouldn't want to replace it with a predictably appreciating currency, as is currently happening in China. Because foreign exchange speculators have a one-way bet on the direction of change in the renminbi, China now faces huge inflows of "hot" money that threaten to destabilize its financial system. Clearly, BCRA has to think very carefully before making any major changes in its current monetary cum exchange rate regime.

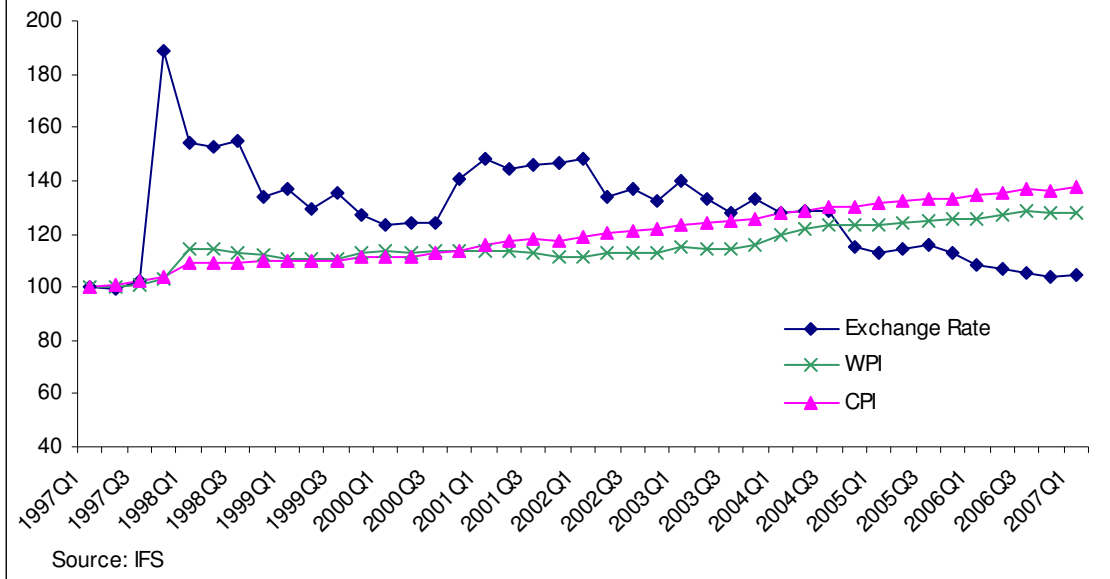


**Figure 2**  
**CPI Inflation in Argentina and Korea**  
**(before and after crises)**

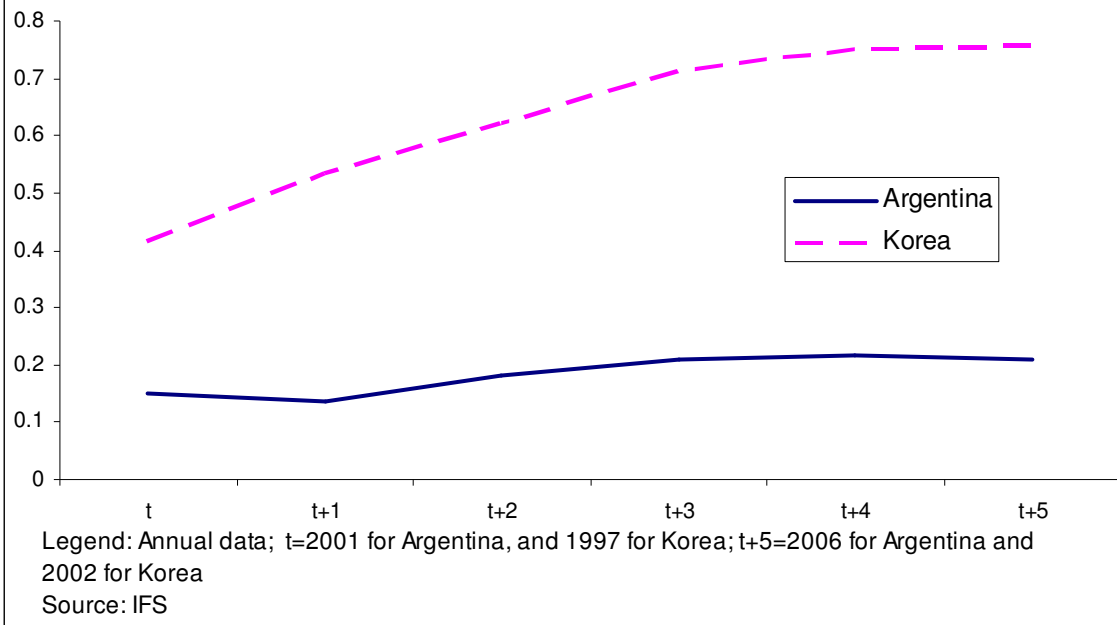




**Figure 3**  
**Korea: Exchange Rates and Prices Levels, 1997-2007**



**Figure 4**  
**M2/GDP in Argentina and Korea**  
**(before and after crises)**





# Jornadas Monetarias y Bancarias, 2007

**Willem H. Buiter**

Monetary economics and the political economy of central banking:  
inflation targeting and central bank independence revisited

4 y 5 de Junio de 2007

# **Monetary Economics and the Political Economy of Central Banking: Inflation Targeting and Central Bank Independence Revisited<sup>\* \*\*</sup>**

20-05-2007

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## Abstract

The canonical modern central bank targets inflation and is operationally independent. This paper analyses whether this central bank model make sense.

With flexible inflation targeting, the period loss function of the monetary authority trades off inflation volatility against output volatility. Flexible inflation targeting does not have robust microfoundations, nor is it compatible with the official mandates of those central banks that have price stability as their primary objective. For these. the operational expression of the pursuit of price stability is *lexicographic* inflation targeting.

There is a material risk that *flexible* inflation targeting will turn into *soft* inflation targeting. The combination of flexible inflation targeting with a view of the transmission mechanism that includes the Calvo-Woodford version of the New-Keynesian Phillips curve (which has a long-run exploitable trade-off between inflation and the output gap), seems almost purpose-built, to repeat the inflation accidents of the 1970s. One can only hope central bankers will be wise enough to resist this siren song.

Modern independent central banks, most notably the ECB, have a higher degree of operational independence than virtually any other agency to which the state has delegated some of its responsibilities. Such a high degree of operational independence implies that the only form of accountability the principal (the citizens through their elected representatives) can impose on the agent (the central bank) is *formal* accountability, that is, reporting obligations through which the principal can monitor the actions of the agent. There is effectively zero *substantive* accountability: no pay-off relevant consequences for the agent follow from the reporting duties and monitoring process imposed on them: the central bank cannot be ‘touched’.

Lack of substantive accountability undermines the legitimacy of the agent and puts it at risk of a political backlash that could impair its operational independence. This risk is greater when, as in the case of the ECB, the central bank is actively engaged in ‘mandate and mission creep’. To address these problems the paper makes a number of proposals for limiting the domain of unaccountability, by turning the operationally independent ‘full-function’ central bank into a minimalist operationally independent monetary authority.

Specifically, the monetary authority would be denied the following:

1. Any voice in the public policy debate on matters other than monetary policy and the institutional arrangements for conducting monetary policy. Specifically, the central bank would not hold forth, in its official capacity, on fiscal sustainability, social security reform, the minimum wage and other structural reforms - all areas beyond both the central bank’s mandate and its domain of competency.
2. Any role in the supervision and regulation of banks, other financial institutions and financial markets.
3. Any ownership, control and management role in the interbank clearing and settlement systems. For instance, the ECB should divest itself of TARGET. The new TARGET owner/manager should have guaranteed access to ECB liquidity.
4. Any ownership, control and management role in the financial securities clearing and settlement systems. For instance, the ECB should not play an active role in the proposed TARGET2-Securities. The eventual TARGET2-Securities owner/manager should have guaranteed access to ECB liquidity.

5. Any active role in the prevention and mitigation of financial instability. The lender of last resort function should be performed by the financial regulator/supervisor, who would have an unlimited overdraft facility with the central bank, guaranteed by the Treasury.

Since the degree of operational independence of the ECB and many other central banks is well in excess of what is required for the proper discharge of functions (2) to (5), these proposals would limit the domain of unaccountability and increase the legitimacy of all the delegations of authority involved, including the (desirable) delegation of monetary policy to an operationally independent central bank, without any material efficiency costs.

Key Words: Central bank independence; New-Keynesian Phillips curve, flexible inflation targeting; accountability.

JEL Classification System: E52, E58, E61, E63.

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## **Introduction**

There is a widespread consensus today, both among practicing and/or practical central bankers and among theoretical and applied monetary economists, that the canonical global best practice central bank is operationally independent<sup>1</sup> and targets inflation<sup>2</sup>. Historically, whenever a near-universal consensus takes hold of the economics profession, it tends to be at least half wrong. A concern that this may be happening in the areas of inflation targeting and central bank independence prompted the choice of subject for this inaugural lecture.

### **I. Inflation targeting**

Inflation targeting – the pursuit of a low and stable rate of inflation over the medium-to-long term for some broadly based index of consumer prices or cost-of-living index - is best rationalised as the operational expression of the pursuit of the more fundamental objective of price stability. The first point I wish to make is that the buck stops right there: price stability must be viewed as a primitive objective of monetary policy - one that cannot be derived from more even more basic or fundamental objectives of efficiency and equity.

#### **IA. The welfare economics foundations of price stability as a monetary policy objective**

There have been many attempts to derive the optimality of price stability from generally accepted welfare economic considerations, that is, to provide microfoundations for price stability as an objective (or even the overriding objective) of monetary policy. These all failed. Conventional welfare economics considerations point in many different directions, but they do not point towards price stability as the natural objective of monetary policy.

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<sup>1</sup> See e.g. Cukierman, Webb and Neyapti (1992), Cukierman (2006), Alesina and Summers (1993), Posen (1993), McCallum (1995), Beetsma and Bovenberg (1997), Campillo and Miron (1997), Forder (1998), Blinder (1999), de Haan and Kooij (2000), Ozkan (2000), Posen (1993), Buiters (2004, 2005).

<sup>2</sup> See e.g. Federal Reserve Bank of Kansas City (1996), Bernanke and Woodford (2005).

### **IA1. Shoe-leather costs and the Bailey-Friedman optimal interest rate rule.**

Central bank fiat money can be produced at effectively zero marginal cost. Economic efficiency considerations therefore point to the desirability of setting the pecuniary opportunity cost of holding central bank money equal to zero. Failure to do so would result in unnecessary ‘shoe-leather costs’ of active cash management (Allais (1947), Baumol (1952), Tobin (1956)).<sup>3</sup> The opportunity cost of holding central bank money is measured by the gap between the short default risk-free nominal interest rate,  $i$ , and the nominal interest rate on central bank money,  $i^M$ . So the venerable Bailey-Friedman optimal interest rate rule (for some reason often called the optimal quantity of money (OQM) rule) is  $i = i^M$ , which results in satiation with real money balances. One component of central bank money, currency, has a zero nominal interest rate. With  $i^M = 0$ , the Bailey-Friedman rule sets the short nominal interest rate equal to zero (Bailey (1956), Friedman (1969)). If the equilibrium real interest rate is positive, the OQM rule points to the optimality not of price stability but to of deflation, that is, negative inflation, at a rate equal to minus the equilibrium real interest rate.

### **IA2. Menu costs**

Menu costs (real costs associated with changing prices, including prices measured in terms of central bank money) point to the desirability of stabilising those prices that are most costly to change. These are most likely to be money wages. Menu costs therefore point to stabilising the average money wage as the appropriate objective of monetary policy. With positive trend growth of labour productivity, this again implies that negative price inflation is optimal.

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<sup>3</sup> A positive gap between  $i$  and  $i^M$  would also cause a distortion by artificially raising the relative price of cash goods relative to credit goods (see Lucas and Stokey (1987)).



### **IA3. Indexation failures**

When contracts or financial instruments are nominally denominated, unanticipated inflation can result in redistribution from creditors to debtors. Imperfect indexation of tax, subsidy and benefit schedules can cause inflation or deflation to create distortions and efficiency losses, and to have unintended and undesired distributional consequences. The obvious solution here is better indexation. Failing that, a second-best argument for price stability exists.

### **IA4. An incorrect New-Keynesian argument *for* price stability: relative price distortions**

An influential strand in the New-Keynesian literature, associated notably with Woodford (2003), argues that there is indeed a case for price stability that can be derived from conventional welfare economic considerations. According to this view, price stability prevents *static relative price distortions* when wage and/or price contracts are staggered, overlapping and subject to nominal rigidities. The starting point of this literature is Calvo's (1983) model of price setting. This divides the universe of price setters into two groups. One consists of fully optimising, forward-looking monopolistically competitive price setters. The other consists of behaviourist plodders (or constrained price setters), who adopt an exceedingly simple heuristic or rule of thumb for updating the prices of their products.<sup>4</sup> I will call the inflation rate generated by the behaviourist plodders the *inflation heuristic*, and denote it by  $\tilde{\pi}$ . Aggregate inflation (reflecting the price-setting choices of both the optimising price setters and the behaviourist plodders) is denoted  $\pi$ .

It is easily appreciated that relative price distortions in the Calvo-Woodford universe are eliminated (relative price dispersion is optimal) when  $\pi = \tilde{\pi}$ , that is, when the aggregate rate of inflation equals the inflation heuristic generated by the behaviourist plodders –

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<sup>4</sup> In Calvo's model (Calvo (1983)) and in Woodford's development of it (Woodford (2003)), price setters each period are randomly allocated to either the fully flexible, optimising or the behaviourist price setters' camps.

whatever that inflation heuristic happens to be. How then does this prescription of *relative* price stability become an argument for stability of the general price level? The answer is that, like Calvo in his original model, Woodford assumes that the inflation heuristic is zero inflation:  $\tilde{\pi} = 0$ . In Woodford (2003), in Benigno and Woodford (2005), in Blanchard and Gali (2005) and in a slew of other publications, the assumption is made that that the behaviourist plodders keep their nominal prices constant, regardless of the economy-wide rate of inflation. In some versions the behaviourist plodders keep their money prices constant every period, and therefore also in the long run. Other versions of this model, analysed in Woodford (2003), imply that the inflation heuristic goes to zero only in the long run, although it still goes there regardless of the economy-wide average rate of inflation in the long run and outside it).<sup>5</sup>

The assumption that there exists a group of price setters who will keep their money prices constant, even when economy-wide inflation is roaring along, and even in a deterministic steady state, is bad economics. The assumption of too much rationality results in counterfactual economic behaviour. The assumption of too little rationality – zero learning and unbounded stupidity - also results in counterfactual economic behaviour. Calvo has since disowned this feature of his model, and has endowed the behaviourist plodders with enough information and rationality to rule out the anomalies of his original model (see Calvo, Celasun and Kumhof (2003), and also Buiter and Miller (1985), Gali, Gertler and Lopez-Salido (2001) and Buiter and Sibert (2006)).

The New-Keynesian paradigm therefore does not offer valid welfare economics or micro-foundations for price stability as an objective for monetary policy

**IA5. An incorrect New-Keynesian argument *against* price stability: the long-run exploitable output-inflation trade-off or Old-Keynesian wine in New-Keynesian bottles**

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<sup>5</sup> Woodford assumes a form of partial one-period-lagged indexation by the behaviourist plodders:  $\tilde{\pi} = \gamma\pi_{-1}$ ,  $0 \leq \gamma < 1$ .

The New-Keynesian approach has further implications for the optimal rate of inflation, based on the inefficiency of the natural rate of unemployment. Instead of pointing to price stability, these point to a positive rate of inflation as optimal. Like the previous argument *for* price stability based on the confusion of relative price stability and stability of the general price level, this one too is fatally flawed, and for essentially the same reason.

The New-Keynesian (Calvo-Woodford) Phillips curve can be approximated as follows:

$$\pi_t - \tilde{\pi}_t = \beta E_t(\pi_{t+1} - \tilde{\pi}_{t+1}) + \alpha(\pi_{t-1} - \tilde{\pi}_{t-1}) + \phi(y_t - y_t^*) + \eta(i_t - i_t^M) \quad (1)$$

$$0 \leq \alpha, \beta \leq 1, \phi > 0$$

In words: the current deviation of economy-wide inflation from the inflation heuristic depends on the expected future deviation, possibly also on the past deviation, and on the output gap - the difference between actual output  $y$  and potential output  $y^*$ .  $E_t$  means expectations formed at time  $t$ . The original Calvo (1983) model and the class of models developed in Woodford (2003), are the special case of (1) with  $\alpha = 0$  and  $0 < \beta < 1$ . Calvo also has  $\eta = 0$ , Much of Woodford's analysis is restricted to the case where either  $i = i^M$  or  $\eta = 0$ , so the Bailey-Friedman pecunairy opportunity cost of holding cash does not enter the Phillips curve.

The approximate social welfare function (evaluated at the deterministic steady state) of the Calvo-Woodford New-Keynesian model is given by (2) and (3).

$$\Lambda_t = \sum_{j=0}^{\infty} \beta^j L_{t+j} \quad (2)$$

$$0 < \beta < 1$$

$$L_{t+j} = E_t \left[ \left( \pi_{t+j} - \tilde{\pi}_{t+j} \right)^2 + \lambda (y_{t+j} - \hat{y}_{t+j})^2 + \ell (i_{t+j} - i_{t+j}^M)^2 \right] \quad (3)$$

$$\lambda, \ell > 0$$

$$\hat{y} = y^* + \delta \quad (4)$$

where  $\delta$  is the gap between the optimal or efficient level of output and the natural level of output (the level supported by perfect price flexibility). In the simplest models,  $\delta$  is constant and, with monopolistic competition in the output market and without production or consumption subsidies, positive.

If either  $\eta = 0$  or  $i = i^M$ , the New-Keynesian Phillips curve (1) implies the following trade-off between the (deterministic) steady-state output gap and the (deterministic) steady-state excess of actual inflation over the inflation heuristic. All deterministic steady state values are denoted by overbars.

$$\overline{y - y^*} = \phi^{-1} [1 - (\alpha + \beta)] (\overline{\pi} - \overline{\tilde{\pi}}) \quad (5)$$

In the Calvo-Woodford model, the steady-state inflation heuristic is zero, that is,  $\overline{\tilde{\pi}} = 0$ , so the long-run Phillips curve becomes:

$$\overline{y} = \overline{y^*} + \phi^{-1} [1 - (\alpha + \beta)] \overline{\pi} \quad (6)$$

Therefore, unless  $\alpha + \beta = 1$ , there is a long-run, exploitable, inflation-output gap trade-off. The Calvo-Woodford model has  $\alpha + \beta < 1$ . Thus, if there are real inefficiencies (monopoly power, tax distortions) that make the efficient level of steady state output  $\overline{\hat{y}}$ , say, higher than the natural steady state level of output,  $\overline{y^*}$ , the authorities could set actual steady-state output equal to its efficient level by choosing the appropriate rate of steady-state inflation:

$$\overline{\pi} = (\overline{\hat{y}} - \overline{y^*}) \phi [1 - (\alpha + \beta)]^{-1} > 0 \quad (7)$$

Woodford points out that although it is possible to keep actual output above its natural level, it will not be optimal to raise it all the way to its efficient level, given in (7), because of the welfare losses caused by the relative price distortions that occur whenever actual inflation

differs from the zero (the value of his long-run inflation heuristic). These welfare losses have to be balanced against the welfare gains from getting actual output closer to the efficient level of output. While logically correct, given the premise that wage and price setting is characterised by permanent irrationality, the conclusion is only as interesting as that premise.

Key to the existence of a long-run inflation-output trade-off in the New-Keynesian Phillips curve model is the relationship between the inflation heuristic and actual inflation - the re-incarnation in the New-Keynesian literature of the relationship between expected and actual inflation characteristic of the 1960s vintage expectations-augmented Old-Keynesian Phillips curves of Samuelson-Solow (1960) and Tobin (1968). In many ways, the Calvo (1983) and Woodford (2003) contributions are throwbacks to Phillips' original non-expectations-augmented Phillips curve (Phillips (1958) or to the pre-Phillips curves of Fisher (1926,1936)).

The theoretical work of Phelps (1967) and Friedman (1968) undermined the plausibility of a stable Phillips curve trade-off, especially across deterministic steady states. Lucas (1972, 1973) convinced much of the profession that the time it took to reach the long run was only as long as it took for rational price and wage setters to hone their expectations to filter out the systematic components of the inflation process (including the decision rules of the policy makers driving the inflation process). In a stationary economic environment, this learning period was bound to be shorter than the time it would take for the economy to reach the steady state.

It is ironic, and indeed rather disheartening, that after so many years of deserved disrepute, the behavioural anomalies that support a long-run non-vertical Phillips curve have once again crept into the debate about optimal inflation policy. It sets back the study of inflation dynamics by almost 40 years to the pre-Phelps/Friedman days. It is yet another

demonstration of the immaturity of economics as a scientific discipline: I would not expect *Nature* to publish an article in 2003 arguing that the earth is flat.

I don't know how much attention central bankers have paid to this resurrection, by an influential part of the monetary theory community, of the long-run exploitable Phillips curve trade-off. One can only hope that they have treated it with disdain and will continue to treat it thus. It would not be the first time that central bank monetary practice is ahead of monetary theory (see King (2005)).

#### **IA6. The absence of microfoundations for price stability as an objective of monetary policy.**

How worrying is the absence of welfare economic foundations for price stability as an objective, let alone the overriding objective, of monetary policy? One response is that it is a problem for conventional monetary economics, that is, for monetary theory, rather than for central banks entrusted with price stability as their primary mandate. According to this view there are valid, deep arguments for price stability, but conventional monetary economics simply does not have to toolkit to make them explicit or formalise them.

Sometimes this argument points to the widespread popular aversion to inflation as evidence that there must be serious costs associated with inflation: consumers and workers don't like inflation, ergo it must be costly. I have some sympathy with this position, but it must be pointed out, however, that the public's understanding of what inflation is and what it does appears to be very limited (see e.g. Shiller (1997)). There appears to be a widespread form of inflation illusion which leads households to believe that there exists an world in which the rate of inflation of the things they buy would have been lower but the rate of inflation of the things they sell would have been the same. People therefore feel 'robbed' by inflation: price inflation erodes the growth of real wages. While the rate of inflation of the general price level can indeed be uncoupled from the rate of inflation of nominal earnings for

an individual or small group of individuals, this is not possible for the labour force as a whole. Yet households everywhere object to bad price inflation while welcoming their own good earnings inflation.

Still, the view that the absence of microfoundations for price stability is mainly a problem for conventional economic theory has a very strong argument in its favour. This is that the most important costs of inflation are likely to be associated with the numéraire role of money, and not with its means of payment/medium or exchange role or its store of value role. The view that the numéraire role of money is its most importance one also chimes with the view of inflation not as inefficient or unfair, but as a sin, because it represents a corruption of weights and measures.

The importance of a stable numéraire makes sense only in a world of bounded rationality – a world in which conventional monetary theory is not comfortable.

## **IB. Price stability as the legitimate political mandate of monetary policy**

When considering the targets or objectives of central banks it is necessary to distinguish between fundamental objectives and operational targets. Fundamental objectives or ultimate objectives of central banks are invariably imposed on the central bank by some legitimate political outside agency. They are typically written into laws or constitutions. In the case of the ECB, the Treaty on European Union is the source of the central bank's fundamental mandate and legitimacy. Ultimate objectives tend to be qualitative or categorical in nature, rather than quantitative or numerical. They are therefore not operational.

The operational objectives or targets of the central bank tend to be quantitative, numerical expressions of the ultimate mandate. This can, for instance, be a numerical inflation target (point, range or inequality) or a numerical exchange rate peg. Few central banks manage without at least one numerical operational target. The Fed is the best known of the central banks without any kind of

quantitative operational mandate. The operational target is often set by an elected political authority. The inflation target of the Bank of England is set by the Chancellor of the Exchequer. In New Zealand, the inflation target of the Reserve Bank of New Zealand is determined jointly by the Governor of the RBNZ and the Minister of Finance.

The ECB sets its own operational inflation target, or as it prefers to call it, its quantitative definition of price stability.<sup>6</sup> The Treaty and Protocols leave the question of who sets the operational monetary target completely open, and the ECB effectively took that power because the other obvious candidate, the Council of Ministers (Ecofin)), did not focus on the matter. It is something that could, in principle, be contested by the Council of Ministers. The matter would then have to be decided by the Treaty-nominated institution for resolving such disputes: the European Court of Justice.

Absent microfoundations/conventional welfare economics foundations, the case for price stability as an objective (let alone the primary objective) of monetary policy has to rest on the fact that this is the lawful and legitimate political mandate given to most central banks. Price stability is, by Law, Constitution or Treaty, the primary objective of the ECB, the Bank of England, the Bank of Japan, the Reserve Bank of New Zealand and the Sveriges Riksbank.<sup>7</sup>

The main outliers in terms of fundamental objectives are the Fed, the Bank of Canada, the Reserve Bank of Australia and Norges Bank, none of which have price stability as the single primary objective of monetary policy.<sup>8</sup>

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<sup>6</sup> Quoting from the ECB's website: *"While the Treaty clearly establishes the primary objective of the ECB, it does not give a precise definition of what is meant by price stability. The ECB's Governing Council has announced a quantitative definition of price stability: "Price stability is defined as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%." The Governing Council has also clarified that, in the pursuit of price stability, it aims to maintain inflation rates below, but close to, 2% over the medium term.*" ECB <http://www.ecb.int/mopo/strategy/pricestab/html/index.en.html> .

<sup>7</sup> The Swiss National Bank is required by the Constitution and by Law to ensure price stability and, in so doing, to take due account of economic developments.

<sup>8</sup> The Fed is mandated by the Federal Reserve Act to pursue maximum employment, price stability and moderate long term interest rates as its fundamental objectives. The preamble of the Bank of Canada act directs the central bank *"to regulate credit and currency in the best interests of the economic life of the nation, to control and protect the external value of the national monetary unit and to mitigate by its influence fluctuations in the*



An inflation target is in many ways the natural operational target of monetary policy for those central banks that have price stability as their primary fundamental objective. However, some central banks that do not have price stability as their primary fundamental objective have also adopted inflation targeting as an operational practice. The Bank of Canada, the Reserve Bank of Australia and Norges Bank are examples. The Fed, under Chairman Bernanke, is likely to move quite swiftly towards the adoption of a *de-facto* numerical inflation target, although they are unlikely, for political reasons, to use the term ‘inflation target’. Operational practice under Greenspan gradually acquired many of the features of flexible inflation targeting, the subject to which I turn next.

The position that price stability should be pursued by the central bank if it is the legitimate public mandate of the central bank – even if there are no good welfare economic foundations for such a mandate may not be comfortable for monetary theorists or central bankers, but I believe that it is all that’s on offer at this point. It may be that *vox populi*, as embodied in legislation charging central banks with the pursuit of price stability as their primary mandate, is indeed wiser than the academic monetary economics of the past few hundred years, and that this legislation anticipates the future microfoundations of price stability, grounded in a formal numéraireology. But we are not there yet. There is no positive economic theory of the numéraire, and therefore no welfare economics of the numéraire either.

## **IC. The siren song of flexible inflation targeting**

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*general level of production, trade, prices and employment, so far as may be possible within the scope of monetary action, and generally to promote the economic and financial welfare of Canada”;* The Reserve Bank of Australia is mandated to pursue “(a) the stability of the currency of Australia; (b) the maintenance of full employment in Australia; and (c) the economic prosperity and welfare of the people of Australia.” The opening paragraph of Norges Bank Regulation on Monetary Policy 2001 (see Norges Bank (2001)).states “*Monetary policy shall be aimed at stability in the Norwegian krone’s national and international value, contributing to stable expectations concerning exchange rate developments. At the same time, monetary policy shall underpin fiscal policy by contributing to stable developments in output and employment.*” It gets better after that, but two nominal objectives plus two real objectives amount to a challenging start.

Some of the world's leading central banks have been seduced by the siren song of 'flexible inflation targeting', as advocated by Svensson (1999, 2005), Woodford (2003) and many others.<sup>9</sup> The objective function of the monetary authority, which we shall denote by  $\Lambda_t$  (like the approximate social welfare function of the Calvo-Woodford New-Keynesian model) has 'period loss functions' given by the expectation of a weighted average of that period's squared deviation of inflation from its (constant) target level,  $\pi^*$  and that period's squared output gap:

$$L_{t+j} = E_t \left[ \left( \pi_{t+j} - \pi^* \right)^2 + \lambda (y_{t+j} - y_{t+j}^*)^2 \right] \quad (8)$$

where  $\lambda \geq 0$  is the relative weight put on output gap stabilisation.

Note that (8) would be an appropriate representation of a 'dual mandate' loss function of the kind the Fed is often alleged to have (see e.g. Mishkin (2007a,b)). However, as is clear from the Federal Reserve Act, the Fed has a triple mandate, not a dual one: it has to target the real economy ('maximum employment'), a nominal objective ('price stability') and the financial asset markets ('moderate long-term interest rates'). Somehow, the asset market objective has been lost sight of in the dual mandate interpretation of the Fed's objective function. Interpreting this to refer to nominal interest rates, and letting  $i^L$  be the long-term nominal interest rate and  $i^{L^*}$  the moderate level of the nominal long-term interest rate, the Fed's 'triple mandate' period loss function would be given by:

$$L_{t+j} = E_t \left[ \left( \pi_{t+j} - \pi^* \right)^2 + \lambda (y_{t+j} - y_{t+j}^*)^2 + \varphi (i_{t+j}^L - i_{t+j}^{L^*})^2 \right] \quad (9)$$

$\lambda, \varphi > 0$

The flexible inflation targeting period loss function (8) is a poor choice of objective function. First, it has no New-Keynesian welfare economics foundations. As is clear from equation (3) To have proper New-Keynesian welfare economics credentials, it should have the

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<sup>9</sup> For a more extensive discussion of these points, see Buiter (2006a).

inflation heuristic  $\tilde{\pi}_t$ , instead of a constant target inflation rate  $\pi^*$  in the period loss function (8); potential output  $y^*$  should be replaced by the socially efficient level of output  $\hat{y}$ , and there should be a term involving the opportunity cost of holding central bank money,  $(i - i^M)^2$ .

Equation (8) is also a poor choice of objective function because it is incompatible with the legal mandate given to many of the leading central banks, for whom price stability is the primary or overriding objective. This includes the European Central Bank, the Bank of England and the Bank of Japan. Only *subject to*, or *without prejudice to*, the price stability objective being met, can the authorities legitimately pursue other objectives such as employment, output or happiness. Such mandates imply *lexicographic* or *hierarchical* inflation targeting, not *flexible* inflation targeting.

Any positive weight  $\lambda$  on the output gap in the period loss function would be too large, because it would imply a trade-off in the authorities' preference ordering between inflation and output stabilisation (relative to their target levels). The lexicographic point of view rules out such a trade-off in preferences. A zero weight  $\lambda$  would, however, also not be right, because output gap stabilisation *is* valued, as long as it does not come at the expense of price stability. Since any trade-off (and no trade-off) in the objective function of the monetary authority between price stability and output gap stability lacks both microfoundations and political mandate legitimacy, the flexible inflation targeting objective function in (2) and (8) is a non-starter. Whether such a trade-off exists in the economy, that is, in the constraints faced by the monetary authority, is a completely separate issue, which is not addressed here.

In practice, the flexible inflation targeting literature has specialised the period loss function (8) to:

$$L = \text{Var } \pi + \lambda \text{Var } y \tag{10}$$

where *Var* denotes the (conditional) variance.

In fact (8) implies not (10) but

$$L = \text{Var } \pi + \lambda \text{Var } y + \lambda \text{Var } y^* + (\text{E } \pi - \pi^*)^2 + \lambda (\text{E } y - \text{E } y^*)^2 - 2\lambda \text{Cov}(y, y^*) \quad (11)$$

where  $\text{Cov}$  denotes the (conditional) covariance. To get from (8) or (11) to (10), it has to be the case that the second line of (11) equals zero (or is independent of monetary policy). It is not too unreasonable to argue that the variance of potential output,  $\text{Var } y^*$ , is independent of monetary policy, or even that the expected level of potential output,  $\text{E } y^*$ , is independent of monetary policy. That is not enough, however, to reduce the second line of (11) to zero (or to make it independent of monetary policy). Conditions sufficient to ensure that are as follows:

(1) Either  $\text{E } \pi = \pi^*$  (there is no inflation target bias), or the inflation target bias cannot be influenced by monetary policy.

(2) Either  $\text{E } y = \text{E } y^*$  (there is no output gap bias), or the output gap bias is independent of monetary policy.

(3) Either  $\text{Cov}(y, y^*) = 0$ , or the covariance between output and potential output is independent of monetary policy.

Assumption (3) is highly unlikely to be satisfied in most Old- or New-Keynesian models. Either the self-equilibrating servomechanisms of the market economy or stabilisation policy should make for a positive covariance. Assumption (2) is satisfied in the long run if the economy has the long-run natural rate property; that is, if there is no unemployment-inflation trade off or output-inflation trade off across deterministic steady states. It is not necessarily satisfied in the short and medium term.

Assumption (1) is a necessary condition for effective inflation targeting, at any rate in the long run. To assume that it is automatically satisfied, as replacing (8) or (11) by (10)

implies, is to assume away all the technical problems, commitment problems and other political complications associated with inflation targeting. It is true that many of the most popular New-Keynesian and Old-Keynesian analytical or calibrated numerical models used to study inflation targeting, have the property that there are few technical obstacles to meeting the inflation target on average. Indeed, when these models have the long-run natural rate property (and more enlightened New-Keynesian models do, including the ones proposed by Buiter and Miller (1985), Gali, Gertler and Lopez-Salido (2001), Calvo, Celasun and Kumhof (2003) and Buiter and Sibert (2006)) it will be true that, when the inflation rate is on average equal to the constant target rate of inflation, the output gap is on average equal to zero.

So, with the ‘first moment’ problems of inflation targeting and output gap targeting solved, the monetary policy maker is left with just the problem of choosing the optimal combination of the conditional second moments of inflation and output.

This result, however, rules only in Theoryland. It trivialises the central problem of inflation targeting, which is meeting the inflation target on average, going forward, that is, achieving a zero inflation bias. When  $E\pi = \pi^*$ , the key problem of the inflation-targeting monetary authority, that of creating a credible nominal anchor, is solved. This is difficult to achieve in practice, and can never be taken for granted: the first moment problem is also always the first-order problem. The second-moments period loss function (10), which assumes that there is no first-moments problem, is an misleading and dangerous construct to dangle in front of the monetary authorities: the second moments are of second-order importance unless the first-order first moments problem has indeed been solved.

The apparent similarity of Assumption (2),  $E y = E y^*$  (no output gap bias) and Assumption (1),  $E \pi = \pi^*$  (no inflation target bias) hides an important difference which can come back to haunt policy makers. For models with the (long-run) natural rate property, the servo-mechanisms of the market economy will tend to drive actual output towards potential

output, at any rate in the long run, even without any policies designed to achieve that. There is no such built-in mechanism for ensuring that the actual rate of inflation will be driven towards the target rate of inflation, unless the policy authorities adopt rules (like the Taylor rule) that ensure that this will be the case: there may be a natural rate of unemployment, a natural level of output and even a natural real rate of interest, but there is no natural rate of inflation; the long-run equilibrium inflation rate in a fiat money economy is ultimately decided by the monetary authorities.

The belief that monetary policy could and should trade off *expected* inflation for the *expected* output gap was shattered by the combination of the intellectual brilliance of three Nobel Prize winning economists (Phelps, Friedman and Lucas) in the 1960s and 1970s, and a recalcitrant reality in the 1970s and 1980s. Likewise, the hubris that has led some leading central banks (but not the ECB or the Bank of England) to adopt the flexible inflation targeting objective function (10), will be shattered when it leads to an unintended and unexpected drift of the inflation rate above its target value. Indeed, there already is some evidence that *flexible* inflation targeting may have morphed into *soft* inflation targeting in a number of countries, including the US, Australia and New Zealand. The obvious and simple solution to this problem is to jettison flexible inflation targeting and to adopt *lexicographic inflation targeting* instead.<sup>10</sup>

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<sup>10</sup> The lexicographic ordering means that the monetary authority chooses a short nominal interest rate rule or a state-contingent sequence of short nominal interest rates to minimize first the following ('conservative central banker') objective function, defined just over deviations of inflation from its target rate:

$$\Lambda_t^\pi = \sum_{i=0}^{\infty} \beta^i E_t \left( \pi_{t+i} - \pi^* \right)^2 .$$

If the optimal rule/state-contingent sequence is unique, that is the end of the matter. If there are multiple optimal rules/sequences, the authority chooses from among these the one that minimises the present discounted value of current and future expected squared output gaps,

$$\Lambda_t^y = \sum_{i=0}^{\infty} \beta^i E_t \left( y_{t+i} - \pi_{t+i}^* \right)^2 .$$

## **II. Central Bank Independence: limiting the domain of unaccountability**

The reasons why so many central banks have been made operationally independent since the beginning of the 1990s are unclear. The received wisdom has it that, in a flexible inflation targeting framework, when the desired (efficient) level of output exceeds the natural level (the level consistent with any constant, fully anticipated rate of inflation), monetary policy suffers from a commitment problem resulting in an inflation bias. The optimal monetary policy is not time-consistent (see Kydland and Prescott (1977), Barro and Gordon (1983), Backus and Driffill (1985)). The delegation of monetary policy by the Principal (the government previously in charge of monetary policy, henceforth the Treasury) to an operationally independent Agent (the central bank) is assumed to solve this commitment problem.

McCallum (1995, 1997a,b) and Blinder (1999, 2006) question how the same government that could not credibly commit itself to the pursuit of a low inflation target when it was in charge of monetary policy, can credibly commit itself to creating an institution capable of producing that same low rate of inflation, and of leaving it alone to get on with the job.

The commitment problem identified by Kydland and Prescott and by Barro and Gordon need not be limited to the temptation for opportunistic exploitation of a short-run inflation-unemployment trade off. Very similar issues arise when there is a large stock of nominally denominated fixed-interest public debt outstanding. This creates an incentive for the Treasury to use unanticipated inflation to reduce the real value of the outstanding stock of public debt. The gains from doing so are greater the longer the duration of the debt. Also, in countries where seigniorage, the resources that can be appropriated by the issuance of base money, is a potentially important source of state revenue, there is a constant temptation for

the Treasury to extract the anticipated and the unanticipated inflation tax. This last channel is especially important in emerging markets and developing countries where conventional revenue bases are often weak and distortionary. Central bank independence is an attempt at institutional reform aimed at strengthening the central bank's defenses against opportunistic abuse of unanticipated inflation (through the short-run Phillips curve trade-off or through the nominal debt channel), against abusive use of the anticipated and unanticipated inflation tax, and against even more direct raids on its resources by the Treasury.

Like every delegation of authority, the delegation of monetary policy to an operationally independent central bank raises two questions. The first is how to incentivise the Agent (the central bank) to act in the interest of the Principal - the government (the proximate Principal) and the people (the ultimate Principal). The second problem concerns the legitimacy of the institution to which authority has been delegated.

In what follows I will take the operational independence of the monetary authority as a *datum*. I will argue that a high degree of operational independence has two unavoidable consequences. First, there are few if any effective means to structure the incentives faced by the central bank so as to align the interests of the central bank with those of the proximate or the ultimate Principals. Second, the central bank will be substantively unaccountable. This undermines the legitimacy of the institution.

Operationally independent central banks contribute to the democratic deficit, in the EU and elsewhere. I will focus on concrete proposals for minimising the damage done by the operationally independent monetary authority to democratic accountability and legitimacy. The risk of a political backlash against central bank independence, prompted in part by a growing recognition of the inherent unaccountability of operationally independent central banks, should make these proposals of interest also to central bankers, even where they involve a sever clipping of central bank wings.



The proposals that follow aim to limit the domain of unaccountability by restricting the scope of the activities for which a high degree of operational independence is granted, and by preventing an unnecessary enlargement of the democratic deficit through central bank ‘mandate and mission creep’. In one sentence I propose to turn the operationally independent full-function central bank into a minimalist operationally independent monetary authority.

My main focus is on the ECB, although *mutatis mutandis* my analysis and proposals apply to all operationally independent central banks. The focus on the ECB is natural, first, because, from a formal legal point of view, the ECB is the world’s most independent central bank; second, because the ECB is most at risk of a political backlash against central bank independence. This is due to the way it interprets and expresses its operational independence, and to the determined way it engages in mandate and mission creep. Right from its birth as a monetary authority in 1999, the ECB has adopted advocacy roles in areas such as budgetary policy and structural reform, that are beyond its mandate and competence. More seriously, it has tried and continues to try to broaden the scope of its formal power and influence to areas beyond monetary policy – areas where a much smaller degree of operational independence is appropriate than that enjoyed by the ECB in the realm of monetary policy.

Millwall FC is a South London football club, somewhat challenged in the love-and-respect-in-the-wider-community-of-football departments. The response of its fans to this lack of appreciation has been their famous song: *"No One Likes Us - We Don't Care"*.

Central bankers are the Millwall supporters of the economic policy world. They are unloved and take pride in that. I would suggest that they may be too pleased with themselves and their situation. That they are unloved is in part the inevitable by-product of their core task: maintaining price stability. William McChesney Martin, Chairman of the Board of Governors of the Federal Reserve System 1951-1970, once described the Fed’s role as “taking

away the punch bowl just as the party gets going.” Being the party pooper is not the way to win a popularity contest.

The unpopularity of central banks and central bankers goes, however, well beyond what is the inevitably by-product of the proper discharge of their appointed monetary policy mandate. I believe that the substantively unaccountable nature of their power, the arrogance with which too often this power is exercised, and the persistent attempts of too many central banks at ‘mandate and mission creep’ are to blame also.

## **IIA. Central bank operational independence is not easy to achieve**

*Operational independence* is the freedom or ability of a central bank to pursue its objectives (regardless of who sets them) as it sees fit, without interference or pressure from third parties. It is not a binary variable but a matter of degree.

Operational independence from an elected, sovereign government is not easily achieved. It requires *political independence*: the central bank cannot seek or take instructions from any government/state body or other institution/body. It requires *technical independence*: the central bank must have the tool(s) to do the job. It means that the central bank cannot be coerced or induced to extend permanent financial assistance to the government or to private agents – it cannot be raided by government or private actors. It requires *financial independence*, that is, a separate budget and a secure capital base. It requires *security of tenure and of terms of employment*; this can be achieved through a minimum term of office, removal from office only for incapacity or serious misconduct (and not for gross incompetence), and pay and other conditions of employment that cannot be manipulated by outsiders. Finally, it requires that there be some other independent body, e.g. a court, to settle disputes between the central bank and the government.

This list suggests that true operational independence is difficult to achieve and that, if it is achieved, the central bank is, almost by definition, not substantively accountable. In addition, central bankers do not face normal economic incentives for eliciting effort and enhancing performance.

As an illustration of the problems standing in the way of operational independence of the central bank, consider the issue of its financial independence. The ability of the central bank to pursue its price stability mandate or, operationally, to achieve its inflation target, is constrained by its financial resources. Unlike the Treasury, the central bank does not have the power to tax. The asymmetry is even stronger when one realises that among the entities the Treasury can tax is the central bank. Frequently, the Treasury is also the owner of the central bank. In the UK, for instance, the Treasury owns all the common stock of the Bank of England. This raises the question: how independent can you be of the party that owns you and is able to tax you at will?

The answer is that this depends on the ability of the Treasury to commit itself not to deplete the financial resources of the central bank, whether by calling for extraordinary dividends, through a forced share re-purchase, or by taxing the central bank. The credibility of that commitment is determined by the same political factors that prompted the delegation of monetary policy to an operationally independent central bank in the first place. It is an open issue.

Table 1 shows the stylised conventional financial balance sheet of a central bank:

<b>Table 1</b>	
<b>Central Bank Financial Balance Sheet</b>	
<b>Assets</b>	<b>Liabilities</b>
<i>D</i> : Treasury debt	<i>M</i> : Base money
<i>L</i> : Private sector debt	<i>N</i> : Non-monetary liabilities
<i>R</i> : Foreign exchange reserves	

	$W$ : Financial net worth or equity
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Table 1 is useless as a guide to the resources the central bank has at its disposal, now and in the future, to pursue its inflation target. For instance, the central bank's financial net worth or equity,  $W$ , could be negative, without this necessarily implying that the central bank's financial viability or solvency are endangered, or even that the central bank is unable to support a low inflation target. To look at the fundamental resource constraint on the central bank we need its intertemporal budget constraint, shown in Table 2.

<b>Table 2</b>	
<b>Central Bank Comprehensive Balance Sheet or Intertemporal Budget Constraint</b>	
<b>Assets</b>	<b>Liabilities</b>
$D$ : Treasury debt	$M$ : Base money
$L$ : Private sector debt	$N$ : Non-monetary liabilities
$R$ : Foreign exchange reserves	
$S$ : Present discounted value of seigniorage profits (interest saved on non-interest-bearing monetary liabilities).	$E$ : Present discounted value of cost of running central bank
	$T$ : Present discounted value of taxes paid to Treasury
	$\bar{W}$ : Comprehensive net worth or equity

While the central bank's financial net worth can be negative, its comprehensive net worth,  $\bar{W}$ , which equals its financial net worth,  $W$ , plus the present value of its future seigniorage profits,  $S$ , minus the present value of the central bank's running costs (salaries, materials, depreciation etc),  $E$ , minus the present value of the net payments (taxes) made by the central bank to the Treasury,  $T$ .

