Private Bank

PRIVATE CAPITAL SURVEY 2020

CITI PRIVATE CAPITAL GROUP



The following information is a summary of the The Private Capital Survey 2020 that was conducted as part of Citi Private Bank's 2020 Family Office Leadership Program, held from 15 June to 8 July 2020. While the program ran for three weeks, polling for the survey was conducted online over a longer period from 12 June to 20 July 2020.

The views expressed herein are those of the participants and do not necessarily reflect the views of Citigroup Inc., Citigroup Global Markets Inc., and its affiliates. All opinions are subject to change without notice. Neither the information provided nor any opinion expressed constitutes a solicitation for the purchase or sale of any security. Past performance is no guarantee of future results.

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PRIVATE CAPITAL SURVEY 2020

FOREWORD

It gives us enormous pleasure to introduce the results of our Private Capital Survey 2020, which we conducted during our Family Office Leadership Program (FOLP) in June and July 2020.

Over the last five years, FOLP has firmly established itself as one of the Private Bank's most popular events. Delegates frequently travel from every continent to attend these unique gatherings, which have become known as the "Davos for family offices".

Owing to the COVID-19 pandemic, we were unable to hold the 2020 edition of this event in the usual way. For the first time ever, therefore, FOLP took place entirely in digital format. This inaugural virtual summit proved to be a tremendous success.

Several thousand attended each of the sessions, which featured live conversations with Larry Fink, David Rubenstein, Janet Yellen and Nassim Nicholas Taleb, among others. Many attendees have told us how much they valued hearing insights from these and other distinguished guests, as well as the opportunity to put questions to them directly.

In the same way, we were privileged to be able to put our survey questions to the attendees. Thanks to the virtual format of the event, we received more responses than ever before.

The results and analysis in this report give a rare insight into the thinking of some of the world's most sophisticated family office executives and other leading investors. We asked them about their outlook for the global economy and financial markets, as well as what they are doing with the portfolios that they oversee.

The answers about the opportunities and risks ahead – and the actions that respondents expect to take – make for fascinating reading. We would like to thank everyone who generously gave their time to participate in the survey and we hope you find the results as illuminating as we have.

We also want to commend all our guest speakers who shared their perspectives freely with us during the virtual summit as well as to Stephen Campbell, James Holder and Ajay Kamath for their efforts organizing the summit and this report.

While we hope to gather for next year's Family Office Leadership Program in the traditional manner, we will also aim to provide virtual access so that as many as possible can continue to experience this very special event.

Thank you for the trust and confidence you place in the Private Bank.

BACKGROUND SUMMARY

Insight into our clients' sentiment and portfolio actions

BY STEPHEN CAMPBELL CHAIRMAN, CITI PRIVATE CAPITAL GROUP

Over the years, Citi Private Bank's Family Office Leadership Program (FOLP) has flourished as a forum for addressing a variety of economic, investment and philanthropic matters for family office heads and principals from around the world.

In summer of 2020, with the COVID-19 pandemic at its peak and social distancing restrictions in place around a rapidly changing world, we took this global educational and networking gathering into the digital arena by organizing our very first FOLP Virtual Summit.

It brought together over 4,000 family principals and office heads from more than 100¹ countries for eight virtual sessions, with experts touching on a range of subjects from geopolitics to sustainability, healthcare to technology.

Nearly 180 participants gave their valuable time and thoughts on the current macroeconomic climate by answering our comprehensive survey on investment sentiment and portfolio actions. It is against the historic background of a global pandemic and the resulting economic hardship that we sampled their views on a variety of topics.

71%

The respondents fell into two categories, those with family offices (71%) and ultra-high net worth clients (29%) who do not have a family office. Via this report, we focus almost exclusively on a very diverse group of family office respondents to our survey.

Starting with geographic diversity, we were privileged to have all regions of the globe represented for this crucial poll. The survey saw 43% of the respondents from Latin America, 28% from North America, 20% from Europe, Middle East and Africa and 9% from Asia Pacific.

