



Division of Investment Management  
Analytics Office

# Private Funds Statistics

Third Calendar Quarter 2018

May 7, 2019

This is a report of the Staff of the Division of Investment Management's Analytics Office of the U.S. Securities and Exchange Commission. The Commission has expressed no view regarding the analysis, findings, or conclusions contained herein.

## Introduction

This report provides a summary of recent private fund industry statistics and trends, reflecting data collected through Form PF and Form ADV filings.<sup>1</sup> Form PF information provided in this report is aggregated, rounded, and/or masked to avoid potential disclosure of proprietary information of individual Form PF filers.

This report reflects data from Fourth Calendar Quarter 2016 through Third Calendar Quarter 2018 as reported by Form PF filers.<sup>2</sup> Please see the Appendix for information on the categories of Form PF filers, the definitions of capitalized terms, a description of the boxplots used in several figures, as well as other technical descriptions.

**The Staff continues to work with data reported on Form PF and with filers to identify and correct filing errors. Staff updates reported statistics based on amended filings and also may make certain adjustments to the statistics presented to correct what appear to be clear filing errors. Further, the Staff has employed certain assumptions in aggregating the data. Future adjustments to these methodologies and amended filings that change the underlying data could lead to changes in previously reported statistics.**

**If you have any questions or comments about Third Calendar Quarter 2018 Private Funds Statistics, please contact:**

Tim Dulaney, PhD, FRM or Tim Husson, PhD, FRM at FormPF@sec.gov with subject line “Third Calendar Quarter 2018-Private Funds Statistics”.

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<sup>1</sup>Only SEC-registered advisers with at least \$150 million in private fund assets under management must report to the Commission on Form PF. SEC-registered investment advisers with less than \$150 million in private fund assets under management, SEC exempt reporting advisers, and state-registered investment advisers are not required to file Form PF, but report general information about the private funds they manage on Form ADV.

<sup>2</sup>The Commission began receiving Form PF filings from Large Hedge Fund Advisers in July 2012. A full data set was not received until March 2013. This report relies upon the Form PF database constructed and maintained by the Office of Research and Data Services in the Division of Economic and Risk Analysis.

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## I Number of Funds and Advisers<sup>3</sup>

**Table 1: Number of Funds**

The “Total” row shows the total reported, and will not equal the sum of the preceding rows, because the rows are not mutually exclusive.

Fund Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Private Equity Fund	10,365	10,383	10,363	10,272	11,493	11,532	11,562	11,513
Hedge Fund	8,928	9,083	9,121	9,161	9,028	9,182	9,297	9,354
Other Private Fund	4,449	4,473	4,495	4,454	4,525	4,595	4,568	4,530
Section 4 Private Equity Fund	3,002	3,006	3,009	2,989	3,482	3,494	3,494	3,495
Real Estate Fund	2,453	2,451	2,449	2,440	2,648	2,658	2,652	2,630
Qualifying Hedge Fund	1,649	1,671	1,717	1,727	1,800	1,770	1,803	1,816
Securitized Asset Fund	1,451	1,463	1,475	1,477	1,504	1,510	1,510	1,507
Venture Capital Fund	761	759	769	755	848	848	833	816
Liquidity Fund	69	70	69	69	70	69	68	68
Section 3 Liquidity Fund	44	45	47	46	48	46	45	45
<b>Total</b>	<b>28,476</b>	<b>28,682</b>	<b>28,741</b>	<b>28,628</b>	<b>30,116</b>	<b>30,394</b>	<b>30,490</b>	<b>30,418</b>

**Table 2: Number of Advisers Advising Each Fund Type**

The “Total” row shows the total reported, and will not equal the sum of the preceding rows, because the rows are not mutually exclusive.

Fund Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Private Equity Fund	1,092	1,095	1,091	1,088	1,141	1,148	1,149	1,148
Hedge Fund	1,688	1,687	1,688	1,689	1,730	1,731	1,734	1,727
Other Private Fund	581	579	579	576	581	587	583	573
Section 4 Private Equity Fund	248	250	250	247	293	296	296	296
Real Estate Fund	314	316	314	313	327	329	329	328
Qualifying Hedge Fund	531	527	534	536	551	541	548	544
Securitized Asset Fund	149	151	153	154	155	155	156	156
Venture Capital Fund	109	109	110	109	114	115	115	113
Liquidity Fund	39	39	38	38	39	39	38	38
Section 3 Liquidity Fund	24	24	24	23	25	23	22	22
<b>Total</b>	<b>2,916</b>	<b>2,918</b>	<b>2,919</b>	<b>2,919</b>	<b>3,017</b>	<b>3,027</b>	<b>3,032</b>	<b>3,012</b>

<sup>3</sup>In this report, “Funds” means all private funds reported on Form PF and “Advisers” means all SEC-registered investment advisers that file a Form PF to report private funds. Please see Appendix E for definitions of other capitalized terms used in this report.

## II Gross and Net Assets

### A Aggregate Assets by Fund Type over Time

**Table 3:** Aggregate Private Fund Gross Asset Value (GAV) (\$ Billions)

As reported on Form PF, Question 8.

The “Total” row shows the total reported, and will not equal the sum of the preceding rows, because the rows are not mutually exclusive.

Fund Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Hedge Fund	6,395	6,673	6,860	7,183	7,239	7,515	7,654	7,901
Qualifying Hedge Fund	5,206	5,463	5,681	5,856	5,862	6,074	6,276	6,383
Private Equity Fund	2,318	2,327	2,324	2,310	2,726	2,764	2,768	2,767
Section 4 Private Equity Fund	1,645	1,648	1,648	1,641	1,941	1,978	1,978	1,978
Other Private Fund	1,067	1,077	1,088	1,061	1,190	1,205	1,207	1,179
Real Estate Fund	436	436	433	432	499	504	504	503
Securitized Asset Fund	448	449	454	453	485	480	488	487
Liquidity Fund	293	282	276	282	291	291	311	314
Section 3 Liquidity Fund	274	267	273	279	289	289	307	309
Venture Capital Fund	64	64	64	63	81	81	81	81
<b>Total</b>	<b>11,021</b>	<b>11,308</b>	<b>11,500</b>	<b>11,784</b>	<b>12,511</b>	<b>12,841</b>	<b>13,014</b>	<b>13,232</b>

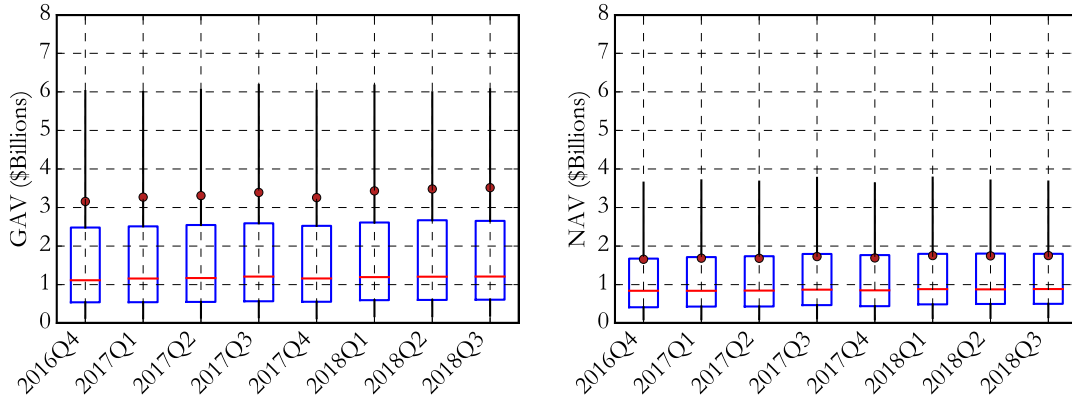
**Table 4:** Aggregate Private Fund Net Asset Value (NAV) (\$ Billions)

As reported on Form PF, Question 9.

The “Total” row shows the total reported, and will not equal the sum of the preceding rows, because the rows are not mutually exclusive.

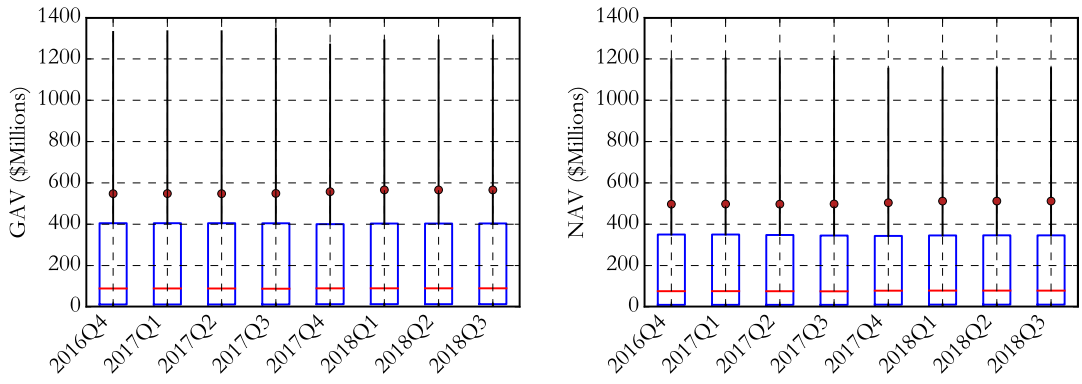
Fund Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Hedge Fund	3,483	3,600	3,658	3,780	3,881	3,971	3,999	4,052
Qualifying Hedge Fund	2,734	2,818	2,890	2,984	3,047	3,104	3,147	3,186
Private Equity Fund	2,075	2,084	2,082	2,069	2,441	2,484	2,487	2,487
Section 4 Private Equity Fund	1,492	1,496	1,496	1,489	1,755	1,789	1,789	1,789
Other Private Fund	978	988	995	971	1,075	1,085	1,106	1,058
Real Estate Fund	341	342	340	339	391	394	394	393
Securitized Asset Fund	141	141	145	144	152	152	154	153
Liquidity Fund	292	281	275	280	291	289	309	311
Section 3 Liquidity Fund	273	265	272	278	288	287	305	306
Venture Capital Fund	61	61	62	60	76	77	76	76
<b>Total</b>	<b>7,372</b>	<b>7,497</b>	<b>7,556</b>	<b>7,644</b>	<b>8,308</b>	<b>8,451</b>	<b>8,526</b>	<b>8,530</b>

**Figure 1: GAV and NAV Distributions**  
 See Appendix C for an explanation of boxplots.  
 As reported on Form PF, Questions 8 and 9.



(a) Qualifying Hedge Fund GAV

(b) Qualifying Hedge Fund NAV

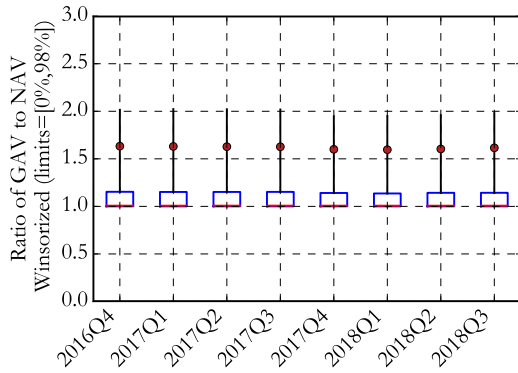


(c) Section 4 Private Equity Fund GAV

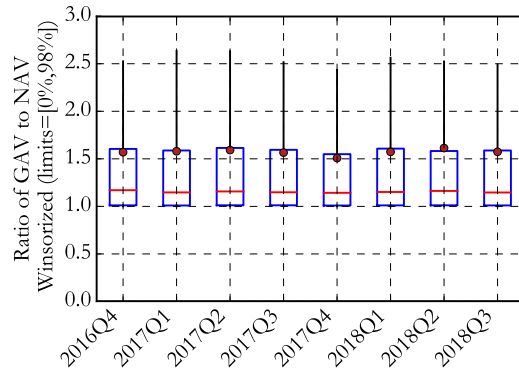
(d) Section 4 Private Equity Fund NAV

**Figure 2: Ratio of GAV to NAV**

See Appendix C and Appendix D for an explanation of boxplots and winsorization.  
As reported on Form PF, Questions 8, 9, and 10.



(a) All Private Funds



(b) Qualifying Hedge Funds



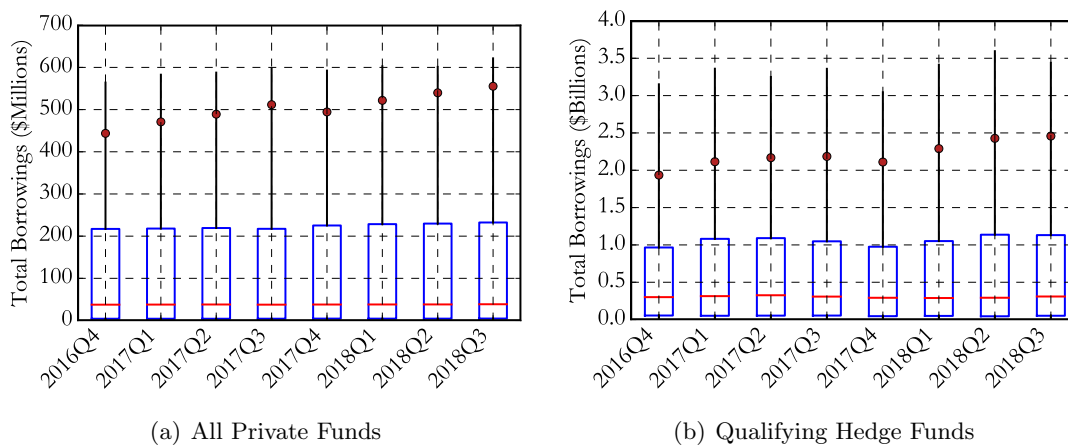
## B Borrowings

**Table 5:** Aggregate Borrowings (Percent of Aggregate GAV)  
As reported on Form PF, Questions 8, 12, and 43 (Third Month).

Fund Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Securitized Asset Fund	50.7	49.5	48.8	48.4	51.9	51.2	51.2	50.4
Qualifying Hedge Fund	39.7	41.2	42.3	41.8	41.5	42.9	45.1	44.6
Hedge Fund	37.4	38.5	39.3	39.6	39.4	40.4	41.6	41.4
Real Estate Fund	13.9	12.9	12.7	12.8	13.2	13.5	13.3	13.3
Private Equity Fund	5.1	5.0	5.0	5.0	5.2	4.9	4.9	4.9
Section 4 Private Equity Fund	4.0	4.0	4.0	4.1	4.6	4.6	4.6	4.6
Other Private Fund	2.8	2.7	2.7	2.7	2.2	2.7	2.7	2.7
Venture Capital Fund	0.4	0.4	0.5	0.5	0.6	0.5	0.5	0.6
Liquidity Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Section 3 Liquidity Fund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

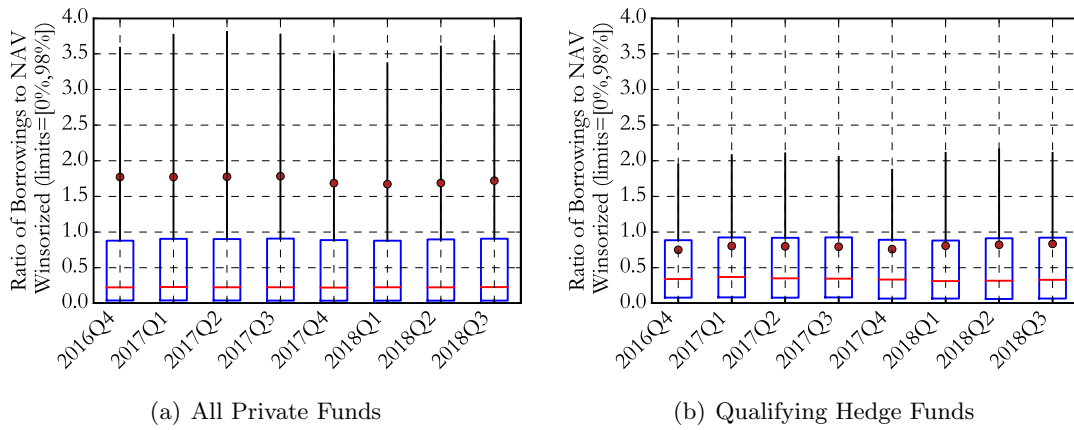
**Figure 3:** Distribution of Total Borrowings for All Private Funds and Qualifying Hedge Funds

See Appendix C for an explanation of boxplots.  
As reported on Form PF, Questions 12 and 43 (Third Month).