What can the central bank do when it gets raided by the Treasury? After it cuts its expenses to the bone, all it can do is to 'print money' to stay solvent. Increased money issuance will, sooner or later, lead to higher inflation. That means higher nominal interest

rates and therefore a higher value of central bank profits on its investment account ( $S$ ) in Table 2. Financial solvency will have been restored (assuming that the central bank is not operating on the slippery slope of the seigniorage Laffer curve), but it may well be the case that the inflation rate necessary to restore financial solvency for the central bank is different from (and most likely higher than) the inflation target (see Buiters (2004, 2005, 2006), Ize (2004) and Sims (2004, 2005)). In that case the inflation target is not independently financeable by the central bank. It is not a problem today for the ECB, the Bank of England, the Fed or the Bank of Japan, but it is a problem in many emerging markets and developing countries. It could become a problem even for the central banks in the most advanced countries. In what follows, I assume that the central bank has the financial resources to support the inflation target.

## **IIB. The ECB *has* achieved a remarkable and unique degree of formal operational independence**

There can be little doubt that the ECB is the central bank with the highest degree of formal or legal operational independence. Since it also sets its own operational objectives (medium term HICP inflation below but close to two percent per annum), it can also be characterized as the most independent central bank, when operational independence and target/goal independence are taken together (Eijffinger (2005)). The ECB's operational independence and its mandate are enshrined in the Treaty establishing the European Community and the associated Protocol. These can only be amended through a Treaty revision requiring the unanimous consent of the EU member states (currently 25 in number).

As regards formal, legal safeguards guaranteeing political independence, financial independence and security of tenure and conditions of employment, the ECB scores as high as or higher than any other central bank. Highly unusually, there is nothing in the Treaty and Protocol governing the ESCB and the ECB that permits the political authorities (in this case

the Council of the European Union) to repatriate, or take back, under extreme circumstances, the power to conduct monetary policy from the ECB. The Bank of England Act 1998 created the Treasury Reserve Powers for this purpose; the Reserve Bank of New Zealand Act 1989 contains a similar provision. Dispute resolution through the European Court of Justice provides a further safeguard for its operational independence.

There is just one potential chink in the ECB's operational independence armour. This relates to the ECB's *technical independence*. There is some question as to whether the ECB has the tools to do the job of ensuring price stability.

Responsibility for exchange rate policy is divided between the ECB and the Council of Ministers. There is no substantive problem for central bank independence from the power of the Council of Ministers, acting unanimously, to enter into formal exchange rate arrangements with non-EU countries. Joining a new Bretton Woods would clearly be a political decision, to be taken by the political leadership of the EU, not by the ECB.

However, the Council can also formulate *general orientations* for the exchange rate. Only a qualified majority is required for this. Divided responsibility for the exchange rate could make a mockery of central bank independence. Not surprisingly, the ECB asserts that it cannot be given binding exchange rate orientations without its consent, and it has good sense on its side. Every French minister of finance since 1999 and a number of other ministers of finance have begged to disagree, however. The issue has not yet been put to the test.

## **IIC. Central bank operational independence means absence of substantive accountability**

### **IIC.1 Accountability: to whom, for what and in which form?**

*Formal* accountability is the aspect of responsibility involving giving, *ex-post*, a statistical or judicial explanation for events, actions and outcomes. Such formal accountability

requires that those to whom account is given (the Principal) can properly monitor the actions of Agent. The Principal must have enough information to be able to make an informed judgment as to how well the party held to account has performed. Clear objectives for the Agent and the most complete possible information about the actions of the Agent are necessary for formal accountability to be possible.

Formal accountability requires openness and transparency, at least *ex-post*. Whether, in the case of the ECB, it is enough to know the objectives of the ECB and to observe the narrowly defined actions of the monetary authority (typically the interest rate decisions), or whether more detailed and comprehensive information about the actions of the ECB (such as individual voting records, if voting takes place) and greater procedural transparency (minutes) are also required, continues to be a subject of disagreement (see e.g. Buiter (1999) and Issing (1999)). It is my position that the relevant actions of the ECB are not just the current and past interest rate decisions, but also the individual votes that produce that interest rate decision, and the (attributed) arguments, opinions, views of the transmission mechanism and forecasts that helped shape past and present interest rate decisions and will help shape future decisions.

*Substantive* accountability means that, following such reporting, explanation and justification, *judgment (or other pleasant or unpleasant consequences) may follow*. There is substantive accountability if the reporting, explanation and justification is ‘payoff-relevant’ for the party doing the reporting, that is, if there can be punishments, sanctions or rewards for those deemed responsible for actions or outcomes. It is clear from its own website, that the ECB has a minimalist, interpretation of accountability as formal accountability only: it is the (written and oral) *reporting obligations* of the ECB to the European Parliament, the European Commission and the European Council.<sup>11</sup> The same holds for the Bank of England (which

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<sup>11</sup> See: <http://www.ecb.int/ecb/orga/accountability/html/index.en.html>. The website states “According to the Statute, the ECB is required to publish quarterly reports on the activities of the Eurosystem as well as a consolidated Weekly Financial Statement. In addition, it has to produce an Annual Report on its activities and on the monetary policy of the previous and the current year. The Annual Report has to be addressed to the European

also has oral reporting obligations towards the UK Parliament) and all other operationally independent central banks.

It is not surprising that truly operationally independent central banks have effectively no substantive accountability at all. Independence *has* to mean that those in charge of monetary policy cannot be fired except for incapacity or serious misconduct, and that financial remuneration and working conditions likewise cannot be used to reward or punish them.<sup>12</sup> It ought to mean also that monetary policy makers cannot be sued in civil courts or be dragged into criminal courts for actions taken in their capacity as monetary policy makers. In the advanced industrial countries we have not (yet) witnessed recourse to the law by those disgruntled with the conduct of monetary policy. The legal immunities and liabilities of central bankers in the performance of their monetary policy making tasks are, however, an uncharted area.

### **IID. Incentivising monetary policy makers through enhanced formal accountability when there is no substantive accountability**

The absence of substantive accountability for central banks and individual central bankers means that it is difficult to provide them with the proper incentives to do the best possible job. While many central bankers may be motivated in their approach to the job by a sense of public service, by duty and by unflinching commitment to the central bank's

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Parliament, the EU Council, the European Commission and the European Council.” Article 113.3 of the Treaty Establishing the European Community (Consolidated Version) states “*The ECB shall address an annual report on the activities of the ESCB and on the monetary policy of both the previous and current year to the European Parliament, the Council and the Commission, and also to the European Council. The President of the ECB shall present this report to the Council and to the European Parliament, which may hold a general debate on that basis. The President of the ECB and the other members of the Executive Board may, at the request of the European Parliament or on their own initiative, be heard by the competent committees of the European Parliament.*”

<sup>12</sup> Governing Council members of the ECB, both Executive Board members and NCB Governors, can only be fired for incapacity and serious misconduct. This does not appear to include gross incompetence as a cause for dismissal. The Bank of England Act 1998, permits dismissal when an MPC member is *unable or unfit* to do the job. This would seem to be a weaker test than that of the ECB. In particular, ‘unfit’ would seem to include ‘grossly incompetent’. Other causes for dismissal of MPC members include bankruptcy and a few other irrelevant odds and ends.



mandate, one would like to see these higher motives reinforced by such primitive but frequently more reliable motives as the desire for power, prestige, wealth, comfort and leisure. This problem is especially acute when the monetary policy decision is a group decision; it gets more severe the larger the monetary policy making committee.

When monetary policy is made by a committee, two further factors can adversely influence the quality of the decision making. The first is the problem of free riding and shirking by individual members whose incremental contribution to the joint product (the interest rate decision) cannot be identified clearly (see Blinder (1999, 2005, 2006), Sibert (2003, 2006), Mihov and Sibert (2006)). The second concerns some well-known problems and pathologies associated with small-group decision making, of which ‘groupthink’ is a well-known example. (see Sibert (2006); for a more optimistic perspective on group decision making see Blinder (1999, 2005), and Blinder and Morgan (2005)).

How can one incentivise monetary policy makers in operationally independent central banks to pull their finger out? The only consequences of poor individual performance (if it can be identified), are damage to reputation (shame and embarrassment), poorer prospects for honours and impaired career prospects following one’s term of office with the monetary authority.

Employment prospects in the public sector or the prospect of honours would not be morally appropriate or even legitimate incentives to induce central bankers to put their shoulder to the wheel, but this does not mean they play no role. Post-central bank employment prospects in the private sector would, however, subject to the appropriate safeguards and purdah/cooling-off-periods, be a useful way of incentivising central bankers.

If we grant the assumption that the outside world’s perception of one’s competence is a major determinant of one’s future employment prospects, it is essential that the most complete information about each monetary policy maker’s contribution to the monetary

policy decision is publicly available. This is not an issue when monetary policy is made by one person, as is the case in New Zealand. It is an issue when monetary policy is made by a committee, as it is now in the majority of central banks. Revealing the individual votes of all members of a monetary policy committee as soon as practicable following a monetary policy decision, is an effective way of structuring incentives and represents a tiny step towards substantive accountability.

The obvious fact that a high degree of operational independence is inconsistent with substantive accountability should be recognised openly; lack of substantive accountability is a price one has to pay for operational independence. The sight and sound of the ECB describing itself as the most accountable central bank in the world, when the truth is zero substantive accountability and an absolutely minimal and utterly inadequate set of formal reporting duties, is not a pretty one. I also do not think it is politically sustainable. Either the ECB will become more open, or its independence will be taken from it.

### **IID. Limiting the domain of unaccountability**

The absence of substantive accountability for delegated authority can be rationalised and defended when there are clear performance gains from the delegation in question. The legitimacy of the delegation is however, undermined when the range of actions and decisions that is delegated to a substantively unaccountable authority is greater than is strictly necessary. It is here that the ECB is especially vulnerable, because since it started operations in 1999 it has made two systematic mistakes. First, it has become a vocal and highly partisan participant in wider economic policy debates that are well beyond its mandate and competence. Second, it has tried and continues to try, to broaden the scope of its formal powers and responsibilities.

### **IID1. Central banks should stick to their knitting<sup>13</sup>**

It was a mistake for the Treaty to grant the ECB an official, public (albeit only) advisory role in the process governing the admission of new Eurozone members. The institution has neither the political legitimacy nor the analytical competence to play such an important part in a quintessentially political and broad economic-analytical decision.

The issue is all the more serious because the 12 NCB Governors that are currently members of the ECB Governing Council face a potential conflict of interest when making recommendations on Eurozone enlargement. The reason is that, once the number of Eurozone member states exceeds 15, it will no longer be the case that each NCB Governor has a vote in each interest rate decision. Instead, they will rotate and thus have their voting power diluted. This potential loss of influence is largest for the smallest current Eurozone members, Luxembourg in particular, once the number of NCB governors reaches 22. If turkeys don't vote for Christmas, Eurozone NCB governors are less likely to vote for Eurozone enlargement.

It is also a mistake for central bankers to express, in their official capacities, views on what they consider to be necessary or desirable fiscal and structural reforms. Examples are social security reform and the minimum wage, subjects on which Alan Greenspan liked to pontificate when he was Chairman of the Board of Governors of the Federal Reserve System. It is not the job of any central banker to lecture, in an official capacity, the minister of finance on fiscal sustainability and budgetary restraint, or to hector the minister of the economy on the need for structural reform of factor markets, product markets and financial markets. This is not part of the mandate of central banks and it is not part of their areas of professional competence. The regrettable fact that the Treasury and the Ministry of the Economy tend to make the symmetric mistake of lecturing the operationally independent central bank on what

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<sup>13</sup> With thanks to Alan Blinder for this felicitous phrase.

they perceive to be its duties (which generally amounts to a plea for lower interest rates) does not justify the central bank's persistent transgressions.

There are but a few examples of central banks that do not engage in public advocacy on fiscal policy and structural reform matters. The only examples I am aware of are the Bank of England and the Reserve Bank of New Zealand.

Central bankers indeed have a duty to explain how their current and future interest rate decisions are contingent on economic developments that may include or may be influenced by, the actions of the fiscal authorities and the success or failure of structural reforms. The central bank should clarify what its reaction function is, given the economic environment in which they operate, which includes the fiscal authorities and the government and 'social partners' engaged in structural reforms.

Independent central bankers can, and where possible should, cooperate with and coordinate their actions with those of the fiscal authorities and with those charged with structural reform. If central banks, Treasury ministers and ministers of the Economy were to act cooperatively toward each other, and with credible commitment towards the private sector, good things may well happen. The reason this does not happen in the EU, or even in the Eurozone, is not a question of principle, but of logistics. There is no coordinated fiscal policy in the EU or in the Eurozone, so the pursuit of coordination between fiscal and monetary policy in the EU or in the Eurozone is simply not possible. Mr. Jean-Claude Juncker could have private breakfasts and/or public lunches with Mr Jean-Claude Trichet every day of the week, every week of the year, it would not bring monetary and fiscal policy coordination in the Eurozone an inch closer to realisation.

## **IID. From independent central bank to minimalist independent monetary authority**

The only time central banks have the right and duty to speak out on issues beyond monetary policy narrowly defined, is when the independence of the central bank is threatened. Such occasions are few and far between. Unsustainable public finances are not a matter on which the central bank should speak out, even if they threaten to confront the central bank with the dilemma: live with a sovereign debt default or bail out the improvident government through monetisation that threatens the central bank's price stability mandate. The central bank's mandated course of action is clear: they should let the government default on its debt rather than monetise that debt in a way that undermines price stability.

The threat of systemic financial instability may make it desirable that any or all of the following speak out: the financial supervisor and regulator, the providers of clearing and settlement services and/or the lender of last resort. However, neither the supervision and regulation of financial institutions and markets, nor the provision of clearing and settlement services, nor the active part of the lender of last resort function need be the responsibility of the central bank. Because the degree of independence of an operationally independent monetary authority is much greater than what is desirable for the financial regulator/supervisor, the provider of clearing and settlement services and the lender of last resort, there is a strong accountability argument for not bestowing any of these functions on the central bank.

An independent monetary authority need have few of the functions historically associated with the central bank. To minimize the legitimacy problems inevitably associated with the complete lack of substantive accountability of the operationally independent central bank, I would favour stripping the monetary authority of all responsibilities and competencies other than the pursuit of price stability. This minimalist objective would be supported through a minimalist assignment of instruments to the monetary authority. It would have just the power to set some short-term nominal interest rate or, in a managed exchange rate regime,

to set the value of the nominal spot exchange rate. It would also be able to manage its portfolio as it sees fit. This could include portfolio operations traditionally described as sterilised or non-sterilised foreign exchange market intervention.

This implies, that I would deny the monetary authority the following functions:

1. Supervision and regulation of banks, other financial institutions and financial markets
2. Ownership, control and management of the interbank clearing and settlement systems (e.g. TARGET for the Eurozone and its proposed successor, TARGET2).<sup>14</sup>
3. Ownership, control and management of the financial securities clearing and settlement systems (e.g. the proposed TARGET2-Securities for the Eurozone)
4. An active role in the prevention and mitigation of financial instability (other than what is the natural by-product of the pursuit of price stability), including an active part in the discharge of the lender of last resort function.

It is possible to strip the monetary authority of an active role in all four areas without this having any material adverse effect on financial stability or on the efficiency of the financial intermediation, clearing and settlement processes. As there would be accountability gains from removing the monetary authority from all four areas, there is no reason not to proceed.

The ECB currently has no role in financial supervision and regulation. The Treaty and Protocol do not grant the ECB supervisory or regulatory powers, but neither do they role this out.<sup>15</sup> The ECB owns and runs TARGET, but is not granted a monopoly of clearing and

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<sup>14</sup> “TARGET stands for **T**rans-**E**uropean **A**utomated **R**eal-time **G**ross settlement **E**xpress **T**ransfer system.” “It is the Real Time Gross Settlement system for the euro, offered by the [Eurosystem](#). It is used for the settlement of central bank operations, large-value euro interbank transfers as well as other euro payments. It provides real-time processing, settlement in central bank money and immediate finality. TARGET was created by interconnecting national euro real-time gross settlement (RTGS) systems and the ECB payment mechanism. It went live in January 1999.” ECB Website, <http://www.ecb.int/paym/target/html/index.en.html>.

<sup>15</sup> Article 3.3 of the Protocol on the Statute of the European System of Central Banks and of the European Central Bank states: “In accordance with Article 105(5) of this Treaty, the ESCB shall contribute to the smooth

settlement services by the Treaty. It has ambitions for being the monopoly provider of Eurozone clearing and settlement facilities for securities.

### **IID1. Taking the monetary authority out of financial supervision and regulation**

The ECB has always had ambitions to become the leading supervisor/regulator of banks and other financial institutions and of key financial markets in the Eurozone (Padoa Schioppa (1999)). There is a good case for an EU-wide (note, not just a Eurozone-wide) supervisor and regulator of banks and other financial institutions, especially as and when such institutions are established under European statutes. There is no case for the ECB fulfilling this role.

The prospect of the extreme degree of substantive unaccountability of Eurozone monetary policy being extended to financial supervision and regulation is a deeply unattractive one. This important but murky area is at the same time highly technical and deeply political. It involves often intense distributional conflict and fierce fights over property rights. Expertise in monetary policy is no qualification for that job. The notion that it should be discharged by an institution without any substantive accountability is unacceptable.

### **IID2. Taking the monetary authority out of the clearing and settlement business**

The provision of clearing and settlement services is another example of an area where central banks often play a role, despite there being no fundamental efficiency argument for it. Real Time Gross Settlement (RTGS) systems process a country's large-value payments. Historically, they are the preserve of the central bank, which more often than not owns, runs

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conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system.”

and oversees it. Examples include CHAPS for the UK, Fedwire for the US, BoJ Net for Japan and TARGET for the Eurozone.

The reason why an operationally independent central bank ought to divest itself of its national (in the case of the ECB regional) RTGS system ownership, management and operation is not that the central bank is doing a particularly poor job of running the RTGS system. It is that, if it were to do a poor job, it is excessively sheltered behind the operational independence shield of the central bank. There is no reason why the owner/manager/operator of the RTGS system should not be fired for doing a poor job. When the owner of the RTGS system is also the head of the operationally independent central bank, appropriate sanctions and incentives cannot be brought to bear on him/her.<sup>16</sup>

The ECB should “outsource” TARGET by spinning it off to another regulated entity (public or private) – one which has no monetary policy functions and much greater substantive accountability than the ECB. Instead the ECB’s systematic mandate and mission creep is leading it to propose that its monopoly over the provision of euro clearing and settlement services through TARGET (and its successor TARGET2) be extended to clearing and settlement of Eurozone transactions in financial securities through a proposed TARGET2 – Securities, to be owned, controlled and run by the ESCB (see Norman (2006)).

A Eurozone-wide platform for clearing and settling securities transactions is highly desirable, because it would lower transaction costs and promote further market integration. There is no efficiency argument for having the central bank provide the clearing and

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<sup>16</sup> My proposal that the central bank divest itself of ownership/management/operation of its national or regional RTGS system is not unheard of. At the SIBOS conference in Sydney, October 2006, Steve Barton, Senior Manager, Payments Systems and Liquidity, Banking and Market Services, Bank of England, discussed the idea of the Bank of England giving up running Britain's RTGS system. "In most cases central banks are the operators of the RTGS, but we are happy to review this," he said when discussing renewal of the system. This "may lead to a different proposal in the future." Quotes from NEWSMAKERS - CENTRAL BANKERS IN THE NEWS, Central Banking Publications, 31 October 2006.



settlement platform, however, and it is important for the political health of the European Union that any ECB attempt to muscle in on this activity be resisted. The body running TARGET (and the future TARGET2-Securities) needs access to the liquid liabilities of the ECB to fulfil its clearing and settlement role at least cost. It therefore needs an account with a generous balance at the ECB or an overdraft facility with the ECB. There is no logical or practical reason why the ECB should provide such clearing and settlement services itself.

### **IID3. Taking the monetary authority out of the financial stability business**

Here I briefly develop the proposition that the monetary authority has no natural role in ensuring financial stability, other than what emerges naturally as the by-product of its pursuit of price stability. A three-step argument is used. The first step is that the scope and incidence of systemically important financial instability are limited. The second step is that the irreducible minimum financial stability role that does indeed exist for public sector institutions can be performed perfectly well without the active participation of the monetary authority. The third step is that if it can be done equally well without the monetary authority, it should be done without the monetary authority. The reason is that it is undesirable, from the point of view of substantive accountability and democratic legitimacy, to grant additional tasks and responsibilities to the operationally independent and therefore substantively unaccountable monetary authority.

Whatever set of institutions is charged with maintaining financial stability, a minimalist view of financial instability is essential.<sup>17</sup> The public authorities should act to prevent three kinds of pathologies. First, *disorderly markets*, including failures of clearing and settlement systems. Second, extreme credit and asset market booms and busts, where market valuations and the cost and availability of credit have become clearly detached from

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<sup>17</sup> What follows owes much to the papers of Allen and Wood (2005) and Howard (2006).

fundamentals. Third, defaults and bankruptcies that have material negative systemic externalities that outweigh the positive value of default and bankruptcy in the re-allocation of ownership and control rights in a market economy based on property rights and the rule of law.

Disorderly markets are rare. For instance, since the New Zealand dollar was floated in 1985, the policy of the Reserve Bank of New Zealand has been to intervene only during periods of “extreme market disorder” when the operation of the foreign exchange market itself is under threat. For this purpose, the Bank maintained foreign exchange reserves in a target range of SDR 1.45bn to 1.75bn. The Bank has never had to intervene for crisis management reasons during the past 21 years. While the event may be rare, the cost of event should it occur could well be high. The post 9/11 flooding of the world’s inter-bank markets and money markets with central bank liquidity was clearly an appropriate precautionary measure.

Unlike disorderly markets, credit booms and busts are a common and integral part of both ancient and modern financial capitalism. The monetary authority has neither an obvious mandate for preventing or mitigating credit booms and asset price bubbles, nor a comparative advantage in doing so. Unless asset market or credit developments threaten the fulfilment, sooner or later, of the primary price stability mandate, where price stability is defined, appropriately, in terms of some consumer price index or cost-of-living index, asset market and credit booms are not a first-order concern of the monetary authority. If the conventional instrument of monetary policy (a short-term nominal interest rate) can be used to address asset market bubbles and credit booms without prejudice to the price stability target, now and in the future, the monetary authorities are indeed not only entitled, but mandated to do so.

I have serious doubts, however, about the effectiveness of the use of the central bank’s policy rate in the pursuit of asset price stability and credit growth moderation, although sharp

cuts in the policy rate can help clean up the mess that results when asset bust follows asset boom and credit crunch follows credit glut. The reasons monetary policy should not target asset prices are straightforward.

First, monetary policy should not try to influence asset prices that reflect fundamentals, even if these asset prices move fast and furiously, as often they will. Second, monetary policy is not the appropriate tool for influencing asset price movements that are not driven by fundamentals, that is, monetary policy is not an effective tool for bursting or mitigating bubbles. You don't hunt bubbles with fundamentals. At most, if the monetary authorities are sufficiently confident that a given observed pattern of asset price movements does indeed represent a bubble, they should use open mouth operations (warnings about irrational exuberance or irrational despondency) to try and prick the bubble.

Credit control measures, such as tighter margin requirements, lower limits on loan-to-value ratios for housing credit, more demanding collateral requirements, higher downpayments for home purchases and durables purchases are the appropriate tools for dealing with credit growth deemed excessive. Taxing lending or borrowing (in a financially open economy, borrowing would make more sense as disintermediation tends to be harder for borrowers than for lenders) is another possible financial stabilisation tool. There is no reason, however, for the central bank to be involved in designing, implementing and administering any such measures. It is enough for the central bank to be informed, so it can make informed judgments about the implications of such credit control measures for the pursuit of its price stability mandate.

Systemically important defaults and bankruptcies in the financial sector no doubt occur, but have I trouble recalling any in the leading industrial countries since World War II. The bail-out of LTCM (with private money but facilitated through the good offices of the New York Fed) has been justified on the grounds that its failure would have created systemic

risk, through the exposure of systematically important banks to the institution and through the effect of the rapid liquidation of LTCM's positions on certain asset prices. I disagree, and had it been my call, I would have allowed it to fail. I do not believe that the failure of this highly leveraged betting facility for the extremely rich would have created systemically significant negative externalities. I find it hard to think of any single financial institution whose failure would be more systemically significant than the failure of, say, General Motors. And there is no financial stability argument for bailing out automobile manufacturers, no matter how large.

Given enough non-fundamental contagion effects, any (financial sector) default can become a systemically important issue. However, pure contagion effects can be addressed effectively by the authorities without foregoing the benefit of periodic large-scale defaults in the financial sector.

Some central banks, the ECB prominent among them, favour a definition of financial instability that encompasses just about any inefficiency in the financial intermediation process. Since financial intermediation, whether through long-term client relationships institutionalised through banks or through markets, is shot through with features that can be plausibly be interpreted as inefficiencies, it is easy, using this all-encompassing definition of financial instability, to paint a picture of pervasive financial instability and of even more comprehensive threats to financial stability. From this 'acquis', some prominent members of the ECB Executive Board have called for a greatly enhanced role of the central bank in financial supervision and regulation. This should be resisted. Financial sector inefficiency is not a financial stability issue. It represents, at most, an issue to be addressed by the regulator/supervisor, not by the monetary authority.;

#### **IID4. Taking the monetary authority out of the lender-of-last-resort business**

There exists a widespread atavistic notion that the monetary authority has to have a role in underpinning financial stability, because the central bank is the natural lender of last resort (Bagehot (1866, 1873)). It is true that, through its monopoly of the issuance of legal tender, the central bank can issue effectively unlimited amounts of default-risk-free financial liabilities of the highest liquidity at little or no notice and at little if any cost. This, however, is not sufficient to conclude that the central bank has to be the lender of last resort. All it implies is that the lender of last resort, whichever institutions plays that role, has to have very large overdraft facility with the central bank.

Financial stability requires the cooperation and coordination of the actions of the Treasury and the supervisor/regulator. There is no logically necessary role for the central bank. In the UK, for instance, the Bank of England could be taken out of the current three-party Memorandum of Understanding concerning financial stability between the UK Treasury, the Financial Services Authority (FSA) and the Bank of England.

The FSA is an essential player in the Financial Stability Team (FST) because it has the deep institution-specific information and knowledge only the supervisor/regulator has. The Treasury is an essential player because, through its capacity to tax, it is the agency with the deepest long-run non-inflationary pockets. The odds on it defaulting on *de jure* or *de facto* index-linked, that is, real, obligations, are therefore lower than for any other economic actor. If a serious bail-out through a large-scale recapitalisation is deemed necessary for financial stability, the Treasury is the only place to go for resources. Historically, the Bank of England is part of the FST because, through its legal tender monopoly, it is the agent with the short-term deep pockets. However, any agency with the appropriate degree of access to the resources of the central bank (through ample balances held with the central bank or through an (in principle) unlimited overdraft facility with the central bank, guaranteed by the

Treasury, could do the job done now by the Bank. The obvious agency in the UK to play the active part of the lender of last resort role is the FSA.

So, in the UK, the Bank of England could be stripped of its financial stability role without any adverse impact on financial stability, by bestowing on the FSA an unlimited overdraft facility with the Bank of England, guaranteed by the Treasury. The Bank of England would not be responsible for the use made of this overdraft facility, so the Bank's lack of substantive accountability would not matter. Since the FSA is significantly more substantively accountable than the Bank of England, accountability would be enhanced overall.

### **III. Conclusions**

#### **III.1 Inflation targeting**

Flexible inflation targeting, the proposition that the monetary authorities should be willing to trade off price stability for output gap stability, threatens to undo the good achieved since the pursuit of price stability was first operationalised through the adoption of a numerical medium term inflation target. It has no foundations in welfare economics. It is incompatible with the mandate of every central bank that has price stability as its primary objective. It risks imparting an upward bias to inflation. It sets monetary policy design and implementation back to before 1989 – the year New Zealand first adopted inflation targeting. The solution is to drop flexible inflation targeting and replace it with *lexicographic* or *hierarchical* inflation targeting.

The influential Calvo-Woodford version of the *New-Keynesian Phillips curve* does not have the long-run natural rate property - it implies an exploitable long-run trade-off between inflation and unemployment (a positive long-run relation between inflation and output). This

sets back monetary economics about 40 years, to the days before the Nobel prize winning contributions of Phelps, Friedman and Lucas. The solution is not to use this construct.

### **III.2 Central bank independence: limiting the domain of unaccountability**

Central bank operational independence is not easily established. It is an empirical question as to whether the inflation target is independently financeable by the central bank.

If a central bank can be made fully operationally independent, it is, by construction, not *substantively accountable*. At most *formal accountability* can exist - reporting duties without consequences, that is, monitoring without sanctions or rewards for the central bank as an institution, or for individual central bankers. As the world's most operationally independent central bank, the ECB has zero substantive accountability. It is therefore particularly unfortunate that it takes such a minimalist view of its reporting obligations – its formal accountability.

This lecture makes a number of concrete proposals for limiting the domain of substantive unaccountability, by stripping the central bank of responsibilities and powers that are not essential to its monetary policy role. The monetary authority should play no role in the supervision and regulation of financial institutions and markets, in the operation of clearing and settlement systems, or in the prevention and mitigation of financial instability. Its participation in these activities is neither necessary for efficiency nor desirable from the point of view of democratic accountability and legitimacy.

Specifically, as regards the ECB, I propose the following:

1. Do not create a role for ECB in the supervision and regulation of banks, other financial institutions and financial markets.
2. End the ownership, control and management by the ECB of the real time gross settlement system for the euro (TARGET).

3. Do not permit ownership, control and management by the ECB of the proposed Eurozone-wide financial securities clearing and settlement system ('TARGET 2 – Securities).
4. Remove the ECB from any active role in the prevention and mitigation of financial instability (other than what occurs as the natural by-product of its pursuit of price stability), including an active part in the discharge of the lender of last resort function. Grant any future EU-wide or Eurozone-wide financial regulator/supervisor (EFSA) an overdraft facility with the ECB, under the joint and several guarantee of the EU or Eurozone national fiscal authorities, to allow the EFSA to discharge the lender of last resort function.

The strength of the formal, legal guarantees of a central bank's independence may say little or nothing about the likelihood that this independence will be encroached on in the real world. The politics of the moment can overwhelm even constitution-based or Treaty-based guarantees. This is likely to be particularly relevant for the ECB.

The ECB's operational independence and operational target independence is derived from a Treaty that is several hundred pages long and has a kitchen-sink quality – it covers everything from the sublime and important to the ridiculous and trivial. Few citizens of the EU consider themselves bound by every paragraph in it. The ECB's independence has extremely sturdy formal legal foundations, but in truth is only secure as long as (1) the EU-wide polity considers it to be politically legitimate and (2) the other EU institutions (especially the Council, the European Parliament and the Court) are willing to support it. Borrowing an image from that great political economist Stalin, the ECB does not have any divisions of its own.

There is a risk that the Eurozone central banking emperor, while clutching frantically to the fig leaf of formal, legalistic operational independence, could turn out to be wearing no politically legitimate clothes.



## Appendix 1. The intertemporal budget constraints of the central bank and the treasury

The argument around Tables 2 and 3 is easily formalised and made precise with a stylized set of accounts for the central bank and the treasury (see also Buiter (2004), Sims (2004), (2005) and Ize (2005)).

The central bank has the monetary base  $M$ , (currency plus commercial bank reserves with the central bank) on the liability side of its financial balance sheet; it carries a zero nominal interest rate.<sup>18</sup> On the asset side it has the stock of international foreign exchange reserves,  $R^f$ , earning a risk-free nominal interest rate  $i^f$  and the stock of domestic credit, which consists of central bank holdings of nominal, interest-bearing treasury bills,  $D$ , earning a risk-free nominal interest rate  $i$ , and central bank claims on the private sector,  $L$ , with nominal interest rate  $i^L$ .<sup>19</sup> The stock of treasury debt held outside the central bank is  $B$ ; it pays the risk-free nominal interest rate  $i$ ;  $\tau^p$  is the real value of the tax payments by the domestic private sector to the treasury; it is a choice variable of the treasury;  $\tau^b$  is the real value of taxes paid by the central bank to the treasury; it is a choice variable of the treasury and can be positive or negative;  $\tau^s \equiv \tau^p + \tau^b$  is the real value of total treasury tax receipts;  $h \geq 0$  is the real value of the transfer payments made by the central bank to the private sector ('helicopter drops'); I assume it to be a choice variable of the central bank;  $\tau \equiv \tau^p - h$  is total real taxes net of transfer payments received by the state, that is, the consolidated treasury and central Bank;  $e$  is the value of the spot nominal exchange rate (the domestic currency price of foreign exchange);  $c^s$  is the real value of general government spending on goods and services and  $c^b$  the real value of central bank spending on goods and services;  $P$  is the general price

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<sup>18</sup> For simplicity, all of the monetary base is treated as non-interest bearing.

<sup>19</sup> For simplicity, I consider only short maturity bonds. Generalisations to longer maturities, index-linked debt or foreign-currency denominated debt are straightforward. In many transition countries and developing countries the central bank also holds private sector debt instruments among its assets and interest-bearing, non-monetary liabilities among its liabilities.

level; the distinction between producer and consumer price levels is ignored for simplicity, and public spending on goods and services is assumed to be public consumption only.

Equation (12) is the budget identity of the treasury and equation (13) that of the central bank.<sup>20</sup>

$$\frac{B_t + D_t}{P_t} \equiv c_t^g - \tau_t^p - \tau_t^b + (1 + i_{t,t-1}) \left( \frac{B_{t-1} + D_{t-1}}{P_t} \right) \quad (12)$$

$$\frac{M_t - D_t - L_t - e_t R_t^f}{P_t} \equiv c_t^b + \tau_t^b + h_t + \frac{M_{t-1} - (1 + i_{t,t-1}) D_{t-1} - (1 + i_{t,t-1}^L) L_{t-1} - (1 + i_{t,t-1}^f) e_t R_{t-1}^f}{P_t} \quad (13)$$

When there exist complete contingent claims markets, and the no-arbitrage condition is satisfied, the usual solvency constraints, ruling out Ponzi finance by both the government and the central bank, imply the following intertemporal budget constraints for the treasury (equation (14)) and for the central bank (equation (15)).<sup>21</sup>

$$B_{t-1} + D_{t-1} \leq E_t \sum_{j=t}^{\infty} I_{j,t} P_j (\tau_j^p + \tau_j^b - c_j^g) \quad (14)$$

$$-(D_{t-1} + L_{t-1} + e_{t-1} R_{t-1}^f) \leq E_t \sum_{j=t}^{\infty} I_{j,t} P_j \left( -c_j^b - \tau_j^b - h_j - s_j + \frac{\Delta M_j}{P_j} \right) \quad (15)$$

$$P_t s_t \equiv (i_t - i_t^L) L_{t-1} + \left[ 1 + i_t - (1 + i_t^f) \frac{e_t}{e_{t-1}} \right] e_{t-1} R_{t-1}^f. \quad (16)$$

Here  $I_{j,t}$  is the nominal stochastic discount factor between periods  $j$  and  $t$  defined by

$$\begin{aligned} I_{t_1, t_0} &= \prod_{k=t_0+1}^{t_1} I_{k,t-1} \quad \text{for } t_1 > t_0 \\ &= 1 \quad \text{for } t_1 = t_0 \end{aligned} \quad (17)$$

<sup>20</sup> Note that the familiar proposition that the change in the monetary base equals domestic credit expansion plus the value of the change in the stock of foreign exchange reserves is correct if and only if the central bank makes no *after-tax* profits, that is, its before-tax profits,  $i_t D_{t-1} + i_t^L L_{t-1} + e_t i_t^f R_{t-1}^f - P_t h_t$ , are paid as taxes to the treasury:  $\Delta M_t \equiv \Delta D_t + \Delta L_t + e_t \Delta R_t^f$  iff  $P_t \tau_t^b \equiv i_t D_{t-1} + i_t^L L_{t-1} + e_t i_t^f R_{t-1}^f - P_t h_t$ .

<sup>21</sup> The solvency constraint for the treasury is  $\lim_{j \rightarrow \infty} E_t I_{j,t} (B_j + D_j) \leq 0$ , that for the central bank is

$$\lim_{j \rightarrow \infty} E_t I_{j,t} (D_j + L_j + e_j R_j^f) \geq 0.$$

The interpretation of  $I_{j,t}$  is the price in terms of period  $t$  money of one unit of money in period  $j \geq t$ . There will in general be many possible states in period  $j$ , and period  $j$  money has a period  $t$  (forward) price for each state. Provided earlier dated information sets do not contain more information than later dated information sets, these stochastic discount factors satisfy the recursion property

$$E_{t_0} \left( I_{t_1,t_0} E_{t_1} I_{t_2,t_1} \right) = E_{t_0} I_{t_2,t_0} \quad \text{for } t_2 \geq t_1 \geq t_0 \quad (18)$$

Finally, the risk-free nominal interest rate in period  $t$ , the money price in period  $t$  of one unit of money in every state in period  $t+1$  is defined by

$$\frac{1}{1+i_{t+1,t}} = E_t I_{t+1,t} \quad (19)$$

For future reference I also define recursively the real stochastic discount factor  $R_{j,t}$  by

$$\begin{aligned} R_{t_1,t_0} &= \prod_{k=t_0+1}^{t_1} R_{k,t-1} \quad \text{for } t_1 > t_0 \\ &= 1 \quad \text{for } t_1 = t_0 \end{aligned}$$

where

$$R_{t+1,t} = I_{t+1,t} (1 + \pi_{t+1,t})$$

and the risk-free real rate of interest between periods  $t$  and  $t+1$  is defined as

$$\frac{1}{1+r_{t+1,t}} = E_t R_{t+1,t}.$$

The expression  $s$  in (16) stands for the real value of the quasi-fiscal implicit interest subsidies made by the central bank. If the rate of return on government debt exceeds that on loans to the private sector, there is an implicit subsidy to the private sector equal in period  $t$  to  $(i_t - i_t^L)L_{t-1}$ . If the rate of return on foreign exchange reserves is less than what would be implied by Uncovered Interest Parity (UIP), there is an implicit subsidy to the issuers of these

reserves, given in period  $t$  by  $\left[ 1 + i_t - (1 + i_t^f) \frac{e_t}{e_{t-1}} \right] e_{t-1} R_{t-1}^f$

Summing (12) and (13) gives the budget identity of the state (the consolidated treasury and central bank), in equation (20); summing (14) and (15) given the intertemporal budget constraint of the state in equation (21).

$$M_t + B_t - L_t - e_t R_t^f \equiv P_t(c_t^g + c_t^b - \tau_t) + M_{t-1} + (1+i_t)B_{t-1} - (1+i_t^l)L_{t-1} - e_t(1+i_t^f)R_{t-1}^f \quad (20)$$

$$B_{t-1} - L_{t-1} - e_{t-1}R_{t-1}^f \leq \sum_{j=t}^{\infty} E_t I_{j,t} P_j \left( \tau_j - s_j - c_j^g - c_j^b + \frac{\Delta M_j}{P_j} \right) \quad (21)$$

The central bank's financial net worth,  $W^{cb} = D + L + eR^f - M$ , is the excess of the value of its financial assets, treasury debt,  $D$ , loans to the private sector,  $L$  and foreign exchange reserves,  $eR^f$ , over its monetary liabilities,  $M$ . Note that, in principle, there is nothing to prevent  $W^{cb}$  from being negative. Financial net worth excludes the present value of anticipated or planned future non-contractual outlays and revenues (the right-hand side of equation (15)). It is therefore perfectly possible, for the central bank to survive and thrive with negative financial net worth. This might, however, require the central bank to raise so much real seigniorage,  $\frac{\Delta M_j}{P_j}$ ,  $j \geq t$ , through current and future nominal base money issuance, that, given the demand function for real base money, unacceptable rates of inflation would result. The financial net worth of the treasury,  $W^s \equiv -(D + B)$ , is negative for most governments. The financial net worth of the state,  $W^s \equiv W^g + W^b = L + eR^f - B - M$ , is also likely to be negative for most countries. None of this need be a source of concern, unless the gap between the outstanding contractual non-monetary debt of the state and the present discounted value of the future primary (non-interest) surpluses of the state,  $\tau_j - c_j^g - c_j^b - s_j$ ,  $j \geq t$  is so large, that it either cannot be filled at all at all (the maximum value of the discounted future real seigniorage stream is too low) and the state defaults, or can only be closed at high rates of inflation.

The only intertemporal budget constraint that ought to matter, that is, the only one that would matter in a well-managed economy, is that of the consolidated treasury and central bank, given in equation (21). Its breakdown into the treasury's intertemporal budget constraint (equation (14)) and the central bank's intertemporal budget constraint (equation (15)) is without macroeconomic interest, unless there is a failure of cooperation and coordination between the monetary and fiscal authorities, that is, between the central bank and the treasury.

## Appendix 2. Can central banks survive with ‘negative equity’?

We can rewrite the intertemporal budget constraint of the central bank in (15) as follows:

$$\begin{aligned} & M_{t-1} - (D_{t-1} + L_{t-1} + e_{t-1}R_{t-1}^f) \\ & \leq E_t \sum_{j=t}^{\infty} I_{j,t} P_j (-c_j^b - \tau_j^b - h_j - s_j) + E_t \sum_{j=t}^{\infty} I_{j,t} \left( \frac{i_{j,j-1}}{1+i_{j,j-1}} \right) M_{j-1} + \lim_{j \rightarrow \infty} E_t I_{j,t} M_j \end{aligned} \quad (22)^{22}$$

On the left-hand side of (22) we have (minus) the equity of the central bank – the excess of its monetary liabilities over its financial assets. On the right-hand side of (22) we have  $E_t \sum_{j=t}^{\infty} I_{j,t} \left( \frac{i_{j,j-1}}{1+i_{j,j-1}} \right) M_{j-1}$ , the present discounted value of the future interest payments saved by the central bank because of its ability to issue non-interest-bearing monetary liabilities. On the right-hand side of (22) we also have the present value of the terminal stock of non-interest-bearing money,  $\lim_{j \rightarrow \infty} E_t I_{j,t} M_j$ .

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<sup>22</sup> Add  $M_{t-1}$  to both sides of (15); note that

$$M_{t-1} + E_t \sum_{j=t}^{\infty} I_{j,t} \Delta M_j \equiv E_t \sum_{j=t}^{\infty} (I_{j-1,t} - I_{j,t}) M_{j-1} + \lim_{j \rightarrow \infty} E_t I_{j,t} M_j; \text{ finally note that}$$

$$E_t I_{j,t} = E_t (I_{j-1,t} I_{j,j-1}) \text{ and that } E_t I_{j,j-1} = \frac{1}{1+i_{j,j-1}}.$$

In order to obtain the central bank's intertemporal budget constraint (15), I assumed (see footnote (39)) that  $\lim_{j \rightarrow \infty} E_t I_{j,t} (D_j + L_j + e_j R_j^f) \geq 0$ , that is, the present value of the terminal net non-monetary liabilities had to be non-negative. I did not impose the condition  $\lim_{j \rightarrow \infty} E_t I_{j,t} (D_j + L_j + e_j R_j^f - M_j) \geq 0$ , that is, that the present value of the terminal total net liabilities, monetary and non-monetary had to be non-negative. The reason is that the monetary 'liabilities' of the central bank are not in any meaningful sense liabilities of the central bank. The owner (holder) of currency notes worth X units of currency have a claim on the central bank for currency notes worth X units of currency – nothing more. The monetary liabilities of the central bank are irredeemable or inconvertible into anything other than the same amount of itself. While in most well-behaved economies,  $\lim_{j \rightarrow \infty} E_t I_{j,t} M_j = 0$ , this will not be the case, for instance, in a permanent liquidity trap where  $\lim_{j \rightarrow \infty} E_t I_{j,t} M_j = \lim_{j \rightarrow \infty} E_t M_j \neq 0$  unless the monetary authorities adopt a policy of (asymptotically) demonetising the economy. This will be the case, for instance, in the efficient stationary liquidity trap equilibrium of the Bailey-Friedman Optimal Quantity of Money rule, where the nominal interest is kept at zero throughout and the nominal stock of base money shrinks at a proportional rate equal to the real interest rate and the rate of time preference.

Consider for simplicity the case where the present value of the terminal money stock is zero. Even if the conventionally defined net worth or equity of the central bank is negative, that is, if  $M_{t-1} - (D_{t-1} + L_{t-1} + e_{t-1} R_{t-1}^f) > 0$ , the central bank can be solvent provided

$$M_{t-1} - (D_{t-1} + L_{t-1} + e_{t-1} R_{t-1}^f) \leq E_t \sum_{j=t}^{\infty} I_{j,t} P_j (-c_j^b - \tau_j^b - h_j - s_j) + E_t \sum_{j=t}^{\infty} I_{j,t} \left( \frac{i_{j,j-1}}{1+i_{j,j-1}} \right) M_{j-1}.$$

Whether this is consistent with the pursuit of the externally imposed or self-imposed inflation target is something we will consider in Appendix 3.

### Appendix 3. Is the inflation target independently financeable by the central bank?

I consider here whether and under what conditions the inflation target is consistent with the central bank's intertemporal budget constraint. Consider a simplified, closed economy macroeconomic model, tagged on to the accounting framework developed in the previous Subsection. There are no international reserves,  $R_t^f = 0$ , no central bank loans to the private sector,  $L_t = 0$ , and therefore no quasi-fiscal subsidies by the central bank,  $s_t = 0$ .

