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SELF-INSURED HEALTH BENEFIT PLANS 2018
Based on Filings through Statistical Year 2015

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SUMMARY

This document analyzes the funding mechanism of employer-sponsored health benefit plans that filed a *Form 5500 Annual Return/Report of Employee Benefit Plans* ("Form 5500"). It compares fully insured, mixed-funded, and self-insured health plans for reporting periods that ended in 2015, and presents select historical series for the years 2006 through 2015. For a subset of health plan sponsors, publicly available corporate financial data were also used. The primary findings include:

- Just under one-half of Form 5500 filing health plans (49%) were self-insured or mixed-funded (funded through a mixture of insurance and self-insurance) in 2015, and those plans covered 83% of plan participants. The percentages of self-insured (42%) and mixed-funded plans (7%) are very similar to those of last year.
- At the participant level, self-insurance and mixed-funding have been increasing since at least 2006. Paradoxically, the self-insurance rate among plans had been decreasing, but it too has slightly increased since 2013. The pre-2013 paradox of decreasing self-insurance among plans but increasing self-insurance among participants is explained by a pre-2013 divergence toward full insurance among relatively small plans and toward self-insurance among relatively large plans.
- As reported in Form 5500 filings, stop-loss coverage among self-insured plans declined from 31% in 2006 to 26% in 2010, and flattened out at approximately that level. Stop-loss coverage among mixed-funded plans declined from 24% in 2006 to 17% by 2013, and its decline also appears to have halted since then. These percentages likely underestimate the overall prevalence of stop-loss insurance.
- Most Form 5500 filing plans with fewer than 100 participants were self-insured in 2015. This is most likely due to Form 5500 filing requirements rather than being representative of all small plans.
- Among Form 5500 filing plans with 100 or more participants, the prevalence of self-insurance generally increased with plan size. For example, 30% of plans with 100-199 participants were mixed-funded or self-insured in 2015, compared with 90% of plans with 5,000 or more participants. This is similar to 2014.
- Mixed funding is found primarily among very large plans. For example, 2% of plans with 100-199 participants were mixed-funded in 2015, compared with 42% of plans with 5,000 or more participants.
- Self-insurance rates varied by industry, with utilities, agriculture, mining, and construction firms having the highest prevalence of self-insurance.
- Self-insurance rates vary widely by state, and only little of the differences is readily attributed to other observed differences across states. At issue may be that a plan's participants can reside in different states than the plan itself.
- One-half (50%) of plans sponsored by for-profit organizations were self-insured or mixed-funded, compared with 45% of plans sponsored by not-for-profit organizations. Weighted by the number of participants, not-for-profit organizations were much more likely to be self-insured and much less likely to be mixed-funded than for-profit firms.
- There is no consistent evidence that the financial health of fully insured plan sponsors is better or worse than that of mixed-funded or self-insured sponsors.

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1. INTRODUCTION

The 2010 Patient Protection and Affordable Care Act (ACA) (§1253) mandates that the Secretary of Labor prepare annual reports with general information on self-insured group health plans (including plan type, number of participants, benefits offered, funding arrangements, and benefit arrangements), as well as data from the financial filings of self-insured employers (including information on assets, liabilities, contributions, investments, and expenses). The U.S. Department of Labor (DOL) engaged Advanced Analytical Consulting Group, Inc. (AACG) to assist with the ACA mandate.[1] This document is intended to serve as an appendix to the Secretary's 2018 *Report to Congress*.

As required by the ACA, the primary data source for this document is the information provided to the DOL by health plan sponsors on *Form 5500 Annual Return/Report of Employee Benefit Plans* ("Form 5500") filings. For a subset of health plan sponsors, publicly available corporate financial data were also used.

The current report analyzes Form 5500 filings for plan years that ended in 2006-2015, i.e., several years before and after the enactment of the ACA in March 2010. The primary findings for 2015 are similar to those for 2014, with one noteworthy update: while self-insurance among plans generally decreased in recent years, the uptick documented in last year's report continued in 2015. Weighted by plan participants, self-insurance continued its long-term increase.

The general approach and the algorithm to determine funding mechanism are unchanged from those in last year's report. New in this year's report are tabulations of funding mechanism by the state of the plan's mailing address recorded on the Form 5500.

The remainder of this report contains the following. Section 2 describes the Form 5500 and other data sources, including data quality, consistency issues, and the extent to which financial data were matched to health plan filings. Section 3 defines funding mechanism as used in this report. Section 4 presents the results of our data analysis, and Section 5 concludes.

The views, opinions, and/or findings contained in this report should not be construed as an official Government position, policy or decision, unless so designated by other documentation issued by the appropriate governmental authority.

[1] Deloitte Financial Advisory Services LLP ("Deloitte") served as a subcontractor to AACG in preparing the 2015-2018 iterations of this report. Conversely, AACG served as a subcontractor to Deloitte for the 2011-2014 reports.

2. DATA SOURCES

The quantitative analysis in this report is based on three data sources: Form 5500 health plan filings, Internal Revenue Service *Form 990 Return of Organization Exempt From Income Tax* ("Form 990") filings, and annual financial reports. This section discusses the data sources and the algorithms to match the three sources.

Form 5500 Filings of Health Benefit Plans

The Form 5500 Series was developed to assist employee benefit plans in satisfying annual reporting requirements under Title I and Title IV of the Employee Retirement Income Security Act (ERISA) and under the Internal Revenue Code. The Form 5500, including required schedules and attachments, collects information concerning the operation, funding, assets, and investments of pensions and other employee benefit plans. It is generally due, unless extended, by the last day of the seventh month after the plan year ends (2015 Instructions for Form 5500).

ERISA requires any administrator or sponsor of an employee benefit plan subject to ERISA to annually report details on such plans unless exempt from filing pursuant to regulations issued by the DOL. Welfare plans with fewer than 100 participants ("small plans") are generally exempt, except if they operate a trust. As a result, small welfare plans that do not need to file a Form 5500 are not covered by the analysis in this report.[2] Also, non-ERISA plans, such as governmental plans and church plans, do not need to file a Form 5500 and are not covered by the analysis in this report.

Benefits other than pensions are collectively referred to as welfare benefits. Generally, separate Forms 5500 are filed for pension benefits and for welfare benefits. This report centers on health benefits only, and is thus based on a subset of welfare benefit filings.[3]

Prior to plan year 2009, Forms 5500 were generally filed on paper. Paper filings were scanned and converted into an electronic database using a combination of optical barcodes and optical character recognition. Starting with the 2009 plan year, filers are required to file electronically using the ERISA Filing Acceptance System (EFAST2). We found the data integrity of electronic filings to be higher than that of the converted paper filings.

The Form 5500 consists of a main Form 5500 and a number of schedules and attachments, depending on the type of plan and its features. The main Form 5500 collects such general information as the name of the sponsoring employer, the type of benefits provided (pension, health, disability, life insurance, etc.), the funding and

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[2] In 2016 the DOL estimated that 2,158,000 health plans cover fewer than 100 participants (Federal Register Vol. 81, July 21, 2016, pages 47525-47526). Our analysis includes only 5,580 such plans (0.3%).

[3] For the purpose of this report, only health benefits are relevant. However, 85% of 2015 Form 5500 health plan filings reported on both health and other types of benefits (dental, vision, et cetera).

benefit arrangements, the effective date of the plan, and the number of plan participants. If some or all plan benefits are provided through external insurance contracts, Form 5500 plan filings must include one or more Schedules A with details on each insurance contract (name of insurance company, type of benefit covered, number of persons covered, expenses, etc.). If any assets of the plan are held in a trust, a Schedule H or Schedule I must be attached with financial information. Schedule H applies to plans with 100 or more participants, whereas smaller plans may file the shorter Schedule I. Starting with the 2009 plan year, certain small plans may file a Form 5500-SF (Short Form) with less detailed information.[4] This report's analysis includes 1,359 Form 5500-SF filings in 2015.

Some plans file a Form 5500 even though they are not required to do so. This report excludes such voluntary filers from the analysis. Apart from this exclusion, our analysis covers the universe (not a sample) of health plans that filed a Form 5500. The analysis includes only one filing per year for plans that submitted multiple Form 5500 filings during a calendar year.

Table 1 presents the distribution of plan size, as measured by the number of participants at the end of the reporting period, for filings in statistical year 2015, i.e., for filings with a reporting period that ended in 2015. Throughout this report, participants may include active and retired employees, but will exclude dependents. For 2015, the analysis is based on more than 54,000 plans that together covered almost 73 million participants.[5]

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[4] To be eligible to use the Form 5500-SF, the plan must generally have fewer than 100 participants at the beginning of the plan year, meet the conditions for being exempt from the requirement that the plan's books and records be audited by an independent qualified public accountant, have 100% of its assets invested in certain secure investments with a readily determinable fair value, hold no employer securities, not be a multiemployer plan, and not be required to file a Form M-1, *Report for Multiple Employer Welfare Arrangements (MEWAs) and Certain Entities Claiming Exception (ECEs)* for the plan year (2015 Instructions for Form 5500-SF).

[5] The number of participants is based on the number reported in Form 5500 filings and may overestimate the number of plan participants who receive health benefits. A single Form 5500 filing may reflect multiple welfare benefit types/options available under a single plan, and some participants may opt out of the health benefit option but participate in a different welfare benefit option. For example, in a welfare plan that provides multiple types of benefits, 500 employees may receive long-term disability benefits while only 400 employees choose health benefits. The number of plan participants reported on the Form 5500 would be 500.

Table 1. Distribution of Health Plans and Health Plan Participants, by Plan Participant Counts (2015)

Participants in plan	Plans	Percent	Participants (millions)	Percent
Zero	2,013	3.7%	0.0	0.0%
1-99	3,567	6.5%	0.2	0.2%
100-199	17,409	32.0%	2.5	3.5%
200-499	16,565	30.4%	5.1	7.1%
500-999	6,391	11.7%	4.4	6.1%
1,000-1,999	3,716	6.8%	5.2	7.2%
2,000-4,999	2,684	4.9%	8.3	11.4%
5,000+	2,143	3.9%	46.9	64.5%
Total	54,488	100.0%	72.6	100.0%

Source: Form 5500 health plan filings.

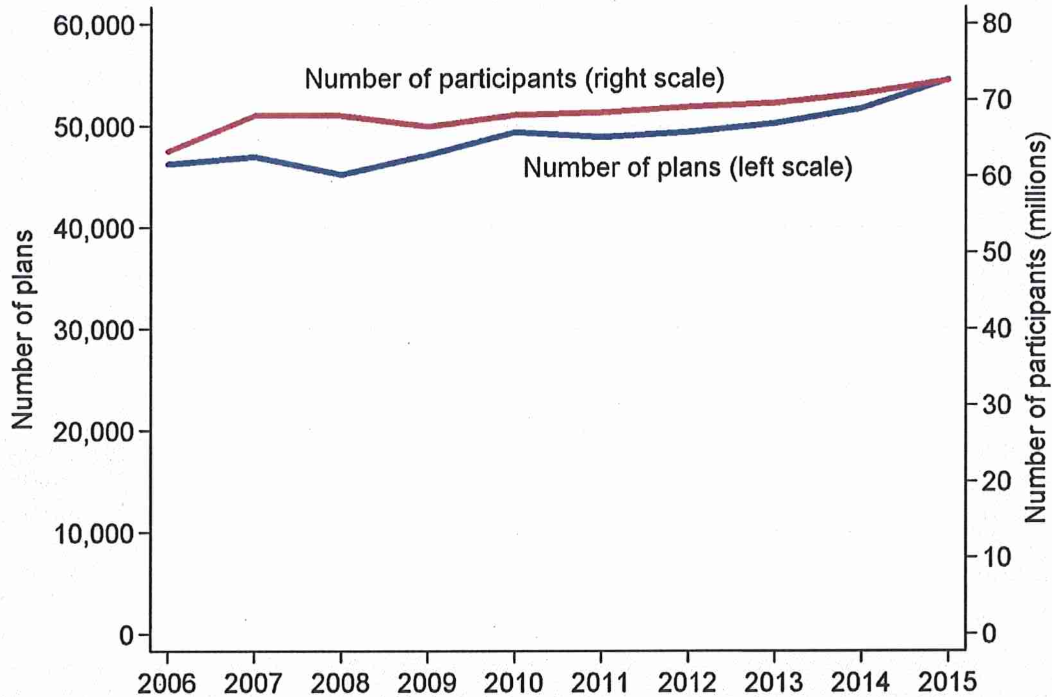
As previously noted, health plans with fewer than 100 participants (small plans) are generally not required to file a Form 5500 unless they hold assets in a trust. Small plans in our analysis are thus a select subset of all small plans. In contrast, plans with 100 or more participants (large plans) are generally required to file a Form 5500 unless otherwise exempt from filing, so we believe our analysis covers the vast majority of large ERISA-covered plans in the United States.

Plans with fewer than 100 participants accounted for 10% of plans in our analysis.[6] Almost two-thirds of plans had between 100 and 499 participants. Most participants, however, were in the largest plans. Plans with 5,000 or more participants make up only 4% of all plans in our sample, but they account for 65% of all participants.

Our analysis covers statistical years 2006 through 2015. As shown in Figure 1 and its underlying counts in Table 2, each statistical year includes between approximately 45,000 and 54,000 plans providing health benefits. The number of participants ranged from approximately 63 million to 73 million per year. Between 2006 and 2015, the numbers of plans and plan participants have generally been increasing. An exception was 2008, when the transition from paper to electronic filings may have caused filings to be imperfectly captured. The number of plans also decreased in 2011, shortly after the ACA was passed, but bounced back in 2012. The number of plan participants did not drop in 2011, which could be consistent with plans that terminated or otherwise ceased filing in 2011 being generally small, or the 2011 reduction in plan filings being in part due to plan mergers. Between 2014 and 2015, the number of plans grew by 6% to more than 54,000 and the number of participants by 3% to almost 73 million.

[6] The filing exemption for plans with fewer than 100 participants that do not hold assets in a trust is based on number of participants at the beginning of the year (BOY), whereas Table 1 is based on end-of-year (EOY) participants. Some plans with zero or 1-99 participants in Table 1 may be plans with more than 100 participants at the beginning of the year and fewer than 100 (including zero) at the end of the year.

Figure 1. Health Plans and Participants, by Statistical Year



Source: Form 5500 filings.

Table 2. Health Plans and Participants, by Statistical Year

Statistical year	Plans	Participants (millions)
2006	46,215	63.3
2007	46,936	68.0
2008	45,184	68.0
2009	47,104	66.6
2010	49,341	68.1
2011	48,855	68.4
2012	49,399	69.1
2013	50,227	69.6
2014	51,643	70.8
2015	54,488	72.6

Source: Form 5500 health plan filings.

