

September 2022

CREDIT SUISSE 

Credit Suisse Single Family Office Index



Important Information: This report represents the views of Credit Suisse (CS) Investment Solutions & Sustainability and has not been prepared in accordance with the legal requirements designed to promote the independence of investment research. It is not a product of the CS Research Department even if it references published research recommendations. CS has policies in place to manage conflicts of interest including policies relating to dealing ahead of the dissemination of investment research. These policies do not apply to the views of Investment Solutions & Sustainability contained in this report. Please find further important information at the end of this material. Singapore: For accredited investors only. Hong Kong: For professional investors only. Australia: For wholesale clients only.

Credit Suisse SFO Index

We are pleased to introduce the Credit Suisse Single Family Office Index (Credit Suisse SFO Index), launched on 26 September 2022.

As documented in the Credit Suisse Global Wealth Report, global wealth grew from USD 231 trillion in 2011 to 463.6 at the end of 2021. The number of ultra high net worth (UHNW) individuals with more than USD 50 million of assets similarly increased, up from 84,700 individuals in 2011 to 264,200 by the end of 2021. Along with this growth, single family offices managing the assets of wealthy private investors have naturally become a specialist resource and support infrastructure for many of them. The INSEAD business school reports that, between 2017 and 2019 alone, 2,000 new single family offices (SFOs) were created to reach a total of 7,300 offices at the end of 2019, and estimates by the Wealth-X Billionaire Census of all family offices (multiple and single family offices) globally numbered about 10,000 in 2020.

Yet there is no single family office benchmark to reflect and compare investment performances across peers. Two of the most common questions from SFOs are what and how are other SFOs doing? The Credit Suisse SFO Index aims to plug this gap and create a reference point for SFOs. While it is often said that family offices have highly individualized asset allocations with a large part in direct equity exposure in unlisted companies, direct real estate portfolios, collectibles and other assets, there are numerous surveys to suggest that, for most family offices, assets in custody with banks still represent the bulk of their investments.

Our database consolidates more than 325 custodians and a large number of active end-clients, with more than 300 SFOs spread over three regions: APAC, Europe and the Middle East.

As we move forward, we will endeavor to cover remaining geographies and strive to create a global SFO benchmark index. We believe the Credit Suisse SFO Index will be a key instrument for single family offices around the world to gain insight into their peers' asset allocations and performances by geography and size.

We are thereby proud to extend Credit Suisse's long tradition as the bank for entrepreneurs by adding the Credit Suisse SFO Index to our Credit Suisse Family Business Index, which provides key performance indicators of family businesses along with other entrepreneur-oriented research. The Credit Suisse SFO Index also complements our simultaneously launched Credit Suisse Single Family Office Survey 2022.



Michael Strobaek
Global Chief
Investment Officer
Credit Suisse



Nannette Hechler-Fayd'herbe
Head of Global
Economics & Research
Credit Suisse

Table of contents



04

Executive summary

06

Rising wealth, booming SFOs

07

Credit Suisse SFO Index data universe

08

Asset allocation

12

Performance analysis

16

Conclusion

17

Appendix

19

General disclaimer / important information

Editor/publisher:

Nannette Hechler-Fayd'herbe
nannette.hechler-fayd'herbe@credit-suisse.com

Contributors:

Myriam Maman
Sebastian Felsch
Fabienne Mougin

Acknowledgments:

The authors would like to thank Ruchika Modi
for her support and assistance.

Cover photo: Shutterstock: zhangyang13576997233

Executive summary

The Credit Suisse SFO Index builds on a universe of more than 300 single family offices tiered in three different size groups: small (less than USD 100 million of assets under management), medium (between USD 100 million and USD 500 million of assets under management) and large (over USD 500 million of assets under management). Three regions are presently covered, namely Asia, Europe and the Middle East.

Assets considered only include assets in banks' custody. Direct participations through equity in unlisted companies, for example, are not included. Neither are direct real estate exposures. Based on the latest industry surveys¹, we estimate that such direct participations represent around 20% of assets among larger SFOs. Our experience is that this proportion tends to be lower in smaller SFOs. We would therefore expect the Credit Suisse SFO Index to be a good starting point for assessing SFO financial asset performance.

1. INSEAD, Family Offices : Global landscape and key trends, April 2020; DBS Private Bank, The Family Office Boom: Contrasts between East and West, 2020; Capgemini, The global state of family offices, 2012; and UBS Global Family Office Report 2022.

Key takeaways:

- As of July 2022, the average SFO asset allocation on assets in banks' custody in our SFO universe is 47% in equities, 29% in bonds, 17% in alternative investments and the rest in multi-asset investment solutions.
- Since January 2020, SFOs have reduced their bond allocations from around 40% to 29% currently, having increased equities and alternative investments instead.
- Of their assets with custodians, we find that large SFOs hold significantly more listed equities (62%) than small SFOs (45%). Moreover, large SFOs hold less alternative investments in bank custody than small SFOs as they are likely to hold more in direct investments than small SFOs.
- As of July 2022, the Credit Suisse SFO Index shows an aggregate year-to-date performance of -7.63%, where Q2 has cost SFOs on average a loss of -4.44%.
- Key performance detractors were listed equities (-6.48%) and key performance contributors were alternative investments (+0.7%) including commodities. As a result of their higher equity allocations, large SFOs have underperformed small and medium SFOs year-to-date. This breaks with the trend over the last two years, where large SFOs outperformed small and medium SFOs for the opposite reason. Regionally, Asia outperformed Europe and the Middle East.
- Since 2020, small SFOs have more or less returned to their pre-pandemic levels of assets (+1.7%), not adding or detracting much value on a cumulative basis. Medium-sized SFOs have grown their assets in custody by 8.4% on a cumulative basis. Large SFOs are outperforming with a cumulative asset growth of 15.8%.

Rising wealth, booming SFOs



Over the last decade, global private wealth has steadily increased. According to the Credit Suisse Global Wealth Report, private household wealth increased from USD 231 trillion in 2011 to USD 463.6 trillion at the end of 2021. In 2011, there were 84,700 individuals with net wealth above USD 50 million globally. At the end of 2021, there were 264,200. By 2026, it is expected that this number will grow to 385,000 (see Figure 1).

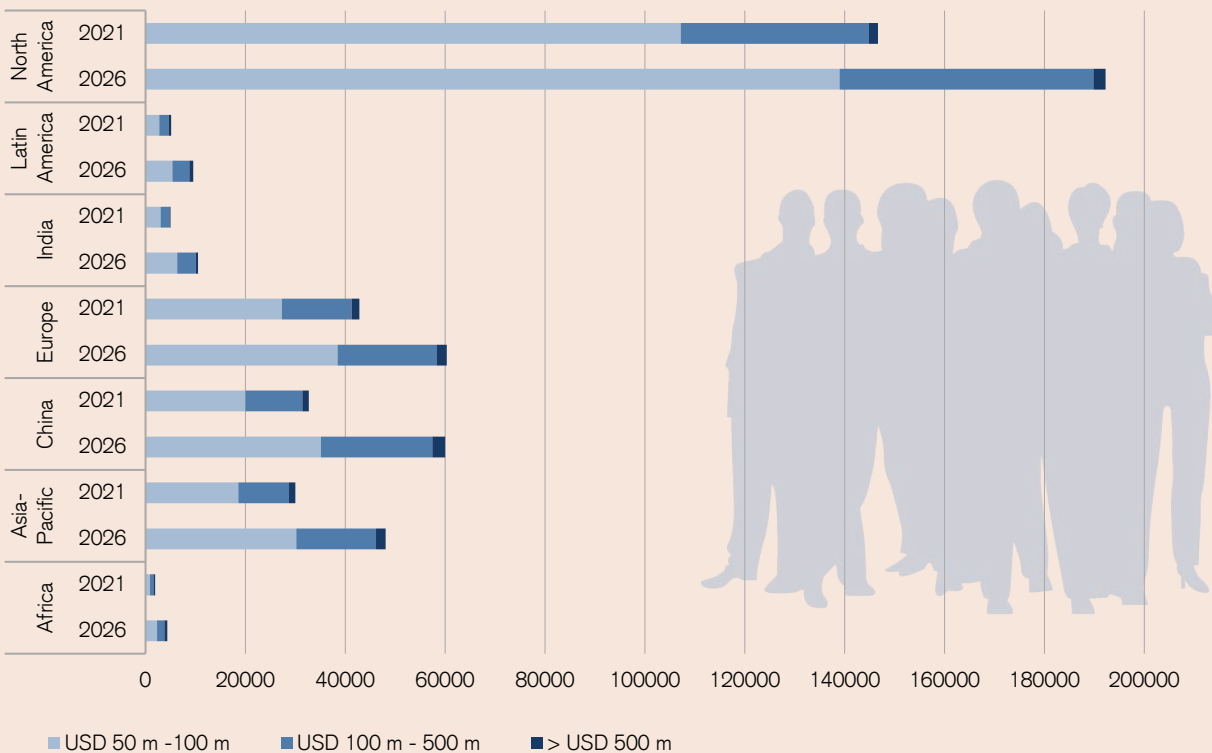
It is little wonder that SFOs have grown extensively over the same time period. In 2012, CapGemini estimated that there were about 3,000 family offices in North America, 1,000 family offices in Europe and around 100 family

offices in Asia. In 2020, the Wealth-X Billionaire Census estimated the global count of family offices (multi-family and single-family combined) to exceed 10,000 and family office consultants Tamarind Partners, estimated that four out of ten family offices around the globe were created in the last decade alone.

INSEAD's Family Offices Report 2020 documented a more rapid growth in the number of single-family offices than of global wealth from 2016 to 2019, with the proportion of family wealth under management by a family office (multi-family or single-family) up from 52% in 2016 to 76% in 2019. The number of single-family offices increased from 5,300 globally in 2017 to 7,300 in 2019, managing an estimated total wealth back then of USD 5.9 trillion assets according to INSEAD.

