

2022 SURVEY RESULTS

HEDGE FUND OPERATIONAL DUE DILIGENCE

NOVEMBER 2022

Charles Tilden, Senior Investment Analyst, ODD



TABLE OF CONTENTS

▪ Background	Page 3
▪ Survey Results	Page 4
▪ Appendix: Survey Questions	Page 17
▪ Appendix: Industry News	Page 19
▪ Disclaimers/Disclosures	Page 26



BACKGROUND

- **NEPC’s hedge fund research team consists of both investment specialists and a separate team focused on Operational Due Diligence (“ODD”)**
- **Ongoing oversight includes an annual ODD survey, sent to all hedge funds utilized by NEPC clients and to any 1-rated hedge funds**
 - Identifies key operational issues
 - Changes to a firm’s ownership structure
 - Senior staff departures
 - Litigation or regulatory action
 - Dramatic change in assets
 - Service provider changes
 - Allows NEPC to aggregate service providers used across all funds
 - Highlights funds with operational “red flags” worthy of further investigation
- **Survey is sent annually in June, and the responses are compiled through the summer and fall**
 - This year, the survey period spanned from 6/30/2021 – 6/30/2022
- **NEPC services over 400 retainer clients with approximately \$1.4 trillion¹ in assets and approximately \$300 billion² in alternative assets**



¹As of 10/1/2022 ²As of 12/31/2021 NEPC provides some form of advice to all clients counted but does not advise all clients on all asset classes.



SURVEY RESULTS

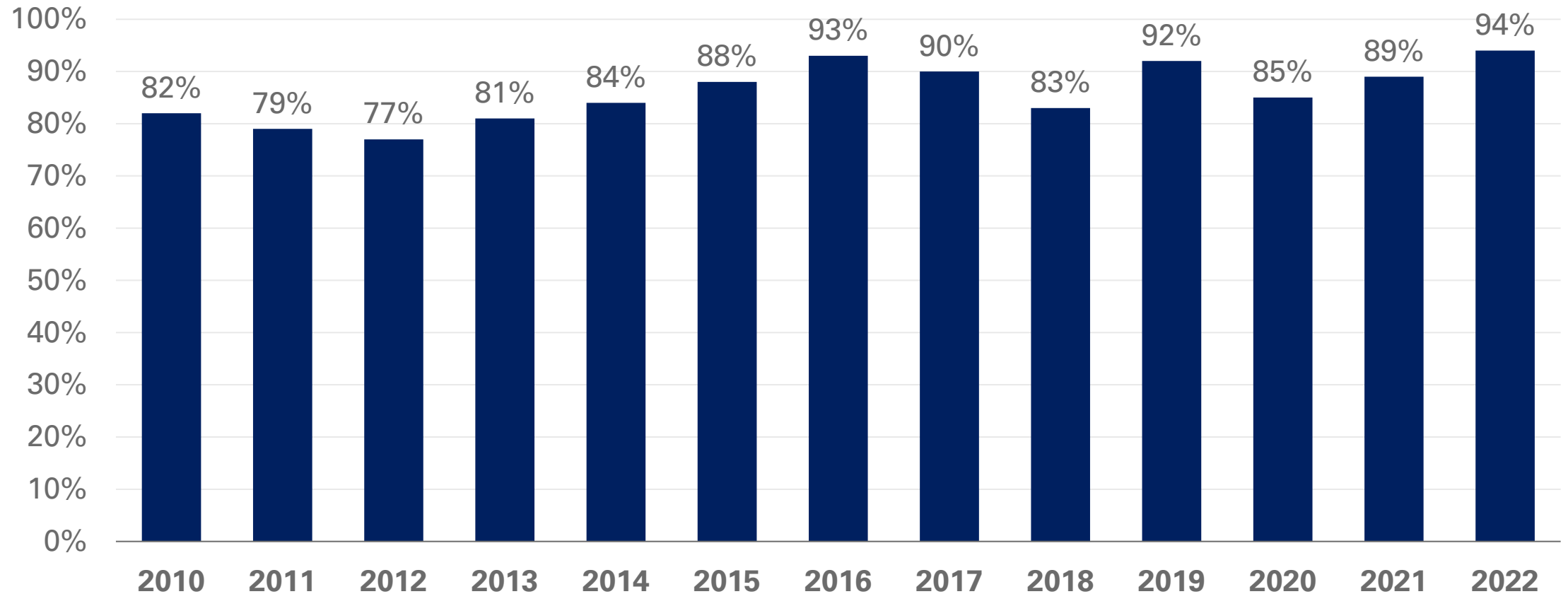


SURVEY RESULTS

- **Each year we survey all hedge funds in place across all clients for whom NEPC provides advice on hedge funds**
- **Like last year, we used a service called DiligenceVault to administer the survey**
- **The 2022 survey went to 196 managers and 184 responded (response rate: 94%)**
- **Information on 258 funds was provided**
 - Fund Administrator, Auditor, and Prime Broker/Custodian information was collected using DiligenceVault
 - Audited Financial Statements are being reviewed
- **12 firms were non-responders**
 - Per NEPC policy, non-responders cannot be included in future searches for clients until they provide the information requested