Table 3 shows the percentage of health plan filings that could be matched to their corresponding filing in the previous year. While generally in the 83%-88% range, this match rate was substantially lower in 2009, perhaps because of data capture errors related to the then-new electronic filing requirement. In order to gauge consistency in the reporting of the number of participants, the table also illustrates to what extent participant counts of matched pairs of plans changed from one year to the next. Table 3 shows that, at the median, plans reported approximately the same size as in the prior year, suggesting that the matches are generally accurate and that there is consistency in the reporting. Except in 2009, the distributions are

fairly stable over time and the interquartile range (the difference between the 75th and 25th percentiles) of plan size growth was about 15 percentage points.

Table 3. Distribution of Year-on-Year Participant Increases in Plans Matched across Years

Statistical year	Number of plans in year *t*	Percentage matched to a plan in *t-1*	Year-on-year increase		
			25th pct	Median	75th pct
2006	46,215	84.3%	-6.0%	0.8%	9.1%
2007	46,936	84.8%	-6.3%	0.8%	9.1%
2008	45,184	86.1%	-7.7%	0.1%	8.2%
2009	47,104	79.7%	-12.0%	-2.1%	5.3%
2010	49,341	83.0%	-8.6%	-0.7%	6.1%
2011	48,855	87.8%	-6.9%	0.0%	7.0%
2012	49,399	87.8%	-5.8%	0.5%	8.1%
2013	50,227	87.5%	-5.9%	0.5%	8.1%
2014	51,643	86.5%	-5.6%	1.0%	9.1%
2015	54,488	84.6%	-5.7%	1.3%	9.7%

Source: Form 5500 health plan filings.
Note: Match rates based on all Form 5500 health plan filings. Participant increases based on the analysis sample only.

Financial Information from the IRS Form 990 and Capital IQ

Several of our research questions seek to understand the relationship between a plan sponsor's financial health and the plan's characteristics. To address these questions, we matched Form 5500 health plan filings with two sources of financial information: Form 990 and Capital IQ corporate financial data. We obtained plan sponsors' not-for-profit status from the Form 990 and their financial information from Capital IQ. This section describes our approach and the number of Form 5500 filers for which we achieved a statistical year 2015 match with the Form 990 or Capital IQ.

Not-for-Profit Status from Form 990

We determined whether health plan sponsors are for-profit or not-for-profit by matching Form 5500 filings to Form 990 filings. We identify not-for-profit plan sponsors by the existence of a Form 990 filing from the plan sponsor. Tax-exempt organizations file a Form 990 annually with the IRS unless exempt from filing. The IRS makes select fields of Form 990 filings, including Employer Identification Numbers (EINs) and the organizations' names, publicly available on its website. If the corporate sponsor listed on a Form 5500 health plan filing was matched to a Form 990 filing, and the entity that filed a Form 990 was not itself a benefit plan, we identify the plan sponsor as a not-for-profit organization; otherwise, it is considered for-profit.[7]

[7] Some welfare plans of for-profit corporations were themselves not-for-profit entities. For example, the Form 5500 plan sponsor could be listed as XYZ Corporation Employee Benefits Plan, a not-for-profit entity for which a Form 990 was located. In such cases, we ignored the Form 990 entry for XYZ Corporation Employee Benefits Plan and looked for XYZ Corporation among Form 990 filings to determine

The match is carried out by EIN and organization name. To reduce mismatches due to name spelling variations, we normalize names prior to matching, as discussed below. The analysis sample for statistical year 2015 includes 54,488 filings of which 9,232 (17%) had sponsors that filed a Form 990 and were thus identified as not-for-profit. They accounted for 14.2 million participants, or 19% of the total under study.

Financial Metrics from Capital IQ

Our financial metrics information comes from Capital IQ, a provider of financial and other data for companies in the United States and elsewhere. Capital IQ culls Form 10-K filings and other sources to collect data on companies with public financial statements, which generally includes companies with publicly-traded stock or bonds.[8] Our extract from its database contains information on the 2015 financial performance for about 9,000 companies with public financial information whose primary geographic location is in the United States.

We extracted fields that capture company characteristics, financial strength, financial health, and financial size. In particular:

- Market capitalization: total value of outstanding common stock as of the end of the company's financial reporting period;
- Revenue: total revenue net of sales returns and allowances;
- Operating income: revenue minus cost of revenues and total operating expenses;
- Net income: operating income net of interest expense, unusual items, tax expense, and minority interest;
- Cash from operations: total of net income, depreciation and amortization, and certain "other" items;
- Total debt: short-term borrowings, long-term debt, and long-term capital leases;
- Altman Z-Score: an index commonly used for predicting the probability that a firm will go into bankruptcy within two years. The lower the score, the greater the probability of insolvency; and
- Number of employees.

Matching Form 5500 Filings and Capital IQ Records

The only common field in Form 5500 health plan filings and the Capital IQ data available to us is the company/sponsor name. In part because of spelling variations, the match rate on name alone is low.

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its for-profit status. To this end, we excluded Form 990 filings by Voluntary Employees' Beneficiary Associations (VEBAs), Teachers Retirement Fund Associations, Supplemental Unemployment Compensation Trusts or Plans, Employee-Funded Pension Trusts, Multiemployer Pension Plans, and any filer with names that include such labels as "health plan" or "welfare plan." For-profit status thus refers to the ultimate plan sponsor, not to the plan itself.

[8] A Form 10-K is an annual financial report filed with the U.S. Securities and Exchange Commission.

To obtain a better match rate, we used both EINs and company names. Form 5500 health plan data contain EINs, but the Capital IQ file available to us does not. Most Capital IQ records, however, report the company's Central Index Key (CIK), a number used by the U.S. Securities and Exchange Commission (SEC) to identify corporations and individuals who have filed a disclosure with the SEC. SEC filings, electronically available from the SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system, often include both a company's CIK and its EIN. The CIK can be used to link Capital IQ records to EINs from the SEC, and then the EIN can link the Capital IQ-SEC record to Form 5500 filings.[9]

Next, we defined clusters of EINs, CIKs, and company names that appeared to relate to the same company. For example, a company may have used two EINs, or an EIN may have been associated with multiple (similar) names. To improve the clustering, we normalized the company names and removed plan labels (e.g., ABC Incorporated Employee Benefit Trust is equivalent to ABC Inc.).

All related EINs, CIKs, and company names were mapped into a unique cluster ID. Finally, we matched Capital IQ records and Form 5500 health plan filings by cluster ID.

Corporate fiscal years need not correspond to health plan reporting periods. In an effort to accurately match 2015 Form 5500 health plan filings with their sponsor's corresponding 2015 financial information, we required that the end date of the fiscal year captured in Capital IQ and the end date of the Form 5500 plan year differed by no more than 183 days. Only if the closest fiscal and plan years differed by no more than 183 days did we consider this a match.

For example, a health plan sponsor could have a plan year from January 1 to December 31, but a fiscal year that ran from April 1 to March 31 of the next year. Under these circumstances, we would match the Form 5500 health plan filing ending December 31, 2015, with the Capital IQ financial information for fiscal year ending March 31, 2016.

Table 4 shows that we matched 4,048 plans, or about 7% of the plans in the 2015 Form 5500 health plan data.[10] This is the set of companies that appear in our matched analyses to follow. The 4,048 plans covered 26 million participants or approximately 36% of all participants in the Form 5500 health plan data.

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[9] Some issues arose in the linking process. While about 15% of Capital IQ records do not contain a CIK, 8% contain multiple CIKs. Also, some CIKs were found to be linked to multiple EINs. These were incorporated in the analysis.

[10] While this is a relatively small number, many companies that filed a Form 5500 are not represented in Capital IQ data because they may have no requirement to issue publicly available financial statements. Sponsors may be privately held or not-for-profit and without publicly issued bonds, or the plan may be a multiemployer or multiple-employer plan.

Table 4. Form 5500 Health Plan Filings Matched with Financial Information, by Plan Size (2015)

Number of participants	Plans			Participants		
	Number	Percent	Match rate	Number (millions)	Percent	Match rate
Zero	95	2.3%	4.7%	0.0	0.0%	
1-99	112	2.8%	3.1%	0.0	0.0%	3.9%
100-199	431	10.6%	2.5%	0.1	0.2%	2.5%
200-499	706	17.4%	4.3%	0.2	0.9%	4.5%
500-999	603	14.9%	9.4%	0.4	1.7%	9.7%
1,000-1,999	566	14.0%	15.2%	0.8	3.1%	15.7%
2,000-4,999	675	16.7%	25.1%	2.2	8.4%	26.6%
5,000+	860	21.2%	40.1%	22.3	85.6%	47.6%
Total	4,048	100.0%	7.4%	26.1	100.0%	35.9%

Source: Form 5500 health plan filings and Capital IQ data.

The match rate increases with plan size, presumably because large plans are sponsored by large companies and larger companies are more likely to disclose financial information than smaller companies. The match rate among plans with 5,000 or more participants is 40% (down from 42% in 2014), i.e., more than one-half was not matched. These include hospitals and universities without public financials, but also plans sponsored by US operations of large international firms with public financials. We restricted Capital IQ records to companies whose primary geographic location is in the United States, because the financial health of a foreign parent company does not necessarily correspond to that of its US subsidiary. Mismatches arose from differences between corporate names in Capital IQ (e.g., XYZ Holdings Inc) and sponsor names on Form 5500 filings (e.g., XYZ Inc). A more inclusive name matching algorithm could boost the matching rate, but it could also increase the risk of false matches which, in turn, could dilute any analysis results based on the matched subset of plans. Instead, we opted for a more conservative approach with a smaller subset of matched plans but more reliable matches.[11]

[11] The match rate for plans, 7.4%, is smaller than achieved using 2014 data (8.1%). The reduction mirrors a decrease in the number of companies with public financials. For example, the number of publicly listed companies dropped from 9,113 in 1997 to 5,734 in 2016 ("America's Roster of Public Companies Is Shrinking Before Our Eyes," *Wall Street Journal*, January 6, 2017). Indeed, a manual review of large plan sponsors that matched last year but not this year indicated that a substantial share had merged with other companies, sometimes in conjunction with relocation overseas.

3. THE DEFINITION OF SELF-INSURANCE

As noted above, the Form 5500 does not require plan sponsors to specify the funding mechanism of health benefits with sufficient specificity for us to determine whether plans that report using both a trust and insurance should be classified for the purposes of this report as self-insured, fully insured, or mixed funded. This section describes how we determine funding mechanisms of individual plans for the purposes of this report.

The Definition of Funding Mechanism is Driven by Available Data

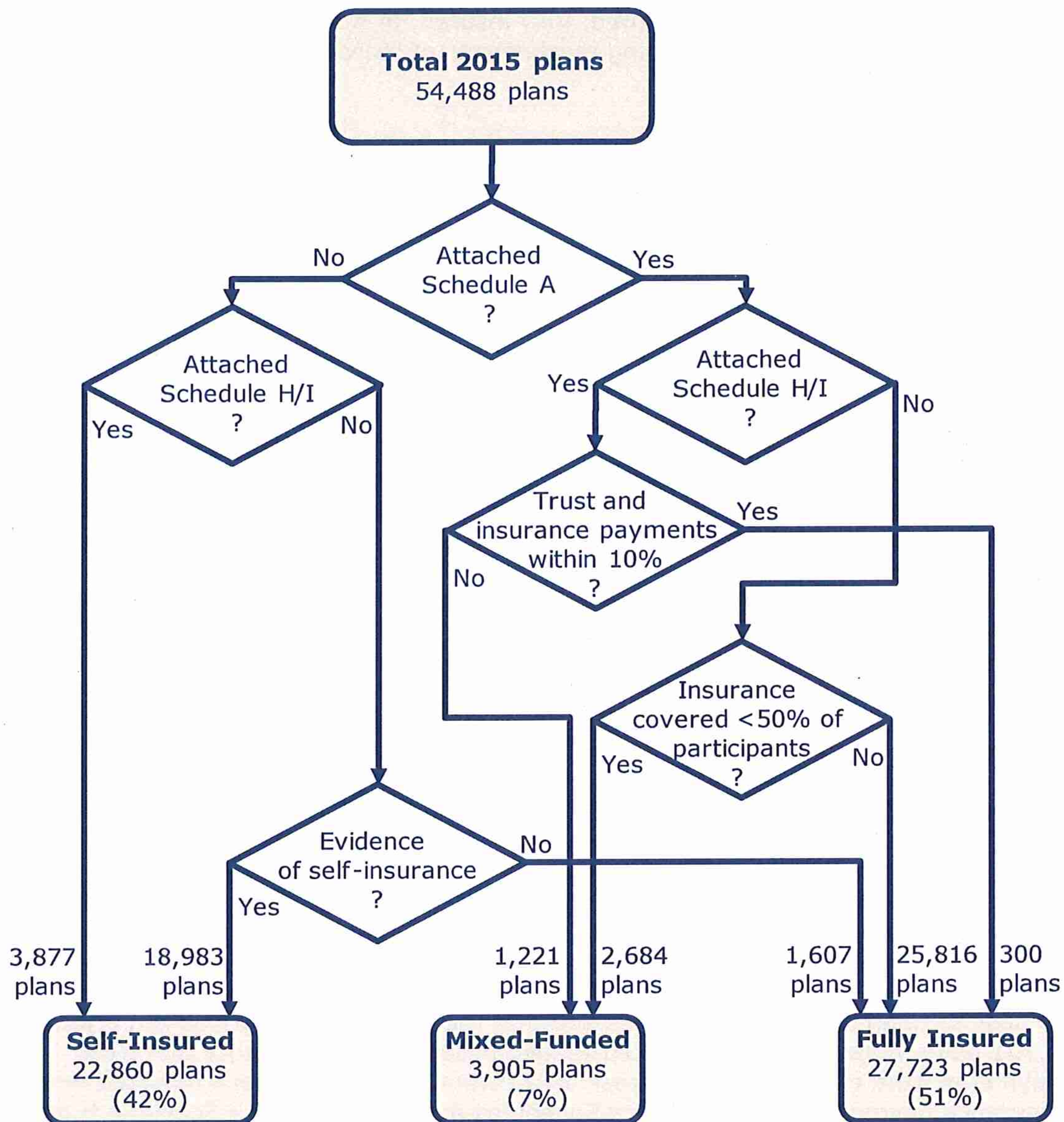
As defined in this report, funding mechanism is based on information in Form 5500 health plan filings. Plans are categorized as self-insured, fully insured, or mixed-funded. A mixed-funded plan contains both self-insured and fully insured components. For example, an employer may offer its employees a choice between a fully insured HMO option and a self-insured PPO option. If both plan components were reported on a single Form 5500 filing, the plan would be mixed-funded. In some cases, the data are incomplete or internally inconsistent (e.g., attached a Schedule A for a contract that appears to be for administrative services only (ASO) rather than for insurance). Given these limitations, the classification in this report should not be interpreted as an official or legal definition. The definition of funding mechanism is driven by available data. The actual data fields used by the algorithm are provided in the Technical Appendix.