Single family offices have undoubtedly become a specialist resource and support infrastructure for most UHNW investors. Yet there is no SFO benchmark to compare individual SFO performances to peer groups of similar size or in similar regions, or across the board. Two of the most common questions from SFOs are what and how are other SFOs doing? We aim to plug this gap with the Credit Suisse SFO Index.

Figure 1: Ultra-high-net-worth individuals by region, 2021 and 2026



Source: Global Wealth Report 2022

Credit Suisse SFO Index data universe

Various surveys indicate that a substantial part of SFO-managed wealth is typically in assets with custodians, while the rest is direct equity and debt exposure to unlisted companies, privately and directly managed real estate, and, to a lesser extent, collectibles or digital assets. Assets of SFOs in banks' custody are thus a good starting point to evaluate the allocation and performance trends of SFOs.

Our database consolidates more than 325 custodians and 312 SFOs over three regions – APAC, Europe and the Middle East. They are tiered in small (less than USD 100 million of assets under management), medium (between USD 100 million and USD 500 million of assets under management) and large (more than USD 500 million of assets under management) SFOs across Asia, Europe and the Middle East.

As can be seen from the breakdown by region and size, the current SFO data universe is biased toward Asia as a region and small-sized SFOs. However, as our data universe continues to grow, we expect to encompass the Americas as a region in the future and raise the number of large SFOs across all regions in the sample. For the sample of 312 SFOs, asset allocations are consolidated by tier group since 2020 on a monthly basis. To avoid monthly databreaks due to reporting date differences, rolling 3 months-average asset allocations are provided every month.

Table 1: Credit Suisse SFO Index universe by size and region

Assets	Asia	Europe	Middle East	Total
Small (<USD 100 m)	113	53	18	184
Medium (USD 100–500 m)	53	32	12	97
Large (>USD 500 m)	13	12	6	31
Total	179	97	36	312

Source: Canopy, Credit Suisse; data as of 29/07/2022

Asset allocation



Aggregating asset allocations on an equity-weighted basis across the SFO universe, we find that, on average as of end-July 2022, 47% were in listed equities, 29% in bonds, 17% in alternative investments and the rest in multi-asset investment solutions (see Figure 2).

Alternative investments include hedge funds, private equity, real estate and commodities. Other alternative investments include investments that are categorized as alternative investments, but not specified as hedge funds, private equity or otherwise. For example, they

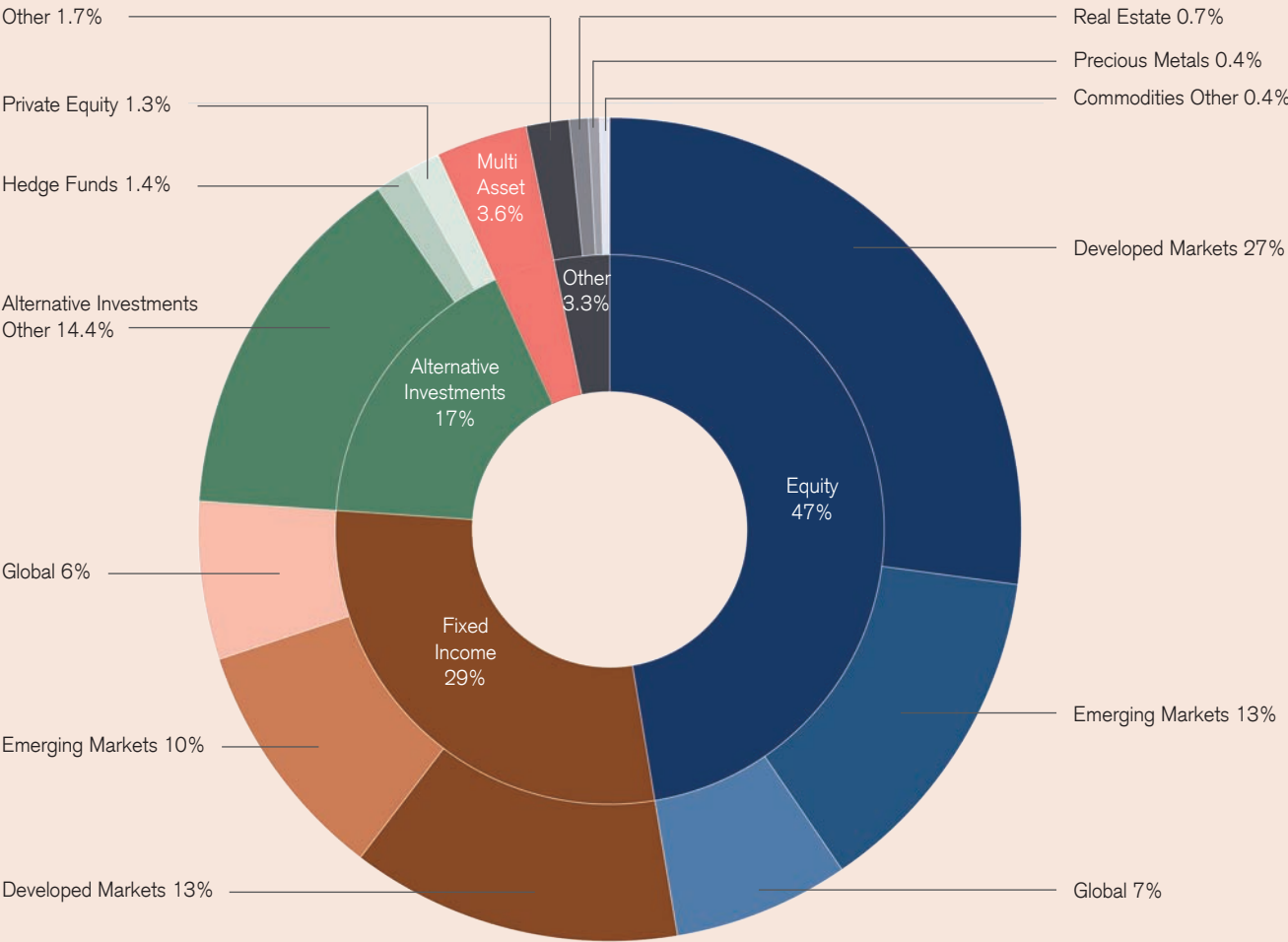
would mostly include funds of funds, but might also include digital assets. Any other asset not categorized in either of the above appears in the “other” category. Liquidity is reported separately and does not form part of the asset allocation.

Since 2020, SFOs have increased their equity and alternative investment holdings to the detriment of global bonds (Figure 3).

There are large differences across the various tiers, with large SFOs holding substantially more listed equities and fewer global bonds than small and medium-sized SFOs (Figure 4). Size tends to matter more than region as far as asset allocations are concerned.

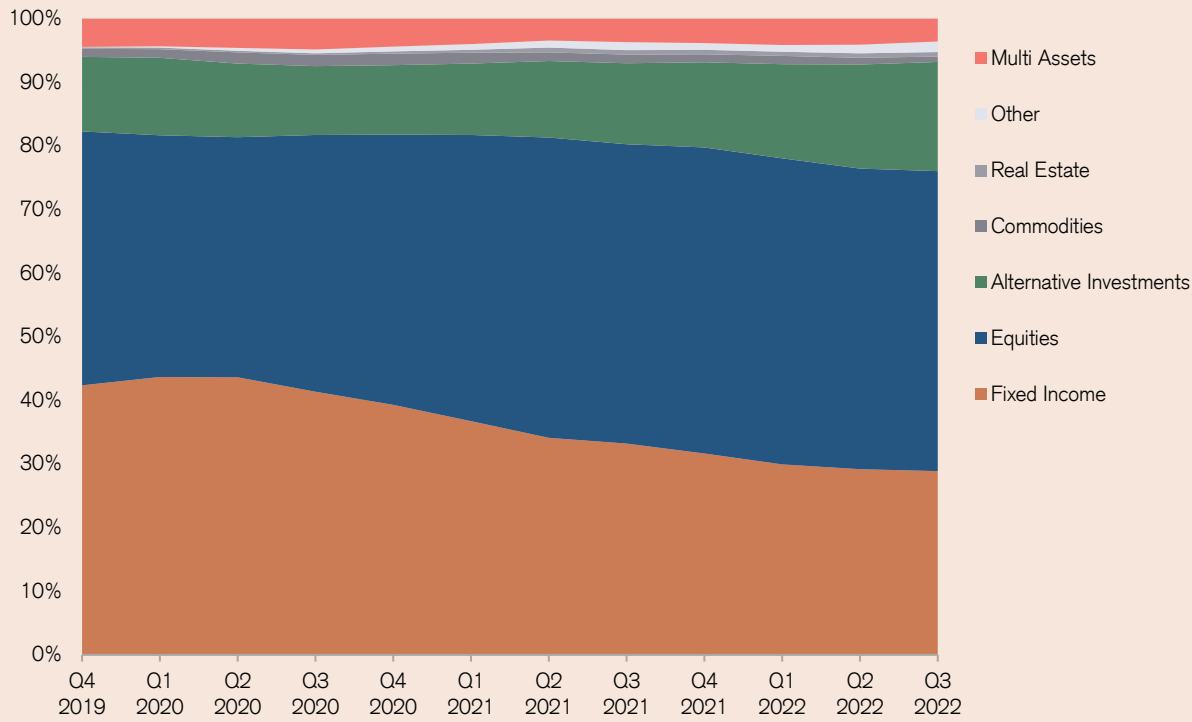
Our results stand in contrast to the notion that SFO asset allocations resemble endowment asset allocations. We find that, based on the largest US endowments (including Harvard, Yale, etc.), endowment asset allocations have a much heavier emphasis on private equity than SFOs (Figure 5).

