

Report on the Fifth IOSCO Hedge Funds Survey

Final Report



OICU-IOSCO

**The Board
OF THE
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Chapter 1 - Introduction

This report presents the analysis of the fifth edition of the IOSCO Hedge Funds Survey, which is based on data collected as at 30th September 2018. In 2009, the G20 highlighted increased regulatory oversight of hedge funds and hedge fund managers as a priority, including the disclosure of appropriate information on an ongoing basis to supervisors and regulators. In response, IOSCO undertook the hedge funds survey to provide insight into the hedge funds industry at a global level. Conducted on a biennial basis and now in its fifth edition, this exercise has developed a repeated cross-section of data, making it an integral part of IOSCO's policy work in the investment management sector.

For this 2018 edition of the survey, nine jurisdictions took part: France, Germany, Hong Kong, Ireland, Luxembourg, Singapore, Switzerland, the United Kingdom and the United States. The inclusion of Switzerland in the exercise marks a change from the 2016 survey. When comparing the results across time, this difference in sample coverage (that is, the inclusion of Switzerland) needs to be kept in mind. Finally, Germany only reported one qualifying hedge fund in its results.¹ Hence, due to confidentiality reasons, no data points were reported. Hong Kong also excluded two funds from its reporting, which represented 8% of the reported assets under management for qualifying hedge funds in Hong Kong, again for confidentiality reasons.

The report is set out as follows: Chapter 2 provides an overview, including a discussion on the data collection methodology. Chapter 3 presents the results of the data analysis. Chapter 4 concludes.

Selected highlights of the report include:

- **the number of qualifying hedge funds captured in this exercise has increased by 8.5% to 2,139;**
- **in the two years since the last hedge funds survey, assets under management (AuM), as captured by the survey, increased 19.5% to \$US3.85 trillion;**
- **hedge funds are domiciled primarily in the Cayman Islands, in line with the last survey;**
- **multi-strategy and equity long/short are the most common investment strategies of qualifying hedge funds;**
- **for both cash securities and derivatives, the largest exposures held by qualifying hedge funds (long and short), are in equities;**
- **on a gross notional basis, interest rate and foreign exchange derivatives positions are the largest in terms of fund exposures;**
- **leverage, as measured on a gross notional basis, stands at 7.8x net asset value. Net leverage stands at 1x; and**
- **qualifying hedge funds seem to have sufficient portfolio liquidity to meet investor liquidity demands in normal times.**

¹ For a definition of “qualifying hedge fund” see Appendix on page 21 of this report.

Chapter 2 – Objectives of the Fifth IOSCO Hedge Funds Survey

Objectives of the Hedge Funds Survey

The IOSCO Hedge Fund Survey is an international data exercise which gathers information from national competent authorities on hedge fund activities for the purpose of providing a global view of the hedge funds industry. Further, IOSCO's data collection exercise enables sharing of information on the scope of hedge fund activities, the markets they operate and invest in, and their leverage, liquidity and funding.

The aim of collecting such data enables IOSCO to:

- gain better insight into the global hedge fund industry;
- promote global cooperation on possible risks in this sector; and
- provide a forum for the discussion of potential regulatory options or recommendations if required.

Given the limited public and global data on hedge fund activities, IOSCO believes that the regular collection and analysis of hedge fund data by regulators remains crucial for observing trends in the sector and better understanding any potential systemic risks that hedge funds may pose to the financial system.

With this fifth iteration, IOSCO is now compiling a comprehensive database based on repeated cross-sectional data of the global hedge fund industry. As such, the exercise is proving to be an important tool for IOSCO's understanding of the global hedge funds industry.

Survey comparability and interpretation

As in previous editions, this IOSCO Hedge Funds exercise leverages the existing reporting requirements already in place in many jurisdictions to the greatest extent possible (such as the Form PF and AIFMD reporting requirements in the United States and Europe, respectively).² Consequently, the definitions and interpretation of data presented in this report have remained as consistent as possible with previous reports.³

While the definitions remain consistent, the survey samples across different time periods are not necessarily the same. Hedge funds open and close regularly. In some jurisdictions reporting is voluntarily and subject to a threshold criterion for reporting. Additionally, the participation of IOSCO member jurisdictions has also changed. However, in spite of these changes, IOSCO

² Since October 2015, the US Securities Exchange Commission's staff has released quarterly *Private Fund Statistics* reports which provide a summary of recent private fund industry statistics and trends by aggregating data reported to the Commission by private fund advisers on Form ADV and Form PF. 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. Under the AIFMD, EEA member states report data on AIFs to the European Markets Supervisory Authority (ESMA). Since April 2019 ESMA has published this data annually.
See: <https://www.esma.europa.eu/file/50580/download?token=REKCzQAz>

³ For the *2016 IOSCO Hedge Funds Survey* report, please see:
<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD587.pdf>

believes that such an exercise is useful since the largest jurisdictions, in terms of the global hedge funds industry's AuM, have been consistently captured.

One area that the data set has not fully captured includes those hedge fund-like activities that are channelled through European Undertakings for Collective Investment in Transferable Securities (UCITS) funds, since some European countries included data only from funds recorded under the Alternative Investment Fund Managers Directive (AIFMD). "Liquid alternatives" can be similar to hedge funds, although they are subject to certain UCITS limits such as eligible assets and diversification. Additionally, separately managed accounts, which follow the same strategy as some hedge funds, are also outside the scope of this exercise.

To help avoid double-counting, "qualifying hedge funds" that are managed outside the US but are likely to have reported to the SEC were removed from the other participating jurisdictions' data.⁴

Supporting IOSCO's work on Leverage metrics

In 2017, the Financial Stability Board (FSB) issued a report that provided policy recommendations to address risks to global financial stability associated with certain structural vulnerabilities from asset management activities, including recommendations related to fund leverage. Specifically, recommendation 10 in that report asks IOSCO to identify and/or develop consistent measures of leverage in funds to facilitate more meaningful monitoring of leverage for financial stability purposes and recommendation 12 calls on IOSCO to collect national/regional aggregated data on leverage across its member jurisdictions based on the consistent measures it develops.

The IOSCO Hedge Funds Survey is the one data collection exercise IOSCO undertakes on a regular basis. Many of the data points collected under this initiative are consistent with those outlined in the final leverage recommendations that IOSCO issued in 2019.⁵ Specifically, this exercise collects data on, among other things:

- investment exposures, broken down by asset class on a long and short basis;
- numerous leverage metrics; and
- collateral received and posted.

Consequently, this exercise provides the necessary expertise and collection framework to help IOSCO's work in meeting Recommendation 12.

⁴ One of the elements of data collection that has proved challenging in the past is the issue of double counting, where the same underlying hedge fund may have reported data in more than one jurisdiction. For example, data collected in the US as part of Form PF pertains to hedge funds managed by those firms that are registered or required to register with the SEC. The SEC reporting thresholds are such that if hedge fund firms are large (more than \$1.5 billion in hedge fund assets) and have at least one qualifying hedge fund (more than \$500 million NAV), then any qualifying hedge funds the firm manages will be included within the US data. As a result, this requirement may pull in some funds that are managed outside the US. For the purposes of avoiding double counting in these cases, the survey has removed from the data of all other participating countries any funds managed by firms that are likely to have reported to the SEC. Hence this methodology may skew the geographic distribution of fund manager location somewhat towards the US and under-represent other countries.

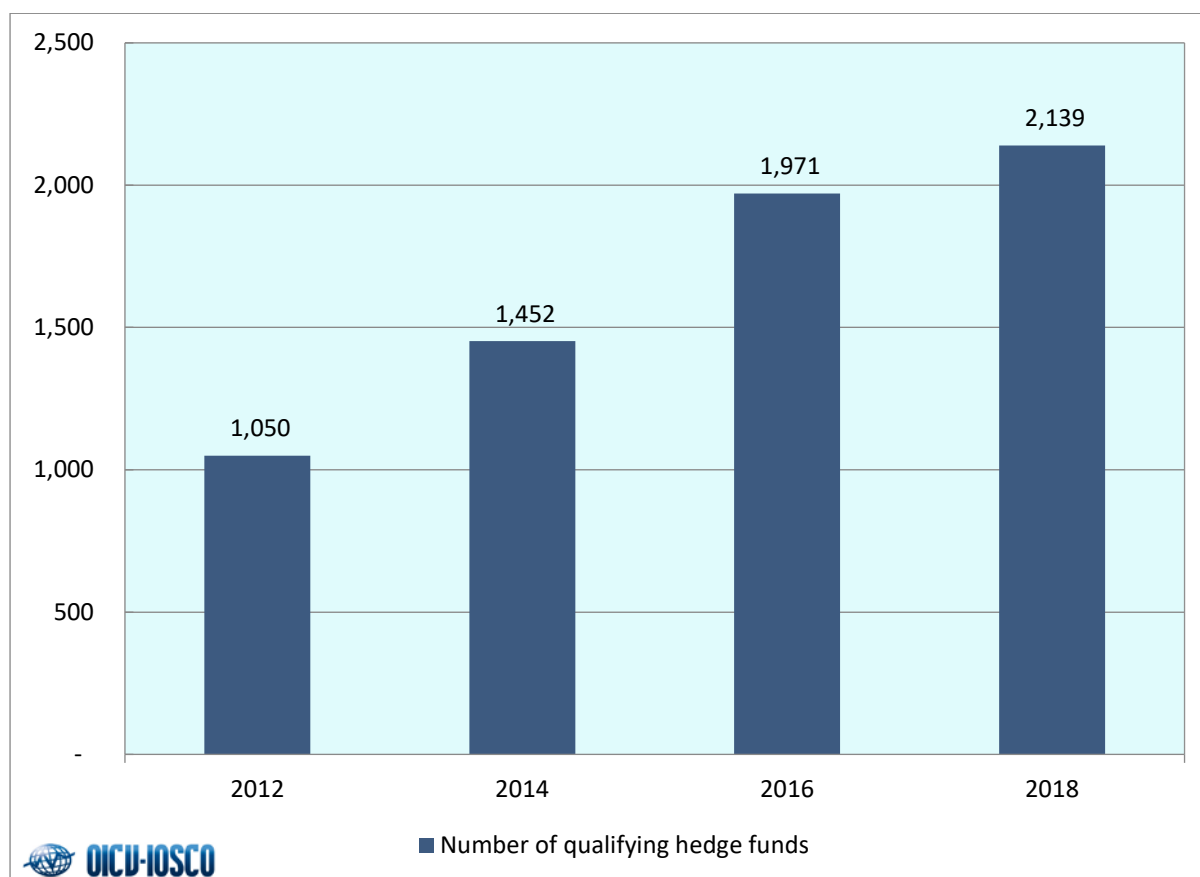
⁵ *IOSCO (2019): Recommendations for a Framework Assessing Leverage in Investment Funds*

Chapter 3 – Global Hedge Funds Industry Analysis: Results from survey

3.1 Results

This 5th edition of the IOSCO hedge funds survey captured data from 2,139 qualifying hedge funds as at 30th September 2018, an 8.5% increase from the 1,971 qualifying hedge funds surveyed in the same 2016 period. As reported in the last hedge funds survey, this growth may be due to better reporting to national regulators. Figure 1 highlights the growth in the number of qualifying hedge funds captured since 2012.