**Figure 4: Ratio of Borrowings to NAV**

See Appendix C and Appendix D for an explanation of boxplots and winsorization.  
As reported on Form PF, Questions 9, 10, 12, and 43 (Third Month).



## C Fair Value Hierarchy

**Table 6:** Assets According to Fair Value Hierarchy (\$ Billions)  
As reported on Form PF, Question 14.

	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Level One	2,871	2,573	2,566	2,558	3,268	3,015	2,974	2,831
Level Two	2,539	2,196	2,181	2,222	2,751	2,297	2,318	2,267
Level Three	2,594	2,513	2,513	2,507	2,895	2,856	2,866	2,874
Cost-Based	1,971	1,679	1,706	1,711	2,225	1,862	1,878	1,839

**Table 7:** Liabilities According to Fair Value Hierarchy (\$ Billions)  
As reported on Form PF, Question 14.

	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Level One	519	654	650	651	647	788	780	659
Level Two	417	462	451	455	608	588	601	598
Level Three	142	136	140	137	174	174	174	177
Cost-Based	464	650	644	650	479	762	773	733

## D Parallel Managed Accounts<sup>4</sup>

**Table 8:** Number of Funds with Parallel Managed Accounts

As reported on Form PF, Question 11.

The “Total” row shows the total reported, and will not equal the sum of the preceding rows, because the rows are not mutually exclusive.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Hedge Fund	664	654	661	668	669	674	678	685
Other Private Fund	486	502	501	499	513	517	513	491
Private Equity Fund	239	240	239	272	292	292	290	257
Qualifying Hedge Fund	233	224	220	227	238	233	234	236
Section 4 Private Equity Fund	88	88	88	88	98	98	98	98
Real Estate Fund	77	77	77	77	71	71	71	71
Liquidity Fund	15	16	16	16	16	16	16	16
Section 3 Liquidity Fund	15	16	16	16	16	16	16	16
Venture Capital Fund	***	***	***	***	***	***	***	***
Securitized Asset Fund	***	***	***	***	***	***	***	***
<b>Total</b>	1,521	1,529	1,534	1,571	1,575	1,584	1,582	1,534

**Table 9:** Aggregate Value in Parallel Managed Accounts (\$ Billions)

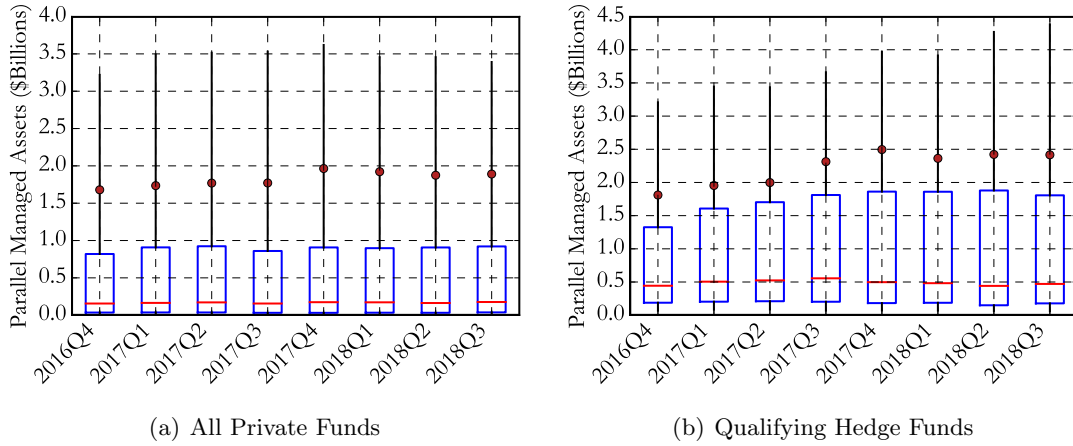
As reported on Form PF, Question 11.

The “Total” row shows the total reported, and will not equal the sum of the preceding rows, because the rows are not mutually exclusive.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Hedge Fund	629	666	680	714	827	770	769	813
Other Private Fund	1,401	1,438	1,489	1,508	1,864	1,869	1,799	1,680
Private Equity Fund	29	29	28	28	37	37	37	36
Qualifying Hedge Fund	422	438	440	525	594	551	567	570
Section 4 Private Equity Fund	22	22	22	22	28	28	28	28
Real Estate Fund	6	6	6	6	6	6	6	6
Liquidity Fund	309	333	330	345	359	361	353	364
Section 3 Liquidity Fund	309	333	330	345	359	361	353	364
Venture Capital Fund	***	***	***	***	***	***	***	***
Securitized Asset Fund	***	***	***	***	***	***	***	***
<b>Total</b>	2,555	2,653	2,714	2,782	3,094	3,044	2,965	2,900

<sup>4</sup>Certain data points in the tables in this section and other sections may be masked to avoid possible disclosure of proprietary information of individual Form PF filers.

**Figure 5: Parallel Managed Account Value Distributions**  
See Appendix C for an explanation of boxplots.  
As reported on Form PF, Question 11.



### III Fund Domiciles and Adviser Main Offices

**Table 10: Fund Domicile (Percent of NAV)**  
As reported on Form PF, Question 9 and Form ADV.

All Private Funds								
Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
United States	51.3	51.4	51.5	51.0	51.4	51.0	50.9	50.6
Cayman Islands	36.4	36.4	36.4	36.6	35.4	35.3	35.2	35.3
Ireland	4.3	4.2	4.2	4.3	4.4	4.4	4.5	4.6
Luxembourg	1.4	1.5	1.6	1.6	1.9	2.0	2.2	2.2
Virgin Islands, British	2.2	2.2	2.0	2.0	1.8	1.8	1.8	1.8
United Kingdom	1.1	1.1	1.1	1.1	1.3	1.3	1.3	1.3
Bermuda	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2
Other	2.1	2.0	2.0	2.1	2.6	2.9	2.9	3.0
Qualifying Hedge Funds								
Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Cayman Islands	52.9	52.6	52.4	51.7	51.3	51.0	50.9	50.8
United States	34.3	34.6	35.0	35.3	35.8	35.6	35.5	35.0
Virgin Islands, British	5.5	5.3	5.0	4.8	4.5	4.4	4.4	4.2
Ireland	2.7	2.7	2.7	2.8	2.9	3.1	3.2	3.3
Luxembourg	1.3	1.4	1.6	1.7	1.9	2.0	2.4	2.7
Bermuda	1.8	1.7	1.7	1.7	1.6	1.7	1.8	1.8
Other	1.7	1.7	1.6	2.0	2.0	2.1	2.0	2.2
Section 3 Liquidity Funds								
Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Ireland	***	***	***	***	***	***	***	***
United States	33.1	33.9	36.8	34.7	35.1	35.8	36.9	36.0
Cayman Islands	***	***	***	***	***	***	***	***
Other	***	***	***	***	***	***	***	***
Section 4 Private Equity Funds								
Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
United States	63.8	63.8	63.8	63.7	60.7	59.5	59.5	59.5
Cayman Islands	29.5	29.4	29.4	29.5	30.4	29.8	29.8	29.8
United Kingdom	1.9	1.9	1.9	2.0	2.7	2.9	2.9	2.9
Bermuda	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.1
Canada	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0
Other	2.9	2.9	2.9	2.9	4.2	5.7	5.7	5.7

**Table 11: Adviser Main Office Location (Percent of NAV)**  
As reported on Form PF, Question 9 and Form ADV.

<b>All Private Funds</b>								
Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
United States	90.1	89.4	89.0	88.9	89.5	88.9	88.8	88.9
United Kingdom	6.2	6.5	6.7	6.8	6.5	6.8	7.0	6.7
Other	3.8	4.1	4.2	4.3	4.1	4.3	4.3	4.3
<b>Qualifying Hedge Funds</b>								
Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
United States	89.7	89.5	89.3	89.0	88.6	88.4	88.6	88.6
United Kingdom	5.6	5.8	6.2	6.3	6.6	6.6	6.5	6.5
Australia	***	***	***	***	***	***	***	***
Hong Kong	***	***	***	***	***	***	***	***
Other	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.1
<b>Section 3 Liquidity Funds</b>								
Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
United States	***	***	***	***	***	***	***	***
United Kingdom	***	***	***	***	***	***	***	***
<b>Section 4 Private Equity Funds</b>								
Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
United States	95.1	95.1	95.1	95.1	94.8	94.8	94.8	94.8
Canada	***	***	***	***	***	***	***	***
Other	***	***	***	***	***	***	***	***

## IV Beneficial Ownership

**Table 12: Beneficial Ownership for All Private Funds (\$ Billions)**  
As reported on Form PF, Questions 9 and 16.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Private Funds	1,340	1,355	1,371	1,370	1,490	1,514	1,532	1,518
Other	975	996	1,011	1,039	1,189	1,234	1,237	1,242
State/Muni. Govt. Pension Plans	1,009	1,029	1,033	1,048	1,153	1,153	1,163	1,176
Pension Plans	948	957	967	973	1,037	1,045	1,049	1,045
Non-Profits	750	770	778	790	849	860	869	865
U.S. Individuals	773	786	790	798	817	834	841	837
Sov. Wealth Funds and For. Official Inst.	429	438	443	445	515	540	544	544
Insurance Companies	305	310	312	314	349	352	365	373
Non-U.S. Individuals	197	198	185	183	187	191	193	193
Unknown Non-U.S. Investors	187	187	185	188	194	193	189	186
Banking/Thrift Inst.	137	141	143	147	161	161	170	172
State/Muni. Govt. Entities	99	104	107	108	121	125	129	130
SEC-Registered Investment Companies	118	119	121	128	129	132	128	125
Broker-Dealers	102	104	107	111	112	113	114	121

**Table 13: Beneficial Ownership for All Private Funds**  
(Percent of Aggregate NAV)

As reported on Form PF, Questions 9 and 16.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Private Funds	18.2	18.1	18.1	17.9	17.9	17.9	18.0	17.8
Other	13.2	13.3	13.4	13.6	14.3	14.6	14.5	14.6
State/Muni. Govt. Pension Plans	13.7	13.7	13.7	13.7	13.9	13.6	13.6	13.8
Pension Plans	12.9	12.8	12.8	12.7	12.5	12.4	12.3	12.3
Non-Profits	10.2	10.3	10.3	10.3	10.2	10.2	10.2	10.1
U.S. Individuals	10.5	10.5	10.4	10.4	9.8	9.9	9.9	9.8
Sov. Wealth Funds and For. Official Inst.	5.8	5.8	5.9	5.8	6.2	6.4	6.4	6.4
Insurance Companies	4.1	4.1	4.1	4.1	4.2	4.2	4.3	4.4
Non-U.S. Individuals	2.7	2.6	2.5	2.4	2.3	2.3	2.3	2.3
Unknown Non-U.S. Investors	2.5	2.5	2.5	2.5	2.3	2.3	2.2	2.2
Banking/Thrift Inst.	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0
State/Muni. Govt. Entities	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5
SEC-Registered Investment Companies	1.6	1.6	1.6	1.7	1.6	1.6	1.5	1.5
Broker-Dealers	1.4	1.4	1.4	1.5	1.3	1.3	1.3	1.4



**Table 14: Beneficial Ownership for Qualifying Hedge Funds (\$ Billions)**  
As reported on Form PF, Questions 9 and 16.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Private Funds	488	493	503	508	503	514	517	526
Other	356	375	385	409	409	435	442	446
Non-Profits	383	395	404	418	428	428	442	442
Pension Plans	369	379	386	398	414	415	415	417
U.S. Individuals	318	324	331	340	345	341	351	356
State/Muni. Govt. Pension Plans	304	310	314	331	352	342	342	348
Sov. Wealth Funds and For. Official Inst.	143	152	158	160	166	193	197	195
Insurance Companies	67	69	73	74	78	78	83	91
Broker-Dealers	68	72	75	79	79	80	81	84
Non-U.S. Individuals	65	68	68	70	73	76	77	79
SEC-Registered Investment Companies	64	63	62	65	65	66	61	59
Unknown Non-U.S. Investors	41	45	52	56	58	55	52	53
State/Muni. Govt. Entities	35	40	42	42	42	47	49	50
Banking/Thrift Inst.	29	31	33	33	35	33	36	38

**Table 15: Beneficial Ownership for Qualifying Hedge Funds  
(Percent of Aggregate NAV)**  
As reported on Form PF, Questions 9 and 16.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Private Funds	17.9	17.5	17.4	17.0	16.5	16.6	16.4	16.5
Other	13.0	13.3	13.3	13.7	13.4	14.0	14.0	14.0
Non-Profits	14.0	14.0	14.0	14.0	14.1	13.8	14.0	13.9
Pension Plans	13.5	13.4	13.4	13.3	13.6	13.4	13.2	13.1
U.S. Individuals	11.7	11.5	11.5	11.4	11.3	11.0	11.2	11.2
State/Muni. Govt. Pension Plans	11.1	11.0	10.9	11.1	11.5	11.0	10.9	10.9
Sov. Wealth Funds and For. Official Inst.	5.2	5.4	5.5	5.4	5.4	6.2	6.2	6.1
Insurance Companies	2.4	2.5	2.5	2.5	2.5	2.5	2.6	2.9
Broker-Dealers	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6
Non-U.S. Individuals	2.4	2.4	2.4	2.3	2.4	2.4	2.5	2.5
SEC-Registered Investment Companies	2.4	2.2	2.1	2.2	2.1	2.1	2.0	1.8
Unknown Non-U.S. Investors	1.5	1.6	1.8	1.9	1.9	1.8	1.7	1.6
State/Muni. Govt. Entities	1.3	1.4	1.4	1.4	1.4	1.5	1.6	1.6
Banking/Thrift Inst.	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2