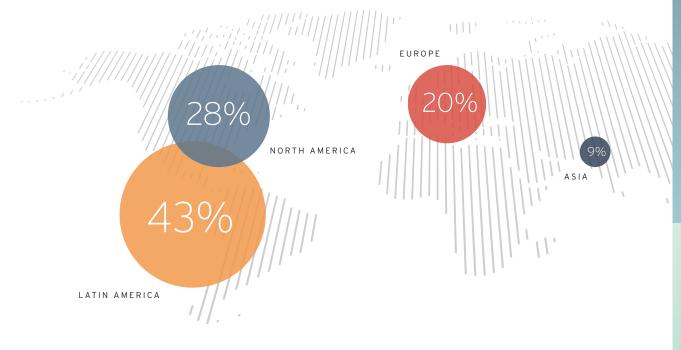


FIGURE 1. GEOGRAPHIC DIVERSITY

PARTICIPANTS

29%

NOT FAMILY OFFICE

region, we also saw broad representation from many of the world's most affluent families, as well as families with lesser yet still meaningful assets under management (AUM). Overall, nearly 18% of family office respondents had over USS1 billion ² in investable assets, 11% had \$500 million. This report summarizes their key observations, providing a unique insight into their actions, market views and pressing concerns. 18% 11% 719% \$500 million to \$1 billion	In step with a healthy mix of respondents by	·
providing a unique insight into their actions, market views and pressing concerns. 18% 11%	many of the world's most affluent families, as well as families with lesser yet still meaningful assets under management (AUM). Overall, nearly 18% of family office respondents had over US\$1 billion ² in investable assets, 11% had \$500 million to \$1	Over \$1 billion
11%	providing a unique insight into their actions,	
	18%	
71% \$500 million to \$1 billion	11%	
	71%	\$500 million to \$1 billion

We present our findings to you and hope that you will find this report to be informative. As ever, we look forward to your feedback,

Under \$500 million

STEPHEN CAMPBELL

MANAGING DIRECTOR CHAIRMAN CITI PRIVATE CAPITAL GROUP CITI PRIVATE BANK

KEY FINDINGS & OBSERVATIONS



SECTION I: INVESTOR SENTIMENT A tale of caution, cash conservation and COVID

In light of the ongoing macroeconomic malaise, perhaps unsurprisingly, an overwhelming majority of our respondents flagged the three C's - caution, cash conservation and COVID-19 prudence when it came to the prevailing sentiment and their reaction to the next 12 months.

Nearly three-quarters of all respondents (72%), i.e. those with a family office and without, described their 12-month investment sentiment as "cautious." However, if pooled with respondents who intend to exercise "extreme caution", collectively 84% will view next four quarters with "caution" or "extreme caution". Delving into their top three sources of fear and concern with respect to financial markets and economic fundamentals and key reasons for the caution expressed, COVID-19 unsurprisingly topped the list, both in terms of vaccine availability, as well as monetary and fiscal response by governments and central banks.

Among others factors flagged by respondents, 23% identified social unrest as an area of concern, perhaps owing to the racial justice protests unfolding in the US and Europe during the time of the survey.³

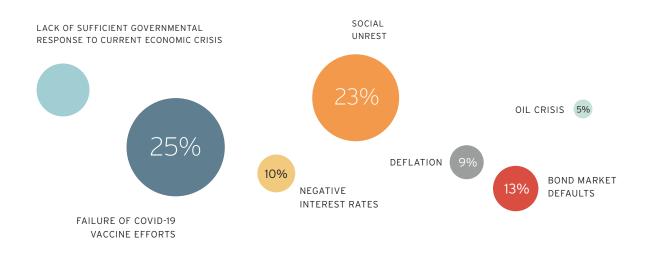


FIGURE 2. KEY REASONS FOR CONCERN OVER FINANCIAL MARKETS

Citi Private Bank's CIO David Bailin notes

The pandemic and government responses have had unprecedented impacts. Never in modern times have we seen shutdowns of entire industries, closure of global transport and "stay at home" orders issued to mitigate the spread of a virus. On the other hand, we also had a glimpse of the future. The value of technology in our lives was confirmed as it saved lives and allowed businesses to operate effectively. While many family offices sought the safe haven of cash, others increased their allocation to equities and, in particular, to technology and shares of firms that actually benefited from our collective pandemic responses.