Figure 1: Number of Qualifying Hedge Funds (2012-2018)



Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

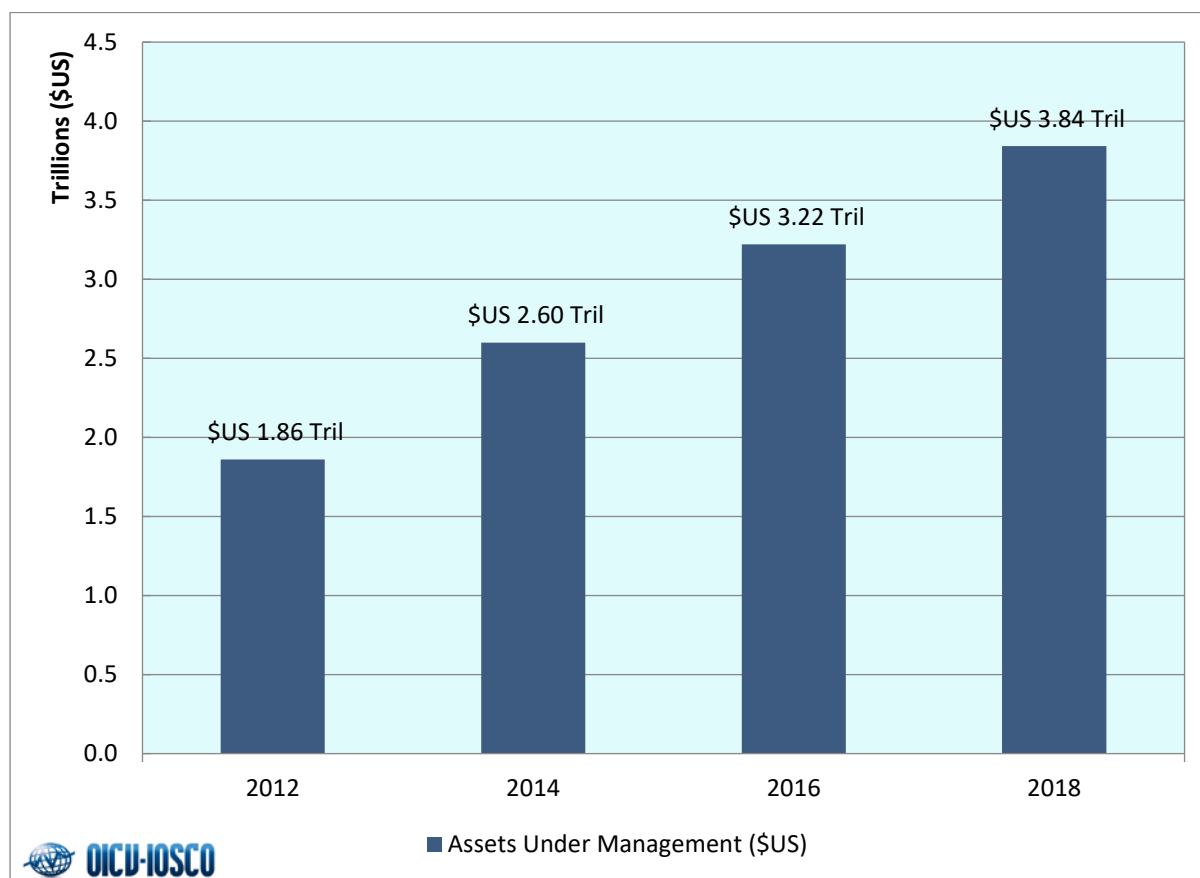
3.2 Assets Under Management

Total net AuM for the qualifying hedge funds sample rose 19.5%, to \$US3.84 trillion in the 2018 survey from \$US3.22 trillion in the 2016 survey, most likely boosted by an increase in the number of reporting jurisdictions, market dynamics and a surge in the number of funds that meet the minimum reporting threshold.

When interpreting these results, there are a few points to keep in mind. The AuM figure, like in previous editions of the survey, represents only those funds with a minimum of over \$US500 million. As such, it represents a lower bound estimate of the global hedge fund industry's size. When comparing the total net AuM result to recent estimates of the size of the global hedge

fund industry (based on third party vendor databases), the result is largely in-line with industry estimates, considering that the scope of this edition includes a larger number of participants.⁶

Figure 2: Qualifying Hedge Funds Net Assets under Management (2012-2018)



Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

Also, to avoid double-counting of funds managed from multiple jurisdictions, survey participants have adjusted the survey results at the jurisdictional level to account for hedge funds that were likely to have reported to the SEC under its Form PF. This may give the impression of a larger than normal hedge fund industry in the US relative to other jurisdictions (for a more comprehensive explanation, please see footnote 4).

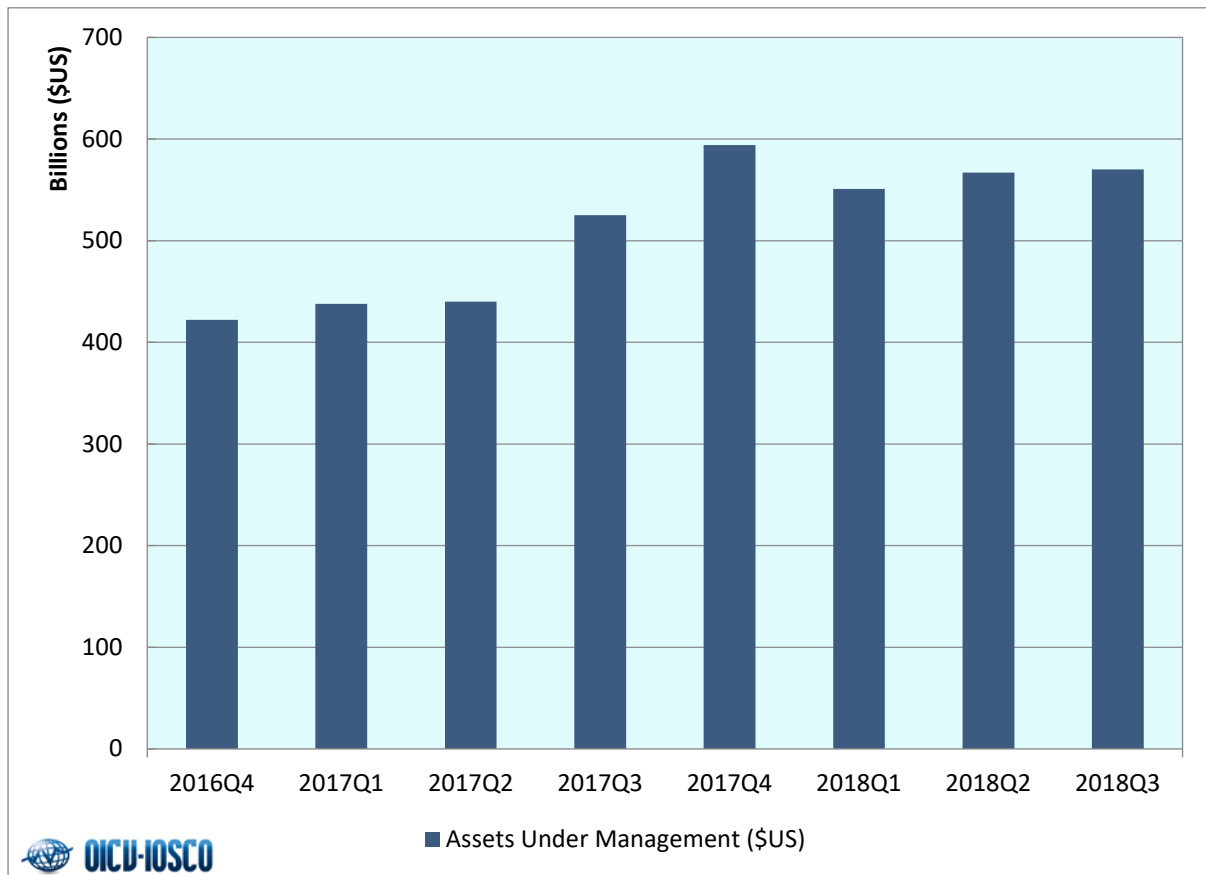
Parallel account – US Form PF data

The Form PF data also includes data on parallel accounts. Parallel accounts are defined for purposes of Form PF as, “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”.⁷ Figure 3 below shows the evolution of AuM in parallel accounts since the 2016 IOSCO Hedge Funds Survey.

⁶ For example, see Barclays (2019): Crossing currents: 2019 Global hedge fund industry outlook, which suggests the size of the global hedge funds industry is \$US3.1 trillion (based on EPFR data). Similarly, the HFR Global Hedge Funds Industry report states total hedge fund assets stood at \$US3.18 trillion (as at April 2019).

⁷ See Appendix E in the SEC staff’s Private Funds Statistics report, Third Calendar Quarter 2018, available at <https://www.sec.gov/divisions/investment/private-funds-statistics/private-funds-statistics-2018-q3.pdf>.

Figure 3: Assets under Management in parallel accounts (Q4 2016 – Q3 2018)



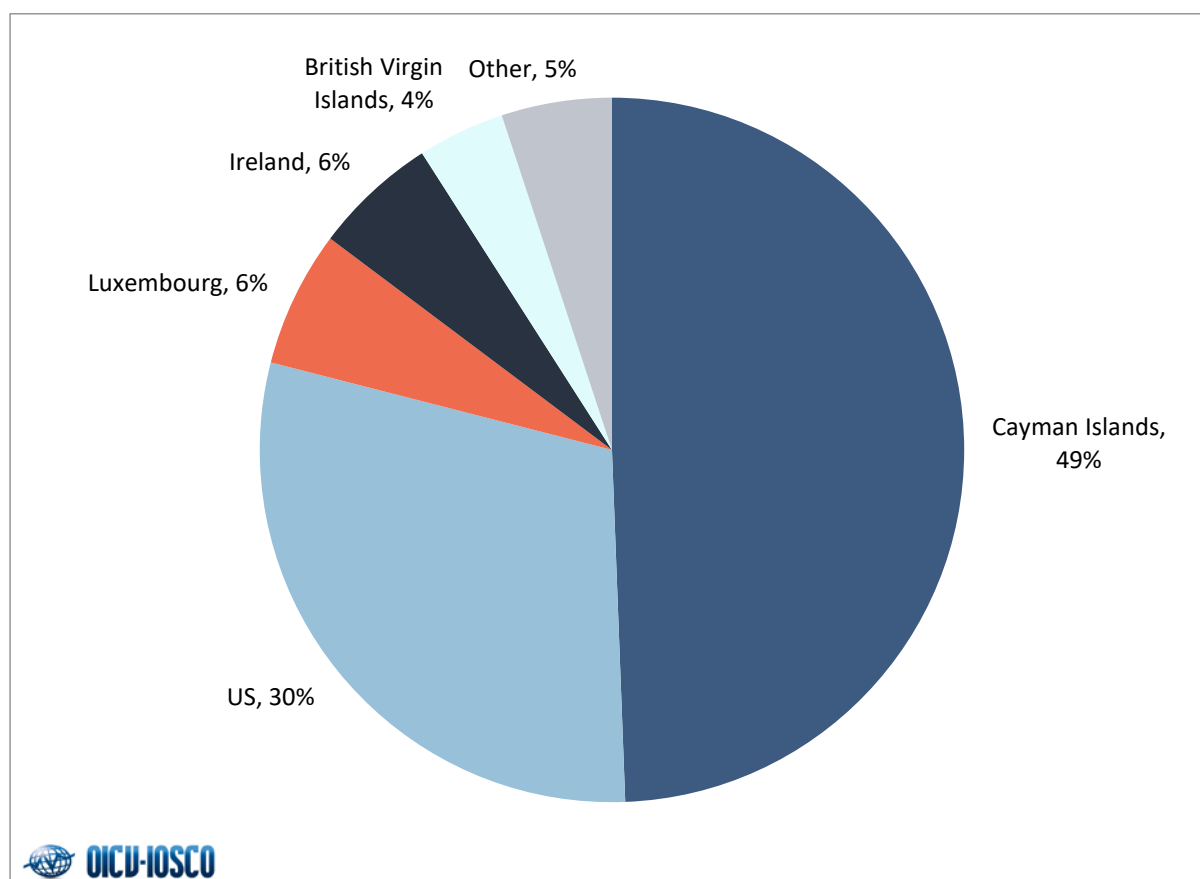
Source: SEC Private Funds Statistics May 2019

As at Q3 2018, AuM in parallel accounts stood at \$US570 billion. Adding this to our initial figure provides a global estimate of the hedge funds industry of \$US4.42 trillion. However, corresponding data points (for example, the European AIFMD initiative) are not systematically collected by other regulators.