Figure 2: SFO asset allocation, all SFOs per 31/07/2022



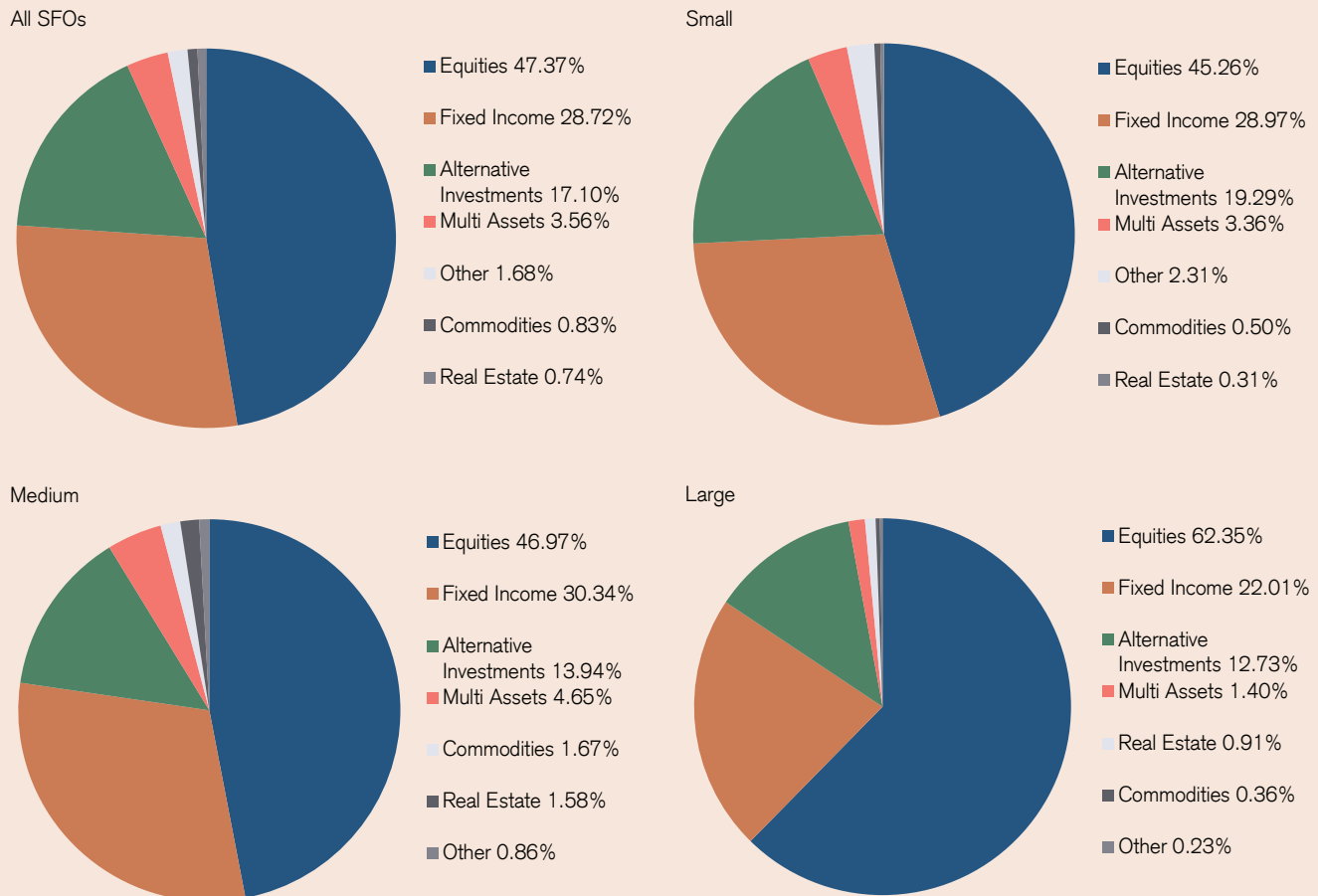
Source: Canopy, Credit Suisse; data as of 29/07/2022

Figure 3: SFO asset allocation (All SFOs), 2020–22



Source: Canopy, Credit Suisse; data as of 29/07/2022

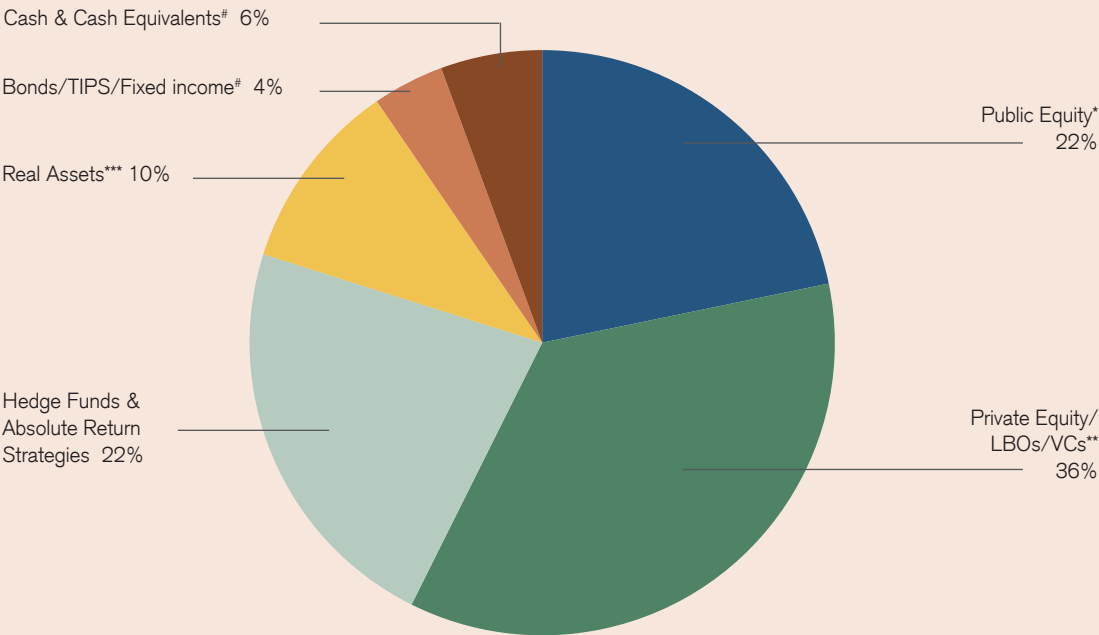
Figure 4: SFO asset allocations by size



Source: Canopy, Credit Suisse; data as of 29/07/2022

10 The above charts are indicative asset allocations and are meant for illustrative purposes only. Please note that asset allocation may be subject to change from time to time without notice.

Figure 5: Top US endowments' average asset allocation



*Public equity includes domestic equity and foreign equity
**PEs/LBOs/VCS grouped together
***Real estate/natural resources grouped together under real assets
#Some present bonds and cash consolidated as one
Source: Investment/annual reports of respective endowments (Harvard, Yale, Stanford, Princeton, MIT, Pennsylvania, UTIMCO, Notre Dame, Michigan, Columbia); data as of 31/08/2022



Credit Suisse SFO Index and performance analysis



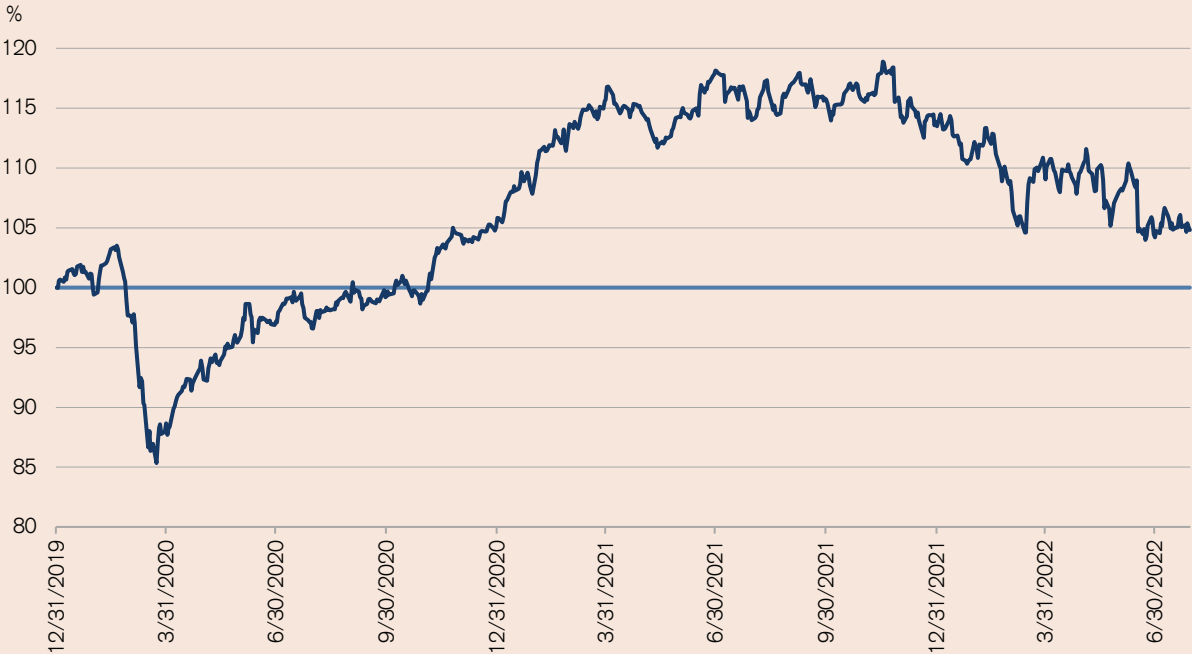
Our Credit Suisse SFO Index mirrors the equal-weighted average performance of SFOs since January 2020, based on the sample of 312 SFOs in our SFO data universe.