What we see now is that fixed income returns are unacceptably low and that technology shares have performed above expectations. At this time, we believe there are many ways for families to position for the eventual recovery of sectors and economies as the pandemic ends with the delivery of vaccines and effective treatments. Thus, while we see higher levels of cash within Citi-managed portfolios across the family office segment, the "caution" expressed by the survey respondents may portend a missed investment opportunity.

We envision a period of recovery of small-and medium-sized business and accelerating global growth in 2021 and 2022 based on the amount of stimulus issued by governments and further benefits from innovation globally. While the majority of the survey participants indicated that they do not plan major portfolio allocation changes, we believe that changes in portfolio composition are merited based on the nature of the recovery already under way. Cash will not be king or queen as we move beyond COVID-19.

> "Economies need a safety net to eliminate the most harmful tail risks so that people can take multitudes of small risks without fear of being blown up by a big one".



NASSIM NICHOLAS TALEB AUTHOR OF 'THE BLACK SWAN'

on the prospect of possible negative rates at Citi Private Bank Family Office Leadership Summit, 15 June, 2020.



SECTION II: PORTFOLIO RETURN FORECASTS Tempered expectations in testing times

Given the level of caution and concern in a COVID-19 stricken world, we queried what the respondents' total return on expectations were over the next 12 months. Nearly half (49%) of family office respondents saw 1% to 5% total portfolio returns on horizon.

However, a breakdown of respondents' expectations by managed assets levels suggested that 56% of families with under \$500 million in AUMs expected 1% to 5% returns, while 43% of those offices with over \$500 million expected returns of between 5% and 10%. Finally, a mere 6% of total family office respondents believed they would achieve total returns in excess of 10% during this period.

	2020 SREs	2020 SREs ANNUAL
GLOBAL DEVELOPED MARKET EQUITY	6.2%	5.1%
GLOBAL LARGE CAP EQUITY	5.5%	4.4%
GLOBAL SMALL/ MID CAP EQUITY	11.6%	9.2%
GLOBAL EMERGING MARKET EQUITY	11.7%	10.9%
GLOBAL DEVELOPED ONVESTMENT GRADE FIXED INCOME	1.1%	2.1%
DEVELOPED GOVERMENT BONDS	0.7%	1.9%
DEVELOPED CORPORATE BONDS	2.6%	2.7%
GLOBAL HIGH YIELD FIXED INCOME	5.9%	3.5%
GLOBAL EMERGING FIXED INCOME	6.2%	4.7%
CASH	0.6%	1.8%
HEDGE FUNDS	4.4%	5.3%

FIGURE 3.

A sample of the 2020 Mid-Cycle Strategic Return Estimates and a comparison to the SREs from earlier this year.

SOURCE: Citi Private Bank Global Asset Allocation team. 2020 SREs based on data through 31 Oct 2019. Strategic return estimates are no guarantee of actual results. Past performance is not indicative of iuture results. See Glossary for definitions. Strategic Return Estimates (SRE) based on indices are Citi Private Bank's forecast of returns for specific asset classes (to which the index belongs) over a 10-year ime horizon. The forecast for each specific asset class is made using a proprietary methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is suill around specific valuation measures that require several stages of calculation. Assumptions on the orojected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Fixed Income asset classes tures a proprietary forecasting methodology that is based on current yield levels. Other asset classes tuilize other specific forecasting methodology that is based class. Fixed Income asset class torecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes tuilize other specific forecasting methodologies.