In 2015, 3,877 plans were identified as self-insured because they did not report any health insurance contracts and the plan attached a Schedule H or I with evidence of benefit payments; see Figure 2. Another 18,983 plans, even though they did not attach a Schedule H or I were also identified as self-insured because they provided other evidence of self-insurance: (1) the plan indicated that its funding or benefit arrangement was, at least in part, through a trust or from general assets; (2) the plan reported fewer than 100 participants and at least some financial information on a Form 5500-SF; (3) the plan reported 100 or more participants and non-zero assets on a Form 5500-SF; or (4) the plan reported stop-loss coverage or payments to a third-party administrator (TPA). In the absence of such evidence, 1,607 plans were classified as fully insured. Some plans attached both health insurance payments on a Schedule A, suggesting full insurance, and trust payments on a Schedule H or I, suggesting self-insurance. For 300 of these plans, trust payments were within 10% of payments for health or all insurance contracts, suggesting that they used the trust to pass through insurance payments and that the plans were fully insured; another 1,221 plans were classified as mixed-funded because their insurance and trust payments were more than 10% apart. In a common scenario, plans reported health insurance payments on one or more Schedules A and did not file a Schedule H or I. For these plans, we compared the number of people covered through health insurance contracts to the number of plan participants. If the number of people covered by a health insurance contract was less than 50% of the number of plan participants, we classified the plan as mixed funded.[12] This was the case for 2,684

[12] See our report, *Strengths and Limitations of Form 5500 Filings for Determining the Funding Mechanism of Employer-Provided Group Health Plans* at

plans. The remaining 25,816 plans whose health insurance covered at least one-half of plan participants were classified as fully insured. In total, 22,860 plans (41%) were identified as self-insured, 3,905 plans (7%) as mixed-funded, and 27,723 plans (51%) as fully insured.

Figure 2. Funding Mechanism Derivation



While this approach is subject to some data quality issues (further discussed below), we believe it results in a meaningful characterization of health plans' funding mechanism.

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http://www.dol.gov/ebsa/pdf/deloitte2012-5.pdf for a discussion of the sensitivity of plans' funding categorizations to the 50% threshold.

Issues in Defining Funding Mechanism

The information on Form 5500 may be incomplete or inconsistent. Some of the issues affecting the funding mechanism definition are as follows:

- According to subject matter specialists, an employer may set up a subsidiary that acts as an in-house insurance company and sells health insurance to employees. These "captive" insurance companies are subject to state regulations regarding insurance companies. Plan sponsors purchasing insurance from a captive insurance company would file a Schedule A, which does not require disclosing that the insurance company is captive. In the classification, such plans would thus be considered fully insured, even though the employer group to which they belong is incurring a risk substantially similar to that of a self-insured plan. Since nothing on the Form 5500 permits the identification of captive insurance companies, we were not able to quantify how frequently this issue arises.
- As explained above, 7% of Form 5500 filing health plans contained both externally insured and self-insured health components in 2015. While the distinction may be clear conceptually, Form 5500 data limitations imply that the health plan as a whole must be categorized as mixed-funded (partially self-insured and partially insured). The issue arises in part because Form 5500s are required for each plan, not for each type of benefit offered under a plan. Where a plan provides multiple types of welfare benefits or multiple types of health benefit options, it is not always possible to attribute responses to the health benefit component(s) of the filer's welfare plan. Also, a plan may indicate funding benefits through insurance contracts and from general assets without specifying which plan components are funded in either way. Separately, Form 5500 data limitations arise from the fact that the Form 5500 does not ask details about self-insured plan components. At the participant/policy level, however, a benefit is either self-insured or fully insured.
- As noted, plans may attach both one or more Schedules A (evidence of insurance) and a Schedule H or I (suggesting self-insurance). If trust payments were within 10% of insurance payments, we conclude that the trust passes through insurance payments and classify the plan as fully insured. However, if the trust and insurance payments differ by more than 10%, the plan is classified as mixed-funded.
- Also as noted above, plans may offer self-insured health benefits to some participants and fully insured benefits to others, but the Form 5500 provides little insight about the number of participants in the self-insured component. Reflecting such scenarios, plans may also be classified as mixed-funded if fewer than 50% of plan participants are covered by health insurance contracts. The comparison is less than perfect. First, the number of "persons covered" by insurance contracts, as reported on Schedule A, may be interpreted as inclusive of dependents, whereas the definition of "participant" for Form 5500 explicitly requires excluding dependents (see 2015 Instructions for Form 5500). Second, on plans that provide multiple types of benefits, not all reported participants may in fact be participants in the health benefits component of the plan.
- The classification may not recognize mixed funding due to carve-out services. For example, a plan may purchase insurance coverage for mental health benefits and self-insure other health benefits. Its Form 5500 filing would include a Schedule A with details of the mental health carve-out, but might

list the benefits provided under the contract as "group health" because there isn't a separate category for "mental health" benefits on Schedule A, as there is for "dental," "vision," and "prescription drugs."

- Some plans may have filed a Schedule A for an ASO contract even though such a contract is not an insurance contract and the instructions advise filers not to file a Schedule A for an ASO contract. We attempted to identify such Schedules A through potentially reported TPA payments, stop-loss coverage, or implausibly low per-person premium amounts, but the process may not be perfect.
- Among plans that reported a funding or benefit arrangement through insurance, approximately 0.7% did not file a Schedule A with insurance contract details. In such cases, it was assumed that the plan was fully insured.
- Among plans that reported a funding or benefit arrangement through insurance, approximately 1.8% filed one or more Schedules A without the type of benefit that the insurance contract covered. In such cases, unless they had also filed another Schedule A for health insurance, it was assumed that the insurance contract provided health benefits.

For more details on data anomalies that stood in the way of unambiguous funding mechanism classifications, see our report on *Strengths and Limitations of Form 5500 Filings for Determining the Funding Mechanism of Employer-Provided Group Health Plans.*[13]

Stop-Loss Insurance

While self-insured plans bear the financial risks of health benefits and claims, some self-insured plans purchase insurance against particularly large losses. As discussed in the Analysis section below, roughly one in four self-insured plans report such catastrophic or stop-loss insurance on their Form 5500 health plan filings.[14] While stop-loss coverage mitigates financial risks, the plan is still considered self-insured or mixed-funded.

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[13] Available at https://www.dol.gov/sites/default/files/ebsa/researchers/analysis/health-and-welfare/deloitte2012-5.pdf.

[14] As also explained in the Analysis section, if the beneficiary of stop-loss insurance is the employer/sponsor rather than the plan and it was not purchased with plan assets, it need not be reported on Form 5500. The true prevalence of stop-loss insurance, therefore, cannot be gleaned from Form 5500 health plan filings alone.

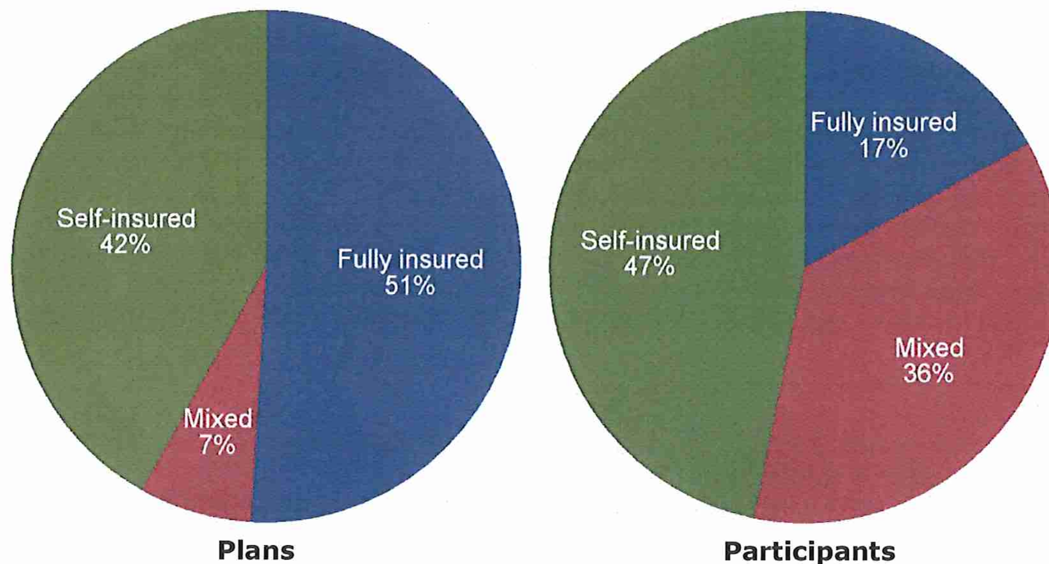
4. ANALYSIS

This section documents the findings of our analyses. We first present the Form 5500 distribution of funding mechanism by plan and plan sponsor characteristics. We then turn to health plan sponsors for which external financial information was available and present summary statistics for these sponsors by plan funding mechanism. Next we follow plan filings over time and document the rate at which plans have switched funding mechanisms. Finally, we show how funding mechanisms vary by state.

Funding Mechanisms for Plans and Participants

For statistical year 2015, Figure 3 shows the overall distribution of funding mechanism among the 54,488 health plans that filed a Form 5500. About 42% of plans were self-insured, 51% were fully insured, and 7% were mixed-funded. As shown further below, smaller plans tend to be fully insured and many very large plans are mixed-funded, so the funding distribution across participants is quite different than it is across plans. About 47% of the 72.6 million participants were in self-insured plans, 17% were in fully insured plans, and 36% were in mixed-funded plans.

Figure 3. Distribution of Funding Mechanism (2015)



To put our analysis in context, consider recent trends in self-insurance according to two external sources. First, the Kaiser Family Foundation and Health Research & Educational Trust annually gather detailed information on employer-provided health benefits, including their funding status, in *Employer Health Benefits 2016 Annual*

Survey ("KFF/HRET Survey").[15] It found that 63% of covered workers in firms with three or more employees were in partially or completely self-funded plans in 2015.[16] Our findings are not directly comparable, because our analysis covers only a small subset of plans with fewer than 100 participants and because as many as 36% of plan participants are in mixed-funded plans. Given the limitations of Form 5500 health plan filings, our results are broadly consistent with those found in the KFF/HRET Survey.

Second, similar to the KFF/HRET Survey, the Insurance Component of the Medical Expenditure Panel Survey (MEPS-IC) annually surveys employers about the health benefit plans they offer.[17] Again, the findings are not strictly comparable, in part because the unit of observation is an establishment in the MEPS-IC and a plan in the Form 5500 data, and because size is measured in covered employees in the MEPS-IC and plan participants in the Form 5500. That said, the results are similar. According to the MEPS-IC, 34% of establishments with 100-999 employees self-insured at least one plan in 2015, whereas we found that 39% of plans with 100-999 participants were self-insured or mixed-funded (calculated from the numbers underlying Table 5 above). Weighted by employees (MEPS-IC) or participants (Form 5500), the fractions are 40% and 47%, respectively. For larger establishments (or plans) with 1,000 or more employees (or participants), 84% self-insured at least one plan according to the MEPS-IC and 82% were self-insured or mixed-funded according to Form 5500 filings. Weighted by employees (MEPS-IC) or participants (Form 5500), the fractions are 86% and 90%, respectively.

Funding Mechanisms by Plan Size

Figure 4 shows the distribution of funding mechanism by plan size for health plans in 2015. Most small plans are identified as self-insured in our study, but this is presumably due to the select nature of small plans in our analysis. Plans with fewer than 100 participants generally are required to file a Form 5500 only if they use a trust or separately maintained fund to hold plan assets or act as a conduit for the transfer of plan assets, which is often associated with self-insurance.[18] Plans with fewer than 100 participants that are fully insured or pay benefits from the general assets of the employer are not required to file a Form 5500 and, therefore, are not included in this analysis.[19] Apart from plans with fewer than 100 participants, the

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[15] *Employer Health Benefits, 2016 Annual Survey.* Kaiser Family Foundation and Health Research & Educational Trust. Available at http://kff.org/health-costs/report/2016-employer-health-benefits-survey.

[16] The KFF/HRET survey defines covered workers as "employees receiving coverage from their employer."

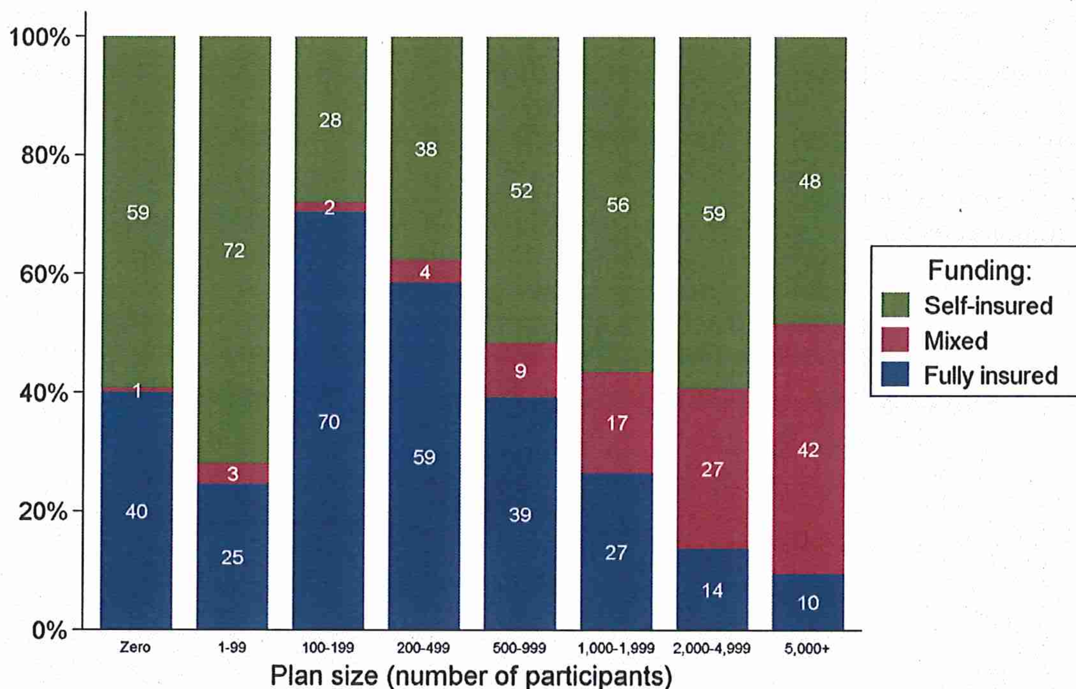
[17] *Medical Expenditure Panel Survey Insurance Component Chartbook 2015.* Rockville, MD: Agency for Healthcare Research and Quality, August 2016. AHRQ Publication No. 16-0045-EF. Available at https://meps.ahrq.gov/mepsweb/survey_comp/MEPSICChartbook.pdf.