Figure 6 shows the evolution of the performance index in US dollars since its inception. It shows that, along with tumbling financial assets in March 2020, SFOs shed nearly 20% of their assets before recovering fully by the end of 2020, and expanding another 15% in the first quarter of 2021. Since then, performance has fluctuated in a broad sideways trend until Q4 2021. Since the start of 2022, SFOs lost much of what they earned in 2021 and are now only +4.8% above their pre-pandemic level in terms of the value of their assets in banks' custody. In 2022, the SFO average performance was -7.63% in US dollar terms at the end of July 2022, with a quarterly loss of -4.44% in Q2.

Figure 7 details the performance contribution by asset classes year-to-date as of end-July 2022. It shows that the bulk of losses since the beginning of the year has come from listed equities (-6.48%), followed by bonds (-1.6%). Multi-asset solutions posted a mild negative contribution of -0.2%. Positive contributions came from alternative investments and commodities. The performance contribution of real estate solutions in banks' custody and other assets remained flat.

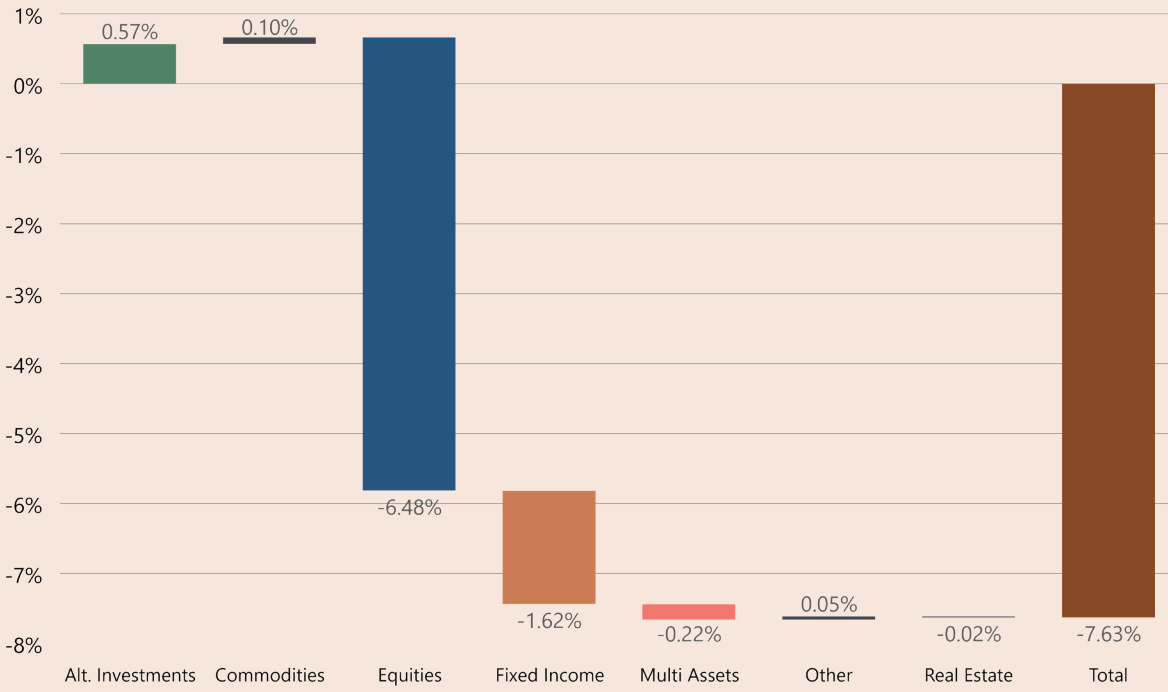
Breaking down the SFO universe by size into small, medium and large tiers as defined previously shows substantial performance differences across the groups. Being more exposed to equities, large SFOs benefited more from the recovery in 2020 and 2021 than small and medium-sized SFOs, but conversely lost relatively more than small and medium-sized SFOs since the beginning of the downturn (see **Figure 8**). As of end-July 2022, small SFOs are down year-to-date by -6.26% on average, medium-sized SFOs are down by -9.25%, and large SFOs are down the most at -11.47%. Since January 2020, large SFOs have expanded their asset base by a cumulative 15.8%, medium SFOs by 8.4% and small SFOs by 1.7%.

Figure 6: Credit Suisse SFO Index, 2020-22



Source: Credit Suisse, unless otherwise specified; last data point 29/07/2022

Figure 7: Performance contribution by asset class, YTD 2022



Source: Credit Suisse, unless otherwise specified; data as of 29/07/2022

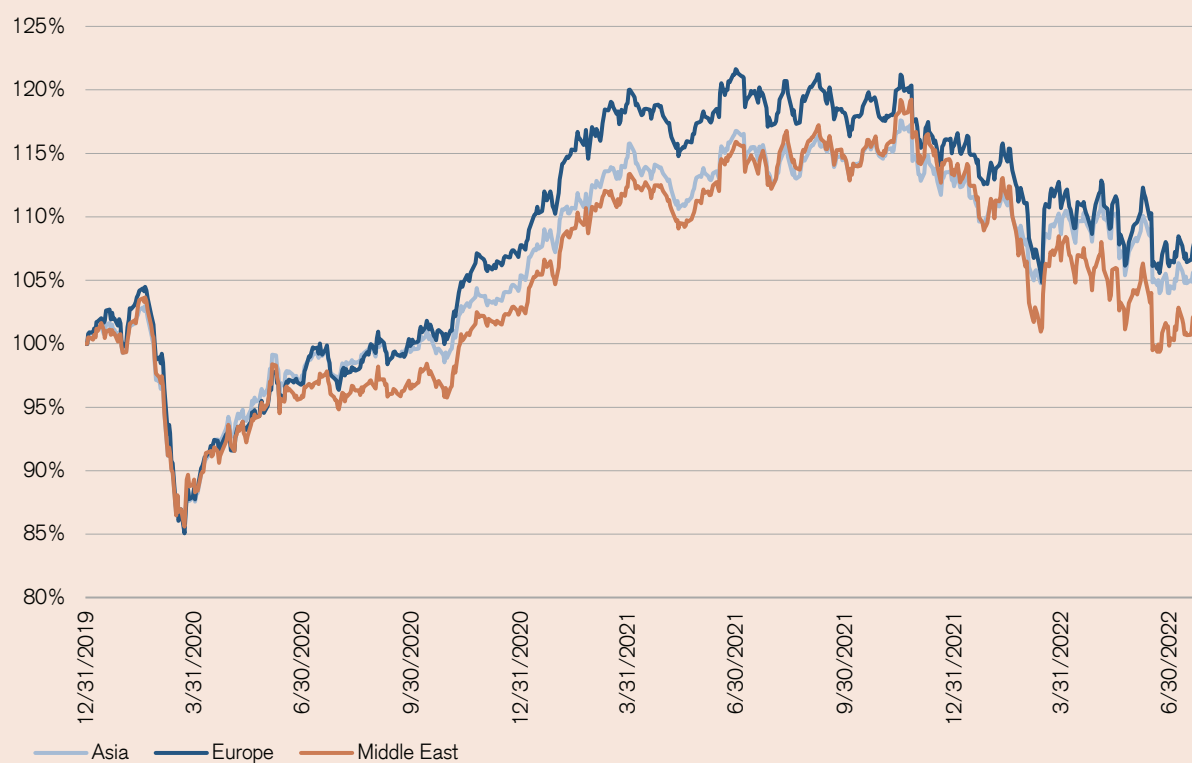
Figure 8: Credit Suisse SFO Index by size, 2020–22



Source: Credit Suisse, unless otherwise specified; last data point 29/07/2022

By region, Asian SFOs are outperforming year-to-date (-6.6% as of end-July) compared to European (-8.1%) and Middle Eastern peers. Middle Eastern SFOs are down by -11.8% (Figure 9). Over the entire 2020-22 period, all three regions had very similar performances until October 2020, after which European SFOs began outperforming the other regions until Q4 2021. As performances are shown in US dollar terms, exchange rate effects may lead to different return comparisons when expressed in local currencies or other reference currencies.

Figure 9: Credit Suisse SFO index, by region, 2020-22



Source: Credit Suisse, unless otherwise specified; last data point 29/07/2022

Conclusion

In the first half of 2022, single family offices have on average seen a loss of around 7.6% on their beneficial owners' assets in custody at banks. Most of these losses have occurred through listed equities.

Large SFOs with more exposure to listed equities in their assets under custody have so far underperformed small and medium-sized SFOs in 2022. But, from January 2020 until end-July 2022, large and medium-sized SFOs have increased their owners' assets by a cumulative 15.8% and 8.4%, respectively, while small SFOs have increased by 1.7%. Size matters more than region in terms of asset allocations. Large SFOs hold more listed equities than small and medium-sized SFOs in their assets under custody. Large SFOs also tend to have more direct private equity and real estate exposure than small SFOs, which access these assets via funds in bank custody.



