UBS

For marketing purposes
For professional / qualified / institutional clients and investors only

What's ahead for the Chinese yuan?

What's ahead for the Chinese yuan?

From 1994 to 2014, the Chinese yuan (CNY) was firmly under Chinese policymakers' control and its behavior was relatively predictable for more than two decades.

Since then, however, we have observed several double-digit, and surprising, moves up and down in the US dollar to CNY exchange rate (USD/CNY) in 2017-2018, 2018-2020, and 2020-2021. This article attempts to describe the past regimes in CNY, what the brand new CNY regime looks like, and what will happen to USD/CNY in the next couple of months and years. In short, we expect USD/CNY to be within 7 to 7.2 to the dollar range in a few months and values above 8 are not unthinkable in 2023 or 2024.

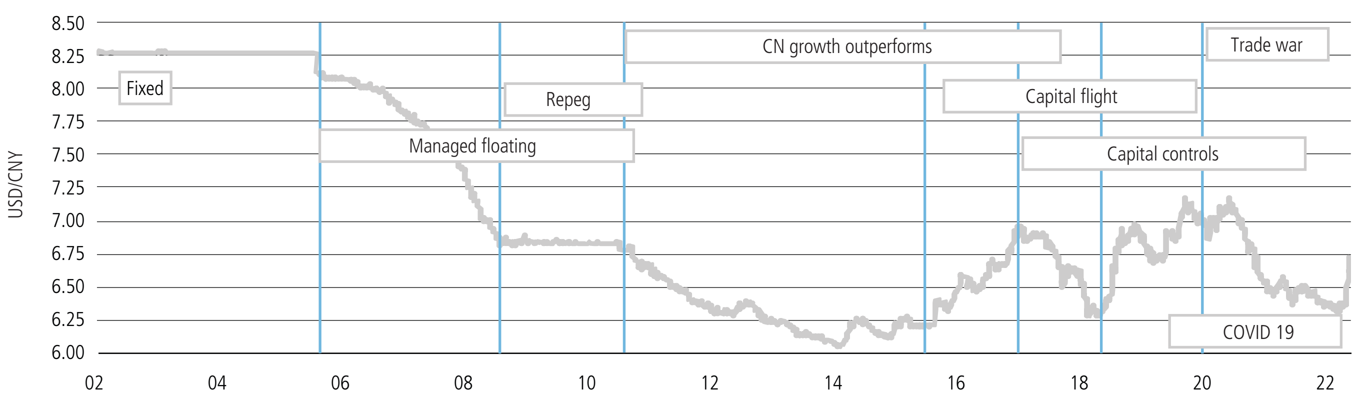
Regimes, they are a-changin'

During the past 20 years, CNY has gone through eight different regimes. First it was fixed at 8.28 until revaluation in July 2005 and a subsequent managed appreciation. The managed appreciation regime ended in April 2008 with the Global Financial Crisis (GFC) and CNY was pegged at around 6.8. After the worst of the GFC was over, the Chinese economy was growing around 10% per year while the rest of the world was going through Eurocrisis and the US debt-ceiling crisis. Developed market rates declined towards zero and CNY was again under managed floating regime.

However, in 2013-2014 Chinese growth began to slow down as the US started positioning towards interest rate hikes. In August 2015 CNY was devalued for the first time since January 1994, bringing about capital flight that lasted until the end of 2016. By 2017, capital controls had stabilized CNY and it began to appreciate.

That was followed by the onset of the US-China trade war in June 2018. The final regime is the one induced by the COVID shock, which first hit China, leading to CNY depreciation. But COVID soon spread to the rest of the world while China was able to get the situation under control. Moreover, COVID led to increased demand for goods, see our EM Fixed Income Quarterly: Bye Bye Globalization, Hello Stagflation for further discussion, and China's leadership in global exports, in addition to portfolio flows to high-yielding CNY bonds, led to CNY appreciation.