3.3 Fund Domicile

Hedge funds remain domiciled primarily in the Cayman Islands and the United States, accounting for 80% of qualifying hedge funds captured by the survey. European jurisdictions represent a fraction of qualifying hedge funds. These results are largely unchanged from the previous surveys. Figure 4 graphically presents the results.

Figure 4: Top Fund Domiciles by Assets Under Management



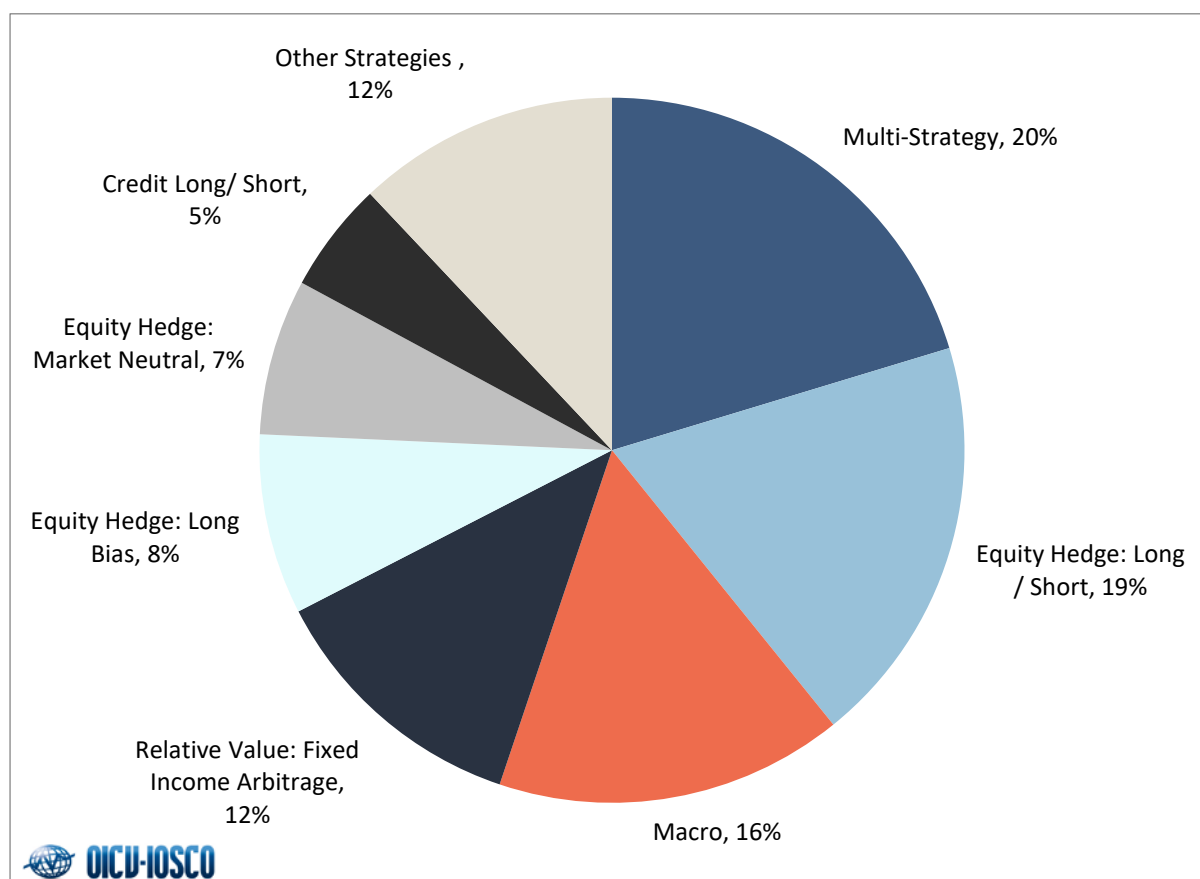
Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

3.4 Investment Strategy

“Hedge fund” is an umbrella term, and within that broad group, funds will pursue one or more specific investment strategies. In most cases, these fit within a dozen or so major categories of strategy. Figure 5 provides a breakdown of the most common investment strategies utilised by qualifying hedge funds.

It is noteworthy that data from the US, which makes up the bulk of the survey’s total dataset, shows a strategy breakdown by gross asset exposure rather than net asset value (NAV). This gives more weight to those strategies that are more highly leveraged. It also means that the total allocated across all strategies will be greater than the total global NAV. Given this, multi-strategy, equity long/short and macro-driven strategies are the most common, representing 55% of all AuM.

Figure 5: Top investment strategies by Assets under Management



Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

Note: May not add to 100% due to rounding

3.5 Investment Exposures

The survey also collected aggregate data on fund exposures to specific asset classes, for both long and short positions. Figures 6, 7, 9 and 10 below highlight the aggregate figures for both cash securities and derivatives positions. While the charts present most asset classes as long and short exposures, the survey only captures gross exposure for both interest rate swap and foreign exchange (FX) derivatives.

Overall, the largest long and short exposures in both cash and derivatives securities are in the equities asset class (see Figure 6 and Figure 7). While on a gross basis, Interest Rate and FX derivatives are the largest exposures held by qualifying hedge funds globally (see Figure 10).⁸ This result is not surprising given that these products may be used for hedging purposes. For a further specialised breakdown on the data that looks at exposures to Collateralised Debt Obligations (CDO) / Collateralised Loan Obligations (CLO) products and financial institutions, please consult boxes 1 and 2, respectively.

⁸ While data from the US reports interest rate derivatives in terms of 10-year bond equivalents, other jurisdictions report them based on the notional values of the contracts, which may far outweigh the amount at risk in these transactions.

Figure 6: Cash Securities – Long and Short Notional

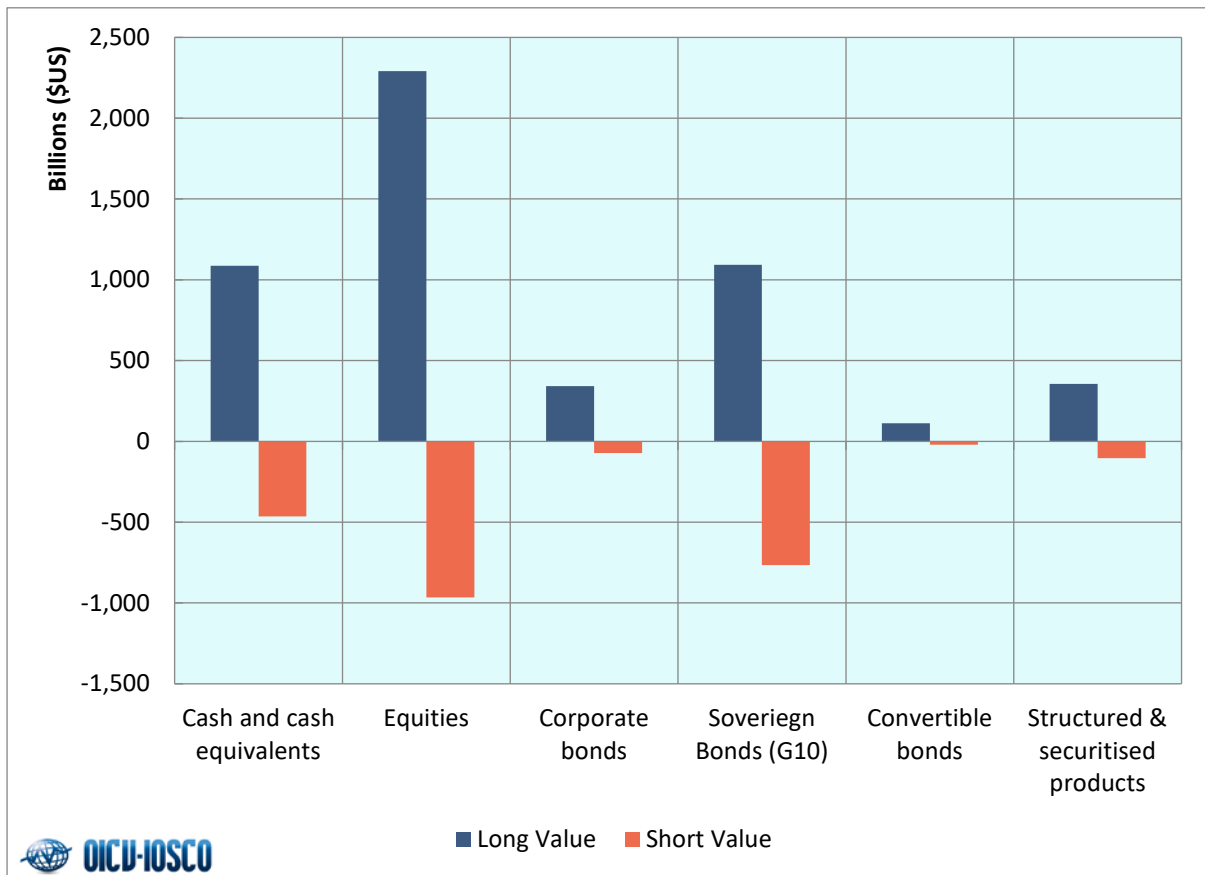
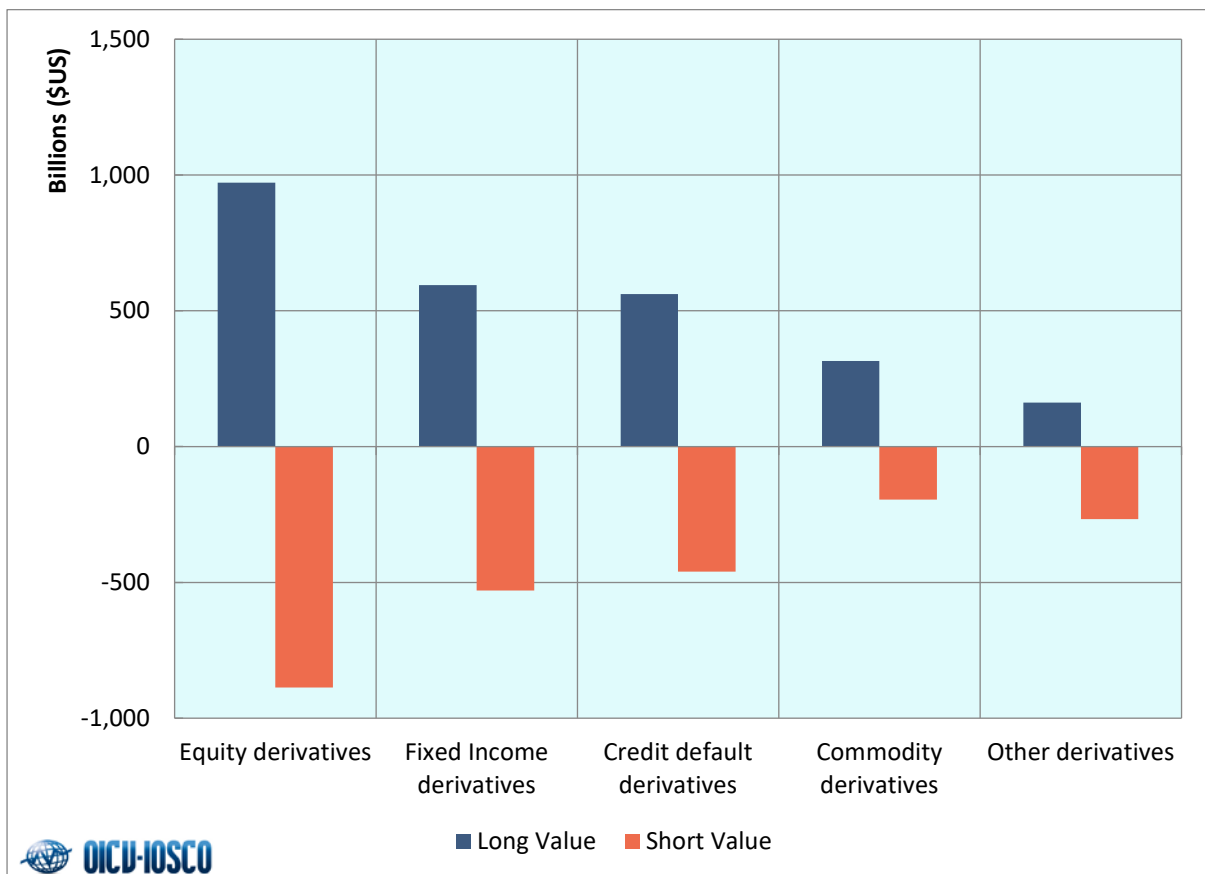