Appendix

Table 1: Credit Suisse SFO Index level, monthly

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2020	99.41	97.67	88.66	93.35	95.41	97.16	96.58	98.83	99.29	98.98	104.44	105.83
2021	107.85	111.41	115.71	114.62	114.28	118.14	113.99	116.87	115.70	115.76	115.30	113.48
2022	112.18	108.80	109.05	109.65	107.98	104.21	104.82					

Source: Credit Suisse, unless otherwise specified; last data point 29/07/2022

Table 2: Performance by size

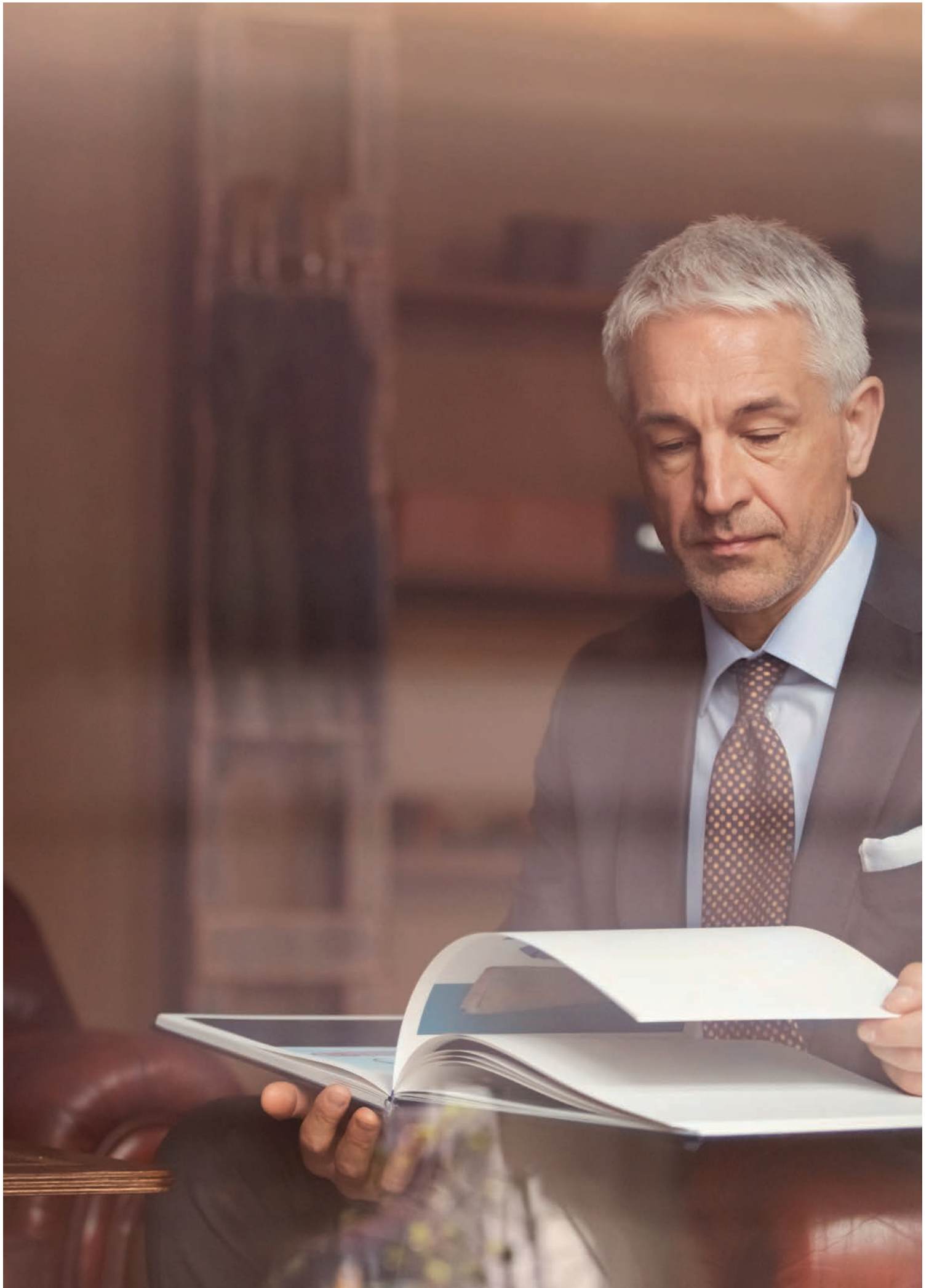
	FY 2020	FY 2021	YTD (July 2022)
Large	22.21%	7.04%	-11.47%
Medium	7.23%	11.44%	-9.25%
Small	3.21%	5.1%	-6.26%
Total	5.83%	7.23%	-7.63%

Source: Credit Suisse, unless otherwise specified; last data point 29/07/2022

Table 3: Performance contribution (quarterly)

Asset class	Q1 2022	Q2 2022	July 2022	YTD 2022
Alternative Investments	-0.04%	0.67%	-0.05%	0.57%
Commodities	0.14%	-0.02%	-0.02%	0.10%
Equities	-2.74%	-4.50%	0.65%	-6.48%
Fixed Income	-1.20%	-0.46%	0.01%	-1.62%
Multi Assets	-0.07%	-0.18%	0.02%	-0.22%
Other	0.01%	0.06%	-0.01%	0.05%
Real Estate	0.00%	0.00%	-0.02%	-0.02%
Total	-3.91%	-4.44%	0.58%	-7.63%

Source: Credit Suisse, unless otherwise specified; last data point 29/07/2022



General disclaimer / important information

Important Information

This report represents the views of Credit Suisse (CS) Investment Solutions & Sustainability and has not been prepared in accordance with the legal requirements designed to promote the independence of investment research. It is not a product of the CS Research Department even if it references published research recommendations. CS has policies in place to manage conflicts of interest including policies relating to dealing ahead of the dissemination of investment research. These policies do not apply to the views of Investment Solutions & Sustainability contained in this report. Please find further important information at the end of this material. Singapore: For accredited investors only. Hong Kong: For professional investors only. Australia: For wholesale clients only.

Risk Warning

Every investment involves risk, especially with regard to fluctuations in value and return. If an investment is denominated in a currency other than your base currency, changes in the rate of exchange may have an adverse effect on value, price or income.

This document may include information on investments that involve special risks. You should seek the advice of your independent financial advisor prior to taking any investment decisions based on this document or for any necessary explanation of its contents. Further information is also available in the information brochure "Risks Involved in Trading Financial Instruments" available from the Swiss Bankers Association.

Past performance is not an indicator of future performance. Performance can be affected by commissions, fees or other charges as well as exchange rate fluctuations.

Financial market risks

Historical returns and financial market scenarios are no reliable indicators of future performance. The price and value of investments mentioned and any income that might accrue could fall or rise or fluctuate. You should consult with such advisor(s) as you consider necessary to assist you in making these determinations.

Investments may have no public market or only a restricted secondary market. Where a secondary market exists, it is not possible to predict the price at which investments will trade in the market or whether such market will be liquid or illiquid.

Emerging markets

Where this document relates to emerging markets, you should be aware that there are uncertainties and risks associated with investments and transactions in various types of investments of, or related or linked to, issuers and obligors incorporated, based or principally engaged in business in emerging markets countries. Investments related to emerging markets countries may be considered speculative, and their prices will be much more volatile than those in the more developed countries of the world. Investments in emerging markets investments should be made only by sophisticated investors or experienced professionals who have independent knowledge of the relevant markets, are able to consider and weigh the various risks presented by such investments, and have the financial resources necessary to bear the substantial risk of loss of investment in such investments. It is your responsibility to manage the risks which arise as a result of investing in emerging markets investments and the allocation of assets in your portfolio. You should seek advice from your own advisers with regard to the various risks and factors to be considered when investing in an emerging markets investment.

Alternative investments

Hedge funds are not subject to the numerous investor protection regulations that apply to regulated authorized collective investments and hedge fund managers are largely unregulated. Hedge funds are not limited to any particular investment discipline or trading strategy, and seek to profit in all kinds of markets by using leverage, derivatives, and complex speculative investment strategies that may increase the risk of investment loss.

Commodity transactions carry a high degree of risk, including the loss of the entire investment, and may not be suitable for many private investors. The performance of such investments depends on unpredictable factors such as natural catastrophes, climate influences, hauling capacities, political unrest, seasonal fluctuations and strong influences of rolling-forward, particularly in futures and indices.

Investors in real estate are exposed to liquidity, foreign currency and other risks, including cyclical risk, rental and local market risk as well as environmental risk, and changes to the legal situation.

Private Equity

Private Equity (hereafter "PE") means private equity capital investment in companies that are not traded publicly (i.e. are not listed on a stock exchange), they are complex, usually illiquid and long-lasting. Investments in a PE fund generally involve a significant degree of financial and/or business risk. Investments in private equity funds are not principal-protected nor guaranteed. Investors will be required to meet capital calls of investments over an extended period of time. Failure to do so may traditionally result in the forfeiture of a portion or the entirety of the capital account, forego any future income or gains on investments made prior to such default and among other things, lose any rights to participate in future investments or forced to sell their investments at a very low price, much lower than secondary market valuations. Companies or funds may be highly leveraged and therefore may be more sensitive to adverse business and/or financial developments or economic factors. Such investments may face intense competition, changing business or economic conditions or other developments that may adversely affect their performance.

Interest rate and credit risks

The retention of value of a bond is dependent on the creditworthiness of the Issuer and/or Guarantor (as applicable), which may change over the term of the bond. In the event of default by the Issuer and/or Guarantor of the bond, the bond or any income derived from it is not guaranteed and you may get back none of, or less than, what was originally invested.

Investment Solutions & Sustainability

Investment Solutions & Sustainability is responsible for multi-asset class strategy formation and subsequent implementation in Credit Suisse's (CS) discretionary and advisory businesses. If shown, Model Portfolios are provided for illustrative purposes only. Your asset allocation, portfolio weightings and performance may look significantly different based on your particular circumstances and risk tolerance. Opinions and views of Investment Solutions & Sustainability may be different from those expressed by other Departments at CS. Investment Solutions & Sustainability views may change at any time without notice and with no obligation to update. CS is under no obligation to ensure that such updates are brought to your attention.

From time to time, Investment Solutions & Sustainability may reference previously published Research articles, including recommendations and rating changes collated in the form of lists. The recommendations contained herein are extracts and/or references to previously published recommendations by CS Research. For equities, this relates to the respective Company

Note or Company Summary of the issuer. Recommendations for bonds can be found within the respective Research Alert (bonds) publication or Institutional Research Flash/Alert– Credit Update Switzerland. These items are available on request or via online banking.

Disclosures are available from:
<https://www.credit-suisse.com/disclosure>

Global disclaimer / Important information

The information provided herein constitutes marketing material; it is not investment research. This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject CS to any registration or licensing requirement within such jurisdiction.