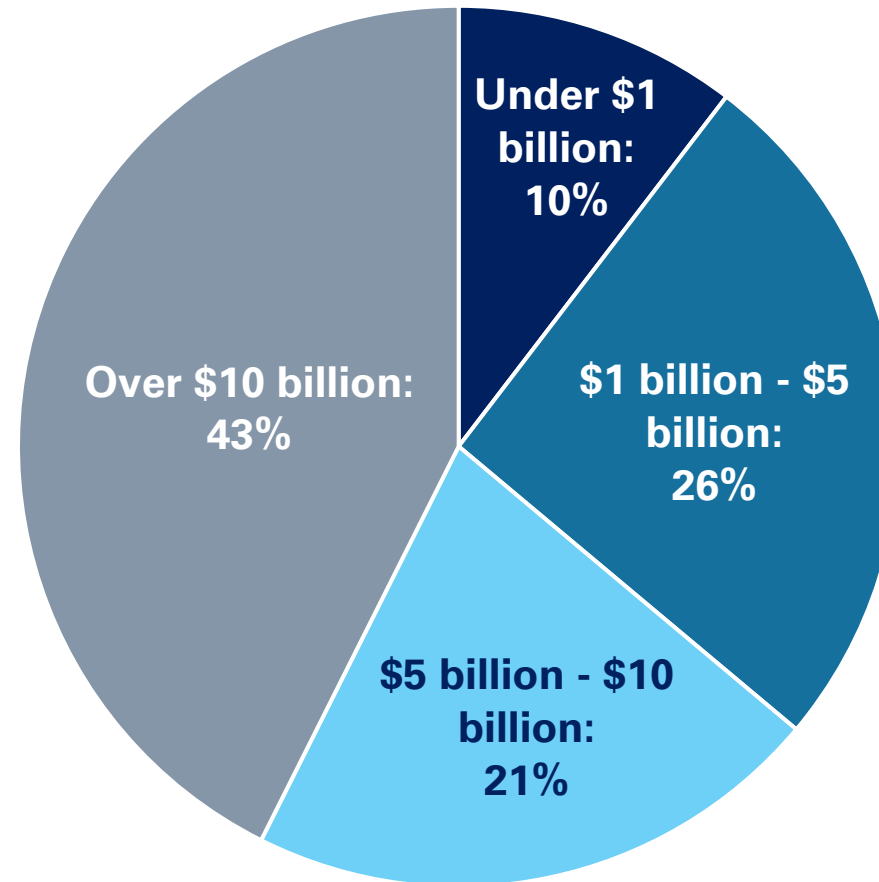
SURVEY RESULTS

Response Rate



SURVEY RESULTS

Firm AUM of Responders



SURVEY RESULTS – HIGHLIGHTS

FIRM-LEVEL DATA

- **100% are registered with the SEC, either fully registered or registered as an exempt reporting adviser**
- **19% reported receiving an inquiry from a regulator during the survey period**
- **15% had a change in ownership**
- **4% are involved in some form of litigation**
 - Litigation brought against the management company or fund could indicate greater operational risk
- **39% had senior personnel departures**
 - 17% reported turnover in the Operations department
 - 14% reported turnover in the Finance department
 - 20% reported turnover in the Legal/Compliance area
 - 10% reported turnover in the IT area

FUND-LEVEL DATA

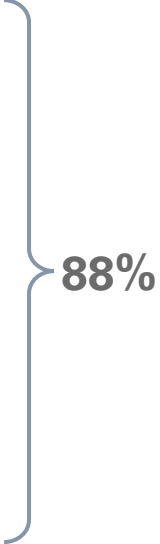
- **11 different audit firms are used, with the top two being PwC (30%) and Ernst & Young (28%)**
- **24 different administrators are used, with the most-used being Citco (19%)**
- **2% of the funds are self-administered**
- **9% have changed audit firm or administrator**
- **2% put up gates to restrict liquidity during the survey period**
- **53% reported using an external valuation provider**
- **6% reported a change in the Board of Directors**
- **79% reported using a compliance consultant**

SURVEY RESULTS

▪ Auditors

- Just eleven audit firms are utilized of the 252 funds with reported audit firms
- This service is highly concentrated: 88% is with the Big Four audit firms

	Provider	
1	PwC	30%
2	Ernst & Young	28%
3	KPMG	17%
4	Deloitte	13%
	All other providers (7)	12%



SURVEY RESULTS

Administrators

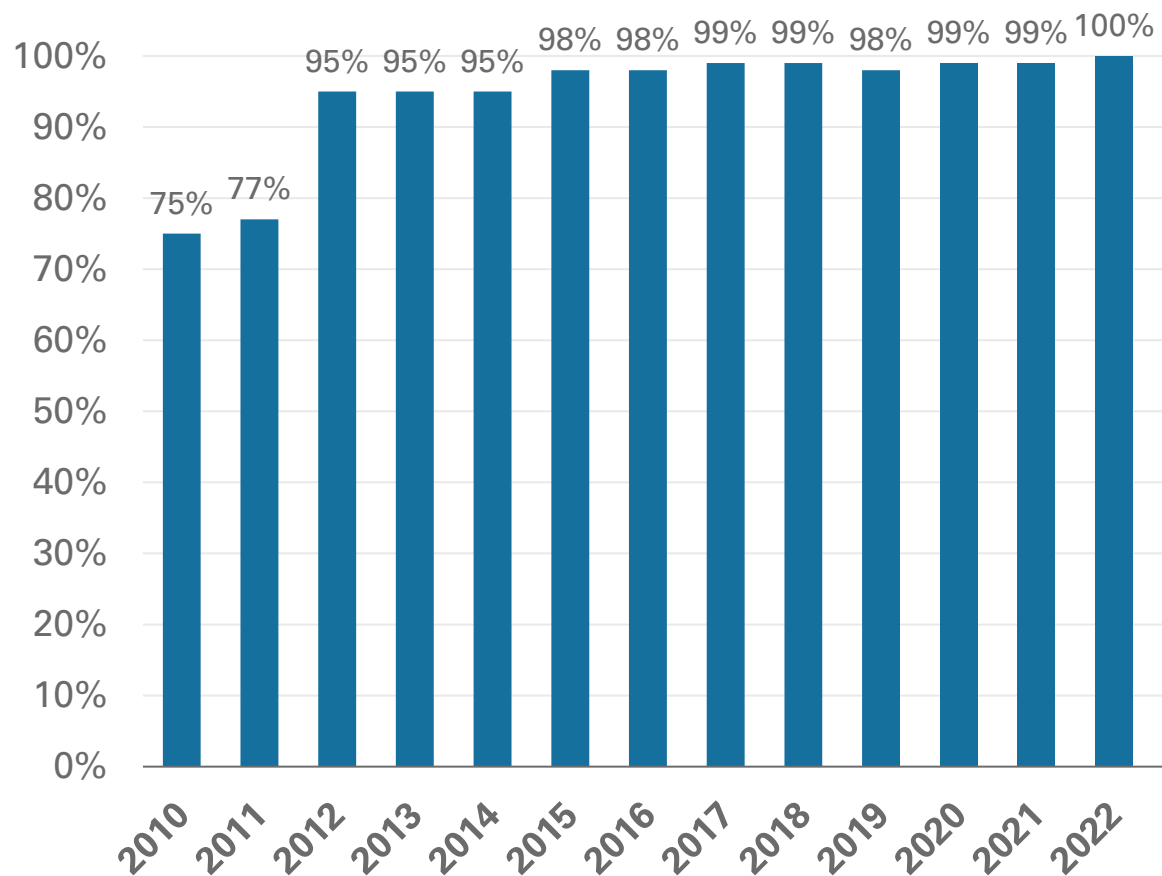
- A diverse group of providers: 24 firms (2021: 21 firms)
- A large concentration in the top ten (84%)

	Provider	
1	Citco Fund Services	19%
2	SS&C Technologies Inc.	17%
3	BNY Mellon Fund Services	9%
4	International Fund Services (IFS) Ltd.	9%
5	MUFG Alternative Fund Services	7%
6	Morgan Stanley Fund Services	7%
7	State Street Bank & Trust	5%
8	Northern Trust Global Fund Services	4%
9	HedgeServ	4%
10	SEI Fund Administration	3%
	Self-Administered	2%
	All other providers (14)	14%