Figure 7: Derivatives – Long and Short Notional

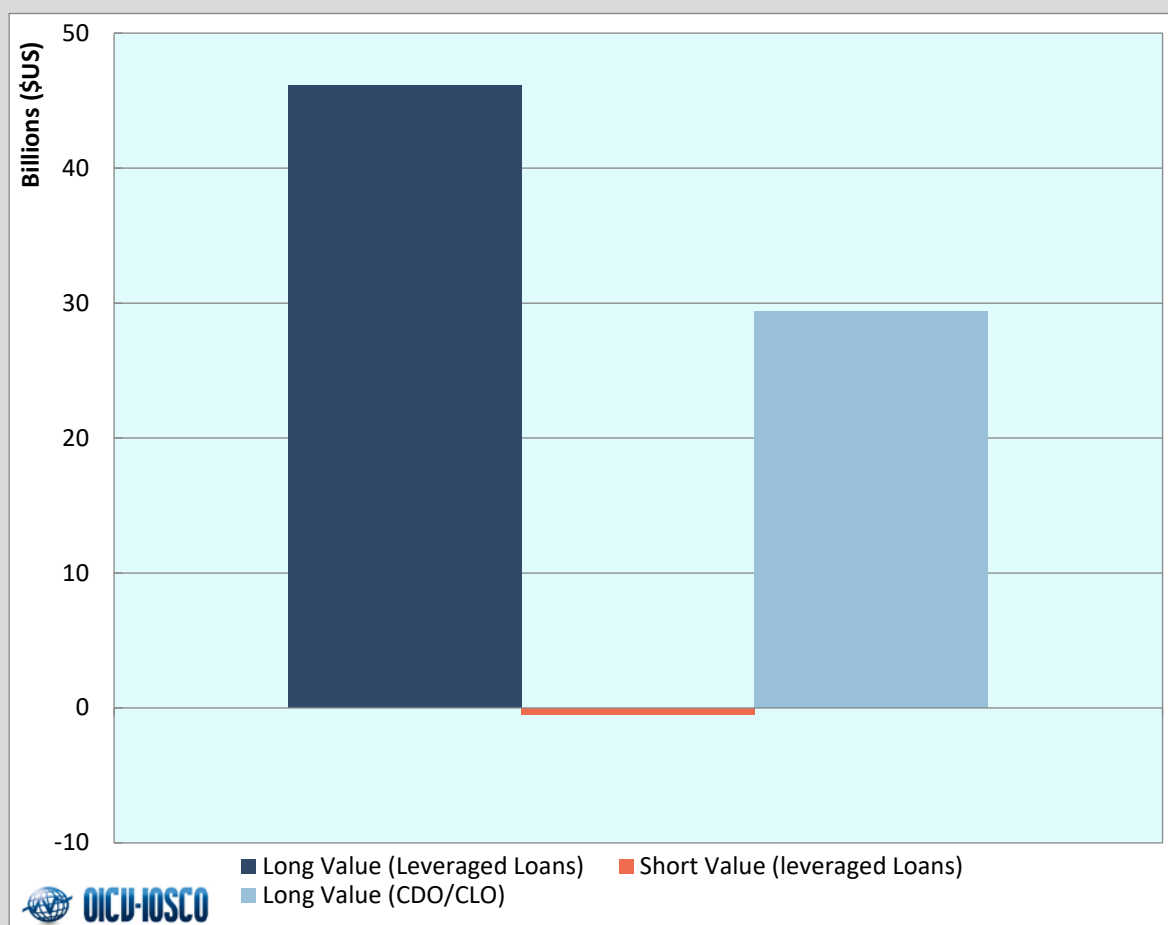


Box 1: Qualifying Hedge Fund Investment in CLOs and Leveraged Loans (excluding US)⁹

CDOs/CLOs bundle loans that are then backed by a series of bonds, similar to securitised products. The leveraged loan market, on the other hand, is where credit is usually extended to lowly rated, highly indebted companies. Of late, both markets have seen large increases in volumes and amounts outstanding.¹⁰ Recent regulatory attention has begun to focus on the asset classes.¹¹

The below figure highlights the extent to which qualifying hedge funds (excluding US funds) invest in such asset classes. The outstanding amount invested in leveraged loans and CDOs/CLOs is \$US46 billion and \$US29 billion, respectively.

Figure 8: Leveraged Loans and CDO/CLO (excluding US)



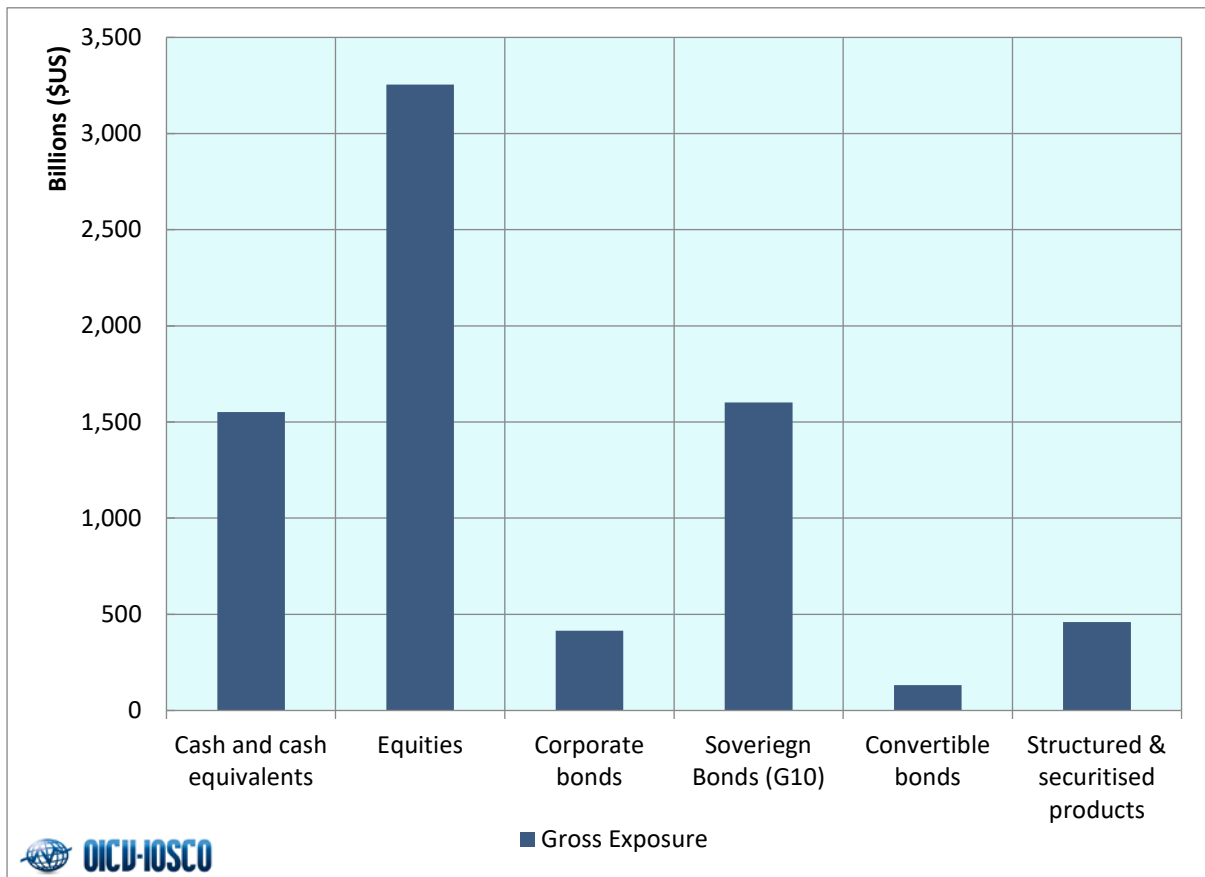
Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

⁹ The data for US hedge funds is not publicly available through the SEC Staff’s Private Fund Statistics reports.

¹⁰ Bank for International Settlements (2018): The rise of leveraged loans, BIS Quarterly Review September 2018.