[18] The analysis inclusion is based on participants at the beginning of the plan year, whereas Figure 4 distinguishes plans based on their number of participants at the end of the year. Some plans with fewer than 100 participants at the beginning of the year may therefore be included in categories with 100 or more participants at the end of the year, and vice versa.

[19] This applies to the vast majority of small health plans; see footnote 2 on page 2.

likelihood that a plan is self-insured generally increases with plan size. The pattern is particularly pronounced for mixed-funded plans, presumably because larger plans may offer multiple plan options, some of which are fully insured and some of which are self-insured. The share of plans with 5,000 or more participants that are self-insured or mixed-funded is 90%, compared with 30% among plans with 100-199 participants.

Figure 4. Distribution of Funding Mechanism, by Plan Size (2015)



Source: Form 5500 filings.

Table 5 shows the numbers underlying Figure 4. It also shows the participant-weighted distribution of funding mechanism by plan size, which is similar to the plan-weighted distribution.

Table 5. Distribution of Funding Mechanism, by Plan Size (2015)

Participants	Plans			Participants		
in plan	Fully insured	Mixed	Self-insured	Fully insured	Mixed	Self-insured
Zero	40.1%	0.6%	59.3%			
1-99	24.7%	3.4%	71.9%	40.9%	4.0%	55.1%
100-199	70.5%	1.6%	27.9%	70.1%	1.6%	28.3%
200-499	58.5%	3.9%	37.6%	57.1%	4.2%	38.7%
500-999	39.3%	9.2%	51.5%	38.4%	9.6%	52.0%
1,000-1,999	26.5%	17.1%	56.4%	25.9%	17.6%	56.5%
2,000-4,999	13.9%	26.9%	59.3%	13.4%	27.7%	58.9%
5,000+	9.6%	42.1%	48.3%	7.2%	47.8%	45.0%
All	50.9%	7.2%	42.0%	16.9%	36.2%	46.8%

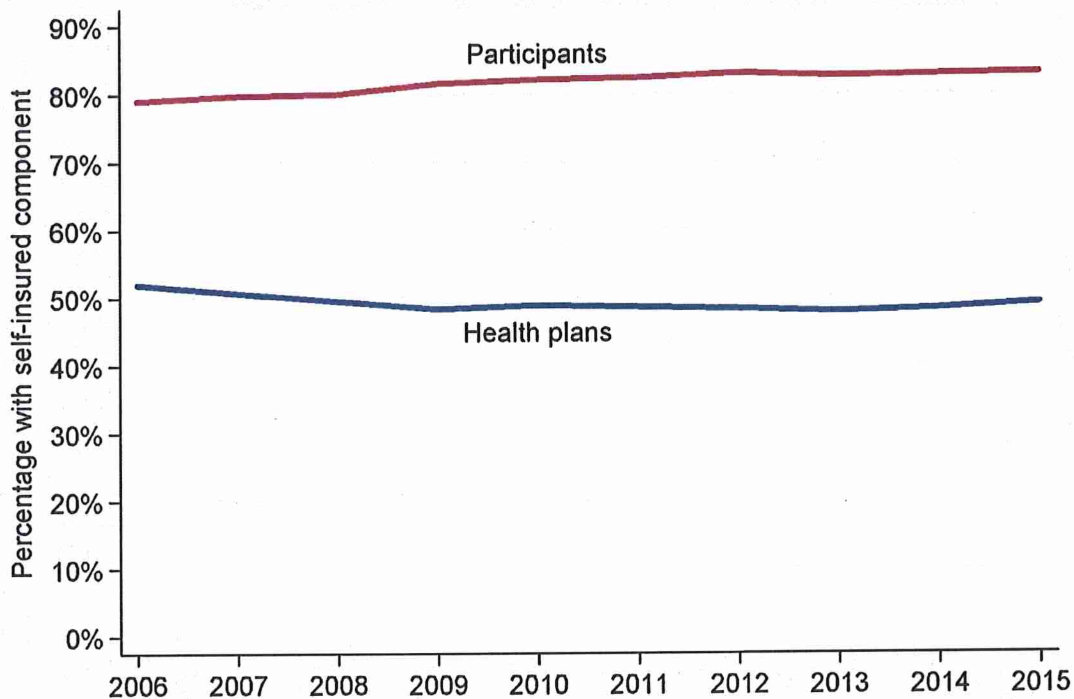
Source: Form 5500 health plan filings.

The finding that larger plans are more likely to adopt mixed-funding or self-insurance is consistent with the KFF/HRET Survey. That study found that 17% of covered workers at firms with 3-199 employees were covered by self-insured plans in 2015, compared with 94% of covered workers at firms with 5,000 or more employees.

Funding Mechanisms by Year

Figure 5 shows the funding mechanism distribution for health plans by statistical year for 2006-2015. The percentage of plans that were self-insured or mixed-funded generally declined from 52% in 2005 to 48% in 2009, was approximately flat through 2013, and then slightly increased to 49% in 2015. While the general trend among plans over the past decade has been away from self-insurance, the share of participants in health plans that self-insured or were mixed-funded increased by about 4 percentage points from 79% in 2006 to 83% in 2012, and remained approximately flat thereafter. In comparison, the KFF/HRET Survey documented a continuing increase toward self-insurance, up 5 percentage points between 2006 and 2012, and another 3 percentage points by 2015. However, KFF/HRET reported that the self-insured or mixed-funded rate subsequently dropped by 2 percentage points between 2015 and 2016. Thus the overall trend toward self-insurance appears to have flattened out based on findings from both this study and the KFF/HRET study.

Figure 5. Distribution of Funding Mechanism, by Statistical Year



Source: Form 5500 filings.

Table 6 provides additional details on the percentages underlying Figure 5, with separate series for the mixed-funded and self-insured categories. Table 7 further shows the corresponding plan and participant counts. The total number of health

plans in each year was between approximately 45,000 and 54,000 and the number of participants was between approximately 63 million and 73 million.

Table 6. Distribution of Funding Mechanism, by Statistical Year

Statistical	Plans			Participants		
year	Fully insured	Mixed	Self-insured	Fully insured	Mixed	Self-insured
2006	48.0%	7.6%	44.3%	21.0%	37.2%	41.8%
2007	49.3%	7.5%	43.3%	20.2%	34.9%	44.9%
2008	50.5%	7.6%	41.9%	19.9%	35.5%	44.6%
2009	51.7%	7.6%	40.7%	18.4%	37.7%	43.9%
2010	51.1%	7.4%	41.6%	17.9%	37.5%	44.6%
2011	51.4%	7.5%	41.1%	17.6%	37.1%	45.3%
2012	51.6%	7.3%	41.0%	17.0%	36.8%	46.2%
2013	52.1%	7.5%	40.4%	17.4%	37.3%	45.2%
2014	51.6%	7.3%	41.0%	17.1%	36.5%	46.4%
2015	50.9%	7.2%	42.0%	16.9%	36.2%	46.8%

Source: Form 5500 health plan filings.

Table 7. Plans and Participants by Funding Mechanism, by Statistical Year

Statistical	Plans			Participants (millions)		
year	Fully insured	Mixed	Self-insured	Fully insured	Mixed	Self-insured
2006	22,198	3,526	20,491	13.3	23.6	26.5
2007	23,124	3,509	20,303	13.8	23.7	30.6
2008	22,815	3,448	18,921	13.5	24.1	30.3
2009	24,333	3,602	19,169	12.3	25.1	29.2
2010	25,210	3,628	20,503	12.2	25.5	30.4
2011	25,098	3,669	20,088	12.0	25.4	31.0
2012	25,510	3,614	20,275	11.7	25.4	32.0
2013	26,183	3,774	20,270	12.1	26.0	31.5
2014	26,657	3,795	21,191	12.1	25.8	32.8
2015	27,723	3,905	22,860	12.3	26.3	34.0

Source: Form 5500 health plan filings.

As also noted in past reports, Figure 5 and Table 6 pose a paradox: the share of plans that were mixed-funded or self-insured generally decreased until recently, but the share of participants in such plans generally increased. The paradox may be explained as follows. First, self-insurance has become less prevalent among relatively small plans and more prevalent among relatively large plans. Table 8 shows that from 2006 to 2015 the percentage of mixed-funded or self-insured plans with 100-499 participants decreased from 39% to 35%, whereas the corresponding percentage among plans with 500 or more participants increased from 66% to 73%. The trend toward full insurance among plans with 100-499 participants flattened out or perhaps even reversed in recent years, but plans with 500 or more participants continue to migrate toward self-insurance (Table 8). Second, the fraction of small plans in the data decreased: the share of plans with 0-99 participants reduced from 12% in 2006 to 10% in 2015. The analysis includes small plans only if they operated a trust, which tends to be associated with self-insurance. The trend toward fewer filings by small plans is thus consistent with a trend toward less mixed-funding or self-insurance among plans. The combined result is that fewer plans are mixed-funded or self-insured, but those plans cover increasingly more participants.

Table 8. Distribution of Funding Mechanism, by Plan Size and Statistical Year

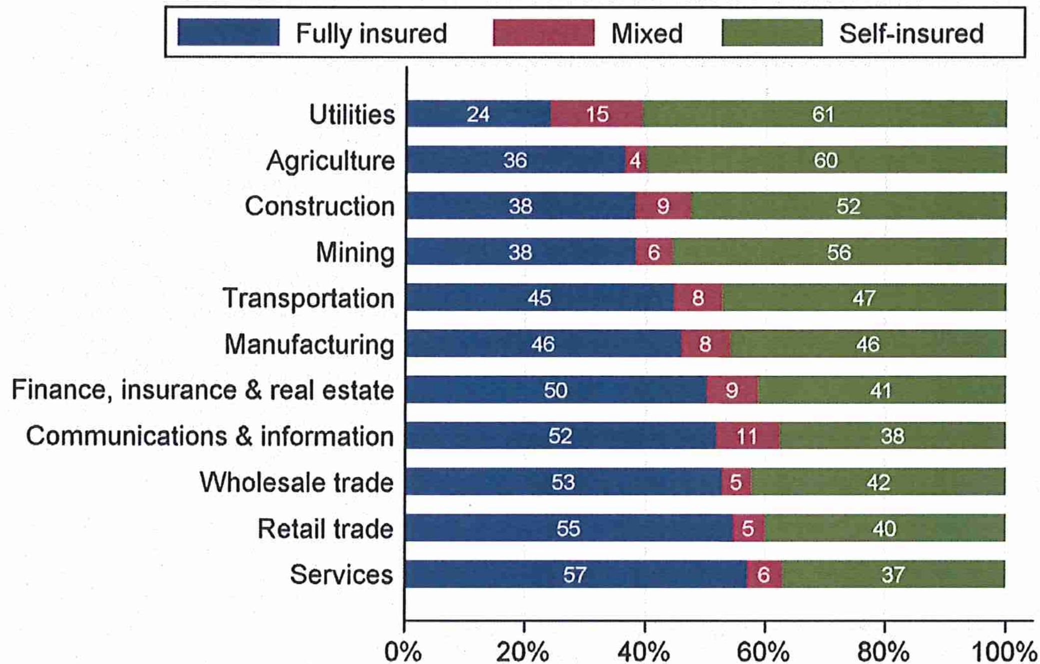
Statistical year	Plans with 100-499 Participants			Plans with 500+ Participants		
	Fully insured	Mixed	Self-insured	Fully insured	Mixed	Self-insured
2006	60.9%	2.7%	36.3%	34.1%	18.3%	47.6%
2007	62.3%	2.6%	35.1%	34.2%	18.2%	47.7%
2008	63.6%	2.6%	33.8%	33.6%	18.6%	47.8%
2009	64.6%	2.5%	32.9%	32.0%	19.7%	48.4%
2010	65.1%	2.4%	32.5%	30.4%	19.6%	50.0%
2011	65.0%	2.4%	32.6%	29.2%	19.9%	50.8%
2012	65.2%	2.5%	32.3%	29.2%	19.1%	51.7%
2013	65.5%	2.7%	31.8%	28.9%	19.7%	51.5%
2014	65.1%	2.8%	32.1%	28.2%	19.1%	52.7%
2015	64.6%	2.7%	32.6%	27.3%	19.0%	53.7%

Source: Form 5500 health plan filings.

Funding Mechanisms by Employer Type

Figure 6 shows the funding mechanism distribution by industry, as identified by the business code provided on Form 5500 filings. We present the percentage breakdown of plans by the funding mechanism for a classification of major industry groups. Plans in the utilities, agriculture, construction, and mining industries are the most likely to be mixed-funded or self-insured, whereas the services and retail trade industries are the most likely to be fully insured. Some of the relationship between funding mechanism and industry may be due to variation across industries in health plan sizes.

Figure 6. Distribution of Funding Mechanism, by Industry (2015)



Source: Form 5500 filings.
Percentages may not sum to 100% because of rounding.

Some industry patterns do not appear consistent with those documented by the KFF/HRET Survey. That study found that the agriculture/mining/construction industry had *below*-average and retail *above*-average self-funding rates. Part of the difference may be due to small plans, which were included in the KFF/HRET Survey but mostly excluded from our analysis. Part may also be due to the fact that KFF/HRET figures are for participants, whereas Figure 6 relates to plans. Weighted by participants, we also find an above-average self-funding rate for plans in the retail sector.

Funding Mechanisms by State

Figure 7 shows the distribution of funding mechanism in 2015 by state or territory of the plan's mailing address, and Figure 8 shows its participant-weighted counterpart.[20] Funding distributions vary widely across states. For example, 88% of plans in Wyoming were self-insured compared with just 18% in Puerto Rico. At the participant level, as many as 98% of participants in plans in Washington DC were self-insured or mixed-funded, compared with just 28% in Puerto Rico.

In Hawaii, relatively few plans were self-insured or mixed funded. This may be a result of Hawaii's restrictions on self-insurance: it requires proof of financial solvency and ability to pay benefits, bonding, annual filings of audited financial statements,

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[20] Fourteen plans were excluded because their mailing address was outside the 50 states, Washington DC, and Puerto Rico. There were 73 plans in Wyoming; all other states had more than 100 plans.

and (for plans covering fewer than 1,500 employees) stop-loss coverage.[21] Outside Hawaii, it is unclear what drives the large observed differences in self-insurance rates. We attempted to relate differences across states to regional location and various state characteristics, but did not uncover any noteworthy patterns. No discernible patterns emerged by states' prevalence of very large plans, competition in the health insurance market, health insurance premiums, or metrics related to implementation of the ACA. State taxation of health insurance premiums was weakly related to self-insurance in states, but in a counterintuitive manner: states with relatively high insurance premium taxes also tended to have relatively many fully insured plans.