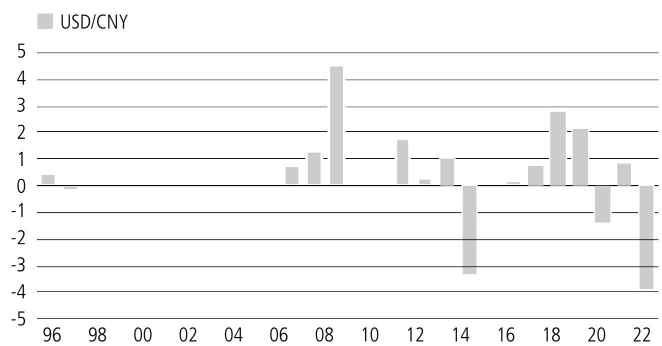
USD/CNY



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of May 2022.

With the Omicron variant and China's zero tolerance COVID policy, the situation has again changed. CNY's performance in the first four months of 2022 was the worst since 1994 when CNY was devalued by 33% on New Year's Day. This suggests that CNY's regime may have shifted again. We study the issue with rolling regression analysis.

CNY performance in the first four months of the year



Source: UBS Asset Management, Macrobond, Bloomberg.
Data as of May 2022.

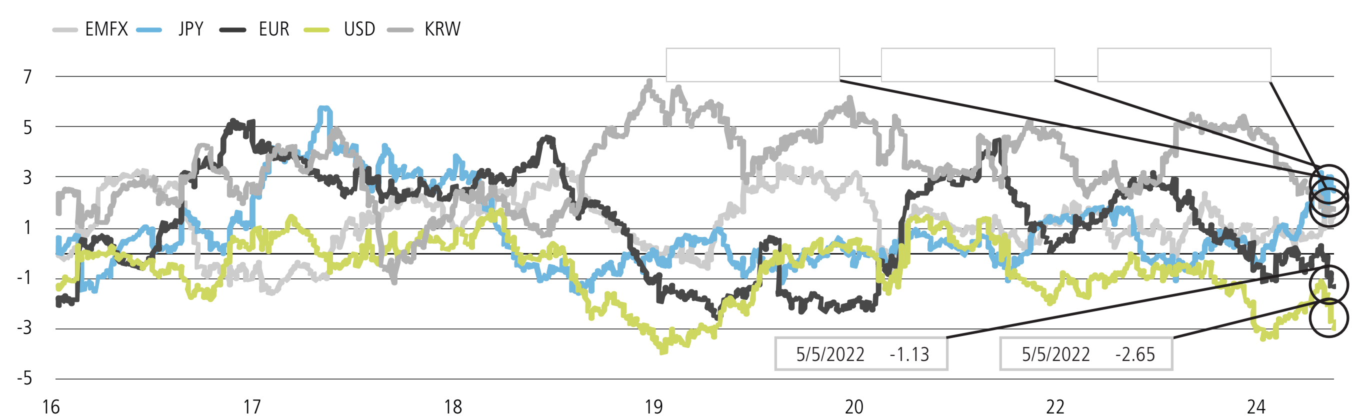
How CNY correlations have changed

We ran rolling regressions with a six-month window using daily data since 2005 on CNY returns as a dependent variable and Japanese yen (JPY), euro (EUR), emerging market foreign currencies (EMFX), USD and Korean won (KRW) daily returns as independent variables, to estimate the relationships—correlations—between CNY and those currencies. By looking at the t-statistics on each independent variable, we can infer 1) which currency has been statistically significant at explaining CNY's performance (t-statistics above two in absolute value are statistically significant) and 2) whether the correlation has been positive or negative while controlling for the movements in other currencies. The last point is particularly important when the independent variables are correlated with each other.

The exhibit at the bottom of the page shows the rolling t-statistics since 2016. On average since 2010, the currency with the most significant and positive correlation with CNY has been KRW. That is not surprising at all. China and Korea have a similar export structure and compete in the same markets. What is surprising, however, is that since mid-April the currency with the most significant and positive correlation with CNY has been JPY.

