



CIO Special

July 16, 2021

Authors:

Jason Liu

Head Chief Investment Office APAC

Mayank Khemka

Chief Investment Officer India

Sagar Singh

Investment Officer, CIO Office APAC

Eirini Pournaras

Investment Officer, CIO Office APAC

Asia: recovery to prove resilient

01 Regional economic and market outlook

02 China: opportunities after recent correction

03 India: markets manage the COVID-19 second wave

04 South-east Asia: recovery vs. low vaccination rates

Key take aways

- Regional economic recovery is likely to prove resilient to continuing COVID-19 outbreaks, given more limited lock-downs and increased export demand from the U.S. and European Union.
- Chinese consumption will help drive China's recovery in the remainder of 2021. We continue to like Chinese equities due to the solid macro fundamentals. Further CNY strengthening looks unlikely.
- India's economic recovery will probably be assisted by a pick-up in vaccination rates and earnings growth expectations should support equities. RBI purchases and low repo rates will likely keep the yield environment benign.

01 Regional economic and market outlook

EM Asia should benefit from continued economic recovery. Some emerging market (EM) Asia countries are experiencing relatively high COVID-19 daily infections and vaccination rates are generally still low compared to developed market (DM) countries. However, their economies are still less affected by COVID-19 than last year, as many of the current lockdown measures are very targeted and localized. Most EM Asia countries are export-oriented and are therefore ready to benefit from further recoveries in external demand, especially from reopening developed markets. **We expect 7.9% GDP growth in EM Asia in 2021 and 5.6% in 2022.**

We expect better returns in Asia ex-Japan (AXJ) equities compared to developed market equities over the next 12 months. **Within AXJ, we are overweight on China and South Korea markets, are neutral towards the India market, and are underweight on ASEAN and Taiwan.** China's vaccination rates are higher compared to other Asian economies, which should be supportive of its domestic demand recovery. Chinese equities (especially Chinese tech) have corrected over the past few months and this may provide a good entry point for long-term investors. For fixed income, **we remain constructive on EM Asia credit** – as it should be supported by improving economic fundamentals, a still loose monetary environment, and investors' "hunt for yield".

02 China: opportunities after the recent correction

Our GDP forecasts for China are unchanged at 8.7% this year and 5.5% in 2022. We believe that Chinese economy will remain supported by export growth (Figure 1) and improving consumption.

China's GDP growth was 12.7% YoY in the first half of the year. We have seen uneven recovery in different sectors of the economy. Consumption growth has lagged behind expectations recently. Some Chinese cities saw a few COVID-19 outbreaks in June, which affected consumption in the month. Pent-up demand for purchases of big-ticket items (such as autos and mobile phones) has now been satisfied. However, we think **consumption will help drive the economy in the second half this year**, given higher household savings from last year, better labour market conditions and the continual normalization of service sectors.



Please use the QR code to access a selection of other Deutsche Bank CIO reports.



Vaccination rates in China are also rising rapidly which should support consumption recovery.

Exports and investment expansion remains robust. Export growth reaccelerated to 32.2% YoY in June (vs. 27.9% in May). External demand, especially for mechanical and electrical products, has been strong. Exports to the EU and Southeast Asia showed particularly growth. We think export growth will be sustained in the rest of 2021 by continued economic reopening in U.S. and Europe.

China's PBoC surprised markets cutting the RRR (Reserve Requirement Ratio) by 50 bps in early July. This move reflects an adjustment in PBoC's tight monetary policy approach in the first half of the year. The RRR cut serves as a preemptive tool against a possible domestic slowdown, especially in consumption. China's average RRR rate is now at 8.9% and we could see more cuts in coming months. However, PBoC policies could become more flexible, dependent on the development of inflationary pressures domestically.

Downside risks to the Chinese economy include the possible escalation in U.S.-China tensions. In our base case forecast, we assume that the U.S.-China relationship will remain largely stable, especially on the trade front. We think tariff increases are not likely as the U.S. administration is currently focusing on rebuilding the economy. Higher tariffs on Chinese exports into the U.S. might lead to higher U.S. inflationary pressures and could affect the recovery in U.S. domestic consumption.

We remain constructive on China/Hong Kong equities. We think they will be supported by economic recovery momentum, the still-loose monetary environment and the continued improvement in corporate profitability. Chinese equities are currently trading at around 13x price to earnings (P/E) ratios, compared to the U.S. and European P/E ratios of above 18x.