A potential reason for the lack of intuitive patterns—and an important caveat for this analysis—is the disconnect between a plan's mailing address and the location of its participants, especially for large plans. Large plans may have employees spread over many states and could be subject to multiple state profiles and jurisdictions. The participant-weighted distributions in Figure 8 should be interpreted with particular caution, since participant-weighted figures are sensitive to the presence of very large plans.

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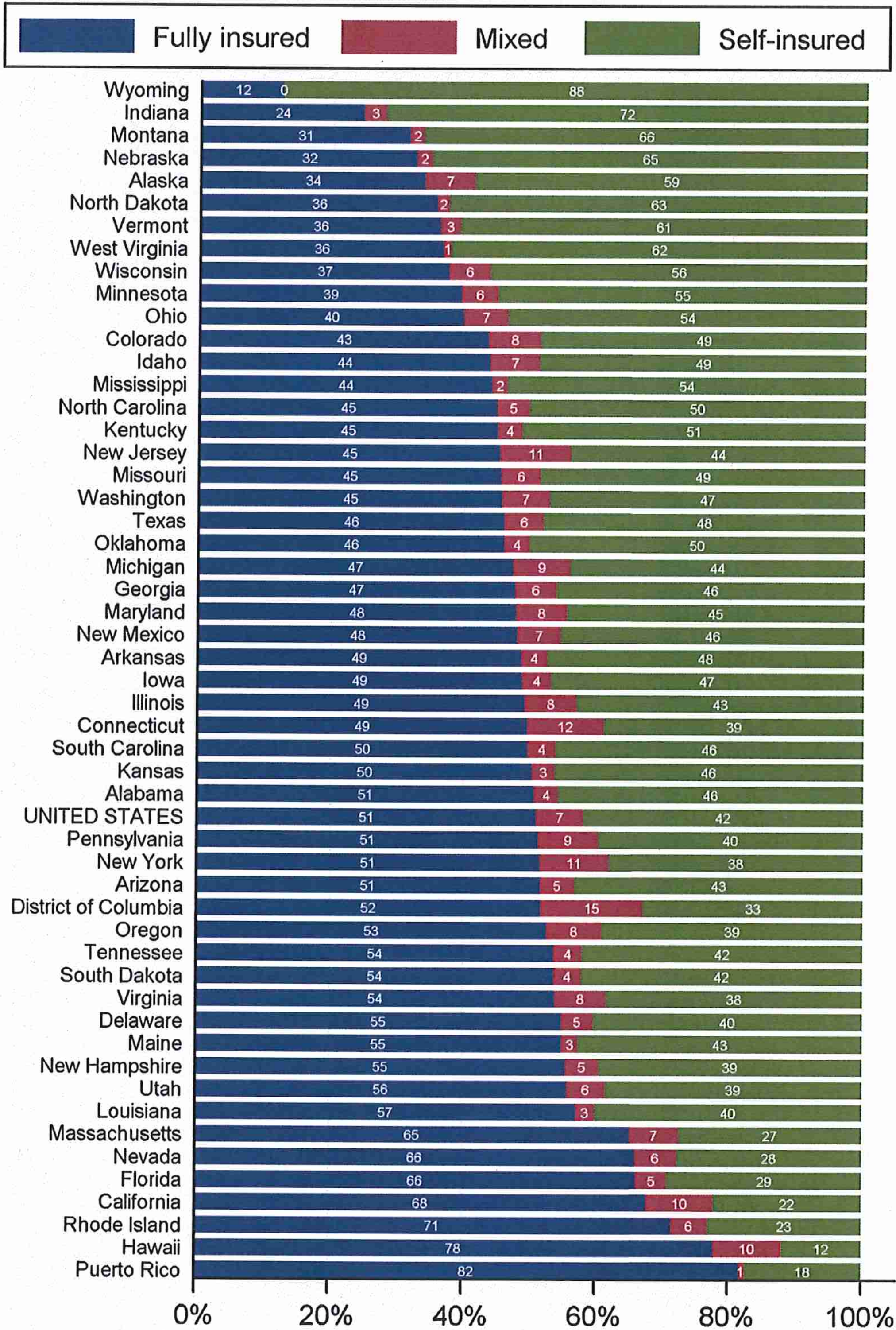
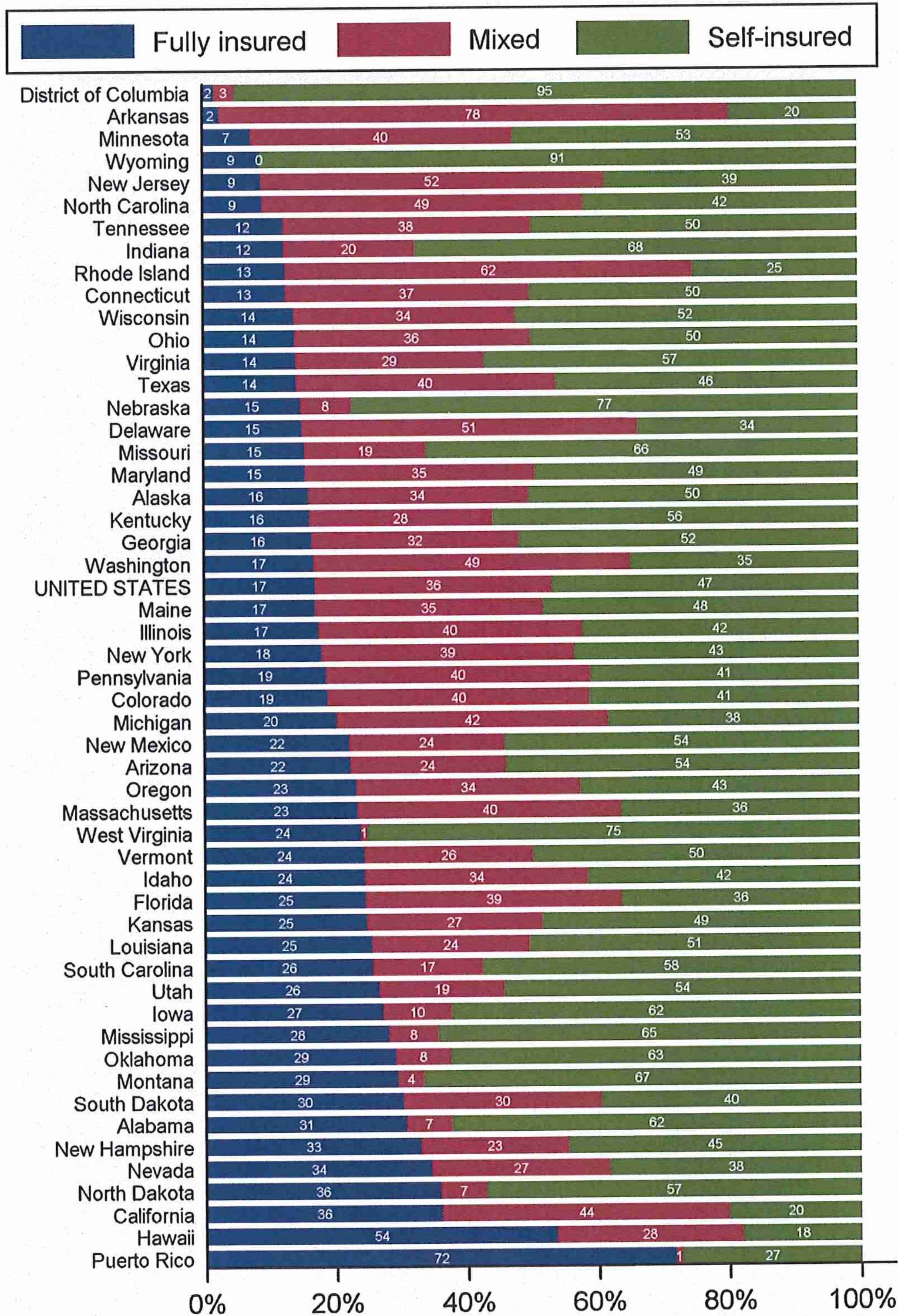
[21] In 1974, Hawaii passed the Hawaii Prepaid Health Care Act (HPHCA) designed to improve health care coverage through an employer mandate (https://www.loc.gov/law/help/statehealthplans/hawaii.php). The HPHCA requires businesses to offer health insurance to employees who work more than 20 hours per week for four consecutive weeks in the State of Hawaii. It also regulates self-insurance, as described in the text, which may explain Hawaii's low rate of self-insurance. ERISA, which was passed shortly after the HPHCA, initially preempted the HPHCA, but a 1983 amendment to ERISA waived federal preemption for the HPHCA. Section 1560 of the ACA maintained the HPHCA's exemption.

Figure 7. Distribution of Health Plan Funding Mechanism, by State (2015)



Source: 2015 Form 5500 health plan filings.
Percentages may not sum to 100% because of rounding.

Figure 8. Participant-Weighted Distribution of Health Plan Funding Mechanism, by State (2015)



Source: 2015 Form 5500 health plan filings.
Percentages may not sum to 100% because of rounding.

Funding Mechanisms over the Life Cycle of Plans

We noted earlier that plans have tended to move toward full insurance over the past decade, whereas the fraction of participants in fully insured plans has generally been declining (Figure 5). Underlying this paradox is a divergence of smaller and larger plans: smaller plans have tended to move toward full insurance whereas larger plans have tended to move toward self-insurance (Table 8). In an attempt to gain a fuller understanding of these trends, we now turn to funding mechanisms over the life cycle of plans.[22]

We distinguish among plans at the beginning of their life, at the end of their life, and during the years in between. For example, it is unclear whether the observed shifts were due to the funding mix of new plans, the funding mix of terminating plans, net switches among established plans, or a combination of factors. The analysis is somewhat hampered by the fact that Form 5500 filings contain incomplete information about the beginning and end of plans' lives:

- *New*: We identify the beginning of a plan's life cycle based on the Form 5500's "first return/report" check box.[23]
- *Cease filing*: We attempt to capture the end of a plan's life cycle in two ways. First, a plan may have indicated on its Form 5500 that it is terminating, namely by checking the "final return/report" box, by reporting a resolution to terminate the plan, or by documenting that all assets were transferred out of the plan.[24] Second, a plan may stop filing a Form 5500 without prior indication. Doing so does not necessarily imply that the plan terminated; it may be non-compliant or it may have shrunk and become exempt (and neglected to note this by writing "4R" on Line 8b of the Form 5500). To mitigate this issue, we ignore gaps in filings. Recognizing that some plans in this category have in fact not reached the end of their life cycle, we label them as plans that "ceased filing."[25]
- *Established*: This category captures the middle of a plan's life cycle. Plans that were neither "new" nor "ceased filing" are labeled "established" plans.

We will discuss plan-level and participant-level trends separately. Starting with plan-level developments, Figure 9 shows the mixed-funded or self-insured share of new plans, established plans, and plans that ceased filing. (Since most plans are established, the overall share is very close to the share among established plans.)

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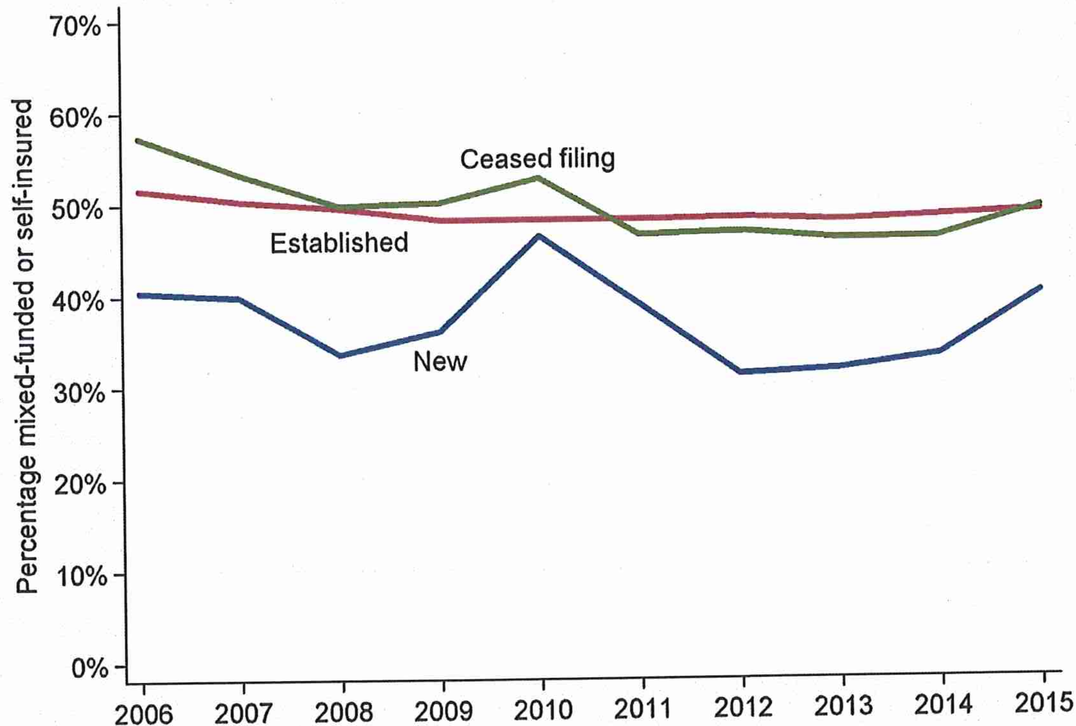
[22] For the lifecycle perspective in this section, we follow filings of individual plans over time. In order to minimize gaps, the analysis includes voluntary filings.
[23] Some plans never checked that box, or not until later in their life cycle. If the box was not checked until the, say, fourth filing, we exclude the earlier filings from the analysis. If the box was checked multiple times, we identify the plan as "new" only the first time.
[24] Some plans repeatedly indicated terminating but continued submitting filings. We ignore indications of terminating if the plan continued filing in subsequent years. Separately, plans that reported termination on their initial filing were included in both the "new" and "ceased filing" categories. Also see Figure 12 below.
[25] In terms of timing, if a plan indicated on its 2011 filing that it was terminating, we consider it as having ceased filing in 2011. If a plan submitted filings through 2011 but not in any later year, we consider it as having ceased filing in 2012.

New plans were more often fully insured than other plans, which helps explain the general migration toward full insurance, but the gap narrowed in 2015, which helps explain the slight reduction in full insurance from 2014 to 2015 (Table 6).