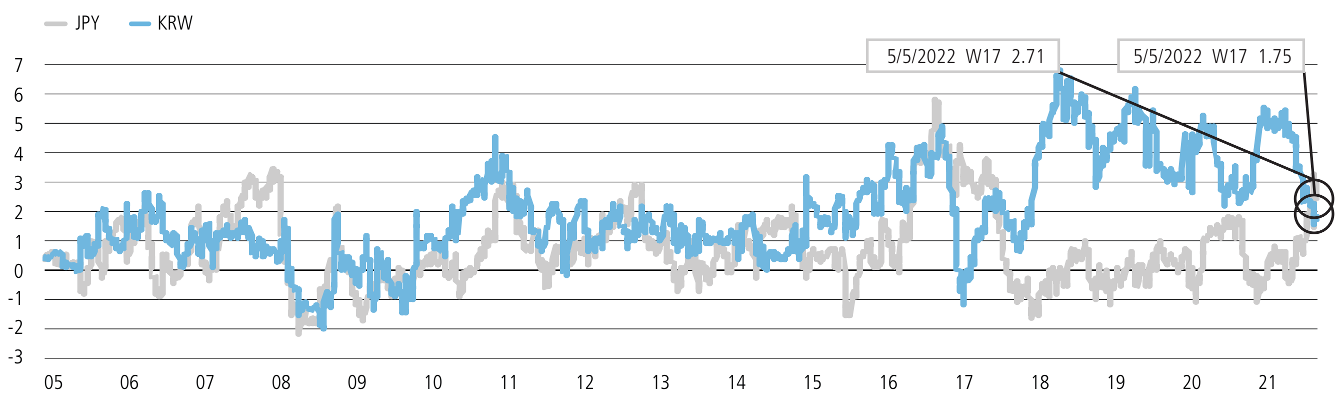
Moreover, looking at the full sample but concentrating on JPY and KRW t-statistics, we can see that the current regime where JPY t-statistic is growing while KRW t-statistic is falling is very unusual (refer to the graph on the following page).

CNY 6m rolling regression t-statistics



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of May 2022.

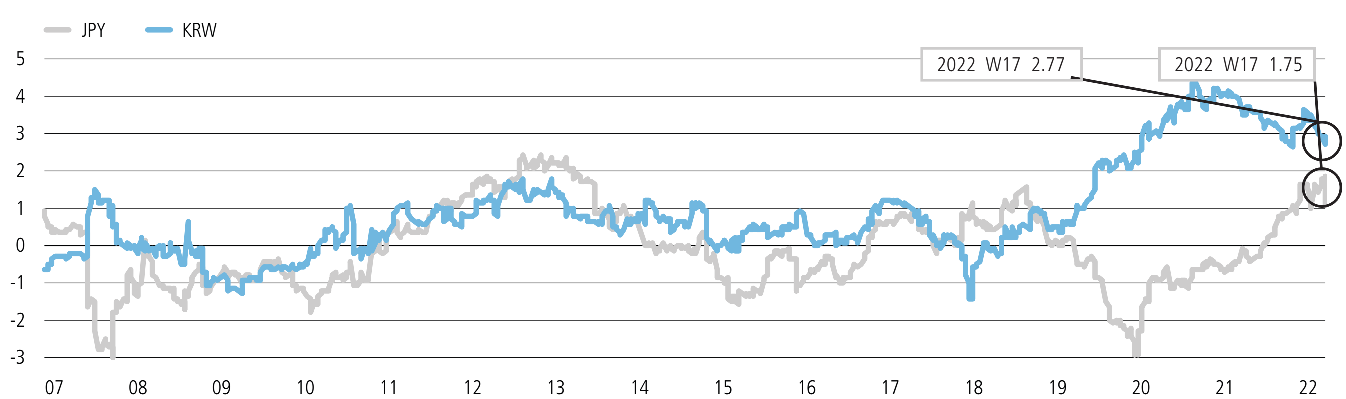
CNY 6m rolling regression t-statistics



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of May 2022.