**Table 16: Beneficial Ownership for Section 3 Liquidity Funds (\$ Billions)**  
As reported on Form PF, Questions 9 and 16.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Private Funds	81	75	89	83	96	94	109	105
Other	52	51	51	51	55	57	55	57
Unknown Non-U.S. Investors	65	60	52	55	53	52	52	51
Broker-Dealers	***	***	***	***	***	***	***	***
SEC-Registered Investment Companies	16	18	21	24	23	24	24	23
Banking/Thrift Inst.	10	***	12	***	***	13	17	17
Insurance Companies	9	9	9	10	9	9	12	12
Sov. Wealth Funds and For. Official Inst.	***	***	***	***	***	***	***	***
Pension Plans	5	5	5	5	5	5	3	4
Non-U.S. Individuals	4	4	4	4	4	4	4	4
State/Muni. Govt. Entities	***	***	***	***	***	***	***	***
State/Muni. Govt. Pension Plans	1	1	1	1	1	1	***	2
Non-Profits	1	2	2	2	2	1	***	1
U.S. Individuals	***	***	***	***	***	***	***	***

**Table 17: Beneficial Ownership for Section 3 Liquidity Funds**  
(Percent of Aggregate NAV)  
As reported on Form PF, Questions 9 and 16.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Private Funds	29.6	28.3	32.6	30.0	33.3	32.6	35.7	34.4
Other	19.2	19.3	18.7	18.5	19.1	19.7	17.9	18.7
Unknown Non-U.S. Investors	23.7	22.7	19.2	19.8	18.4	18.1	17.0	16.6
Broker-Dealers	***	***	***	***	***	***	***	***
SEC-Registered Investment Companies	5.9	6.9	7.6	8.6	7.8	8.3	7.9	7.6
Banking/Thrift Inst.	3.6	***	4.3	***	***	4.7	5.6	5.4
Insurance Companies	3.3	3.4	3.3	3.7	3.0	3.3	3.9	3.8
Sov. Wealth Funds and For. Official Inst.	***	***	***	***	***	***	***	***
Pension Plans	1.7	1.8	1.8	1.9	1.8	1.7	1.1	1.2
Non-U.S. Individuals	1.4	1.5	1.5	1.4	1.3	1.4	1.2	1.1
State/Muni. Govt. Entities	***	***	***	***	***	***	***	***
State/Muni. Govt. Pension Plans	0.4	0.6	0.4	0.4	0.4	0.3	***	0.6
Non-Profits	0.5	0.6	0.6	0.6	0.5	0.5	***	0.4
U.S. Individuals	***	***	***	***	***	***	***	***

**Table 18:** Beneficial Ownership for Section 4 Private Equity Funds (\$ Billions)  
As reported on Form PF, Questions 9 and 16.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
State/Muni. Govt. Pension Plans	366	366	366	366	415	416	416	416
Private Funds	283	285	284	284	353	356	356	356
Other	162	162	161	161	212	225	225	225
Sov. Wealth Funds and For. Official Inst.	153	154	154	153	186	203	203	203
Pension Plans	142	142	142	139	159	159	159	159
Insurance Companies	94	94	94	94	109	109	109	109
Non-Profits	92	92	92	90	104	104	104	104
U.S. Individuals	88	88	88	88	94	94	94	94
Non-U.S. Individuals	34	34	34	34	36	36	36	36
Banking/Thrift Inst.	31	31	31	31	29	29	29	29
State/Muni. Govt. Entities	22	22	22	22	28	28	28	28
SEC-Registered Investment Companies	12	12	12	12	16	16	16	16
Unknown Non-U.S. Investors	14	14	14	13	14	14	14	14
Broker-Dealers	1	1	1	1	1	1	1	1

**Table 19:** Beneficial Ownership for Section 4 Private Equity Funds  
(Percent of Aggregate NAV)  
As reported on Form PF, Questions 9 and 16.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
State/Muni. Govt. Pension Plans	24.5	24.5	24.5	24.6	23.6	23.3	23.3	23.3
Private Funds	19.0	19.0	19.0	19.1	20.1	19.9	19.9	19.9
Other	10.8	10.8	10.8	10.8	12.1	12.6	12.6	12.6
Sov. Wealth Funds and For. Official Inst.	10.3	10.3	10.3	10.3	10.6	11.3	11.3	11.3
Pension Plans	9.5	9.5	9.5	9.4	9.1	8.9	8.9	8.9
Insurance Companies	6.3	6.3	6.3	6.3	6.2	6.1	6.1	6.1
Non-Profits	6.1	6.1	6.2	6.1	5.9	5.8	5.8	5.8
U.S. Individuals	5.9	5.9	5.9	5.9	5.3	5.2	5.3	5.2
Non-U.S. Individuals	2.3	2.3	2.3	2.3	2.1	2.0	2.0	2.0
Banking/Thrift Inst.	2.0	2.0	2.0	2.1	1.7	1.6	1.6	1.6
State/Muni. Govt. Entities	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.5
SEC-Registered Investment Companies	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
Unknown Non-U.S. Investors	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8
Broker-Dealers	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

## V Derivatives

**Table 20:** Aggregate Derivative Value (\$ Billions)

As reported on Form PF, Questions 13 and 44 (Third Month).

The “Total” row shows the total reported, and will not equal the sum of the preceding rows, because the rows are not mutually exclusive.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Hedge Fund	9,149	10,183	10,099	11,369	12,132	14,211	13,418	13,576
Qualifying Hedge Fund	7,876	8,767	8,765	9,583	10,127	12,095	11,314	10,330
Other Private Fund	112	109	108	109	148	149	148	134
Private Equity Fund	38	38	38	38	39	40	40	40
Liquidity Fund	***	***	***	***	***	***	***	***
Section 3 Liquidity Fund	***	***	***	***	***	***	***	***
Section 4 Private Equity Fund	35	35	34	34	33	34	34	34
Real Estate Fund	16	16	16	16	17	17	17	17
Securitized Asset Fund	14	14	14	13	3	2	2	2
Venture Capital Fund	***	***	***	***	***	***	***	***
<b>Total</b>	<b>9,351</b>	<b>10,332</b>	<b>10,329</b>	<b>11,572</b>	<b>12,327</b>	<b>14,329</b>	<b>13,619</b>	<b>13,797</b>

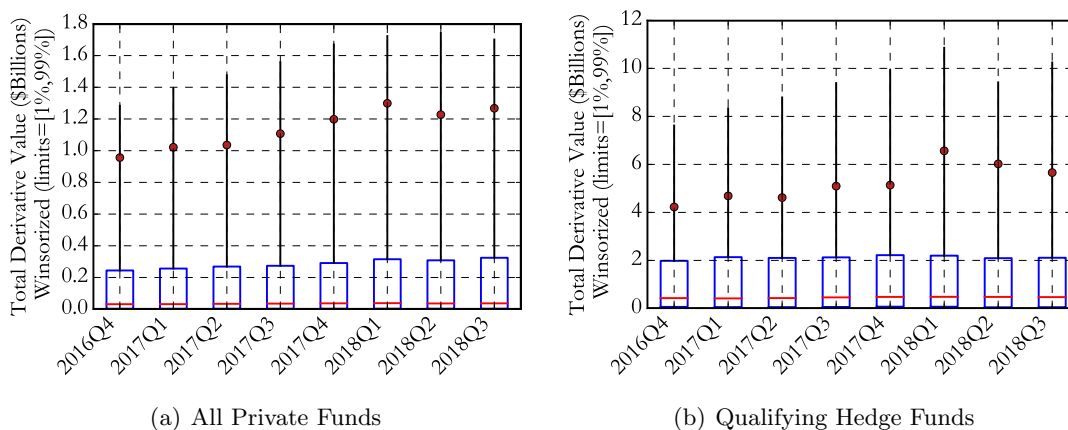
**Table 21:** Aggregate Derivative Value (Percent of Aggregate NAV)

As reported on Form PF, Questions 9, 13, and 44 (Third Month).

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Hedge Fund	262.7	282.8	276.1	300.8	312.6	357.9	335.5	335.0
Qualifying Hedge Fund	288.1	311.1	303.3	321.1	332.4	389.7	359.5	324.3
Other Private Fund	11.5	11.0	10.9	11.2	13.7	13.7	13.4	12.7
Private Equity Fund	1.8	1.8	1.8	1.8	1.6	1.6	1.6	1.6
Liquidity Fund	***	***	***	***	***	***	***	***
Section 3 Liquidity Fund	***	***	***	***	***	***	***	***
Section 4 Private Equity Fund	2.3	2.3	2.3	2.3	1.9	1.9	1.9	1.9
Real Estate Fund	4.8	4.8	4.7	4.8	4.4	4.4	4.4	4.4
Securitized Asset Fund	9.8	9.8	9.4	9.2	1.7	1.6	1.5	1.5
Venture Capital Fund	***	***	***	***	***	***	***	***
<b>Total</b>	<b>126.8</b>	<b>137.8</b>	<b>136.7</b>	<b>151.4</b>	<b>148.4</b>	<b>169.5</b>	<b>159.7</b>	<b>161.8</b>

**Figure 6: Distribution of Derivative Values**

See Appendix C and Appendix D for an explanation of boxplots and winsorization. As reported on Form PF, Questions 13 and 44 (Third Month).



## VI High Frequency Trading

**Table 22: Number of Hedge Funds Using High Frequency Trading (HFT) Strategies**  
As reported on Form PF, Question 21.

Fraction of NAV	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
0%	7,495	7,624	7,666	7,702	7,763	7,875	7,984	8,022
Less than 100%	62	62	66	63	42	70	69	58
100% or More	11	12	11	12	12	11	11	11

**Table 23: Hedge Fund Assets Managed Using HFT Strategies (\$ Billions)**  
As reported on Form PF, Questions 9 and 21.

Fraction of NAV	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
0%	3,369	3,487	3,551	3,652	3,770	3,842	3,891	3,933
Less than 100%	78	79	78	43	41	46	42	43
100% or More	2	3	3	37	37	38	38	38

## VII Hedge Fund Industry Concentration

**Table 24:** Percent of Aggregate Hedge Fund Net Asset Value  
Reported by Top Hedge Funds Sorted by Net Asset Value  
As reported on Form PF, Questions 9 and 10.

	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Top 10	8.0	7.7	7.7	7.5	7.5	7.3	7.3	7.2
Top 25	13.8	13.4	13.5	13.2	13.4	13.3	13.5	13.5
Top 50	20.5	20.2	20.3	20.0	20.2	20.2	20.1	20.1
Top 100	29.1	28.7	28.6	28.5	28.8	28.6	28.4	28.5
Top 250	44.2	43.7	43.5	43.5	43.3	43.0	42.6	42.6
Top 500	57.5	57.0	56.9	56.8	56.6	56.4	56.1	56.0

**Table 25:** Percent of Aggregate Hedge Fund Gross Asset Value  
Reported by Top Hedge Funds Sorted by Gross Asset Value  
As reported on Form PF, Questions 8 and 10.

	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Top 10	14.7	14.7	14.9	15.5	15.1	15.5	15.5	15.4
Top 25	23.2	23.6	23.3	24.2	23.8	24.2	23.8	24.4
Top 50	31.4	32.1	31.6	32.6	31.8	32.6	32.0	33.0
Top 100	41.1	41.5	41.3	42.2	41.4	42.0	41.7	42.5
Top 250	55.1	55.2	55.1	56.0	55.4	55.5	55.2	56.0
Top 500	66.8	66.7	66.8	67.4	66.6	66.9	66.7	67.2

**Table 26:** Percent of Aggregate Hedge Fund Borrowings  
Reported by Top Hedge Funds Sorted by Borrowings  
As reported on Form PF, Questions 12 and 43 (Month 3).

	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Top 10	31.5	31.9	33.3	35.0	34.5	35.2	34.5	34.7
Top 25	44.4	45.1	46.2	47.5	47.5	49.1	48.3	48.4
Top 50	56.1	56.7	57.4	58.7	59.0	60.0	59.6	60.1
Top 100	68.5	68.8	69.2	70.2	70.8	71.1	70.7	71.0
Top 250	81.6	81.5	81.8	82.6	82.6	82.8	82.9	83.0
Top 500	90.0	89.9	90.1	90.5	90.2	90.4	90.6	90.6

**Table 27:** Percent of Aggregate Hedge Fund Derivative Value  
Reported by Top Hedge Funds Sorted by Derivative Value  
As reported on Form PF, Questions 13 and 44 (Month 3).

	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Top 10	34.8	34.3	32.4	32.6	32.6	31.8	30.8	30.4
Top 25	48.7	48.3	46.7	49.4	47.9	49.7	49.6	48.5
Top 50	60.3	60.8	59.5	61.7	60.3	62.2	62.1	61.4
Top 100	73.3	73.5	72.1	73.7	72.8	73.9	73.3	73.1
Top 250	86.1	86.3	85.8	86.5	86.0	87.0	86.3	86.4
Top 500	93.3	93.2	92.7	93.3	93.1	93.8	93.2	93.3

**Table 28:** Percent of Aggregate Hedge Fund Gross Notional Exposure  
Reported by Top Hedge Funds Sorted by Gross Notional Exposure  
As reported on Form PF, Questions 26 and 30 (Month 3).

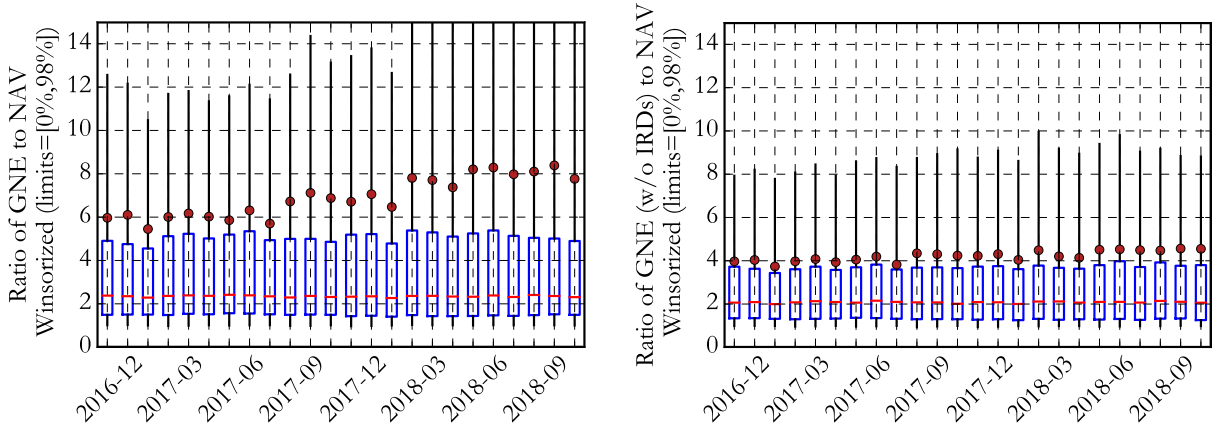
	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Top 10	31.7	31.1	30.4	30.4	30.5	29.6	28.4	27.6
Top 25	45.5	44.7	43.5	45.2	45.1	46.3	44.7	44.1
Top 50	57.0	56.9	55.7	57.1	56.6	59.2	58.1	57.8
Top 100	68.8	69.0	67.7	68.8	68.6	70.5	69.6	69.4
Top 250	82.3	82.6	82.0	82.6	82.6	84.0	82.9	82.8
Top 500	91.3	91.4	90.7	91.1	91.1	92.0	91.3	91.2

## VIII Information Reported by Large Hedge Fund Advisers

### Fund Advisers

#### A Economic Leverage

**Figure 7:** Ratio of Hedge Fund Gross Notional Exposure to Net Asset Value  
See Appendix C and Appendix D for an explanation of boxplots and winsorization.  
As reported on Form PF, Questions 3(a) and 26.