Figure 9. Percentage Mixed-Funded or Self-Insured among New Plans, Established Plans, and Plans That Ceased Filing, by Statistical Year

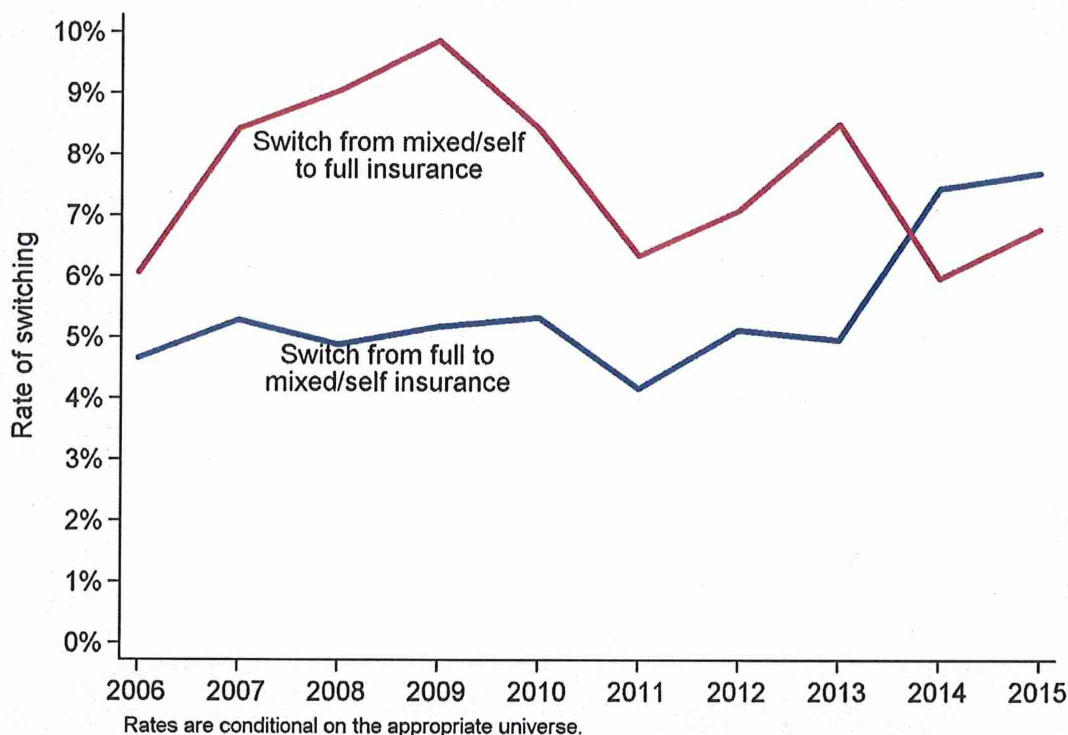


Switch Rates

This section discusses funding mechanism switch rates among new and established plans.

Figure 10 shows the switch rate for new plans over time, i.e., funding mechanism changes between plans' first and second filings. Through 2013, mixed-funded or self-insured plans were more likely to switch to full insurance than fully insured plans were to switch to a form of self-insurance. For example, 8.5% of plans that started in 2012 as mixed-funded or self-insured had switched to full insurance by 2013, compared with 5.0% of fully insured plans that had switched to mixed funding or self-insurance. This does *not* mean that the net flow was toward full insurance: Figure 9 above showed that about 31% of new plans in 2012 were self-insured or mixed-funded, so the number of plans switching toward self-insurance (5.0% of 69%) is slightly higher than plans moving toward full insurance (8.5% of 31%). Indeed, the net flows were very small from 2005 through 2013, with fewer than 10 plans annually, on net, moving in one direction or the other (not shown).

Figure 10. Rates of Funding Switching among New Plans, by Statistical Year



Switch rates reversed in recent years. In 2014 and 2015, new plans were more likely to switch toward self-insurance than away from it. On net, 85 new plans switched toward self-insurance in 2014 and another 83 new plans in 2015 (not shown). Both recently increasing self-insurance rates among new plans (Figure 9) and recently increasing switch rates to self-insurance in plans' second year of life (Figure 10) help explain the recent uptick in overall self-insurance rates.

Figure 11 shows the switch rate for established plans over time. Switch rates are higher toward self-insurance than away from it, especially (and consistent with switching among new plans) since 2014. For example, 4.3% of established plans that in 2014 were mixed-funded or self-insured had switched to full insurance by 2015, compared with 7.7% of fully insured plans that had switched to mixed funding or self-insurance.[26]

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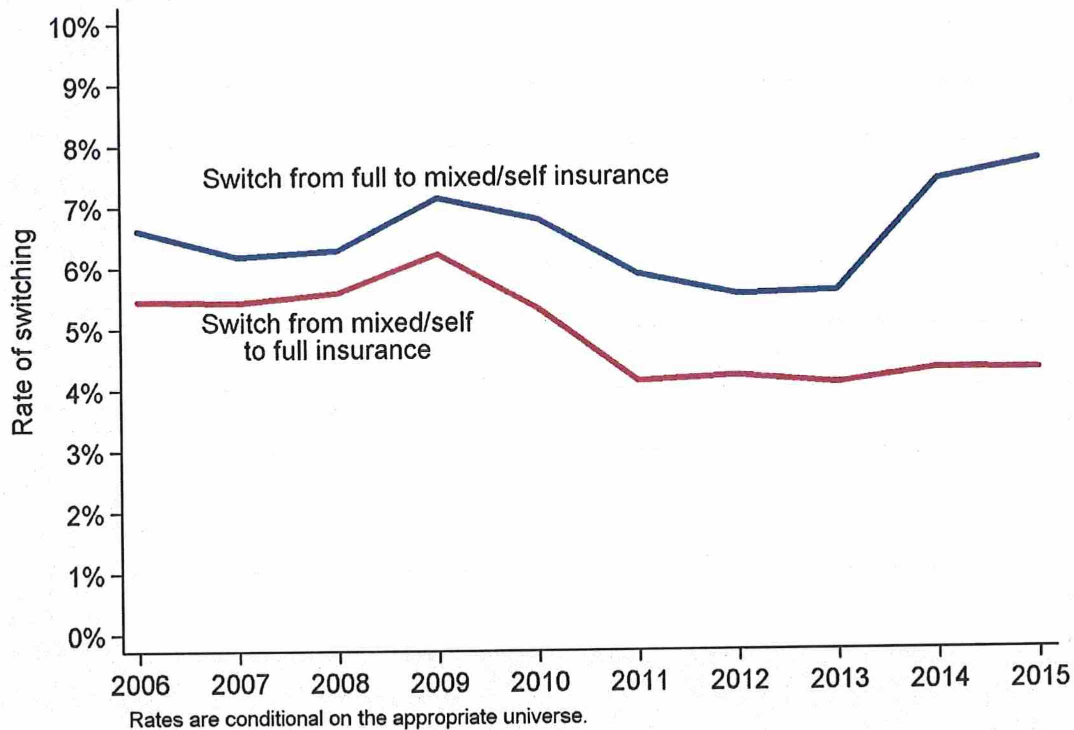
[26] Some plans appear to switch funding mechanisms more often than is plausible. In some cases, the issue is that two plans—one insured, one self-insured—are reported with the same EIN and PN. In other cases, incomplete or ambiguous information on Form 5500 filings may result in conflicting categorizations from one year to the next. The switching rates in Figure 11 may thus overstate true switching rates, but the net effect on plan flows should be approximately zero.

Figure 11. Rates of Funding Switching among Established Plans, by Statistical Year



Again, the switch rate patterns in Figure 11 do not necessarily reflect flows of plans because of differences in the numbers of established plans that were fully insured or mixed-funded/self-insured. Among established plans, the net flows were larger than among new plans, and more plans switched toward self-insurance than away from it. Earlier we showed that until about 2010, an increasingly large fraction of health plans were fully insured (Figure 5); switch patterns among new plans contributed very little to that trend, whereas switch patterns among established plans went counter to the overall trend. In 2014 and 2015, consistent with switch patterns among new and established plans, the prevalence of mixed-funding or self-insurance increased slightly.

Rates at Which Plans Ceased Filing

Figure 12 shows the rates at which new plans ceased filing; they could have checked both the first and final return/report checkboxes, or they could have filed just a single Form 5500. In all years from 2006 to 2015, mixed-funded or self-insured new plans were more likely to cease filing than their fully insured counterparts.[27] In terms of absolute numbers, more fully insured plans terminated, except in 2010 and 2015.

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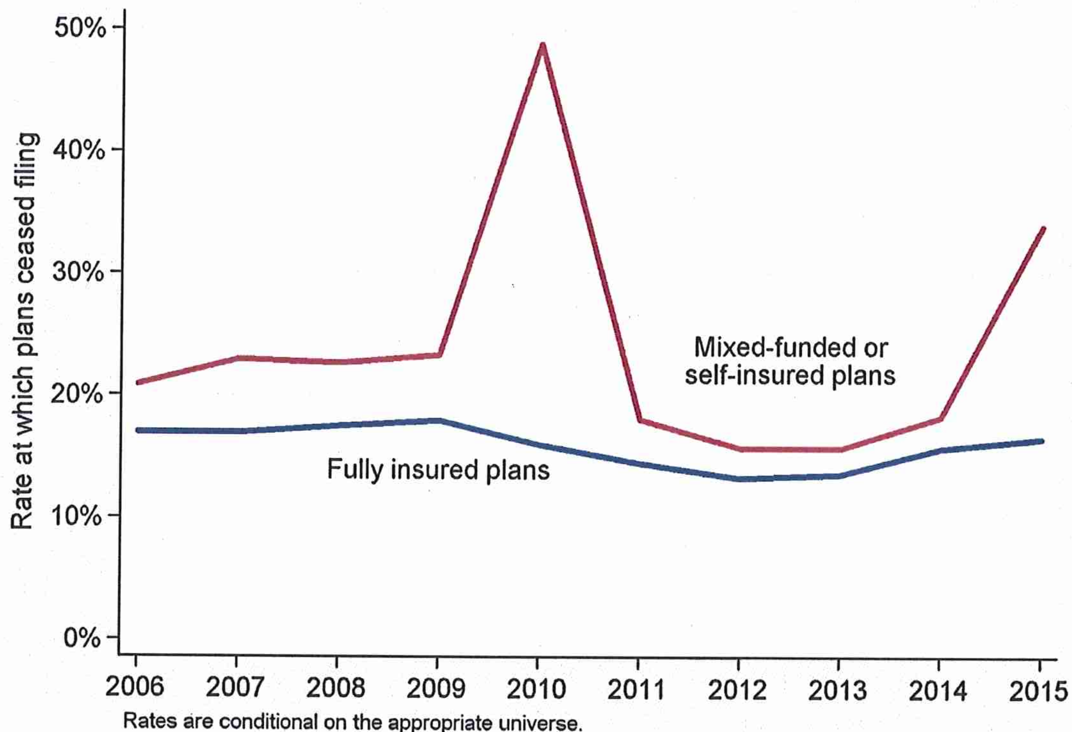
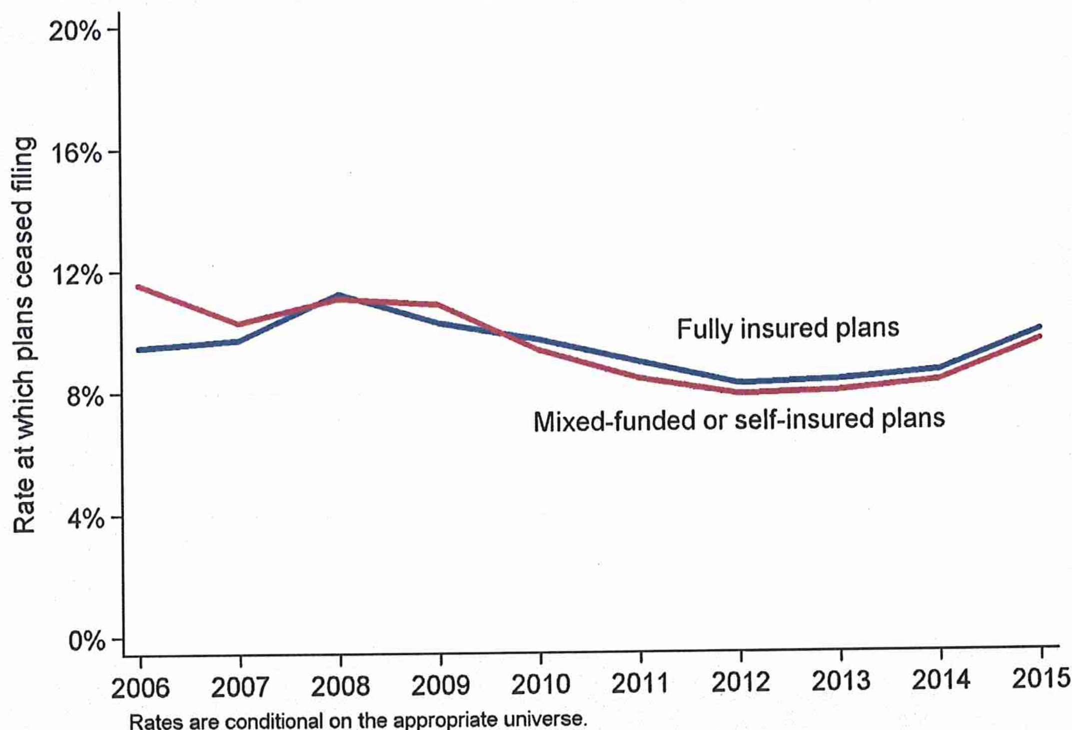
[27] The spike in 2010 appears to be an anomaly due to a single administrator who submitted more than 800 Form 5500 filings for small, self-insured plans in 2010 and checked both the first and final return/report boxes. No such explanation is evident for the increase in 2015.

Figure 12. Rates at Which New Plans Ceased Filing, by Statistical Year



Similarly, Figure 13 shows that rates at which established fully insured plans ceased filing were generally close to those of mixed-funded or self-insured plans. Until 2009, since the majority of established plans were mixed-funded or self-insured, the net effect was to increase the fraction of fully insured plans. In 2010-2015, fully insured plans ceased filing in larger numbers than mixed-funded or self-insured plans.

Figure 13. Rates at Which Established Plans Ceased Filing



Rates are conditional on the appropriate universe.

In conclusion, the share of plans that were fully insured was increasing until 2013. This was mostly caused by new plans and, up to 2009, was amplified by patterns in the number of plans that ceased filing. The majority of new plans were fully insured. The net effect of changes in funding mechanism over the life cycle went in the opposite direction, with more plans switching toward mixed/self-insurance than toward full insurance. Up to 2009, more mixed-funded or self-insured plans ceased filing than fully insured plans did, but that pattern reversed starting in 2010. Indeed the overall trend among plans toward full insurance leveled out starting around 2010 (see Figure 5 and Table 6). Starting in 2014, the trend away from self-insurance shows a tentative reversal caused by increasing self-insurance among new plans (Figure 9), and more net switching to self-insurance by new plans (Figure 10) and established plans (Figure 11).