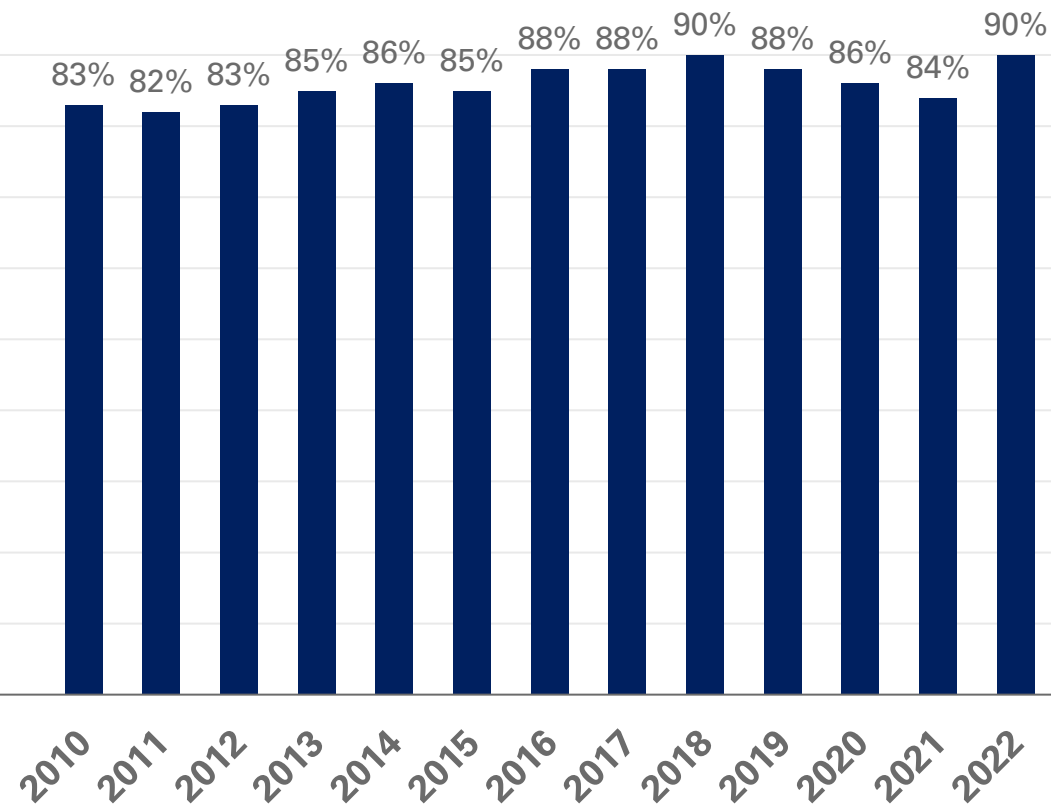
84%

SURVEY RESULTS

Registered with the SEC *



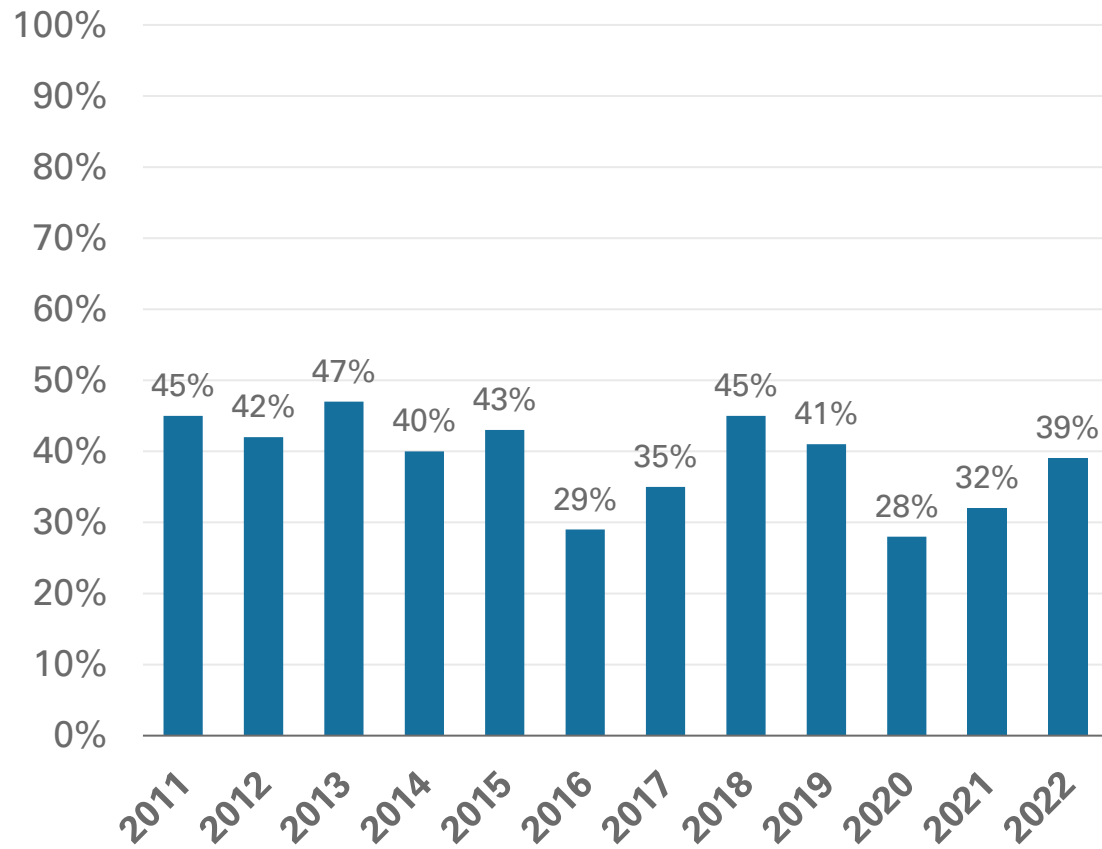
Firm AUM > \$1 Billion



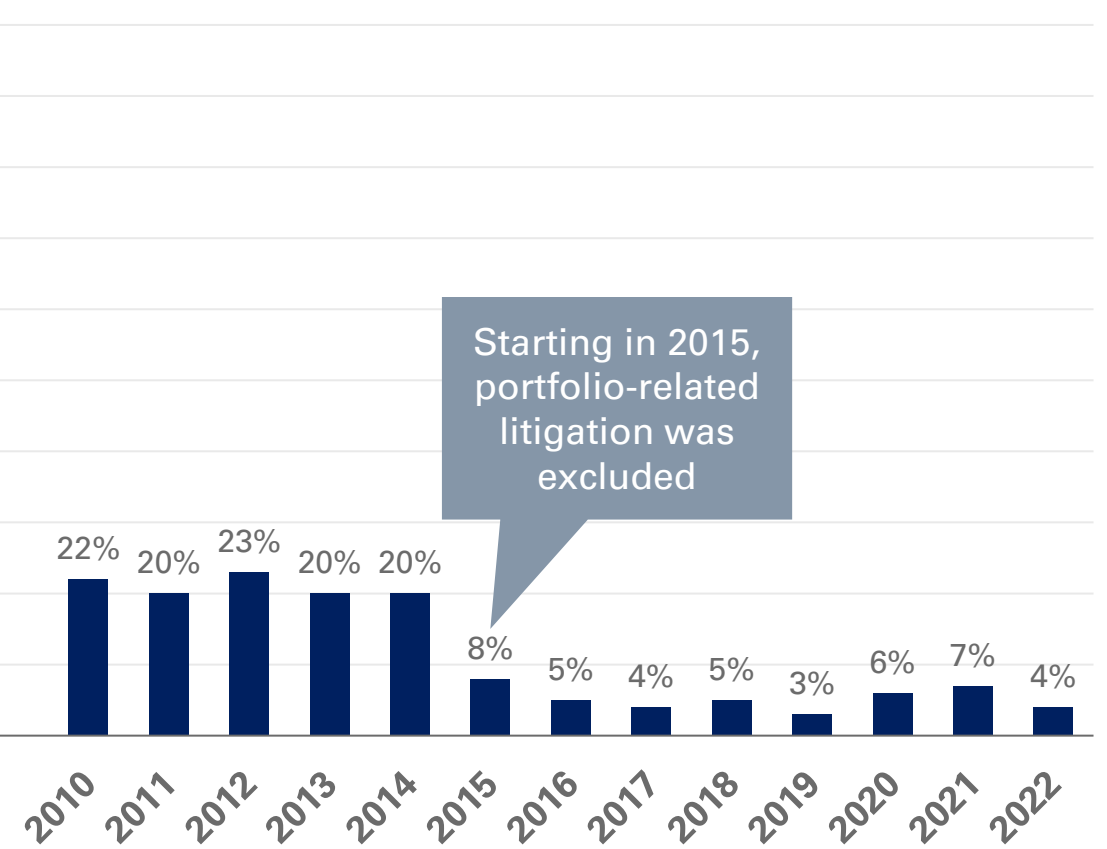
* Includes Exempt Reporting Advisers

SURVEY RESULTS

Senior Departures

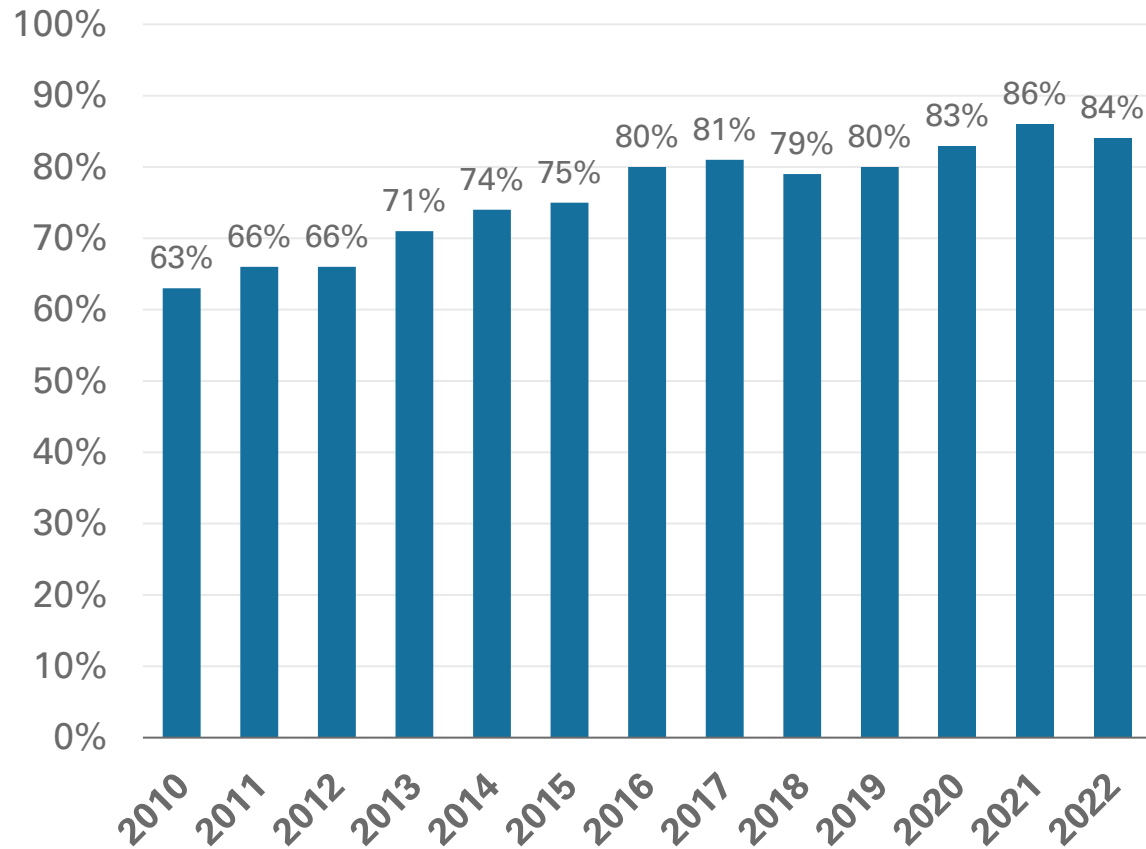


Pending Litigation

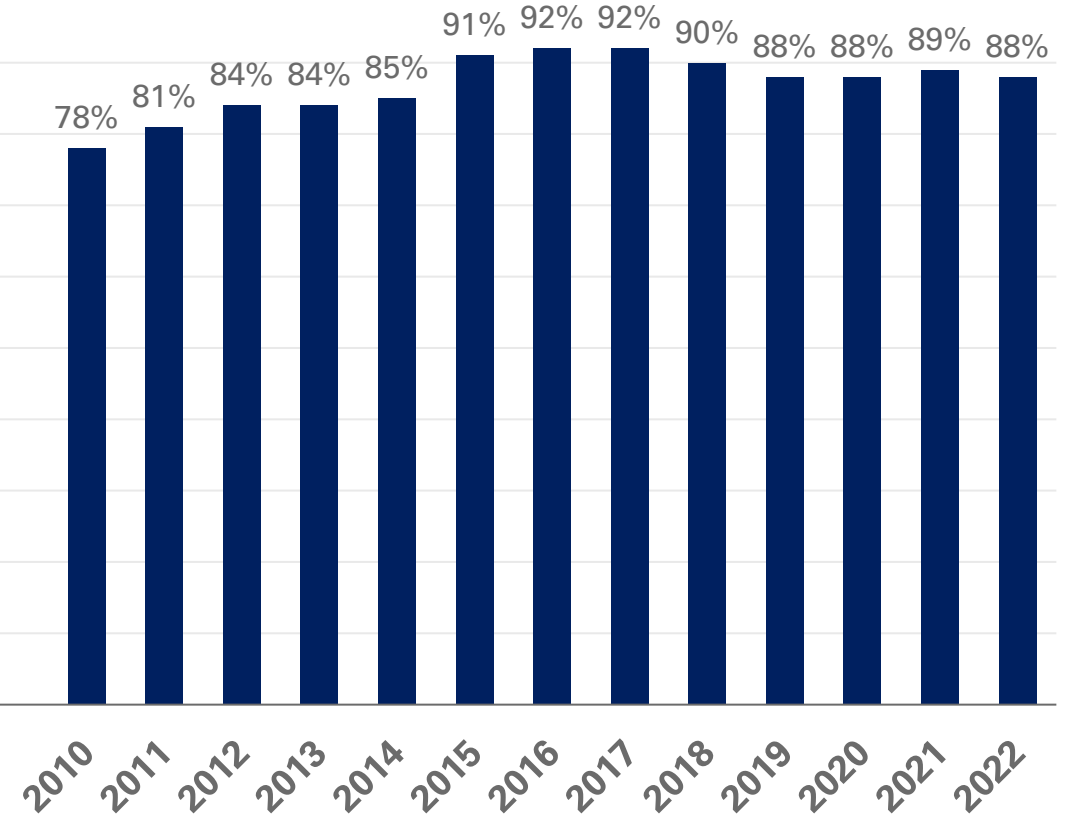


SURVEY RESULTS

Top 10 Administrator Concentration

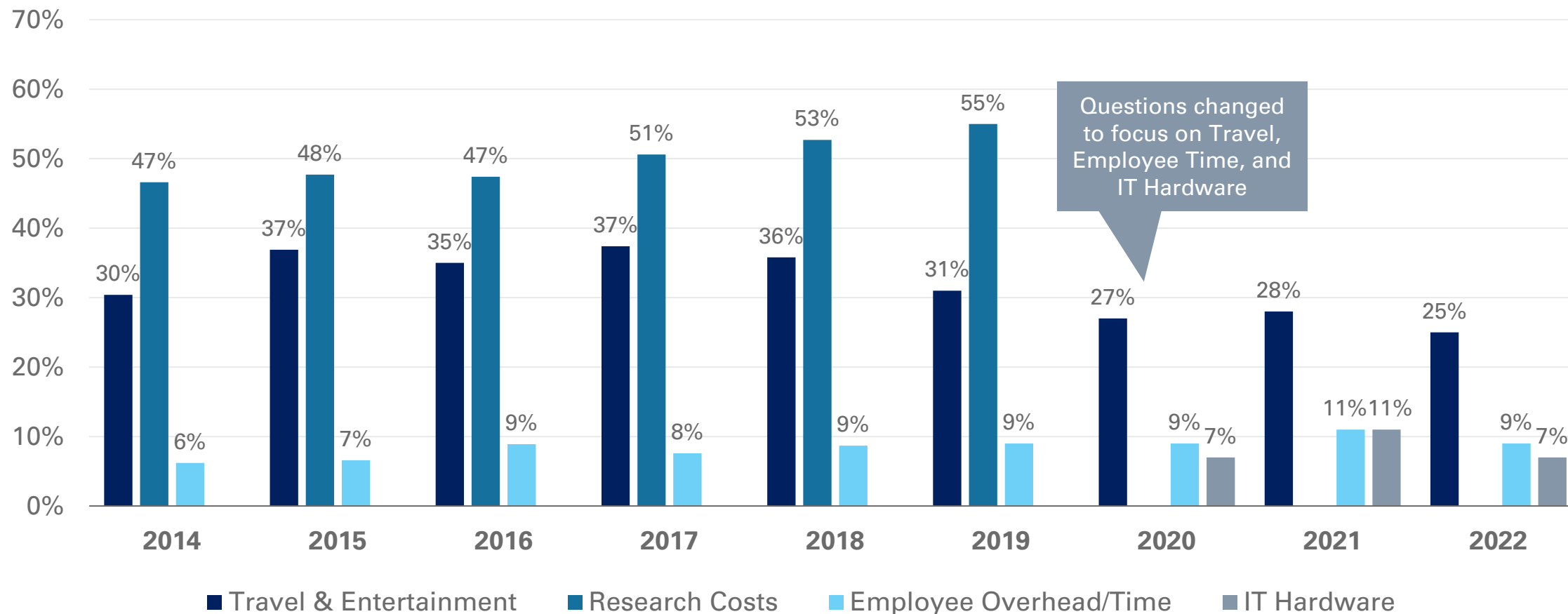


Big Four Auditor Concentration



SURVEY RESULTS

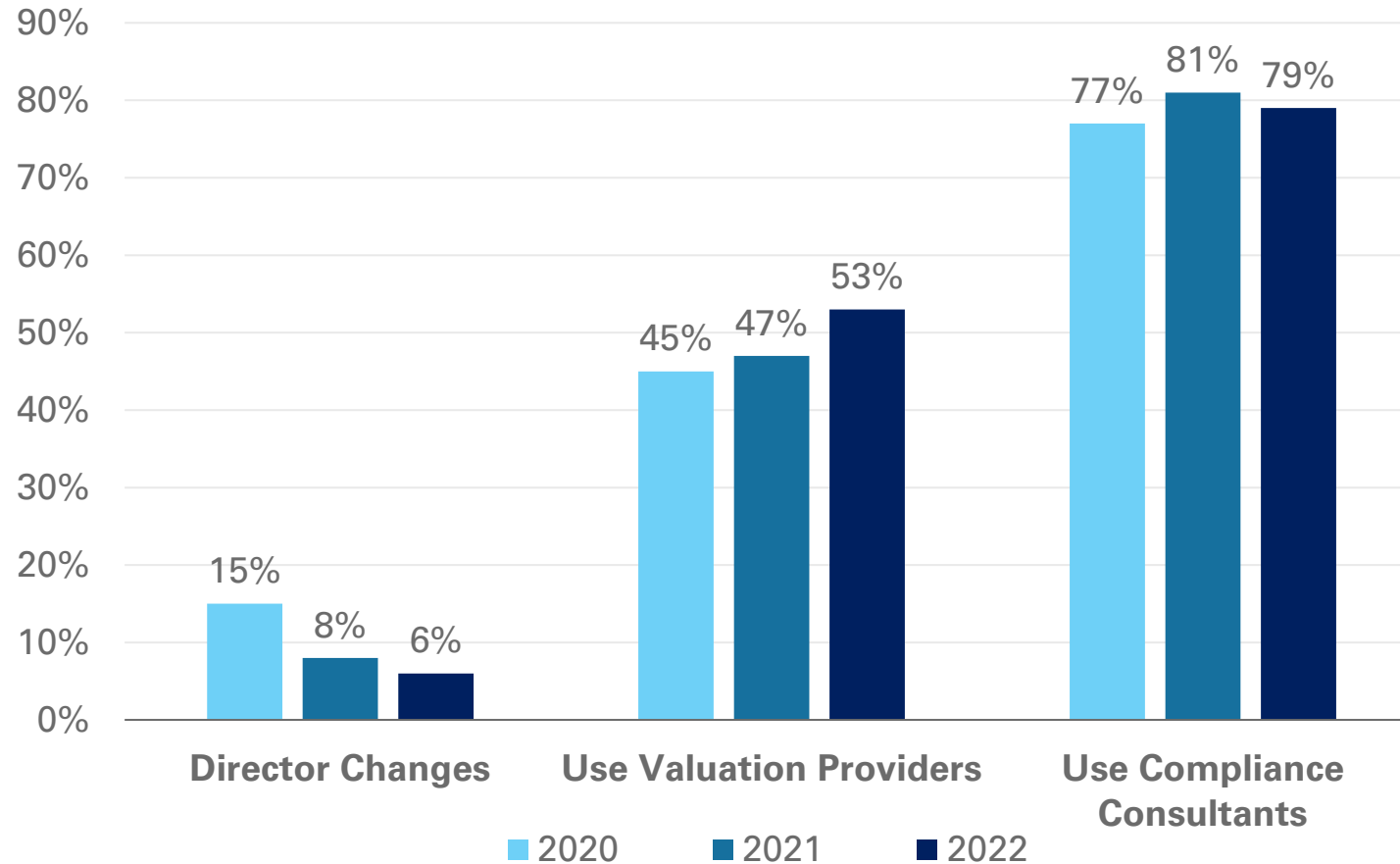
Pass-Through Expense Items *



* Represents the percentage of funds surveyed that charge the specified expense types to investors

SURVEY RESULTS

Additional Fund-Level Data



- The 53% of funds that use valuation providers do not necessarily have more accurate NAVs as in many cases the other 47% of funds trade more liquid assets and may not need external valuation providers.
- Many firms do not exclusively rely on a single compliance consultant as they have internal compliance staff and/or utilize external counsel. Some consultants are only engaged for specific projects, such as mock audits or email surveillance, thus a Yes answer does not necessarily indicate that the whole compliance function is outsourced.



APPENDIX



SURVEY QUESTIONS

FIRM QUESTIONS

- **Firm AUM**
- **Did your firm receive an onsite visit, deficiency letter, or sanctions from the SEC or another regulator during the survey period?**
- **Is there any pending material litigation against the firm or current members of the firm brought by any current/former investors or employees? (not including portfolio-related litigation)**
- **Was there a material change to the firm's ownership during the survey period?**
- **Did any personnel responsible for managing the Operations function leave the firm during the survey period?**
- **Did any personnel responsible for managing the Finance function leave the firm during the survey period?**
- **Did any personnel responsible for managing the Legal/Compliance functions leave the firm during the survey period?**