Citi Private Bank's CIO David Bailin notes

The severity of the economic and market impacts of the pandemic led Citi Private Bank to re-run its Strategic Return Estimates (SREs) for the next decade in the middle of 2020. The changes to the resultant 10-year SREs are substantial and required that we also re-run our asset allocation models in parallel. As you can see in the adjacent chart, the most significant changes were the reduction in strategic return estimates (SRE) from fixed income, an increase in SRE's from equities, and in particular from SMID and emerging markets, and accelerated future growth from alternative investments. The immediate liquidity concerns of family offices took precedence, according to the survey results. But raising cash is itself risky. Many families surveyed experienced significant declines in their portfolio values, and without exposure to the likely growth areas over the next decade may not see their portfolios recover in line with the global economy.



SECTION III: IMPACT OF UNFORESEEN HEADWINDS

At start of 2020, few could have predicted the magnitude of the upheaval that hit the global market. Even before the first quarter of the year had ended, the COVID-19 virus and its profound socioeconomic impact had become glaringly obvious. Whole economies went into lockdown, airlines were grounded, retail outlets were shut, and roads and highways were nearly eerily devoid of traffic.

The pandemic brought misery for some sectors such as aviation, oil and gas, as well as hospitality, but also translated into an opportunity for others involved in online retail, technology, logistics and the circular economy. So how did our respondents' finances fare during the COVID-19 crisis and the resulting disruption?

NO CHANGE OR PORTFOLIO DECLINES

77%

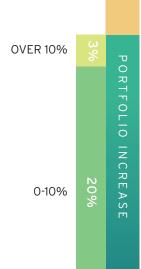
A. Portfolio performance

Nearly one-fifth (19%) of all respondents reported portfolio gains of 0% to 10% between 1 January 2020 and 30 June 2020. Of this group, family offices with AUMs in excess of \$500 million reported a slightly higher rate of favorable returns versus those with under \$500 million.

However, if the responses are divided into those who reported 'increases in portfolio values' and 'no change' or 'declines', it is the latter group that outnumbered the former by 77% to 23%.

Among those who posted declines, 7% of family offices reported portfolio losses of 20% or more, while the vast majority of family office respondents (42%) suffered decreases of less than 10%.





23%

B. Liquidity and Debt

How, then, has the crisis impacted family offices?

Half of family office respondents reported being "moderately concerned" to "very concerned" about family liquidity. Those offices with AUMs in excess of \$500 million showed marginally greater concern about portfolio, operational, and family liquidity than those with under \$500 million.

Nearly one-quarter (23%) of family offices reported drawing down credit lines within 60 days prior to 20 July, 2020, with 28% of families with \$500 million or more in AUMs drawing on lines. Just less than half (44%) of family office portfolios presently maintain between 10% and 20% in cash or liquid assets. Remarkably, 29% held more than 20% in cash at the time of the survey.

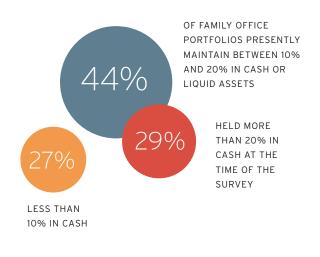


FIGURE 5. LEVEL OF CASH IN CURRENT PORTFOLIO

How, then, have family offices responded to both the crisis and the availability of low interest rate debt? Over half (55%) of family offices intend to take advantage of low interest rates by refinancing, increasing lines of credit, or both; 64% of families with AUMs in excess of \$500 million plan to avail themselves of credit alternatives while, 51% of those under \$500 million expect to do so.

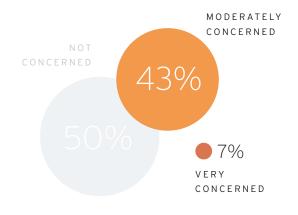
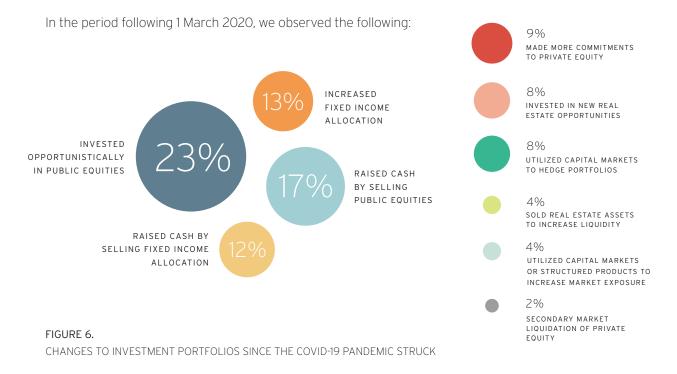


FIGURE 4. LEVEL OF CONCERN OVER FAMILY LIQUIDITY

C. Changes to investment portfolios

In the face of a rapid market decline followed by a sector and geographic specific bounce back (as of July 2020), how did family offices respond in terms of investment strategy?