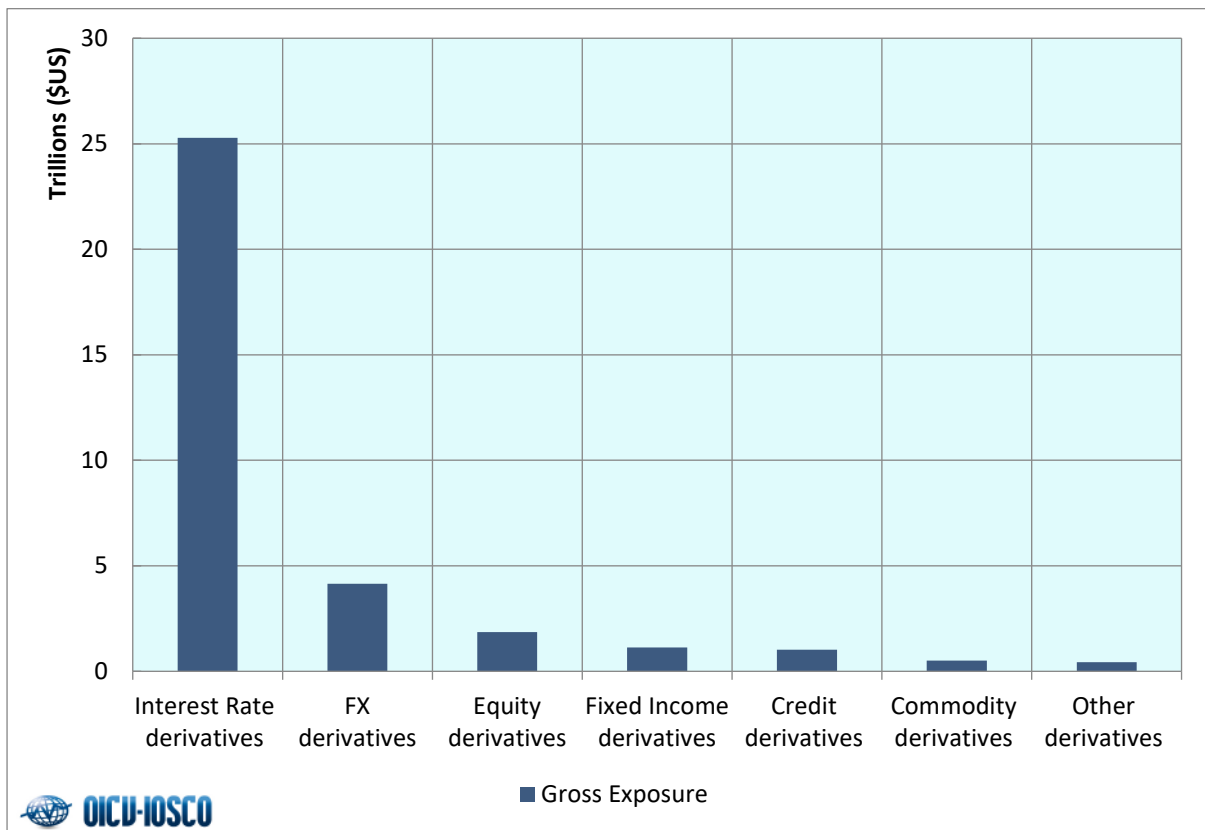
¹¹ Financial Stability Board (2019): Global Monitoring Report on Non-Bank Financial Intermediation 2018.

Figure 9: Cash Securities – Gross Exposure



Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

Figure 10: Derivatives – Gross Exposures

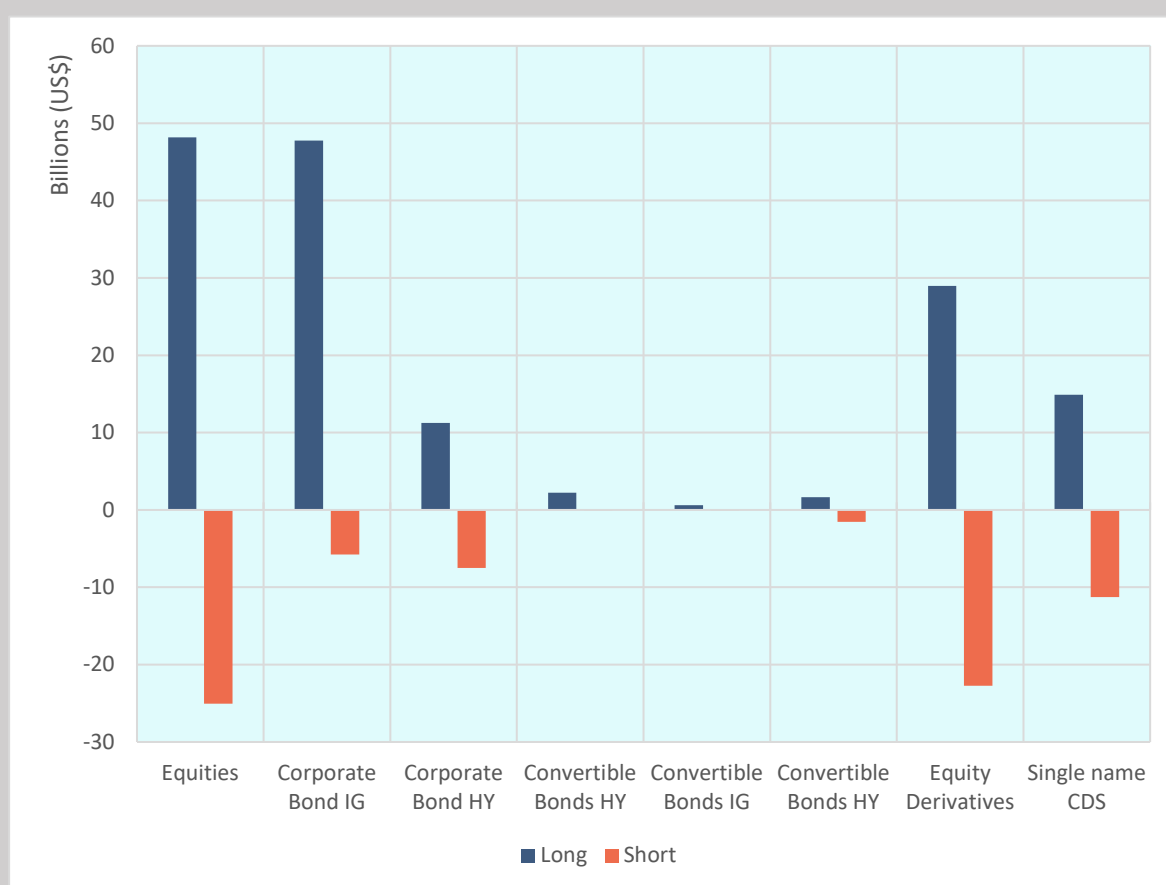


Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

Box 2: Qualifying Hedge Fund exposure to asset classes issued by financial institutions (excluding US)¹²

The asset management industry plays a vital role in providing capital to the non-financial and financial sectors of the economy. Since 2008, this capital provision has increased. In some circles, this growth has raised concerns regarding the asset management industry’s interconnection with the financial sector.¹³

Interconnectedness can take many forms. Two particular forms of interconnectedness are induced through direct ownership and via counterparty relationships and claims that such relationships could make on balance sheets.¹⁴ The below chart highlights the exposures hedge funds (ex US) have to financial institutions through either direct, or the potential for direct, ownership (share equity, convertible bonds and derivatives exposures). Specifically, it highlights those exposures to instruments issued by financial institutions and for derivatives where financial institutions are the underlying or the counterparty.



Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

Notes: The chart these are exposures to instruments issued by financial institutions and for derivatives where financial institutions are the underlying or the counterparty.

¹² The data for US hedge funds is not publicly available through the SEC Staff’s Private Fund Statistics reports.

¹³ Financial Stability Board (2019): Global Monitoring Report on non-Bank Financial Intermediation 2018

¹⁴ Portes, R (2018): “Interconnectedness: mapping the shadow banking system”, Banque de France Financial Stability Review No.22

3.6 Leverage

Leverage is a financial technique generally used to increase investment exposure. Leverage allows a fund to increase its potential gains, as well as losses, by using financial instruments and/or borrowed money to increase the fund's market exposure beyond its net asset value. Leverage can come in a variety of different forms, for example, debt or some types of derivatives when used for this purpose. For the purposes of this report, the results on leverage are delineated by these two categories.

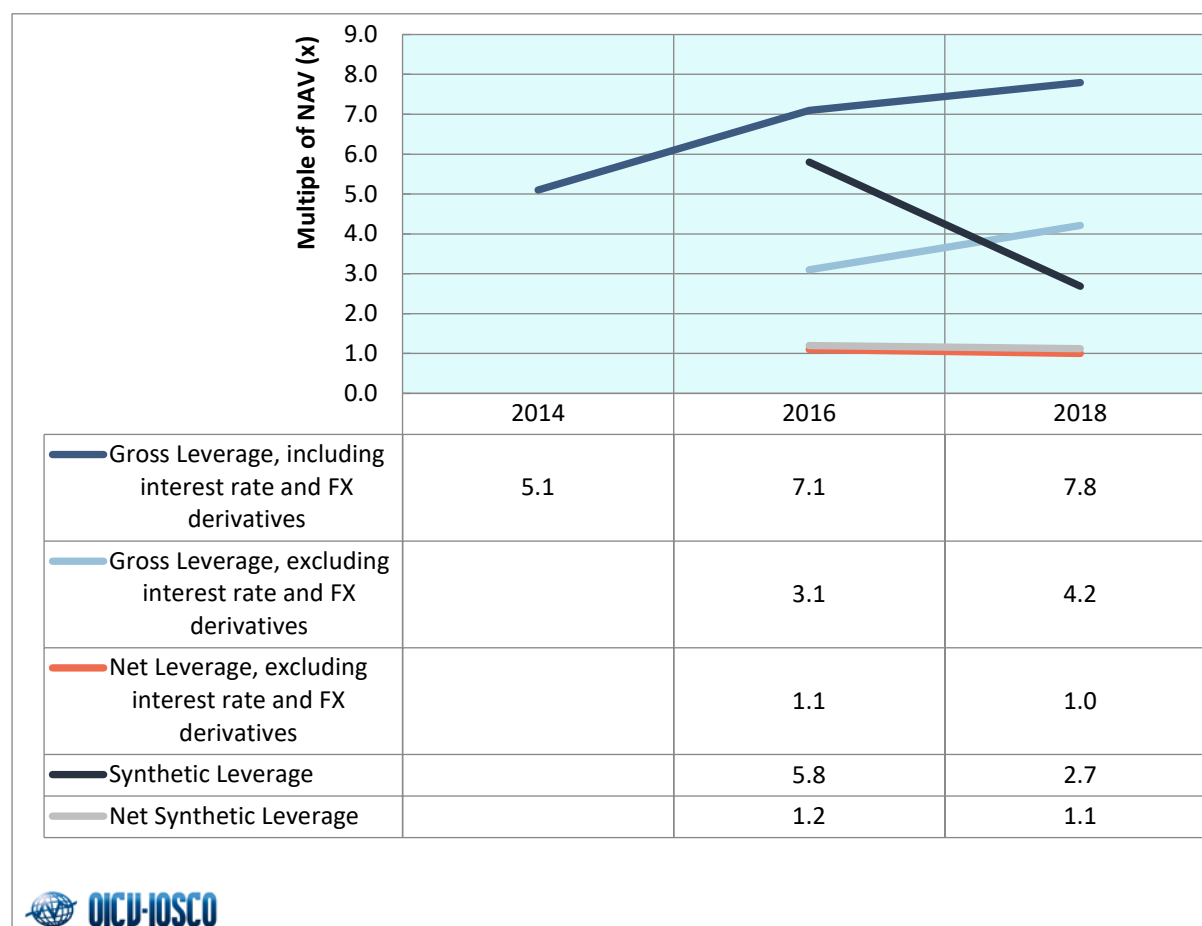
Notional Analysis

This section looks at the market value of cash securities and notional derivatives exposures of the qualifying hedge funds sampled in the survey. By aggregating the total long and short positions across the sample of funds, we can roughly estimate the total leverage employed by funds. There are several ways this can be done. First, by adding the absolute value of all positions, leverage can be estimated on a gross basis. Second, by subtracting the short positions from the long positions for the same asset class, leverage can be estimated on a net basis. Finally, by using the estimate of the gross notional outstanding of derivatives, as a proportion of the NAV, synthetic leverage can be estimated. Figure 11 below presents the results of these selected metrics.