The intertemporal budget constraints of the central bank and of the consolidated central bank and treasury are for this simplified closed economy:

$$-D_{t-1} \leq \sum_{j=t}^{\infty} E_t I_{j,t} P_j \left( -c_j^b - \tau_j^b - h_j + \frac{\Delta M_j}{M_j} \frac{M_j}{P_j} \right) \quad (23)$$

and

$$B_{t-1} \leq \sum_{j=t}^{\infty} E_t I_{j,t} P_j \left( \tau_j - c_t^s - c_t^b + \frac{\Delta M_j}{M_j} \frac{M_j}{P_j} \right) \quad (24)$$

Let the real value of the stock of domestic credit be  $d_t = \frac{D_t}{P_t}$  and the real stock of money balances  $m_t = \frac{M_t}{P_t}$ .

We can re-write the central bank's intertemporal budget constraint as:

$$-d_{t-1} \leq \sum_{j=t}^{\infty} E_t R_{j,t} \left( -c_j^b - \tau_j^b - h_j + \frac{\Delta M_j}{M_j} m_j \right) \quad (25)$$

The rest of the economy is a simple non-stochastic one-commodity endowment economy with a representative infinite-lived household with a time-additive objective function and a subjective discount factor  $\beta = \frac{1}{1+\rho} < 1$ . Period utility is the natural logarithm of a Cobb-Douglas function of consumption and real money balances. There is full price flexibility. Real money balances are an argument in the household's utility function. The

demand for real money balances and the Euler equation for private consumption,  $c$ , are as follows:

$$m_t = \alpha \left( \frac{1+i_{t+1}}{i_{t+1}} \right) c_t; \quad 1 > \alpha > 0, i_{t+1} \geq 0 \quad (26)$$

$$c_{t+1} = \left( \frac{1+r_{t+1}}{1+\rho} \right) c_t \quad (27)$$

where the one-period real interest rate  $r_{t,t-1}$  is defined by

$$1+r_{t,t-1} = \frac{1+i_{t,t-1}}{1+\pi_{t,t-1}}$$

Equilibrium is given by:

$$y_t = c_t + c_t^s + c_t^b \quad (28)$$

I consider a simple stationary benchmark with  $y_t = \bar{y} > c_t^s + c_t^b$ ,  $c_t^s = \bar{c}^s$  and  $c_t^b = \bar{c}^b$ .

It follows that in equilibrium:

$$c_t = \bar{c} = \bar{y} - \bar{c}^s - \bar{c}^b \quad c_t = \bar{c} = \bar{y} - \bar{c}^s - \bar{c}^b \quad (29)$$

$$r_{t+1} = \rho \quad (30)$$

$$\pi_{t+1} = \frac{\Delta M_{t+1}}{M_t} \quad (31)$$

I want to consider which constant rate(s) of inflation,  $\bar{\pi}$ , this economy can support, with a central bank whose intertemporal budget constraint is given by equation (25). Without loss of generality for our purposes, we also assume that the real value of the taxes imposed on the central bank by the treasury is constant,  $\tau_t^b = \bar{\tau}^b$  and that the real value of the payments by the central bank to the public is constant,  $h_t = \bar{h}$ .<sup>23</sup> It follows that the central bank's intertemporal budget constraint can be rewritten as follows:

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<sup>23</sup> We can interpret  $\bar{\tau}_t^b$  as the permanent value of treasury taxes on the central bank, that is, as that constant real tax whose present discounted value is the same as the present discounted value of the actual (not necessary



$$-d_{t-1} + \frac{\bar{\tau}^b}{\rho} + \left( \frac{\bar{c}^b + \bar{h}}{\rho} \right) \leq \sigma(\bar{\pi}) \quad (32)$$

where

$$\sigma(\bar{\pi}) = \frac{\alpha \bar{c}(1+\rho)(1+\bar{\pi})\bar{\pi}}{\rho[\rho+(1+\rho)\bar{\pi}]}$$

with

$$\sigma'(\bar{\pi}) = \frac{\alpha \bar{c}(1+\rho)[\rho(1+2\bar{\pi})+(1+\rho)\bar{\pi}^2]}{\rho[\rho+(1+\rho)\bar{\pi}]^2} > 0 \text{ for } \bar{\pi} > \frac{-\rho}{1+\rho} \quad (33)$$

24

The interpretation of  $\sigma(\bar{\pi})$  is the capitalised value of long-run real seigniorage revenue.

If the value of the inflation target,  $\pi^*$ , is less than the value of the lowest constant inflation rate that is consistent with the central bank's intertemporal budget constraint, for given values of  $d_{t-1}, \bar{c}^b \geq 0, \bar{\tau}^b$  and  $\bar{h} \geq 0$ , the central bank cannot achieve the inflation target, because doing so would bankrupt it. The most it could do would be to set both  $\bar{h}$  and  $\bar{c}^b$  equal to zero: there would be no central bank-initiated helicopter drops of money and central bank staff would not get paid. If that is not enough to cause the weak inequality in (32) to be satisfied with  $\bar{\pi} = \pi^*$ , I will call this a situation where the inflation target is not *independently financeable* by the central bank. The value of the central bank's holdings of treasury debt,

constant) sequence of taxes. So  $\bar{\tau}_t^b \equiv \left[ \sum_{j=t}^{\infty} \prod_{s=t}^j \left( \frac{1}{1+r_s} \right) \right]^{-1} \sum_{j=t}^{\infty} \prod_{s=t}^j \left( \frac{1}{1+r_s} \right) \tau_j^b$ . We can also define the

permanent or long-run real interest rate in period  $t$ ,  $\bar{r}_t$ , as that constant real interest rate that satisfies

$$\frac{1}{\bar{r}_t} = \sum_{j=t}^{\infty} \prod_{s=t}^j \left( \frac{1}{1+\bar{r}_t} \right) = \sum_{j=t}^{\infty} \prod_{s=t}^j \left( \frac{1}{1+r_s} \right), \text{ if } \bar{r}_t > 0. \text{ Using this convention, the intertemporal budget constraint}$$

of, say, the central bank can always be written as  $-d_{t-1} + \frac{\bar{\tau}_t^b}{\bar{r}_t} + \left( \frac{\bar{c}_t^b + \bar{h}_t}{\bar{r}_t} \right) \leq \sigma(\bar{\pi})$ , with (constant) permanent

flows of revenues being discounted using (constant) permanent discount rates.

<sup>24</sup> For the 'double logarithmic' money demand function there is no long-run 'seigniorage Laffer curve'. A higher inflation rate will increase steady-state real seigniorage revenue.

$d_{t-1}$ , is determined by history; the net tax paid by the central bank to the treasury,  $\bar{\tau}^b$  is determined unilaterally by the treasury.

If the treasury decides to support the central bank in the pursuit of the inflation objective, the inflation target is *jointly financeable* by the central bank and the treasury, as long as the consolidated intertemporal budget constraint of the treasury and the central bank can be satisfied with the seigniorage revenue generated by the implementation of the inflation target. Let the real stock of treasury debt held outside the central bank be  $b_t \equiv B_t / P_t$ , remember that taxes net of transfers of the consolidated treasury and central bank are  $\tau = \tau^p - h$  and assuming for simplicity that treasury spending, like central bank spending is constant, the intertemporal budget constraint of the state is given by:

$$b_{t-1} + \frac{\bar{c}^g + \bar{c}^b - \bar{\tau}}{\rho} \leq \sigma(\bar{\pi}) \quad (34)$$

If (34) is not satisfied with  $\bar{\pi} = \pi^*$ , the inflation target is *not financeable*, even with cooperation between treasury and central bank. The inflation target in that case is not feasible. If (34) is satisfied with  $\bar{\pi} = \pi^*$ , the inflation target is financeable by the consolidated treasury and central bank – that is, the inflation target is feasible with cooperation between treasury and central bank. Note that the feasibility condition for the inflation target, equation (34), is independent of  $\bar{\tau}^b$  (which is a transfer payment within the consolidated treasury and central bank) and of  $d_{t-1}$  which is an internal liability/asset within the consolidated treasury and central bank. What matters is the net debt of the consolidated treasury and central bank,  $b_{t-1}$ , and the taxes net of transfers of the consolidated treasury and central bank,  $\bar{\tau}$ . If the feasibility condition (34) is satisfied, the treasury can always provide the central bank with the resources it requires to implement the inflation target. All it has to do is reduce taxes on the

central bank (or increase transfer payments to the central bank), in an amount sufficient to ensure that equation (32) is also satisfied.<sup>25</sup>

If (34) is satisfied with  $\bar{\pi} = \pi^*$ , but (32) is satisfied with  $\bar{\pi} = \pi^*$ , but (32) is not, then the inflation target is only financeable by the treasury and central bank jointly, not independently by the central bank.

This discussion supports the view that the central bank should not have operational target independence (freedom to choose a quantitative inflation target) even when it has operational independence (the freedom to set the short nominal interest rate as it sees fit), simply because it does not have financial independence. Therefore, one reason the treasury (that is, the government) should set the inflation target, is that only the treasury can make sure that the central bank has enough resources, other than through seigniorage, to make the inflation target financeable by the central bank. The treasury, through its ability to tax the central bank, is effectively constrained only by the consolidated intertemporal budget constraint in (34), even though formally it faces the intertemporal budget constraint given in equation (35):

$$b_{t-1} + d_{t-1} \leq \frac{\bar{\tau}^p + \bar{\tau}^b - \bar{c}^s}{\rho} \quad (35)$$

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<sup>25</sup> This could be achieved through a one-off capital transfer rather than through a sequence of current transfers.

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# Jornadas Monetarias y Bancarias, 2007

**Otmar Issing**

Monetary aggregates in an uncertain framework

4 y 5 de Junio de 2007

# **Monetary Aggregates in an Uncertain Framework**

**Otmar Issing**

Contribution to the Conference

“Monetary Policy Under Uncertainty”

Central Bank of Argentina

Buenos Aires

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Uncertainty is a pervasive fact of life. Many decisions have to be taken with limited information, imperfect knowledge, in an ever-changing environment. In central banks uncertainty comes up in very complex dimensions because they are important players affecting the overall behaviour of the economic system. There are three types of uncertainty:

First, there is uncertainty about the state of the economy. This type of uncertainty is (inter alia) characterized by the fact that economic key figures such as order volume or production are needed in real time but are often revised ex-post.

Second, there is uncertainty concerning the structure and functioning of the economy. This uncertainty has two sources. On the one hand, there is a fundamental uncertainty as to which models provide the most reasonable description of the functioning of the economy – and how they relate to each other. On the other hand, this uncertainty depends on the strength and stability of the structural relationships, the so-called parameter uncertainty.

Third there is strategic uncertainty, i.e. uncertainty over our own interaction with private agents. The impact of monetary policy on the economy depends to a large extent on the formation of expectations by private agents. The result is that, for a central bank, the problem of taking decisions under uncertainty is compounded by that of understanding how private agents' behaviour will react to such decisions. This kind of uncertainty has an endogenous character and highlights the need to anchor expectations. Let me refer to a concrete case of a central bank confronted with uncertainty.

After the establishment of the ECB on 1 June 1998, only 7 months were left to prepare for the beginning of monetary policy for the euro area and this beginning was characterized by an environment of extreme uncertainty: the data situation was very worrisome. This was true for simple data but even more for unobservable indicators like the output gap etc. As all countries preparing for

participation in EMU underwent a deep structural change which might even intensify after entry into the regime of a single currency, the famous Lucas Critique was especially relevant. In addition we did not know how markets, investors and consumers/savers would react to the disappearance of the familiar national currencies and the introduction of a new one, the euro. After a thorough assessment of the situation the challenge was how to deal with this historically unique situation.

For me the arguments against emulating the example of the Bundesbank and adopting a strategy of monetary targeting were straightforward. I had experience of rather wild volatility of M3 in the nineties and I knew how difficult it was to explain to the public – and sometimes even to the Zentralbankrat – that we should nevertheless stick to our strategy of monetary targeting.

In case the ECB would have to abandon a strategy soon after the start this would cause an almost deadly blow to the credibility of the new institution from which it would not recover for years. However, rejecting monetary targeting as a strategy for the ECB did of course not imply neglecting the overwhelming evidence for the long-run relation between money and prices.

Inflation targeting could also not cope with the challenges we were confronted with. Adopting inflation targeting would have unduly shortened the horizon of monetary policy to the conventional forecast horizon of one to two years.

In October 1998, the Governing Council adopted its stability oriented monetary policy strategy with three elements namely

- a quantitative definition of price stability;
- a prominent role for money;
- a broadly based assessment of the outlook for future price developments.

It was clear from the beginning that risks to price stability identified under the two pillars referred to different time horizons. The relation between “money”

and prices is a long run phenomenon. On the other hand, limiting the horizon of monetary policy to the information coming from the economic analysis would run the risk of conducting a short term oriented and “activist” monetary policy losing side of trend developments.

The two pillars serve the purpose of organising the incoming data in a structured way basically under the aspect of the relevant time horizon. The cross-checking is a means of reconciling the shorter-term analysis with the longer-term perspective leading to a consistent, “unified” overall assessment.

Coming back to the general topic of my paper – Monetary Aggregates in an Uncertain Framework – I would like to raise a question of central importance: How can a monetary policy framework induce prompt action in the face of ever changing circumstances and a situation of high uncertainty, and at the same time maintain a firm sense of direction? Here there is clearly potential for destabilising mechanisms setting in. Constantly bombarded by economic news, a central bank risks becoming hypnotised by the latest indicator, by the markets’ likely reaction to the latest indicator, by the markets’ anticipation of the central bank’s response to the latest indicator, and so on into infinity. This mechanism can lead monetary policy gradually astray from its foremost role of providing a firm medium-term anchor for the economy.

So, at the risk of oversimplifying, let me now turn to consider two general principles of prudent monetary governance which may help central banks to reconcile the need for prompt action and a firm medium-term orientation.

First, a central bank always needs to tailor action upon the origin, the magnitude and the nature of the shocks which hit the economy from time to time. This is a highly demanding exercise, because shocks do not come about with labels: they have to be identified first, in real time. But there are no shortcuts or excuses: no simple rules linking policy to one or two privileged indicators can substitute for an accurate examination of shocks and a careful analysis of their potential for

transmission into prices over a sufficiently extended span of time ahead. A corollary to this principle is that the horizon for policy action cannot be set in advance.

Second, a central bank can benefit from keeping an eye fixed on the single long-term compatibility condition that monetary economics has to offer to practitioners, free of model-specificities and restrictive assumptions. Namely, that over a sufficiently extended period of time money should grow at a rate which is consistent with trend growth in real output and the central bank's definition of price stability. In more general terms, this principle embodies the ancient wisdom of the quantity theoretic law that it is the growth of money that ultimately anchors the development of prices.

Each one of these two principles – if taken individually – entails some guidance for the monetary policy-maker, which, however, is partial. A monetary policy strategy – such as the one adopted by the ECB – can be seen to provide a robust framework for monetary policy decision-making, which heeds these two general principles in a way in which they reinforce and complement each other.

The lesson suggested by the first principle is that disturbances have to be evaluated, as they come about, according to their potential for propagation, for infecting expectations, for degenerating into price spirals. And preventive action should not be delayed, as it becomes clear that shocks – whatever their origin – may take hold in the economy and evolve into inflationary or deflationary pressures over the medium term. The time dimension of these possible developments varies with the type of shock, the initial macroeconomic conditions, the prevailing financial sentiment, the international environment and many other variables. Therefore, the horizon for monetary policy cannot be set in advance. Sometimes it pays to look far ahead, beyond the average lag of monetary transmission. Sometimes, the economy can be expected to return to price stability within a much shorter horizon. In all events, a central bank has to ensure that expectations be quickly reverting to its declared objective of policy.

The policy recommendation implicit in the second principle is simple: do not ignore the information that monetary developments contain for medium-term price developments even if the relationship between money and prices may not come through strongly at shorter horizons. This principle also provides an antidote against the pitfalls of exceedingly forward-looking rules. Looking into the future with a vigilant eye, as the first principle suggests, is a fundamental element of good policy. But, by constantly looking ahead, one should not lose sight of the intended trajectory of policy and the need to act consistently over time. One should always be constantly aware of possible, inadvertent slippages from the intended long-term direction. In the end, monetary policy needs to ensure a path of money supply which is consistent with maintaining price stability over the medium term. Trends in money velocity can be incorporated in such a longer-term benchmark, to account for the evolving structure of the monetary exchange. But, in the end, there can be no sustained inflation without systematic accommodation in monetary aggregates.

The key point that I want to bring out here is that neither of these two principles can stand alone. Both are in need for mutual cross-checking. The first principle suggests that the central bank move its interest rate policy instrument in reaction to the disturbances that are considered to have implications for price stability in the medium term. But these actions – taken at successive points in time – may not prove to be consistent over time and could thus, cumulatively, result in systematic divergence from the desired objective. Thus, the course of policy followed in the attempt to counter perturbations via shock-specific responses needs to be ascertained against the straight line provided by the quantity theoretic reference of the second principle. If that line turns out to have been departed from for an extended period of time, then policy, sooner or later, has to be brought back onto the right course.

Incidentally, it is worth noting that historical episodes of asset price ‘bubbles’ have tended to be accompanied by strong and persistent deviations from that

reference line. Thus, a monetary policy strategy that monitors closely monetary developments and measures them against a medium term reference growth rate may – as an important side effect – also contribute to limiting the emergence of unsustainable developments in asset valuations. Asset prices, by themselves, are not a suitable goal for monetary policy. In the long run the relative price of assets is mainly driven by underlying real factors – e.g. technological developments and preferences – which cannot be controlled by monetary policy. But monetary aggregates and credit developments in situations of financial instability can signal to what extent consumption, investment, labour and price setting decisions are being affected by conditions of financial disorder, excessive euphoria or disillusion.

Conversely, the second principle too, if followed in isolation, is subject to potential difficulties. As first pointed out by William Poole more than thirty years ago, there are many short-term shocks to the amount of money demanded for each unit of nominal income, which monetary authorities would do better ignoring and accommodating. These unexplained innovations may be simply related to seasonal noise in the money creation system, or transitory forces driving around transactions habits. They may reflect reversible movements in the preference for liquidity, in- or out-flows of foreign exchange transiting through checkable accounts, or else. In the case of Europe, it cannot be ruled out that the process of financial integration may have affected the income velocity of monetary aggregates. In these circumstances, having to hit a constant rate-of-growth target for, say, base money on a near-term horizon would result in ample fluctuations in short-term interest rates. And this instability would likely be transmitted to prices and output causing unnecessary fluctuations in these variables. In this context, the first principle of good policy, prescribing a careful filtering of disturbances, provides important safeguards against such policy-induced instabilities. And it also supports the need to look at monetary developments from a medium-term perspective. Nevertheless, as long as money



demand relationships are reasonably stable – as has been the case in Europe in contrast to the US – information from monetary developments should provide robust indications of medium-term price pressures.

Paraphrasing an expression of Paul Samuelson, we were given two eyes: one to watch money and credit aggregates and one to watch everything else. Ultimately, these two policy perspectives are to be combined in a single strategy which subsumes them both in a unified – albeit complex – and robust framework for action. This strategy lends policy-makers an accurate perspective over the economy to respond expeditiously to the events, and at the same time insures them against systematic slippage.



# Jornadas Monetarias y Bancarias, 2007

**Eduardo Levy Yeyati**

Agregados bajo fuego: los costos de la popularidad

4 y 5 de Junio de 2007

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# Agregados bajo fuego: Los costos de la popularidad

Eduardo Levy Yeyati

*Banco Mundial & CIF (Universidad Torcuato Di Tella)*

Jornadas Monetarias del B.C.R.A., Junio 2007

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# Hoja de ruta

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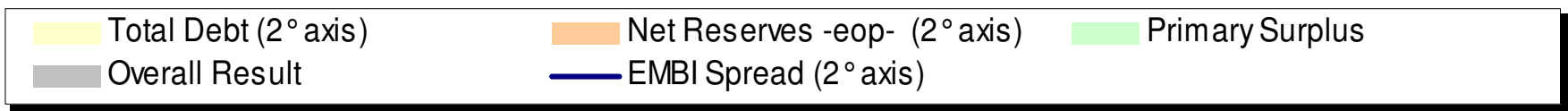
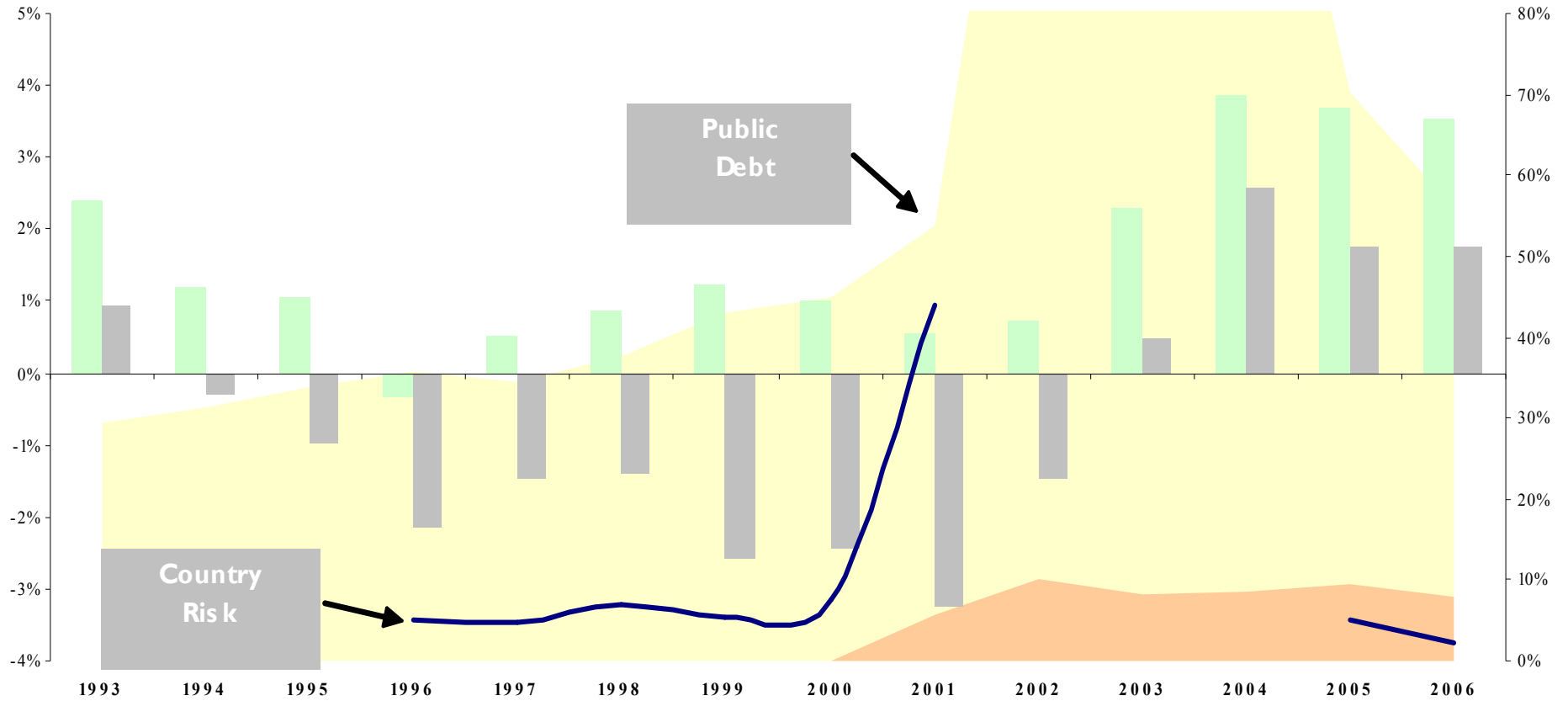
- El problema
  - La estrategia
  - El costo
  - Las opciones
  - Prognosis
-

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# El problema

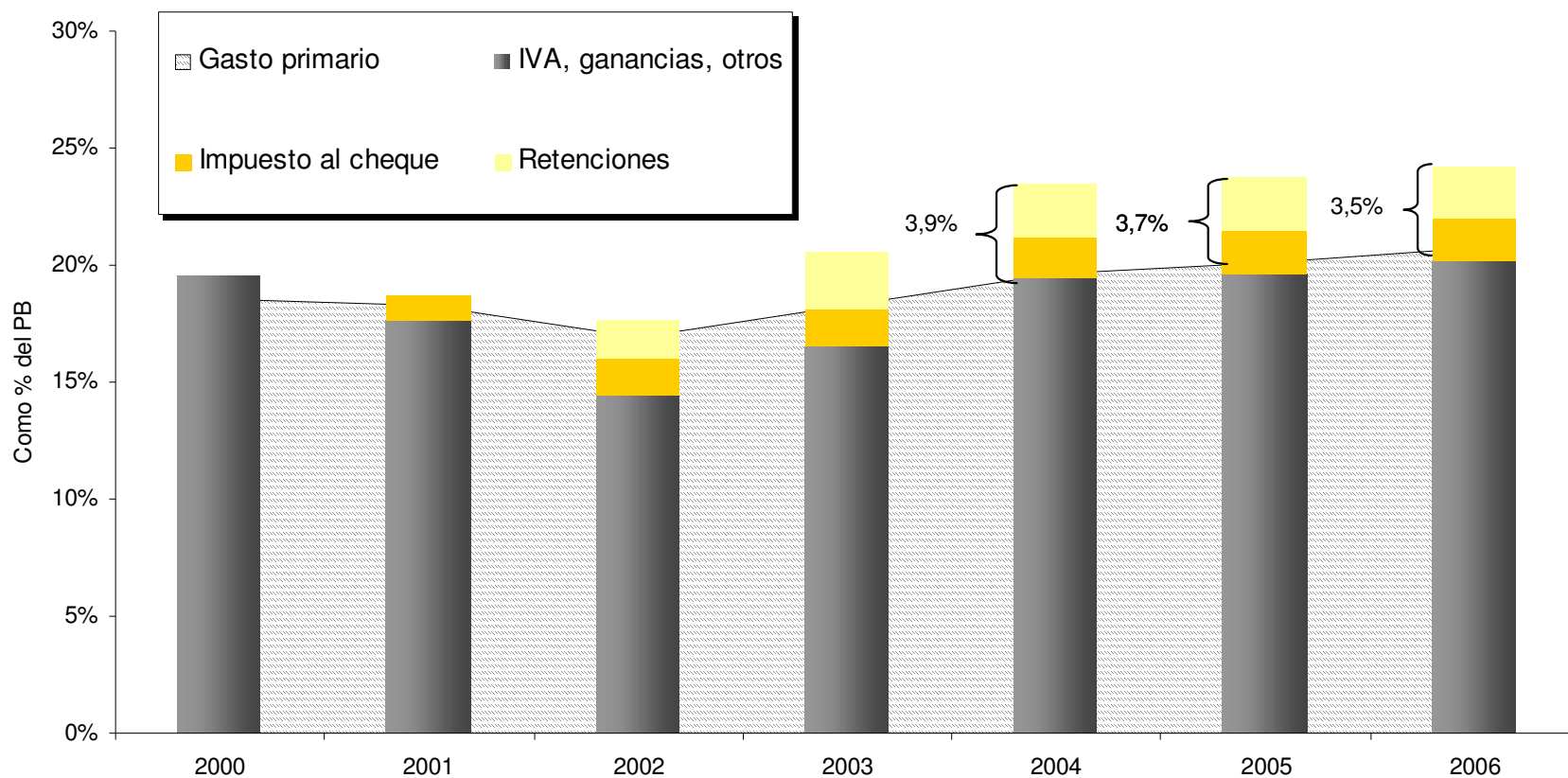
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# El nuevo fiscalismo



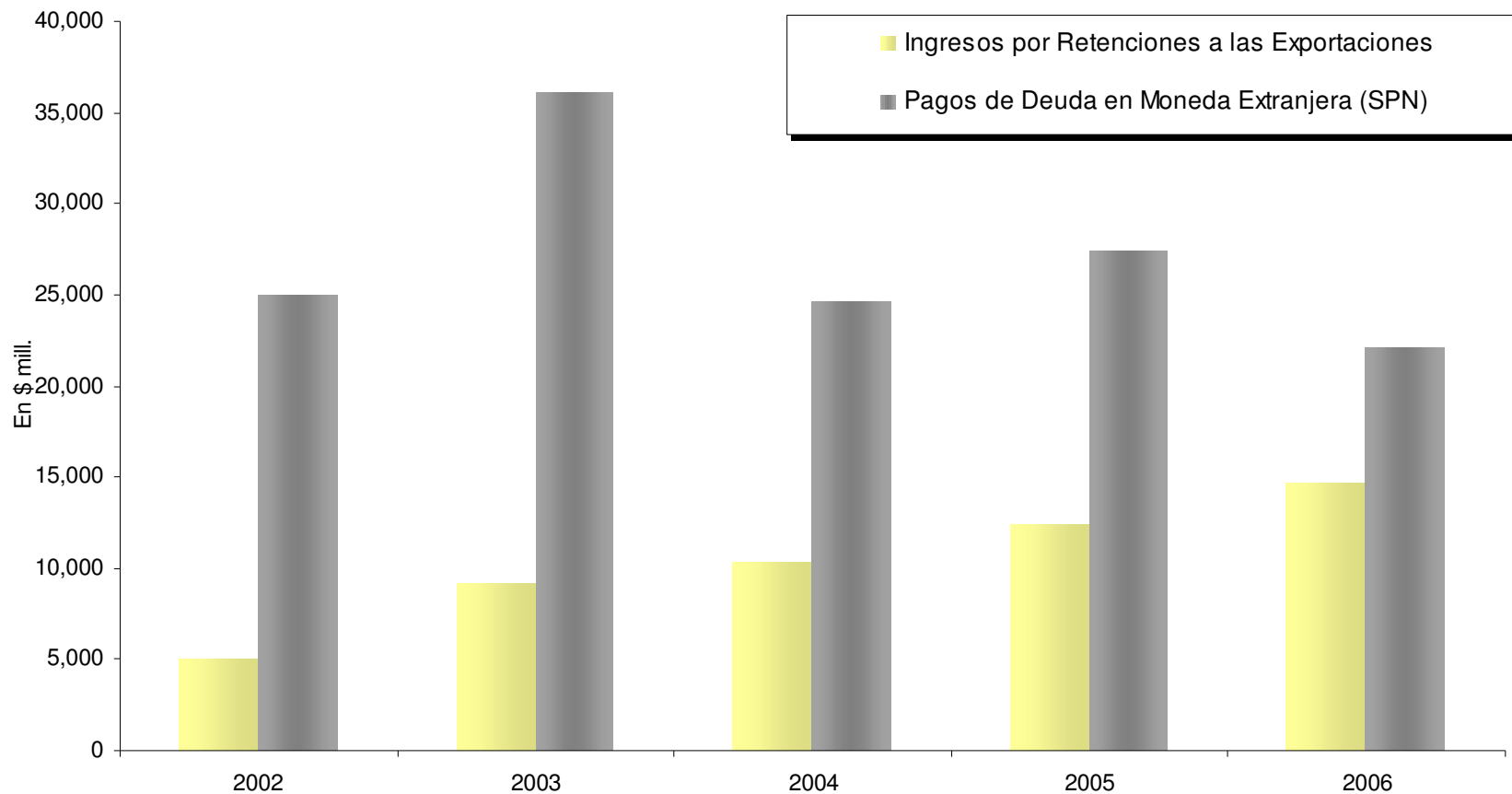
# Los nuevos impuestos

## Anatomía del superavit fiscal



# El discreto encanto de las retenciones

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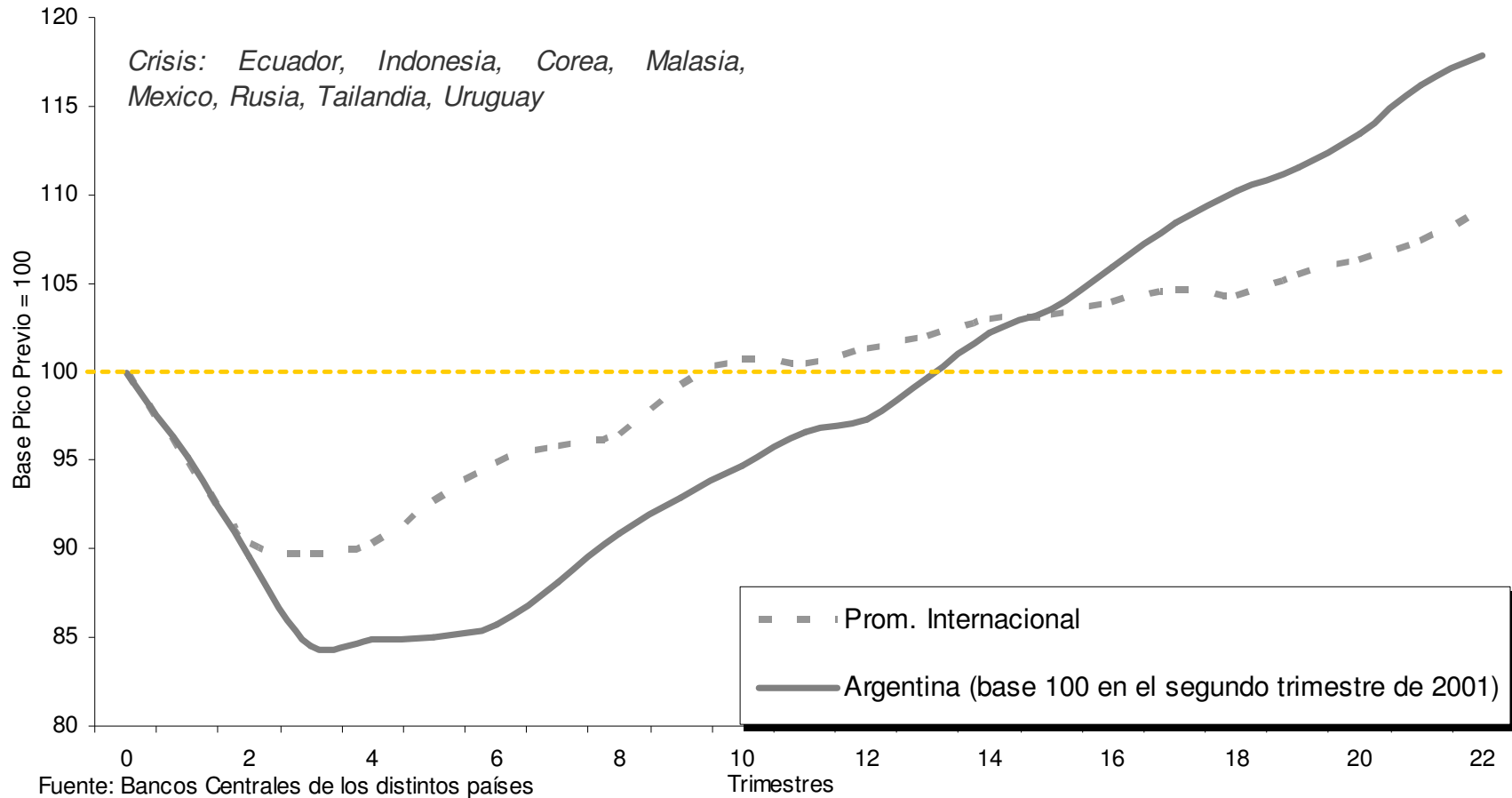




# El milagro

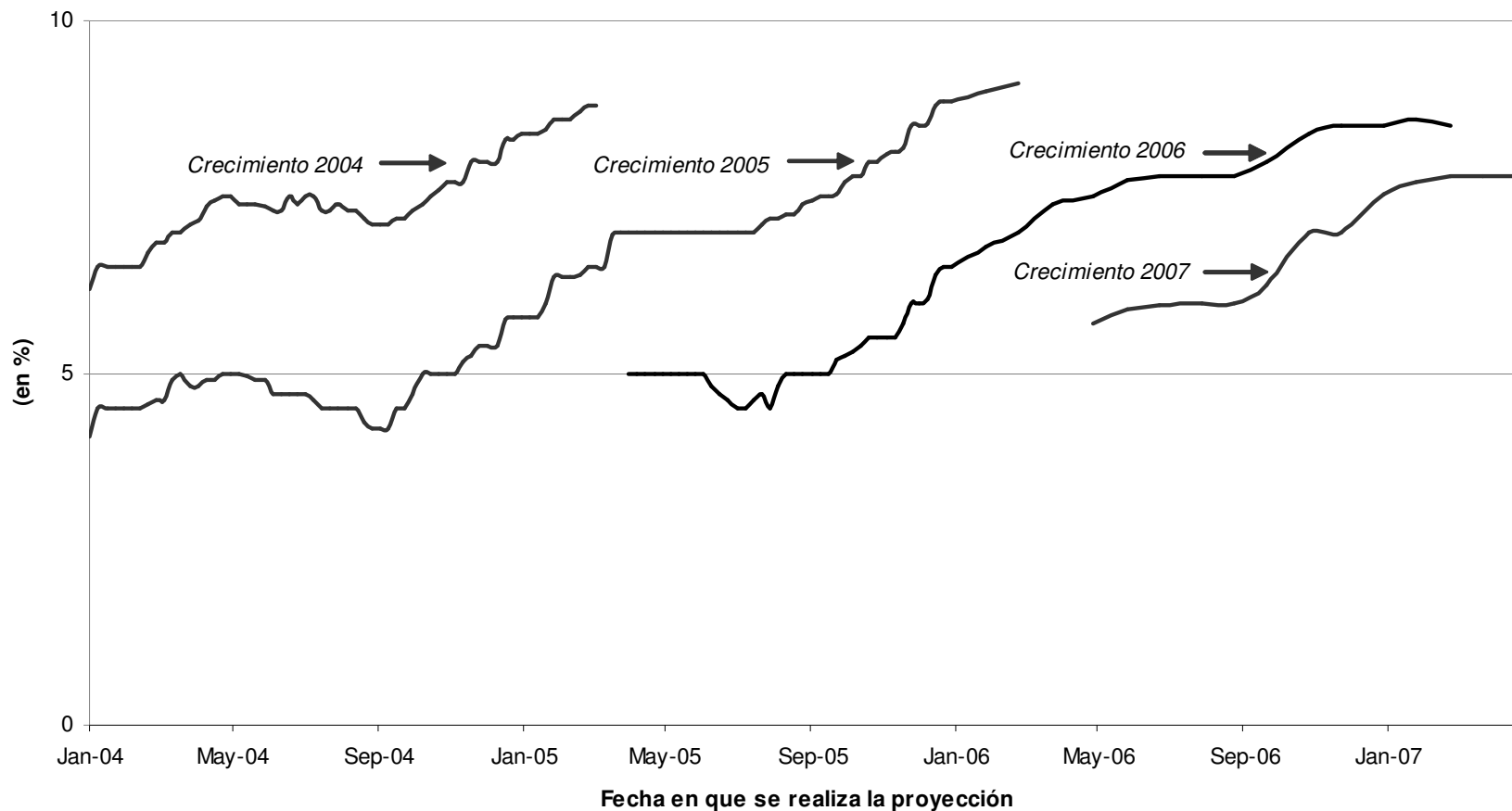
## La Crisis Argentina desde una Perspectiva Internacional

PBI Per Cápita Desestacionalizado



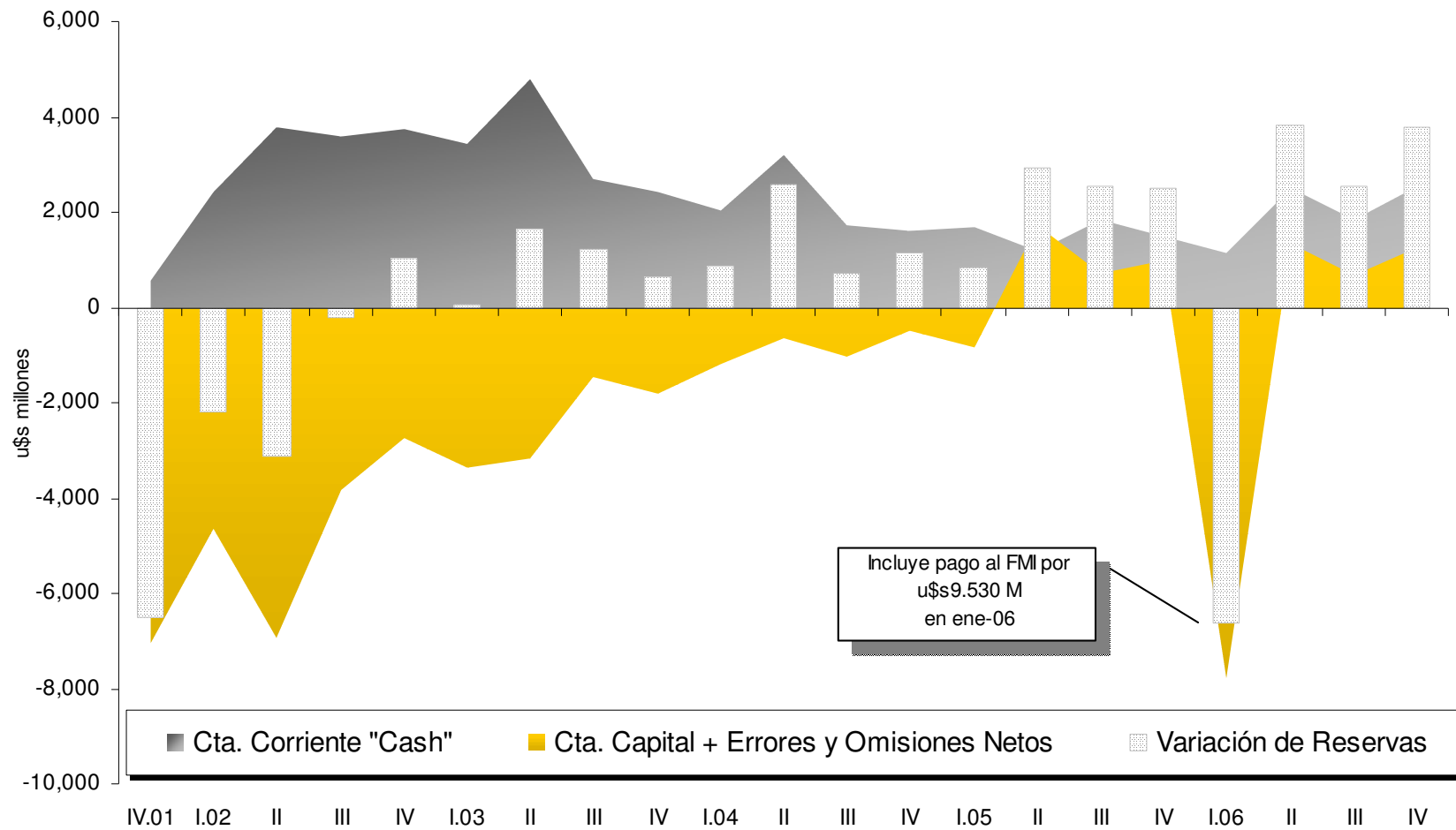
# La sorpresa

Pronosticos privados de crecimiento del PBI real



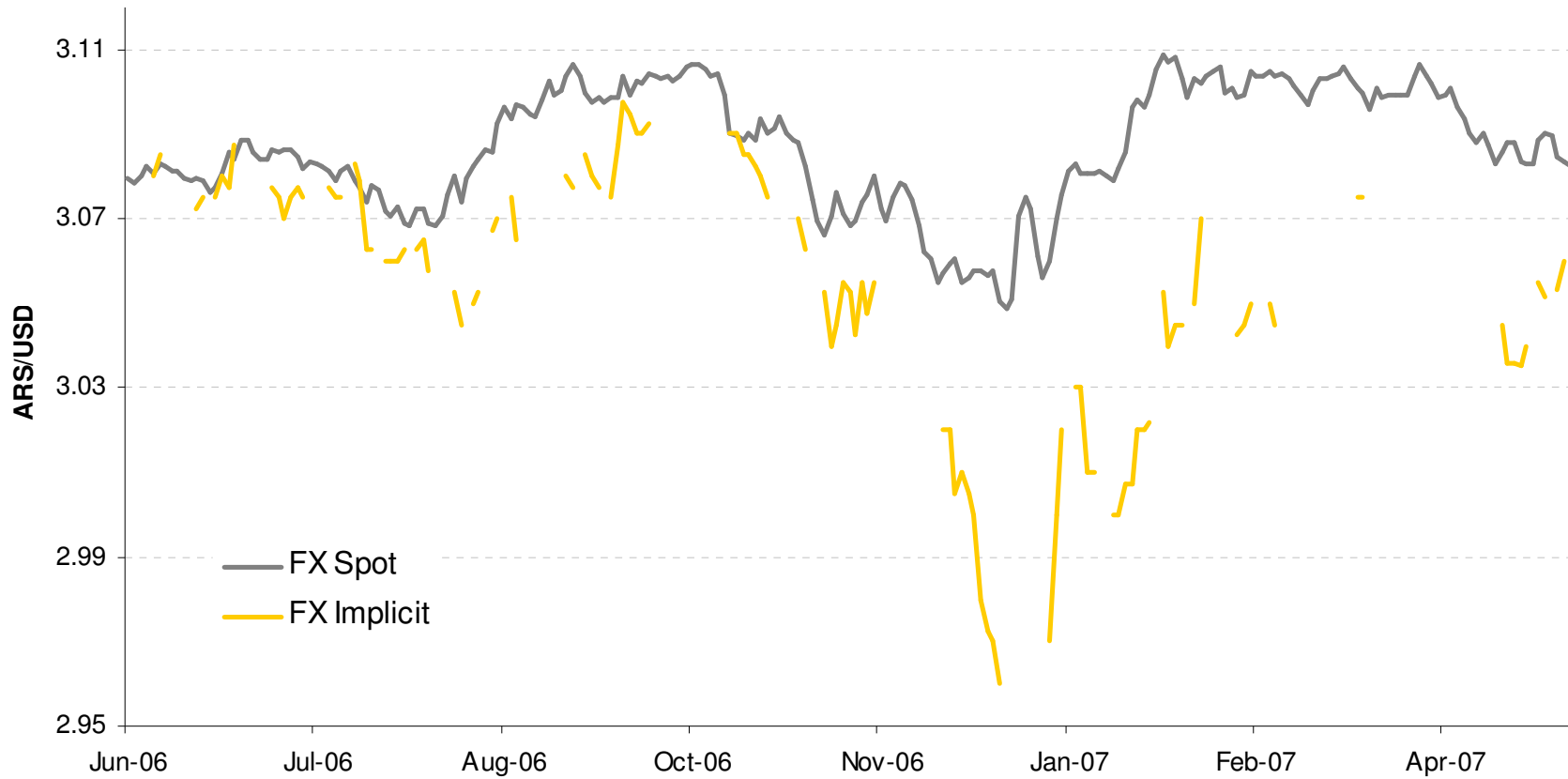
Fuente: B.C.R.A.