We see families making meaningful tactical changes in an effort to seek quality and enhance liquidity. When asked what portfolio changes they now plan to make, 56% reported making "some tactical changes," while only 14% reported making "significant portfolio changes." Owing undoubtedly to the unfolding pandemic and uncertainties over regional and global economic outlooks, 22% of family offices are taking a "wait and see" approach before declaring their intentions.

"Although the Fed have said they're not considering it at the moment, one thing my colleagues and I have learned is never to say 'never' in the central banking business. You don't know what you might be compelled or feel compelled to do some day. It's possible that negative rates are what the future holds in store if the problems of secular stagnation become really serious".



DR JANET YELLEN

FORMER CHAIR, US FEDERAL RESERVE

on the prospect of possible negative rates at Citi Private Bank Family Office Leadership Summit, 15 June, 2020.



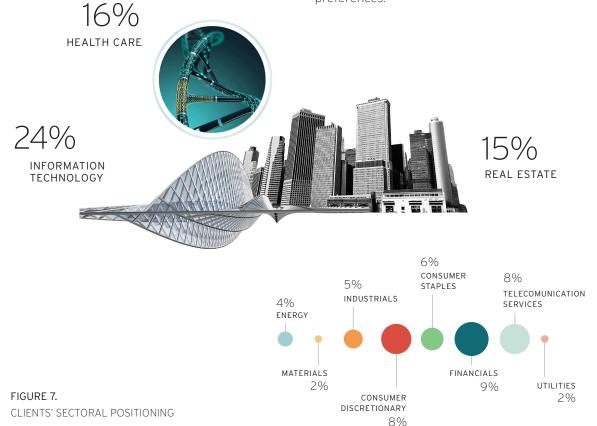
D. Direct investment

Perhaps the most interesting finding of the survey is in the area of direct investment. A remarkable 59% of family offices reportedly have increased their allocations to direct investments for the next 12 months. While this is consistent with trend among family offices towards more direct investment in real estate, private equity and venture capital that has been underway over the past 10 years, the magnitude of this finding suggests an acceleration in interest.

Notably, 66% of family offices with over \$500 million in AUMs said they intend to increase their direct investing versus 55% for those under \$500 million. Where will family offices be investing these direct allocations?

Interestingly, the top three public market sectors where family offices intend to increase investment exposure in the next 12 months corresponds to their private and direct allocations in these sectors which already dominate their public market allocations.

Finally, when asked what segments are best positioned to "thrive" over the next 3 to 5 years, 33% of family offices reported US equities, followed by 27% who reported private equity. Precious metals, emerging market equities, and real estate were a distant third in the high single digits. This is consistent with our Adaptive Valuation Strategies (AVS) Strategic Return Expectations, which show higher private equity returns looking forward. In terms of direct sector investments by clients, respondents named information technology (24%), healthcare (16%) and real estate (15%) as their three top preferences.





sustainable investment funds 15%

esg screening 15%

IMPACT INVESTING



^{NONE}

E. No gold rush or overt sustainable investing

On the subject of precious metals, the media is full of stories of investors seeking the safe haven protection supposedly offered by precious metals in general and gold in particular in the current climate.

The thinking is not without reason, as gold and silver prices have risen strongly this summer, with the yellow metal hitting an all time high.. On 31 July 2020 the COMEX gold futures contract for December 2020 traded at a 9-year high of around \$1995/oz, an uptick of 25% since mid-March when the COVID-19 pandemic took hold.