The advantage of running rolling regressions with daily data is that one can detect regime changes earlier than if one is using lower frequency data. The disadvantage is that the resulting t-statistics tend to be very volatile. To better see long-term trends in correlations, we also ran rolling regressions using weekly data (weekly returns) and a two-year window. The results, presented in the next exhibit, show that—while KRW is still the currency most correlated with CNY—trends in t-statistics tend to continue for a long time. This suggests that the JPY domination in the current CNY regime is likely to persist for some time.

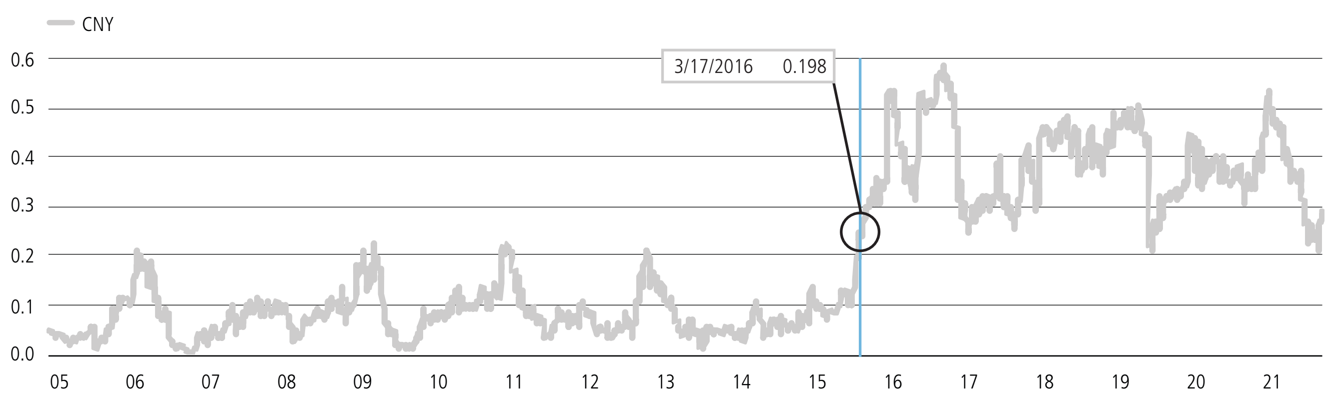
CNY 2y rolling regression t-statistics



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of May 2022.

One final comment on CNY regimes before we try to understand why JPY is the dominant currency for CNY's determination now. If one looks at the R2s, coefficients of determination, of the rolling regressions, there is an interesting regime shift in Q1 2016. Prior to that, R2s were relatively low, fluctuating between 0 and 0.2. Since Q1 2016, however, they have been fluctuating between 0.2 and 0.6. What could be behind this particular regime shift?

6m rolling regression R2



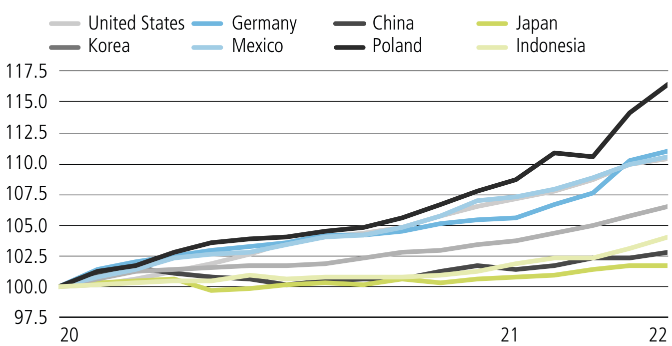
Source: UBS Asset Management, Macrobond, Bloomberg. Data as of May 2022.

In December 2015, China Foreign Exchange Trading System published the "CFETS exchange rate index", dating back to December 31, 2014, to guide the market on the trade-weighted basket of currencies that was the focus of the exchange rate policy. Subsequently, in early 2016, the authorities elaborated on how the new regime was expected to function and reassured markets that they were not targeting or expecting substantial depreciation. In other words, instead of targeting a pegged value or hoped for appreciation/depreciation of CNY against USD, the authorities were monitoring how CNY traded against currencies of the major trading partners. This meant that the fluctuations in individual currencies would have a larger impact on fluctuations in CNY/USD.

Why is CNY behaving like JPY?