# Los hijos pródigos

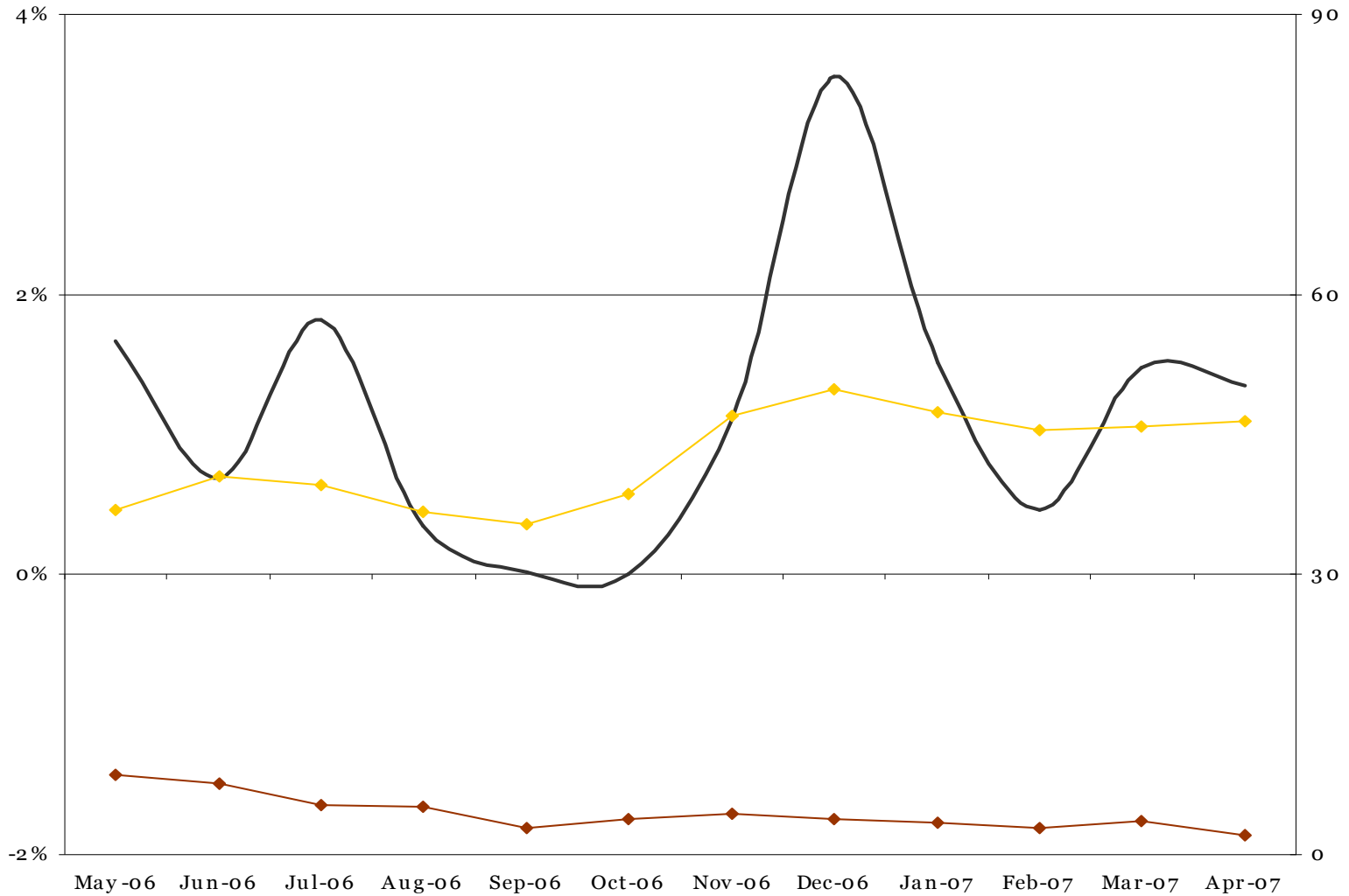


# La puerta 12

FX spot vs. implícito

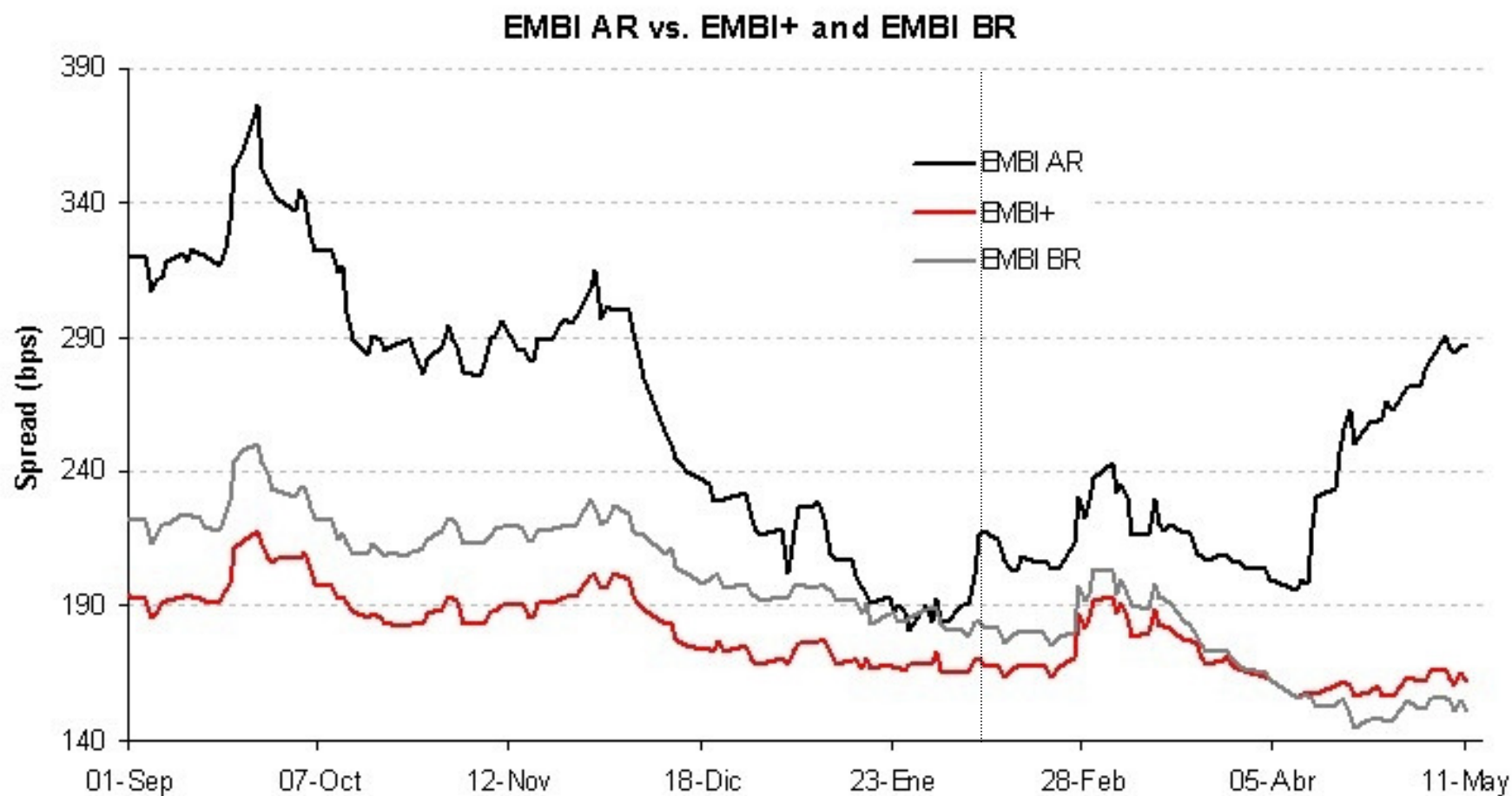


# La puerta 12



— Prima de ADR    ◆ Volumen ADR (eje derecho; U\$D mill)    ◆ Volumen stock (eje derecho; U\$D)

# EI INDEC



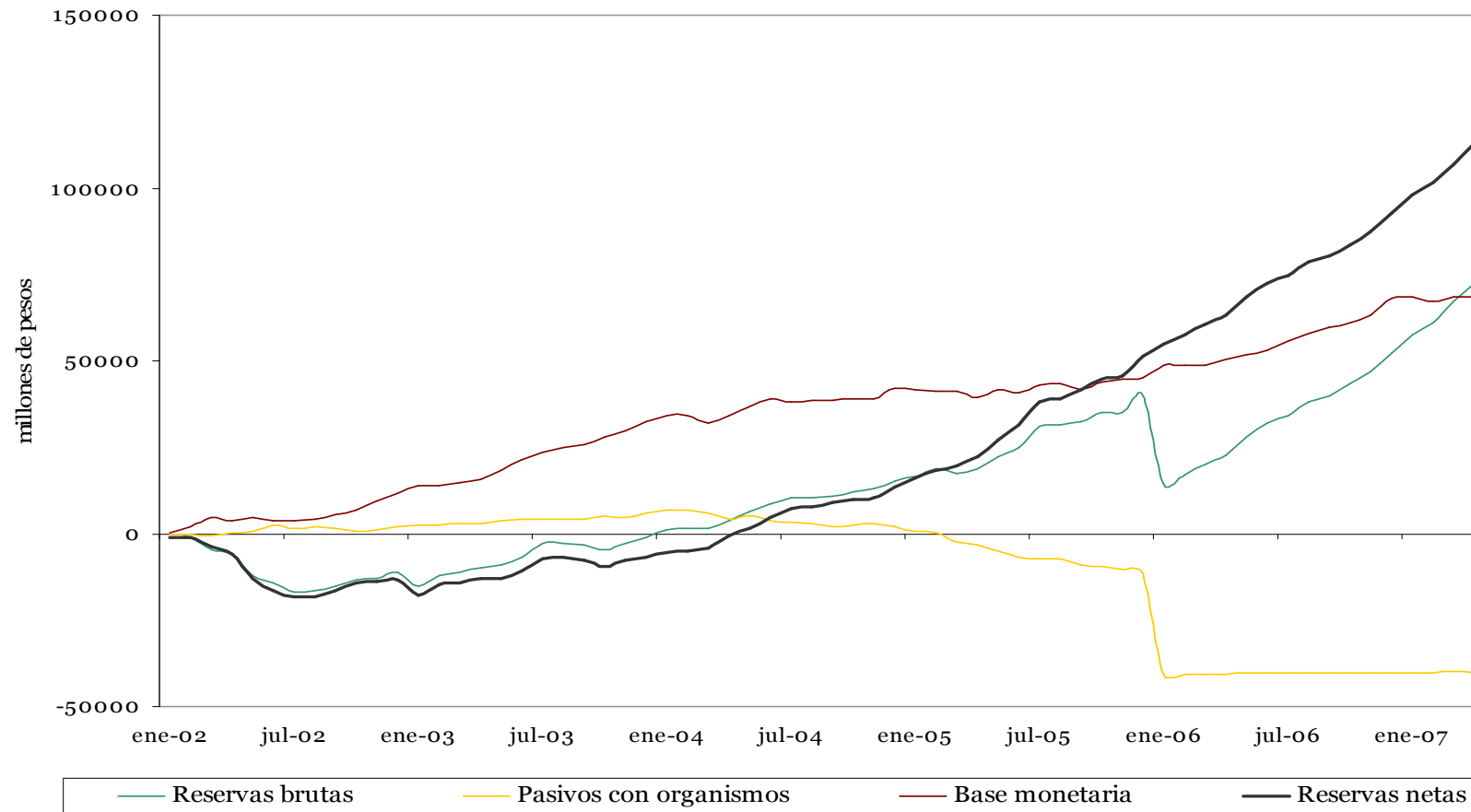
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# La estrategia

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# La recomposición/acumulación de reservas

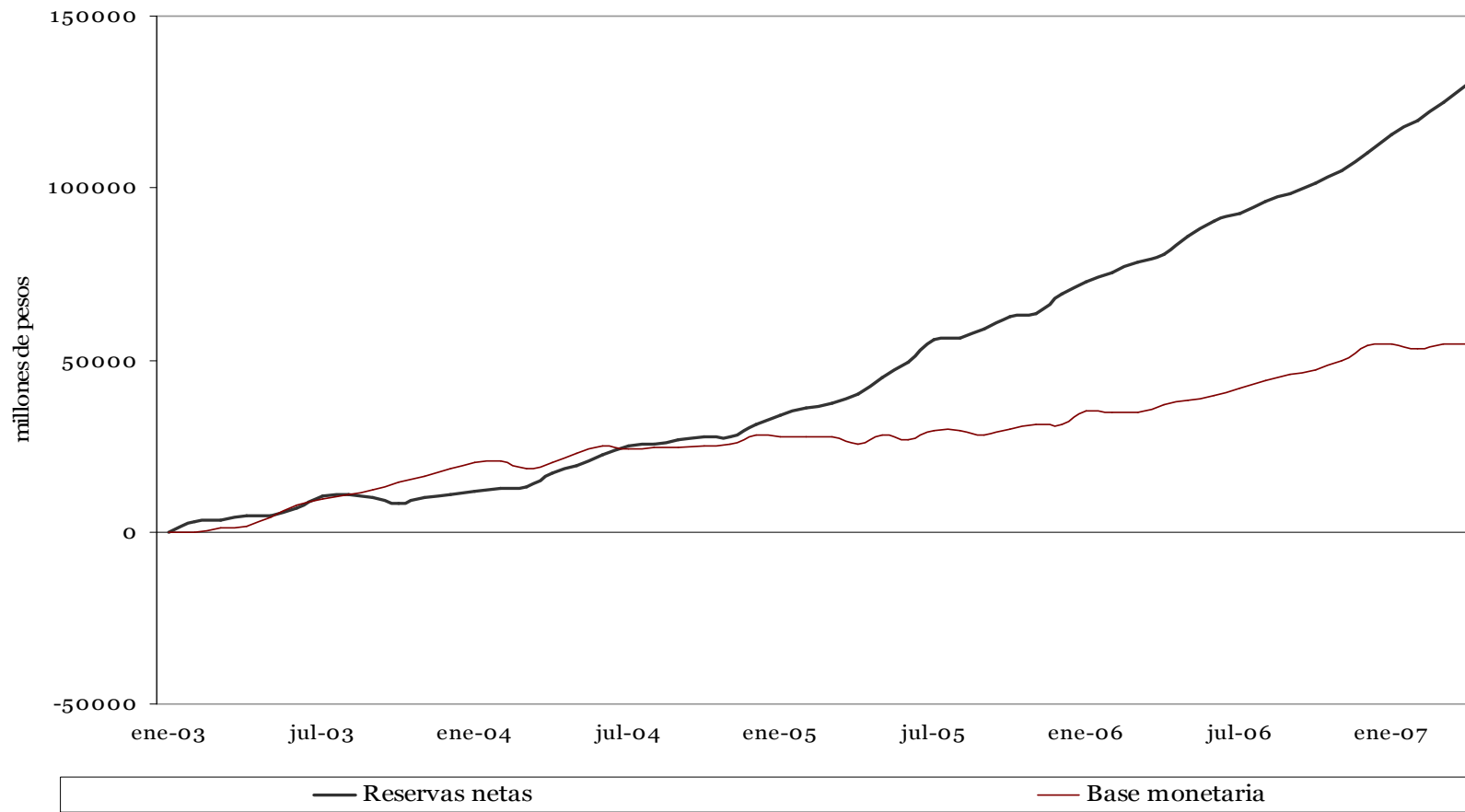
**Reservas y emisión monetaria**  
(incrementos acumulados en el periodo)





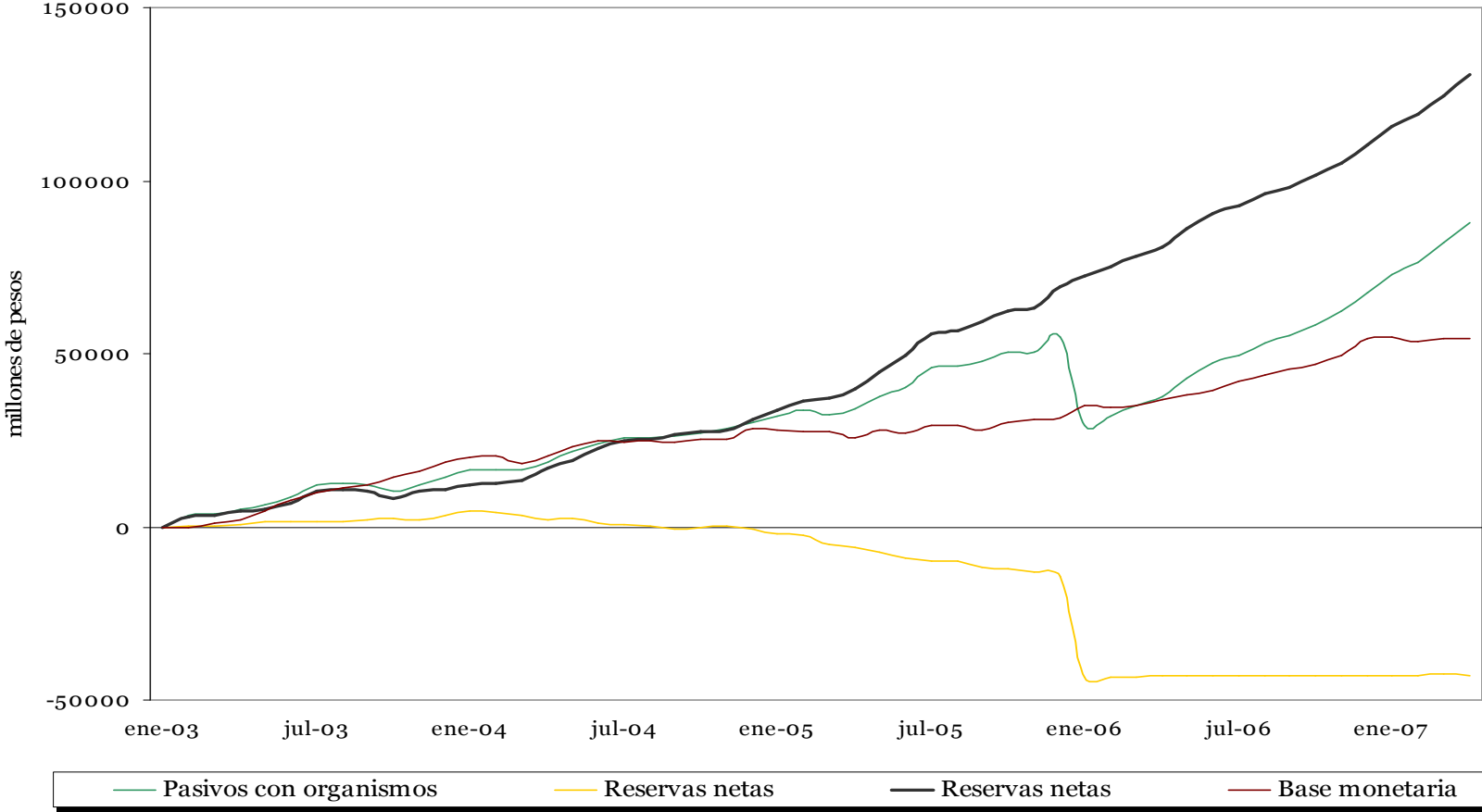
# La acumulación de reservas

**Reservas y emisión monetaria**  
(incrementos acumulados en el periodo)



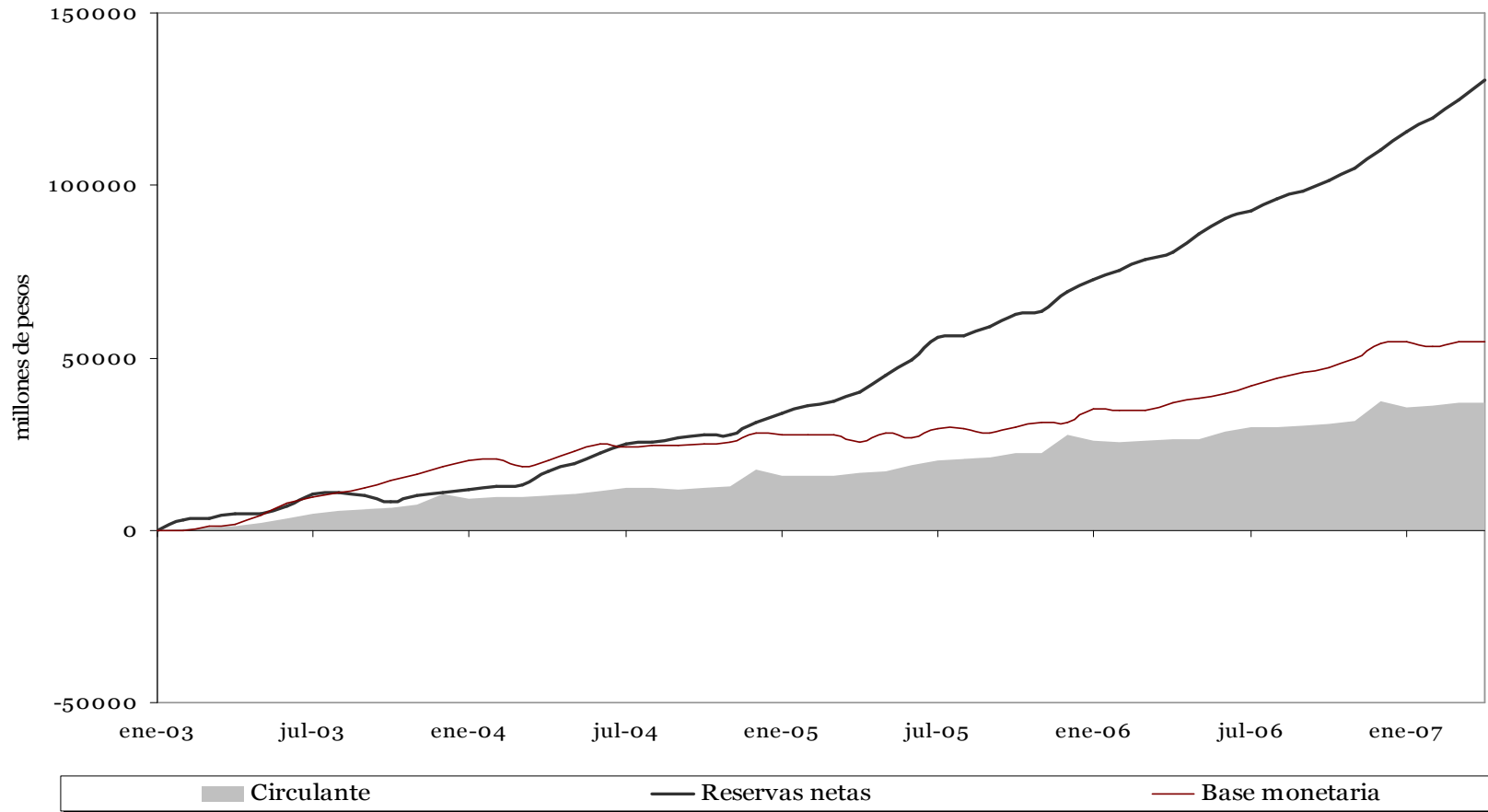
# La acumulación de reservas

**Reservas y emisión monetaria**  
(incrementos acumulados en el periodo)

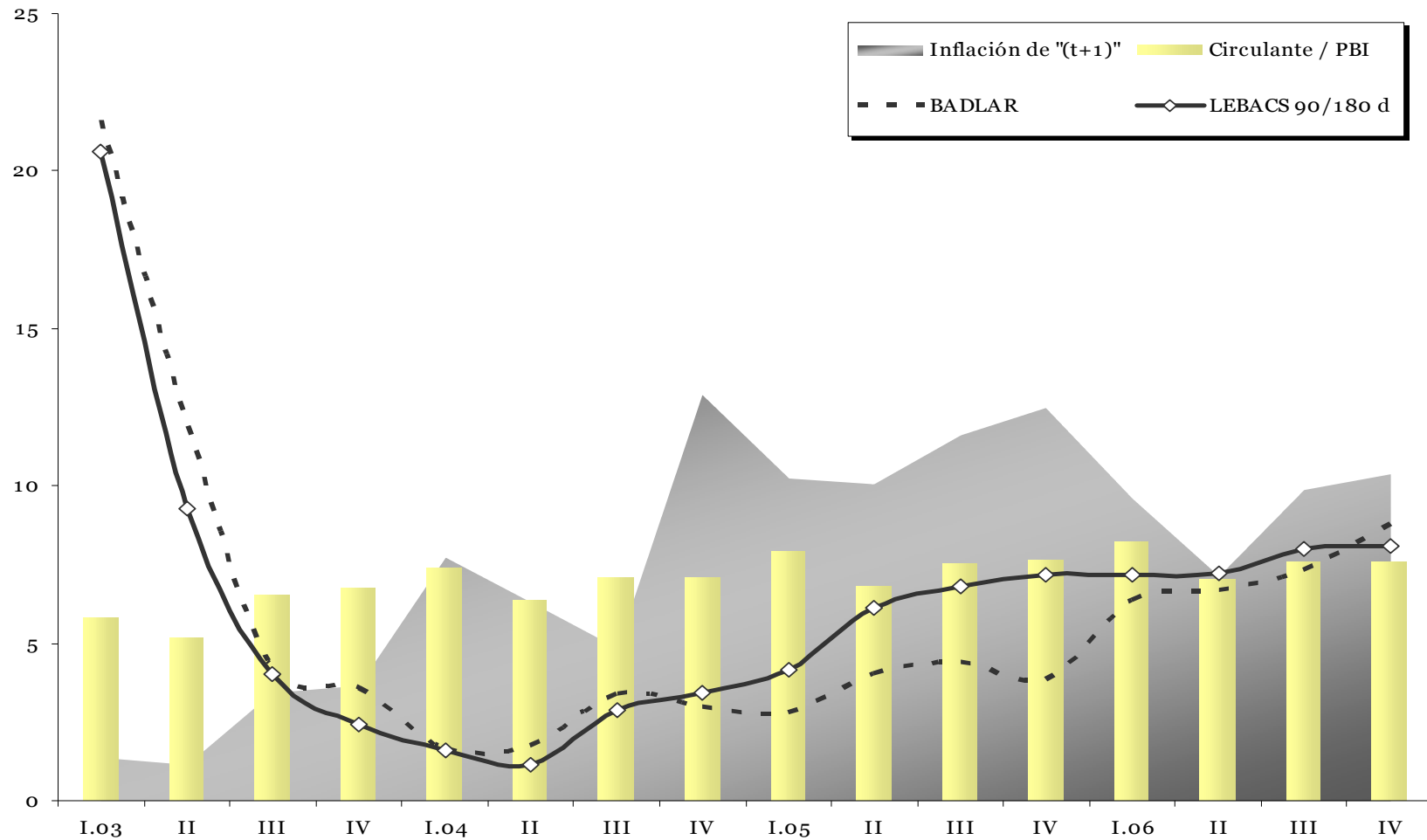


# La acumulación de reservas & el senioreage

**Reservas y emision monetaria**  
(incrementos acumulados en el periodo)

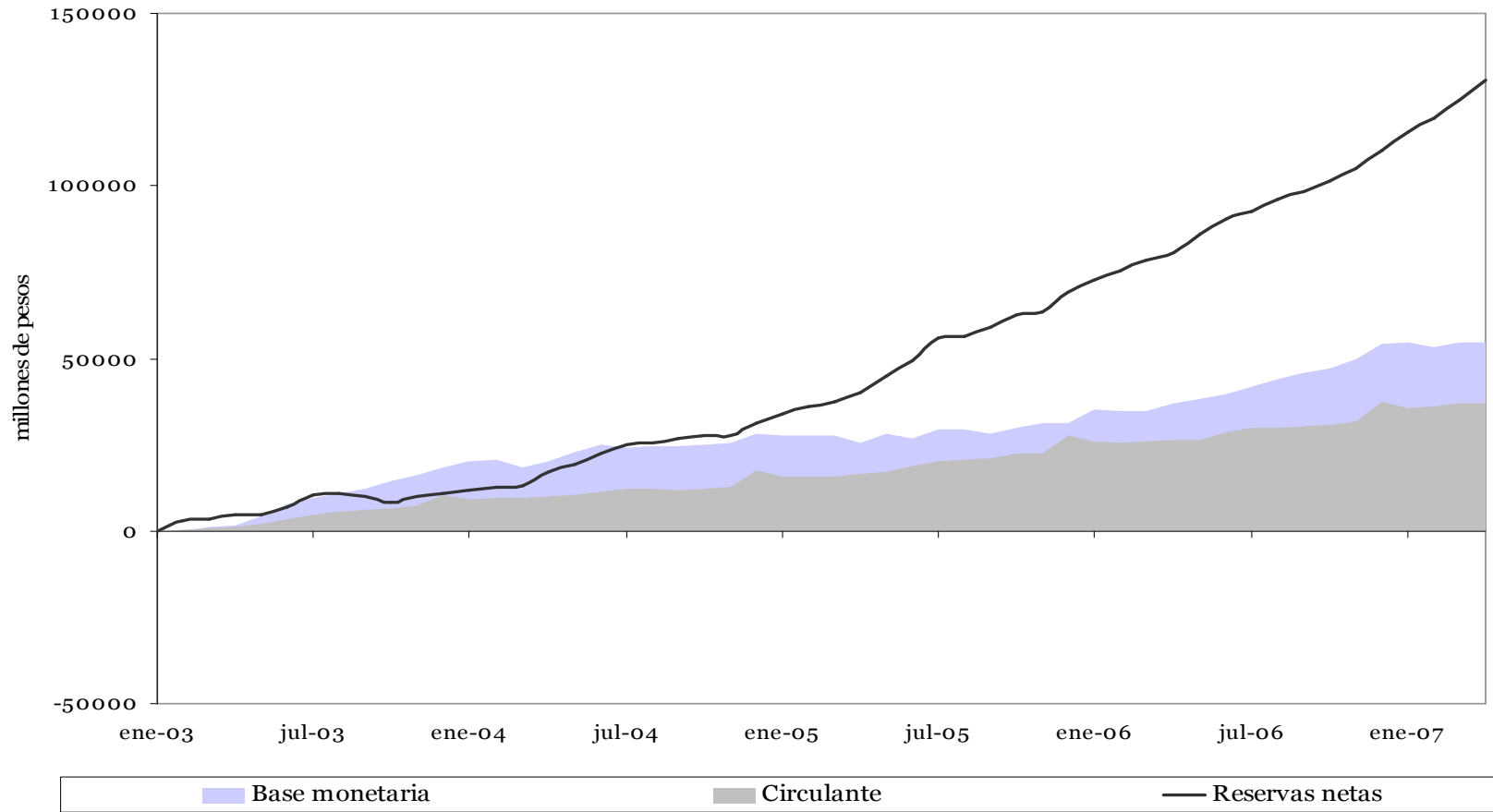


# La acumulación de reservas & la inflación



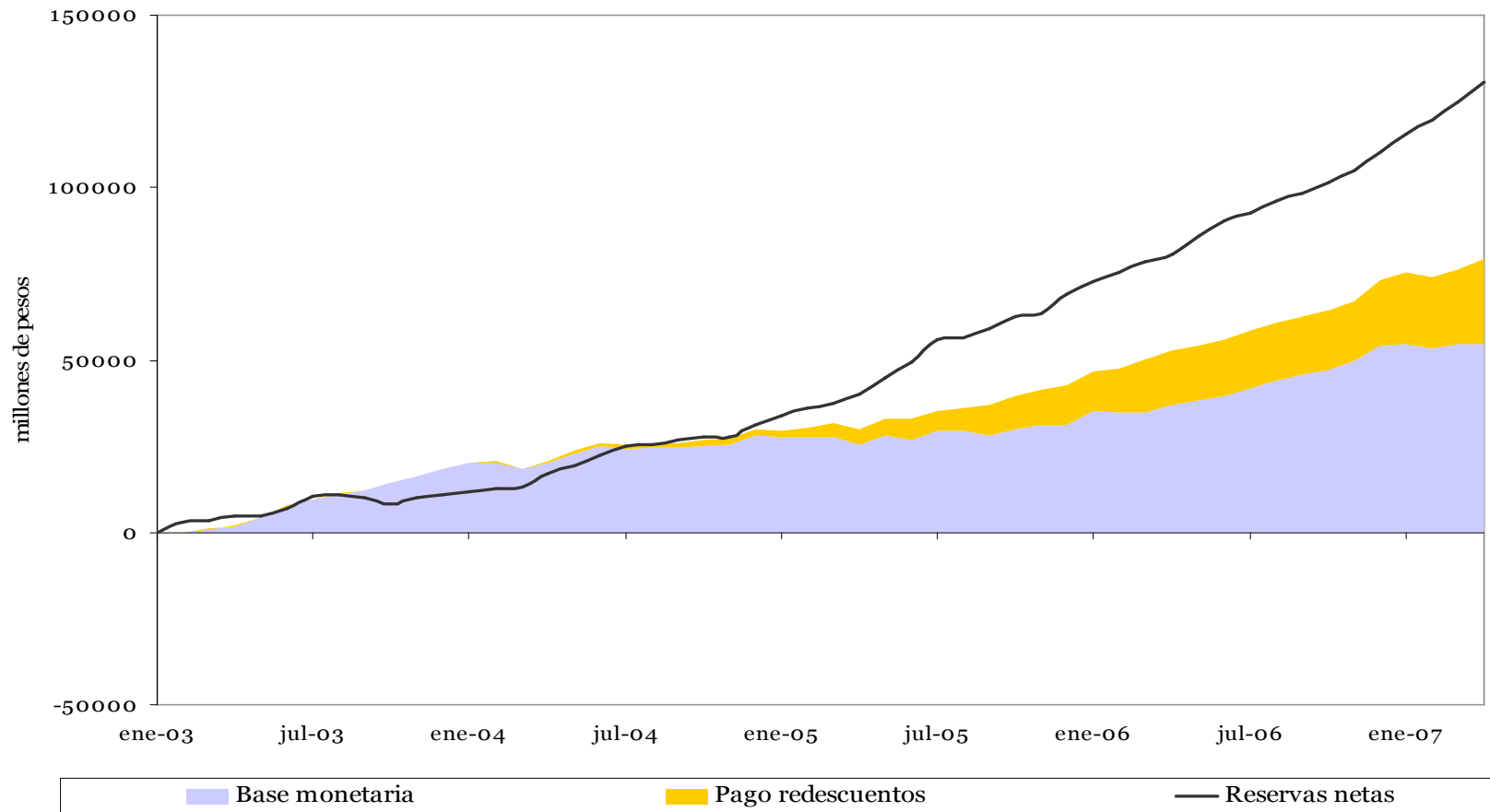
# La acumulación de reservas & el senioreage

**Reservas y emisión monetaria**  
(incrementos acumulados en el periodo)



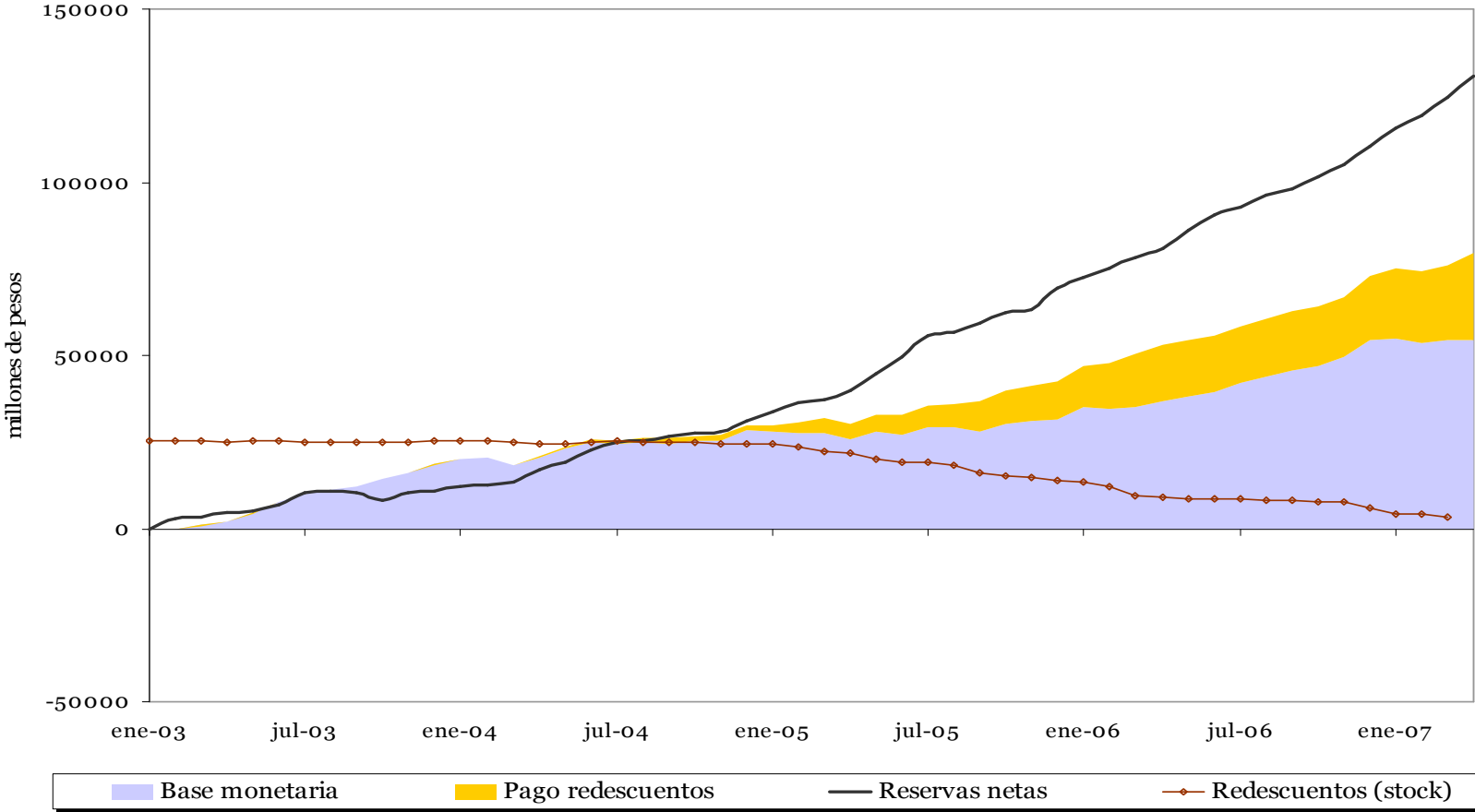
# La acumulación de reservas & los redescuentos

**Reservas y emisión monetaria**  
(incrementos acumulados en el periodo)



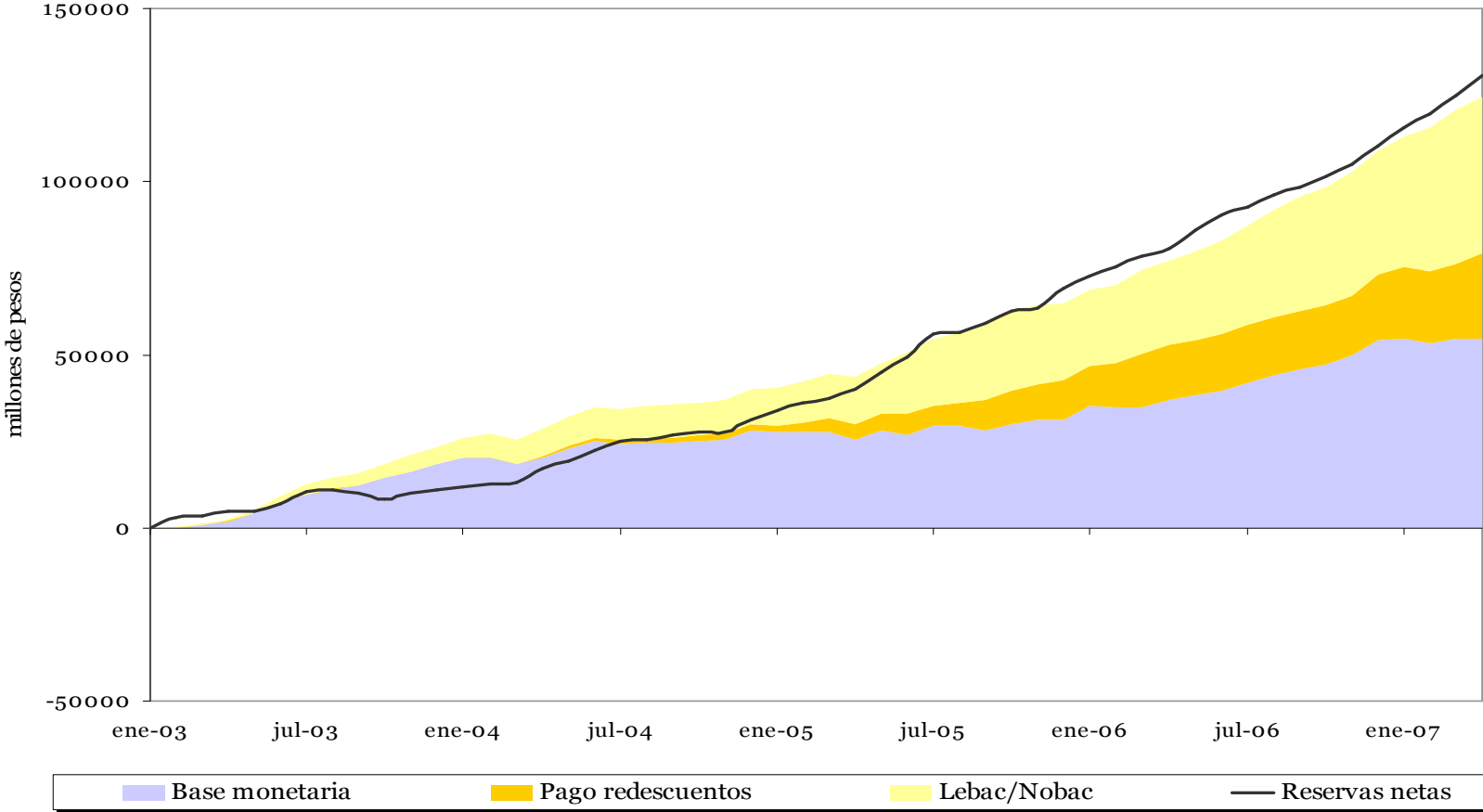
# La acumulación de reservas & los redescuentos