Chinese tech stocks have recently fallen back: the Hang Seng Tech Index was down around 30% as of July 15 from its peak in February, due to the government's increased anti-monopoly and data security scrutiny of the large tech companies. The new Data Security Law enacted in June requires companies and individuals to get approval from relevant authorities to transfer

any data stored in China to overseas entities, such as law enforcement agencies. The law takes effect September 1.

We do not yet feel there should be a change to our overall positive outlook for China, but more prudence should be there. Asia ex-Japan equities are still attractive to us because of the lower price to earnings ratios relative to Europe and U.S. That said, due to what has been going on in the region, we feel that there will be volatility in the coming months in the equities space.

Capital raising is not a major obstacle for the development of Chinese tech companies, as most of them have sufficient sources of funding, such as commercial banks, PE/VC funds or government industry support funds. However, the IPO cycle could get longer because of the new rules, especially the listings in overseas stock exchanges. More Chinese tech companies could choose to be listed in Hong Kong instead of the U.S. due to the recent tighter regulations.

The policy uncertainty over China tech sector could stay for some time. However, for long-term investors, we think China tech remains quite attractive due to the solid fundamentals and positive earnings outlook. Any further weakness could be entry opportunities for long-term investors, in our view.

On fixed income, we would be selective. Market sentiment has been relatively weak in recent months towards Chinese credit, due to credit events for some state-owned companies and property firms. The PBoC implemented tight monetary policy earlier this year. As a result, China high yield has underperformed. Despite the RRR cut recently, the PBoC may continue to show tightening bias especially in property sector with their concerns over financial risks.

That said, Chinese credit overall is still attractive, in our view, due to its relatively high yield (compared to DM credit), improving corporate profitability in a recovering economy, and still loose global monetary policy environment. We would suggest a selective and diversified approach given the ongoing domestic targeted policy tightening efforts.

Figure 1: Chinese foreign trade



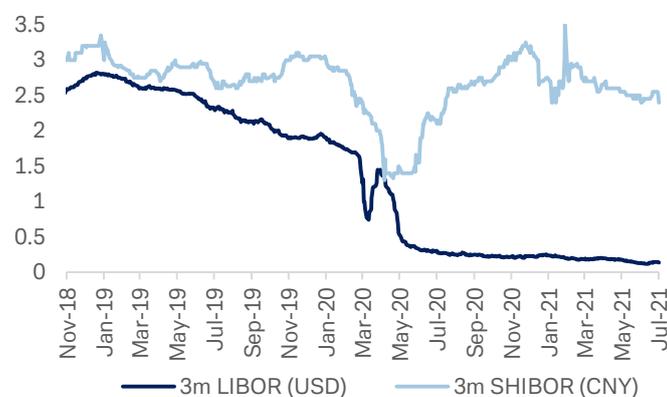
Source: Bloomberg Finance L.P., Deutsche Bank AG.
Data as of July 2021



Our 12-month USD/CNY forecast is 6.65. The CNY (Renminbi) is likely to remain underpinned by strong exports and renewed capital inflows on the back of loose global liquidity conditions. However, the CNY may face headwinds in the second half of 2021, given a potential tapering announcement by the Fed, and this could result in CNY weakening again over a 12-month horizon.

USD/CNY's recent break below 6.50 has to be seen in the context of a weakening in the broader USD index (DXY) lows in recent months. DXY is now showing signs of strengthening again, with more signs that the Fed is considering tapering. Therefore the short and medium term situation remains fluid. From the PBoC's perspective, CNY gains might not be desirable if U.S./Chinese relations were to deteriorate. The PBoC will also want to discourage market expectations of one-way gains for the CNY, which would complicate future policy making.

Figure 2: Chinese/U.S. interest rate differentials.



Source: Bloomberg Finance L.P., Deutsche Bank AG. Data as of July 2021.

Indian equity markets have outperformed other emerging market peers over the past 12 months: the Nifty 50 is up 46%, while MSCI Emerging Markets (EM) is up 25%. YTD, Nifty is up 13% while the MSCI EM is up 4%.

After four years of subdued/flat earnings growth, India is finally seeing a multi-year earnings growth cycle. Earnings are currently expected to grow 38% in FY21-22 (ending March), and over 16% in FY22-23. This is already leading to a re-rating of the multiples Indian markets trade at, and provides some cushion for any corrections.