Note that the figure of gross leverage is 7.8x for 2018. This is important because when compared to the results of the prior two surveys – taking into account the surveys' data limitations as discussed below - this figure represents a potential increase in leverage employed by funds. However, interpreting this trend in isolation can be misleading for several reasons. First, this survey exercise represents a repeated cross-section, with the sample of data collection changing for the 2018 exercise. That is, the pool of hedge funds sampled has changed, along with the number of jurisdictions taking part. Second, each data point represents a point-in-time estimate, with portfolio exposures being a function of macro-economic factors at that time - factors that do not remain constant. Third, the nature of these metrics is such that they do not provide a meaningful measure of the actual economic risk of the fund. Fourth, the gross leverage figure is significantly skewed by the inclusion of large notional amounts from interest rate and foreign exchange derivatives transactions – asset classes that are sometimes used for hedging purposes only. By excluding those asset classes from the calculation, gross leverage is 4.2x.

On this last point, the use of derivatives does not necessarily imply leverage. In fact, there are many uses for derivatives, including hedging to reduce the risk of a portfolio. Although not a perfect measure, one way to account for hedging is to calculate the net leverage measure, which offsets long and short positions in the same asset class. This metric for 2018 is calculated at 1x, which: 1) indicates qualifying hedge funds are not leveraged according to this measure; and 2) is not materially different from the 2016 result. Leverage metrics by jurisdiction can be found in Appendix B.

Figure 11: Notional leverage figures by selected metrics (2014-2018)¹⁵



Source: IOSCO Hedge Funds Survey 2014, 2016 & 2018 Data Collection Exercises

Note: blank cells indicate data was not collected for that data point

Asset Class Breakdown

However, these metrics may not, in isolation, provide a better understanding of where the exposures are being built up, a point also echoed in IOSCO's recent Leverage recommendations.¹⁶ This same publication also suggests an approach that seeks to address these limitations, which is to express such metrics by asset class. An asset class breakdown provides the percentage of a core set of investment exposures typical of an investment fund. Table 1 presents such a breakdown using the data collected for this exercise.

¹⁵ Definitions:

- Gross leverage is estimated as the absolute sum of all positions, divided by NAV;
- Net leverage excludes IRS and FX positions. The calculation offsets long and short in the same asset class and then sums the remaining position. The final summation is divided by NAV;
- Synthetic Leverage is the absolute sum of derivatives positions only, divided by NAV;
- Net Synthetic Leverage excludes IRS and FX positions. The calculation offsets positions in the same derivatives asset class before summing the absolute value of remaining positions. The final summation is divided by NAV.

¹⁶ IOSCO (2019): *Recommendations for a Framework Assessing Leverage in Investment Funds*

Table 1: Qualifying Hedge Fund Market Exposure, broken down by asset class on a long/short basis

Market exposure				
Asset class	Position Base Currency		NAV (%)	
	Long	Short	Long	Short
Equity securities	3,087,397,534,030.00	1,302,404,644,018.00	80.42%	33.92%
Equity derivatives	1,600,404,184,428.93	313,961,347,709.29	41.68%	8.18%
Fixed income securities	1,334,039,248,143.00	660,700,927,210.00	34.75%	17.21%
Credit derivatives	1,516,987,913,349.00	680,310,651,152.00	39.51%	17.72%
Non-base currency holdings*	-	-		
FX derivatives **				
High-quality sovereign bonds	3,186,221,261,571.00	499,840,323,638.00	82.99%	13.02%
IRS derivatives**				
Commodities	110,496,000.00	-		
Commodity derivatives	468,341,128,432.00	114,804,410,832.00	12.20%	2.99%
Cash and cash equiv.	1,220,653,727,138.47	807,454,712,324.00	31.79%	21.03%
Other	2,079,538,168,360.00	242,824,799,402.00	54.16%	6.32%

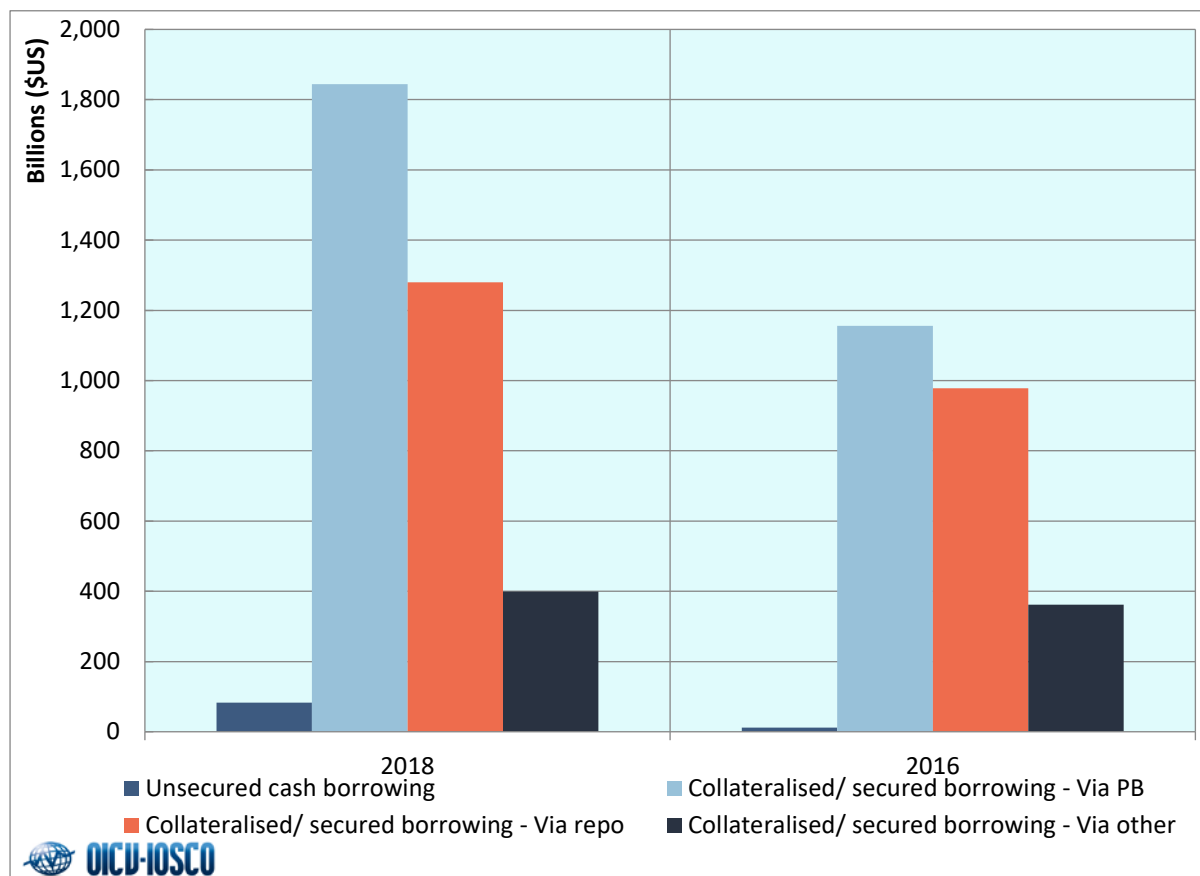
Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

Notes: * indicates that data was not collected on this asset class; ** indicates that data was collected on a gross notional basis only. Long short split is not available.

Financial Leverage

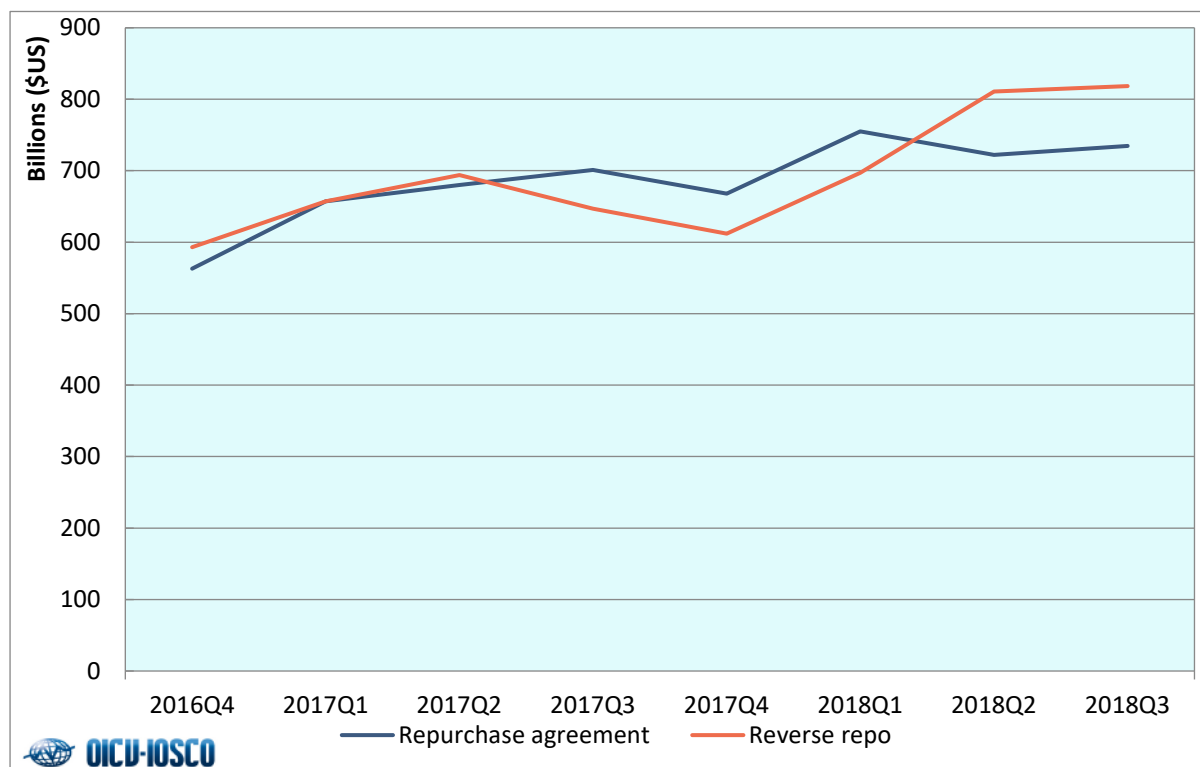
Financial leverage is described as the amount of cash borrowed (secured or unsecured) as a proportion of investors' capital. It shows the increase in exposure via cash borrowing and, as such, is analogous to the classic accounting definition of debt-to-equity. Figure 12 below graphically represents the amount of cash borrowing (secured and unsecured) by qualifying hedge funds in the sample and compares it with the 2016 result. Figure 13 shows the repo and reverse repo positions of qualifying hedge funds in the US.