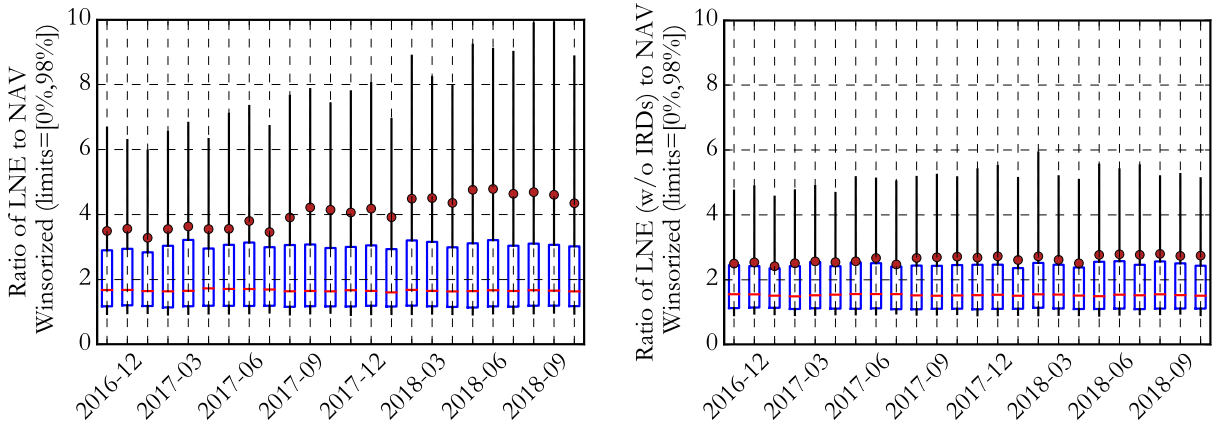


(a) Gross Exposure with Interest Rate Derivatives (IRDs)

(b) Gross Exposure without IRDs

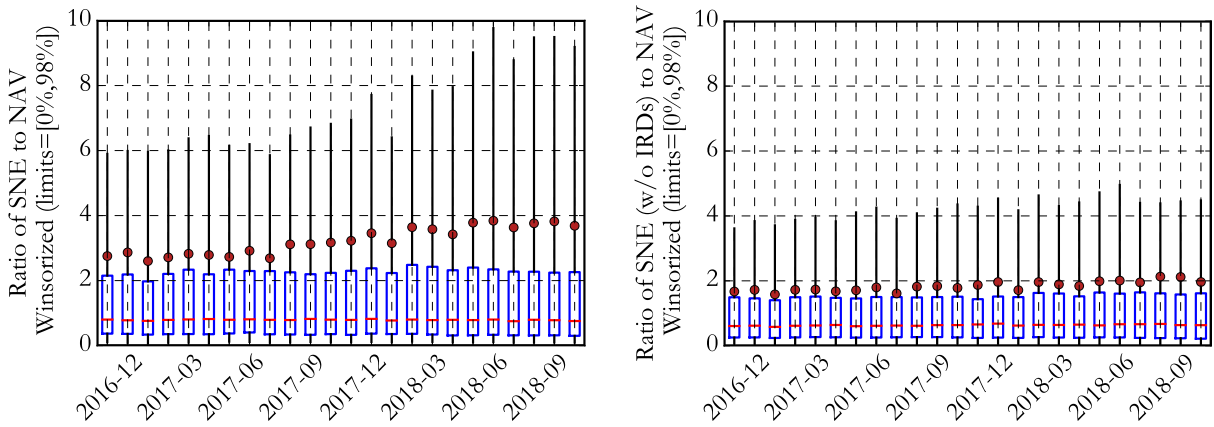


**Figure 8: Ratio of Hedge Fund Long Notional Exposure (LNE) and Short Notional Exposure (SNE) to Net Asset Value Distribution**  
 See Appendix C and Appendix D for an explanation of boxplots and winsorization.  
 As reported on Form PF, Questions 3(a) and 26.



(a) Long Exposure with IRDs

(b) Long Exposure without IRDs



(c) Short Exposure with IRDs

(d) Short Exposure without IRDs

## B Industry Concentration

**Table 29:** Large Hedge Fund Adviser Asset and Exposure Concentration  
(Percent of Total Reported)  
As reported on Form PF, Questions 3(a) and 26.

Month	Top 10 Advisers (NAV)	Top 20 Advisers (NAV)	Top 10 Advisers (GNE)	Top 20 Advisers (GNE)
2016-10	18.1	27.9	39.6	53.2
2016-11	18.1	27.9	40.0	53.4
2016-12	18.1	27.9	36.8	50.8
2017-01	18.6	28.2	38.4	52.2
2017-02	18.6	28.2	39.0	52.8
2017-03	18.6	28.2	37.3	51.1
2017-04	18.5	28.1	36.1	50.1
2017-05	18.5	28.1	36.5	50.5
2017-06	18.5	28.1	36.3	50.5
2017-07	18.6	28.1	36.6	51.1
2017-08	18.6	28.1	37.4	52.5
2017-09	18.6	28.1	36.2	50.8
2017-10	18.4	27.7	36.0	51.3
2017-11	18.4	27.7	36.3	52.0
2017-12	18.4	27.7	36.5	51.8
2018-01	18.5	27.7	37.5	53.6
2018-02	18.5	27.7	41.0	56.3
2018-03	18.5	27.7	40.0	55.4
2018-04	18.1	27.3	41.0	56.5
2018-05	18.1	27.2	40.3	56.0
2018-06	18.1	27.2	38.1	53.7
2018-07	18.2	27.4	35.4	51.2
2018-08	18.3	27.6	34.1	50.0
2018-09	18.4	27.7	34.4	49.6

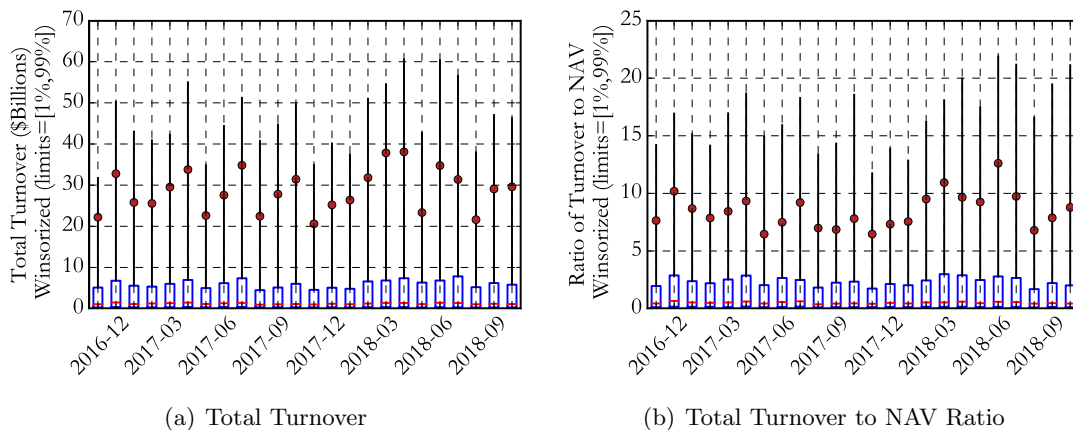
### C Portfolio Turnover

**Table 30:** Aggregate Portfolio Turnover (\$ Billions)  
As reported on Form PF, Question 27.

Month	Futures	Sov. and muni. bonds	Listed equities	Corporate bonds	Convertible bonds	Total
2016-10	8,490	2,434	1,887	97	24	12,932
2016-11	13,314	3,481	2,235	95	19	19,143
2016-12	11,026	2,265	1,785	70	17	15,164
2017-01	11,361	2,596	1,855	123	20	15,955
2017-02	12,255	2,750	1,869	105	21	17,001
2017-03	14,639	2,735	2,043	125	25	19,567
2017-04	10,971	1,992	1,846	85	16	14,910
2017-05	11,955	3,001	2,189	131	25	17,300
2017-06	16,994	2,963	2,187	115	23	22,282
2017-07	11,133	2,673	2,099	101	17	16,023
2017-08	10,809	2,932	2,385	92	21	16,239
2017-09	13,460	2,997	2,259	109	24	18,849
2017-10	8,761	2,646	2,220	107	29	13,763
2017-11	10,364	2,857	2,399	210	25	15,856
2017-12	13,350	2,459	2,081	70	15	17,976
2018-01	16,685	3,164	2,448	142	33	22,471
2018-02	18,500	3,516	2,446	132	27	24,620
2018-03	18,023	3,238	2,273	153	33	23,720
2018-04	10,382	2,733	2,437	119	22	15,693
2018-05	15,734	3,727	2,498	132	31	22,121
2018-06	15,104	3,080	2,581	119	29	20,913
2018-07	8,406	3,178	2,272	92	17	13,966
2018-08	18,814	3,280	2,416	96	20	24,625
2018-09	16,440	2,953	2,110	114	32	21,649

**Figure 9:** Distributions of Portfolio Turnover

See Appendix C and Appendix D for an explanation of boxplots and winsorization.  
As reported on Form PF, Questions 3(a) and 27.



## D Region and Country Exposure

**Table 31:** Large Hedge Fund Adviser Hedge Fund  
Region Exposure (\$ Billions)  
As reported on Form PF, Questions 3(a) and 28.

Region	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
North America	4,077	4,406	4,500	5,089	4,527	4,808	4,921	5,111
Europe EEA	1,223	1,709	1,669	1,708	1,663	1,989	1,821	1,749
Asia	531	596	600	713	673	734	698	678
South America	87	95	102	108	133	114	112	101
Europe Other	64	80	78	77	91	86	74	72
Supranational	46	60	68	67	75	72	59	60
Africa	18	19	23	24	31	37	33	31
Middle East	18	20	23	23	26	30	36	26

**Table 32:** Large Hedge Fund Adviser Hedge Fund  
Region Exposure (Percent of Aggregate NAV)  
As reported on Form PF, Questions 3(a) and 28.

Region	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
North America	136.3	141.7	142.9	155.9	135.4	140.6	141.5	147.3
Europe EEA	40.9	55.0	53.0	52.3	49.7	58.2	52.4	50.4
Asia	17.7	19.2	19.0	21.8	20.1	21.5	20.1	19.5
South America	2.9	3.1	3.2	3.3	4.0	3.3	3.2	2.9
Europe Other	2.1	2.6	2.5	2.4	2.7	2.5	2.1	2.1
Supranational	1.5	1.9	2.2	2.0	2.2	2.1	1.7	1.7
Africa	0.6	0.6	0.7	0.7	0.9	1.1	0.9	0.9
Middle East	0.6	0.6	0.7	0.7	0.8	0.9	1.0	0.7

**Table 33:** Large Hedge Fund Adviser Hedge Fund  
Country Exposure (\$ Billions)

As reported on Form PF, Questions 3(a) and 28.

Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
United States	3,866	4,182	4,246	4,824	4,312	4,548	4,681	4,868
Japan	219	231	229	233	245	269	244	250
China (Inc. Hong Kong)	129	130	144	152	164	178	184	165
Brazil	37	40	42	45	60	47	50	42
India	30	32	35	37	47	38	36	36
Russia	14	17	13	16	18	16	12	11

**Table 34:** Large Hedge Fund Adviser Hedge Fund  
Country Exposure (Percent of Aggregate NAV)

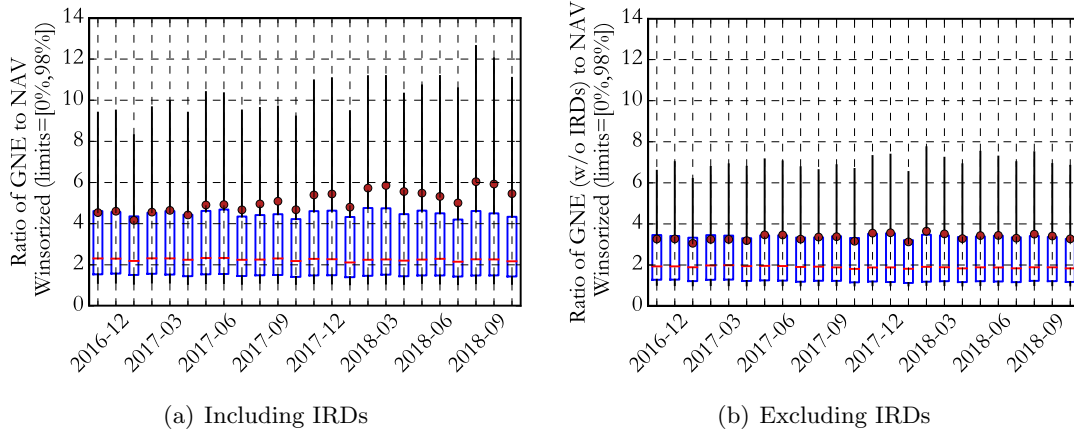
As reported on Form PF, Questions 3(a) and 28.

Country	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
United States	129.3	134.5	134.9	147.8	129.0	132.9	134.6	140.3
Japan	7.3	7.4	7.3	7.1	7.3	7.9	7.0	7.2
China (Inc. Hong Kong)	4.3	4.2	4.6	4.7	4.9	5.2	5.3	4.8
Brazil	1.2	1.3	1.3	1.4	1.8	1.4	1.4	1.2
India	1.0	1.0	1.1	1.1	1.4	1.1	1.0	1.0
Russia	0.5	0.5	0.4	0.5	0.5	0.5	0.3	0.3

# IX Qualifying Hedge Fund Specific Information

## A Economic Leverage

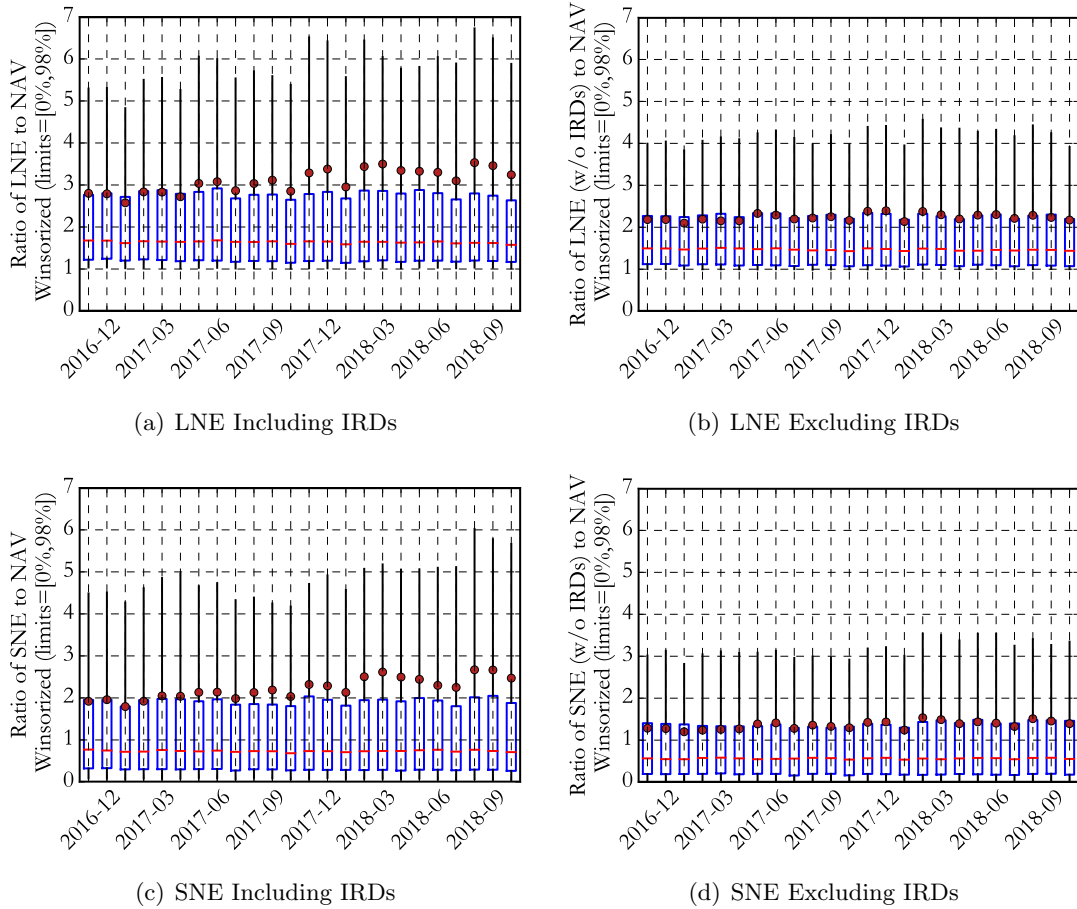
**Figure 10:** Ratio of Qualifying Hedge Fund Gross Notional Exposure to Net Asset Value  
See Appendix C and Appendix D for an explanation of boxplots and winsorization.  
As reported on Form PF, Questions 9, 10, 26, and 30.