Nifty earnings per share (EPS) for FY 21-22 currently stands at INR725, valuing the market at 21.8x price to earnings (P/E). Sector rotation and mid/small cap outperformance have been the two biggest themes throughout this broad-based rally. Mid and Small caps are up 81% and 108% in the last 12 months while, sector-wise, Metal and IT stocks have been the outperformers.

As regards Indian fixed income, the yield outlook is benign but watch inflation. In April 2021, in a historic first, the RBI said that it would use its own balance sheet to buy government securities. Under the G-Sec Acquisition Program (G-SAP) 1.0 and 2.0, INR1tn (USD14bn) was committed for the June quarter and INR1.2tn (USD16bn) for the following quarter. Coupled with aggressive repo rate cuts (of 120bp since February 2020), this has kept yields low to support economic growth. The RBI is expected to use all tools (open market operations etc.) to keep yields lower and incentivize policy transmission across the yield curve. Investors should continue to look at accrual gains for the year, with the sweet spot in the 3-4 year tenure bucket.

However, the potential for further rate cuts has been reduced by the ongoing rise in commodity prices. Wholesale price inflation has spiked up, which is feeding into consumer inflation, up 6.3% YoY in May, slightly above RBI's target 2-6% band. Although no rate hikes are expected soon, inflation will be closely monitored.

From the perspective of the offshore/USD bond market, India's

03 India: resilience amidst the COVID-19 second wave

India is currently recovering from a severe second COVID-19 wave. At the time of writing, daily new cases have dropped down below 40k – a 3-month low from a high of 400k+ last month. But while the pace of vaccinations has picked up recently, only around 10% of India's eligible population has so far been fully vaccinated.

Recent lockdowns have been shorter, localized and less stringent. Consequently the impact to economic activity impact has been contained, as compared to April-May 2020. Key indicators have proved relatively resilient (Figure 3).

We expect economic activity to start normalizing in the next quarter as lockdowns ease. The Indian economic recovery should be supported by a pick up in vaccination rates, fiscal policy (record government counter-cyclical spending) and monetary policy (RBI's bond buying programme). A robust global growth environment will also help. Nevertheless, we do expect some near-term impact to India's economic outlook given the lockdowns and have downgraded our forecast of Indian GDP growth in FY22 (financial year ending March 2022) from 11% to 10%. The key risk to watch will be the trend in COVID-19 cases (with the potential for a re-acceleration or third wave).

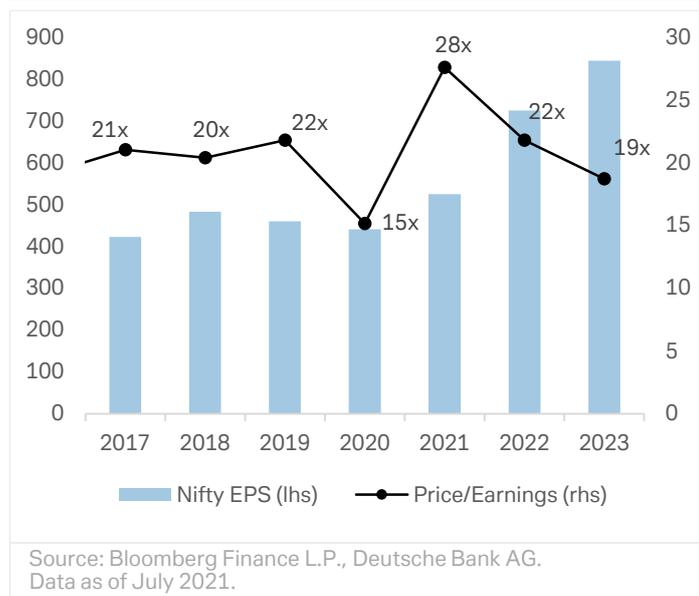
Figure 3: Indian economic data like exports, PMI show resilience to 2nd Covid-19 wave



Source: Bloomberg Finance L.P., Deutsche Bank AG. Data as of July 2021.



Figure 4: Nifty EPS and P/E projections



sovereign rating continues to be borderline investment grade (BBB-, Baa3, BBB-). While the pandemic poses near-term risk to economic growth, we do not see any risk of India's downgrade into the category of a 'fallen angel' as rating agencies look towards more medium term indicators and, as noted above, we expect economic recovery to be sharp.

Assisted by lower trade deficits and large capital inflows, **India's foreign exchange reserves have continued to rise**, reaching a record high of USD608bn in mid-June 2021. India has now overtaken Russia to become the fourth largest FX reserve holder in the world after China, Japan and Switzerland. Existing reserves cover almost 18 months of normalized imports and put India in a comfortable position to withstand any adverse global shocks.