**Reservas y emisión monetaria**  
(incrementos acumulados en el periodo)



# La acumulación de reservas & la deuda

**Reservas y emisión monetaria**  
(incrementos acumulados en el periodo)





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# Las opciones

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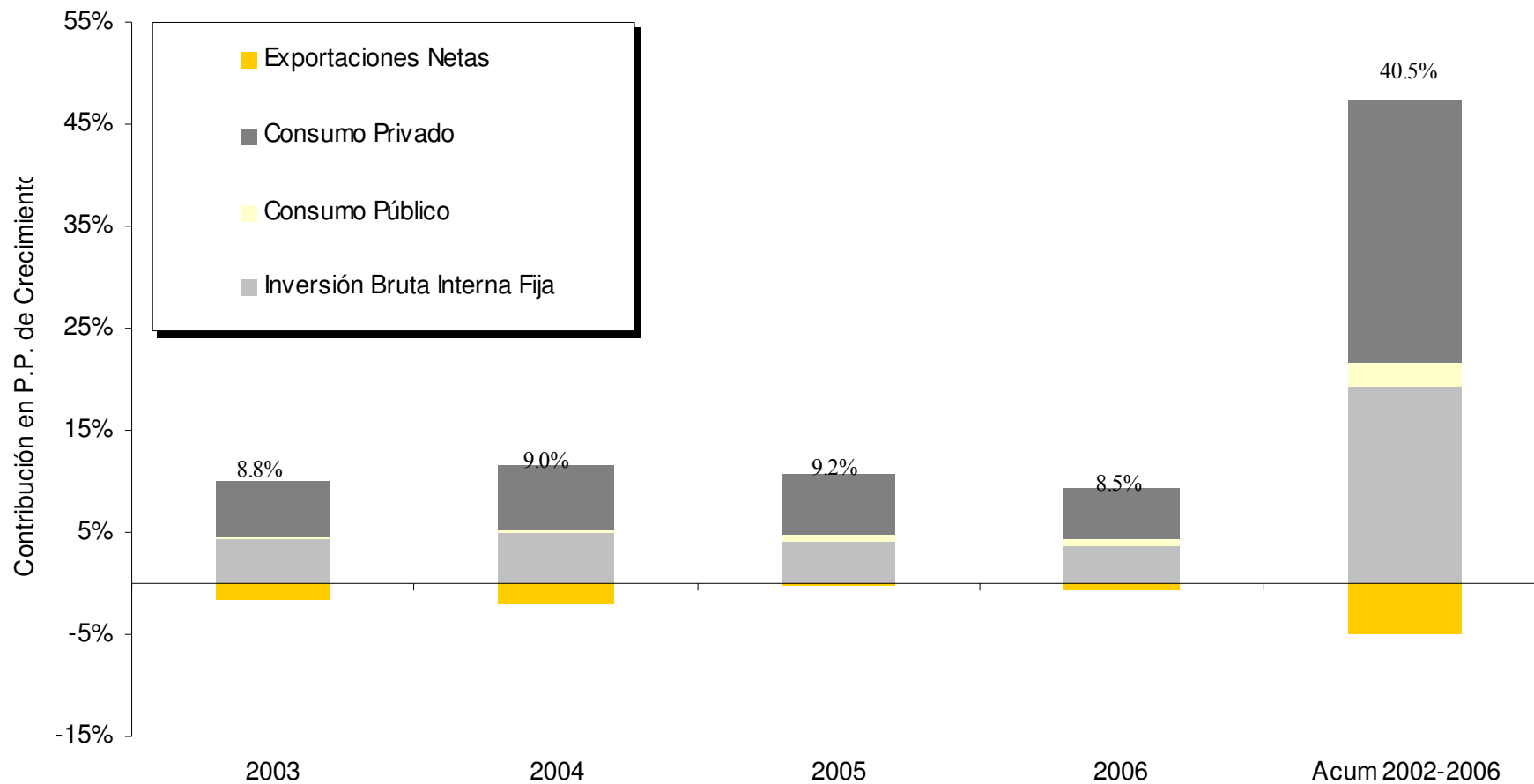
# Opción I:

## El tipo de cambio

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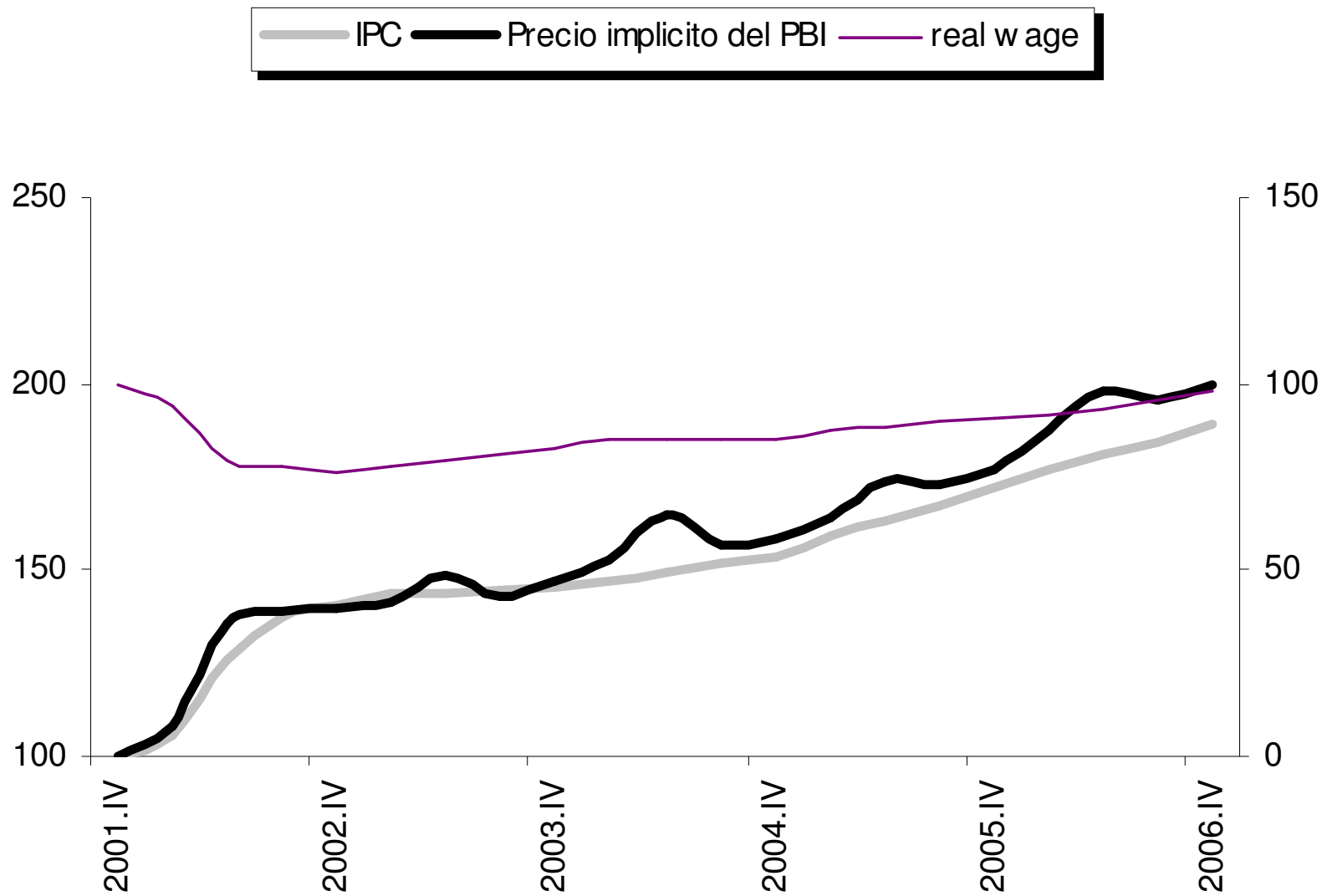
# El modelo exportador

Contribución al Crecimiento 2003-2006



Fuente: INDEC

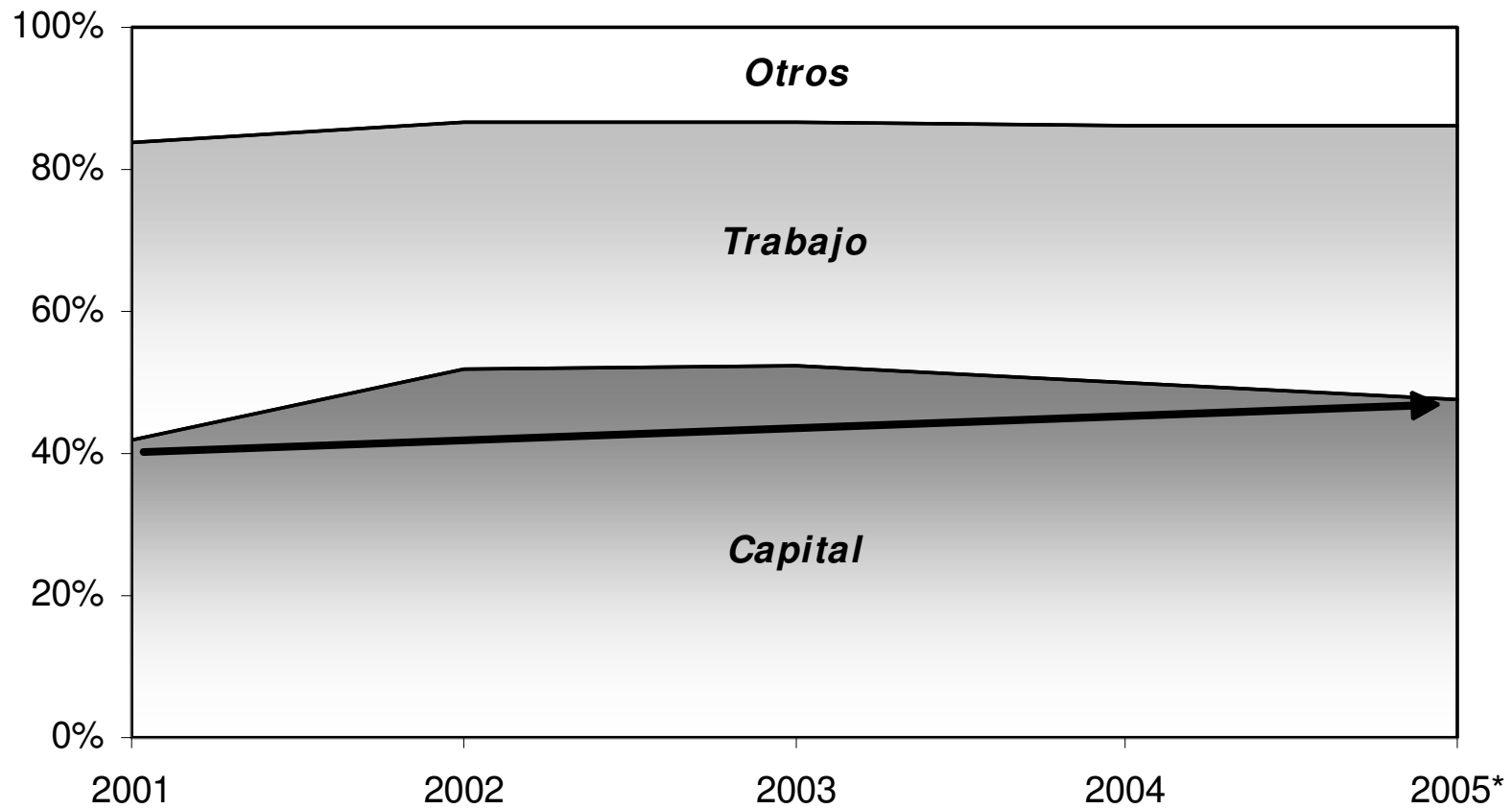
# El dólar alto



# El dólar alto

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## PBI por factor



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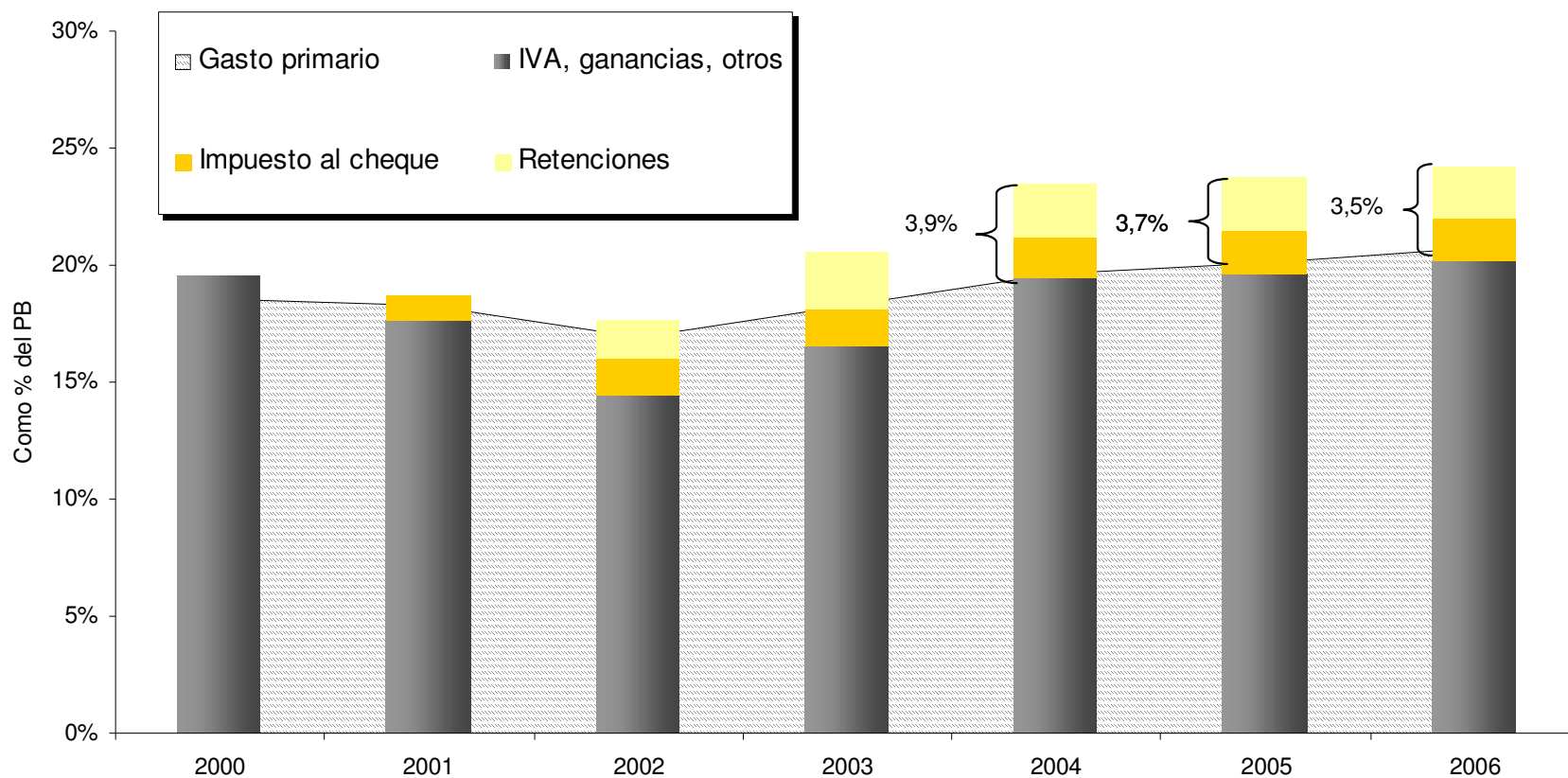
# Opción II:

## El gasto

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# El gasto

## Anatomía del superavit fiscal



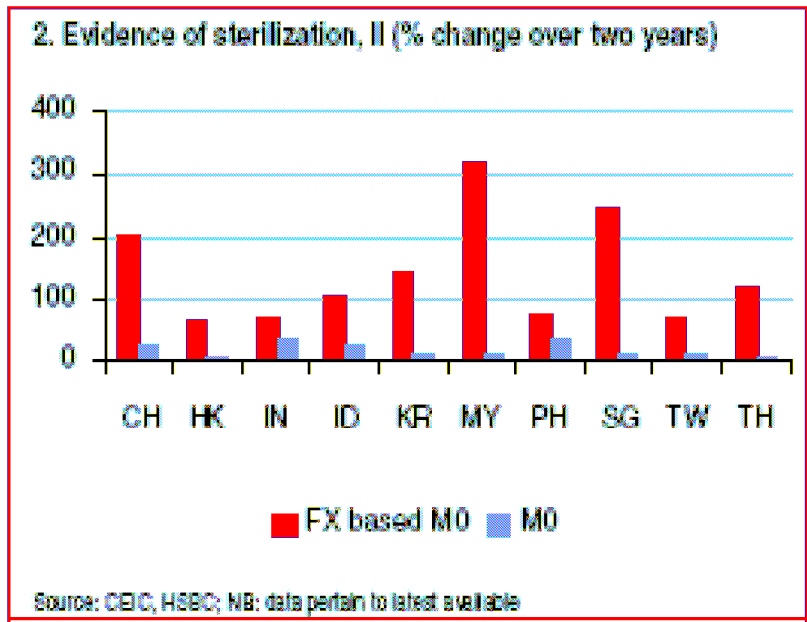
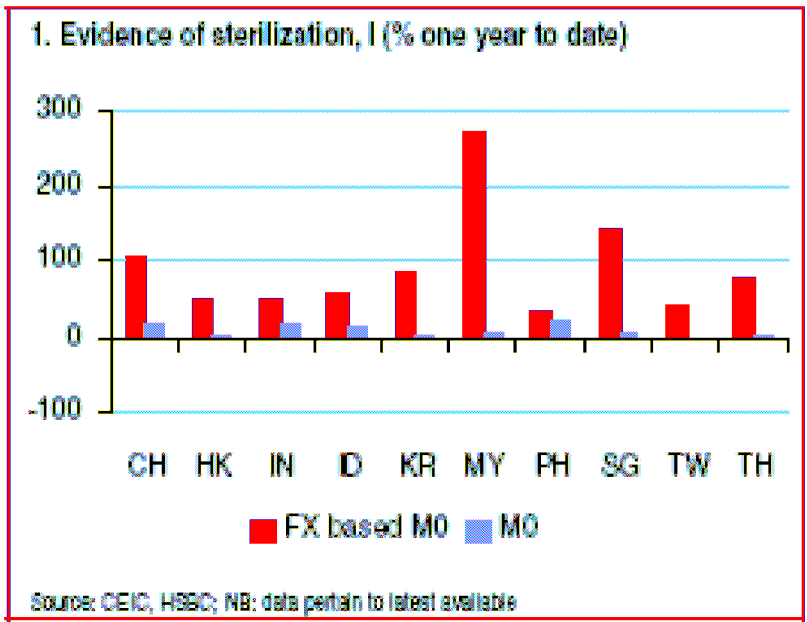
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# Opción III: La tasa de interés

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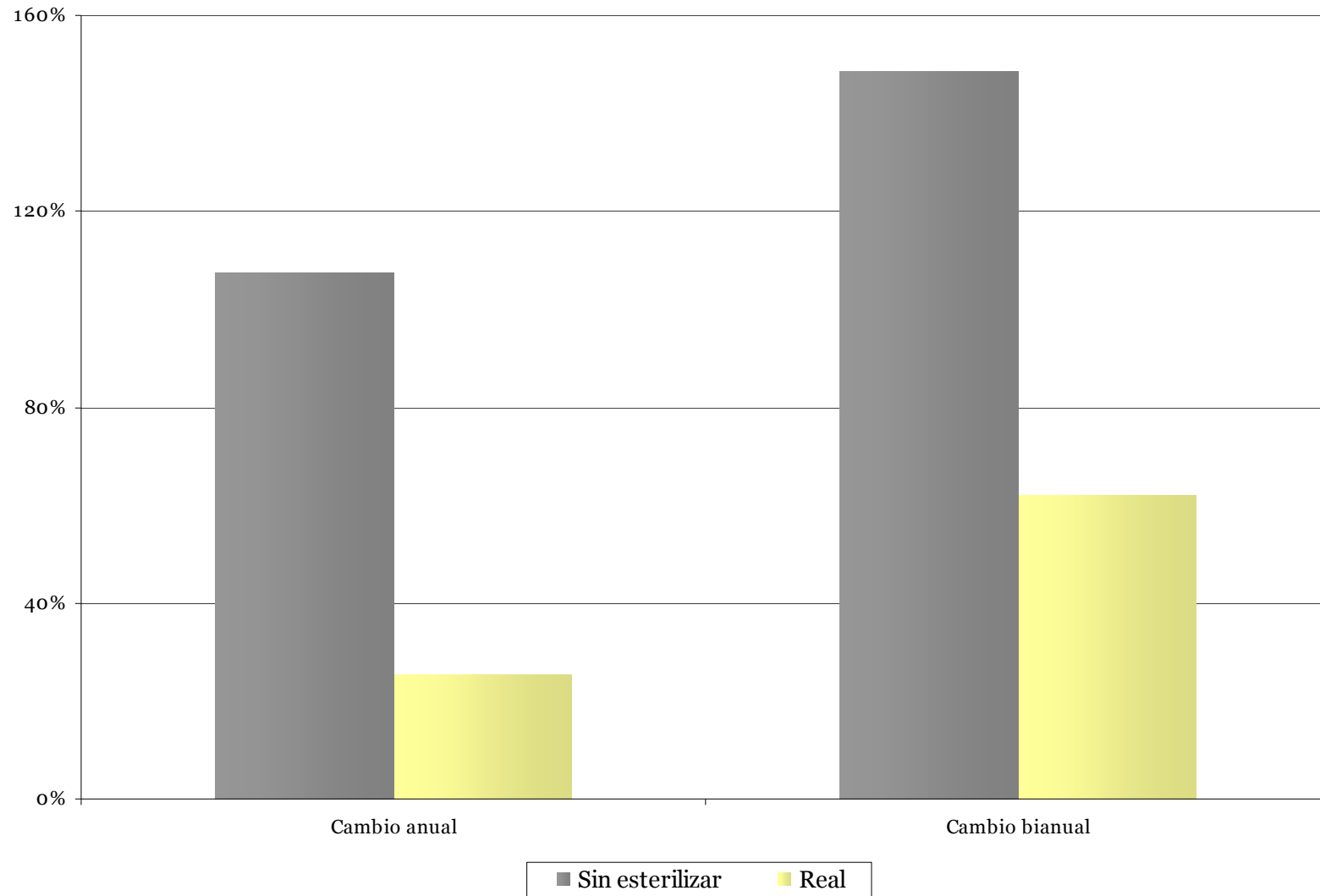


# El modelo asiático

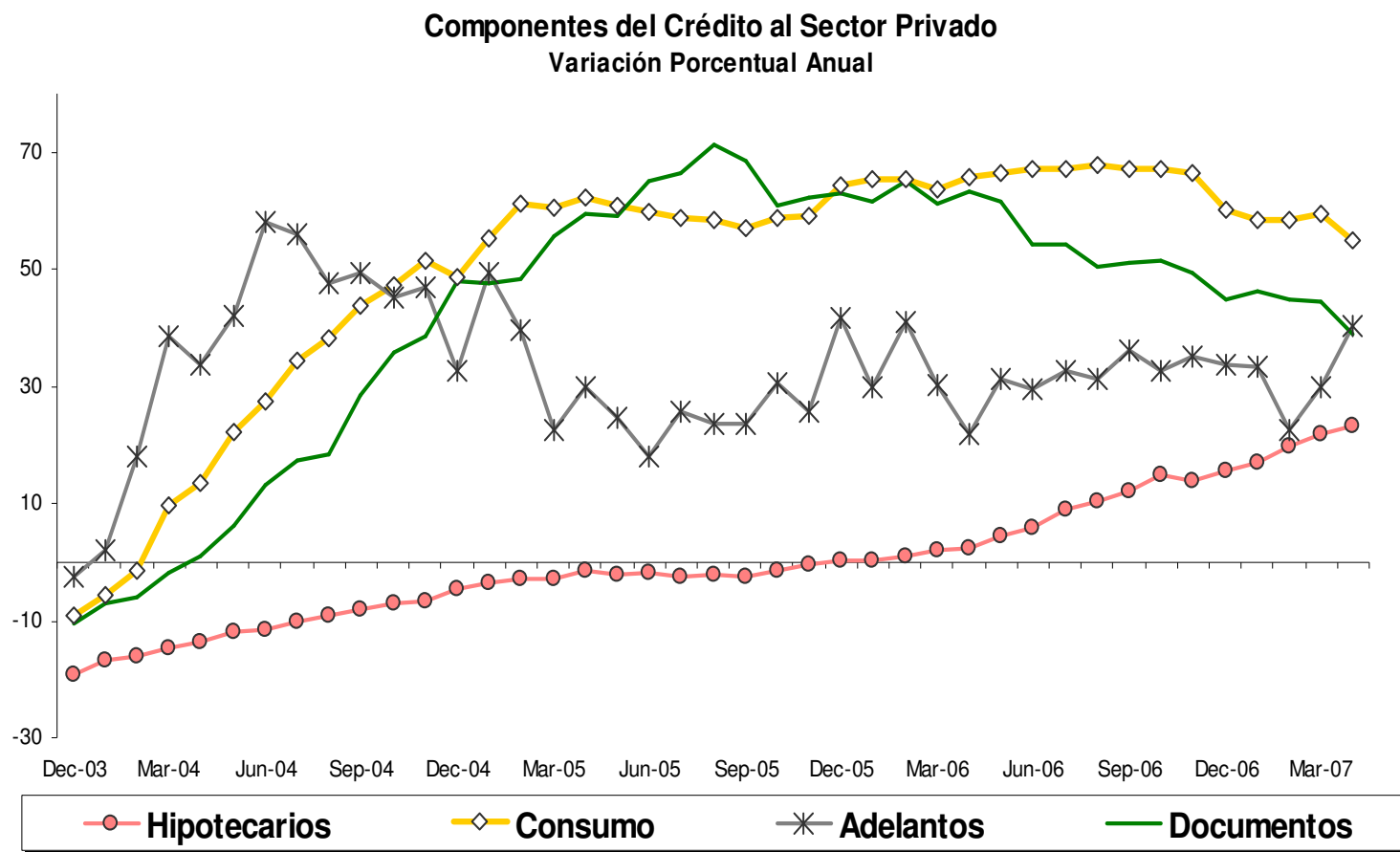


# El margen menguante

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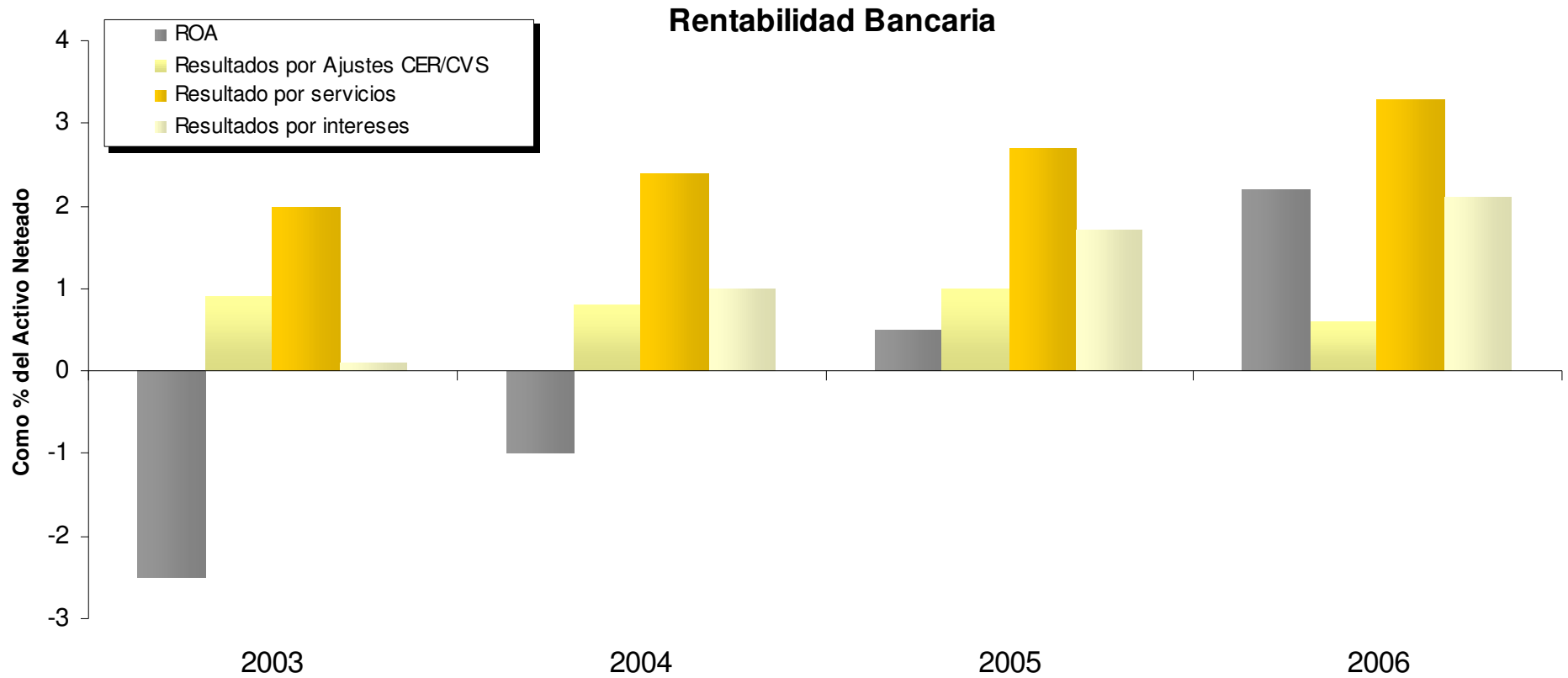


# El financiamiento corto y de la demanda



# El lado de los bancos

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# El costo

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# El costo de las reservas

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- Cuál es el costo marginal de las reservas?
    - Spread soberano en dolares sobre reservas, menos...
    - ...reducción de riesgo de liquidez, menos...
    - ...reducción del costo financiero sobre el stock de deuda
  - Costo devengado (pérdidas futuras por valuación)
    - Argentina no es China → el efecto de una apreciación del tipo de cambio real aún nos favorece
    - Deberíamos mantener una posición neta en dólares para especular?
  - Spread BCRA en pesos sobre reservas
-

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# Prognosis

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# Los huevos de la tortilla

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- Ajuste del gasto
  - Esterilización a tasas reales bajas
  - Inflación + senioreaje (van de la mano)
  - Combinar a gusto
  - Fecha de vencimiento: diciembre 2008?
-



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*Gracias*

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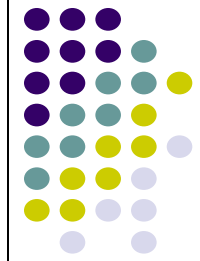


# Jornadas Monetarias y Bancarias, 2007

**Joshua Aizenman**

Tradeoffs between monetary and financial stability: international reserves hoarding and the emerging global economic architecture

4 y 5 de Junio de 2007



Tradeoffs between Monetary and Financial  
Stability:

**International reserves hoarding and the  
emerging global economic architecture**

June 5, 2007

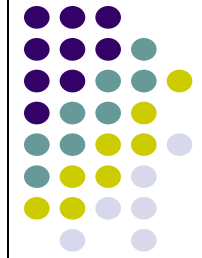
Central Bank of Argentina, Buenos Aires, Argentina

Joshua Aizenman

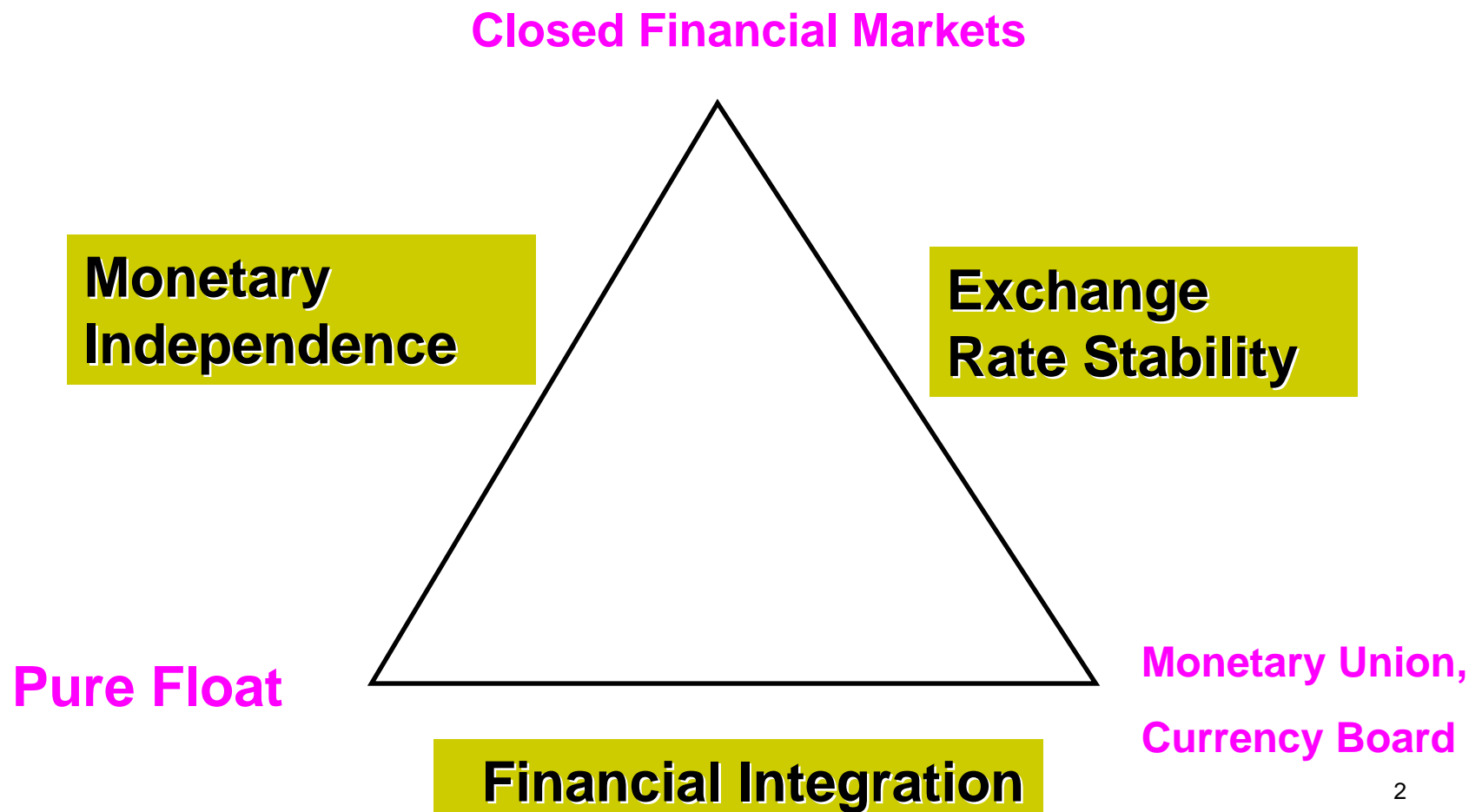
UCSC and the NBER

# The Trilemma is alive and kicking

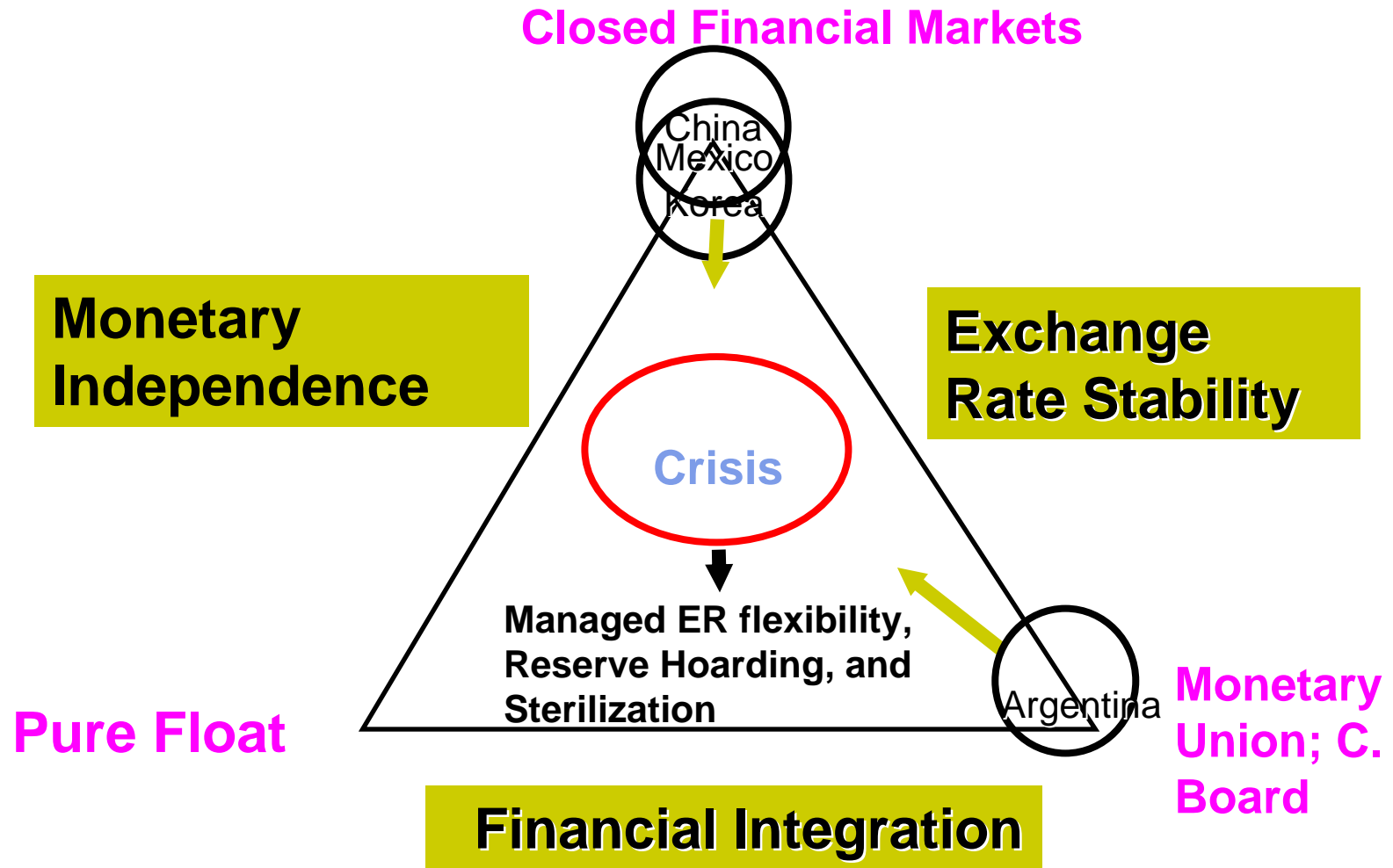
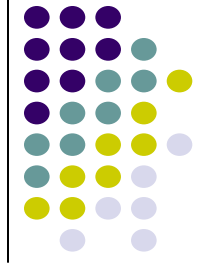
[Frankel 1999, Obstfeld Shambaugh & Taylor, 2005]



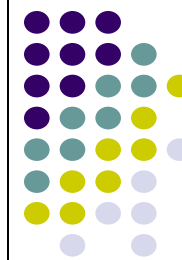
A country can choose only two out of these three:



# Various Trilemma Configurations Seen to be Unstable

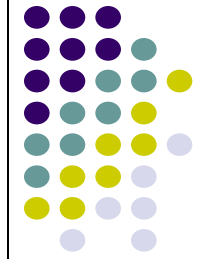


## The 1990s – illustrated the downside risk of financial integration; the temporariness and risks of fixed exchange rates



- Validated Diaz-Alejandro's 1985 conjecture: Good-bye financial repression, hello investment boom, to be followed by a costly financial crash.
- The Mirage of Fixed Exchange Rates: pegged ER – a trap in the era of greater financial integration. [Obstfeld & Rogoff (1995); Frankel (1999); Edwards & Levy Yeyati (2005); Aizenman & Glick (2005)].

# The overall trend has been deeper financial integration

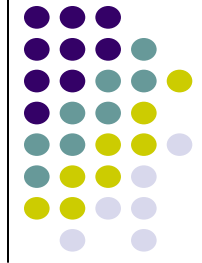


- Remains contentious [Rodrik (1998), Stiglitz (2002)].
- The gains from financial integration are overrated [Gourinchas & Jeanne 2004, Aizenman 2005, Prasad et al. 2006].
- **Like it or not, deeper financial integration is the unavoidable outcome of rapid trade integration:**

Trade integration facilitates capital flights via trade misinvoicing, increasing the costs enforcing financial repression, forcing countries to tolerate greater financial integration [Aizenman 2004].

- **Byproduct: greater exposure to financial instability.**

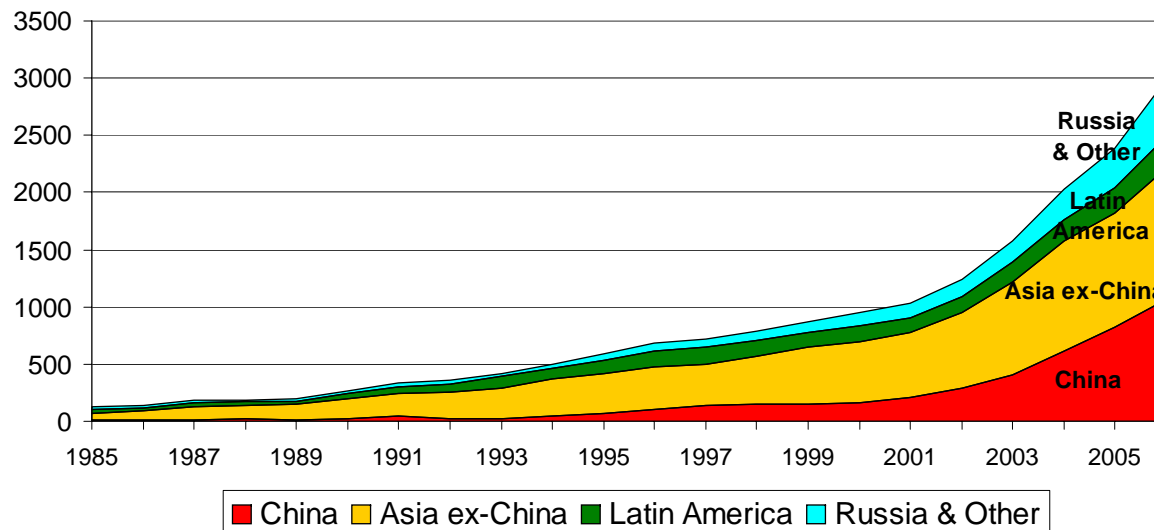
Post crises, countries opt for managed ER flexibility, greater monetary independence, and growing financial integration.



## How stable is the new configuration?

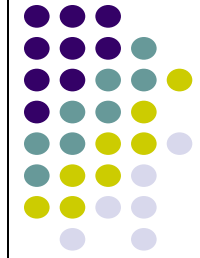
- Hoarding IR -- a key ingredient enhancing the stability of the emerging configuration in an era of greater financial integration.

Foreign Exchange Reserve,  
in Emerging Markets, \$billions

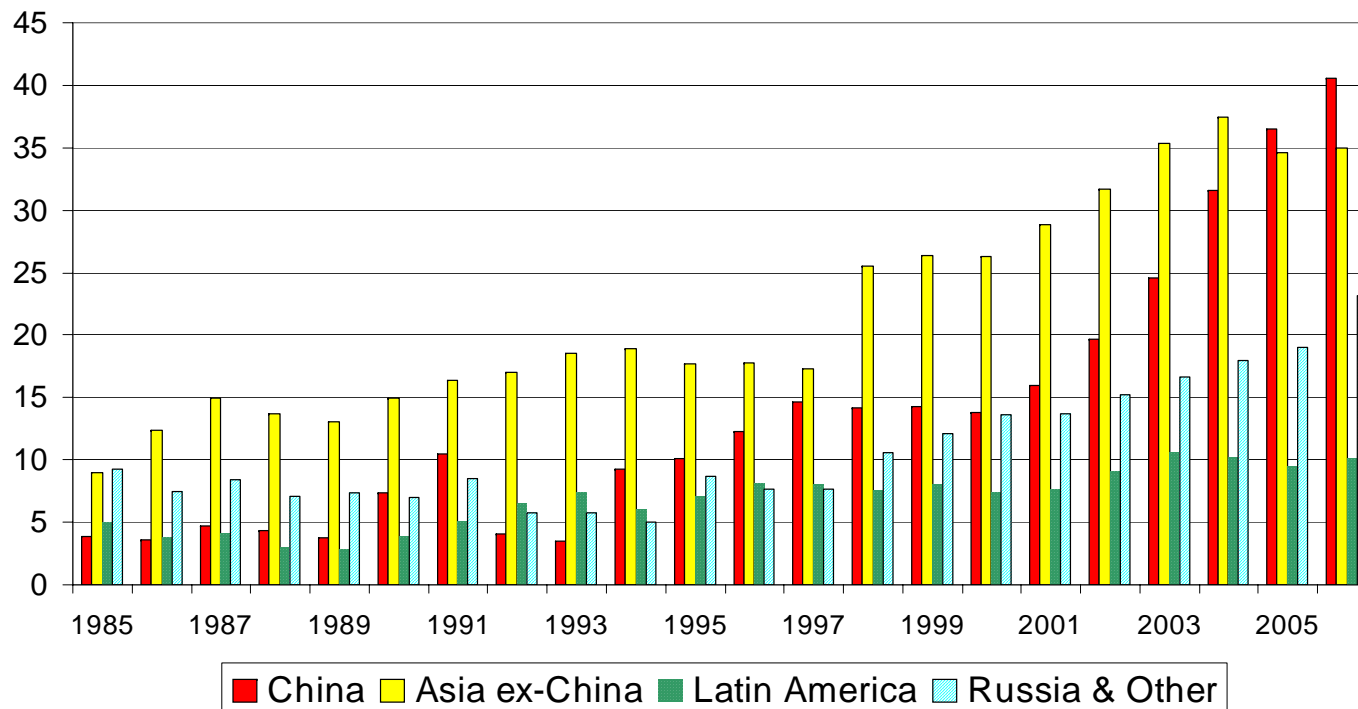




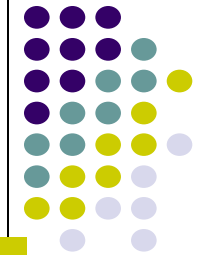
# Emerging Markets have accelerated hoarding of reserves



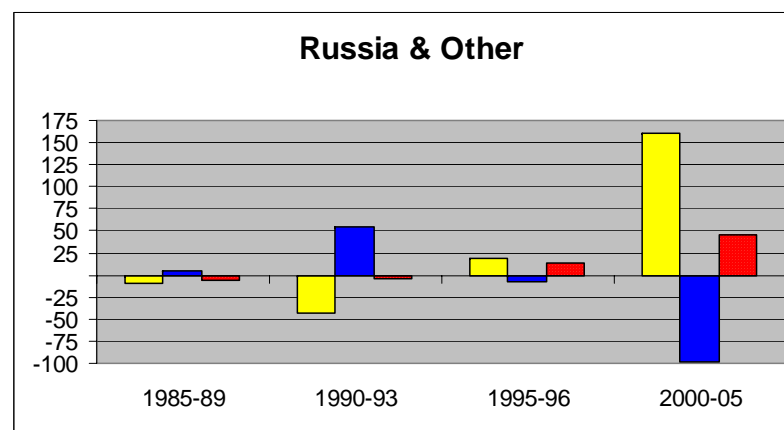
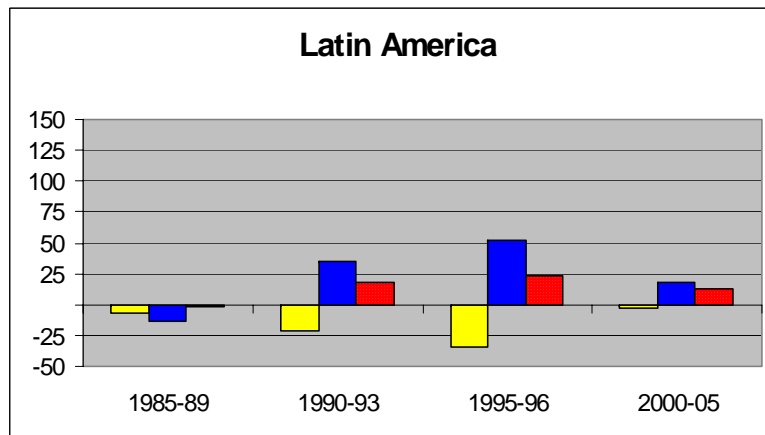
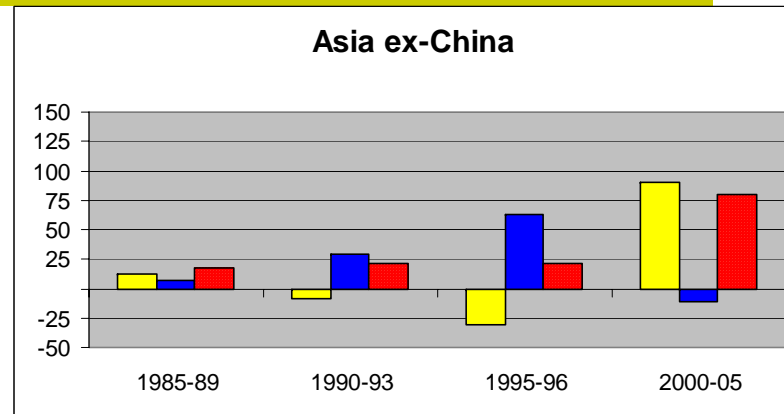
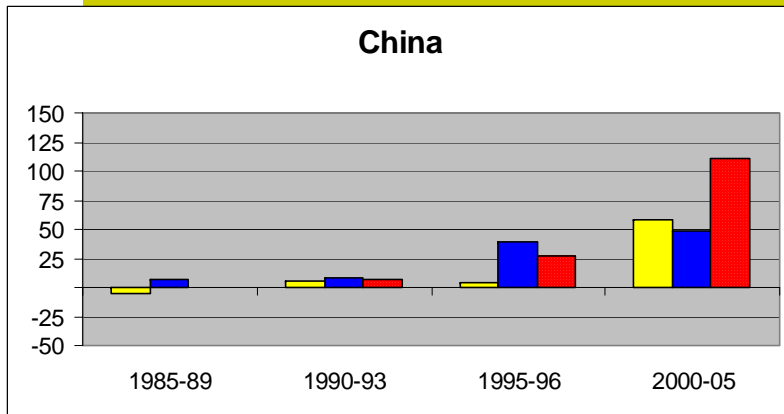
**Foreign Exchange Reserves in Emerging Markets, as percent of GDP**



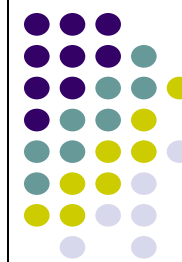
# Recent reserve accumulation, current account and financial flows



## Balance of payments, annual averages, in \$billions



# While not a panacea, IR helps by providing



## i. Self insurance against sudden stops.

- Adjustment to the downside risk of greater financial integration [Ben-Bassat & Gottlieb (1992); Aizenman & Marion (2003), Aizenman and Lee (2005)].