**Figure 11:** Ratio of Qualifying Hedge Fund Long Notional Exposure (LNE) and Short Notional Exposure (SNE) to Net Asset Value

See Appendix C and Appendix D for an explanation of boxplots and winsorization.

As reported on Form PF, Questions 9, 10, 26, and 30.



## B Gross Exposure by Strategy<sup>5</sup>

**Table 35: Exposures of Hedge Funds (\$ Billions)**  
As reported on Form PF, Questions 9 and 20.

Category	Strategy	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
	Subtotal	1,397	1,482	1,547	1,635	1,664	1,646	1,713	1,760
Equity	Long/Short	841	880	906	926	945	925	950	956
	Long Bias	288	310	330	369	371	371	390	413
	Market Neutral	262	***	***	***	***	342	365	383
	Short Bias	6	***	***	***	***	8	8	8
	Subtotal	848	880	935	968	999	983	984	1,004
Other	Subtotal	689	694	652	699	660	784	760	819
	Global Macro	606	612	570	617	575	698	670	729
	Currency	***	44	***	***	***	***	45	45
	Commodity	38	35	35	38	40	39	40	41
	Active Trading	***	3	***	***	***	***	5	4
Relative Value	Subtotal	701	717	750	815	719	739	786	774
	F.I. Sov.	469	488	507	566	477	496	537	506
	F.I. Asset Backed	123	115	120	119	119	121	127	137
	F.I. Corp.	41	41	48	50	46	49	52	56
	F.I. Conv. Arb.	39	44	47	49	50	51	49	53
	Volatility Arb.	28	30	29	31	27	22	21	22
Event Driven	Subtotal	324	342	353	359	353	363	360	350
	Distressed/Restruct.	173	172	167	170	167	165	162	165
	Equity	80	94	100	100	101	97	100	98
	Risk Arb./Merger Arb.	71	77	86	89	86	101	98	88
Credit	Subtotal	274	283	285	289	287	286	297	307
	Long/Short	231	240	240	240	235	248	238	247
	Asset Based Lending	43	43	45	49	51	38	59	60
Managed Futures/CTA	Subtotal	117	131	137	136	142	138	141	157
	Quantitative	***	121	134	134	139	136	139	***
Investment in other funds	Fundamental	***	9	3	2	3	2	2	***
	Subtotal	43	42	48	49	49	44	42	48
<b>Total</b>	<b>Total</b>	<b>4,393</b>	<b>4,571</b>	<b>4,706</b>	<b>4,951</b>	<b>4,872</b>	<b>4,983</b>	<b>5,082</b>	<b>5,218</b>

<sup>5</sup>Form PF Question 20 requires advisers to indicate which strategies best describe the reporting fund's strategies including a good faith estimate of the reporting fund's allocation among strategies, and provides a list of investment strategies for this purpose. Form PF does not define the investment strategies listed by Question 20.



**Table 36: Exposures of Hedge Funds (Percent of NAV)**  
As reported on Form PF, Questions 9 and 20.

Category	Strategy	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
	Subtotal	51.1	52.6	53.5	54.8	54.6	53.0	54.4	55.2
Equity	Long/Short	30.8	31.2	31.4	31.0	31.0	29.8	30.2	30.0
	Long Bias	10.5	11.0	11.4	12.4	12.2	11.9	12.4	13.0
	Market Neutral	9.6	***	***	***	***	11.0	11.6	12.0
	Short Bias	0.2	***	***	***	***	0.3	0.3	0.2
Other	Subtotal	31.0	31.2	32.3	32.4	32.8	31.7	31.3	31.5
	Subtotal	25.2	24.6	22.5	23.4	21.7	25.3	24.1	25.7
Macro	Global Macro	22.2	21.7	19.7	20.7	18.9	22.5	21.3	22.9
	Currency	***	1.6	***	***	***	***	1.4	1.4
	Commodity	1.4	1.3	1.2	1.3	1.3	1.3	1.3	1.3
	Active Trading	***	0.1	***	***	***	***	0.1	0.1
	Subtotal	25.6	25.4	26.0	27.3	23.6	23.8	25.0	24.3
Relative Value	F.I. Sov.	17.2	17.3	17.5	19.0	15.7	16.0	17.1	15.9
	F.I. Asset Backed	4.5	4.1	4.2	4.0	3.9	3.9	4.0	4.3
	F.I. Corp.	1.5	1.4	1.7	1.7	1.5	1.6	1.6	1.8
	F.I. Conv. Arb.	1.4	1.6	1.6	1.7	1.6	1.6	1.6	1.7
	Volatility Arb.	1.0	1.1	1.0	1.1	0.9	0.7	0.7	0.7
	Subtotal	11.9	12.1	12.2	12.0	11.6	11.7	11.4	11.0
Event Driven	Distressed/Restruct.	6.3	6.1	5.8	5.7	5.5	5.3	5.1	5.2
	Equity	2.9	3.3	3.5	3.4	3.3	3.1	3.2	3.1
	Risk Arb./Merger Arb.	2.6	2.7	3.0	3.0	2.8	3.3	3.1	2.8
	Subtotal	10.0	10.0	9.8	9.7	9.4	9.2	9.4	9.6
Credit	Long/Short	8.4	8.5	8.3	8.1	7.7	8.0	7.6	7.8
	Asset Based Lending	1.6	1.5	1.6	1.6	1.7	1.2	1.9	1.9
	Subtotal	4.3	4.6	4.7	4.6	4.6	4.5	4.5	4.9
Managed Futures/CTA	Quantitative	***	4.3	4.7	4.5	4.6	4.4	4.4	***
	Fundamental	***	0.3	0.1	0.1	0.1	0.1	0.1	***
Investment in other funds	Subtotal	1.6	1.5	1.6	1.6	1.6	1.4	1.3	1.5
<b>Total</b>	<b>Total</b>	<b>160.7</b>	<b>162.2</b>	<b>162.9</b>	<b>165.9</b>	<b>159.9</b>	<b>160.5</b>	<b>161.5</b>	<b>163.8</b>

## C Leverage by Strategy

**Table 37:** Asset Weighted-Average Ratio of GAV to NAV  
by Strategy

As reported on Form PF, Questions 8, 9, 10, and 20.

Strategy	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Relative Value	4.1	4.6	5.0	5.0	4.7	5.0	5.1	4.7
Macro	3.3	3.7	3.6	3.9	3.7	3.9	4.1	4.4
Multi-Strategy	2.4	2.2	2.2	2.3	2.2	2.2	2.2	2.3
Other	1.6	1.6	1.6	1.6	1.7	1.6	1.6	1.7
Equity	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.7
Credit	1.5	1.6	1.6	1.5	1.5	1.5	1.5	1.5
Managed Futures/CTA	1.2	1.2	1.9	1.2	1.2	1.2	1.3	1.3
Event Driven	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Investment in other funds	1.1	1.1	1.0	***	1.0	1.3	1.1	1.1

**Table 38:** Asset Weighted-Average Ratio of GNE to NAV  
by Strategy

As reported on Form PF, Questions 9, 10, 20, 26, and 30 (Third Month).

Strategy	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Macro	13.6	16.8	18.1	20.6	21.5	26.8	27.7	23.8
Relative Value	16.4	19.1	17.6	18.5	18.2	20.9	19.9	19.0
Managed Futures/CTA	7.3	8.0	9.5	8.4	10.0	8.4	10.5	14.0
Multi-Strategy	10.1	7.9	7.9	9.0	8.6	9.7	8.4	8.4
Other	4.7	5.0	5.3	5.4	5.4	5.0	4.4	4.7
Equity	3.1	3.2	3.2	3.2	3.2	4.0	3.3	3.6
Investment in other funds	1.4	1.7	1.6	***	1.7	2.6	2.4	3.6
Credit	2.7	3.3	3.0	3.1	3.2	3.3	2.9	2.8
Event Driven	2.0	2.2	2.0	2.0	2.0	2.0	1.9	1.9

**Table 39:** Asset Weighted-Average Percent of Unencumbered Cash  
by Strategy

As reported on Form PF, Questions 9, 10, 20, and 33 (Third Month).

Strategy	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Managed Futures/CTA	67.7	65.5	61.2	59.0	58.0	60.6	55.5	47.5
Macro	41.4	37.9	40.6	40.3	40.2	37.0	36.4	36.8
Multi-Strategy	28.1	25.3	22.4	24.9	24.8	24.7	27.1	30.6
Other	25.6	21.5	20.6	21.3	21.0	18.5	18.9	19.2
Relative Value	22.5	22.7	19.9	21.0	19.3	20.9	18.7	18.5
Equity	12.2	10.6	11.5	9.8	10.2	9.7	11.5	11.3
Event Driven	11.5	8.0	11.1	10.0	9.7	8.1	8.6	9.6
Credit	11.7	9.8	10.9	9.9	9.8	8.3	7.0	7.3
Investment in other funds	5.5	3.4	6.2	***	9.4	4.2	6.6	3.6

## D Investment Exposures

**Table 40:** Aggregate Qualifying Hedge Fund Gross Notional Exposure  
by Asset Type (\$ Billions)  
As reported on Form PF, Questions 26 and 30.

	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Cash/Cash Equivalents	672	679	682	677	681	726	740	747
Securities - Equities	2,114	2,299	2,393	2,521	2,599	3,035	2,709	2,738
Securities - Treasuries	1,139	1,142	1,107	1,156	1,158	1,196	1,342	1,477
Securities - G10 (non-US)	971	1,017	1,037	1,138	1,179	1,321	1,277	1,241
Securities - Other Bonds	190	203	233	263	254	289	286	299
Securities - Corp. Bonds	252	268	269	259	253	264	272	278
Securities - MBS	227	246	241	254	266	264	252	276
Securities - Conv. Bonds	69	82	89	82	82	94	97	93
Securities - ABS (non-MBS)	76	75	77	75	77	80	88	87
Derivatives - IR	3,532	4,149	3,824	4,125	4,446	5,699	5,390	5,512
Derivatives - FX	2,429	2,634	2,711	3,051	3,149	3,738	3,245	2,470
Derivatives - Equity	1,105	1,182	1,215	1,283	1,331	1,364	1,307	1,317
Derivatives - Credit	594	636	683	798	716	733	684	669
Derivatives - Commodity	324	329	331	368	378	366	381	380
Derivatives - Other	136	132	273	267	412	568	580	339
Repurchase Agreements	1,156	1,314	1,374	1,348	1,280	1,452	1,533	1,553
Other	678	697	725	775	748	764	791	783

**Table 41:** Percent of Qualifying Hedge Fund Gross Notional Exposure  
Representing Long Notional Exposure  
As reported on Form PF, Questions 26 and 30.

	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Cash/Cash Equivalents	86.9	85.0	86.8	88.0	85.9	80.8	79.8	82.0
Securities - Equities	70.1	70.2	70.0	70.3	71.9	75.5	70.7	70.8
Securities - Treasuries	68.1	65.3	63.2	62.3	62.9	60.4	62.7	63.1
Securities - G10 (non-US)	49.7	49.3	50.2	50.3	50.5	52.5	51.4	49.4
Securities - Other Bonds	74.6	77.5	77.7	70.8	73.6	72.8	72.9	71.0
Securities - Corp. Bonds	81.7	80.9	79.9	81.2	81.6	81.9	82.6	82.8
Securities - MBS	76.0	74.1	73.6	71.9	71.2	73.2	74.2	71.0
Securities - Conv. Bonds	95.2	95.2	95.6	94.1	93.4	88.2	88.0	87.8
Securities - ABS (non-MBS)	98.7	98.0	98.0	96.7	96.8	98.2	95.5	95.0
Derivatives - IR	51.0	48.3	47.3	47.7	49.4	51.2	52.2	49.3
Derivatives - FX	48.6	50.9	50.1	49.8	49.9	56.8	53.5	55.6
Derivatives - Equity	55.2	56.3	55.6	56.8	57.0	51.5	51.6	52.2
Derivatives - Credit	48.3	47.3	47.7	47.4	47.8	44.8	45.3	45.2
Derivatives - Commodity	63.4	64.2	58.9	64.1	64.5	65.7	62.7	59.6
Derivatives - Other	58.5	60.2	53.3	51.2	53.7	46.6	41.6	34.4
Repurchase Agreements	48.7	50.0	49.5	52.0	52.2	52.0	47.1	47.3
Other	89.1	87.8	90.3	87.0	89.9	88.9	88.1	87.9

## E Liquidity

**Table 42:** Investor Liquidity for Qualifying Hedge Funds (Percent of Aggregate NAV)  
As reported on Form PF, Questions 9 and 50.

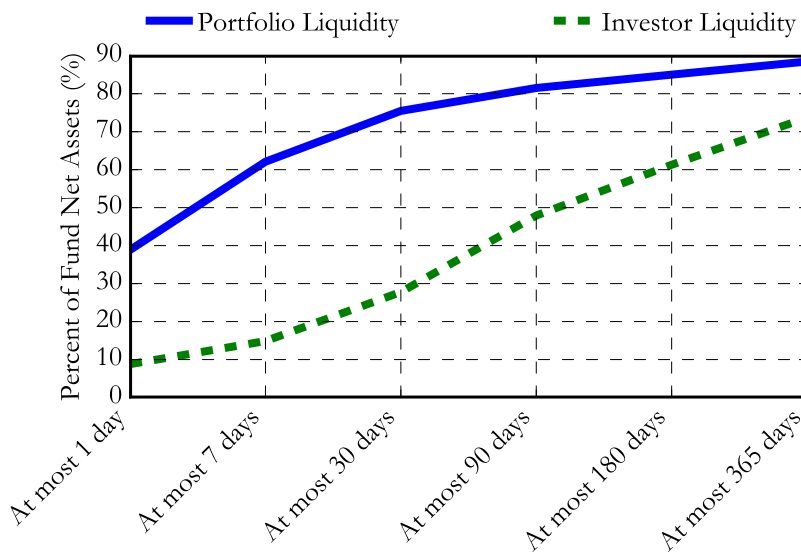
Liquidation Period	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
At most 1 day	7.9	8.2	8.1	8.3	8.5	8.9	9.0	8.8
At most 7 days	13.9	14.3	14.4	14.6	15.0	15.5	15.3	14.9
At most 30 days	26.4	28.5	27.1	27.5	28.1	30.0	27.8	27.8
At most 90 days	49.5	47.5	46.6	48.2	50.9	48.9	47.6	47.9
At most 180 days	58.7	59.7	59.3	61.6	60.0	60.3	58.9	61.3
At most 365 days	74.1	74.1	73.9	73.6	73.8	74.1	73.6	73.7

**Table 43:** Portfolio Liquidity for Qualifying Hedge Funds (Percent of Aggregate NAV)  
As reported on Form PF, Questions 9, 26, 30, and 32.