- **Did any personnel responsible for managing the IT/Technology functions leave the firm during the survey period?**

SURVEY QUESTIONS

STRATEGY QUESTIONS

- **Strategy Net Assets**
- **Are there independent directors that sit on the boards or advisory committees of any of the fund vehicles in the strategy?**
 - If yes, did any of the independent directors change during the survey period?
- **Were any of the strategy's assets side-pocketed during the survey period?**
- **Did the fund create new gates to reduce liquidity for current investors during the survey period?**
- **Fund Administrator, Auditor, Prime Brokers/Custodians**
- **Did you use a third-party valuation provider during the survey period to price hard-to-value positions?**
- **Did your firm use Expert Networks during the survey period?**
- **Do you have a compliance consultant?**
- **Were travel costs (including research-related travel) charged to the fund during the survey period?**
- **Was any employee time charged to the fund during the survey period?**
- **Were any costs related to IT hardware charged to the fund during the survey period?**

INDUSTRY NEWS

GROWTH IN ASSETS AND FUNDS

▪ **Hedge fund launches reach highest level since 2017 ***

- More hedge funds were launched last year than in any 12 months since 2017, with 614 added, as the industry posted double-digit returns, according to a report released by HFR.
- Hedge funds and funds of funds totaled 9,254 in 2021, roughly stable from the previous year. While 527 were liquidated, HFR said this was the fewest since 2004, as hedge funds performed well amid rising inflation and interest rates.
- Hedge funds assets reached \$4 trillion for the first time in December, with returns of 10.2% in the year, according to a fund weighted composite index.
- HFR President Kenneth J Heinz said in a statement the industry is likely to attract investors through mid-2022 as macro strategies have helped to create returns despite high volatility this year. “Strong growth trends continue to be driven by rising geopolitical and macroeconomic uncertainty, with institutional investors positioning for this uncertainty and looking for portfolio capital protections,” he said.