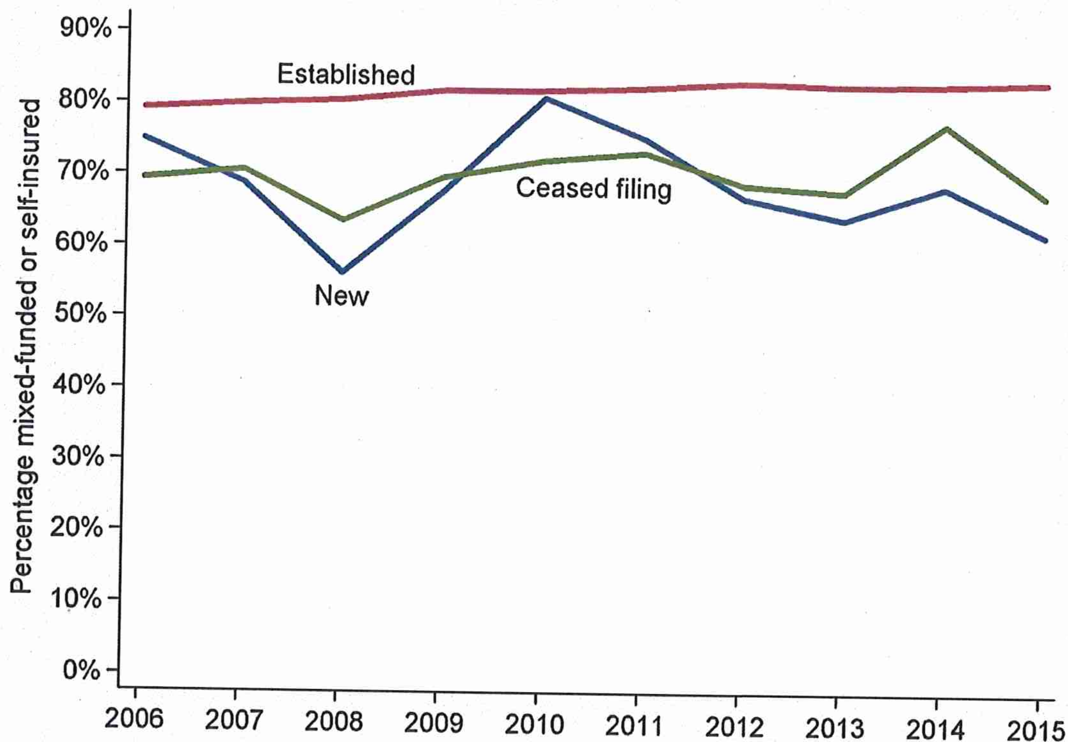
Small and Large Plans Behaved Differently

The discussion above generally ignored plan size. However, while the overall fraction of plans that are fully insured generally increased over time, the fraction of participants covered by those fully insured plans has moved in the opposite direction (Figure 5 and Table 6). Indeed small and large plans followed different patterns, as demonstrated in this section.

Figure 14 shows the percentage of participants who were covered by a mixed-funded or self-insured plan, by plan life cycle stage, from 2006 to 2015. It is the participant-weighted counterpart of Figure 9. Mirroring the pattern among plans, participants in new plans were generally less likely to be in mixed-funded or self-insured plans than

those in established plans. However unlike in Figure 9, participants in plans that ceased filing were also less likely to be in mixed-funded or self-insured plans than those in established plans, pointing at funding mechanism switching as the main cause of the general upward trend in self-insurance among participants.

Figure 14. Participant-Weighted Percentage Mixed-Funded or Self-Insured among New Plans, Established Plans, and Plans That Ceased Filing, by Statistical Year



Before turning to switching patterns, consider that most participants are covered by large plans (Table 1 and Table 9).[28] We restrict the analysis to the most recent five years (2011-2015). Less than 2% of new plans covered 5,000 or more participants, but those plans accounted for 48% of participants in all new plans. Among established plans, 65% of participants were in plans with 5,000 or more participants. The behavior of plans with more than 5,000 participants is therefore key to understanding participant-weighted trends in funding.

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[28] Table 9 shows that 1.4% of new plans in 2011-2015 had 5,000 or more participants. A manual review indicated that such plans commonly were successor plans to prior plans that were replaced or consolidated, such as after a corporate merger. Likewise, many plans that ceased filing may have been replaced with other plans and secured continuing health benefit coverage for their participants.

Table 9. Distribution of Health Plans and Plan Participants, by Plan Participant Counts (2011-2015)

Participants in plan (EOY)	New Plans		Established Plans		Plans That Ceased Filing	
	Plans	Participants	Plans	Participants	Plans	Participants
Zero	3.0%	0.0%	0.4%	0.0%	32.0%	0.0%
1-99	13.6%	1.1%	8.5%	0.3%	20.9%	2.6%
100-199	51.0%	13.0%	30.8%	3.2%	21.0%	6.6%
200-499	20.5%	11.4%	31.3%	6.9%	15.2%	10.4%
500-999	5.7%	7.3%	12.4%	6.1%	5.2%	7.9%
1,000-1,999	2.8%	7.3%	7.4%	7.3%	2.9%	9.1%
2,000-4,999	2.0%	11.8%	5.2%	11.5%	1.7%	12.0%
5,000+	1.4%	48.1%	4.1%	64.8%	1.1%	51.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Form 5500 health plan filings.

Table 10 shows the annual rate of funding mechanism switching among new and established plans. Overall, 6.0% of plans that started as fully insured switched to mixed-funded or self-insured during their second reporting period, but large plans were much more likely to make that switch than small plans. For example, 31% of fully insured new plans with 5,000 or more participants changed funding mechanism, compared with less than or equal to 8% of plans with fewer than 500 participants. Conversely, small plans that started life as mixed-funded or self-insured were more likely to switch to fully insured than their larger counterparts. A similar pattern existed among established plans. Since most participants are in large plans, the implication is that, on net, participants in both new and established plans migrated to mixed-funded or self-insured plans.

Table 10. Annual Rates of Funding Switching among New and Established Plans, by Plan Size (2011-2015)

EOY plan participants	New Plans		Established Plans	
	Switch to mixed or self-insured	Switch to fully insured	Switch to mixed or self-insured	Switch to fully insured
Zero	8.0%	2.9%	11.7%	8.4%
1-99	5.8%	2.9%	6.1%	3.0%
100-199	4.4%	10.2%	4.3%	7.0%
200-499	7.0%	10.2%	6.0%	5.0%
500-999	10.4%	6.3%	9.5%	3.4%
1,000-1,999	13.5%	7.6%	12.9%	2.5%
2,000-4,999	22.8%	2.8%	17.4%	1.7%
5,000+	31.0%	2.4%	18.5%	1.4%
All	6.0%	6.9%	6.4%	4.2%

Source: Form 5500 health plan filings.

Note: Rates are conditional on the appropriate universe. For example, the denominator for the first column is fully insured new plans.

Rates at which plans ceased filing also varied by plan size (Table 11), with small plans much more likely to stop filing in 2011-2015 than large plans.[29] Among plans with 5,000 or more participants, fully insured plans ceased filing at a higher rate than mixed-funded or self-insured plans. On net, filing cessations affected participants in mixed-funded or self-insured plans less than those in fully insured plans (Figure 14).

Table 11. Annual Rates at Which New and Established Plans Ceased Filing, by Plan Size (2011-2015)

	New Plans		Established Plans	
BOY plan participants	Mixed or self-insured	Fully insured	Mixed or self-insured	Fully insured
Zero	82.1%	80.4%	40.9%	38.2%
1-99	37.3%	30.6%	17.0%	19.4%
100-199	19.0%	14.7%	10.5%	9.7%
200-499	12.3%	10.1%	6.8%	7.0%
500-999	15.9%	11.7%	6.8%	6.4%
1,000-1,999	8.8%	12.5%	5.9%	6.4%
2,000-4,999	4.5%	6.7%	4.8%	6.4%
5,000+	4.3%	14.3%	4.0%	6.1%
All	21.7%	14.8%	8.4%	8.8%

Source: Form 5500 health plan filings.

In conclusion, large plans on net switched away from full insurance, thereby increasing the fraction of participants in mixed-funded or self-insured plans. Further reinforcing this trend, large fully insured plans were more likely to cease filing than large mixed-funded or self-insured plans.

Stop-Loss Coverage of Plans

Table 12 examines the presence of stop-loss insurance. These figures must be interpreted with caution. If stop-loss insurance identifies the health plan as the beneficiary or it is purchased with plan assets, it must be reported on a Schedule A.[30] However, if the employer/sponsor has purchased stop-loss insurance with itself as the beneficiary (rather than the plan), then it need not be reported on the Form 5500. The figures in Schedule A (and Table 12) thus likely understate the prevalence of stop-loss insurance.[31] In 2015, approximately 17% of mixed-funded and 26% of

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[29] Given the focus on the end of the life cycle, Table 11 categorizes plans by the number of participants at the beginning (rather than the end) of the reporting period. On a related point, fully insured plans with zero or 1-99 participants generally do not need to file, which may explain their high cease-filing rates. (Recall that voluntary filings are included in the current section in order to observe as much as possible of their life cycle; voluntary filings are excluded from the analysis in other sections.)

[30] No Schedule A can be attached to a Form 5500-SF and our analysis assumes that none of the Form 5500-SF (1,353 of 22,860 self-insured plans, or 6%) filers have stop-loss insurance.

[31] Our 2012 report, *Anomalies in Form 5500 Filings: Lessons from Supplemental Data for Group Health Plan Funding*, suggests that as many as four-out-of-five self-

self-insured plans reported stop-loss coverage in a Schedule A, down from 2006 rates of 24% and 31%, respectively. The downward trend in stop-loss coverage may have halted for mixed-funded plans in 2015, just as it has been approximately flat for self-insured plans since 2010. Weighting by the number of participants, approximately 15% of mixed-funded and 20% of self-insured plans reported stop-loss coverage for 2015, indicating that smaller plans are more likely to report stop-loss insurance than larger plans. We note that the participant-weighted figures are historically more volatile than unweighted figures.[32]

Table 12. Percentage of Health Plans Reporting Stop-Loss Insurance, by Funding Mechanism and Statistical Year

Statistical year	Plans		Participants	
	Mixed	Self-insured	Mixed	Self-insured
2006	24.2%	31.1%	14.8%	25.8%
2007	23.9%	30.5%	14.2%	22.4%
2008	23.0%	30.7%	12.9%	16.4%
2009	20.6%	28.2%	16.6%	16.0%
2010	19.1%	26.4%	15.2%	15.1%
2011	18.1%	26.5%	14.2%	14.7%
2012	17.5%	26.6%	13.7%	14.3%
2013	17.2%	26.0%	13.7%	14.1%
2014	16.5%	26.4%	13.8%	20.3%
2015	17.0%	26.3%	14.8%	20.0%

Source: Form 5500 health plan filings.
Note: Reflects stop-loss coverage only insofar reported on Form 5500.

Table 13 shows the annual per-person cost of stop-loss coverage, calculated as the ratio of premiums to "number of persons covered" by the stop-loss policy on Schedule A—both the premium and the number of people covered thus refer to the stop-loss policy only and not to the overall plan. The numbers are not adjusted for inflation. These results should also be interpreted with caution because the Form 5500 filing contains no information on attachment points or other stop-loss policy features that may reflect the amount of coverage provided by the policies.

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insured or mixed-funded plans and roughly 55% of participants in such plans were covered by stop-loss insurance, possibly purchased for the benefit of the plan sponsor. Those stop-loss coverage levels are consistent with those in the 2013 KFF/HRET study, which found that 59% of participants in self-funded plans at firms with 200 or more workers were in a plan that had purchased stop-loss insurance in 2013. See http://ehbs.kff.org. It should also be noted that reported stop-loss insurance does not necessarily relate to health benefits but could protect other self-insured benefits, such as disability benefits.

[32] A single, very large, self-insured plan with about 1.8 million participants reported stop-loss insurance in 2006-2007 and 2014-2015, but not in other years. As a result, the fraction of participants in self-insured plans with stop-loss insurance was elevated in those years.

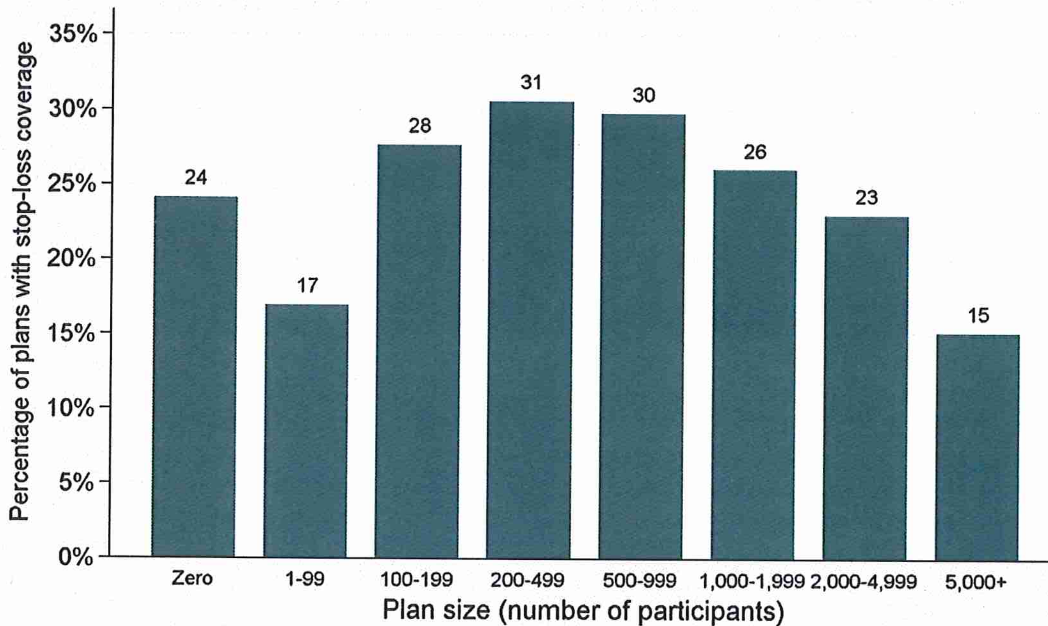
Table 13. Per-Person Annual Premiums for Stop-Loss Insurance

Statistical year	Mixed-funded ($) 25th pct	Mixed-funded ($) Median	Mixed-funded ($) 75th pct	Self-insured ($) 25th pct	Self-insured ($) Median	Self-insured ($) 75th pct
2006	115	281	514	178	510	980
2007	97	263	505	175	522	997
2008	105	287	543	189	564	1,067
2009	138	318	577	202	580	1,105
2010	157	334	601	210	571	1,095
2011	157	335	633	230	604	1,155
2012	153	338	635	259	640	1,233
2013	171	407	756	272	684	1,314
2014	189	431	807	294	744	1,405
2015	207	447	817	346	830	1,566

Source: Form 5500 health plan filings.
Note: Reflects stop-loss coverage only insofar reported on Form 5500.