Liquidation Period	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
At most 1 day	40.1	38.3	38.6	38.0	38.7	39.6	39.3	38.9
At most 7 days	63.2	61.5	62.2	61.8	62.5	63.0	62.6	62.1
At most 30 days	76.7	76.0	76.4	76.0	76.2	76.2	75.8	75.5
At most 90 days	83.0	82.1	82.5	82.4	82.5	82.7	82.3	81.5
At most 180 days	86.3	85.8	86.1	85.8	86.1	86.1	85.8	85.0
At most 365 days	89.8	89.6	89.7	89.2	89.6	89.5	89.3	88.5

**Figure 12:** Asset Weighted-Average Qualifying Hedge Fund  
Investor and Portfolio Liquidity

As reported on Form PF, Questions 9, 26, 30, 32, and 50 as of Third Calendar Quarter 2018.

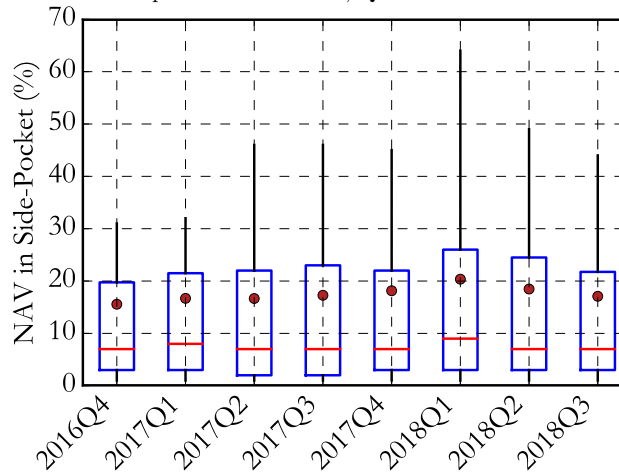


**Table 44:** Restrictions on Qualifying Hedge Fund Assets (\$ Billions)  
As reported on Form PF, Questions 48 and 49.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
May Suspend	2,145	2,212	2,263	2,325	2,363	2,410	2,428	2,469
May Have Gates	1,287	1,335	1,359	1,392	1,405	1,457	1,487	1,510
Side-Pocketed	38	39	38	39	39	42	41	39
Gated	27	27	28	30	38	39	32	34
Suspended	19	27	27	22	17	***	13	12

**Figure 13:** Percentage of Qualifying Hedge Fund NAV Subject to a Side-Pocket Arrangement

See Appendix C for an explanation of boxplots.  
As reported on Form PF, Questions 9 and 48.



## F Borrowings

**Table 45: Borrowings of Qualifying Hedge Funds (\$ Billions)**  
As reported on Form PF, Question 43 (Third Month).

Type	Subtype	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Secured	Subtotal	2,057	2,238	2,391	2,437	2,419	2,592	2,813	2,830
	Prime Broker	1,087	1,185	1,265	1,371	1,379	1,418	1,526	1,591
	Reverse Repo	675	739	795	721	685	780	894	862
	Other Secured	295	313	331	345	356	394	392	377
Unsecured	Subtotal	12	14	11	12	14	14	14	12
<b>Total</b>	<b>Total</b>	2,069	2,252	2,402	2,448	2,433	2,606	2,827	2,842

**Table 46: Aggregate Borrowing by Creditor Entity Type (Percent)**  
As reported on Form PF, Question 43 (Third Month).

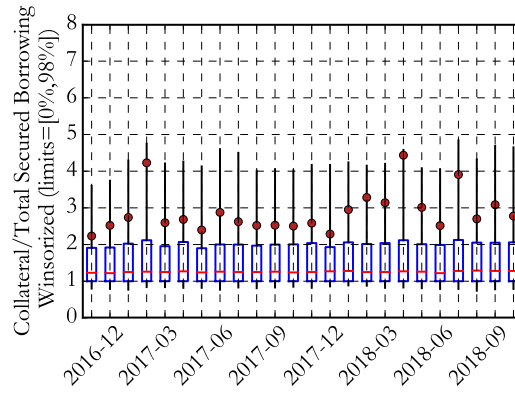
Creditor Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
US Financial	63.2	61.3	61.1	61.4	61.7	60.5	63.3	63.6
Non-US Financial	36.3	38.3	38.5	38.3	37.9	39.1	36.4	36.1
US Non-Financial	0.3	***	0.3	***	***	***	***	***
Non-US Non-Financial	0.1	***	0.1	***	***	***	***	***

**Table 47: Aggregate Collateral for Secured Borrowings  
of Qualifying Hedge Funds (\$ Billions)**  
As reported on Form PF, Question 43 (Third Month).

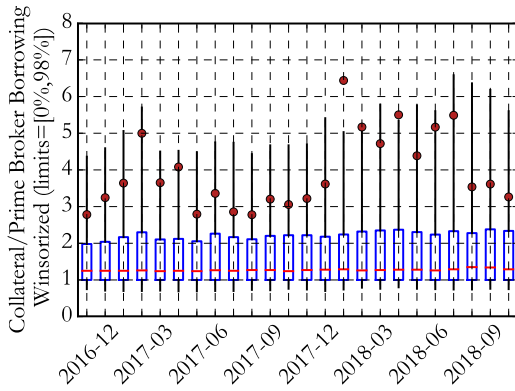
Borrowing Type	Collateral Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Prime Broker	Subtotal	1,333	1,466	1,544	1,672	1,685	1,751	1,839	2,148
	Other	857	949	1,022	1,151	1,183	1,225	1,270	1,557
	Cash	476	517	521	522	502	526	568	591
Reverse Repo	Subtotal	691	783	786	734	718	781	909	885
	Other	451	517	506	478	455	513	569	573
	Cash	241	266	281	256	263	268	340	312
Other Secured	Subtotal	349	384	407	423	426	447	468	436
	Other	210	254	251	265	262	296	308	298
	Cash	139	130	156	158	165	152	159	138
<b>Total</b>	<b>Total</b>	2,374	2,633	2,737	2,830	2,829	2,979	3,215	3,468

**Figure 14: Ratio of Collateral Posted to Secured Borrowing for Qualifying Hedge Funds**

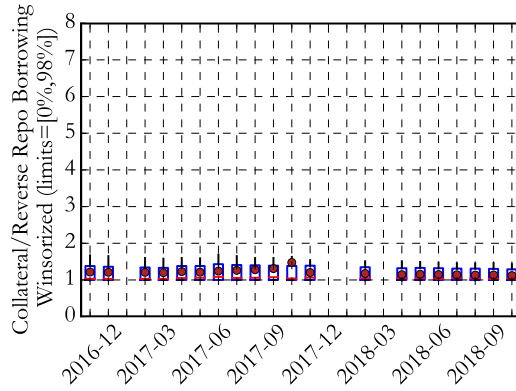
See Appendix C and Appendix D for an explanation of boxplots and winsorization. As reported on Form PF, Question 43.



(a) Total Secured Borrowing



(b) Prime Broker Borrowing

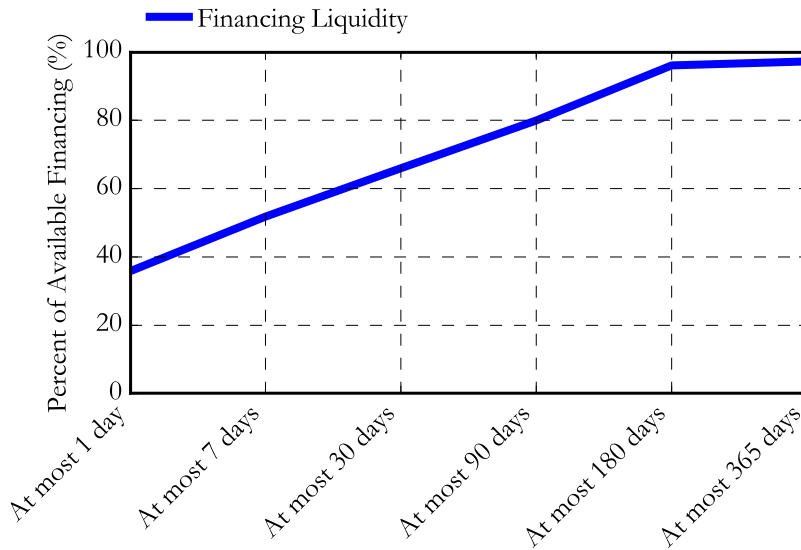


(c) Reverse Repo Borrowing

**Table 48:** Financing Liquidity for Qualifying Hedge Funds  
 (Percent of Available Financing)  
 As reported on Form PF, Question 46.

Financing Available	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
At most 1 day	35.8	36.3	34.6	35.4	34.2	31.6	32.9	35.8
At most 7 days	48.1	52.9	53.4	51.7	49.5	51.5	52.7	51.8
At most 30 days	64.0	65.0	65.4	64.1	64.7	64.9	66.7	66.0
At most 90 days	81.1	80.2	80.8	79.3	80.3	80.6	80.6	79.9
At most 180 days	95.9	96.0	96.2	96.0	95.9	95.8	95.8	96.0
At most 365 days	97.3	97.3	97.4	97.3	97.2	96.9	97.1	97.2

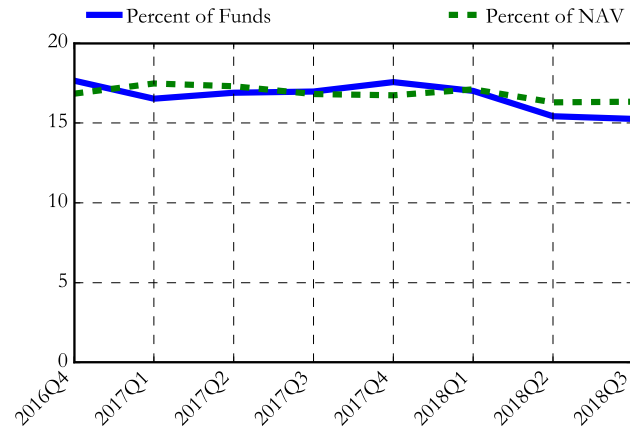
**Figure 15:** Weighted-Average Qualifying Hedge Fund  
 Financing Liquidity (Percent of Available Financing)  
 As reported on Form PF, Question 46 as of Third Calendar Quarter 2018.





## G Central Clearing

**Figure 16:** Qualifying Hedge Funds Using Central Clearing  
As reported on Form PF, Question 39.



## H Value-at-Risk (“VaR”) Reporting

**Table 49:** Number of Qualifying Hedge Funds Using VaR  
As reported on Form PF, Question 40.

VaR Method	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
VaR (Any Method)	628	637	649	649	663	660	672	682
Historical Simulation	234	238	249	271	278	286	287	298
Parametric	196	190	190	186	193	185	193	194
Monte Carlo Simulation	194	200	205	188	186	175	178	182
Other	41	43	44	42	47	51	52	52
VaR Not Used	1,021	1,034	1,068	1,078	1,137	1,110	1,131	1,134

**Table 50:** Aggregate Qualifying Hedge Fund GAV Managed Using VaR (\$ Billions)  
As reported on Form PF, Questions 8 and 40.

VaR Method	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
VaR (Any Method)	3,212	3,397	3,480	3,586	3,546	3,661	3,779	3,841
Historical Simulation	1,700	1,829	1,798	1,900	1,882	1,969	2,027	2,017
Parametric	731	737	760	767	806	817	837	842
Monte Carlo Simulation	637	854	938	930	835	854	838	670
Other	368	402	431	461	495	496	522	759
VaR Not Used	1,994	2,066	2,201	2,269	2,316	2,412	2,497	2,543

**Table 51:** Aggregate Qualifying Hedge Fund NAV Managed Using VaR (\$ Billions)  
As reported on Form PF, Questions 9 and 40.

VaR Method	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
VaR (Any Method)	1,293	1,334	1,366	1,394	1,397	1,423	1,430	1,434
Historical Simulation	479	491	504	561	562	580	570	575
Parametric	459	465	474	477	490	494	500	496
Monte Carlo Simulation	345	395	416	386	377	375	379	353
Other	91	92	90	90	89	91	96	130
VaR Not Used	1,441	1,484	1,524	1,590	1,649	1,681	1,718	1,752

## I Stress Testing and VaR

**Table 52:** Number of Qualifying Hedge Funds Managed Using VaR or Market Factor Change Testing (“Stress Testing”) As reported on Form PF, Questions 40 and 42.

Risk Tool Used	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Stress and VaR	552	545	555	555	589	593	599	613
Stress, No VaR	453	451	457	467	498	494	489	496
No Stress, VaR	76	92	94	94	74	67	73	69
Neither	568	583	611	611	639	616	642	638

**Table 53:** Aggregate Qualifying Hedge Fund GAV Managed Using VaR or Stress Testing (\$ Billions) As reported on Form PF, Questions 8, 40, and 42.

Risk Tool Used	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Stress and VaR	3,033	3,158	3,209	3,350	3,386	3,499	3,612	3,675
Stress, No VaR	1,001	1,076	1,114	1,178	1,190	1,269	1,291	1,300
No Stress, VaR	179	240	271	236	160	162	168	165
Neither	993	990	1,086	1,091	1,126	1,143	1,205	1,243

**Table 54:** Aggregate Qualifying Hedge Fund NAV Managed Using VaR or Stress Testing (\$ Billions) As reported on Form PF, Questions 9, 40, and 42.

Risk Tool Used	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Stress and VaR	1,176	1,189	1,219	1,236	1,289	1,313	1,318	1,320
Stress, No VaR	661	683	673	712	736	746	743	757
No Stress, VaR	117	146	147	158	108	110	112	114
Neither	780	801	850	878	914	935	974	995

## X Section 3 Liquidity Fund Specific Information

### A Liquidity

**Table 55:** Investor Liquidity For Section 3 Liquidity Funds (Percent of Aggregate NAV)  
As reported on Form PF, Questions 9 and 64.