However, high inflation limits the RBI's scope for action to support the currency. **The RBI continues to face a classic a 'policy trilemma'** in its objectives of receiving large capital inflows, conducting independent monetary policy and having a stable exchange rate. One of these has to give way. To ease the currently high inflation, we believe the RBI may allow INR

strengthen the second half of 2021, particularly if crude oil prices move up and the global demand outlook continues to improve as trade opens up. Making imports cheaper in local currency terms with a stronger INR could become a near-term tool for inflation management. **Our 12-month USD/INR target remains in the 72-74 range**, with risks of weakening contingent on resumption of broader USD strength globally.

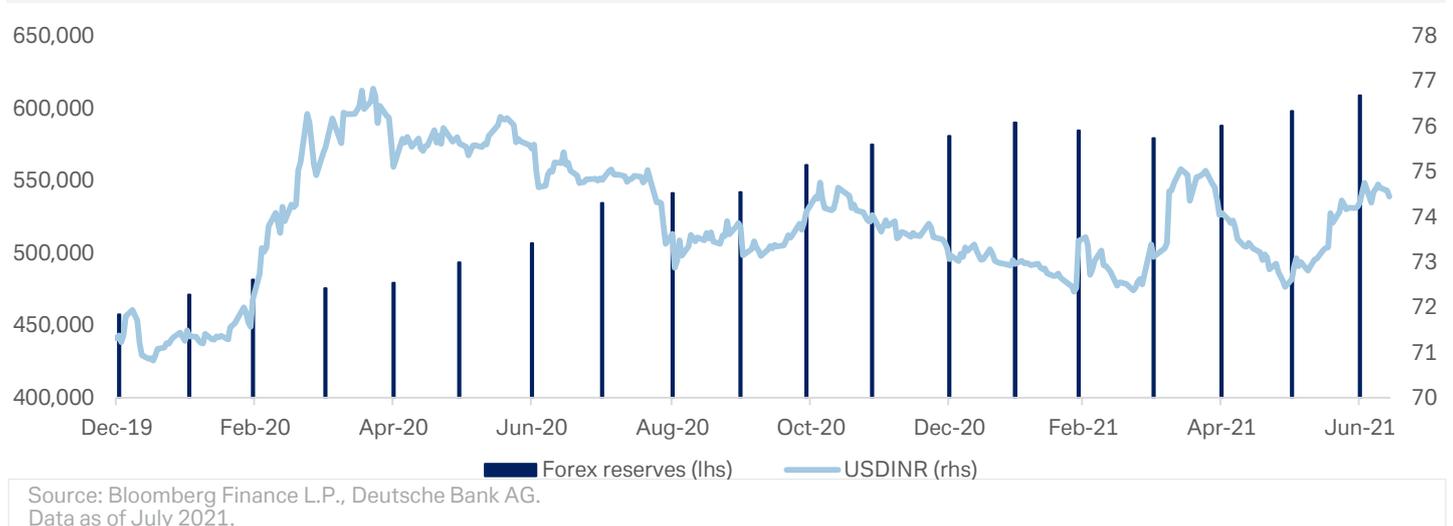
04 South East Asia: recovery vs. low vaccination rates

We forecast the ASEAN-5 region to grow by 5.3% in 2021 and 5.6% in 2022. Nonetheless, the IMF estimates that income per capita in the five economies will be 6% lower in 2024 than the level that was expected prior to the pandemic, with the Philippines down by 12%. In terms of monetary policy, most central banks are likely to remain on hold until year-end, after which a gradual reversal of COVID-related easing is expected.

The key factor that will determine ASEAN economic recovery will be vaccination rates. Currently, only Singapore has been able to vaccinate its population at a rate comparable to other countries/regions like the EU and U.S., with 38% fully vaccinated and 66% having received at least one dose of the vaccine. Indonesia and Malaysia have vaccinated approximately 13% and 24% with at least one dose, respectively. Overall, however, there now seem to be better prospects for vaccine exports from India to Asia as a whole, as the COVID-19 situation and movement restrictions ease there, and there are also better prospects of support from China, given its production capacity and progress towards immunity.