Many opine that \$2,000-plus levels are likely to become the norm as the rally is being driven by a fundamental shift in asset allocation. However, our survey respondents seem less convinced of precious metals' investment case. A mere 8% of them reckoned that precious metals are likely to be the best performing asset class over the next 3 to 5 years.

Like gold, sustainable and impact investing has gained increasing public attention in recent times, partly aided by the COVID-19 pandemic. A plurality of respondents (35%) said that they felt that now was not the time to adopt this approach.

However, a fifth of family offices did say they were considering impact investing while sustainable investment funds, ESG screening and investment strategies tailored to sustainability causes found favor with 15% of respondents in each case.

ARE FAMILY OFFICES CONSIDERING INVESTING IN SUSTAINABLE AND RESPONSIBLE INVESTING

Citi Private Bank's CIO David Bailin notes

The survey indicated a wide range of investing behaviors by family offices and a similarly broad range of results, too. Those who raised cash by selling equities had less exposure to the markets' recovery after the unprecedented fiscal and monetary stimulus applied to markets. By contrast, many of those who did invest saw improved, above market returns.

We therefore see recent events as yet another example of why market timing is a deficient approach to investing. The disciplined deployment of money into dislocated markets is likely to remain the wisest approach in the years to come. While we see family offices willing to do this in private markets (including direct investments in real estate, health care and technology - sectors we think are poised for sustained growth), the public market opportunities remain as substantial if one looks beyond the next 6 to 12 months.

"It's a ripe environment to find really innovative companies. At a time investors are worried about economies closing down, the investment in Renewable Energy space is going to continue and accelerate. We see this as a long-term unstoppable trend. What was once considered a niche investment for people who wanted to do good is now firmly mainstream".



ROBERT JASMINSKI

GLOBAL HEAD, CITI INVESTMENT MANAGEMENT

on the prospect of possible negative rates at Citi Private Bank Family Office Leadership Summit, 15 June, 2020.



"The companies embracing and driving the winds of change are the ones providing true macro trends of where to invest in. We can accelerate that investment and at the same time bring about a fundamental change in society, be purposeful with our employees and indulge in stakeholder capitalism".



LARRY FINK

FOUNDER AND CHIEF EXECUTIVE OFFICER, BLACKROCK

on stakeholder capitalism at Citi Private Bank Family Office Leadership Summit 8 July, 2020.

"The traditional thought of impact investing was that it meant a lower rate of return. I'd like to think that in time all investing will be impact investing and we will have a positive social impact that will lead to a higher rate of return as the world evolves".



DAVID RUBENSTEIN

CO-FOUNDER & CO-EXECUTIVE CHAIRMAN, THE CARLYLE GROUP

on impact investing at Citi Private Bank Family Office Leadership Summit, 6 July, 2020.



FINAL THOUGHTS

Rising to meet the COVID-19 challenges

What may we discern about family office sentiment and portfolio intentions? Liquidity remains at a premium for many family offices, owing to both economic uncertainty in the age of COVID-19, and a desire to be well positioned to make opportunistic and risk oriented tactical portfolio changes.

As we connect the themes from the survey to our own experience from working with over 1,400 family offices across the world, we clearly see that families do currently hold liquidity at a premium and are willing to sacrifice short to medium term returns to maintain that.

The survey data, and our own analysis of market participants' flows and allocations, suggests that running higher levels of liquidity reflects not only a degree of caution about future returns, but also a desire to build capacity to be more opportunistic and take advantage of future dislocations. We continue to advise clients that the data does not support the premise that timing market dislocations can outweigh the returns from considered, consistent, long term allocations.

The survey also suggests that family offices continue to see private markets as key to taking advantage of such future dislocations, and perhaps explains the desire to build a liquidity 'war chest' in the short to medium term. This is now a multi-cycle trend and continues to feature strongly in many of our client discussions. In particular we see greater interest in the spread between public and private market valuations for the technology and health care sectors, again reflected in the survey data and both <u>'Unstoppable Trends'</u> from the Office of our own CIO. The increasing creation of Special Purpose Acquisition Companies (SPACs) that are positioned to align sponsors and families behind private market opportunities, is one such practical expression of what we see in the survey data.