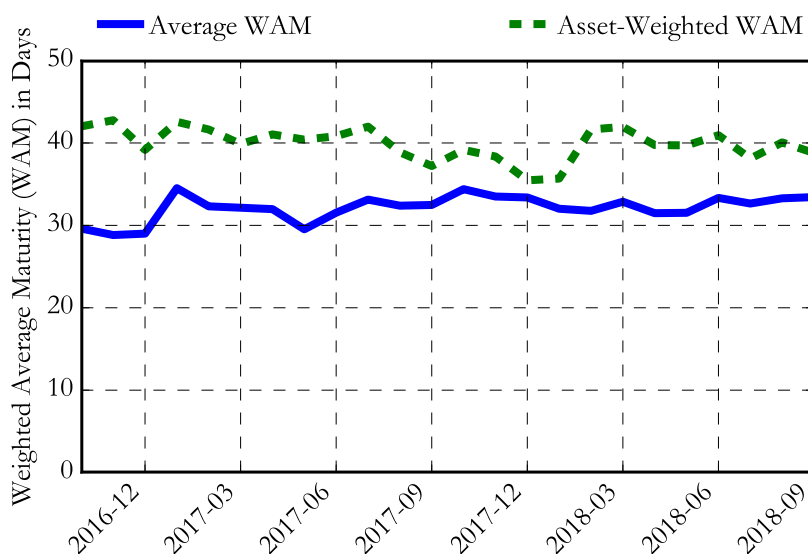
Liquidation Period	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
At most 1 day	80.9	78.0	79.6	79.1	80.5	78.9	79.1	78.8
At most 7 days	97.3	95.5	95.2	95.5	95.5	95.5	96.1	96.0
At most 30 days	99.6	99.7	99.5	99.5	99.5	99.7	99.7	99.5
At most 90 days	99.8	100.0	99.8	99.7	99.7	99.9	99.9	99.8
At most 180 days	99.9	100.0	99.9	99.8	99.8	99.9	100.0	99.9
At most 365 days	100.0	100.0	99.9	99.9	99.9	100.0	100.0	100.0

**Table 56:** Suspensions and Gates of Section 3 Liquidity Funds (\$ Billions)  
As reported on Form PF, Question 63.

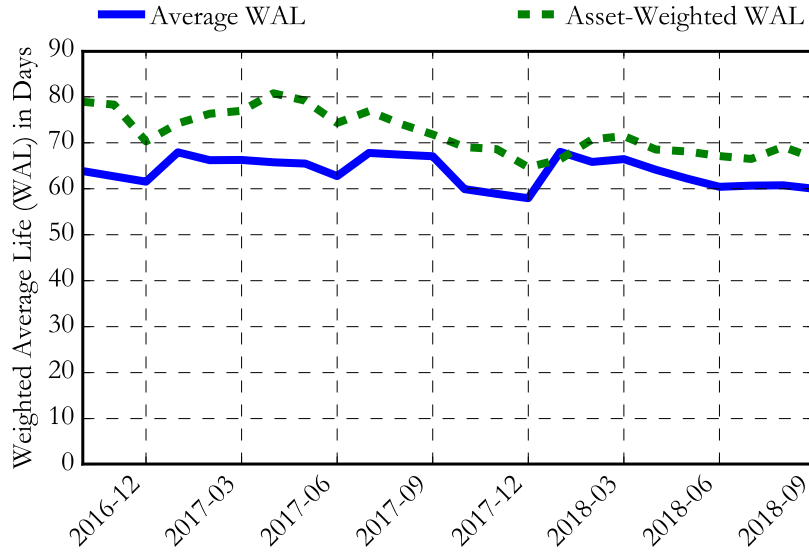
Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
May Suspend	253	246	255	261	273	269	284	291
May Have Gates	220	215	224	226	237	232	245	255
Suspended	0	0	0	0	0	0	0	0
Gated	0	0	0	0	0	0	0	0

### B Portfolio Characteristics

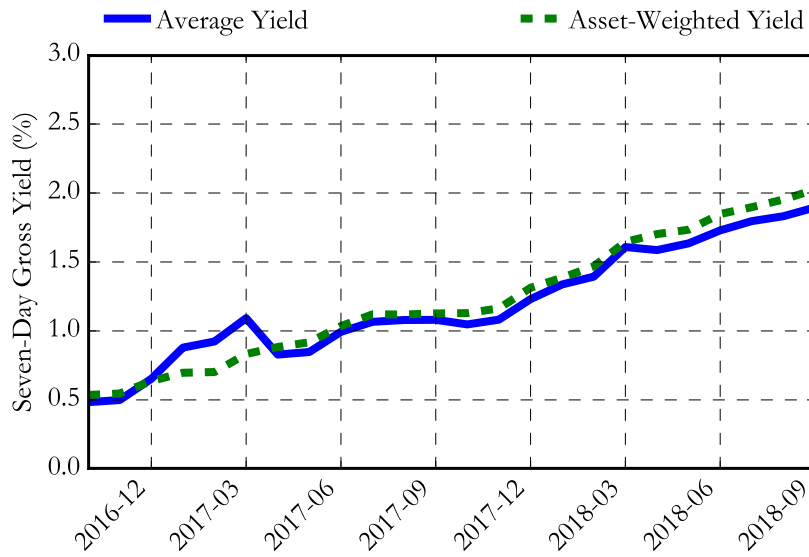
**Figure 17:** Weighted-Average Maturity Reported by Section 3 Liquidity Funds  
As reported on Form PF, Question 55.



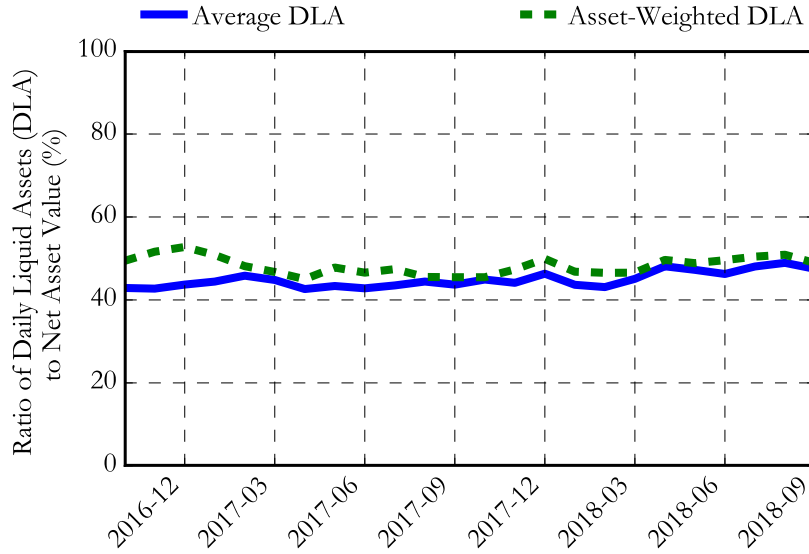
**Figure 18: Weighted-Average Life Reported by Section 3 Liquidity Funds**  
As reported on Form PF, Question 55.



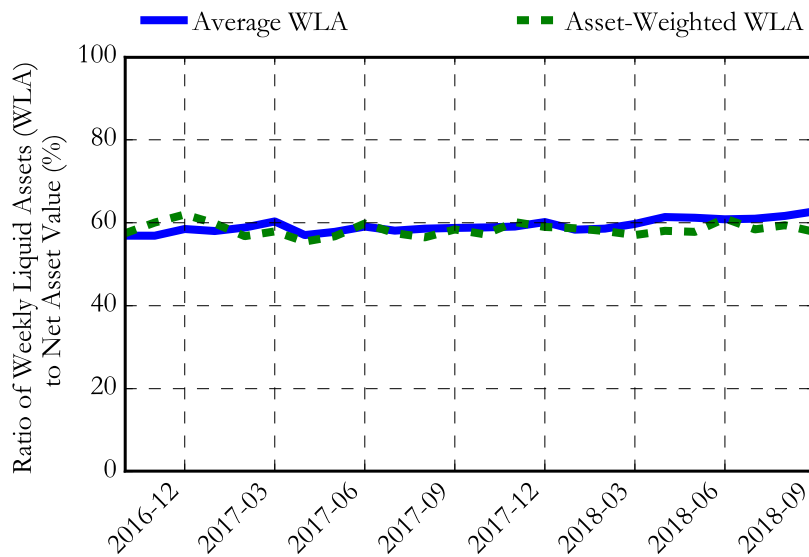
**Figure 19: Seven-Day Gross Yield Reported by Section 3 Liquidity Funds**  
As reported on Form PF, Question 55.



**Figure 20:** Ratio of Daily Liquid Assets to Net Asset Value of Section 3 Liquidity Funds  
As reported on Form PF, Question 55.



**Figure 21:** Ratio of Weekly Liquid Assets to Net Asset Value of Section 3 Liquidity Funds  
As reported on Form PF, Question 55.



## C Rule 2a-7 Compliance

**Table 57:** Rule 2a-7 Compliance (Percent of Funds)

As reported on Form PF, Questions 9 and 54.

Compliance Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Credit Quality	59.1	57.8	59.6	56.5	56.2	58.7	60.0	60.0
Diversification	56.8	55.6	55.3	52.2	52.1	54.3	55.6	55.6
Maturity	56.8	55.6	55.3	52.2	52.1	54.3	55.6	55.6
Liquidity	56.8	55.6	55.3	52.2	52.1	50.0	51.1	51.1
Fully	50.0	48.9	48.9	45.7	45.8	45.7	46.7	46.7
None	38.6	40.0	38.3	41.3	41.7	41.3	40.0	40.0

**Table 58:** Rule 2a-7 Compliance (Percent of Aggregate NAV)

As reported on Form PF, Questions 9 and 54.

Compliance Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Credit Quality	14.4	15.5	15.9	15.9	14.7	15.9	14.6	14.5
Diversification	13.8	14.9	14.9	14.9	13.7	14.9	13.7	13.5
Maturity	13.6	14.8	14.7	15.0	13.7	14.9	13.7	13.5
Liquidity	13.6	14.8	14.7	15.0	13.7	14.5	13.4	13.3
Fully	11.8	12.8	12.8	12.8	11.8	12.7	11.7	11.5
None	85.5	84.3	84.1	83.9	85.2	84.1	85.4	85.5

## D Methods of Calculating NAV

**Table 59:** NAV Calculation Method (Percent of Funds)

As reported on Form PF, Questions 9, 52, and 53.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Stable	81.8	80.0	78.7	78.3	79.2	80.4	80.0	77.8
Floating	18.2	20.0	21.3	21.7	20.8	19.6	20.0	22.2

**Table 60:** NAV Calculation Method (Percent of Aggregate NAV)

As reported on Form PF, Questions 9, 52, and 53.

Type	2016Q4	2017Q1	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Stable	69.9	71.4	68.3	70.2	69.1	70.3	68.4	68.0
Floating	30.1	28.6	31.7	29.8	30.9	29.7	31.6	32.0

## E Aggregate Portfolio Holdings

**Table 61:** Section 3 Liquidity Fund Aggregate Product Exposures (\$Billions) — 1 of 2  
As reported on Form PF, Question 63.

Product Type	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03	2017-04	2017-05	2017-06	2017-07	2017-08	2017-09
Deposits	56.8	62.4	60.7	68.2	67.7	65.7	73.5	72.2	69.1	74.3	73.9	69.7
U.S. Treasuries	63.2	66.0	66.4	56.3	59.1	56.3	55.9	50.4	47.5	50.9	48.5	47.0
Other	28.5	27.2	35.4	43.2	42.2	38.4	39.8	44.5	44.3	43.9	42.7	43.5
Commercial Paper	32.4	32.0	35.3	35.2	37.1	40.2	34.0	37.6	36.2	39.6	37.7	39.4
Repo - Govt. Collateral	42.5	39.8	33.4	26.9	21.2	18.3	21.0	27.2	27.5	28.6	29.0	30.2
Asset-Backed Securities	22.5	22.4	22.1	23.1	21.0	21.6	23.4	22.8	19.8	19.1	18.6	21.4
Repo - Other Collateral	7.9	10.1	8.5	14.2	13.6	14.9	17.2	16.3	16.6	16.9	16.7	15.2
U.S. Govt. Debt	5.1	4.2	4.0	3.7	3.8	4.9	4.6	5.0	5.7	4.3	4.0	5.5
Municipal Debt	1.9	1.7	1.6	1.3	1.3	0.9	0.9	1.1	0.9	0.9	0.9	0.9

**Table 62:** Section 3 Liquidity Fund Aggregate Product Exposures (\$Billions) — 2 of 2  
As reported on Form PF, Question 63.

Product Type	2017-10	2017-11	2017-12	2018-01	2018-02	2018-03	2018-04	2018-05	2018-06	2018-07	2018-08	2018-09
Deposits	73.6	73.2	66.6	72.3	69.3	54.3	64.2	60.8	64.6	61.5	59.0	64.1
U.S. Treasuries	50.6	56.4	58.2	54.2	54.2	60.9	56.7	54.5	61.9	53.3	54.5	53.6
Other	41.6	41.9	46.9	48.7	47.5	45.1	45.8	48.1	48.6	47.3	49.9	47.9
Commercial Paper	41.8	41.9	37.5	42.9	41.2	42.2	42.6	44.1	42.8	50.5	47.0	45.8
Repo - Govt. Collateral	32.1	31.0	29.6	37.3	30.5	34.2	40.6	39.0	35.1	43.9	45.3	44.8
Asset-Backed Securities	20.6	19.6	19.8	21.7	21.3	21.4	21.9	22.6	23.1	21.9	22.0	20.2
Repo - Other Collateral	16.7	16.2	15.3	16.8	16.8	15.8	17.1	19.7	16.2	17.6	17.2	17.8
U.S. Govt. Debt	5.4	5.6	5.6	4.8	5.6	5.4	4.6	5.2	5.7	5.1	4.5	4.8
Municipal Debt	1.2	1.2	0.9	0.9	1.0	1.0	1.2	1.0	1.1	1.0	1.0	1.2



## XI Section 4 Private Equity Fund Specific Information

### A CPC Industry Concentration

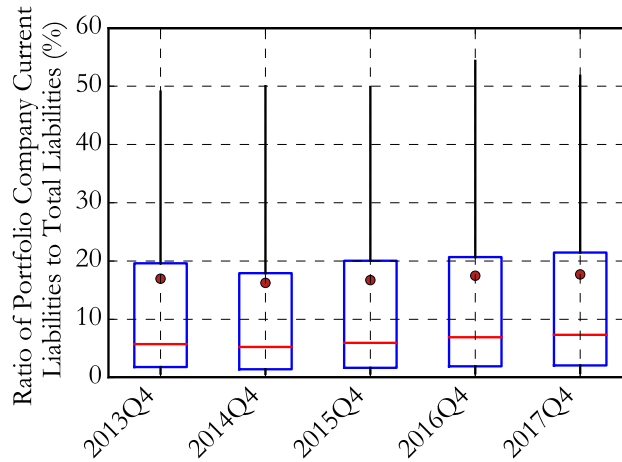
**Table 63:** Gross Assets in CPC Industries (Percent of Total)  
As reported on Form PF, Questions 8 and 77.