Figure 15 shows the rate of stop-loss coverage among self-insured plans by plan size. Stop-loss coverage increases with plan size up to 200-499 participants and decreases with plan size among larger plans.

Figure 15. Self-Insured Health Plans' Rate of Stop-Loss Coverage, by Plan Size (2015)



Source: Form 5500 filings.
Note: Reflects stop-loss coverage only insofar reported on Form 5500.

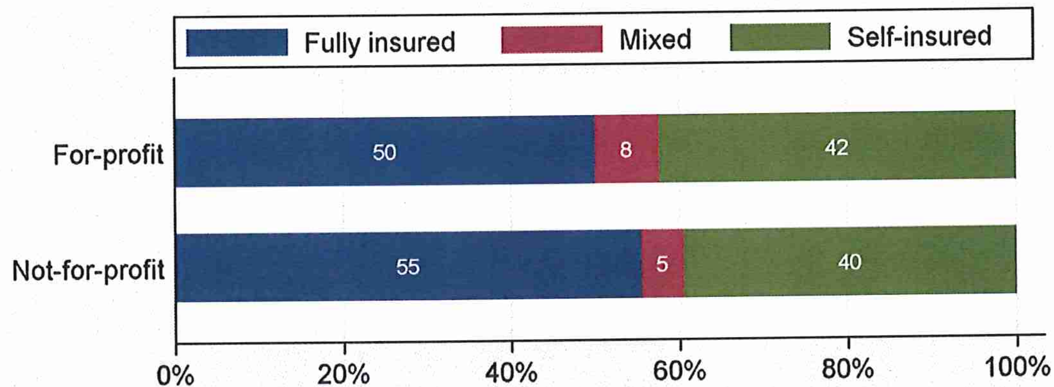
Lower stop-loss coverage for smaller plans is not consistent with the notion that smaller plans face greater financial risks and should thus be more likely to purchase stop-loss coverage. Part of the explanation may relate to the fact that stop-loss coverage with the sponsor (rather than the plan) as beneficiary need not be reported on Form 5500; smaller employers may be more likely to designate the firm as the

beneficiary than larger employers. The lower prevalence of stop-loss insurance among small plans may also reflect market realities: insurance companies may not offer stop-loss insurance to small employers, or offer it only at very high prices. The KFF/HRET Survey also documented lower stop-loss coverage rates among small and large plans than among mid-sized plans.

Funding Mechanisms and Financial Metrics

As described above, we matched the Form 5500 health plan data to Form 990 filings to identify whether a health plan sponsor is a for-profit or a not-for-profit entity. Approximately 17% of plans were found to be sponsored by a not-for-profit entity. Figure 16 presents the breakdown in funding status for for-profit and not-for-profit firms. One-half (50%) of plans sponsored by for-profit organizations were self-insured or mixed-funded, compared with 45% of plans sponsored by not-for-profit organizations. Weighted by participants, not-for-profit organizations were much more likely to have self-insured plans and much less likely to have mixed-funded plans than for-profit firms (not shown in figure).

Figure 16. Distribution of Funding Mechanism, by For-Profit and Not-for-Profit Sponsors (2015)



Source: Form 5500 filings.
Percentages do not sum to 100% because of rounding.

Focusing on the subset of Form 5500 health plan filers that could be matched to financial information in Capital IQ, Table 14 presents 2015 information on company size as measured by revenue, market capitalization, net income, and number of employees (and the number of observations (# Obs) on which each calculation is based). The table shows that companies offering fully insured health plans tend to be smaller than companies with self-insured or mixed-funded health plans. Companies offering mixed-funded health plans tend to be the largest.

Table 14. Characteristics of Companies Matched to Form 5500 Health Plan Filings, by Funding Mechanism (2015)

		All	Fully insured	Mixed	Self-insured
Revenue (in $ millions)	25 pct	335	110	1,376	517
	Median	1,350	314	3,720	1,458
	75 pct	5,245	1,405	11,172	5,350
	# Obs	4,048	1,185	973	1,890
Market capitalization (in $ millions)	25 pct	454	174	1,567	614
	Median	1,999	632	4,669	2,322
	75 pct	7,997	2,733	17,605	8,633
	# Obs	3,415	1,032	809	1,574
Net income (in $ millions)	25 pct	-1	-12	8	5
	Median	56	10	168	80
	75 pct	327	82	706	344
	# Obs	4,048	1,185	973	1,890
Number of employees	25 pct	543	236	2,754	856
	Median	3,000	669	9,300	3,500
	75 pct	12,607	3,130	26,000	12,300
	# Obs	4,040	1,182	973	1,885

Source: Form 5500 health plan filings and Capital IQ data.

Figure 17 presents three metrics of the financial health of matched companies: the ratio of operating income over total debt, the ratio of cash and cash equivalent holdings over total debt, and the Altman Z-Score.[33] For all three, higher values suggest better financial health. We grouped all matched plans into quartiles and show in Figure 17 what share of fully insured, mixed-funded, or self-insured plans fall into each quartile. Consider the ratio of operating income over total debt. If financial health were unrelated to funding mechanisms, all bars would be equal-sized. Instead, 36% of fully insured sponsors were in the bottom quartile, compared with 18% of mixed-funded and 22% of self-insured sponsors; see the red bars in the left portion of Figure 17. Based on how frequently their ratios of operating income over total debt are in the bottom quartile, mixed-funded and self-insured companies thus appear to be in better financial health than fully insured companies.[34]

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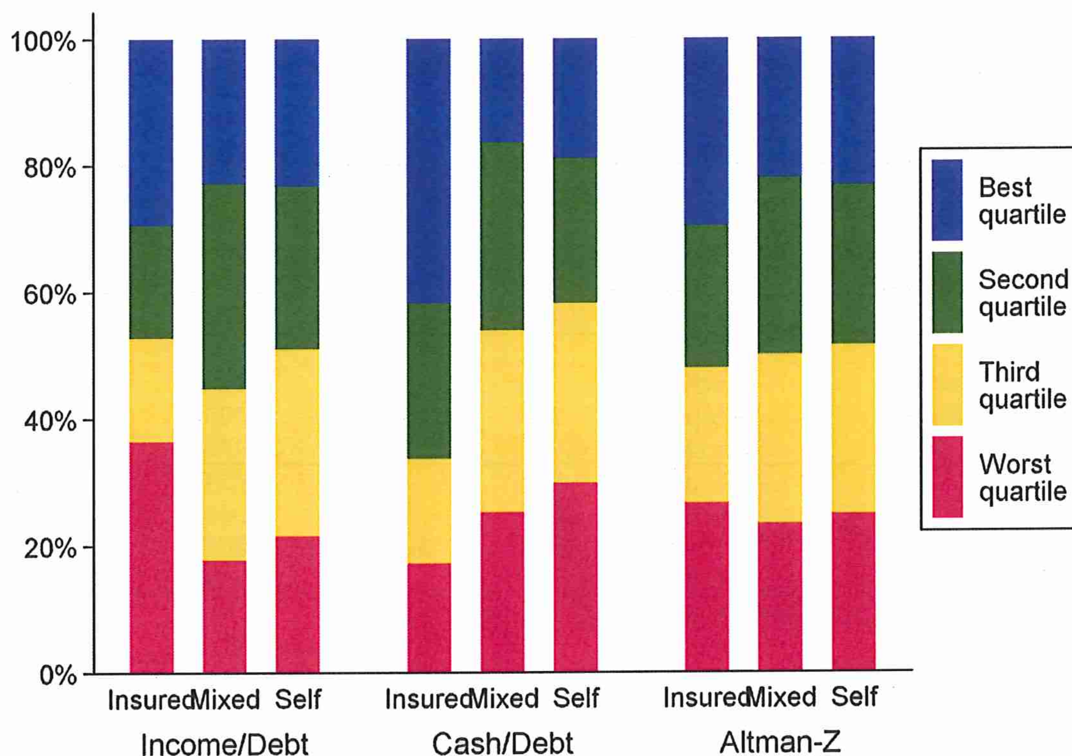
[33] The Altman Z-Score is an index summarizing five financial measures that are used to predict bankruptcy risk. A company with a Z-Score greater than 2.99 is considered to be in a "safe" zone, one with a score between 1.80 and 2.99 in a "grey" zone and a company with score less than 1.80 to be in a "distress" zone. The 25th percentile of Altman Z-Scores of plan sponsors in our analysis was 1.68, i.e., all companies in the bottom quartile and some in the second quartile were considered to be in the "distress" zone. For details see Altman, E.I. (1968). "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy." *Journal of Finance* 23(4): 589-609.

[34] Fully insured sponsors are overrepresented not only in the bottom quartile, but also in the top quartile. The discussion focuses on the bottom quartile because that relates more directly to the risks that large medical claims pose to the continuity of the plan sponsor.

Figure 17. Financial Health of Companies Matched to Form 5500 Health Plan Filings, by Funding Mechanism (2015)



Source: Form 5500 filings, Capital IQ data

The results are mixed for the other two metrics of financial strength. The Altman Z-Score again suggests that mixed-funded and self-insured sponsors are in (slightly) better financial health than fully insured sponsors, but the ratio of cash holdings to total debt points to the opposite conclusion. In short, there is no consistent evidence that mixed-funded or self-insured sponsors are in better or worse financial health than fully insured sponsors. These findings are generally consistent with those in prior reports. Finally, as in prior years, fully insured plans show a wider dispersion of financial health (as measured by the share of plans in the bottom and top quartiles) than mixed-funded or self-insured plans.

Table 15 shows the percentages and sample sizes corresponding to Figure 17.

Table 15. Financial Health of Companies Matched to Form 5500 Health Plan Filings, by Funding Mechanism (2015)

		All	Fully insured	Mixed	Self-insured
Operating income over total debt	Best quartile	25.0%	29.5%	22.9%	23.2%
	Second quartile	25.0%	17.8%	32.3%	25.8%
	Third quartile	25.0%	16.3%	27.0%	29.4%
	Worst quartile	25.0%	36.4%	17.8%	21.6%
	# Obs	4,043	1,184	973	1,886
Cash (equivalent) holdings over total debt	Best quartile	25.0%	41.9%	16.3%	18.9%
	Second quartile	25.0%	24.4%	29.7%	22.9%
	Third quartile	25.0%	16.5%	28.7%	28.4%
	Worst quartile	25.0%	17.2%	25.3%	29.8%
	# Obs	4,037	1,180	973	1,884
Altman Z-Score	Best quartile	24.8%	29.6%	22.0%	23.3%
	Second quartile	25.1%	22.5%	27.9%	25.3%
	Third quartile	25.0%	21.3%	26.7%	26.6%
	Worst quartile	25.0%	26.6%	23.4%	24.9%
	# Obs	2,833	856	735	1,242

Source: Form 5500 health plan filings and Capital IQ data.

5. CONCLUSION

The ACA was enacted in 2010 and has brought about far-reaching changes to health care financing and coverage. This report and its counterparts from prior years offer an opportunity to monitor any changes in employer-sponsored health benefit coverage and its funding mechanism that employers have made in the first few years since the ACA became law. While we identified several time trends, the changes tended to be moderate, generally started prior to 2010, and appear to have flattened out in recent years.

First, the number of health plans that filed a Form 5500 and the number of participants that they cover is continuing to grow, i.e., there is no indication that employers are dropping health benefit coverage. We note that most small health benefit plans are exempt from filing a Form 5500, so that no conclusions should be drawn based on this report with respect to small employers.

Second, plans with 500 or more participants have migrated toward self-insurance since at least 2006. Until recently, the opposite was true for smaller plans, but that pattern flattened out in 2010-2013 and appears to have reversed in 2014-2015. Self-insurance and mixed-funding is now slowly rising among both plans under and over 500 participants.

Third, the trend toward less stop-loss coverage (insofar reported on Form 5500 filings), which had steadied for self-insured plans since 2010, may similarly have stopped for mixed-funded plans in 2015. It is unclear whether these findings reflect trends in overall stop-loss coverage—Form 5500 filings are known to capture only a subset of stop-loss coverage.

Overall, the Form 5500, despite some known limitations, continues to be a useful data source to better understand the type and range of health benefits that employers provide to American workers. The relatively long history of these data can help frame important policy debates surrounding these benefits. It can be anticipated that future versions of this report will continue to document these important trends.

TECHNICAL APPENDIX

The definitions of funding mechanism rely upon the fields of Form 5500 and its Schedules as outlined in Table 16.

Table 16. Data Fields Used to Determine Plan Funding Type

Source	Description
Form 5500, Line 5	Total number of participants at the beginning of the plan year
Form 5500, Line 6d	Number of participants at the end of the plan year who are active, retired, separated, or retired/separated and entitled to future benefits
Form 5500, Line 9a	The "funding arrangement" is the method for the receipt, holding, investment, and transmittal of plan assets prior to the time the plan actually provides benefits. Plan funding arrangement (check all that apply) 1. Insurance 2. Section 412(e)(3) insurance contracts 3. Trust 4. General assets of the sponsor
Form 5500, Line 9b	The "benefit arrangement" is the method by which the plan provides benefits to participants. Plan benefit arrangement (check all that apply) 1. Insurance 2. Section 412(e)(3) insurance contracts 3. Trust 4. General assets of the sponsor
Schedule A, Line 1e	Approximate number of persons covered at the end of the plan year
Schedule A, Line 2a	Total amount of commissions paid
Schedule A, Line 2b	Total fees paid
Schedule A, Line 3e	Organization code of agents, brokers, or other persons to whom commissions or fees were paid: 1. Banking, Savings & Loan Association, etc. 2. Trust Company 3. Insurance Agent or Broker 4. Agent or Broker other than insurance 5. Third party administrator 6. Investment Company/Mutual Fund 7. Investment Manager/Adviser 8. Labor Union 9. Foreign entity 0. Other

Source	Description
Schedule A, Line 6b	Premiums paid to carrier
Schedule A, Line 8	Type of benefit and contract types. A. Health (other than dental or vision), J. HMO contract, K. PPO contract, L. Indemnity contract, M. Other and other codes for stop-loss, dental, vision, life, disability, etc. More than one may be checked.
Schedule A, Line 8m	Description of "Other" benefit and contract type.
Schedule A, Line 9a(4)	Total earned premium amount for experience-rated contracts
Schedule A, Line 9b(3)	Incurred claims
Schedule A, Line 9b(4)	Claims charged
Schedule A, Line 10a	Total premiums or subscription charges paid to carrier for nonexperience-rated contracts
Schedule H, Line 2e	Benefit payment and payments to provide benefits: 2e(1) Directly to participants or beneficiaries, including direct rollovers 2e(2) To insurance carriers for the provision of benefits 2e(3) Other 2e(4) Total benefit payments
Schedule I, Line 2e	Benefits paid (including direct rollovers)

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