The question remains: what is behind JPY's newfound dominance in explaining the performance of CNY. The most likely explanation is the divergence between inflation and interest rates between the China-Japan block and the rest of the world. The next exhibit displays Consumer Price Indexes of selected countries (with the base period starting at the end of 2020): the US and Germany representing western developed countries; China, Japan, and Korea from the northeast Asia; and Mexico, Poland, and Indonesia representing EM countries. In the exhibit, Japan, China, and Indonesia have had very limited inflation—although it seems to have picked up lately in Indonesia—Poland, Germany, Mexico, and the US have had very fast inflation, particularly since September 2021, and Korea has been somewhere between these two groups.

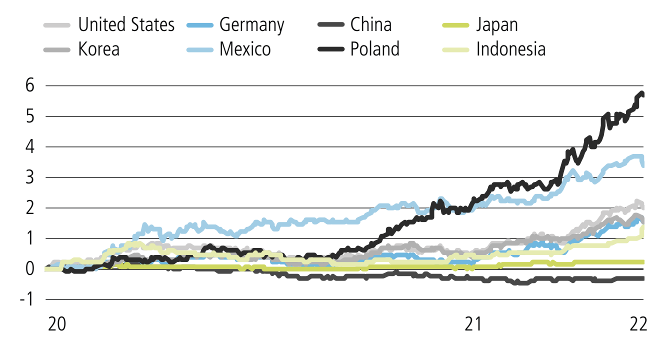
Consumer Price Index, rebased 12/21/2020 = 100



Source: UBS Asset Management, Macrobond, Bloomberg.
Data as of May 2022.

The exhibit below does a similar exercise for 10-year government bond yields. The cumulative change for every 10-year yield since the end of 2020 has been at least 95 bps, with Poland and Mexico having experienced more 360 bps in cumulative increases, except for Japan (cumulative 20 bps) and China (cumulative -30 bps). Again, China and Japan are exceptions.

10y government bond yield changes since 12/31/2020

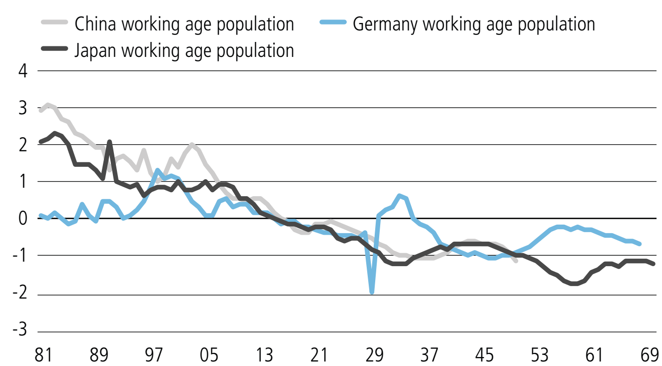


Source: UBS Asset Management, Macrobond, Bloomberg.
Data as of May 2022.

Demography is destiny

The next two exhibits highlight the possible role of demographics in explaining the recent developments in Chinese rates and CNY. As the first exhibit shows, the working age population growth in China reached zero in 2016 and turned negative after that. The same had happened in Germany in 1998 and Japan in 1996. The exhibit also plots World Bank forecasts of the future working age population growth until 2050.