Type	2013Q4	2014Q4	2015Q4	2016Q4	2017Q4
Oil & Gas Extraction	7.9	7.8	5.8	6.7	6.2
Software Publishers	2.8	3.8	4.9	6.1	6.0
Electric Power Generation, Transmission & Distribution	3.8	3.8	3.7	4.1	4.2
Data Processing, Hosting, & Related Services	2.9	2.3	1.8	2.0	2.3
Telecommunications Data Processing Services	2.6	2.5	2.7	2.3	2.2
Other Information Services	2.0	2.1	1.9	1.8	2.0
Pipeline Transportation	2.4	2.6	2.4	2.2	1.9
Other Financial Vehicles	0.4	0.4	0.6	1.8	1.6
Management, Scientific, & Technical Consulting Services	1.0	1.2	1.1	1.3	1.6
Pharmaceutical & Medicine Mfg	1.0	1.3	1.5	1.4	1.5
Custom Computer Programming Services	0.9	1.0	1.5	1.5	1.5
Educational Services	1.4	1.3	1.3	1.2	1.4
Other Financial Investment Activities	2.0	1.8	1.8	1.7	1.4
Investigation & Security Services	0.5	0.5	0.7	1.2	1.4
Activities Related to Credit Intermediation	1.2	1.2	1.4	1.0	1.2
Other Insurance Related Activities	0.9	1.0	1.0	2.0	1.2
Utility System Construction	0.4	0.5	0.8	0.8	1.2
Insurance Agencies & Brokerages	0.9	1.0	1.0	1.2	1.1
Natural Gas Distribution	0.5	0.4	0.6	0.7	1.0
Support Activities for Mining	1.3	1.6	1.2	1.0	1.0
Fruit & Vegetable Preserving & Specialty Food Mfg	0.2	0.1	0.0	0.1	1.0

## B CPC Financial Leverage

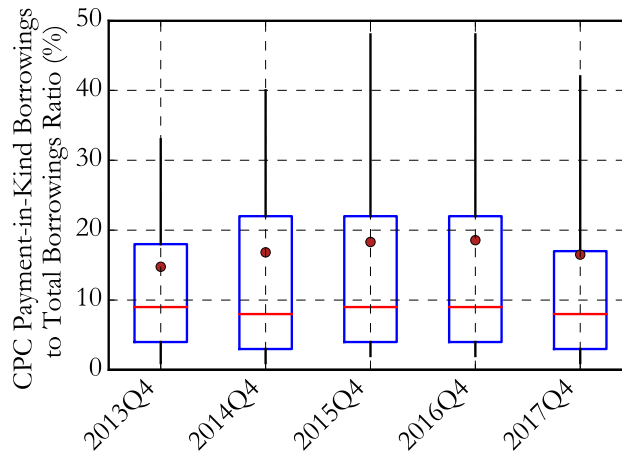
**Figure 22:** Distribution of Ratio of Aggregate CPC Current Liabilities to Total Liabilities of Section 4 Private Equity Funds

See Appendix C for an explanation of boxplots.  
As reported on Form PF, Questions 71 and 72.



**Figure 23:** Distribution of CPC Payment-in-Kind or Zero Coupon Borrowings to Total Borrowings Ratio

See Appendix C for an explanation of boxplots.  
As reported on Form PF, Question 73.



## C CPC Investments by Region and Country

**Table 64:** Aggregate Gross Value of Private Equity  
Investments by Region (\$ Billions)  
As reported on Form PF, Questions 70 and 78.

Region	2013Q4	2014Q4	2015Q4	2016Q4	2017Q4
North America	5,279	4,506	4,132	3,942	4,274
Europe EEA	1,423	1,259	941	848	1,543
Asia	571	462	447	406	379
South America	75	85	58	111	258
Europe Other	25	9	21	22	98
Supranational	65	67	23	37	49
Middle East	8	12	9	15	23
Africa	20	12	12	18	14

**Table 65:** Private Equity CPC Investments by Region  
(Percent of Aggregate CPC Gross Asset Value)  
As reported on Form PF, Questions 70 and 78.

Region	2013Q4	2014Q4	2015Q4	2016Q4	2017Q4
North America	70.7	70.2	73.2	73.0	64.4
Europe EEA	19.1	19.6	16.7	15.7	23.2
Asia	7.6	7.2	7.9	7.5	5.7
South America	1.0	1.3	1.0	2.0	3.9
Europe Other	0.3	0.1	0.4	0.4	1.5
Supranational	0.9	1.0	0.4	0.7	0.7
Middle East	0.1	0.2	0.2	0.3	0.3
Africa	0.3	0.2	0.2	0.3	0.2

**Table 66:** Aggregate Gross Asset Value of Private Equity  
CPC Investments by Country (\$ Billions)  
As reported on Form PF, Questions 70 and 78.

Country	2013Q4	2014Q4	2015Q4	2016Q4	2017Q4
United States	5,039	4,305	3,943	3,776	3,794
China and Hong Kong	171	186	173	114	147
Brazil	45	58	41	88	131
India	63	83	89	92	73
Japan	233	98	85	79	52
Russia	3	2	5	4	4

**Table 67:** Private Equity CPC Investments by Country  
(Percent of Aggregate CPC Gross Asset Value)  
As reported on Form PF, Questions 70 and 78.

Country	2013Q4	2014Q4	2015Q4	2016Q4	2017Q4
United States	67.5	67.1	69.9	69.9	57.1
China and Hong Kong	2.3	2.9	3.1	2.1	2.2
Brazil	0.6	0.9	0.7	1.6	2.0
India	0.8	1.3	1.6	1.7	1.1
Japan	3.1	1.5	1.5	1.5	0.8
Russia	0.0	0.0	0.1	0.1	0.1

## XII Appendices

### A Form PF Filer Categories

The amount of information an adviser must report and the frequency with which it must report on Form PF depends on the amount of the adviser's private fund assets and the types of private funds managed. Reporting advisers must identify the types of private funds they manage on Form PF.

#### 1 All Private Fund Advisers

SEC-registered investment advisers with at least \$150 million in private fund assets under management are required to file Form PF. Registered investment advisers with less than \$150 million in private funds assets under management, exempt reporting advisers, and state-registered advisers report general private fund data on Form ADV, but do not file Form PF.<sup>6</sup> Not all Form PF filers report on a quarterly basis. Smaller private fund advisers and all private equity fund advisers file Form PF on an annual basis, while larger hedge fund advisers and larger liquidity fund advisers file the form quarterly.<sup>7</sup> As a result of the difference in reporting frequency, information in this report related to funds that are reported annually may be dated by several months.<sup>8</sup>

#### 2 Large Hedge Fund Advisers

Large Hedge Fund Advisers have at least \$1.5 billion in hedge fund assets under management. A Large Hedge Fund Adviser is required to file Form PF quarterly and provide data about each hedge fund it managed during the reporting period (irrespective of the size of the fund).

Large Hedge Fund Advisers must report more information on Form PF about Qualifying Hedge Funds than other hedge funds they manage during the reporting period. A Qualifying Hedge Fund is any hedge fund advised by a Large Hedge Fund Adviser that had a NAV (individually or in combination with any feeder funds, parallel funds, and/or dependent parallel managed accounts) of at least \$500 million as of the last day of any month in the fiscal quarter immediately preceding the adviser's most recently completed fiscal quarter. This report provides information about all hedge funds reported by Large Hedge Fund Advisers, including Qualifying Hedge Funds and smaller hedge funds. This report also provides an overview of certain data reported solely for Qualifying Hedge Funds.

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<sup>6</sup>Note that these thresholds are on a gross basis. Exempt reporting advisers are advisers that rely on the exemptions from SEC registration in Advisers Act section 203(l) for venture capital fund advisers and section 203(m) for advisers managing less than \$150 million in private fund assets in the U.S.

<sup>7</sup>An adviser may be a large hedge fund adviser that must file quarterly to report data about the hedge funds it manages as well as a private equity fund adviser that must file only annually to report data about the private equity funds it manages.

<sup>8</sup>In addition, because some Form PF filers have fiscal year ends that are not December 31, not all Form PF data is filed as of a single date.

### **3 Large Liquidity Fund Advisers**

Large Liquidity Fund Advisers have at least \$1 billion in combined liquidity fund and money market fund assets under management. On a quarterly basis, such advisers report on Form PF data about the liquidity funds they managed during the reporting period (irrespective of the size of the fund). This report contains information about all liquidity funds reported by Large Liquidity Fund Advisers (referred to in this report as “Section 3 Liquidity Funds”).

### **4 Large Private Equity Fund Advisers**

Large Private Equity Fund Advisers have at least a \$2 billion in private equity fund assets under management. These advisers are required to file Form PF annually in connection with the private equity funds they managed during the reporting period. Smaller Private Equity Fund Advisers must file annually as well, but provide less detail regarding the private equity funds they manage. This report provides information about private equity funds managed by Large Private Equity Fund Advisers (referred to in this report as “Section 4 Private Equity Funds”).

### **5 Other Private Fund Advisers**

All advisers required to file Form PF that are not Large Hedge Fund Advisers or Large Liquidity Fund Advisers must file Form PF annually to report data about each private fund managed by the adviser.<sup>9</sup> These “annual filing advisers” include smaller fund advisers, Large Private Equity Fund advisers, and venture capital fund advisers. Annual filers must provide specific information about each of the private funds they manage on an annual basis.

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<sup>9</sup>This includes “other private funds,” which are private funds that do not meet the Form PF definition of hedge fund, liquidity fund, private equity fund, real estate fund, securitized asset fund, or venture capital fund.

## B Handling Annual and Quarterly Data

Only a subset of filers (Large Hedge Fund Advisers and Large Liquidity Fund Advisers) are required to file Form PF quarterly; all other filings are made annually. Annual filings are typically, but not always, made at the end of the calendar year, as Form PF allows filings to be made at the end of an adviser’s fiscal year. In order to present the most complete and recent data possible, while accounting for differences in filing dates, we use the following procedure for determining which data to consider in any given quarter:

First, filings are grouped by their report date within their reported year:

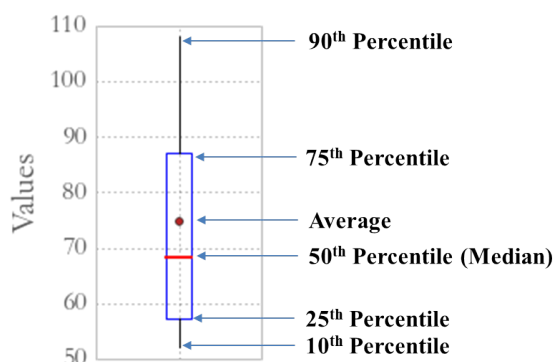
- (Q1): February 15 to May 14
- (Q2): May 15 to August 14
- (Q3): August 15 to November 14
- (Q4): November 15 to February 14

Then, responses for funds that have no information are ‘filled forward’ — essentially, copied from last reported values — up to a maximum of three quarters. Any fund that has no data four quarters after its most recent date is no longer counted or included in any calculations.<sup>10</sup>

## C How to Read a Boxplot

In these figures, the boxes extend from the twenty-fifth percentile to the seventy-fifth percentile, while the levels (the dashed vertical lines) extend from the tenth to the twenty-fifth percentile as well as the seventy-fifth to the ninetieth percentile. Also shown as a red line within the box is the median (the fiftieth percentile) and the horizontal dashed line is mean of the distribution. See Figure 24 for an explanation of each feature.

**Figure 24:** How to Read a Boxplot



<sup>10</sup>Form PF has no requirement to inform the SEC if a fund liquidates or otherwise terminates operations. Therefore, liquidations or terminations may not be reflected on this report for up to one year after ceasing operations.

## D Mitigating the Effects of Outliers

Form PF data occasionally contains spurious outliers. While Analytics Office staff actively engages in outreach to identify and correct such values, not all aberrant values have been corrected as of this writing. To reduce the effect of these outliers on the aggregate measures reported here, we have chosen to winsorize or trim some data sets.

Winsorization is a technique for reducing the effect of outliers by reducing the size of the largest and smallest values in a distribution.<sup>11</sup> For example, to calculate a 95%/5% winsorized data set, all the values above the ninety-fifth percentile are set to the value of the ninety-fifth percentile, and all the values below the fifth percentile are set to the value of the fifth percentile. Effectively, this procedure makes the very largest values smaller (but still large), and all the smallest values larger (but still small). This approach can be more effective than trimming (simply removing the largest and/or smallest values) because it does not change the number of data points and does not change the median or other percentile values within the 95%/5% range. All instances of winsorization or trimming have been noted and include the affected percentiles.

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<sup>11</sup>Such techniques are known as ‘robust statistics’, reviewed for example in Wilcox (2012), *Introduction to Robust Estimation & Hypothesis Testing*, 3rd Edition.



## E Definitions

*Included by reference are all definitions included in the glossary of Form PF.*

<i>Aggregate Exposure</i>	A dollar value for long and short positions as of the last day in each month of the reporting period, by sub-asset class, including all exposure whether held physically, synthetically or through derivatives. Includes closed out and OTC forward positions that have not expired, as well as positions in side-pockets.
<i>Borrowing</i>	In Form PF, borrowings include secured borrowings, unsecured borrowings, as well as synthetic borrowings (e.g., total return swaps that meet the failed sale accounting requirements).
<i>CPC</i>	Controlled portfolio company, as defined in Form PF.
<i>Gross Notional Exposure (GNE)</i>	The gross nominal or notional value of all transactions that have been entered into but not yet settled as of the data reporting date. For contracts with variable nominal or notional principal amounts, the basis for reporting is the nominal or notional principal amounts as of the data reporting date.
<i>Hedge Fund</i>	Any private fund (other than a securitized asset fund): (a) with respect to which one or more investment advisers (or related persons of investment advisers) may be paid a performance fee or allocation calculated by taking into account unrealized gains (other than a fee or allocation the calculation of which may take into account unrealized gains solely for the purpose of reducing such fee or allocation to reflect net unrealized losses); (b) that may borrow an amount in excess of one-half of its net asset value (including any committed capital) or may have gross notional exposure in excess of twice its net asset value (including any committed capital); or (c) that may sell securities or other assets short or enter into similar transactions (other than for the purpose of hedging currency exposure or managing duration). The definition of a hedge fund for Form PF purposes also includes any commodity pool an adviser reports on Form PF.
<i>IRDs</i>	Interest rate derivatives, including foreign exchange derivatives used for either investment or hedging.
<i>Large Hedge Fund Adviser</i>	An adviser that has at least \$1.5 billion in hedge fund assets under management.

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<i>Large Liquidity Fund Adviser</i>	An adviser that has at least \$1 billion in combined liquidity fund and money market fund assets under management.
<i>Large Private Equity Fund Adviser</i>	An adviser that has at least a \$2 billion in private equity fund assets under management.
<i>Parallel Managed Account</i>	An account advised by an adviser that pursues substantially the same investment objective and strategy and invests side by side in substantially the same positions as the reporting fund.
<i>Qualifying Hedge Fund</i>	A hedge fund advised by a Large Hedge Fund Adviser that has a net asset value (individually or in combination with any feeder funds, parallel funds, and/or dependent parallel managed accounts) of at least \$500 million as of the last day of any month in the fiscal quarter immediately preceding the adviser's most recently completed fiscal quarter.
<i>Section 3 Liquidity Fund</i>	A liquidity fund advised by a Large Liquidity Fund Adviser.
<i>Section 4 Private Equity Fund</i>	A private equity fund advised by a Large Private Equity Fund Adviser.
<i>Value</i>	For derivatives (other than options), "value" means gross notional value; for options, "value" means delta adjusted notional value; for all other investments and for all borrowings where the reporting fund is the creditor, "value" means market value or, where there is not a readily available market value, fair value; for borrowings where the reporting fund is the debtor, "value" means the value you report internally and to current and prospective investors.