In conclusion, having explored the resilience and sustainable investment theme in our 2020 Family Office Leadership Program Virtual Summit, we believe that family office investors remain a critical and growing part of the stakeholder capitalism that contributes to a thriving social and economic order. Families have weathered the crisis well and are positioned to deploy further capital as they see opportunities arise, especially in private markets.

JAMES HOLDER

GLOBAL HEAD, CITI PRIVATE CAPITAL GROUP CITI PRIVATE BANK



SURVEY PARTICULARS

The Private Capital Survey 2020 was conducted as part of Citi Private Bank's 2020 Family Office Leadership Program, held from 15 June to 8 July 2020. While the program ran for three weeks, polling for the survey was conducted online over a longer period from 12 June to 20 July 2020.

The survey included 26 questions aimed at gauging investment sentiment and portfolio actions anonymously in the wake of macroeconomic headwinds created by the onset of the COVID-19 global pandemic. It drew responses from a total of 179 participants. Of the stated number of respondents, 127 (or 71%) were those with family offices, while the remaining 52 (or 29%) were ultra-high net worth individuals who do not have a family office.

Geographically, the survey had 77 respondents from Latin America accounting for 43% of the total sample pool. North American respondents totaled 50 (or 28%), followed by Europe, Middle East and Africa with 36 respondents (or 20%) and Asia Pacific with 16 respondents (or 9%). In total, respondents hailed from 103 different countries.

For statistical purposes and the respondents' questionnaire, the US dollar was the valuation currency of the survey.

Of the total number of respondents, 32 (18%) had in excess of \$1 billion in assets under management (AUM), 20 (11%) had AUM in the range of \$500 million to \$1 billion, while the remaining 127 (71%) had under \$500 million in AUM.

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Acknowledgements

Dr Janet Yellen, Former Chair, US Federal Reserve David Rubenstein, Co-Founder & Co-Executive Chairman, The Carlyle Group Larry Fink, Founder and Chief Executive Officer, BlackRock Nassim Nicholas Taleb, Author of 'The Black Swan' Robert Jasminski, Global Head, Citi Investment Management David Bailin, Managing Director, Chief Investment Officer

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GLOSSARY

ASSET CLASS DEFINITIONS:

Cash is represented by US 3-month Government Bond TR, measuring the US dollar-denominated active 3-Month, fixed-rate, nominal debt issues by the US Treasury.

Commodities asset class contains the index composites – GSCI Precious Metals Index, GSCI Energy Index, GSCI Industrial Metals Index, and GSCI Agricultural Index – measuring investment performance in different markets, namely precious metals (e.g., gold, silver), energy commodity (e.g., oil, coal), industrial metals (e.g., copper, iron ore), and agricultural commodity (i.e., soy, coffee) respectively. Reuters/Jeffries CRB Spot Price Index, the TR/CC CRB Excess Return Index, an arithmetic average of commodity futures prices with monthly rebalancing, is used for supplemental historical data.

Emerging Markets (EM) Hard Currency Fixed Income is represented by the FTSE Emerging Market Sovereign Bond Index (ESBI), covering hard currency emerging market sovereign debt.

Global Developed Market Corporate Fixed Income is composed of Bloomberg Barclays indices capturing investment debt from seven different local currency markets. The composite includes investment grade rated corporate bonds from the developed-market issuers.

Global Developed Market Equity is composed of MSCI indices capturing large-, mid- and small-cap representation across 23 individual developed-market countries, as weighted by the market capitalization of these countries. The composite covers approximately 95% of the free float-adjusted market capitalization in each country.

Global Developed Investment Grade Fixed Income is composed of Bloomberg Barclays indices capturing investment-grade debt from twenty different local currency markets. The composite includes fixed-rate treasury, government-related, and investment grade rated corporate and securitized bonds from the developedmarket issuers. Local market indices for US, UK and Japan are used for supplemental historical data.