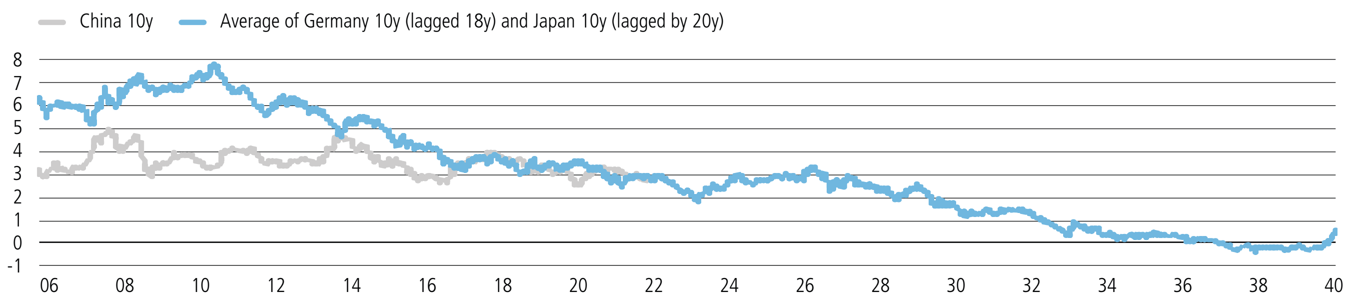
Working age population growth



Source: UBS Asset Management, Macrobond, Bloomberg.
Data as of May 2022.

The next exhibit displays the Chinese 10-year government bond yield since 2006, together with the average of German and Japanese 10-year government bond yields lagged by 18 and 20 years, respectively. The similarility in the levels, but not necessarily in short-term moves since 2017, is striking. Lower population growth implies lower economic growth implies lower inflation and rates.

China, Germany and Japan 10y



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of May 2022.

Investment implications

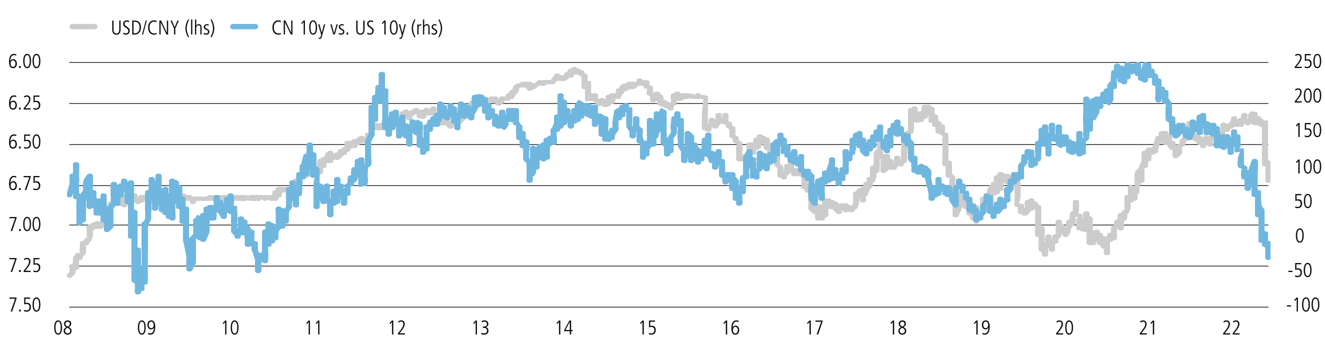
All of the above points to a weaker CNY in the months if not years ahead. The Omicron variant and China's zero COVID policy have led to lockdowns in major Chinese cities, significantly reducing economic activity judging by real-time mobility and cargo trackers. Slower growth in China will push down Chinese yields.

At the same time, the US inflation and the Federal Reserve being behind the curve have brought on significant increase in both short-term and long-term US rates. The US-China 10-year yield differential has been since 2008 one of the most reliable indicators of where USD/CNY will settle—and right now it implies USD/CNY above 7.

In addition, the war in Ukraine has increased sanctions risk on China and further deteriorated the US-China relationship leading to an abrupt slowdown for foreign inflows to China, which further reduced demand for CNY.

Finally, pay attention to what JPY movements are saying. The regime shift in the CNY determination is likely to be with us for an extended period of time. We expect USD/CNY to be within 7 to 7.2 range in a few months and values above 8 are not unthinkable in 2023 or 2024.

CNY and China vs US 10y



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of May 2022.