▪ **Canada the world’s fifth largest hedge fund market, report finds ****

- Canada was home to 2.1% of the world’s hedge funds in 2021, making it the fifth largest market globally, finds a report from U.K.-based SigTech.
- Most of those funds were based in Toronto, which was home base for 395 or 1.4% of the world’s funds. That makes Toronto the tenth largest city in terms of hedge fund concentration.
- According to SigTech’s analysis, there are 27,255 active hedge funds globally. The U.S. was by far the largest market in 2021, with 67.2% of funds based there. (New York City alone was home to 25% of the world’s funds.) The U.K. (8.6%), China (including Hong Kong; 4.4%) and Brazil (2.5%) rounded out the top four countries.
- The fastest-growing strategy was cryptocurrency, which accounted for 5.6% (310) of the 5,500 hedge funds launched since 2019. In 2021 alone, 171 crypto hedge funds launched, bringing the total to 774 — or 2.8% of all hedge funds.

INDUSTRY NEWS

GROWTH IN ASSETS AND FUNDS

▪ Hedge fund Inflows now at Seven-Year High *

- It may be an unusually uncertain time for financial markets, especially given the emergence of soaring inflation, aggressive monetary tightening pursued by central banks and ongoing war in Eastern Europe that seems unlikely to conclude anytime soon. As such, one might have assumed that market participation by investors would be tempered in favour of caution and waiting to see how events unfold. But as far as hedge funds are concerned, we have seen the exact opposite occur.
- According to recent figures from Hedge Fund Research (HFR), institutional investors in the first quarter allocated the largest amount of new capital to hedge funds since the April-June quarter of 2015. What's more, it would appear that it has been precisely those aforementioned factors—inflation, higher interest rates and geopolitics—that have driven these seven-year-high inflows. “Total global hedge fund industry capital remained above the \$4 trillion milestone, as managers navigated extreme volatility with leadership from uncorrelated Macro strategies, including Fundamental Commodity and Discretionary funds, as well