References in this report to CS include Credit Suisse AG, the Swiss bank, its subsidiaries and affiliates. For more information on our structure, please use the following link: <https://www.credit-suisse.com>

NO DISTRIBUTION, SOLICITATION, OR ADVICE:

This document is provided for information and illustrative purposes and is intended for your use only. It is not a solicitation, offer or recommendation to buy or sell any security or other financial instrument. Any information including facts, opinions or quotations, may be condensed or summarized and is expressed as of the date of writing. The information contained in this document has been provided as a general market commentary only and does not constitute any form of regulated investment research financial advice, legal, tax or other regulated service. It does not take into account the financial objectives, situation or needs of any persons, which are necessary considerations before making any investment decision. You should seek the advice of your independent financial advisor prior to taking any investment decisions based on this document or for any necessary explanation of its contents. This document is intended only to provide observations and views of CS at the date of writing, regardless of the date on which you receive or access the information. Observations and views contained in this document may be different from those expressed by other Departments at CS and may change at any time without notice and with no obligation to update. CS is under no obligation to ensure that such updates are brought to your attention.

FORECASTS & ESTIMATES:

Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. To the extent that this report contains statements about future performance, such statements are forward looking and subject to a number of risks and uncertainties. Unless indicated to the contrary, all figures are unaudited. All valuations mentioned herein are subject to CS valuation policies and procedures.

CONFLICTS:

CS reserves the right to remedy any errors that may be present in this report. CS, its affiliates and/or their employees may have a position or holding, or other material interest or effect transactions in any securities mentioned or options thereon, or other investments related thereto and from time to time may add to or dispose of such investments. CS may be providing, or have provided within the previous 12 months, significant advice or investment services in relation to the investments listed in this report or a related investment to any company or issuer mentioned. Some investments referred to in this report will be offered by a single entity or an associate of CS or CS may be the only market maker in such investments. CS is involved in many businesses that relate to companies mentioned in this report. These businesses include specialized trading, risk arbitrage, market making, and other proprietary trading. TAX: Nothing in this report constitutes investment, legal, accounting or tax advice. CS does not advise on the tax consequences of investments and you are advised to contact an independent tax advisor. The levels and basis of taxation are dependent on individual circumstances and are subject to change.

SOURCES:

Information and opinions presented in this report have been obtained or derived from sources which in the opinion of CS are reliable, but CS makes no representation as to their accuracy or completeness. CS accepts no liability for a loss arising from the use of this report.

WEBSITES:

This report may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the report refers to website material of CS, CS has not reviewed the linked site and takes no responsibility for the content contained therein. Such address or hyperlink (including addresses or hyperlinks to CS's own website material) is provided solely for your convenience and information and the content of the linked site does not in any way form part of this report. Accessing such a website or following such a link through this report or CS's website shall be at your own risk.

DATA PRIVACY:

Your Personal Data will be processed in accordance with the Credit Suisse privacy statement accessible at your domicile through the official Credit Suisse website: <https://www.credit-suisse.com>

In order to provide you with marketing materials concerning our products and services, Credit Suisse Group AG and its subsidiaries may process your basic Personal Data (i.e. contact details such as name, e-mail address) until you notify us that you no longer wish to receive them. You can opt out from receiving these materials at any time by informing your Relationship Manager.

Distributing entities

Except otherwise specified herein, this report is distributed by Credit Suisse AG, a Swiss bank, authorized and regulated by the Swiss Financial Market Supervisory Authority Bahrain: This report is distributed by Credit Suisse AG, Bahrain Branch, a branch of Credit Suisse AG, Zurich/Switzerland, duly authorized and regulated by the Central Bank of Bahrain (CBB) as an Investment Business Firm Category 2. Related financial services or products are only made available to Accredited Investors, as defined by the CBB, and are not intended for any other persons. The Central Bank of Bahrain has not reviewed, nor has it approved, this document or the marketing of any investment vehicle referred to herein in the Kingdom of Bahrain and is not responsible for the performance of any such investment vehicle. Credit Suisse AG, Bahrain Branch is located at Level 21, East Tower, Bahrain World Trade Centre, Manama, Kingdom of Bahrain. Brazil: This report is distributed in Brazil by Credit Suisse (Brasil) S.A. Corretora de Títulos e Valores Mobiliários or its affiliates. Chile: This report is distributed by Credit Suisse Agencia de Valores (Chile) Limitada, a branch of Credit Suisse AG (incorporated in the Canton of Zurich), regulated by the Chilean Financial Market Commission. Neither the issuer nor the securities have been registered with the Financial Market Commission of Chile (Comisión para el Mercado Financiero) pursuant to Law no. 18.045, the Ley de Mercado de Valores, and regulations thereunder, so they may not be offered or sold publicly in Chile. This document does not constitute an offer of, or an invitation to subscribe for or purchase, the securities in the Republic of Chile, other than to individually identified investors pursuant to a private offering within the meaning of article 4 of the Ley de Mercado de Valores (an offer that is not "addressed to the public in general or to a certain sector or specific group of the public"). DIFC: This information is being distributed by Credit Suisse AG (DIFC Branch). Credit Suisse AG (DIFC Branch) is licensed and regulated by the Dubai Financial Services Authority ("DFSA"). Related financial services or products are only made available to Professional Clients or Market Counterparties, as defined by the DFSA and are not intended for any other persons. Credit Suisse AG (DIFC Branch) is located on Level 9 East, The Gate Building, DIFC, Dubai, United Arab Emirates. France: This report is distributed by Credit Suisse (Luxembourg) S.A. Succursale en France (the "France branch"), which is a branch of Credit Suisse (Luxembourg) S.A., a duly authorized credit institution in the Grand Duchy of Luxembourg with registered address 5, rue Jean Monnet, L-2180 Luxembourg. The France branch is subject to the prudential supervision of the Luxembourg supervisory authority, the Commission de Surveillance du Secteur Financier (CSSF), and of the French supervisory authorities, the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and the Autorité des Marchés Financiers (AMF). Germany: This report is distributed by Credit Suisse (Deutschland) Aktiengesellschaft regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht ("BaFin"). Guernsey: This report is distributed by Credit Suisse AG Guernsey Branch, a branch of Credit Suisse AG (incorporated in the Canton of Zurich), with its place of business at Helvetia Court, Les Echelons, South Esplanade, St Peter Port, Guernsey. Credit Suisse AG Guernsey Branch is wholly owned by Credit Suisse AG and regulated by the Guernsey Financial Services Commission. Copies of the latest audited accounts of Credit Suisse AG are available on request. India: This report is distributed by Credit Suisse Securities (India) Private Limited (CIN no. U67120MH1996PTC104392), regulated by the Securities and Exchange Board of India as Research Analyst (registration no. INH00001030), as Portfolio Manager (registration no. INP000002478) and as Stock Broker (registration no. INZ000248233), having registered address at 9th Floor, Ceejay House, Dr. Annie Besant Road, Worli, Mumbai

– 400 018, India, T- +91-22 6777 3777. Israel: If distributed by Credit Suisse Financial Services (Israel) Ltd. in Israel: This document is distributed by Credit Suisse Financial Services (Israel) Ltd. Credit Suisse AG, including the services offered in Israel, is not supervised by the Supervisor of Banks at the Bank of Israel, but by the competent banking supervision authority in Switzerland. Credit Suisse Financial Services (Israel) Ltd. is a licensed investment marketer in Israel and thus, its investment marketing activities are supervised by the Israel Securities Authority. Italy: This report is distributed in Italy by Credit Suisse (Italy) S.p.A., a bank incorporated and registered under Italian law subject to the supervision and control of Banca d'Italia and CONSOB. Lebanon: This report is distributed by Credit Suisse (Lebanon) Finance SAL ("CSLF"), a financial institution incorporated in Lebanon and regulated by the Central Bank of Lebanon ("CBL") and having a financial institution license number 42. Credit Suisse (Lebanon) Finance SAL is subject to the CBL's laws and circulars as well as the laws and regulations of the Capital Markets Authority of Lebanon ("CMA"). CSLF is a subsidiary of Credit Suisse AG and part of the Credit Suisse Group (CS). The CMA does not accept any responsibility for the content of the information included in this report, including the accuracy or completeness of such information. The liability for the content of this report lies with the issuer, its directors and other persons, such as experts, whose opinions are included in the report with their consent. The CMA has also not assessed the suitability of the investment for any particular investor or type of investor. It is hereby expressly understood and acknowledged that investments in financial markets may involve a high degree of complexity and risk of loss in value and may not be suitable to all investors. The suitability assessment performed by CSLF with respect to this investment will be undertaken based on information that the investor would have provided to CSLF as at the date of such assessment and in accordance with Credit Suisse internal policies and processes. It is understood that the English language will be used in all communication and documentation provided by CS and/or CSLF. By accepting to invest in the product, the investor expressly and irrevocably confirms that he fully understands, and has no objection to the use of the English language. Luxembourg: This report is distributed by Credit Suisse (Luxembourg) S.A., a duly authorized credit institution in the Grand Duchy of Luxembourg with registered address 5, rue Jean Monnet, L-2180 Luxembourg. Credit Suisse (Luxembourg) S.A. is subject to the prudential supervision of the Luxembourg supervisory authority, the Commission de Surveillance du Secteur Financier (CSSF). Mexico: This document represents the view of the person who provides his/her services to C. Suisse Asesoría México, S.A. de C.V. ("C. Suisse Asesoría") and/or Banco Credit Suisse (México), S.A., Institución de Banca Múltiple, Grupo Financiero Credit Suisse (México) ("Banco CS") so that both C. Suisse Asesoría and Banco CS reserve the right to change their mind at any time not assuming any liability in this regard. This document is distributed for informational purposes only and does not imply a personal recommendation or suggestion, nor the invitation to celebrate any operation and does not replace the communication you have with your executive in relation to C. Suisse Asesoría and/or Banco CS prior to taking any investment decision. C. Suisse Asesoría and/or Banco CS does not assume any responsibility for investment decisions based on information contained in the document sent, as the same may not take into account the context of the investment strategy and objectives of particular clients. Prospectus, brochures, investment regimes of investment funds, annual reports or periodic financial information contain all additional useful information for investors. These documents can be obtained free of charge directly from issuers, operators of investment funds, in the Internet page of the stock exchange in which they are listed or through its executive in C. Suisse Asesoría and/or Banco CS. Past performance and the various scenarios of existing markets do not guarantee present or future yields. In the event that the information contained in this document is incomplete, incorrect or unclear, please contact your Executive of C. Suisse Asesoría and/or Banco CS as soon as possible. It is possible that this document may suffer modifications without any responsibility for C. Suisse Asesoría and/or Banco CS. This document is distributed for informational purposes only and is not a substitute for the Operations Reports and/or Account Statements you receive from C. Suisse Asesoría and/or Banco CS in terms of the General Provisions Applicable to Financial Institutions and other Legal Entities that Provide Investment Services issued by the Mexican Banking and Securities Commission ("CNBV"). Given the nature of this document, C. Suisse Asesoría and/or Banco CS does not assume any responsibility derived from the information contained therein. Without prejudice to the fact that the information was obtained from or based on sources believed to be reliable by C. Suisse Asesoría and/or Banco CS, there is no guarantee that the information is either accurate or complete. Banco CS and/or C. Suisse Asesoría does not accept any liability arising from any loss arising from the use of the information contained in the document sent to you. It is recommended that the investor make sure that the information provided is in accordance to his/her personal circumstances and investment profile, in relation to any