Americas
The views expressed are a general guide to the views of UBS Asset Management as of June 2022. The information contained herein should not be considered a recommendation to purchase or sell securities or any particular strategy or fund. Commentary is at a macro level and is not with reference to any investment strategy, product or fund offered by UBS Asset Management. The information contained herein does not constitute investment research, has not been prepared in line with the requirements of any jurisdiction designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research. The information and opinions contained in this document have been compiled or arrived at based upon information obtained from sources believed to be reliable and in good faith. All such information and opinions are subject to change without notice. Care has been taken to ensure its accuracy but no responsibility is accepted for any errors or omissions herein. A number of the comments in this document are based on current expectations and are considered "forward-looking statements". Actual future results, however, may prove to be different from expectations. The opinions expressed are a reflection of UBS Asset Management's best judgment at the time this document was compiled, and any obligation to update or alter forward-looking statements as a result of new information, future events or otherwise is disclaimed. Furthermore, these views are not intended to predict or guarantee the future performance of any individual security, asset class or market generally, nor are they intended to predict the future performance of any UBS Asset Management account, portfolio or fund.

EMEA
The information and opinions contained in this document have been compiled or arrived at based upon information obtained from sources believed to be reliable and in good faith, but is not guaranteed as being accurate, nor is it a complete statement or summary of the securities, markets or developments referred to in the document. UBS AG and / or other members of the UBS Group may have a position in and may make a purchase and / or sale of any of the securities or other financial instruments mentioned in this document.

Before investing in a product please read the latest prospectus carefully and thoroughly. Units of UBS funds mentioned herein may not be eligible for sale in all jurisdictions or to certain categories of investors and may not be offered, sold or delivered in the United States. The information mentioned herein is not intended to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. Past performance is not a reliable indicator of future results. The performance shown does not take account of any commissions and costs charged when subscribing to and redeeming units. Commissions and costs have a negative impact on performance. If the currency of a financial product or financial service is different from your reference currency, the return can increase or decrease as a result of currency fluctuations. This information pays no regard to the specific or future investment objectives, financial or tax situation or particular needs of any specific recipient.

The details and opinions contained in this document are provided by UBS without any guarantee or warranty and are for the recipient's personal use and information purposes only. This document may not be reproduced, redistributed or republished for any purpose without the written permission of UBS AG.

This document contains statements that constitute "forward-looking statements", including, but not limited to, statements relating to our future business development. While these forward-looking statements represent our judgments and future expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from our expectations.

UK
Issued in the UK by UBS Asset Management (UK) Ltd. Authorised and regulated by the Financial Conduct Authority.

APAC
This document and its contents have not been reviewed by, delivered to or registered with any regulatory or other relevant authority in APAC. This document is for informational purposes and should not be construed as an offer or invitation to the public, direct or indirect, to buy or sell securities. This document is intended for limited distribution and only to the extent permitted under applicable laws in your jurisdiction. No representations are made with respect to the eligibility of any recipients of this document to acquire interests in securities under the laws of your jurisdiction.

Using, copying, redistributing or republishing any part of this document without prior written permission from UBS Asset Management is prohibited. Any statements made regarding investment performance objectives, risk and/or return targets shall not constitute a representation or warranty that such objectives or expectations will be achieved or risks are fully disclosed. The information and opinions contained in this document is based upon information obtained from sources believed to be reliable and in good faith but no responsibility is accepted for any misrepresentation, errors or omissions. All such information and opinions are subject to change without notice. A number of comments in this document are based on current expectations and are considered "forward-looking statements". Actual future results may prove to be different from expectations and any unforeseen risk or event may arise in the future. The opinions expressed are a reflection of UBS Asset Management's judgment at the time this document is compiled and any obligation to update or alter forward-looking statements as a result of new information, future events, or otherwise is disclaimed.

You are advised to exercise caution in relation to this document. The information in this document does not constitute advice and does not take into consideration your investment objectives, legal, financial or tax situation or particular needs in any other respect. Investors should be aware that past performance of investment is not necessarily indicative of future performance. Potential for profit is accompanied by possibility of loss. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice.

Australia
This document is provided by UBS Asset Management (Australia) Ltd, ABN 31 003 146 290 and AFS License No. 222605.

Source for all data and charts (if not indicated otherwise): UBS Asset Management

The key symbol and UBS are among the registered and unregistered trademarks of UBS.

AMT-2022 6/22
www.ubs.com/am-us

For professional / qualified / institutional clients and investors only.

UBS