Figure 12: Secured and Unsecured Borrowing (2016-2018)



Source: IOSCO Hedge Funds Survey 2016 & 2018 Data Collection Exercises

Figure 13: Qualifying hedge funds exposure through Repurchase and Reverse Repurchase Agreements (US Only)



Source: SEC Private Funds Statistics May 2019

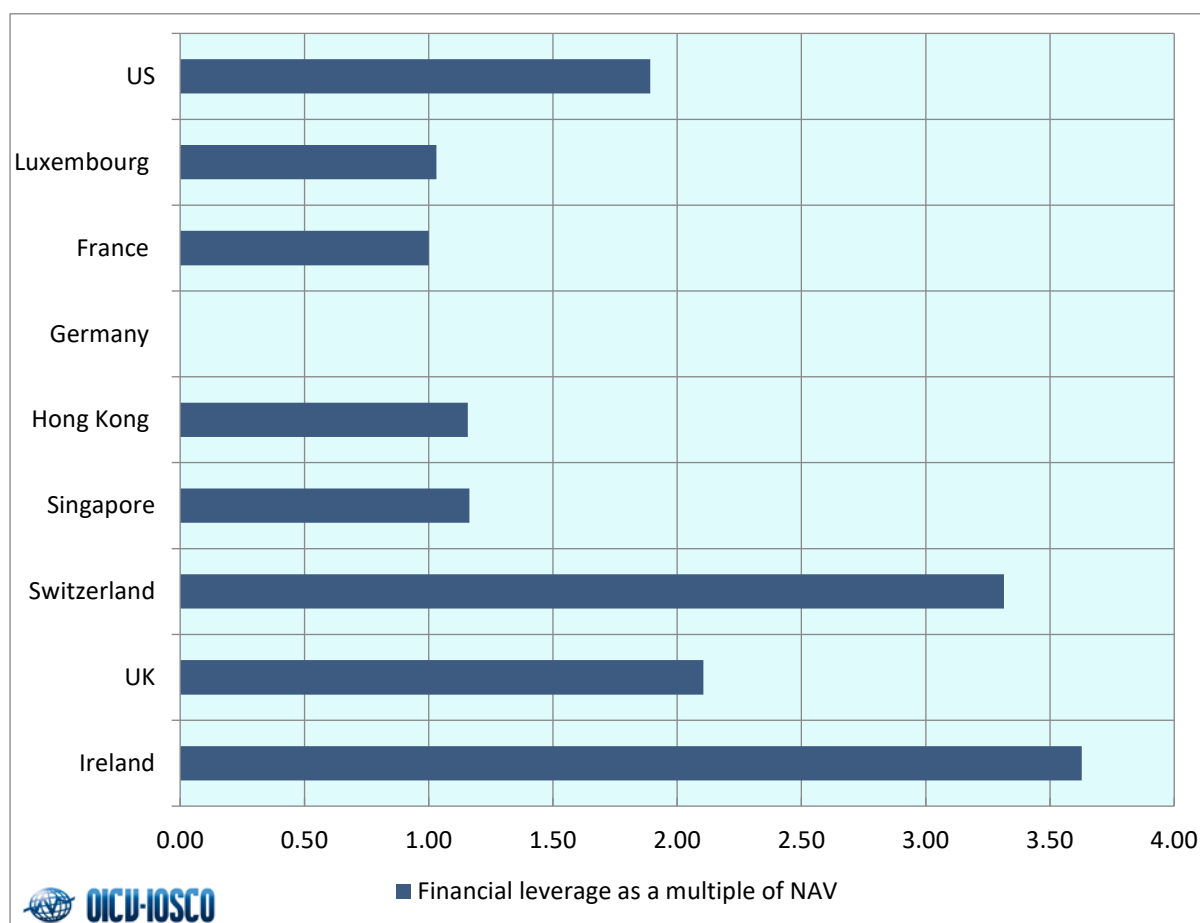
Table 2: Financial leverage (2014-2018)

	September 30, 2018	September 30, 2016	September 30, 2014
Financial Leverage	1.9x	1.8x	1.7x

Source: IOSCO Hedge Funds Survey 2014, 2016 & 2018 Data Collection Exercises

Overall, the amount of secured and unsecured borrowing by qualifying hedge funds totalled \$US3.59 trillion, with \$US3.5 trillion being secured borrowings through repo transactions, credit from prime brokers and other sources of lending (see *Collateral* section below for a discussion on collateral posted). This observation implies a financial leverage ratio of 1.9x NAV, which is a marginal increase on the figure reported in the last survey (See Table 2). A jurisdictional level breakdown is provided in Figure 14.

Figure 14: Financial leverage by jurisdiction



Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

Notes: Figures for Switzerland and Hong Kong reflect the total exposures of the qualifying hedge funds, and not the mere exposure in relation to the assets managed from these respective jurisdictions and include qualifying hedge funds of several managers headquartered outside Switzerland and Hong Kong.

3.7 Collateral

The survey collected information on the aggregate amount of collateral posted by hedge funds to counterparties, which could take the form of cash (or cash equivalents) and other assets (including securities).

Overall, qualifying hedge funds across the sample indicated that they had posted a total of \$US4.5 trillion as collateral. This amount is broken down into \$US3.1 trillion posted as other (including securities and credit support) and \$US1.4 trillion as cash (and cash equivalents).

Contrast this with the figures for secured borrowing presented in the financial leverage section. The qualifying hedge funds in the sample indicated that secured borrowings were \$US3.2 trillion (in aggregate), compared to collateral posted of \$US4.5 trillion. In short, secured borrowings undertaken by qualifying hedge funds seem, on aggregate, to be over collateralised. However, this interpretation needs to be qualified. Collateral, as captured, accounts for all collateral posted by qualifying hedge funds, including for initial margin. Hence, the figure presented here is an upper-bound estimate of the amount of collateral used to secure funding.

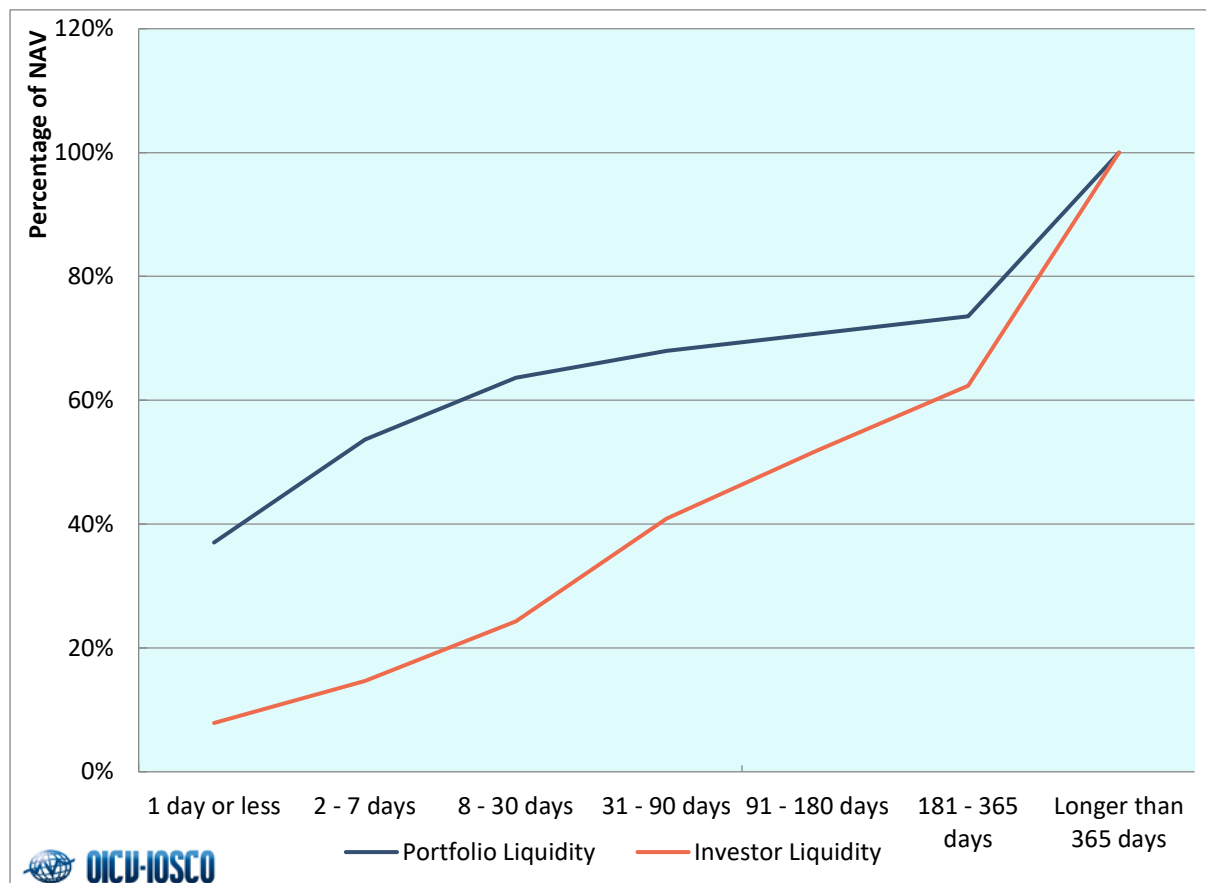
3.8 Liquidity

The liquidity profile looks at the fund’s ability to meet investors’ redemption demands with the underlying liquidity of the portfolio. Figure 15 below highlights this relationship between portfolio liquidity and investor demands for liquidity.

Of note is the gap between the two lines. The blue line represents the amount of the fund portfolio, on average, that could be liquidated at each time period. The red line represents investor redemption demand, on average, at each time period. Therefore, to ensure that portfolio liquidity is adequate to meet investor demand, the blue line should be above the red line. The difference between the two lines can be considered the liquidity buffer.

On aggregate, we see that for every time period, portfolio liquidity may be sufficient to meet investor redemption demand under normal market conditions. However, it is worth noting that Figure 15 only represents the liquidity demand in normal times.¹⁷ Additionally, the calculation methodology commingles all assets and all liabilities in one global balance sheet and, therefore, allows funds with excess liquidity to compensate for funds with liquidity mismatch. Hence, more granular data would be needed to carry out a more accurate assessment.

Figure 15: Average Portfolio and Investor Liquidity Profile for Qualifying Hedge Funds



Source: IOSCO Hedge Funds Survey 2018 Data Collection Exercise

¹⁷ While portfolio liquidity does in principle represent normal market conditions, the IOSCO guidelines (and in Europe the AIFMD) highlight that with respect to investor liquidity, funds should take into account “the shortest period within which the invested funds could be withdrawn or investors could receive redemption payments, as applicable”. In other words, the investor liquidity profile represented in the chart can be largely interpreted as the extreme adverse scenario of all investors redeeming at the same time in the shortest time period possible.

Chapter 4 – Conclusion

This report presents the results of the fifth edition of the IOSCO Hedge Funds Survey. The survey is a biennial exercise that aims to provide IOSCO and interested stakeholders with a global view of the hedge fund industry. After five iterations, this exercise continues to develop as an important database of global hedge fund information.

Overall, the survey indicates that the global hedge fund industry continues to grow in terms of the number of funds and assets under management. The strategies most employed by hedge funds globally are multi-strategy funds and equity long/short funds. The exposures of hedge funds confirm this result, with equities exposures (both cash securities and derivatives) being the largest positions held. However, on a gross exposure basis, interest rate and FX derivatives continue to be the largest asset class positions held.

All of this has implications for the measure of leverage in funds. Depending on the metric, leverage (both notional and financial) may appear to have increased, but this interpretation needs to be treated with caution given the data and other limitations as described in this report. At an aggregate level, there is a considerable liquidity buffer, suggesting that in normal market conditions hedge funds should be able to meet investor redemptions.