as Quantitative, Trend-Following CTA strategies which posted record gains,” the HFR report confirmed, whilst also revealing that total capital inflows had reached a mighty \$19.8 billion in the quarter. Total hedge-fund industry capital has also expanded by more than \$1 trillion in the last eight quarters, having dropped below \$3 trillion in the first quarter of 2020 amidst the outbreak of the global COVID-19 pandemic.
- Part of this rush can be attributed to the solid performance hedge funds have demonstrated at a time when other markets have suffered. The HFRI 500 Hedge Fund Index, which is a global composite index of the largest 500 funds that report to the HFR's database, gained 0.3 percent during the quarter and thus easily outperformed the S&P 500 and Nasdaq 100, which both registered their worst quarterly performances since the start of the pandemic two years ago. By contrast, in 2021, the index trailed the S&P 500 across the year by some margin—10.2 percent versus 26.9 percent returns.
- That said, investment-data firm and hedge-fund specialist Preqin provided a slightly less upbeat assessment for the recently concluded quarter, based on the data on hedge funds it obtained from its proprietary database. Nonetheless, investor interest in hedge funds continued to swell during the quarter, despite the U.S. Federal Reserve's (the Fed's) rate hike, Russia's invasion of Ukraine and 40-year-high inflation weighing heavily on stock markets. “We think the current investment environment—higher rates, higher inflation, and higher volatility—speaks in favor of hedge funds as an effective diversifier to reduce overall portfolio volatility,” Mark Haefele, UBS Global Wealth Management's chief investment officer, explained to CNBC in late April.
- The biggest hedge funds have led the way, moreover, with those managing more than \$5 billion receiving inflows estimated at \$16.8 billion during the first quarter of 2022. Mid-sized funds managing between \$1 billion and \$5 billion saw net inflows of \$2.3 billion, while those with less than \$1 billion of managed assets to their names received estimated net inflows of \$723 million.