## ii. Mitigating REER effects of TOT shocks.

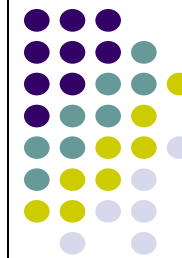
- Especially important for commodity exporters and EM.

## iii. Smoothing overtime the adjustment to shocks, allowing more persistent current account patterns [ii. and iii. - Aizenman (2006)].

## iv. Export promotion?

Debatable due to possible coordination issues akin to competitive devaluations [Aizenman and Lee (2006)].

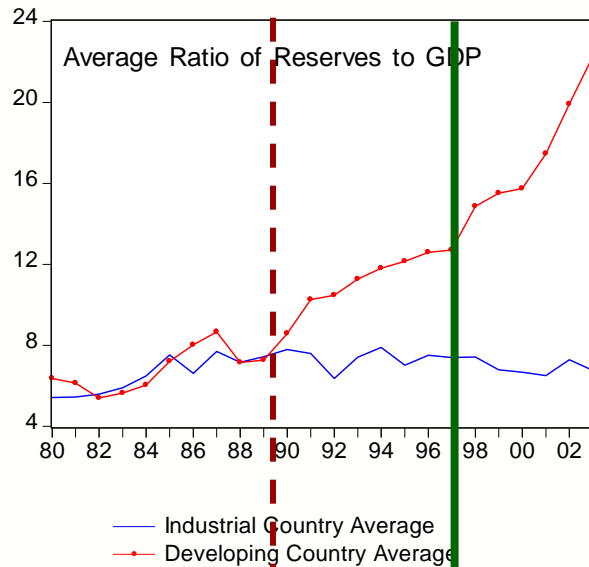
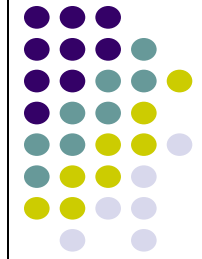
# Trends in the provision of international liquidity



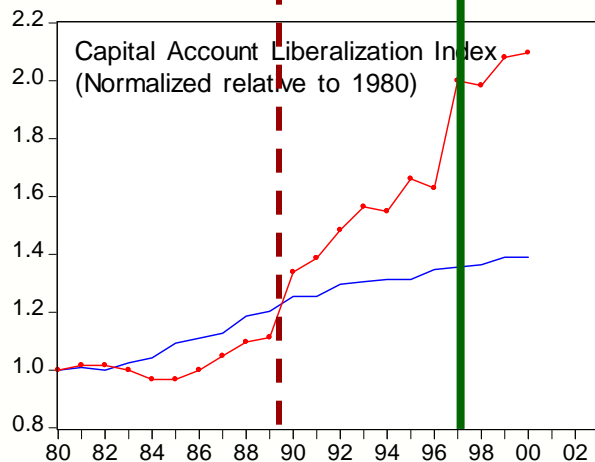
- Decentralization of the hard currency lender-of-last-resort, from implicit insurance via the IFIs [IMF, World Bank, etc...] to self insurance by emerging markets.
- The desire to self insure may reflect evolving experience with the downside of deeper financial integration, manifested by greater exposure to sudden stops of capital flows, and by the growing reluctance to rely on centralized solutions provided by IFIs.

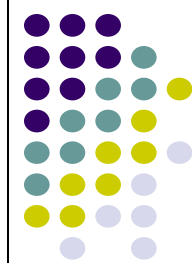
Calvo (1998), Kaminsky & Reinhart. (1999), Aizenman and Marion (2003, 4), Hutchison & Noy (2005).

# ***Developing countries IR took off during the 1990s, decade of growing financial integration, leading to greater self insurance***



Financial crises [1994-5, 1997-8] led to an unprecedented increase in hoarding IR by developing countries.

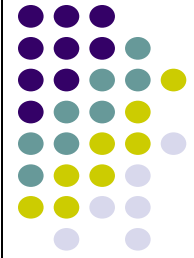




## ***IRs Mitigate REERs effects of TOT shocks***

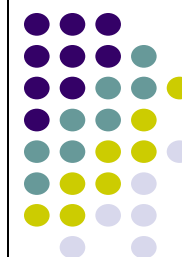
- TOT volatility leads to REER volatility, magnifying business cycle volatility.
- Limited ability of developing countries to mitigate TOT shocks by internal adjustment or by external hedging:
  - Shallow financial systems;
  - Lack of sectoral diversification;
  - Sovereign risk and & lack of proper financial instruments.
- Hoarding IR mitigates the REER effects of TOT shocks [Aizenman (2006)].
- Exports of natural resources magnify the impact of TOT shocks and the mitigation associated with IR by 2.

# ***Current account persistence and IRM***



- Higher international reserves/GDP may enhance the capacity to smooth overtime the adjustment to shocks, allowing more persistent current account patterns.
- In contrast, a low level of reserves may require fast and rigid adjustments of the current account to shocks, where deviations from a balanced current account position are hard to sustain.

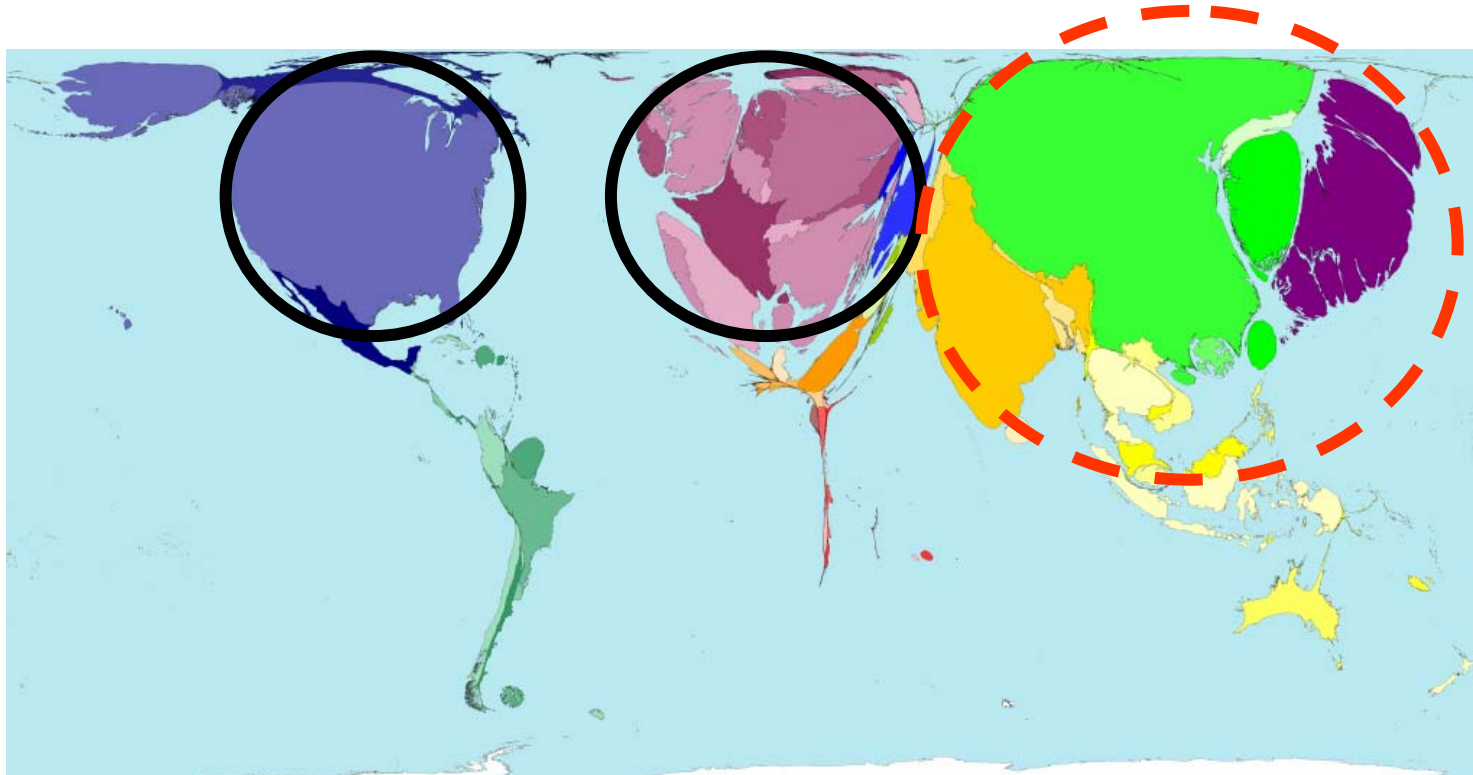
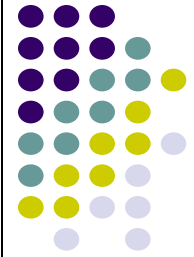
## *Developing countries opt for managed ER flexibility, greater monetary independence, and growing financial integration*



- These trends are consistent with changes in the global distribution of economic might:
- From a **unipolar** architecture dominated by the US during the mid part of the 20th century to a **multipolar** world, with a shifting distribution of economic might.
- The unipolar architecture was dominated by the US centric economic organization:  
Leading currencies were pegged to the \$, and the US dictated the global monetary policy [Bretton Woods system, 1944-1970].



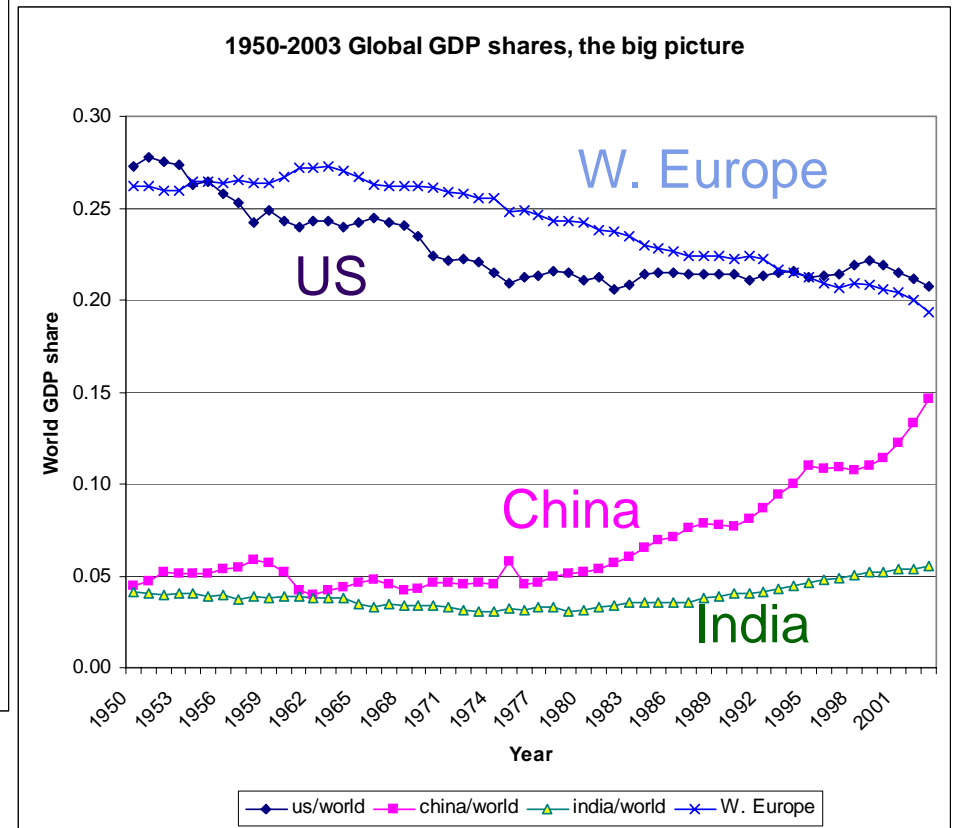
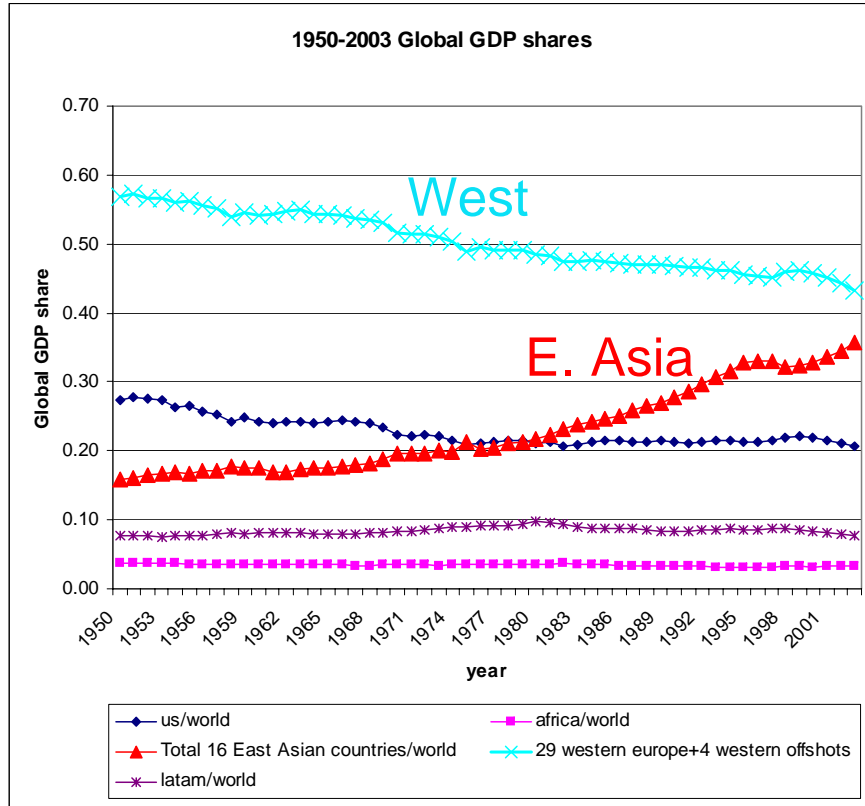
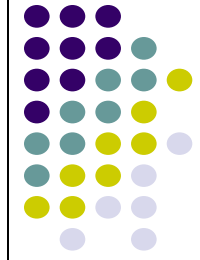
## Most of the global economic growth during the last 30 years comes from East Asia



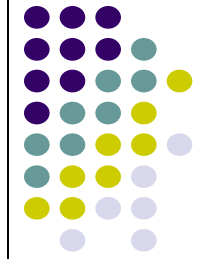
**Territory size shows the proportion of worldwide growth in GDP that occurred there between 1975 and 2002. The GDP is in billions of US\$ adjusted for purchasing**

**power parity. Source:** <http://www.worldmapper.org/index.html>

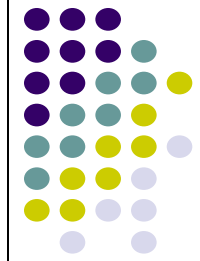
# Changing distribution of economic might



# The emerging of a new global architecture?



- The emerging decentralized global architecture is manifested in the proliferation of decentralized and less cooperative arrangements.
  - Large hoarding of international reserves by developing countries – self insurance, no central role for the IFIs.
  - Managed flexibility of the exchange rate – no central role of the dollar.
  - Decentralized Inflation targeting [Rose (2006)].
- IFIs adjust at glacial speed to the new realities.

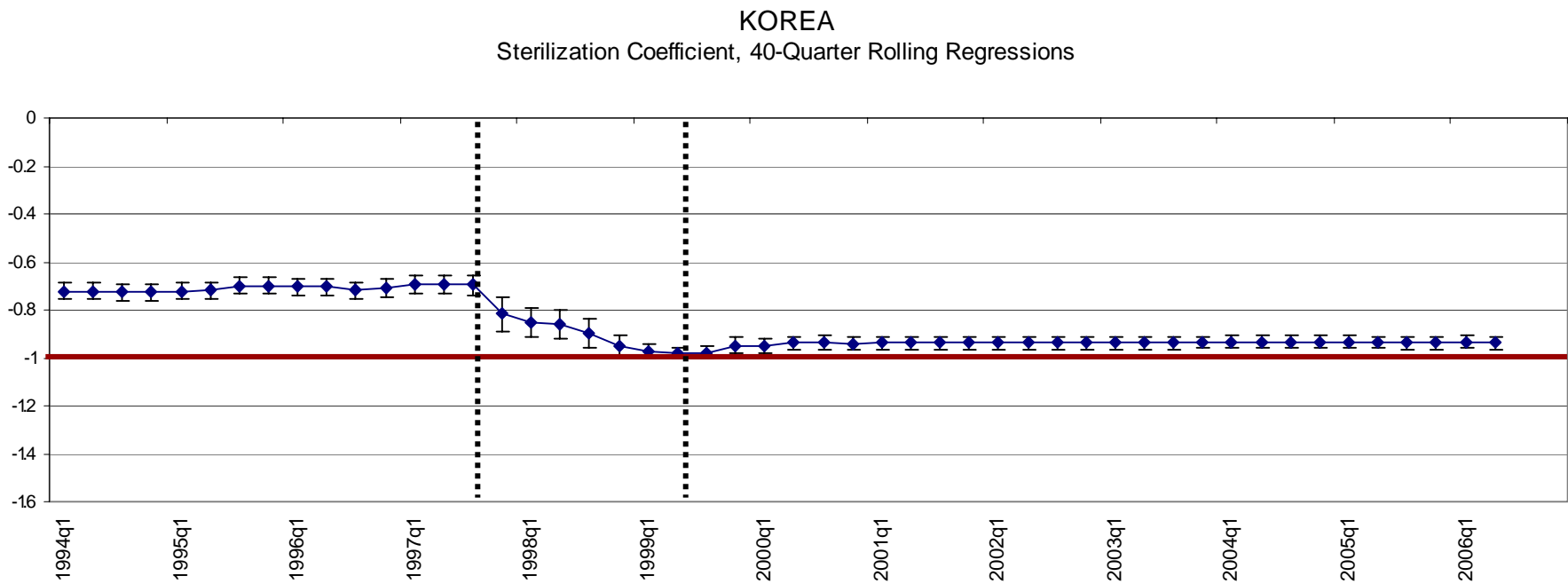
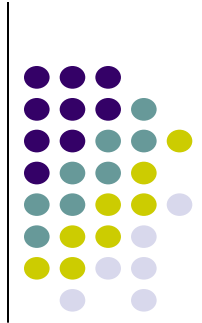


## Concerns about financial and monetary instability increased the complementarity between hoarding IR and Sterilization

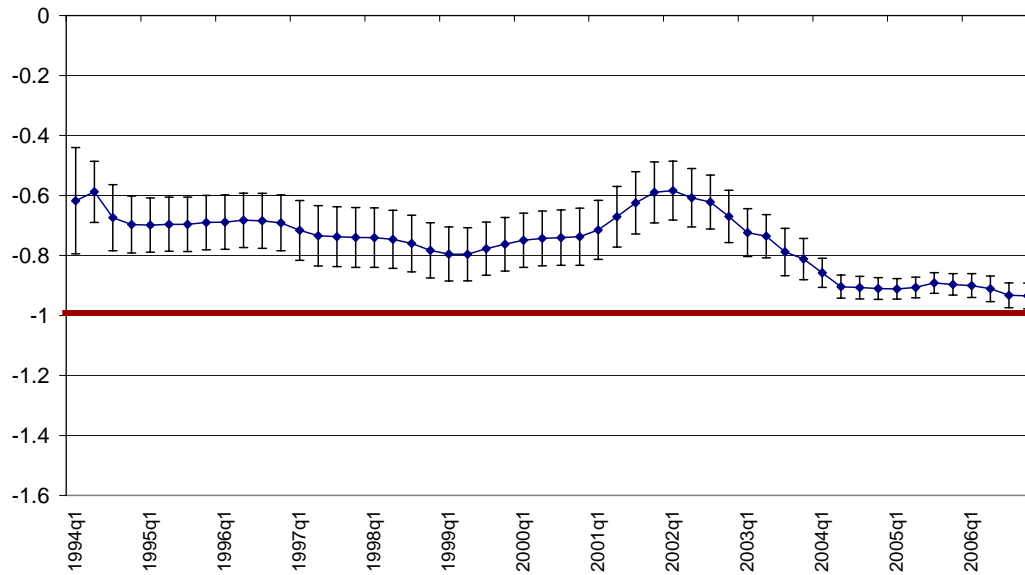
- Evidence of large sterilization after the Asian crisis for China and Korea, and to a lesser degree for Thailand, India and Malaysia.
- The evidence is consistent with a regime change in China, intensifying hoarding and sterilization in the early 2000s.
- Some evidence for greater sterilization in Brazil and Mexico in the aftermath of the Mexican crisis.
- Sterilization of FDI inflows is less than non-FDI inflows.
- Sterilizing the hoarding of IRs is easier to implement in countries with a higher saving rate and greater financial repression.

Aizenman and Glick (2007).

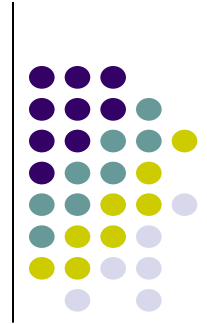
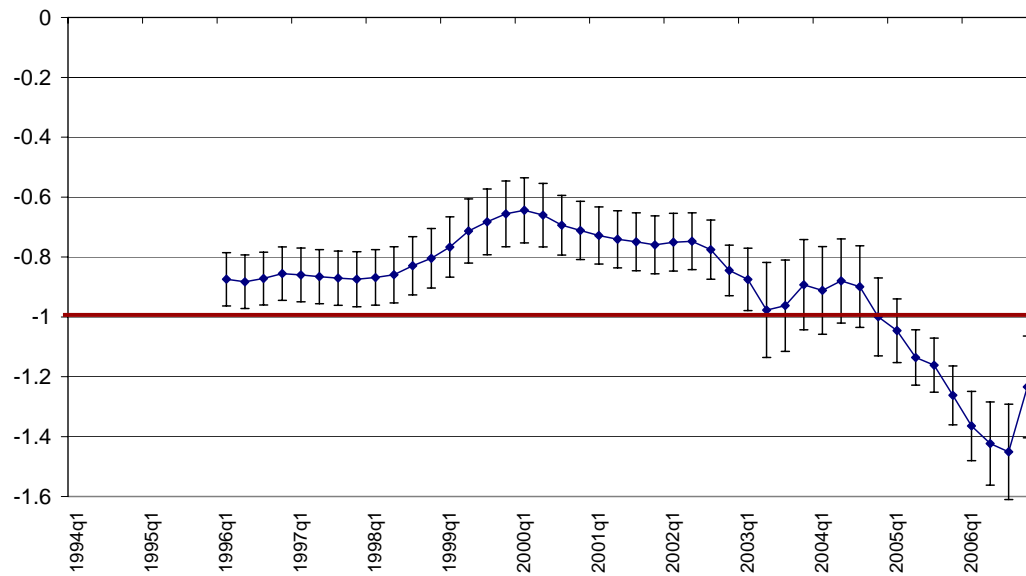
# Concerns about financial and monetary instability and Sterilization: Korea



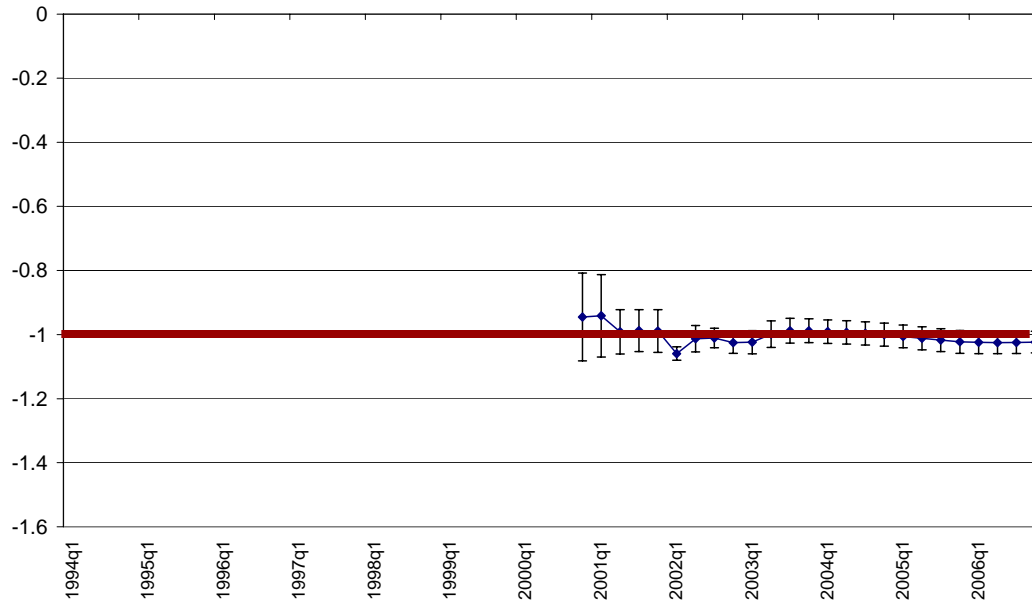
INDIA  
Sterilization Coefficient, 40-Quarter Rolling Regressions



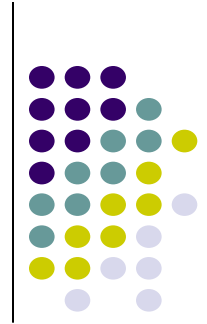
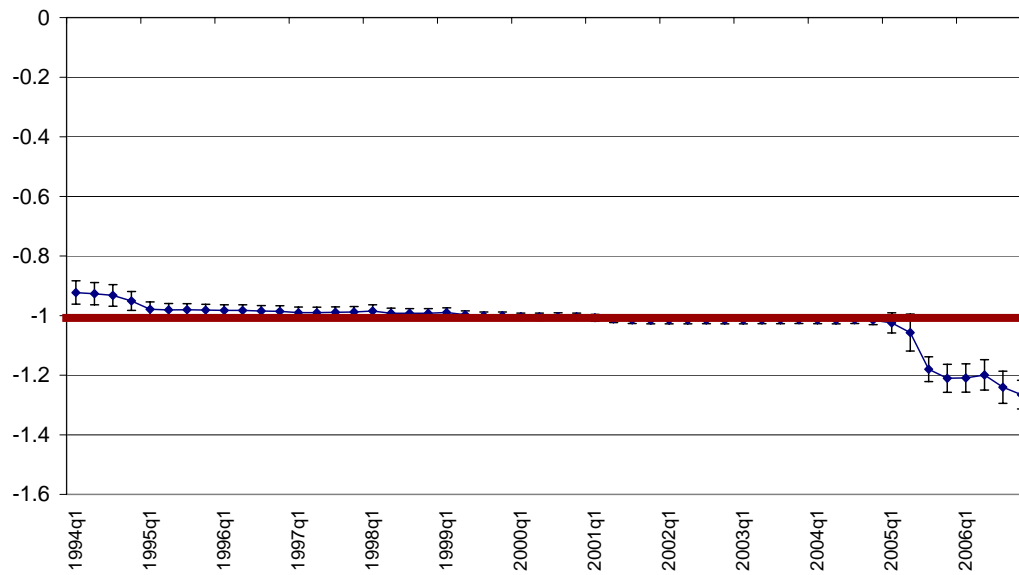
CHINA  
Sterilization Coefficient, 40-Quarter Rolling Regressions



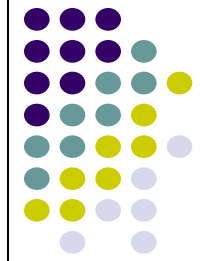
ARGENTINA  
Sterilization Coefficient, 40-Quarter Rolling Regressions



MEXICO  
Sterilization Coefficient, 40-Quarter Rolling Regressions



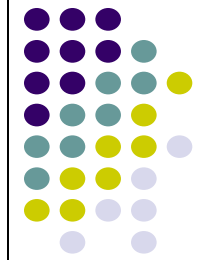
## ***IR management is subject to serious limitations***



- Moral hazard associated with insurance.
  - Macro moral hazard: IR target of opportunistic spending in regimes characterized by political instability and limited monitoring [Aizenman and Marion (2004)].
  - Micro moral hazard: IR subsidize risk taking. Levy Yeyati (2005) calls for liquid reserve requirements on banks, and an ex-ante suspension-of-convertibility clause.
- Fiscal costs
  - Opportunity cost (MPK, the cost of external borrowing).
  - Quasi Costs of sterilization [Calvo (1991)].
- East Asia: over insurance; LATAM: underinsurance? Rodrik (2006), Jeanna (2007).
- Coordination failure: competitive hoarding games

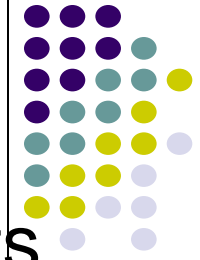


## An unintended consequence of a decentralized global architecture: greater exposure to coordination failure



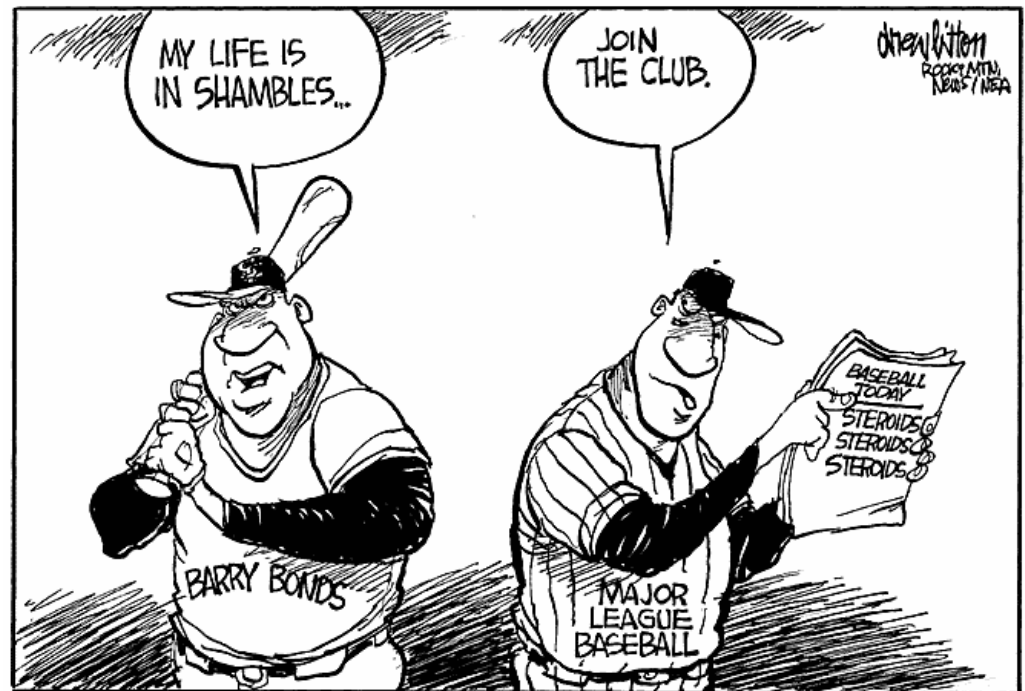
- Countries following export oriented growth strategies [described by *Dooley et al. (2004)*] may end up with competitive hoarding to improve their competitiveness in the OECD countries [Aizenman and Lee (2005, 6)].
- These developments can be accounted for in a model akin to Johnson's tariff wars.

# Symmetric emerging markets

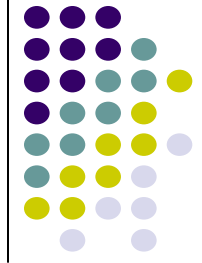


- In a world with symmetric emerging markets competing in similar industries, competitive hoarding tends to dissipate most competitiveness gains → excessive hoarding and “**Beggar-yourself**” outcomes.

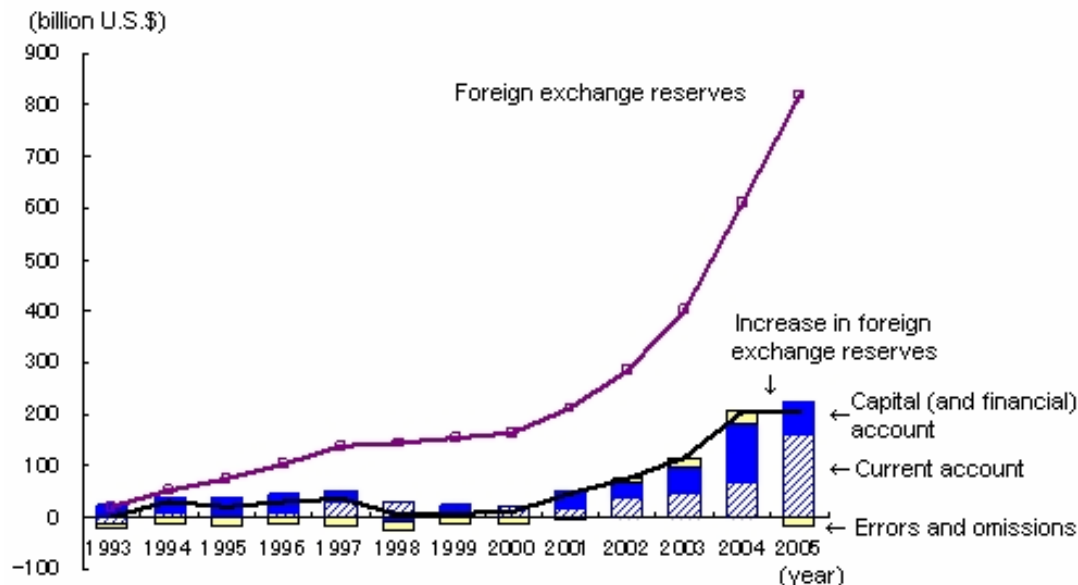
- Akin to the effects of steroids in sport.



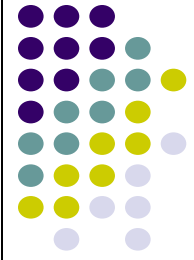
# Asymmetric world



- In an asymmetric world, an EM with high saving and restrictions on capital mobility [China], may win the hoarding war -- its non cooperative outcome is superior to the cooperative one → **“Beggars-ty-neighbor”** outcome; akin to the outcome of asymmetric tariff Wars.



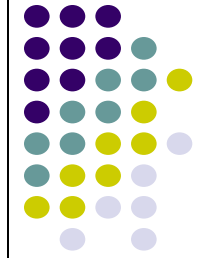
# Concluding remarks



- The emerging configuration: managed ER flexibility, greater monetary independence and financial integration.
- Growing financial integration is the unavoidable outcome of deeper trade integration.
  - **Byproduct: greater exposure to financial instability.**
- Hoarding IR -- a key ingredient enhancing the stability of the emerging configuration: self insurance, mitigating REER effect of TOT shocks, and smoothing adjustment.
- This is consistent with a more decentralized and less cooperative global financial architecture.
- THANKS FOR YOUR ATTENTION



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# Jornadas Monetarias y Bancarias, 2007

**Axel Leijonhufvud**

So far from Ricardo, so close to Wicksell

4 y 5 de Junio de 2007

So far from Ricardo,  
so close to Wicksell

Axel Leijonhufvud

University of Trento

UCLA

# Monetary and financial stability

- Not normally a trade-off.
- Price stability a prerequisite for financial markets to function well
- But CPI stability does not rule out asset price bubbles



# Japan in the 1980's

- No significant CPI inflation
- If the CB had worked with an inflation target, it would not have acted differently.
- But two enormous asset-price bubbles were growing over the decade.

Conclusion:

Inflation targeting cannot be the end-all of  
monetary policy

- 1990 was a *long time ago*. Much has changed:
  - – payments practices and the monitoring of credit
  - – deregulation of banking and the rise of financial conglomerates
  - – securitization of loans
  - – the growth of derivatives markets

# Lessons of History?

- Each major stage in the evolution of finance has introduced new instabilities
- learning to stabilize the system has taken time
- Adaptation by trial-and-error
- Some of the “errors” have been huge

- Will the present stage in financial evolution be different?
- Two questions:
  - 1) Have the developments mentioned above made the world a safer place – so we do not have to worry?
  - 2) If something does go wrong, are the powers of Central Banks adequate to cope with the consequences?.

# A Century of inflation targeting (theory)

- Michael Woodford, **Interest and Prices**  
(2003)
- Knut Wicksell, **Geldzins und Güterpreise**  
(1898)

# Wicksell's Spectrum

Ricardo

Wicksell



$$M^s = \left( \frac{1+g}{g+r} \right) G$$

$$g \rightarrow 0$$

$$r \rightarrow 0$$

$$P = \frac{V}{X} M$$

P indeterminate



- Wicksell: Not there yet, but getting closer
- Still *some* demand for outside money, but small, getting smaller....
  
- Patinkin's theorem (1960)
  - sufficient that CB can control *one* interest rate and *one* nominal quantity (for which the private sector unable to produce a close substitute)

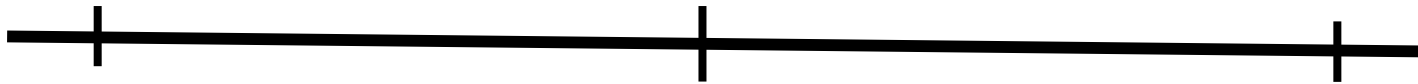


- Will controlling copper coins do?
- Suffices only to create “coin shortage”
  
- For larger stocks, the “no close substitute” condition always suspect
- Result: Goodhart’s Law

## Wicksell's Spectrum again

Ricardo

Wicksell



$$M = \frac{1+c}{c+r} B$$

Revival of the quantity theory

# Powers of central banks

- Inflation targeting successes
- Claim deserved – or historically unique conjuncture?

- Was Greenspan “the most powerful man in the world”?
- If you hike Bank rate 13 or 14 times and the market pays no attention, how powerful are you really?
- Or was it masterly matching of market rate to natural rate?
- Also: attempts to reflate by Bank of Japan

# Easy money and no inflation

- World awash in liquidity, but no inflation.
- How explain it?
- Milton F: “inflation always and everywhere... etc.
- Lemma: absence of inflation also a monetary phenomenon
- So: Exchange rate policies of a number of CBs
- But also: Bank of Japan and Fed were fighting deflation

- Suppose a *very* expansionary monetary policy ... and no inflation.
- What do you get?
- A: asset price inflation and general deterioration of credit standards

# The trouble with inflation targeting

- Wicksellian policy *adaptive*
- Behavior of price level should tell you whether your policy is too little, too much, or just right...
- Crucial feedback loop short-circuited by exchange rate policies of China, Russia, et al.
- Price level gave *no clue* to Fed that it was more than a dozen quarter-points below the market

- Japan since 1990 shows that inflation-targeting will not by itself protect against financial instability
- To which we may now add:
- Inflation targeting may mislead you into policy actively damaging to financial stability



# A Safer World?

- We have had some asset-price inflation and considerable lowering of credit standards
- How serious is it? – We don't know.
- Has securitization of loans and credit derivatives made the world a safer place?

- Risks now widely dispersed
- No longer concentrated in the banks
  
- But system as a whole has taken on more risk
- Risk spreads exceptionally compressed

# Liquidity and Imbalances

- The sanguine view:
- LTCM was dealt with so smoothly
- Enron et al. did not spook the market
- Amaranth caused not a ripple....

- What dangers might materialize will depend on:
  - First, how the extraordinary liquidity will be absorbed (through inflation or contractionary policies)
  - Where the inflationary pressures will first be felt and how national policies react

- Second, how (and when) current financial imbalances will eventually be resolved.
- The two are obviously related and the possible scenarios are numerous
- We live in interesting times....



# Jornadas Monetarias y Bancarias, 2007

**Anne C. Sibert**

Financial stability and central banks: do announcements help?

4 y 5 de Junio de 2007

**Financial Stability and Central Banks:  
Do Announcements Help?**

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30 May 2007

Prepared for the Money and Banking Conference, 4-5 June 2007

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## 1 Introduction

A common, if not consensus, view among academics and policy makers is that the most important role of a central bank in a modern society is to provide a stable means of payment. Thus, low inflation is the mandated primary goal of many countries' central banks. Central banks, however, may also be interested in promoting a secure financial system. Some threats to financial stability are best dealt with by appropriate supervision and regulation; they do not require a monetary policy response. But one particular threat – a coordination failure – can occur even in the presence of a good regulatory framework and vigilant oversight. This paper looks at how monetary policy makers might affect the likelihood of such a coordination failure occurring.

Two types of coordination failures are of particular importance to monetary authorities. The first is one that produces a bank run or a speculative attack on a pegged exchange rate. In this scenario there are multiple possible equilibria. In the socially desirable outcome a bank run or a speculative attack does not occur; in the coordination failure equilibrium the bank run or the speculative attack occurs. The second type of coordination failure is when an asset prices, such as the exchange rate, house prices or equity prices, cease to depend solely on the appropriate fundamentals. One way that this can occur with rational market participants is if they believe that a variable that ought to be extraneous is important and their beliefs are self fulfilling: the asset price diverges from what is implied solely by the fundamentals.

It is sometimes suggested that conventional monetary policy can be used to affect asset prices that are out of line with the fundamentals. Unfortunately, using monetary policy to influence an asset price – such as an exchange rate – may conflict with providing low and stable inflation. Suppose, for example, that a central bank is confronted with a rising value of its domestic currency that it



perceives as undesirable. If inflation is to be contained, it is not possible to reduce interest rates to lower the currency's value. It is not possible to use monetary policy to target both inflation and the exchange rate.