Global Emerging Market Fixed Income is composed of Bloomberg Barclays indices measuring performance of fixed-rate local currency emerging markets government debt for 19 different markets across Latin America, EMEA and Asia regions. iBoxx ABF China Govt. Bond, the Markit iBoxx ABF Index comprising local currency debt from China, is used for supplemental historical data.

Global High Yield Fixed Income is composed of Bloomberg Barclays indices measuring the non-investment grade, fixed-rate corporate bonds denominated in US dollars, British pounds and euros. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below, excluding emerging market debt. Ibbotson High Yield Index, a broad high yield index including bonds across the maturity spectrum, within the BB-B rated credit quality spectrum, included in the below-investment-grade universe, is used for supplemental historical data.

Hedge Funds is composed of investment managers employing different investment styles as characterized by different sub categories - HFRI Equity Long/Short: Positions both long and short in primarily equity and equity derivative securities; HFRI Credit: Positions in corporate fixed income securities: HFRI Event Driven: Positions in companies currently or prospectively involved in wide variety of corporate transactions; HFRI Relative Value: Positions based on a valuation discrepancy between multiple securities; HFRI Multi Strategy: Positions based on realization of a spread between related yield instruments; HFRI Macro: Positions based on movements in underlying economic variables and their impact on different markets; Barclays Trader CTA Index: The composite performance of established programs (Commodity Trading Advisors) with more than four years of performance history.

High Yield Bank Loans are debt financing obligations issued by a bank or other financial institution to a company or individual that holds legal claim to the borrower's assets in the event of a corporate bankruptcy. These loans are usually secured by a company's assets, and often pay a high coupon due to a company's poor (noninvestment grade) credit worthiness. **Private Equity** characteristics are driven by those for Developed Market Small Cap Equities, adjusted for illiquidity, sector concentration, and greater leverage.

INDEX DEFINITIONS:

Bloomberg Barclays US Corporate Bond

Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes US dollar denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

Bloomberg Barclays US Treasury Index

measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury.

FTSE All-World Index is a stock market index representing global equity performance that covers over 3,100 companies in 47 countries starting in 1986.

MSCI AC Asia ex-Japan Index captures large and mid-cap representation across two of three Developed Markets (DM) countries* (excluding Japan) and 9 Emerging Markets (EM) countries* in Asia. With 1,187 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI China Index captures large and mid-cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). With 704 constituents, the index covers about 85% of this China equity universe.

MSCI Emerging Markets Index captures largeand mid- cap representation across twenty-four Emerging Markets (EM) countries. With 837 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Emerging Markets EMEA Index captures large and mid cap representation across 11 Emerging Markets (EM) countries* in Europe, the Middle East and Africa (EMEA). With 173 constituents, the index covers approximately 85% of the free floatadjusted market capitalization in each country.

MSCI Emerging Markets (EM) Latin America Index captures large and mid-cap representation across five Emerging Markets (EM) countries in Latin America. With 113 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI Europe Index captures large- and mid- cap representation across 15 Developed Markets (DM) countries in Europe*. With 437 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.

The VIX or the Chicago Board Options Exchange (CBOE) Volatility Index, is a real-time index representing the market's expectation of 30-day forwardlooking volatility, derived from the price inputs of the S&P 500 index options.

OTHER TERMINOLOGY:

Adaptive Valuations Strategies is Citi Private Bank's own strategic asset allocation methodology. It determines the suitable long-term mix of assets for each client's investment portfolio.

Correlation is a statistical measure of how two assets or asset classes move in relation to one another. Correlation is measured on a scale of 1 to -1. A correlation of 1 implies perfect positive correlation, meaning that two assets or asset classes move in the same direction all of the time. A correlation of -1 implies perfect negative correlation, such that two assets or asset classes move in the opposite direction to each other all the time. A correlation of 0 implies zero correlation, such that there is no relationship between the movements in the two over time.

LIBOR or London interbank offered rate is the rate of interest at which banks offer to lend funds to each other. It is used a reference rate for large amounts of financial contracts.

Sharpe ratio is a measure of risk-adjusted return, expressed as excess return per unit of deviation, typically referred to as risk.

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