INDUSTRY NEWS

PERFORMANCE

- **Stock-picking hedge funds poised for worst performance in 10 years ***

- Hedge funds that actively buy and sell stocks are set for their worst performance in 10 years, based on new data from Preqin, suggesting that the tide may be turning against stock picking strategies.
- Globally, funds that buy and sell stocks have seen their cumulative returns drop 12.24% in the 12 months ending July 31, investment data provider Preqin said. Year to date cumulative returns for 2022 were down 11.42%.
- Stock picking, where a portfolio manager actively decides when to buy and sell a stock, traditionally has been one of the most commonly used trades among hedge funds. But this approach faces an increasingly uncertain market backdrop. Equity hedge funds in general are down 10% for the year, while credit funds which trade bonds have fared better and are down around 2%, Preqin said.
- "Stock picking has become difficult in a world of high inflation and rising interest rates," said London-based hedge-fund manager Crispin Odey. Odey, whose fund manages \$4.7 billion in assets, said it was difficult to find opportunities to short or bet against a stock, when inflation has eroded the value of money but not the nominal value of companies.
- Choppy markets have hit profits from other hedge fund trading strategies. Systematic equity hedge funds that code their trading ideas into computer programmes had a negative 3.68% return cumulatively in the 12-months ending in July, the Preqin data showed.
- In contrast, macro trading hedge funds which buy and sell financial instruments based on the economic outlook are having the strongest year so far, the Preqin data showed. Actively managed macro hedge funds were up 6.39%, a bit more than those managed systematically, which have brought in cumulative returns around 3.08%.

- **Hedge fund industry faces consolidation as performance wanes ****

- The hedge fund industry could be headed for a major consolidation, according to panelists at the SALT Conference, which just wrapped up in New York. Significant asset outflows driven by underperformance are putting pressure on even well established funds. As a result, the war for talent is heating up.
- Ilana D. Weinstein, Founder & Chief Executive Officer at executive search firm The IDW Group said that the hedge fund industry is in the "early innings of an industry correction and consolidation." She argues that much of what is left at many large hedge funds is founder capital. For these funds to rebound, performance will have to significantly improve which could take years.
- Many funds were over optimized to market conditions before the pandemic and have had difficulty trading through volatility and rising inflation. Fund managers are repositioning, but for the largest funds that could take several quarters. Small and medium sized funds, which are more sensitive to large outflows, could have difficulty bouncing back. "We may see more funds convert to family offices," Weinstein added.
- For the funds that do remain, not only will strategies have to adapt to the new market regime, but staffing may look much different than it has in the past.

INDUSTRY NEWS

EVOLUTION OF HEDGE FUNDS

- **Next generation of hedge fund managers are emerging more resilient and efficient ***
 - The Alternative Investment Management Association (AIMA), in partnership with Cowen, a global financial services firm, has published a new report presenting an analysis of the global emerging hedge fund manager community. The report, 'Emerging Stronger: The Next Generation Manager Survey 2022' is informed by two surveys: one of emerging managers running up to US\$500 million in assets under management (AuM), and another of the investors that allocate to them.
 - Key findings:
 - The average break even has fallen by 25% from its 2017 level of US\$86 million in 2017 to \$64 million
 - Two-thirds of investors will consider allocating to hedge funds with less than \$100 million AuM
 - The average time to close on new investments for emerging managers is taking 6.3 months on average and even less, 5.6 months, for managers of sub-\$100m funds
 - The research revealed a community of hedge fund managers that have weathered the recent macroeconomic turmoil and have emerged hardier and more resilient than before. This has been achieved by slashing costs where possible (for example, in real estate and travel and headcount), sacrificing salaries, and greater use of regulatory platforms.
 - For a long time, it has been recognised that fund managers must have a track record of at least three years and also boast an AuM of over US\$100 million before most investors will consider them. On both these counts, investors surveyed dismissed these views, with data showing that the vast majority would consider a fund that was less than three years old and had under US\$100 million AuM. Moreover, investors appear more willing to engage with managers at an earlier stage in their lifecycle and are taking less time to agree to new investments.
 - Jack Seibald, Managing Director and Global Co-Head of Prime Brokerage and Outsourced Trading at Cowen commented: "This research provides evidence of a changing landscape for both managers and investors. For funds with up to \$500m AuM, the impact of the pandemic has resulted in leaner, more efficient and robust operations, with greater opportunities from investors than at any time in recent memory. The steps these funds have taken to safeguard their businesses during the pandemic stand them in good stead moving forwards. These firms have largely insulated their businesses from recession and have the resilience to withstand the predicted economic turmoil ahead."
 - Survey details: The manager survey had 149 respondents with an estimated aggregate AuM of US\$16.7 billion and an average AuM per manager of \$112 million. This research was carried out in Q4 2021. The investor survey had 26 respondents who together allocated around US\$50 billion to hedge funds. Just under half (48%) of investors surveyed allocate more than US\$1 billion to hedge funds.