particular legal, regulatory or fiscal situation, or to obtain independent professional advice. C. Suisse Asesoría México, S.A. de C.V. is an investment adviser created in accordance with the Mexican Securities Market Law ("LMV"), registered with the CNBV under the folio number 30070. C. Suisse Asesoría México, S.A. de C.V. is not part of Grupo Financiero Credit Suisse (México), S.A. de C.V., or any other financial group in Mexico. C. Suisse Asesoría México, S.A. de C.V. is not an independent investment adviser as provided by LMV and other applicable regulations due to its direct relationship with Credit Suisse AG, a foreign financial institution, and its indirect relationship with the entities that make up Grupo Financiero Credit Suisse (México), S.A. de C.V. Netherlands: This report is distributed by Credit Suisse (Luxembourg) S.A., Netherlands Branch (the "Netherlands branch"), which is a branch of Credit Suisse (Luxembourg) S.A., a duly authorized credit institution in the Grand Duchy of Luxembourg with registered address 5, rue Jean Monnet, L-2180 Luxembourg. The Netherlands branch is subject to the prudential supervision of the Luxembourg supervisory authority, the Commission de Surveillance du Secteur Financier (CSSF), and of the Dutch supervisory authority, De Nederlandsche Bank (DNB), and of the Dutch market supervisor, the Autoriteit Financiële Markten (AFM). Portugal: This report is distributed by Credit Suisse (Luxembourg) S.A., Sucursal em Portugal (the "Portugal branch"), which is a branch of Credit Suisse (Luxembourg) S.A., a duly authorized credit institution in the Grand Duchy of Luxembourg with registered address 5, rue Jean Monnet, L-2180 Luxembourg. The Portugal branch is subject to the prudential supervision of the Luxembourg supervisory authority, the Commission de Surveillance du Secteur Financier (CSSF), and of the Portuguese supervisory authorities, the Banco de Portugal (BdP) and the Comissão do Mercado dos Valores Mobiliários (CMVM). Qatar: This information has been distributed by Credit Suisse (Qatar) L.L.C., which is duly authorized and regulated by the Qatar Financial Centre Regulatory Authority (QFCRA) under QFC License No. 00005. All related financial products or services will only be available to Eligible Counterparties (as defined by the QFCRA) or Business Customers (as defined by the QFCRA), including individuals, who have opted to be classified as a Business Customer, with net assets in excess of QR 4 million, and who have sufficient financial knowledge, experience and understanding to participate in such products and/or services. Therefore, this information must not be delivered to, or relied on by, any other type of individual. Saudi Arabia: This document is distributed by Credit Suisse Saudi Arabia (CR Number 1010228645), duly licensed and regulated by the Saudi Arabian Capital Market Authority pursuant to License Number 08104-37 dated 23/03/1429H corresponding to 21/03/2008AD. Credit Suisse Saudi Arabia's principal place of business is at King Fahad Road, Hay Al Mhamadiya, 12361- 6858 Riyadh, Saudi Arabia. Website: <https://www.credit-suisse.com/sa>. Under the Rules on the Offer of Securities and Continuing Obligations, this document may not be distributed in the Kingdom except to such persons as are permitted under the Rules on the Offer of Securities and Continuing Obligations issued by the Capital Market Authority. The Capital Market Authority does not make any representation as to the accuracy or completeness of this document, and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this document, you should consult an authorized financial advisor. Under the Investment Fund Regulations, this document may not be distributed in the Kingdom except to such persons as are permitted under the Investment Fund Regulations issued by the Capital Market Authority. The Capital Market Authority does not make any representation as to the accuracy or completeness of this document, and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. Prospective subscribers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this document you should consult an authorized financial advisor. South Africa: This information is being distributed by Credit Suisse AG which is registered as a financial services provider with the Financial Sector Conduct Authority in South Africa with FSP number 9788 and / or by Credit Suisse (UK) Limited, which is registered as a financial services provider with the Financial Sector Conduct Authority in South Africa with FSP number 48779. Spain: This document is a marketing material and is provided by Credit Suisse AG, Sucursal en España, legal entity registered at the Comisión Nacional del Mercado de Valores for information purposes. It is exclusively addressed to the recipient for personal use only and, according to current regulations in force, by no means can it be considered as a security offer, personal investment advice or any general or specific recommendation of products or investment strategies with the aim that you perform any operation. The client shall be deemed responsible, in all cases, for taking whatever decisions on investments or disinvestments, and therefore the client takes all responsibili-

ty for the benefits or losses resulting from the operations that the client decides to perform based on the information and opinions included in this document. This document is not the result of a financial analysis or research and therefore, neither it is subject to the current regulations that apply to the production and distribution of financial research, nor its content complies with the legal requirements of independence of financial research. Turkey: The investment information, comments and recommendations contained herein are not within the scope of investment advisory activity. The investment advisory services are provided by the authorized institutions to the persons in a customized manner taking into account the risk and return preferences of the persons. Whereas, the comments and advices included herein are of general nature. Therefore recommendations may not be suitable for your financial status or risk and yield preferences. For this reason, making an investment decision only by relying on the information given herein may not give rise to results that fit your expectations. This report is distributed by Credit Suisse Istanbul Menkul Değerler Anonim Şirketi, regulated by the Capital Markets Board of Turkey, with its registered address at Levazim Mahallesi, Koru Sokak No. 2 Zorlu Center Terasevler No. 61 34340 Besiktas/Istanbul-Turkey. United Kingdom: This material is distributed by Credit Suisse (UK) Limited. Credit Suisse (UK) Limited, is authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Where this material is distributed into the United Kingdom by an offshore entity not exempted under the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 the following will apply: To the extent communicated in the United Kingdom ("UK") or capable of having an effect in the UK, this document constitutes a financial promotion which has been approved by Credit Suisse (UK) Limited, which is authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority for the conduct of investment business in the UK. The registered address of Credit Suisse (UK) Limited is Five Cabot Square, London, E14 4QR. Please note that the rules under the UK's Financial Services and Markets Act 2000 relating to the protection of retail clients will not be applicable to you and that any potential compensation made available to "eligible claimants" under the UK's Financial Services Compensation Scheme will also not be available to you. Tax treatment depends on the individual circumstances of each client and may be subject to changes in future.

Important regional disclosure information

Pursuant to CVM Resolution No. 20/2021, of February 25, 2021, the author(s) of the report hereby certify(ies) that the views expressed in this report solely and exclusively reflect the personal opinions of the author(s) and have been prepared independently, including with respect to Credit Suisse. Part of the author(s)'s compensation is based on various factors, including the total revenues of Credit Suisse, but no part of the compensation has been, is, or will be related to the specific recommendations or views expressed in this report. In addition, Credit Suisse declares that: Credit Suisse has provided, and/or may in the future provide investment banking, brokerage, asset management, commercial banking and other financial services to the subject company/companies or its affiliates, for which they have received or may receive customary fees and commissions, and which constituted or may constitute relevant financial or commercial interests in relation to the subject company/companies or the subject securities.

UNITED STATES: NEITHER THIS REPORT NOR ANY COPY THEREOF MAY BE SENT, TAKEN INTO OR DISTRIBUTED IN THE UNITED STATES OR TO ANY US PERSON (within the meaning of Regulation S under the US Securities Act of 1933, as amended).

APAC – IMPORTANT NOTICE

The information provided herein constitutes marketing material; it is not investment research. For all, except accounts managed by relationship managers and/or investment consultants of Credit Suisse AG, Hong Kong Branch: This material has been prepared by Credit Suisse AG ("Credit Suisse") as general information only. This material is not and does not purport to provide substantive research or analysis and, accordingly, is not investment research or a research recommendation for regulatory purposes. It does not take into account the financial objectives, situation or needs of any person, which are necessary considerations before making any investment decision. The information provided is not intended to provide a sufficient basis on which to make an investment decision and is not a personal recommendation or investment advice. Credit Suisse makes no representation as to the suitability of the products or services specified in this material for any particular investor. It does not constitute an invitation or an offer to any person to subscribe for or purchase any of the products or services specified in this material or to participate in any other transactions.