A possible solution is to adopt a more flexible attitude about the primary role of a central bank and to give the central bank multiple objectives, to allow it some discretion in trading off the costs of inflation against the costs of asset price misalignments or other coordination failures that threaten the financial system. Unfortunately, this increased flexibility comes at the cost of a loss of credibility. Suppose, for example, that inflation is low and the home currency is appreciating in a manner that suggests a bubble. The central bank could lower the interest rate for opportunistic reasons unrelated to fostering financial stability under the guise of trying to contain the exchange rate.

If society – sensibly – rejects the notion of the central bank using its interest rate policy to achieve multiple goals, then a central bank interested in combatting bubbles, sunspots, bank runs and speculative attacks must search for additional instruments. One class of instruments is those that are intended to be signals. The idea is that the central bank might signal – either through announcements or actions – that an asset price has moved away from the fundamentals or it might use its signal to coordinate the market away from a bank run or speculative attack equilibrium.

In this paper, I use results from the recent (and not-so-recent) game theory literature to suggest how the central bank's signalling might matter in three scenarios. In the first scenario I suppose that the central bank can make an informative announcement about the state of the economy. I discuss how this may be useful for aligning asset prices with the fundamentals – at least if the central bank's information is reasonably precise – but it can cause the possibility of a bank run or speculative attack, especially if the central bank's information is precise. In the second scenario I suppose that the central bank has an incentive to misrepresent

its information. I explain that as long as a central bank's interests are not too different from a private sector agent's it may still be able to provide the private sector with some useful information. Finally, I suppose that it is possible for a central bank to affect the likelihood of a bank run or a speculative attack through a costly action. I discuss how the possibility of the action functioning as a signal of the fundamentals and can give rise to self-fulfilling expectations and multiple equilibria.

## **2 What happens when the central bank provides useful information?**

Indeterminacy is a prominent feature of financial asset prices. How much a person is willing to pay for a financial asset depends upon what the person believes that other people are willing to pay for that asset now and in the future. This gives rise to the possibility of self-fulfilling expectations and multiple equilibria.

As an example, suppose that the exchange rate is pegged and that the central bank has the will and resources to withstand a limited attack on its currency, but not a sufficiently large attack. If market participants believe that other market participants will not attack the currency then they know that they cannot successfully attack it alone and they do not attack: the central bank successfully maintains its peg. On the other hand, if market participants believe that all other market participants are going to attack, they know that the attack will be successful and they have an incentive to join in: the peg collapses. As another example, suppose that all economic fundamentals are expected to remain constant over time and the home exchange rate floats. Then, there is a *fundamental* equilibrium where the value of the home currency remains constant over time. There are, however, also an infinite number of *bubble* equilibria where the currency appreciates or depreciates at some particular rate because it is expected that this is likely and market participants' beliefs are self-fulfilling.

Coordination failures, where market participants force a bank run or a speculative attack, even though this is not required by the fundamentals, or where asset prices depart from what they would be if they were determined solely by the fundamentals are costly. The after effect of an attack on a currency or the eventual collapse of a bubble is not just a redistribution of income. The inevitable bankruptcies and restructurings eat up real economic resources. In this section I consider the case where the central bank can provide useful information to the private sector and ask whether this information can coordinate the private sector on a "good" equilibrium or whether it is likely to cause or exacerbate a coordination failure. In the first subsection I consider the effect of central bank information on speculative attacks; in the second I consider the central bank's role in preventing asset price misalignments.

## **2.1 Bank Runs and Speculative Attacks**

### **2.1.1 The classic model of bank runs and speculative attacks**

In this section I consider the classical model of a coordination failure in financial asset markets: the model of a bank run or a speculative attack on a fixed exchange rate regime. In this framework the private sector is made up of many small market participants: I represent them as points in the interval  $[0, 1]$ . Each private sector agent can choose to "attack" (that is, withdraw his money from a bank or to speculate against the domestic currency) or to "abstain" from attacking. Agents who do not attack get a payoff of zero. It costs an agent  $\delta$  units to attack, but if the attack is successful an agent who participates receives a payment of one unit. Thus, the overall payment to an agent who participates in a successful attack is  $1 - \delta$  units and the payment to an agent who participates in an unsuccessful attack is  $-\delta$  units.

The fraction of agents who choose to attack is denoted by  $A$ . To capture the

idea that the success or lack of success of an attack depends on the fundamentals, it is assumed that the attack succeeds if and only if  $A > \theta$ , where  $\theta$  is a variable representing the fundamentals.

In the classical bank run model,  $\theta$  is common knowledge. For "good" fundamentals, where  $\theta \geq 1$ , individual private sector agents know that there can be no successful attack. Thus, they do not attack. For "poor" fundamentals, where  $\theta < 0$ , agents know that there will be a successful attack and each attacks. With "intermediate" fundamentals, however, where  $0 \leq \theta < 1$ , multiple equilibria are possible. If each private sector agent believes that all other private sectors will attack then he believes that  $A = 1 > \theta$  and a successful attack will occur. Thus, each agent finds it rational to join in and their expectations are validated. Likewise, if each private sector agent believes that no other private sector agent will attack then he believes that  $A = 0 \leq \theta$  and there will be no successful attack. Thus, each agent abstains and, again, agents' beliefs are validated.

The two equilibria in the intermediate fundamentals case are *Nash equilibria*: no agent regrets his choice given the behavior of other agents. But, it is difficult to explain how these equilibria arise. The situation is similar to one where two friends have agreed to meet in New York City at noon but have forgotten to specify where to meet (and also their cell phones). They both want to coordinate and end up at the same place, but it is not clear how such an outcome could occur.

As there is no explanation of how agents form their expectations in the classical model of speculative attacks, there is no obvious way for central bank announcements or other signals to affect the outcome. A more modern theory introduces uncertainty about the fundamentals and focuses on how expectations are formed and how coordination might occur. This provides a role for the central bank's provision of information to matter.

### 2.1.2 A more modern model with imperfect information

Suppose that the model is modified slightly: the fundamental variable  $\theta$  is no longer known. Instead, each private sector agent  $i \in [0, 1]$  has an (improper) prior belief that realizations of  $\theta$  are equally likely and then receives an independent signal  $x_i$  of  $\theta$ . This signal has mean  $\theta$  and is his private information.<sup>1</sup>

With this modification the equilibrium becomes unique and has a *threshold* property. There are an  $x^*$  and a  $\theta^*$  such that each agent attacks if his individual signal is less than  $x^*$  and the attack succeeds if and only if  $\theta < \theta^*$ . As a concrete example, suppose that  $\delta = 1/10$  so that the payoff to attacking when the attack is unsuccessful is  $-\delta = -1/10$  and the payoff to attacking when the attack is successful is  $1 - \delta = 9/10$ . Suppose also that each agent's signal is distributed uniformly on  $[-1/2, 1/2]$ .

If a private sector agent who receives the signal  $x^*$  is indifferent between attacking and abstaining, then agents with signals less than  $x^*$  will find it optimal to attack and agents with signals greater than  $x^*$  will find it optimal to abstain. As the payoff to not attacking is zero, to find  $x^*$  take  $\theta^*$  as given and find the  $x^*$  such that an agent with  $x_i = x^*$  has an expected payoff from attacking that is equal to zero. This is the case when the probability of a successful attack is  $1/10$  :

$$1/10 = \Pr(\theta < \theta^* | x_i = x^*) = 1/2 - (x^* - \theta^*). \quad (1)$$

If the threshold value of  $\theta$  is  $\theta^*$  then clearly an attack succeeds if  $\theta < \theta^*$  and fails if  $\theta > \theta^*$ . To find the threshold value  $\theta^*$  find the value of  $\theta$  such that the fraction of private sector agents who attack is equal to  $\theta$ . Given  $x^*$ , this fraction of agents who attack is equal to the probability that any individual's signal is less than  $x^*$ .

---

<sup>1</sup>The idea behind this variant of the model may originate with Carlsson and van Damme (1993), who show that in an incomplete information game where players receive noisy private signals there is a unique equilibrium.

Thus

$$\theta^* = \Pr(x_i < x^* | \theta = \theta^*) = (x^* - \theta^*) + 1/2. \quad (2)$$

Solving (1) and (2) yields  $x^* = 13/10$  and  $\theta^* = 9/10$ : there is a unique equilibrium where a private sector agent attacks if and only if his signal is strictly less than  $13/10$  and the attack succeeds if and only if  $\theta$  is less than  $9/10$ .

The intuition behind this uniqueness result is that, while private sector agents have some information about the fundamentals as a result of their own signal, they do not have enough information about other agents' information either to launch a coordinated attack or to coordinate on abstention.

### 2.1.3 A role for the central bank

To see how the central bank might play a role in affecting the likelihood of speculative attacks, consider again the problem of the friends who want to meet in New York City. As they gain from coordinating, they will seek to find a way to do so. Suppose that each of them recalls that a popular meeting place is under the clock in Grand Central Station. This in itself is not sufficient for coordination. If one friend knows that the clock is a common place to meet but does not think that the other friend knows this, he is unlikely to go to Grand Central Station. But, if each friend knows that the clock is a typical meeting place and knows that his friend knows this and knows that his friend knows that he knows this and so on, then it is *common knowledge* that the clock is a good place to meet and this can make the clock serve as a *focal point*.

A central bank announcement may play a similar role in coordinating expectations. Suppose that in addition to each private sector agent receiving his own signal that there is a public announcement of useful information. This signal plays two roles: it provides each private sector agent with additional information and it gives agents something to coordinate on.

### 2.1.4 How do central bank announcements of useful information affect the likelihood of speculative attacks?

Suppose that private sector agent  $i$  receives his own signal

$$x_i = \theta + \epsilon_P^i, \quad i = 1, 2, 3 \quad (3)$$

and that there is a common knowledge central bank signal

$$y = \theta + \epsilon_G, \quad (4)$$

where  $\epsilon_P^i$ ,  $i \in [0, 1]$  and  $\epsilon_G$  are mean zero, independent and normally distributed. The private sector signals have variance  $1/\rho$  and the central bank's signal has variance  $1/\gamma$ . The variables  $\rho$  and  $\gamma$  can be interpreted as the quality or precision of the private sector and central bank signals, respectively. It can be shown that after receiving his signal each private sector agent  $i$  believes that  $\theta$  is normally distributed with mean  $x_i^* = \frac{\gamma y + \rho x_i}{\rho + \gamma}$  and variance  $\frac{1}{\rho + \gamma}$ . Given  $y$  and  $\theta$ , private sector agents believe that  $x_i^*$  is normally distributed with mean  $\frac{\gamma y + \rho \theta}{\rho + \gamma}$  and variance  $\frac{\rho}{(\rho + \gamma)^2}$ .

As in the previous section, I now look for threshold equilibria where  $x^*$  and  $\theta^*$  are such that an agent with  $x_i^* = x^*$  is indifferent between attacking and abstaining and a successful attack occurs if and only if  $\theta < \theta^*$ . Analogously to equation (1),  $x^*$  is found by equating the cost of attacking,  $\delta$ , to a private sector agent's probability assessment that  $\theta < \theta^*$  when his signal is  $x^*$ :

$$\delta = \Phi \left( \frac{\theta^* - x^*}{\sqrt{\rho + \gamma}} \right), \quad (5)$$

where  $\Phi$  is the c.d.f. of a standard normal distribution. Analogously to equation (2),  $\theta^*$  is found by equating  $\theta^*$  to the probability that a private sector agent's signal

is less than  $x^*$  when  $\theta = \theta^*$  :

$$\theta^* = \Phi \left( \frac{(\rho + \gamma) x^* - \gamma y - \rho \theta^*}{\sqrt{\rho}} \right). \quad (6)$$

It can be shown that a unique equilibrium exists if and only if  $\frac{\gamma}{\sqrt{\rho}}$  is sufficiently small.<sup>2</sup> That is, the equilibrium is unique if and only if the central bank's information is not too precise. If the central bank information becomes too precise multiple equilibria can occur.

This result can be seen for the particular example of  $\delta = 1/2$ . In this case, solving equation (5) yields  $\theta^* = x^*$ . Substituting this into equation (6) yields

$$\theta^* = \Phi (\alpha (\theta^* - y)), \quad (7)$$

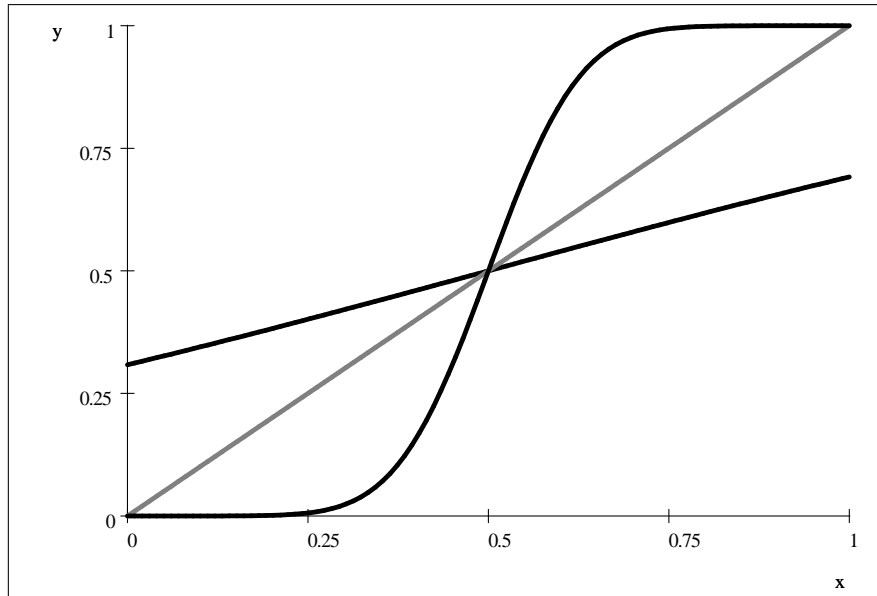
where  $\alpha \equiv \frac{\gamma}{\sqrt{\rho}}$ . For the case of  $y = 1/2$ , the outcome is shown in the figure below. The grey line is the forty-five degree line (the left-hand side of equation (7)); the straight black curve that crosses the forty-five degree line once is the case of  $\alpha = 1$  and the other black curve is the case of  $\alpha = 10$ . For the smaller value of  $\alpha$  there is a unique equilibrium; for the larger value of  $\alpha$  there are three equilibria.

NormalDist ( $x - 1/2$ )

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<sup>2</sup>These results are due to Hellwig (2002), Metz (2002) and Morris and Shin (2004).





The Possibility of Multiple Equilibria

### 2.1.5 Policy advice

The information in the above models is assumed to be common knowledge. Not all announcements by the government are believed to be true, let alone common knowledge. The private sector does not typically treat finance ministers' protestations that it is unthinkable that their currency ever be devalued as a common knowledge statement that the fundamentals are strong enough to resist any attack. However, some government information may be common knowledge. An announcement that last month's inflation was two percent might result in it being common knowledge that the government's best guess is that inflation was indeed two percent. If the central bank or government wishes it to be common knowledge that its announcement is a truthful revelation of the information it has, then an institution for conveying this information should be set up and any decisions about how precise the information ought to be must be set up in advance, before the fundamentals are realized. It must be prohibitively costly to influence the institution or change a decision about precision in response to a particularly good or bad signal that is the central bank or government's private information.

Extracting policy advice from the above literature about institutions for releasing information is somewhat difficult. It has been suggested that central bank announcements might be used as a way of coordinating the private sector away from bank runs and speculative attacks. But, the it appears that providing precise enough information may make such equilibria possible, where they were not before. It is not possible to say whether the multiple equilibrium outcome with precise central bank information or the unique equilibrium outcome of the less precise central bank information is better: we do not have a theory of how likely the different outcomes are in the multiple equilibrium case.

A paper by Metz (2003) provides some suggestions however. Suppose that central bank information is insufficiently precise to generate multiple equilibria. Then comparative statics are possible and the effect of a marginal change of the precision of central bank announcements on the likelihood of a speculative attack is possible. She demonstrates that there is cutoff value of  $\theta^*$  such that when  $\theta^*$  is above this cutoff value (and speculative attacks are relatively likely) then an increase in the precision of central bank announcements makes them more likely. If  $\theta^*$  is below this cutoff value (and speculative attacks are relatively unlikely) then an increase in the precision of central bank announcements makes them less likely. The intuition is simple. Suppose that speculative attacks are relatively likely and the precision of central bank announcements increases. Then central bank signals that suggests that fundamentals are poor occur more likely and when they do the increased precision has two effects. Private sector agents believe smaller attacks will succeed so coordination is less important and they believe that other agents will be putting more weight on the central bank signal so more coordination will occur. The intuition for the case of relatively good fundamentals is similar.

## **2.2 Asset Price Misalignments**

Can the central bank use common knowledge information as a policy tool to improve welfare when asset prices are misaligned? An interesting recent paper by Morris and Shin (2002) argues that this need not be the case; in their framework informative central bank announcements can make society worse off and lower quality announcements can be better than higher quality announcements. Thus this paper is often viewed as making the case that central banks might improve matters by deliberately withholding information from the public, or at least by making the information that they provide more ambiguous. In this section I review the paper and discuss its implications and empirical relevance. I consider whether ambiguity might be desirable in other contexts and discuss suggestions for how publicly provided information can be made less damaging.

### **2.2.1 Some background and intuition**

In financial markets, if there is no information that is common knowledge, then people will act on the basis of what they know about the fundamentals. But if there were a focal point, then people might coordinate on that focal point. Examples of such a focal points were the announcements of Henry Kaufman, the Solomon Brothers economist who was famous during the 1970s and early 1980s for his interest rate forecasts, and the comments of former Fed chairman Alan Greenspan, whose recent remarks on China promoted a decline in Chinese equity prices and whose mention of recession helped cause US stocks to tumble earlier this year. In both cases market participants viewed these pundits' announcements as not just informative about the state of the economy; they also knew that other market participants actions would depend on what was said.

In Morris and Shin's (2002) paper, the central bank has information about the economy that it can make common knowledge. Thus, the central bank's

announcements become a focal point and this can be good and bad. By providing useful information the central bank makes the private sector better informed. But, it gives the private sector a way to coordinate. If the private sector has an incentive to coordinate then it will place too much weight on the central bank's information and too little weight on its own information: the central bank information crowds out the private sector's information. If the second effect dominates the first, the central bank information can be harmful.

If the central bank provides information, then making the information of marginally better quality can also lower welfare. This is because an increase in the quality of the central bank information increases the weight that the private sector puts on the central bank signal. If the quality of the central bank signal is poor then this latter effect can dominate the effect of better available information.

In the remainder of this section, I present a simplified version of Morris and Shin's paper and then argue that the result is empirically irrelevant. The central bank would have to be woefully incompetent for the central bank's information to worsen things or for more precise information to be harmful. I also discuss the implications of central banks being ambiguous in other scenarios and discuss what might be done to ameliorate any harmful effects of central bank information.

### **2.2.2 Morris and Shin's (2002) model**

Market participants would like to choose the most appropriate action given the fundamentals, but they would also like to pick the action that other market participants pick. If the central bank made no announcement, market participants would have to rely on their own private information; they would have no way to coordinate

The model consists of the central bank and the private sector, which comprises three agents.<sup>3</sup> The state of the economy is again given by the variable  $s$ .

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<sup>3</sup>This is a simplification: Morris and Shin (2002) consider a continuum of agents, but the

The objective functions of the private sector agents capture the idea that, while there are welfare gains from picking the action that is most appropriate for the fundamentals, agents who coordinate on an action that is not justified solely by the fundamentals can gain at the expense of those who do not coordinate.

The private sector welfare functions of agents one, two and three are:

$$\begin{aligned}
W_P^1 &= -\phi(a_1 - s)^2 - (1 - \phi) \left[ \frac{1}{2}(a_1 - a_2)^2 + \frac{1}{2}(a_1 - a_3)^2 - (a_2 - a_3)^2 \right] \\
W_P^2 &= -\phi(a_2 - s)^2 - (1 - \phi) \left[ \frac{1}{2}(a_2 - a_1)^2 + \frac{1}{2}(a_2 - a_3)^2 - (a_1 - a_3)^2 \right] \\
W_P^3 &= -\phi(a_3 - s)^2 - (1 - \phi) \left[ \frac{1}{2}(a_3 - a_1)^2 + \frac{1}{2}(a_3 - a_2)^2 - (a_1 - a_2)^2 \right],
\end{aligned} \tag{8}$$

where  $\phi \in [0, 1]$  is a parameter measuring the importance to individual agents of picking the action justified by the state of the economy relative to picking the action that helps them coordinate. Each agent dislikes deviations of his action from  $s$  and dislikes deviations of his actions from the other agents' actions. This specification ensures that the coordination is a zero-sum activity and the central bank's welfare, which is equal to average private sector welfare, depends only on picking actions that fit the fundamentals:

$$W_G = \frac{W_P^1 + W_P^2 + W_P^3}{3} = -\frac{\phi}{3} [(a_1 - s)^2 + (a_2 - s)^2 + (a_3 - s)^2]. \tag{9}$$

Given their welfare functions, each agent's optimal action is a weighted average of his forecast of the state of the economy and the average actions of the other

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results are the same.

two agents. Specifically,

$$\begin{aligned}
a_1 &= \phi E^1(s) + (1 - \phi) E^1\left(\frac{a_2 + a_3}{2}\right) \\
a_2 &= \phi E^2(s) + (1 - \phi) E^2\left(\frac{a_1 + a_3}{2}\right) \\
a_3 &= \phi E^3(s) + (1 - \phi) E^3\left(\frac{a_1 + a_2}{2}\right),
\end{aligned} \tag{10}$$

where  $E^i$  is the expectation or forecast of agent  $i$  given his information: his own signal and the publicly observed central bank signal.

It is assumed that the private sector agents and the central bank noisy signals of  $s$ . As in section 2.1.4 (equations (3) and (4)), private sector agent  $i$  receives a signal of the fundamental  $s + \epsilon_P^i$  and the central bank receives a signal of the fundamental  $s + \epsilon_G$ . The error terms are normally distributed with mean zero and precisions  $\rho$  and  $\gamma$ , respectively.

Agent  $i$ 's expectation of the state of the economy is a weighted average of his own signal and the central bank's signal:

$$E^i(s) = \frac{\gamma y + \rho x_i}{\rho + \gamma}. \tag{11}$$

The more precise is the central bank's signal, the more weight is placed on it.

There is a unique equilibrium. To find it, conjecture that in equilibrium the private sector agents' actions are weighted averages of their own signal and the central bank's signal. Then

$$a_i = \omega x_i + (1 - \omega) y, \quad \omega \in (0, 1). \tag{12}$$

To find the weight  $\omega$ , substitute equation (12) into equation (10) to find

$$\omega x_i + (1 - \omega) \phi y = (\phi + \omega - \phi \omega) E^i(s). \tag{13}$$

Substituting equation (11) into equation (13) yields

$$[\omega (\gamma/\rho + \phi) - \phi] (x_i - y) = 0. \quad (14)$$

Equation (14) always holds if and only if  $\omega = \phi / (\gamma/\rho + \phi)$ . Thus, by (12) an equilibrium has

$$a_i = \frac{\phi \rho x_i + \gamma y}{\gamma + \phi \rho}. \quad (15)$$

The more precise is the central bank's signal relative to the private sector's signal, the more weight the private sector puts on the central bank's information in the determination of its actions. To compute the central bank's expected welfare, substitute equation (15) into equation (9) and take the expected value to find

$$E(W_G) = -\frac{\phi (\gamma + \rho \phi^2)}{(\gamma + \rho \phi)^2}. \quad (16)$$

Differentiating equation (16) yields

$$\frac{\partial E(W_G)}{\partial \gamma} = \frac{\phi [\gamma + (2\phi - 1) \phi]}{(\gamma + \rho \phi)^3}. \quad (17)$$

As long as private sector agents do not place too much weight on coordination ( $\phi \geq 1/2$ ), the above expression must be positive and expected welfare is increasing in the quality of the central bank signal, falling to  $-\phi/\rho$  as the quality goes to zero and rising to zero as the signal becomes perfect. The policy advice in this case is clear: the central bank should be as precise as it is able to be. However, if agents place sufficient weight on coordination ( $\phi < 1/2$ ) expected welfare can be decreasing in the precision of the central bank signal. This is the case if

$$\frac{\rho}{\gamma} > \frac{1}{\phi(1 - 2\phi)}. \quad (18)$$

### 2.2.3 The empirical relevance

This striking result suggests that central banks might improve matters by refusing to provide any information. But, is this the appropriate policy advice? Even if there is reason to believe that  $\phi < 1/2$  – and this is questionable – the answer is probably no. For a central bank to do better by refusing to provide any information (that is, by setting  $\gamma = 0$ ), equation (16) implies that the ratio of the quality of the central bank’s signal to the quality of any private sector signal must be less than  $1 - 2\phi$ . Thus, even in the most extreme case where the private sector cares solely about coordination and  $\phi = 0$  the central bank’s signal would have to be more imprecise than a private agent’s signal and this seems unlikely to be true.

It is even more unlikely that a marginal increase in imprecision would raise welfare. When, for example  $\phi = 1/4$ , the precision of any private sector agent’s signal has to be *eight* times as high as the precision of the central bank’s signal for this result to be relevant. As  $\phi = 1/4$  minimizes the right-hand side of condition (18), this is the least extreme case! When  $\phi = 1/20$  or  $9/20$  then the precision of any private sector agent’s signal must be over 22 times as high as the precision of the central bank’s signal for increasing ambiguity to be beneficial.

### 2.2.4 Central bank ambiguity is unambiguously bad in scenarios where coordination is good

That public signals might conceivably be bad in a particular scenario does *not* imply that imprecision may be desirable in other scenarios. Angeletos and Pavan (2006) argue that Morris and Shin’s (2002) result is driven by coordination being privately, but not socially, beneficial. If coordination yields social benefits, then public information may unambiguously increase welfare. An example, due to Hellwig (2005) and Roca (2006) is a scenario where monopolistically competitive firms set prices based on idiosyncratic signals leading to distorted relative prices.



Increased precision of a central bank announcement helps to reduce this welfare-lowering price dispersion.

### **2.2.5 What can be done to lessen the harmful effects of announcements**

Some authors have suggested measures that central banks might take to reduce the harmful effects of public information provision. Heinemann and Illing (2002) suggest that matters may be improved upon if the central bank sends its signal to different agents separately and containing agent-specific noise. Cornand and Heinemann (2002) suggest that if the central bank information is insufficiently precise to be welfare enhancing, then the central bank may improve matters by releasing its information to only a subset of the population. The partial disclosure suggested in both of these papers reduces the incentive of any agent who receives a signal to overreact to it.

While of theoretical interest, these suggestions are likely to be of limited usefulness to central banks. Deliberately releasing different market information to different agents or to a subset of agents is unlikely to be popular in a democratic society.

## **3 Cheap Talk**

"One peso, one dollar, full stop." (President Carlos Menem)

In some situations policy makers may know with greater certainty than the private sector what has happened or what will happen and they may want to convey some of this information to the public. One tactic for policy makers is to just say what they want the public to know. Unfortunately, in its strategic interaction with the central bank, the public is aware that – as well as wanting to be informative – the central bank often has an incentive to misrepresent the truth. Its credibility is frequently suspect. The markets did not believe Chancellor of the Exchequer Norman Lamont's assurances that in 1992 that there was not a

"scintilla of doubt about the pound" and they quickly brushed off Fed Chairman Alan Greenspan's 1996 warnings about "irrational exuberance". It is frequently suggested that speeches are poor signals of future events because – to be effective – a signal must be costly and "talk is cheap". The information conveyed in a speech need not become common knowledge.

On the other hand, not all policy makers are ignored. Market participants pore over central bank central bankers' speeches, hoping to understand their views. In this section I suggest that as long as the central bank has some incentive to misrepresent its knowledge, then it will be unable to convey precise information to the public with "cheap talk". But, as long as the central bank and the private sector's interests are not too divergent, speeches can be an additional tool for monetary policy makers; policy makers can credibly convey *imprecise*, but useful, information to the private sector about the health of the economy.<sup>4</sup>

To see this, consider a scenario where the central bank has private information about the health of the economy. The public wants to know the information exactly so that it can make the best possible decision. The central bank cares about the public making the right decisions, but perhaps for opportunistic political reasons, it would like the private sector to believe that the economy is doing better than it actually is. Thus, the central bank and the public have some common interest: the central bank does not want the public to be too imperfectly informed. But, their interests are not perfectly aligned.

Formally, assume that the central bank information about the state of the economy is summarized in the variable  $s$ . The public does not observe  $s$  but it knows that  $s$  is drawn from a uniform distribution on  $[0, 1]$ . The public makes a report to the public about  $s$ . Then, given what it knows about  $s$  following the

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<sup>4</sup>This is based on the work of Crawford and Sobel (1982).

report, the public chooses an action  $a$ . The public's welfare is given by

$$W_P = -(a - s)^2. \tag{19}$$

Thus, the private sector dislikes any deviation of its action from the correct state of the economy. Given its welfare function, the public chooses its action  $a$  to be equal to the expected value of  $s$  given its updated information following the central bank report.

Given  $s$  and the public's choice of an action, the central bank's welfare is given by

$$W_G = -[a - (s + \phi)]^2, \quad \phi > 0 \tag{20}$$

This says that the central bank wants the private sector to choose an action  $s + \phi$ , and it dislikes any deviation from this. Thus, it wants the private sector's expected value of  $s$  to be  $s + \phi$ . If  $\phi$  were equal to zero, then the central bank's and private sector's interests would be perfectly aligned. The smaller is  $\phi$ , the more closely their interests are aligned.

Given that the central bank would like to systematically fool the public into thinking that the health of the economy is  $\phi$  units better than it actually is, there can be no equilibrium where the central bank provides precise (that is, deterministic) information. If the public believed the central bank was biasing its report upward by some amount, the public would subtract off the amount of the bias in forming its report. But, then the central bank would want to report an even higher figure and the public would subtract even more, and so on.

There is however an imprecise outcome that involves no sharing of information at all. The central bank announces that the fundamental is somewhere on  $[0, 1]$  and, rationally, the public infers nothing from the public's announcement. Since the public does not update its beliefs in response to the central bank's announcement, the central bank has no reason to change its behavior.

If  $\phi$  is small enough ("small enough" turns out to be strictly less than one fourth), there is, however, another possible outcome where the central bank is able to provide useful imprecise, or noisy, information. To see this, suppose that  $[0, 1]$  is partitioned into two parts:  $[0, s^*]$  and  $[s^*, 1]$ . The central bank then tells the public that the economy is either doing well (that is,  $s \in [s^*, 1]$ ) or that it is doing poorly (that is  $s \in [0, s^*]$ ). If the public is told that the economy is doing well then it knows that the expected value of  $s$  is  $(s^* + 1) / 2$  and it chooses  $a = (s^* + 1) / 2$ . If the public is told that the economy is doing poorly then it knows that the expected value of  $s$  is  $s^* / 2$  and it chooses  $a = s^* / 2$ .

For this to be an equilibrium, it must be that the central bank had no incentive to make an incorrect report. This is the case if the central bank is indifferent between reporting that the economy is doing well and that the economy is doing poorly in the borderline case  $s = s^*$ . By equation (20) the central bank's welfare when  $s = s^*$ , the central bank reports the economy is doing well and the public consequently chooses  $a = (s^* + 1) / 2$  is

$$-[(s^* + 1) / 2 - (s^* + \phi)]^2 .; \tag{21}$$

Likewise, its welfare when  $s = s^*$ , it reports the economy is doing poorly and the public consequently chooses  $a = s^* / 2$  is

$$-[s^* / 2 - (s^* + \phi)]^2 . \tag{22}$$

The expressions in (21) and (22) are equal to each other when

$$(s^* + 1) / 2 - (s^* + \phi) = -s^* / 2 + (s^* + \phi) \tag{23}$$

and, thus,  $s^* = (1 - 4\phi) / 2$ . Such an  $s^* \in (0, 1)$  exists as long as  $\phi < 1/4$ .

If the central bank and public's interests are even more closely aligned, finer

partitions are possible. For example, if  $\phi < 1/12$  the set  $[0, 1]$  can be partitioned into three subsets divided by  $s^* = (1 - 12\phi)/3$  and  $s^{**} = (2 - 12\phi)/3$ .

Thus, the lesson from this strand of the game theory literature on cheap talk is that if there is some conflict between the objectives of the central bank and the private sector, no precise statement – such as "One peso, one dollar, full stop," is credible. But it is possible to have outcomes where the central bank is able to use cheap talk to convey less precise information about the outcome. The reason that this "cheap talk" is possible – even though there is no exogenous cost – is that there is an endogenous cost in the form of the public's reaction. Too extreme a statement, say claiming the economy is doing "well" when it is really doing "poorly" causes the private sector to take an action that is harmful to the central bank.

#### 4 Actions as Signals

When governments cannot provide information through announcements, because such announcements are not credible, they may be able to provide information through costly actions. In this section I use the model of Angeletos, Hellwig and Pavan (2006) to discuss how costly intervention by the central bank may be taken by the market as a signal of its type.<sup>5</sup>

Consider again the example of a speculative attack/bank run model of section 2.1.2. There atomistic private sector agents are represented by the interval  $[0, 1]$ . These agents incur a cost of  $1/10$  units if they attack and they receive a benefit of 1 unit if the attack succeeds. The attack is successful if the fraction of agents who attack, denoted by  $A$ , is greater than a fundamental variable  $\theta$ . The fundamental is unobservable and agents' prior belief is that realizations of  $\theta$  are equally likely. Each agent  $i \in [0, 1]$  receives a noisy signal  $x_i = \theta + \epsilon_i$  of  $\theta$  where  $\epsilon_i$  is uniformly

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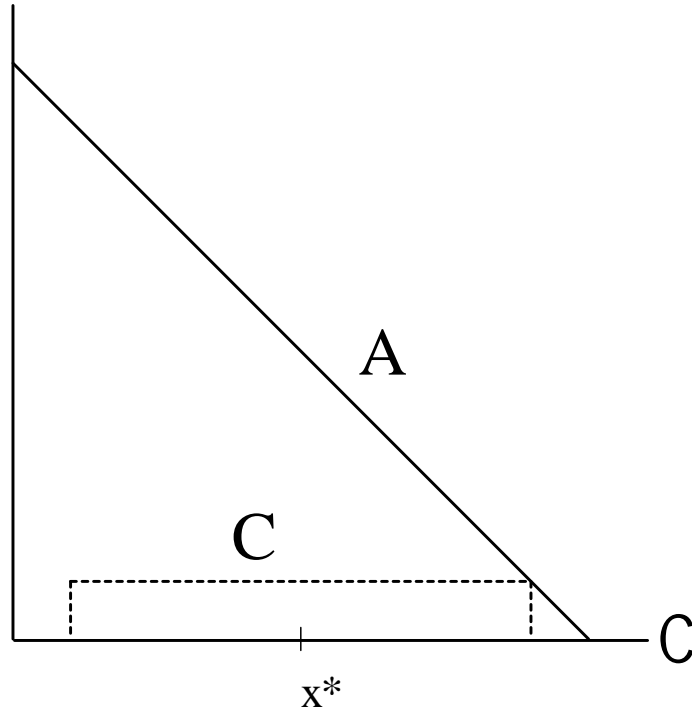
<sup>5</sup>The model is also related to the signalling and countersignalling model of Feltovich, Harbaugh and To (2001).

distributed on  $[-1/2, 1/2]$ . This model example has a unique equilibrium where each agent attacks if his signal is strictly less than  $13/10$  and the attack succeeds if the fundamental  $\theta$  is strictly less than  $9/10$ .

There is no role for the central bank in this simple model. Here, the model is extended to allow for central bank activism. Suppose that the realization of  $\theta$  is known to the central bank and is its private information. Assume further that the central bank can affect the outcome by a costly intervention that causes the cost to private sector agents of attacking to rise. Let  $C(\delta) = \delta - 1/10$  be the cost to the central bank of making the cost to the private sector be  $\delta \in (1/10, 1)$ . Assume that the central bank gets  $\theta - A$  if it averts an attack; this captures the idea that the fundamental represents the will of the central bank to fight an attack. The central bank's payoff is then  $\theta - A - C(\delta)$  if the attack fails and  $-C(\delta)$  if the attack succeeds.

Central banks with sufficiently good fundamentals do not need to intervene and central banks with sufficiently poor fundamentals find intervention useless. Central banks with intermediate fundamentals, however, might find the cost of intervention to be less than the benefit from reducing the size of an attack. Thus, if the private sector were to see a central bank intervene it would know that the central bank is an intermediate type and this would affect the private sector's behavior. The private sector takes the central bank's costly action as a signal of its type  $\theta$ .

The result of this is that the original non-intervention equilibrium is still a possible outcome but there exist a continuum of other equilibria as well. These equilibria have the property that they depend on the intervention level that intermediate types choose:  $\delta^* \in (1/10, 1)$ . Given this (indeterminate) intervention level the equilibrium is as follows. The set of possible central bank types is partitioned into three sets: "poor" types, "intermediate" types and "good" types. Only intermediate types intervene. No private sector agent attacks when there is



intervention. If there is no intervention then there is a threshold level of the signal below which a private sector agent attacks. The attack is successful if and only if the central bank is a poor type.

As an example, suppose that  $\delta^*$  is  $1/5$ . Then the cost to intervention is  $1/10$ . Poor central banks are those with  $\theta < 1/10$  and good central banks are those with  $\theta > 9/10$ . Intermediate types have  $\theta \in [1/10, 9/10]$ . If there is no intervention, the threshold value of the signal is  $1/2$ ; if the signal is less than  $1/2$  the private sector agent attacks if it is greater than  $1/2$  the private sector agent does not attack. Thus, if a central bank does not intervene the size of the attack is the probability that a signal  $\theta + \epsilon_i$  is less than  $1/2$ . As the noise term is uniform on  $[-1/2, 1/2]$  the probability is zero if  $\theta$  is greater than one, one if  $\theta$  is less than zero and  $1 - \theta$  otherwise. This is depicted in the figure below by the line labelled "A". The intervention cost incurred is zero for good and poor types and  $1/10$  for intermediate types; this is depicted in the figure by the dotted line labelled "C".

To see that this must be an equilibrium consider the central bank of type  $1/10$

who is on the borderline between poor and intermediate types. It is indifferent between intervening and not intervening. If it intervenes no private sector agent attacks but it incurs an intervention cost. Its payoff is its type minus the cost:  $1/10 - 1/10 = 0$ . If this central bank does not intervene the attack is successful and it also gets a payoff of zero. Now consider the central bank who is borderline between being an intermediate and a good type; it too is indifferent between intervening and not intervening. If it intervenes there is no attack and its payoff is its type minus the intervention cost:  $9/10 - 1/10 = 4/5$ . If it does not intervene then there an unsuccessful attack of size  $1/10$ ; the payoff is again  $9/10 - 1/10 = 4/5$ . Finally, consider the threshold signal  $1/2$ . If there is no intervention, an agent who receives such a signal should be indifferent between attacking and not attacking. This is the case if the probability of a successful attack is  $1/10$ . The likelihood that the attack succeeds is the probability that  $\theta < 1/10$  when the signal is  $1/2$ . This is equivalent to the probability that the noise term is less than  $-4/5$  and this probability is  $1/10$ .

The intuition behind the hump-shaped outcome is that intermediate types can distinguish themselves from poor types by incurring the cost of the signal. The poor types do not find it beneficial to signal; they do not benefit enough from halting an attack. The good types can distinguish themselves from the intermediate types by pooling with the poor types. The intermediate types are unwilling to do this because of the chance of being thought a poor type. Partitioning the central bankers into three groups enables the private sector to coordinate on abstaining when they see a central bank intervene.

That signalling leads to multiple equilibria is troubling as it is not clear how the players in this game would be able to coordinate on any outcome. However, in the simple example, the ability to signal unambiguously makes the central bank at least as well off and it seems reasonable that this result would hold for any intervention level. If the central bank is a poor type then it is unaffected by the



type of equilibrium: it does not signal and there is a successful attack. If the central bank is an intermediate type then it prefers the signaling outcome. With signalling it incurs a cost but there is no attack; without signalling it does not incur a cost but a successful attack occurs. The former outcome is better. Good types are either unaffected by the type of equilibrium or they prefer the signalling equilibrium. If they are sufficiently good then no private sector agent attacks in either equilibrium. If they are less good then an unsuccessful attack occurs and in either the no-signalling equilibrium or in both equilibria. But, the size of the attack is always smaller in the signalling equilibrium because the private sector does not confuse good central banks with intermediate ones.

## 5 Conclusion

For central banks that do not want to use interest rate policy to affect asset price misalignments, speeches, the release of data and other signals may potentially provide another policy instruments. It has often been suggested that in situations where there are multiple equilibria, central bank announcements may coordinate the public on the socially optimal outcome, thereby avoiding bank runs, speculative attacks, bubbles and sunspots.

This paper reviews some recent game theory – particularly the literature on global coordination games – and finds that it comes to a different – and rather disconcerting – conclusion. Central bank announcements can possibly improve welfare. However, by providing a focal point the central bank can create a situation where there are multiple equilibria, where there would have been a unique outcome without the intervention.

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# Jornadas Monetarias y Bancarias, 2007

**Andrew Crocket**

Forthcoming challenges for monetary policy

4 y 5 de Junio de 2007

## **Forthcoming Challenges for Monetary Policy**

**Remarks by Andrew Crockett, President, JPMorgan Chase International at the Annual Conference of Banco Central de la Republica Argentina on “Monetary Policy under Uncertainty”.**

**Buenos Aires, June 5, 2007**

### **Introductory remarks**

It is a great pleasure to participate in the 2007 Conference of the Banco Central de la Republica Argentina. Over the years, the Annual BCRA conference has acquired growing stature as a venue for thoughtful policy debates on topics of key concern to central banks. It is, in a sense, “Jackson Hole South”. It is therefore flattering to be asked to speak here and I thank the Bank, and Martin Redrado personally, for the invitation.

Before I begin my remarks, may I also pay tribute to the remarkable transformation that has taken place in Argentina’s economic fortunes over the past five years. The country has emerged from the deep recession that followed the crisis of 2001, and has recorded a sustained period of brisk growth. Argentina’s many friends abroad are gratified by these trends. Of course, many challenges remain. Continued efforts are necessary to complete the process of market-oriented economic reform, and to lay the basis for a continuation of the positive trends of the past few years. I send my best wishes to the economic policy team for success in this endeavour.

### **Background**

Central banks have had remarkable success in recent years in achieving low and stable inflation. Partly as a result of this, a broad consensus has emerged that the principal focus of monetary policy should be price stability. And there has been a growing measure of agreement about how price stability should be defined in practice.

Supporting this consensus on the focus of monetary policy has been acceptance of the theoretical proposition that there is no long-term tradeoff between output and inflation. Not only is there no tradeoff, low and stable inflation provides the best environment for the growth of economic activity. Stability promotes the efficient allocation of resources, and stimulates productivity-enhancing investment.

These theoretical findings seem to be confirmed by the robust economic performance of the past quarter century. In the industrialized countries at least, (the picture in emerging markets is more mixed) there has been a sustained 25-year upswing in output, punctuated by only two relatively mild recessions. The volatility of output does not seem to have been adversely affected by the increased focus on monetary stability. In fact, the reverse has occurred. There has been a “great moderation” in the volatility of economic activity.

Turning to the way in which monetary policy is conducted, there has been a similar measure of agreement on economic instruments and intermediate objectives. Central banks virtually all accept that monetary policy should be implemented through periodic adjustments in short term money market rates, undertaken in response to a forward view of inflation prospects.

Lastly, there is substantial common ground about the financial environment in which central banks will find it easiest to achieve price stability. Policy instruments will work best, economists generally hold, in circumstances where financial markets are liberalized and “complete”, and where key prices of financial assets, can respond to overall changes in supply and demand. In such circumstances, the influence of the central bank on short term policy rates can be diffused, with the least possible friction, throughout the economy.

Does all this mean the “end of history”, from a monetary policy perspective? Has the distilled wisdom of experience now brought monetary policy to a point at which all that is required is to follow the lessons of the past, holding steady to the focus I have just outlined? If so, I could end this paper here, and save time in the conference for more promising debates.

In fact, however, another lesson of experience is that future policy challenges rarely present themselves in a form that is exactly similar to the challenges of the past. It would be surprising if the benign and consensual environment for monetary policy were to last indefinitely. Even the recent period of growing central bank prestige has been punctuated by nasty shocks, such as the currency and banking crises in Mexico, East Asia, Russia, Argentina and Brazil. Moreover, the achievement of stability of prices for current output has not been matched by similar stability in the prices of real and financial assets. And overshadowing this history is the fact that globalization and capital market integration is proceeding apace, with uncertain consequences for the environment in which monetary policy is conducted.

In the remainder of my remarks, therefore, I want to deal with some of the uncertainties that surround the future prospects for monetary policy making. These include: the choice of anchor for monetary policy; the possibility of changes in the short-run inflation/output tradeoff; the impact of globalization on the autonomy of policymaking in individual countries; the appropriate response to perceived disequilibria in exchange rates; the appropriate response to asset price bubbles, and the relationship between monetary and financial system stability. Some of these are related topics, but they all have the capacity to complicate the lives of monetary policy makers, and hence I propose to discuss them separately.

### **The choice of Anchor for Monetary Policy.**

There is now remarkable unanimity on how to anchor monetary policy. Most major central banks effectively follow an inflation-targeting strategy, even though not all of them publicly describe their monetary regime in this way.

The essence of an inflation targeting regime is the public declaration and definition of the price stability objective; a commitment to take action to return inflation to the desired range when disturbances cause a departure; the use of medium term inflation forecasts to signal the need for policy action, and the autonomy of the monetary policy making authority to act when needed on interest rates.