INDUSTRY NEWS

EVOLUTION OF HEDGE FUNDS

- **Hedge fund managers increasingly entering into SMA relationships ***

- US law firm Seward & Kissel notes in its recent SMA Snapshot Report that it has seen, within the US hedge fund market, an increase in the number of managers entering into separately managed account (SMA) relationships these last 12 months. This reflects the generally increasing demand for bespoke products.
- The report features fewer new managers (those founded less than two years ago) than last year (9% as opposed to 18%). That may be because newer managers are offering founders classes, thus removing the need for many newer manager investors to seek out SMA arrangements.
- A breakdown of investors into SMAs shows the share of funds that invest in SMAs has increased significantly compared to last year (from 52% to 75%). The other investors are high net worth individuals and family offices (15% compared to 25% last year), and others. New managers with SMA arrangements dealt with fund investors only. "The significant rise in the percentage of fund investors may be indicative of their abilities to best marshal the increased resources necessary to source, diligence and negotiate with SMA managers in the current environment."
- More than half of strategies in SMAs are equity-focused, a bit less than last year. Almost a third have a credit-focused strategy. "Approximately half of the strategies implemented deviated from the manager's flagship hedge fund strategy due to mandates primarily related to long-only exposure; higher position concentrations; greater leverage; ESG considerations; or tax efficiency," the report adds.
- The average account size was over \$45m for mature managers and less than \$7.5m for new managers. In virtually all of the SMA agreements, clients were permitted to terminate on an average of 45 days' notice.
- 28% of managers charged no incentive fee (compared to 40% last year) and more than half charged 15-18% (from a third last year). Part of the reason why more are demanding incentive fees in their SMA arrangements is that more of them are mature rather than new managers. The average management fee was about 1%, compared to last year's 1.5%. Some have tiered structures tied to AuM levels.
- In short, the report found that 91% of fund managers with SMAs were founded over two years ago, 55% of SMAs have an equity-focused strategy, 75% of SMA investors are funds, and 28% of SMAs have no incentive fee.
- A separately managed account (SMA) is an investment structure where the investor creates its own investment vehicle, then appoints a hedge fund manager as an investment advisor. With an SMA, the investor owns the account, which is significantly different from the commingled fund and fund of one, both of which are created and controlled by the hedge fund manager and in which the investor is just a subscriber.
- Transparency, control, liquidity and customization are the most common reasons indicated for investing in hedge fund SMAs.

INDUSTRY NEWS

ALLOCATOR TRENDS

▪ **Hedge fund allocations expected to increase ***

- SigTech conducted a global survey of hedge funds with \$194 billion in assets under management collectively. Some 83% of respondents expect institutional investors to increase their allocation to hedge fund strategies over the next two years, with nearly one in four (23%) expecting a dramatic increase.
- The primary reason identified for institutional investors increasing allocation to hedge funds over the next five years was the expectation that they can generate absolute returns in any market environment. The research further found investors believe hedge fund strategies play an important role in mitigating certain risks and improving overall portfolio diversification.
- A key factor in attracting flows from institutional investors is the level of transparency of the investment process employed by a hedge fund. A total of 90% of survey respondents identified this as an important issue.
- The report also highlights that 94% of managers believe that access to high-quality data and cutting-edge tech is key to generating alpha, while 85% anticipate a rise in the trading of digital asset, and 95% expect an increased use of quant analytics by discretionary managers.

▪ **Institutional investors bullish on alternative assets, set to increase alts allocations ****

- According to the 2022 EY Global Alternative Fund Survey ... managers face pressure to drive inflows and organic growth by exploring new avenues of product and investor diversification, with trustworthy ESG-labeled products a particular area of focus and digital assets yet to pick up momentum.
- Managers expect to increase investor mandates by expanding into new asset classes, participating in opportunistic and special situation transactions, and launching new fund structures to capture retail inflows.
- Crossover funds continued to be a major area of focus, as 32% of hedge fund managers increased their exposure to private market investing and more than half (53%) of investors are not limiting their hedge fund managers' exposure to PE and venture-capital style investments.
- A double-edged sword of opportunity and complexity remains pronounced within the realms of environmental, social, and corporate governance (ESG) investing, as one-quarter of surveyed investors were found to have not invested with a manager in 2022 because of inadequate ESG policies. The ESG-specific findings indicate that managers are responding to the increased investor pressure by changing their approach by developing corporate ESG policies (57%) and implementing governance structures and embedding ESG into their investment decisions (53%).
- Exposure to digital assets remains small, as most managers indicated that digital assets comprise less than 2% of their overall portfolios. However, there are signs of growth, as 23% of surveyed hedge funds reported being interested in, or having exposure to, the digital asset space.

INDUSTRY NEWS

FUND TERMS

- **From the 2022 report by JPMorgan on hedge fund terms ***

- This report [was] produced based on figures collected in December 2021. The previous report was released in December 2019 and has been referenced herein for comparative purposes.
- The hedge fund industry saw new net inflows of approximately \$30 billion in 2021. Couple this with positive hedge fund performance against a backdrop of sharp equity gains and the result was hedge fund assets hitting a record high of \$4.0 trillion.
- The report focuses on hedge fund fees and terms. While we continue to witness a decline in hedge fund manager fees, the pace of this decline has slowed significantly year-over-year. In the new launch space, we note headline fees increasing, with the average founder share class management and incentive fees at 1.3% and 17% vs. 1.2% and 15% in 2019.
- The recent proliferation of multi-strategy/multi-PM hedge fund platforms is an enticing proposition for would-be hedge fund managers, as evidenced by the continued decline in the number of launches. Over 500 new hedge funds launched in the first three quarters of 2021, far below the 968 that launched in all of 2015. Hedge funds launching in the past 18 months have tended to be larger than in historical years, with the median launch size totaling \$100 million (2019, \$58.9 million). Launches in the EMEA region have been the largest— average assets under management at launch was \$335 million vs. Asia Pacific \$255 million and \$180 million in the Americas.

- **Higher hedge fund fees mean better performance, says Barclays study ****

- Recent research by Barclays' Capital Solutions Group, looking at the fees and returns from around 290 hedge funds, reveals that the firms that charge the highest fees – quite often the industry's biggest names – generate better returns for investors than cheaper rivals.
- Top off the pile in terms of performance are multi-manager funds, which use groups of traders to invest across markets, and the study found that those charging full pass-through fees, whereby investors pay for the full cost of operations, portfolio-manager compensation and other expenses, generate "superior net returns". When compared with firms that only charge partial or no pass-throughs, they also produce more alpha too.
- The study examined annualised returns between 2019 and June 2022 of about 40 multi-manager funds overseeing an average of \$7 billion of assets, and 250 traditional funds – those that charge clients a portion of fees and assets – with an average of \$2 billion in assets. Within traditional funds, those with higher combined fees also produced stronger net returns and alpha than peers with lower fees, the report found.

DISCLAIMERS AND DISCLOSURES

Data used to prepare this report was obtained directly from the investment manager(s). While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.

The “Industry News” items contain excerpts from published articles. Some content has been excluded due to space limitations.

Investors should be aware that non-traditional investment strategies including hedge funds and private equity have the following characteristics:

1. Performance can be volatile and investors could lose all or a substantial portion of their investment
2. Leverage and other speculative practices may increase the risk of loss
3. Past performance may be revised due to the revaluation of investments
4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms
5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value
6. These funds are not subject to the same regulatory requirements as registered investment vehicles
7. Managers may not be required to provide periodic pricing or valuation information to investors
8. These funds may have complex tax structures and delays in distributing important tax information
9. These funds often charge high fees
10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager’s realm of expertise or contemplated investment strategy

THANK YOU

Please reach out to
ODD@nepc.com
with any questions