Appendix A - Methodology and Structure

Methodology

The 2018 iteration of the IOSCO survey was conducted following the same methodology and using a similar template to the one used in 2016. The firms and funds captured in the survey met the following conditions. They must:

- Qualify as a hedge fund, either based on criteria defined in its local jurisdiction, based on its own declaration to its regulator or based on a combination of criteria, such as the use of leverage, the complexity of strategies, and the application of performance fees;
- Be at least partially managed by a regulated entity within their jurisdiction or marketed in that jurisdiction;
- Be managed by a single manager, i.e. fund of funds (or multi-manager funds) are excluded; and
- Be able to demonstrate that it manages at least \$US500 million of total global net assets (net AuM or NAV). This includes the sum of all accounts managed under the same strategy (for example including pooled funds and separately managed accounts), to ensure the product is fully captured.

Structure of the survey

The fifth version of the survey was made up of 21 questions over two sections. Section 1 is based on information collected at the firm level and Section 2 comprises information at the fund level. The latter section makes up most of the questionnaire, as more granular data on hedge fund risks and activities is identified at this level. Details of what is included in each section of the questionnaire are outlined below.¹⁸

Section 1 - Management company information. This section includes general questions about the regulated entity and the group/parent it relates to. Additionally, it includes questions on the assets under management for the group/global entity, and assets under management for the local entity, broken down into total group net AuM and total group net hedge fund AuM. This section is used to provide a context for the fund level data.

Section 2 - Qualifying fund information. This section was completed for each qualifying hedge fund that the firm manages. It includes detailed questions about qualifying funds, limiting all data provided to the vehicle in question, whilst considering a fund in its entirety, embedding all structures (master and feeders) and share classes. The section includes fund-level information about asset class exposure, leverage details, liquidity profile, collateral details, and information about trading and clearing mechanisms.

¹⁸ In many cases, the funds are not domiciled (and sometimes not marketed) in the reporting jurisdictions. The information is then provided by the manager of the given hedge fund.

Appendix B – Leverage Metrics and asset class breakdown by Jurisdiction¹⁹

	Gross Leverage, including interest rate and FX derivatives	Gross Leverage, excluding interest rate and FX derivatives	Net Leverage, excluding interest rate and FX derivatives	Synthetic Leverage	Net Synthetic Leverage
Ireland	14.34	9.05	5.18	7.48	1.40
United Kingdom	9.42	7.19	1.55	5.03	0.35
Switzerland	At the request of the NCA, jurisdictional-level data withheld– however, included in the aggregate figures.				
Singapore	16.91	2.27	1.34	14.64	0.26
Hong Kong	13.14	4.30	1.14	11.39	0.15
France	12.10	4.53	1.56	11.07	0.68
Luxembourg	6.71	3.04	1.15	5.46	0.15
United States	6.11	3.61	0.83	3.35	0.85

Note: Participating jurisdictions apply different definitions of what constitutes a hedge fund. While some participating jurisdictions focused on "pure" hedge funds (i.e. those with no leverage restrictions), based on the declaration by the Asset Managers with no corrections. Other jurisdictions may have applied a different methodology. Hence, the figures are not necessarily comparable between jurisdictions.

Definitions:

- Gross leverage is estimated as the absolute sum of all positions, divided by NAV;
- Net leverage excludes IRS and FX positions. The calculation offsets long and short in the same asset class and then sums the remaining position. The final summation is divided by NAV;
- Synthetic Leverage is the absolute sum of derivatives positions only, divided by NAV;
- Net Synthetic Leverage excludes IRS and FX positions. The calculation offsets positions in the same derivatives asset class before summing the absolute value of remaining positions. The final summation is divided by NAV.

¹⁹ All data presented is sourced from the *IOSCO Hedge Funds Survey 2018 Data Collection Exercise*.

Please note the corresponding legend for the following data tables:

* Represents the Interest rate derivatives unadjusted notional only

Market exposure: Ireland					
Asset class	Position Base Currency			NAV (%)	
	Long	Short	Gross	Long	Short
Equity securities	98,493,480,396.00	48,865,092,931.00		78.57%	38.98%
Equity derivatives	35,345,509,980.00	24,096,576,466.00		28.20%	19.22%
Fixed income securities	167,679,947,271.00	46,453,770,518.00		133.76%	37.06%
Credit derivatives	131,855,862,004.00	23,515,619,677.00		105.18%	18.76%
Non-base currency holdings					
FX derivatives			78,454,253,442.00		
High-quality sovereign bonds	144,588,920,215.00	6,212,186,534.00		115.34%	4.96%
IRS derivatives			584,217,625,375.00*		
Commodities	0	0		0.00%	0.00%
Commodity derivatives	46,742,133,963	4,349,110,311.00		37.29%	3.47%
Cash and cash equiv.	167,947,085,085.00	86,807,352,426.00		133.97%	69.25%
Other	89,468,844,037.00	12,414,763,131.00		71.37%	9.90%

Market exposure: United Kingdom					
Asset class	Position Base Currency			NAV (%)	
	Long	Short	Gross	Long	Short
Equity securities	102,389,730,951.00	40,989,951,170.00		53.03%	21.23%
Equity derivatives	80,106,813,518.00	61,975,815,086.00		41.49%	32.10%
Fixed income securities	42,440,891,203.00	21,819,038,293.00		21.98%	11.30%
Credit derivatives	207,109,549,118.00	161,642,149,491.00		107.26%	83.71%
Non-base currency holdings					
FX derivatives			416,203,615,098.00		
High-quality sovereign bonds	166,233,916,607.00	58,980,780,664.00		86.09%	30.55%
IRS derivatives			13,872,148,642.00*		
Commodities	0	0		0.00%	0.00%
Commodity derivatives	14,908,997,508.00	14,628,213,886.00		7.72%	7.58%
Cash and cash equiv.	185,878,541,120.00	202,437,990,909.00		96.27%	104.84%
Other	27,287,127,178.00	-		14.13%	0.00%

Market exposure: Switzerland					
Asset class	Position Base Currency			NAV (%)	
	Long	Short	Gross	Long	Short

Equity securities					
Equity derivatives					
Fixed income securities					
Credit derivatives					
Non-base currency holdings	At the request of the NCA, jurisdictional-level data withheld – however,				
FX derivatives	included in the aggregate figures.				
High-quality sovereign bonds					
IRS derivatives					
Commodities					
Commodity derivatives					
Cash and cash equiv.					
Other					

Market exposure: Singapore					
Asset class	Position Base Currency			NAV (%)	
	Long	Short	Gross	Long	Short
Equity securities	22,653,195,521.00	1,794,701,044.00		70.34%	5.57%
Equity derivatives	8,389,386,420.00	4,779,796,763.00		26.05%	14.84%
Fixed income securities	3,810,864,162.00	14,783,788.00		11.83%	0.05%
Credit derivatives	8,900,144,905.00	5,672,690,066.00		27.64%	17.61%
Non-base currency holdings					
FX derivatives			76,178,764,131.00		
High-quality sovereign bonds	4,508,062,565.00	58,106,724.00		14.00%	0.18%
IRS derivatives			364,620,283,435.00*		
Commodities	0	0		0.00%	0.00%
Commodity derivatives	1,994,893,691	383,307,726.00		6.19%	1.19%
Cash and cash equiv.	6,484,894,460.00	2,306,892,157.00		20.14%	7.16%
Other	1,350,560,887.00	57,923,566.00		4.19%	0.18%

Market exposure: Hong Kong

Asset class	Position Base Currency			NAV (%)	
	Long	Short	Gross	Long	Short
Equity securities	34,041,231,669.00	14,158,983,090.00		41.77%	17.37%
Equity derivatives	58,361,948,537.93	59,538,241,161.29		71.62%	73.06%
Fixed income securities	33,123,705,459.00	6,652,011,944.00		40.65%	8.16%
Credit derivatives	29,909,892,630.00	40,351,267,878.00		36.70%	49.52%
Non-base currency holdings					
FX derivatives			699,231,914,043.00		
High-quality sovereign bonds	6,565,250,000.00	2,484,948,500.00		8.06%	3.05%
IRS derivatives			21,217,023,210.00*		
Commodities	110,496,000.00	0		0.14%	0.00%
Commodity derivatives	1,206,719,300.00	1,339,876,000.00		1.48%	1.64%
Cash and cash equiv.	28,803,334,431.47	7,412,279,173.00		35.34%	9.10%
Other	16,675,666,690.00	9,291,512,863.00		20.46%	11.40%

Notes: Figures reflect the total exposures of the qualifying hedge funds, not the mere exposure in relation to the assets managed from Hong Kong and include qualifying hedge funds of several managers headquartered outside Hong Kong.

Market exposure: France

Asset class	Position Base Currency			NAV (%)	
	Long	Short	Gross	Long	Short
Equity securities	3,313,666,165.00	257,433,058.00		52.87%	4.11%
Equity derivatives	3,982,982,782.00	3,235,218,713.00		63.54%	51.61%
Fixed income securities	1,281,576,338.00	287,515,169.00		20.45%	4.59%
Credit derivatives	4,513,040,490.00	7,626,086,882.00		72.00%	121.66%
Non-base currency holdings					
FX derivatives			2,877,804,001.00		
High-quality sovereign bonds	375,868,985.00	-		6.00%	0.00%
IRS derivatives			44,558,651,587.00*		
Commodities	0	0		0.00%	0.00%
Commodity derivatives	535,317,885	668,206,461.00		8.54%	10.66%
Cash and cash equiv.	402,293,404.00	127,126,425.00		6.42%	2.03%
Other	910,410,707.00	883,254,634.00		14.52%	14.09%

Market exposure: Luxembourg

Asset class	Position Base Currency	NAV (%)
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	Long	Short	Gross	Long	Short
Equity securities	19,097,784,245.00	2,837,872,684.00		14.17%	2.11%
Equity derivatives	51,167,890,178.00	53,655,984,906.00		37.98%	39.82%
Fixed income securities	32,254,500,269.00	45,764,359.00		23.94%	0.03%
Credit derivatives	48,385,698,127.00	62,090,759,007.00		35.91%	46.08%
Non-base currency holdings					
FX derivatives			154,724,015,574.00		
High-quality sovereign bonds	50,473,185,920.00	1,357,643,397.00		37.46%	1.01%
IRS derivatives			339,650,270,044.00*		
Commodities	0	0		0.00%	0.00%
Commodity derivatives	7,858,369,189	5,327,648,050.00		5.83%	3.95%
Cash and cash equiv.	38,030,439,102.00	11,239,644,768.00		28.22%	8.34%
Other	18,947,404,082.00	6,965,951,479.00		14.06%	5.17%

Market exposure: United States				
Asset class	Position Base Currency		NAV (%)	
	Long	Short	Long	Short
Equity securities	2,738,000,000,000.00	1,139,008,000,000.00	85.94%	35.75%
Equity derivatives	1,317,000,000,000.00	57,948,000,000.00	41.34%	1.82%
Fixed income securities	1,033,000,000,000.00	572,476,000,000.00	32.42%	17.97%
Credit derivatives	669,000,000,000.00	64,224,000,000.00	21.00%	2.02%
Non-base currency holdings				
FX derivatives	2,470,000,000,000.00	276,640,000,000.00	77.53%	8.68%
High-quality sovereign bonds	2,718,000,000,000.00	372,082,000,000.00	85.31%	11.68%
IRS derivatives	5,512,000,000,000.00	77,168,000,000.00	173.01%	2.42%
Commodities	0	0	0.00%	0.00%
Commodity derivatives	380,000,000,000.00	72,960,000,000.00	11.93%	2.29%
Cash and cash equiv.	747,000,000,000.00	478,080,000,000.00	23.45%	15.01%
Other	1,892,000,000,000.00	189,630,000,000.00	59.38%	5.95%