The only legally binding terms are to be found in the applicable product documentation or specific contracts and confirmations prepared by Credit Suisse. For accounts managed by relationship managers and/or investment consultants of Credit Suisse AG, Hong Kong Branch: This material has been prepared by Credit Suisse AG ("Credit Suisse") as general information only. This material is not and does not purport to provide substantive research or analysis and, accordingly, is not investment research for regulatory purposes. It does not take into account the financial objectives, situation or needs of any person, which are necessary considerations before making any investment decision. Credit Suisse makes no representation as to the appropriateness of the products or services specified in this material for any particular investor. It does not constitute an invitation or an offer to any person to subscribe for or purchase any of the products or services specified in this material or to participate in any other transactions. The only legally binding terms are to be found in the applicable product documentation or specific contracts and confirmations prepared by Credit Suisse. For all: In connection with the products specified in this material, Credit Suisse and/or its affiliates may:

- (i) have had a previous role in arranging or providing financing to the subject entities;
- (ii) be a counterparty in any subsequent transaction in connection with the subject entities; or
- (iii) pay, or may have paid, or receive, or may have received, one-time or recurring remuneration from the entities specified in this material, as part of its/their compensation. These payments may be paid to or received from third parties.

Credit Suisse and/or its affiliates (including their respective officers, directors and employees) may be, or may have been, involved in other transactions with the subject entities specified in this material or other parties specified in this material which are not disclosed in this material. Credit Suisse, for itself and on behalf of each of its affiliates, reserves the right to, provide and continue to provide services, and deal and continue to deal with the subject entities of the products specified in this material or other parties in connection with any product specified in this material. Credit Suisse or its affiliates may also hold, or may be holding, trading positions in the share capital of any of the subject entities specified in this material.

For all, except accounts managed by relationship managers and/or investment consultants of Credit Suisse AG, Hong Kong Branch: A Credit Suisse affiliate may have acted upon the information and analysis contained in this material before being made available to the recipient. A Credit Suisse affiliate may, to the extent permitted by law, participate or invest in other financing transactions with the issuer of any securities referred to herein, perform services or solicit business from such issuers, or have a position or effect transactions in the securities or options thereof. To the fullest extent permitted by law, Credit Suisse and its affiliates and each of their respective directors, employees and consultants do not accept any liability arising from an error or omission in this material or for any direct, indirect, incidental, specific or consequential loss and/or damage suffered by the recipient of this material or any other person from the use of or reliance on the information set out in this material. None of Credit Suisse or its affiliates (or their respective directors, officers, employees or advisers) makes any warranty or representation as to the accuracy, reliability and/or completeness of the information set out in this material. The information contained in this material has been provided as a general market commentary only and does not constitute any form of regulated financial advice, legal, tax or other regulated service. Observations and views contained in this material may be different from, or inconsistent with, the observations and views of Credit Suisse's Research analysts, other divisions or the proprietary positions of Credit Suisse. Credit Suisse is under no obligation to update, notify or provide any additional information to any person if Credit Suisse becomes aware of any inaccuracy, incompleteness or change in the information contained in the material. To the extent that this material contains statements about future performance, such statements are forward looking and subject to a number of risks and uncertainties. Past performance is not a reliable indicator of future performance.

For accounts managed by relationship managers and/or investment consultants of Credit Suisse AG, Hong Kong Branch: A Credit Suisse affiliate may have acted upon the information and analysis contained in this material before being made available to the recipient. A Credit Suisse affiliate may, to the extent permitted by law, participate or invest in other financing transactions with the issuer of any securities referred to herein, perform services or solicit business from such issuers, or have a position or effect transactions in the securities or options thereof. To the fullest extent permitted by law, Credit Suisse and its affiliates and each of their respective directors, employees and consultants do not accept any liability arising from

an error or omission in this material or for any direct, indirect, incidental, specific or consequential loss and/or damage suffered by the recipient of this material or any other person from the use of or reliance on the information set out in this material. None of Credit Suisse or its affiliates (or their respective directors, officers, employees or advisers) makes any warranty or representation as to the accuracy, reliability and/ or completeness of the information set out in this material. The information contained in this material has been provided as a general market commentary only and does not constitute any form of legal, tax or other regulated service. Observations and views contained in this material may be different from, or inconsistent with, the observations and views of Credit Suisse's Research analysts, other divisions or the proprietary positions of Credit Suisse. Credit Suisse is under no obligation to update, notify or provide any additional information to any person if Credit Suisse becomes aware of any inaccuracy, incompleteness or change in the information contained in the material. To the extent that this material contains statements about future performance, such statements are forward looking and subject to a number of risks and uncertainties. Past performance is not a reliable indicator of future performance. For all: This material is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of, or is located in, any jurisdiction where such distribution, publication, availability or use would be contrary to applicable law or regulation, or which would subject Credit Suisse and/or its subsidiaries or affiliates to any registration or licensing requirement within such jurisdiction. Materials have been furnished to the recipient and should not be redistributed without the express prior written consent of Credit Suisse. For further information, please contact your Relationship Manager. To the extent that this material contains an appendix comprising research reports, the following additional notice applies to such appendix.

ADDITIONAL IMPORTANT NOTICE FOR APPENDIX

The reports in the Appendix ("Reports") have been authored by members of the Credit Suisse Research department, and the information and opinions expressed therein were as of the date of writing and are subject to change without notice. Views expressed in respect of a particular security in the Reports may be different from, or inconsistent with, the observations and views of the Credit Suisse Research department of the Investment Banking division due to the differences in evaluation criteria. These Reports have been previously published by Credit Suisse Research on the web:

Credit Suisse does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that Credit Suisse may have a conflict of interest that could affect the objectivity of these Reports.

For all, except accounts managed by relationship managers and/or investment consultants of Credit Suisse AG, Hong Kong Branch: Credit Suisse may not have taken any steps to ensure that the securities referred to in these Reports are suitable for any particular investor. Credit Suisse will not treat recipients of the Reports as its customers by virtue of their receiving the Reports. For accounts managed by relationship managers and/or investment consultants of Credit Suisse AG, Hong Kong Branch: Credit Suisse may not have taken any steps to ensure that the securities referred to in these Reports are appropriate for any particular investor. Credit Suisse will not treat recipients of the Reports as its customers by virtue of their receiving the Reports. For all: For a discussion of the risks of investing in the securities mentioned in the Reports, please refer to the following Internet link:
<https://investment.credit-suisse.com/re/riskdisclosure>

For information regarding disclosure information on Credit Suisse Investment Banking rated companies mentioned in this report, please refer to the Investment Banking division disclosure site at:
<https://rave.credit-suisse.com/disclosures>

For further information, including disclosures with respect to any other issuers, please refer to the Credit Suisse Global Research Disclosure site at:
<https://www.credit-suisse.com/disclosure>

AUSTRALIA This material is distributed in Australia by Credit Suisse AG, Sydney Branch solely for information purposes only to persons who are "wholesale clients" (as defined by section 761G(7) of the Corporations Act). Credit Suisse AG, Sydney Branch does not guarantee the performance of, nor make any assurances with respect to the performance of any financial product referred herein. In Australia, Credit Suisse Group entities, other than Credit Suisse AG, Sydney Branch, are not authorized deposit-taking institutions for the purposes of the Banking Act 1959 (Cth.) and their obligations do not represent deposits or other liabilities of Credit Suisse AG,

Sydney Branch. Credit Suisse AG, Sydney Branch does not guarantee or otherwise provide assurance in respect of the obligations of such Credit Suisse entities or the funds. HONG KONG: This material is distributed in Hong Kong by Credit Suisse AG, Hong Kong Branch, an Authorized Institution regulated by the Hong Kong Monetary Authority and a Registered Institution regulated by the Securities and Futures Commission, and was prepared in compliance with section 16 of the "Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission." The contents of this material have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to any offer. If you are in any doubt about any of the contents of this material, you should obtain independent professional advice. No one may have issued or had in its possession for the purposes of issue, or issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or material relating to this product, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than where this product is or is intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made thereunder. SINGAPORE: This material is distributed in Singapore by Credit Suisse AG, Singapore Branch, which is licensed by the Monetary Authority of Singapore under the Banking Act (Cap. 19) to carry on banking business. This report has been prepared and issued for distribution in Singapore to institutional investors, accredited investors and expert investors (each as defined under the Financial Advisers Regulations ("FAR")) only. Credit Suisse AG, Singapore Branch may distribute reports produced by its foreign entities or affiliates pursuant to an arrangement under Regulation 32C of the FAR. Singapore recipients should contact Credit Suisse AG, Singapore Branch at +65-6212-2000 for matters arising from, or in connection with, this report. By virtue of your status as an institutional investor, accredited investor or expert investor, Credit Suisse AG, Singapore Branch is exempted from complying with certain requirements under the Financial Advisers Act, Chapter 110 of Singapore (the "FAA"), the FAR and the relevant Notices and Guidelines issued thereunder, in respect of any financial advisory service which Credit Suisse AG, Singapore branch may provide to you. These include exemptions from complying with:

- (i) Section 25 of the FAA (pursuant to Regulation 33(1) of the FAR
- (ii) Section 27 of the FAA (pursuant to Regulation 34(1) of the FAR); and
- (iii) Section 36 of the FAA (pursuant to Regulation 35(1) of the FAR).

Singapore recipients should contact Credit Suisse AG, Singapore Branch for any matters arising from, or in connection with, this material. If you have any queries/objections relating to the receipt of marketing materials from us, please contact our Data Protection Officer at dataprotectionofficer.pb@credit-suisse.com (for Credit Suisse AG, HK Branch) or PDPO.SGD@credit-suisse.com (for Credit Suisse AG, SG Branch) or csau.privacyofficer@credit-suisse.com (for Credit Suisse AG, Sydney Branch).

The entire contents of this document are protected by copyright law (all rights reserved). This document or any part thereof may not be reproduced, transmitted (electronically or otherwise), altered or used for public or commercial purposes, without the prior written permission of Credit Suisse. © 2022, Credit Suisse Group AG and/or its affiliates. All rights reserved. Credit Suisse AG (Unique Entity Number in Singapore: S73FC2261L) is incorporated in Switzerland with limited liability.

22C014A_IS

CREDIT SUISSE 

CREDIT SUISSE AG
[credit-suisse.com](https://www.credit-suisse.com)