The points of divergence among central banks in the way in which they operate monetary policy are, to my mind, far less significant than the fundamental convergence. The Federal Reserve may resist a formal statement of its inflation objective, but by signaling its “comfort zone” it comes close to an explicit target. And while some uncertainty surrounds exactly how central banks will respond to inflationary surprises (i.e. how quickly they will attempt to return to the target zone) these are more matters of detail than essential substance.

Just as remarkable is how widely the use of inflation targeting regimes has spread. Of the 20 largest economies in the world with separate currencies, at least 12 would meet my broad criteria of an inflation targeting regime, and most of the others have important similarities of substance.

But it is well to remember that inflation targeting is barely fifteen years old. Even the term would have been unfamiliar twenty years ago. How was monetary policy anchored for the first fifty years or so of the post war period, and why were these earlier anchors abandoned?

To begin with, in the immediate postwar period, inflation was not really accepted as a monetary phenomenon at all. Inflation was seen as the product of cost push and demand pull forces, arising largely in the real economy. Countering inflation was viewed as largely a task for fiscal policy (to influence the growth of aggregate demand), and direct market intervention and moral suasion to influence prices (“Whip Inflation Now” buttons). The role of central banks was regarded as essentially supportive, setting interest rates at levels that did not impede the impact of other policies on the demand/supply balance.

In the course of the 1960s, Milton Friedman’s powerful advocacy was instrumental in bringing the realization that inflation was a monetary phenomenon, and that achieving price stability was the job of central banks. The preferred instrument was control of the money supply. Controlling monetary aggregates was an invaluable tool, both substantive and presentational, in wringing inflation out of the system in the late 1970s. As time went on, however, Friedman’s original contention, that the demand for money was predictable enough to use as the primary lever for achieving price stability, turned out to be wide of the mark. It was ill-fitted for use as a policy instrument in an environment of rapid financial innovation influencing, in unforeseeable ways, the demand for money.

An alternative anchor for policy, which lay at the heart of the Bretton Woods system until 1971, was the exchange rate. So long as a country takes the necessary steps to maintain the convertibility of its currency into that of another (the US dollar, say, or the DMark), it will assure that its inflation rate will not diverge too far from that of the anchor currency. Fixed but adjustable exchange rates actually worked quite well during the 1950s and early 1960s. They also brought about convergence in inflation among EU countries in the 1980s. But their drawbacks were forcibly illustrated in the context of the debt crisis of the 1980s, the ERM crises of 1992-93, and the East Asian currency crisis of 1997-98.

The point of this history is to recall that anchors that seem robust at one moment may prove fragile in different circumstances. Inflation targets probably have more resilience, but, as will become clear in my remarks in subsequent sections, there could be elements of vulnerability. One of the requirements of successful inflation targeting is a monetary authority that has the independence to pursue the inflation objective. This requires a political consensus for central bank autonomy, which can probably be sustained so long as policy is delivering employment growth as well as price stability. But it would become harder if the short term output/inflation tradeoff deteriorates.

### **The inflation/unemployment tradeoff**

Few economists now believe there is a meaningful long-run trade-off between inflation and output. It has been settled theory for more than twenty years that allowing inflation to accelerate can buy only a temporary rise in employment, and that in the longer run, inflation beyond a certain level imposes inefficiencies that tend to lower an economy's rate of growth of productive potential.

Still, it is also generally accepted that a *short run* tradeoff can exist, and that reducing volatility of the inflation rate around its target may involve an increase in the volatility of real output. Bringing inflation down to acceptable levels after a price shock requires below trend output growth during the adjustment period. The more rapidly central banks seek to return inflation to the desired range, the greater the output loss they will have to accept. In turn, this will have implications for unemployment levels, and thus for the political acceptability of anti-inflationary policy.

Over the past two decades or more, anti-inflationary policy has arguably been facilitated by a combination of rapid productivity growth and an increase in the effective global labour supply. These trends have increased the potential rate of global output growth, and, together with increases in desired savings in countries like China, exerted downward pressure on prices and interest rates. This has done part of the central banks' work for them, by helping to neutralize inflationary shocks, and making more palatable the monetary tightening that has periodically been needed to keep inflationary pressures in check.

Increases in the underlying rate of productivity have been most marked in the United States, where the growth of output per employee gradually accelerated in the decade

following the mid-1990s, perhaps by as much as 1-1.5 percent per annum. The most plausible reason for this acceleration appears to be the introduction and application, throughout the economy, of information technology. Chairman Greenspan is credited with spotting this trend and with keeping interest rates low enough to permit the economy to reap the benefits of faster real growth.

The growth of the effective labour supply has resulted from the opening up of China, India and other emerging markets. Over a relatively short space of time, tens, or even hundreds of millions of new employees were absorbed in manufacturing industry in these countries, and began producing goods that could sell in world markets at prices well below those sold by the developed countries. Access to new sources of labour supply kept prices low, both because of competition in the labour market and because there was an increased supply of goods relative to the level of real demand.

These trends, of productivity growth and labour supply, have not ceased, of course. But they might well have stopped accelerating, so that the *additional* downward pressure on prices is no longer present. If this is true, then central bankers may well have a more difficult task in the coming decade than they did in the last one. If and when negative supply shocks occur, a greater portion of the adjustment will have to be borne by reductions in real demand, rather than being absorbed through productivity-generated increases in supply.

What can central banks do in such circumstances? Doubtless, the political system will call forth pressures for a softer approach to interest rates, which if acceded to would risk higher rates of inflation. Since central banks can in practice only preserve their policy independence for as long as they retain the confidence of the public and the political authorities, they will have to persuade opinion formers that acquiescing in higher inflation will bring only transitory gains, and that it is better in the long term to retain the credibility of an anti-inflationary stance. In this way, the real economic costs of adjusting to a less benign environment, which cannot be avoided, will be minimized.

### **Globalization and monetary policy**

The globalization phenomenon has an important impact on how monetary policies are formulated and put into effect. Central banks need to reflect on how the continuation of economic integration will affect the environment in which they are called upon to make policy. Gone for good are the days when trade and capital flows were a relatively small proportion of output and financial transactions. Not only has trade grown much faster than GDP over the past half century, cross-border financial transactions have grown much faster than trade. The result is that trends in financial asset prices are much more closely integrated across countries and regions than they were a few decades ago.

The consequences of financial globalization are largely benign. Financial markets are better able to equalize returns, adjusted for risk, across investment opportunities in different countries. A global pool of capital enables countries to tap foreign savings more



easily. Diversification of investment portfolios is facilitated. And market disciplines make it harder for national governments to pursue imprudent policies. All this helps make financial intermediation more effective, and promotes the efficiency of resource allocation.

But there are also consequences for how central banks conduct monetary policy. For one thing, global measures of economic slack are likely to increase in importance relative to purely domestic ones. With an international pool of capital, tightening of policy in one country can potentially be offset through borrowers' access to finance abroad. Free capital movement means that capital can flow in to meet an excess demand for borrowing. So, increasingly, globalization requires flexibility of the exchange rate for monetary policy to be effective.

Raising interest rates to head off inflationary pressures will typically provoke an inflow of capital, which, other things equal, will put upward pressure on the exchange rate. The exchange rate is itself a significant influence on aggregate demand. A task here, particularly important for small open economies, is to judge the degree of restraint imposed by a given increase in domestic interest rates when account is also taken of the exchange rate transmission channel of monetary policy.

The acceptance of the exchange rate in helping manage aggregate demand is not necessarily a drawback. Indeed it is an inevitable consequence of real and financial integration. But it needs to be noted that this feature of monetary policy places a disproportionate burden on the traded goods sector in the adjustment of the economy to shifting demand pressures. I turn to this in the following section.

### **Exchange rates and monetary policy**

There is now a broad consensus that monetary policy can only be fully effective if the exchange rate has an adequate degree of flexibility. All economists and policy makers are familiar with the "impossible trinity" which states that it is impossible to maintain simultaneously: (i) free capital movements, (ii) a fixed exchange rate, and (iii) discretionary domestic monetary policy. Since open capital markets are good for global efficiency (and there are anyway numerous ways to avoid the impact of capital controls), this means that the choice boils down to one between fixed exchange rates and independent monetary policy.

What became clear from the banking and exchange rate crises of the 1980s and 1990s was that a fixed but adjustable exchange rate, the arrangement of choice under the Bretton Woods system, was inherently unworkable in a world of liberalized capital markets and free capital mobility. Market participants inevitably focused on the conditions under which the exchange rate would have to be adjusted. By speculating on future changes in rates, market players in practice take the decision to adjust out of the hands of the authorities, thus bringing forward the time at which an adjustment has to take place.

For a while there was a lively debate about which of the two “corner solutions”, i.e. perfectly floating or rigidly fixed exchange rates was preferable and under what circumstances. In that context, the two favourite exemplars of rigidly fixed exchange rates were Argentina and Hong Kong. The Argentine experience proved that it is hard to convince markets that exchange rates really are rigidly fixed, unless the Government can demonstrate an ability to take the necessary supporting measures under all political circumstances. As a result, it seems that the fixed exchange rate polar case is efficient only in special cases, such as Hong Kong; or for countries that are prepared to maintain effective capital controls; or for those, such as the members of Euroland, that adopt a single currency.

Over the past ten years or so, therefore, many important countries that had previously maintained fixed but adjustable rates have moved towards a greater degree of exchange rate flexibility. The experience has generally speaking been positive, and most outside observers now believe that exchange rate flexibility makes the economies concerned much more resilient to external disturbances, and domestic policy mistakes.

But that’s not the end of the story. There is a more negative consequence that has led a number of countries, in practice, to limit the degree of flexibility in their exchange rate. This is that the exchange rate can move in ways that run counter to the authorities’ other economic objectives. The exchange rate is an extremely important price from a macroeconomic and distributional point of view, and it can be questioned whether market forces always produce the most efficient level for this price.

Lying behind this concern is the suspicion that financial prices can be subject to overshooting. The emergence and temporary maintenance of disequilibrium prices can lead to resource misallocation in the short term, and subsequently to adjustment costs as the disequilibrium is eventually corrected. The central bank can achieve control over one important price, the short term domestic price of money, but only at the expense of losing control over another, the foreign exchange price of domestic money.

Why should we suspect that free markets would produce a disequilibrium set of prices? And even if they do, would governments or central banks reliably be able to detect and correct such an outcome? These are tricky questions, to which there are no clear or generally accepted answers. Casual observation suggests that there are indeed periodic “bubbles” in asset prices, and that exchange rates fluctuate more than might be justified by underlying economic conditions. Some academic work, going back to Rudi Dornbusch, has demonstrated conditions under which markets could rationally “overshoot”. More recently, work on the procyclicality of the financial system, suggests that risks can be underestimated during upswings, leading to undue inflation of asset prices, with the reverse phenomenon occurring in recessions.

I will have more to say about asset price inflation and monetary policy a little later. For the time being, however, I simply want to point out the dilemma for monetary policy when exchange rates move by more than is desired by the authorities. Several countries now face situations in which the domestic economy is growing rapidly and needs to be

restrained. But the tightening of monetary policy needed to curb demand pressures would add to upward pressure on the exchange rate which would have unwelcome consequences for economic competitiveness. Under these circumstances, many central banks have chosen to intervene in the exchange market to moderate upward pressure on the rate, and to sterilize the domestic monetary consequences of this intervention.

An issue that central banks will have to face in the future is how far it is possible and desirable to incorporate these exchange rate objectives into the operation of monetary policy. My own instinct is to believe that sterilization will not be indefinitely sustainable, and that intervention in the exchange market should be directed at smoothing adjustment over a short- to medium-term time horizon, rather than running against fundamental market forces.

### **Asset Price Disequilibria**

I have already referred to the phenomenon of overshooting in asset price and the issue of how central banks should respond to it. This is a subject that is likely to preoccupy policymakers for some time to come.

The behaviour of asset prices poses two separate, but linked, issues for central bankers. The first concerns the definition of the price index that should be of concern for monetary policy. Should it comprise output for current consumption, or should its net be cast wider, to include assets held for the future stream of services they are presumably expected to yield? The second issue is whether central banks should seek to offset, or puncture, perceived imbalances in prices, to prevent the damage that might be done if they were allowed to expand unchecked, and be corrected later in a disruptive manner.

As far as the first issue is concerned, central banks have traditionally measured price stability in terms of current output. And in tracking their success in achieving stability they have often excluded from the consumption basket used for measurement those items that are especially volatile and/or seasonal (such as food and energy prices). This is a perfectly logical and justifiable technique if the prices *not* included in the index behave in the same way, over longer time periods, as those that are included.

Is this in fact the case? Some observers have objected that in the United States, for example, consumption items excluded from the basket seem to move systematically higher than the measured basket. Thus, while the measure of inflation used by the Fed showed a year on year increase of 2.4 percent in the year to April, 2007, the retail price index rose by 2.6 percent in the same period. It is harder to get a handle on asset prices, but it seems clear that for some time, house prices at least have been rising more rapidly than measured inflation.

Does all this matter? In one sense, perhaps not. The main thing is for the central bank to pick a meaningful measure of the general level of prices and to transparently seek to control it. If changes in relative prices take place, whether among items included in the index, or between items inside and outside the index, this is a second-order phenomenon.

However, it could also be argued that the failure to pick up changes in asset prices obscures what could be an underlying increase in inflationary pressures. If the prices of goods for current consumption are being held down, say as a result of competition from imported goods, then low interest rates and an increase in liquidity in the domestic economy could well spill out in asset prices.

The second reason to be concerned about a rapid increase in asset prices is that it could constitute an unsustainable trend, whose subsequent reversal could cause financial distress. For this reason, several observers, including the Economist and the Financial Times, as well as, in more measured language, the BIS, have called for central banks to take action to prevent, or limit, the size of asset price disequilibria.

At least two sorts of objections have been raised to this “activist” stance. One is that it is no business of central banks to try to influence relative prices and to try to protect market participants from the consequences of their own misjudgments. Markets mature as a result of accumulated experience, and part of experience is making mistakes and learning from them. The second objection is more practical. It is rarely possible to see in advance whether a particular deviation of prices from normal levels is a “bubble”, or the effect of underlying changes in economic structure. Alan Greenspan made this point forcefully in his Jackson Hole lecture in 2002. Given this ignorance, it may be better for monetary policy to be prepared to act quickly to offset the macroeconomic consequences of a bursting bubble, rather than to try to preempt natural economic forces.

The jury is still out on this issue. So long as central banks are successful in responding quickly and successfully to market-driven asset price corrections, it seems likely that the case for preemptive action will fail to gain a critical mass of adherents. If, however, a bursting bubble causes genuine economic distress, the balance of opinion may well shift. This is another field where the experience of emerging market economies could well be different from that of the mature industrial economies. The potential for periods of excessive enthusiasm, followed by “sudden stops”, seems in practice to be greater in emerging markets.

### **Financial System Stability.**

The last issue which I want to tackle in my remarks this afternoon is the role of the Central Bank in financial system stability. It can be argued that this is not strictly speaking a “challenge for monetary policy”. But I believe the links between monetary and financial stability are closer than is sometimes realized. And certainly the role of the central bank in the supervision of the banking system seems likely to absorb policy makers for a good few years to come.

If one goes back far enough, monetary and financial stability were essentially two sides of the same coin. The job of central banks was to maintain the convertibility of the

currency into gold. Inflation was described as a rise in the price of products in terms of gold. So central banks gradually came to shoulder the responsibility of underwriting the stability of the banking system. In order to do so, they acquired supervisory responsibilities over those institutions to which they were prepared to lend in a crisis.

Now, however, making monetary policy, and supporting systemic stability are usually seen as separate tasks. They have some links because, on the one hand, the stability of the financial system could be threatened by unpredictable shifts in monetary policy; and on the other, financial instability could undermine the smooth growth of aggregate demand that central bank seek to achieve. Still, an increasing number of countries have separated financial system supervision from monetary policy.

One of the arguments in favour of doing this is to prevent decisions about the monetary policy needed to ensure price stability being influenced by the desire to protect the banking system against strains. Against this, those who advocate central banks' retaining supervisory responsibilities argue that knowledge of commercial banks' balance sheets and decision making processes is essential in judging the transmission mechanism for monetary policy.

It is telling to note that most of those countries that have transferred supervisory responsibilities away from their central bank have usually left with the central bank a responsibility (largely undefined) for "systemic stability". It will be a task for the future to articulate more clearly exactly what this responsibility means in practice, and to define how it relates to central banks' primary responsibility to maintain price stability.



# Jornadas Monetarias y Bancarias, 2007

**Martín Redrado**

Discurso de cierre

4 y 5 de Junio de 2007

**JORNADAS MONETARIAS Y BANCARIAS 2007  
DISCURSO DE CIERRE  
MARTÍN REDRADO  
PRESIDENTE DEL BANCO CENTRAL DE LA REPÚBLICA ARGENTINA**

**RON MCKINNON PREGUNTANDO ACERCA DE LOS SUPUESTOS DETRÁS DEL MODELO PRESENTADO POR RAGHU RAJAN, RICHARD COOPER SEÑALÁNDOLE A STIGLITZ QUE LOS DESEQUILIBRIOS GLOBALES FORMAN PARTE DE UNA SITUACIÓN MÁS DE ESTABILIDAD QUE DE INESTABILIDAD...**

**ESTAS JORNADAS, NOS HAN BRINDADO NO SÓLO LA POSIBILIDAD DE PODER ESCUCHAR Y DIALOGAR CON AQUELLOS ACADÉMICOS O HACEDORES DE POLÍTICA QUE ESTÁN EN LA FRONTERA DEL CONOCIMIENTO TEÓRICO Y PRÁCTICO SINO DE TENER EL PRIVILEGIO ÚNICO DE VERLOS INTERACTUAR ENTRE ELLOS.**

**DESPUÉS DE DOS DÍAS INTENSOS DE RICO DEBATE E INTERCAMBIO DE EXPERIENCIAS TANTO, A TRAVÉS DE LAS EXPOSICIONES DE LOS PANELISTAS COMO DE LAS DISCUSIONES POSTERIORES, HEMOS LLEGADO AL FINAL DE ESTAS JORNADAS. Y PODEMOS DECIR: MISIÓN CUMPLIDA.**

**MIRANDO HACIA ADELANTE, PODEMOS CONCLUIR DE LO QUE HEMOS ESCUCHADO A LO LARGO DE ESTAS JORNADAS QUE LOS DESAFÍOS QUE ENFRENTAMOS LOS BANQUEROS CENTRALES DEL MUNDO Y, PARTICULARMENTE DE AMÉRICA LATINA, NO SON MENORES POR LO QUE LA PRUDENCIA, LA CONSISTENCIA Y EL GRADUALISMO RESULTAN ESENCIALES.**

**LOS CAMBIOS EXPERIMENTADOS EN LA ECONOMÍA GLOBAL A PARTIR DE LA INNOVACIÓN FINANCIERA QUE BIEN DESMENUZARON MARIO DRAGHI, MALCOLM KNIGHT Y JOSÉ VIÑALS HAN AFECTADO SUSTANCIALMENTE NO SÓLO EL PODER DE LOS CANALES DE TRANSMISIÓN DE LA POLÍTICA MONETARIA TRADICIONALES SINO TAMBIÉN SU ESTABILIDAD. EL CANAL DE CRÉDITO ES MENOS EFECTIVO A RAÍZ DE LA SECURITIZACIÓN MIENTRAS QUE LA VOLATILIDAD DE LOS PRECIOS DE LOS ACTIVOS ES MÁS PRONUNCIADA.**

**TAMBIÉN HEMOS ESCUCHADO A PARTIR DE LAS DIVERSAS EXPERIENCIAS QUE NO EXISTEN RECETAS ÚNICAS. "SÓLO DIOS SABE CUÁL ES EL MODELO CORRECTO" SEÑALABA MI AMIGO VITTORIO CORBO ESTA MAÑANA.**

**POR LO TANTO, DEPENDIENDO DE LA SECUENCIA EN LA QUE SE ENCUENTRE LA ECONOMÍA HACIA SU ESTADO ESTACIONARIO, LA FLEXIBILIDAD TANTO EN EL DISEÑO COMO EN LA IMPLEMENTACIÓN**

**DE LAS POLÍTICAS ES FUNDAMENTAL. ESTO NOS EXIGE PONDERAR NO SÓLO LA SOLIDEZ TEÓRICA DE LOS MODELOS DE CONDUCCIÓN DE POLÍTICA MONETARIA SINO TAMBIÉN LA FORMA PRÁCTICA EN LA QUE LOS MISMOS SON IMPLEMENTADOS.**

**ES POR ELLO QUE LA DEMANDA POR "POLÍTICAS FLEXIBLES" ES HOY EN DÍA ELEVADA PARA NOSOTROS LOS BANQUEROS CENTRALES. ESTO IMPLICA AGREGARLE A LOS MODELOS EL VALOR DEL JUICIO PROPIO, INTENTANDO VISLUMBRAR CAMBIOS, AMENAZAS Y OPORTUNIDADES.**

**NO ES MÁS QUE EL ENFOQUE DE ADMINISTRACIÓN DE RIESGOS APLICADO A LA CONDUCCIÓN DE POLÍTICA MONETARIA QUE, CON LA VISIÓN DE LA FED, DESCRIBÍA JOE TRACY AYER POR LA TARDE. O LA NECESIDAD DEL BANCO CENTRAL DE EVALUAR EL ORIGEN, LA MAGNITUD Y NATURALEZA DE LOS SHOCKS QUE RECALCABA, CON LA IMPRONTA DEL ECB, OTMAR ISSING HACE UN RATO. ESTO ES, MAXIMIZAR LA PROBABILIDAD DE CONSECUCCIÓN DE LOS OBJETIVOS QUE NOS PLANTEAMOS, ENTENDIENDO LOS RIESGOS IMPLÍCITOS, LAS CONSECUENCIAS ASOCIADAS CON CADA TIPO DE RIESGO Y CONCENTRÁNDONOS EN LA DISTRIBUCIÓN DE LOS ESCENARIOS POSIBLES.**

**BAJO EL ENFOQUE DE ADMINISTRACIÓN DE RIESGOS, LA ROBUSTEZ PUEDE SER PREFERIBLE A LA OPTIMALIDAD EN ALGÚN MOMENTO DETERMINADO, ENTENDIDA ESTA COMO LA POLÍTICA MÁS EFICIENTE SI SE VERIFICA EL ESCENARIO MÁS PROBABLE, PERO AQUELLA COMO EL MENOS NOCIVO SI ES ESCENARIO SUPUESTO LUEGO NO SE CORROBORA EN LA REALIDAD.**

**EN AMÉRICA LATINA Y EN ARGENTINA EN PARTICULAR, LA TAREA DE LA FORMULACIÓN DE LA POLÍTICA ECONÓMICA SE TORNA PARTICULARMENTE COMPLEJA A PARTIR DEL DESCRÉDITO PROVOCADO POR LOS SUCESIVOS FRACASOS QUE SE TRANSFORMARON, EN MUCHAS CIRCUNSTANCIAS, EN FUENTES INDEPENDIENTES DE PERTURBACIONES E INESTABILIDAD.**

**EN NUESTRA REGIÓN, LA AMPLITUD DE LAS FLUCTUACIONES CÍCLICAS Y LA RECURRENCIA DE LOS PERÍODOS DE VOLATILIDAD MACROECONÓMICA HAN TENIDO EFECTOS MUY DAÑINOS SOBRE EL DESEMPEÑO DE LARGO PLAZO DE LAS ECONOMÍAS QUE SE TRADUJO EN POBRES NIVELES DE BIENESTAR DEL CONJUNTO DE LA POBLACIÓN.**

**MIENTRAS QUE EN LAS ECONOMÍAS DESARROLLADAS, LAS OSCILACIONES CÍCLICAS SUELEN SER MODERADAS, EN LA REGIÓN ESTOS EPISODIOS SE HAN CARACTERIZADO EN GENERAL POR SU INTENSIDAD Y FRECUENCIA.**



**PERO LO QUE, A MI JUICIO, ES MÁS RELEVANTE: NO TODOS LOS PAÍSES DE LA REGIÓN NOS ENCONTRAMOS EN LA MISMA SITUACIÓN. HAY PAÍSES CUYAS ECONOMÍAS SE ENCUENTRAN TRANSITANDO ETAPAS MÁS CERCANAS A SU VELOCIDAD CRUCERO DE LARGO PLAZO. OTRAS ECONOMÍAS SE ENCUENTRAN EN ESE CAMINO. EN OTRAS EN CAMBIO EL PROCESO DE CONVERGENCIA ES INCIPIENTE.**

**EN ARGENTINA, PESE A LA NOTABLE MEJORÍA OBSERVADA, VARIOS RASGOS DEL ACTUAL FUNCIONAMIENTO MACROECONÓMICO PERMITEN INFERIR QUE LA ECONOMÍA SE ENCUENTRA TRANSITANDO TODAVÍA HACIA UN NUEVO EQUILIBRIO DE LARGO PLAZO.**

**DADA LA MAGNITUD SIN PRECEDENTES DE LA CRISIS SUFRIDA, UNA BUENA PARTE DE LAS VARIABLES FUNDAMENTALES EXPERIMENTARON UNA "SOBRERREACCIÓN" Y, PRESUMIBLEMENTE, SE ENCUENTRAN CONVERGIENDO HACIA NUEVOS VALORES DE LARGO PLAZO QUE, EN BUENA MEDIDA, DESCONOCEMOS.**

**ESTO SE TRADUCE, POR EJEMPLO, EN DINÁMICAS NOMINALES QUE RESULTA DIFÍCIL CARACTERIZAR EX ANTE COMO TRANSITORIAS O PERMANENTES PERO QUE, EN DETERMINADAS CIRCUNSTANCIAS, PODRÍAN DAR LUGAR A TRAYECTORIAS DIVERGENTES.**

**POR OTRA PARTE, PESE A SU INTENSIDAD, LA RECUPERACIÓN DE LA INTERMEDIACIÓN FINANCIERA ES TODAVÍA INCIPIENTE Y A PLAZOS REDUCIDOS.**

**Y ESTE ES UN PUNTO CENTRAL YA QUE, COMO SEÑALARA MI COLEGA DEL BANCO CENTRAL DE INDIA ESTOS PROCESO DE TRANSICIÓN LLEVAN TIEMPO E INVOLUCRAN ENORMES DESAFÍOS.**

**EN ESTE SENTIDO, DIAGNÓSTICOS APRESURADOS Y COMPARACIONES SIMPLISTAS ENTRE LAS SITUACIONES DE LOS DIVERSOS PAÍSES RESULTAN EN ANÁLISIS POCO SERIOS Y, LO QUE ES PEOR, PUEDEN LLEVAR A RECOMENDACIONES TOTALMENTE EQUIVOCADAS.**

**HA SIDO MUY VALIOSA LA PONENCIA DE CORBO, QUIEN RESALTÓ EL PROCESO SECUENCIAL QUE VIVIÓ LA ECONOMÍA CHILENA PARA ENCONTRARSE EN LA SITUACIÓN DE ESTABILIDAD MACROECONÓMICA QUE HOY VIVE. VITTORIO FUE MUY PRECISO A LA HORA DE DESCRIBIR LA SECUENCIA GRADUAL QUE SIGUIÓ EL PAÍS TRASANDINO A LA HORA DE DISEÑAR EL ACTUAL RÉGIMEN MONETARIO.**

**EN ESTE PROCESO HA SIDO FUNDAMENTAL LA CONSOLIDACIÓN PRIMERO DE LA SOLVENCIA FISCAL COMO HERRAMIENTA ANTICICLICA, EL REESTABLECIMIENTO DE LA SUSTENTABILIDAD EXTERNA (CHILE CONTABA CON UN ANCLA CAMBIARIA Y CONTROLES DE CAPITALES), LA REESTRUCTURACIÓN DE LOS PASIVOS Y EL SANEAMIENTO DEL SISTEMA FINANCIERO. ASÍ, CHILE LOGRÓ TRANSFORMAR EN QUINCE AÑOS UNA INFLACIÓN CERCANA AL 30% AL ACTUAL 2.9% ANUAL, TRAS UN PACIENTE CAMINO DE CONSTRUCCIÓN DE CREDIBILIDAD E INSTITUCIONES.**

**UNA VEZ ATACADOS TODOS ESTOS FRENTE DE CONFLICTO, SE AVANZÓ EN LA CONSOLIDACIÓN DE UN ESQUEMA DE METAS DE INFLACIÓN QUE HOY GOZA DE ALTA CREDIBILIDAD Y HA PROBADO SER EXITOSO. ES DECIR QUE LA TRANSICIÓN HACIA UN RÉGIMEN DE INFLACIÓN PLENO SE FUE LOGRANDO EN CONVIVENCIA CON ALTOS NIVELES DE INFLACIÓN. FUE UN ESQUEMA GRADUAL Y FLEXIBLE EN EL USO DE LOS INSTRUMENTOS TRADICIONALES DE POLÍTICA LO QUE LE PERMITIÓ A LA ECONOMÍA ACOMODARSE FRENTE SHOCKS TANTO DE ORDEN DOMÉSTICO COMO EXTERNO.**

**HABLANDO ACERCA DE LA NECESIDAD DE LAS ECONOMÍAS EMERGENTES DE CONTAR CON RÉGIMENES CAMBIARIOS DIFERENCIADOS, MARIO BLEJER COINCIDIÓ CON ESTE DIAGNÓSTICO SEÑALANDO QUE UN RÉGIMEN DE METAS DE INFLACIÓN ES MÁS ÚTIL PARA MANTENER LA INFLACIÓN ESTABLE EN NIVELES BAJOS QUE PARA REDUCIR LA TASA DE INFLACIÓN, SEÑALANDO QUE ESTE RÉGIMEN PUEDE NO BRINDAR LA FLEXIBILIDAD NECESARIA AL BANCO CENTRAL COMO PARA CUMPLIR OBJETIVOS INTERMEDIOS DE CORTO PLAZO.**

**RUSIA ES OTRO BUEN EJEMPLO DEL MANEJO DE LA POLÍTICA MONETARIA EN ESTOS PROCESOS DE TRANSICIÓN. IGNATIEV REMARCÓ QUE EL BANCO CENTRAL UTILIZA UN RÉGIMEN DE FLOTACIÓN ADMINISTRADA QUE INFLUENCIA TEMPORALMENTE LA TASA DE INTERÉS Y EL TIPO DE CAMBIO, INDICANDO QUE PROCURA RESTRINGIR LA APRECIACIÓN DEL RUBLO PARA LUEGO PASAR PAULATINAMENTE A UN SISTEMA DE METAS DE INFLACIÓN, LO CUAL SE VE AFECTADO PORQUE SE DEPENDE MUCHO DEL PRECIO DEL PETRÓLEO. AL TIEMPO, SE AVANZA EN EL DESARROLLO DEL SISTEMA FINANCIERO Y EL PROCESO DE DESDOLARIZACIÓN DE LA ECONOMÍA PERO "SIENDO MUY CAUTELOSO Y TRATANDO DE EVITAR CAMBIOS RADICALES" EN PALABRAS DEL PRESIDENTE DEL BANCO CENTRAL DE RUSIA.**

**EN ESTE SENTIDO, UN INFLUJO DE CAPITALES DEL EXTERIOR GENERA EFECTOS SOBRE LA ECONOMÍA QUE, EN SITUACIONES DE TRANSICIÓN COMO ESTA, PUEDE TENER MÁS COSTOS QUE BENEFICIOS.**

**UNA DE LAS LECCIONES QUE NOS DEJÓ LA CONVERTIBILIDAD ES QUE NO HAY NADA MÁS PROCÍCLICO QUE LA MONEDA LOCAL APRECIADA, TANTO EN TÉRMINOS DE CONSUMO PÚBLICO COMO PRIVADO. LA APRECIACIÓN ESTIMULA EL CONSUMO PRESENTE A COSTA DEL AHORRO, Y POR TANTO DE LA INVERSIÓN Y DEL CRECIMIENTO DE LARGO PLAZO.**

**EL PAPER PRESENTADO POR AYER RAJAN ES CLARO EN ESTE SENTIDO: LA SOBREVALUACIÓN CAMBIARIA PRODUCIDA POR LA ENTRADA DE CAPITALES CONLLEVA MENORES RETORNOS A LA INVERSIÓN Y MENORES TASAS DE CRECIMIENTO.**

**ASIMISMO, PARA UN PAÍS QUE HA SUFRIDO TRES CRISIS FINANCIERAS EN LOS ÚLTIMOS DOCE AÑOS, Y DONDE LA VOLATILIDAD MACRO ES QUIZÁS EL PRINCIPAL FACTOR EXPLICATIVO DEL BAJO DINAMISMO DE LAS TRES DÉCADAS PREVIAS, EVITAR UNA PRÓXIMA CRISIS DEBE SER UN OBJETIVO DE PRIMER ORDEN DE LA POLÍTICA ECONÓMICA. EN ESE MARCO, DEBE CONSIDERARSE EL ROL DEL NIVEL DE TIPO DE CAMBIO COMO DISPARADOR DE CRISIS: LA APRECIACIÓN EXCESIVA TÍPICAMENTE TERMINA EN UNA DEVALUACIÓN BRUSCA CON AGUDOS COSTOS PARA LA ECONOMÍA.**

**POR OTRO LADO, ES IMPORTANTE NO ADAPTAR LA POLÍTICA A TENDENCIAS TRANSITORIAS: PARTE DE LA ACTUAL PRESIÓN A LA APRECIACIÓN DE LAS MONEDAS EMERGENTES SE RELACIONA CON EL PRECIO DE LAS COMMODITIES (VÍA CUENTA CORRIENTE) Y EL APETITO AL RIESGO DE LOS INVERSORES (VÍA CUENTA CAPITAL), QUE CLARAMENTE PUEDEN SER FUERZAS NO PERMANENTES SINO TRANSITORIAS.**

**EN ESE MARCO, SERÍA UN ERROR ADAPTAR LA POLÍTICA MONETARIA A ESTAS FUERZAS. POR EL CONTRARIO, ES PRUDENTE TRATAR DE EVITAR CUALQUIER EUFORIA, ASUMIENDO ESTOS CAMBIOS COMO TRANSITORIOS.**

**ASÍ, ESTOS FACTORES PUEDEN INDUCIR UN OVERSHOOTING (HACIA ARRIBA O HACIA ABAJO) DEL TIPO DE CAMBIO NOMINAL, QUE LEJOS DE AJUSTAR HACIA EL NIVEL DE EQUILIBRIO DE LARGO PLAZO, PROVOQUE UNA EXCESIVA VOLATILIDAD QUE DISTORSIONES LAS SEÑALES DE PRECIOS RELATIVOS PARA EL AHORRO, EL CONSUMO Y LA INVERSIÓN.**

**FINALMENTE, LOS BANQUEROS CENTRALES NUNCA DEBEMOS PERDER DE VISTA EL ANÁLISIS DE EQUILIBRIO GENERAL. ESPECIALMENTE, AL EVALUAR EL IMPACTO DE VOLATILIDAD**

**CAMBIARIA SOBRE EL CONJUNTO DE VARIABLES MACROECONÓMICAS EN UNA ETAPA DE NORMALIZACIÓN.**

**A MI ENTENDER, LA POLÍTICA MONETARIA DEBE CONCEBIRSE BAJO UN ENFOQUE DE EQUILIBRIO GENERAL, DONDE LA SOLVENCIA FISCAL, EL BALANCE MONETARIO Y LA SUSTENTABILIDAD EXTERNA SE DETERMINAN MUTUAMENTE. AL RESPECTO, LA DEMANDA POR COORDINACIÓN DE POLÍTICAS ES MÁS FUERTE EN EL PERÍODO POSTERIOR A UNA CRISIS, Y CONDICIÓN SINE QUANON PARA LA ESTABILIDAD DE LARGO PLAZO.**

**ASÍ, EN EL ACTUAL CONTEXTO DE TRANSICIÓN HACIA EL ESTADO ESTACIONARIO, EL CLÁSICO DILEMA DE POLÍTICA ECONÓMICA DE REGLAS VS. DISCRECIÓN NO PUEDE RESOLVERSE ENTONCES MEDIANTE UNA OPCIÓN EXTREMA. TANTO EL CAMINO DE LA "DISCRECIONALIDAD SIN RUMBO" COMO UNA REGLA RÍGIDA DE "LOCK-IN" ("TIRAR LA LLAVE") SON INCONDUCTENTES.**

**POR EL CONTRARIO, UN ESQUEMA INTERMEDIO EL DE AGREGADOS MONETARIOS, QUE COMBINA DOSIS DE FLEXIBILIDAD (COMO METAS INDICATIVAS DE INFLACIÓN), CON REGLAS SIMPLES SOBRE LA EVOLUCIÓN DE LA CANTIDAD DE DINERO QUE PROVEEN EL ADECUADO ACCOUNTABILITY DEL HACEDOR DE POLÍTICAS, PUEDE IR REGENERANDO PAULATINAMENTE LA REPUTACIÓN PERDIDA EN LA CRISIS SIN SACRIFICAR LA DISCRECIONALIDAD NECESARIA PARA ENFRENTAR LAS CONTINGENCIAS PROPIAS DE ESTE ESTADÍO.**

**LO QUE ES SEGURO ES QUE NO PODEMOS "TOMAR ATAJOS": VAMOS DESARROLLANDO Y CALIBRANDO LOS INSTRUMENTOS QUE NOS PERMITAN DARLES PODER NECESARIO COMO PARA ESTABILIZAR LAS FLUCTUACIONES CÍCLICAS Y, A LA VEZ, IR REDUCIR LOS RIESGOS MACROECONÓMICOS.**

**POR EJEMPLO, TRABAJAMOS EN DARLE PROFUNDIDAD A NUESTRO SISTEMA FINANCIERO PARA RECONSTRUIR EL CRÉDITO AL SECTOR PRIVADO COMO CANAL DE TRANSMISIÓN DE LA POLÍTICA MONETARIA. ES IMPORTANTE RECONOCER QUE NUESTROS MERCADOS FINANCIEROS NO SON LO SUFICIENTEMENTE PROFUNDOS COMO PARA CANALIZAR GRANDES INFLUJOS DE CAPITAL. LOS MERCADOS DE DEUDA EN MONEDA LOCAL ESTÁN NACIENDO Y LOS MERCADOS SECUNDARIOS NO TIENEN SUFICIENTE LIQUIDEZ. AYER POR LA TARDE RAJAN MISMO NOS DECÍAN QUE LOS PAÍSES EMERGENTES QUE RECIBIERON AHORRO EXTERNO HAN CRECIDO MENOS, ATRIBUYENDO LA DIFERENCIA A LA INCAPACIDAD DE LOS SISTEMAS FINANCIEROS PARA INTERMEDIAR EFICIENTEMENTE DICHO AHORRO.**

**OTRO ELEMENTO IMPORTANTE, ES EL DESARROLLO DEL MERCADO EN MONEDA DOMÉSTICA QUE, COMO SEÑALARA MALCOLM KNIGHT PERMITE UNA MENOR DEPENDENCIA DE LOS FLUJOS DE CAPITALES, DESCALCES DE MONEDAS MENOS PRONUNCIADOS Y MENOR CONCENTRACIÓN DE RIESGOS EN LOS SISTEMAS BANCARIOS. PERO AQUÍ TAMBIÉN DEBEMOS IR CON PRUDENCIA; SOBRE TODO EN UN ESTADIO EN EL QUE LA ESTABILIDAD MONETARIA Y LA CONFIANZA EN LA UNIDAD DE CUENTA LOCAL SE VA GRADUALMENTE RECUPERANDO, PARA EVITAR REDUCIR EL RIESGO DE DESCALCE DE MONEDA A COSTA DE ASUMIR EXCESIVO RIESGO POR DESCALCE DE PLAZO. O PARA NO SATURAR A LOS INVERSORES LOCALES CON INSTRUMENTOS QUE LIMITEN SUS POSIBILIDADES DE DIVERSIFICACIÓN DE RIESGOS.**

**EN ESTA DIRECCIÓN, HEMOS FIJADO PAUTAS ESTRICTAS PARA REDUCIR LA EXPOSICIÓN DEL SISTEMA FINANCIERO AL SECTOR PÚBLICO. ASÍ, EN LOS ÚLTIMOS AÑOS LA PARTICIPACIÓN DEL CRÉDITO AL GOBIERNO EN EL TOTAL DE ACTIVOS SE REDUJO VEINTE PUNTOS PORCENTUALES, REVIRTIÉNDOSE ACELERADAMENTE EL PROCESO DE DESPLAZAMIENTO DEL CRÉDITO A LAS FAMILIAS Y EMPRESAS. DE HECHO, ESTAS FINANCIACIONES CONSTITUYEN HOY EL PRINCIPAL COMPONENTE DEL ACTIVO DE LAS ENTIDADES Y EL FOCO DE SU ACCIONAR.**

**DE CUALQUIER MODO, VEMOS QUE TODOS LOS PAÍSES DE LA REGIÓN TOMAN PRECAUCIONES. EN NUESTRO CASO, PARA UNA ECONOMÍA EN TRANSICIÓN HACIA SU VELOCIDAD CRUCERO DE LARGO PLAZO, LA ACUMULACIÓN DE RESERVAS CONSTITUYE UNA POLÍTICA ANTICÍCLICA DE EXTREMA UTILIDAD.**

**HE HABLADO SOBRE POLÍTICA MONETARIA E INCERTIDUMBRE PERO TAMBIÉN ES RELEVANTE LA INSERCIÓN DE NUESTROS BANCOS CENTRALES EN EL SISTEMA INSTITUCIONAL MÁS AMPLIO DE LA ESTRUCTURA DE GOBIERNO DE UN PAÍS.**

**ESTA MAÑANA MCKINNON Y BUTER HABLABAN SOBRE LAS CAMBIANTES PERSPECTIVAS DOCTRINARIAS SOBRE LOS BANCOS CENTRALES. CONSIDERO QUE EMERGE CON CLARIDAD EL POSITIVO AVANCE QUE HA SIDO, EN LAS ÚLTIMAS DÉCADAS, EL OTORGAMIENTO DE INDEPENDENCIA A LAS AUTORIDADES MONETARIAS PARA DECIDIR LOS MEJORES INSTRUMENTOS CON LOS CUALES CUMPLIR SU COMETIDO.**

**ESTE MOVIMIENTO HA IDO DE LA MANO CON LA MAYOR TRANSPARENCIA Y RENDICIÓN DE CUENTAS POR PARTE DE LOS BANCOS CENTRALES, ALGO QUE TAN SÓLO HACE DIEZ AÑOS ESTABA MUCHO MENOS GENERALIZADO. HAY EN ESTE PUNTO UNA ENSEÑANZA VALIOSA: LAS NOCIONES QUE HOY CONSIDERAMOS MÁS**

**ESTABLECIDAS SON EL RESULTADO DE UNA EVOLUCIÓN INSTITUCIONAL CONCRETA, NO SON PRÁCTICAS INMUTABLES.**

**ESTÁ EN NUESTRA GESTIÓN COMO AUTORIDADES MONETARIAS EL CONTRIBUIR A PROFUNDIZAR LOS ASPECTOS POSITIVOS DE ESTA EVOLUCIÓN, DESCARTANDO LOS QUE LA PRÁCTICA MUESTRE COMO MENOS CONSTRUCTIVOS.**

**AQUÍ TAMPOCO PARECE ADECUADO PENSAR EN UN ÚNICO "MARCO INSTITUCIONAL UNIVERSAL", SINO QUE PRINCIPIOS ÚTILES, COMO LA INDEPENDENCIA Y LA RENDICIÓN DE CUENTAS, DEBEN ADAPTARSE A LA REALIDAD INSTITUCIONAL DE CADA ECONOMÍA.**

**EN LOS ÚLTIMOS AÑOS LA REGIÓN HA PROFUNDIZADO SU GRADO DE DISCIPLINA MACROECONÓMICA Y SE ENCUENTRA MEJOR PREPARADA QUE EN LA DÉCADA PASADA PARA ENFRENTAR ESCENARIOS ADVERSOS. SIN EMBARGO, TODAVÍA TENEMOS TRABAJO POR DELANTE PARA REDUCIR LOS POSIBLES FOCOS DE VULNERABILIDAD DE NUESTRAS ECONOMÍAS. ESTO REQUIERE DE UNA DIFÍCIL TAREA: NO ALCANZA CON ESTAR DE ACUERDO ENTRE ANALISTAS Y HACEDORES DE POLÍTICAS PÚBLICAS, HAY QUE LOGRAR CONSENSOS ECONÓMICOS E INSTITUCIONALES AMPLIOS Y DURADEROS, QUE EVITEN LA REVERSIÓN DE LAS POLÍTICAS, QUE SÓLO LLEVA AL ESTANCAMIENTO Y LA FRUSTRACIÓN.**

**MUCHAS GRACIAS.-**



*Banco Central de la República Argentina*

## **JORNADAS MONETARIAS Y BANCARIAS**

*Desafíos en los mercados financieros mundiales*

4 y 5 de junio de 2007

Buenos Aires, República Argentina



**Martín Redrado**  
**Presidente del B.C.R.A.**





**Martín Redrado y  
Mario Draghi**



**Y.V. Reddy, Sergey Ignatiev y  
Carlos Pérez**



**Raghuram Rajan**



**Martín Redrado  
y Joseph Stiglitz**



**Joseph Stiglitz**



De izquierda a derecha, Vittorio Corbo, Eduardo Curia y Mario Blejer

## Vittorio Corbo, Eduardo Curia y Mario Blejer



**Otmar Issing**



**Eduardo Levy-Yeyati**





**Eduardo Levy-Yeyati, Otmar  
Issing y Luciano Laspina**