Supportive factors for Southeast Asia include international trade. The region's exporters quickly benefited a surge in demand for personal protective equipment (PPE), electronics, and other products as a result of working from home and an increased reliance on technology. As a result, Southeast Asia's exports had already recovered to above pre-pandemic levels by October 2020. Going forward, the outlook remains promising. While the global demand for PPE will be less pronounced as economies globally slowly return to normality, there will be continued demand for

Figure 5: Rising foreign exchange reserves reduce INR pressure



In Europe, Middle East and Africa as well as in Asia Pacific this material is considered marketing material, but this is not the case in the U.S. No assurance can be given that any forecast or target can be achieved. Forecasts are based on assumptions, estimates, opinions and hypothetical models which may prove to be incorrect. Past performance is not indicative of future returns. Investments come with risk. The value of an investment can fall as well as rise and you might not get back the amount originally invested at any point in time. Your capital may be at risk.



electronics, software equipment and semi-conductors, as U.S. and European consumers in particular start to spend their built up savings.

Indonesia

The encouraging investment rise in Q1 2021 along with investment-friendly policy suggests that post-Covid, a renewed investment upturn will lead economic recovery. Higher potential GDP growth is expected, of 10% in 2021 and 6.5% in 2022, due to reforms and strong push for higher productivity/foster technological upgrades. CPI inflation remains below the central bank range of 2-4% and external balances are expected to stay in check with the current account deficit within 1-2% of GDP. Core inflation has averaged a softer 1.4% yoy in first five months of 2021, with the onset of the second Covid wave to soften demand impulses further (higher inflation in May was largely attributed to festivities of the Ramadan and Idul Fitri which put pressure on food and transport service prices). The central bank is focusing on strengthening the country's reserves, maintain a strong external balance and thus we expect it will stay on hold through the remainder of this year in terms of rate adjustments.

The decent external balance position, scope for foreign direct investment, coupled with higher energy prices and low inflation may suggest that Indonesian assets fare better this time than the last U.S. taper tantrum in 2013 when Indonesian assets

suffered as a result of higher inflation, higher real rates and weak external balances. **USD/IDR target for June 2022 stands at 14,000.**

Singapore

New outbreaks in May led to imposing of restrictions which have the potential to weigh on activity for the latter part of Q2. Indeed, this is reflected on advance estimates for Q2 growth, which show negative QoQ growth of 2%, a reversal from Q1's growth of 1.3% (while YoY Q2 growth is 14.3%, due to low base effects from last year's circuit breaker period). Nevertheless, the Ministry of Trade and Industry maintained its 2021 GDP growth forecast of between 4.0% and 6.0%, although there is still some degree of uncertainty regarding the macroeconomic environment because a full normalization of border reopening and restrictions lifting are not currently in sight albeit the speedy vaccination efforts. The recovery will be uneven across sectors. Trade oriented sectors such as wholesale trade are expected to benefit from the pick-up in external demand as well as low base effects, while tourism and aviation-related sectors are likely to see further delay in their recovery. As the economy still operates below full capacity and inflationary pressures are to stay muted, monetary policy is expected to remain accommodative until the recovery is well established.



Glossary

The **Association of Southeast Asian Nations (ASEAN)** comprises Indonesia, Malaysia, the Philippines, Singapore, Thailand, Brunei, Cambodia, Laos, Myanmar and Vietnam.

CNY is the currency code for the Chinese yuan.

The **U.S. Dollar Index (DXY)** is a weighted index based on the value of the U.S. dollar versus a basket of six other currencies.

An **emerging market (EM)** is a country that has some characteristics of a developed market in terms of market efficiency, liquidity and other factors, but does not meet all developed market criteria.

The **Eurozone (EU)** is formed of 19 European Union member states that have adopted the euro as their common currency and sole legal tender.

The **Federal Reserve (Fed)** is the central bank of the United States. Its **Federal Open Market Committee (FOMC)** meets to determine interest rate policy.

Gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

The **Hang Seng Index (HSI)** includes the 50 largest companies traded on the Hong Kong stock exchange.

IDR is the currency code for the Indonesia Rupiah.

The **Indian rupee (INR)** is the currency of India.

LIBOR or London Interbank Offered Rate is a benchmark rate that some of the world's leading banks charge each other for short-term loans and serves as the first step to calculating interest rates on various loans throughout the world.

The **MSCI EM Index** captures large and mid cap representation across 23 emerging markets countries.

The Chinese **National People's Congress (NPC)** is the Chinese national legislature.

The **People's Bank of China (PBoC)** is the central bank of the People's Republic of China.

Private equity (PE) refers to funds or individuals investing directly in private, non-listed companies.

Purchasing manager indices (PMI) provide an indicator of the economic health of the manufacturing sector and are based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment. The composite PMI includes both manufacturing and services sectors. They can be published by public sector or private agencies (e.g. Caixin, Nikkei).

The **Reserve Bank of India (RBI)** is the central bank of India.

Reserve requirement ratios (RRR) determine the proportion of banks' deposit liabilities that must be held as reserves.

SHIBOR is the Shanghai interbank offered rate - the rate at which banks are prepared to lend to each other.

USD is the currency code for the U.S. Dollar.

Venture capital (VC) is a type of private equity financing, typically to small, early-stage, emerging firms.



Important information

General

This document may not be distributed in Canada or Japan. This document is intended for retail or professional clients only. This document is being circulated in good faith by Deutsche Bank AG, its branches (as permitted in any relevant jurisdiction), affiliated companies and its officers and employees (collectively, "Deutsche Bank").

This material is for your information only and is not intended as an offer, or recommendation or solicitation of an offer to buy or sell any investment, security, financial instrument or other specific product, to conclude a transaction, or to provide any investment service or investment advice, or to provide any research, investment research or investment recommendation, in any jurisdiction. All materials in this communication are meant to be reviewed in their entirety.

If a court of competent jurisdiction deems any provision of this disclaimer unenforceable, the remaining provisions will remain in full force and effect. This document has been prepared as a general market commentary without consideration of the investment needs, objectives or financial circumstances of any investor. Investments are subject to generic market risks which derive from the instrument or are specific to the instrument or attached to the particular issuer. Should such risks materialise, investors may incur losses, including (without limitation) a total loss of the invested capital. The value of investments can fall as well as rise and you may not recover the amount originally invested at any point in time. This document does not identify all the risks (direct or indirect) or other considerations which may be material to an investor when making an investment decision. This document and all information included herein are provided "as is", "as available" and no representation or warranty of any kind, express, implied or statutory, is made by Deutsche Bank regarding any statement or information contained herein or in conjunction with this document. All opinions, market prices, estimates, forward looking statements, hypothetical statements, forecast returns or other opinions leading to financial conclusions contained herein reflect Deutsche Bank's subjective judgment on the date of this report. Without limitation, Deutsche Bank does not warrant the accuracy, adequacy, completeness, reliability, timeliness or availability of this communication or any information in this document and expressly disclaims liability for errors or omissions herein. Forward looking statements involve significant elements of subjective judgments and analyses and changes thereto and/or consideration of different or additional factors could have a material impact on the results indicated. Therefore, actual results may vary, perhaps materially, from the results contained herein.

Deutsche Bank does not assume any obligation to either update the information contained in this document or inform investors about available updated information. The information contained in this document is subject to change without notice and based on a number of assumptions which may not prove valid, and may be different from conclusions expressed by other departments within Deutsche Bank. Although the information contained in this document has been diligently compiled by Deutsche Bank and derived from sources that Deutsche Bank considers trustworthy and reliable, Deutsche Bank does not guarantee or cannot make any guarantee about the completeness, fairness, or accuracy of the information and it should not be relied upon as such. This document may provide, for your convenience, references to websites and other external sources. Deutsche Bank takes no responsibility for their content and their content does not form any part of this document. Accessing such external sources is at your own risk.

Before making an investment decision, investors need to consider, with or without the assistance of an investment adviser, whether any investments and strategies described or provided by Deutsche Bank, are appropriate, in light of their particular investment needs, objectives, financial circumstances and instrument specifics. When making an investment decision, potential investors should not rely on this document but only on what is contained in the final offering documents relating to the investment. As a global financial services provider, Deutsche Bank from time to time faces actual and potential conflicts of interest. Deutsche Bank's policy is to take all appropriate steps to maintain and operate effective organisational and administrative arrangements to identify and manage such conflicts. Senior management within Deutsche Bank are responsible for ensuring that Deutsche Bank's systems, controls and procedures are adequate to identify and manage conflicts of interest.

Deutsche Bank does not give tax or legal advice, including in this document and nothing in this document should be interpreted as Deutsche Bank providing any person with any investment advice. Investors should seek advice from their own tax experts, lawyers and investment advisers in considering investments and strategies described by Deutsche Bank. Unless notified to the contrary in a particular case, investment instruments are not insured by any governmental entity, not subject to deposit protection schemes and not guaranteed, including by Deutsche Bank. This document may not be reproduced or circulated without Deutsche Bank's express written authorisation. Deutsche Bank expressly prohibits the distribution and transfer of this material to third parties. Deutsche Bank accepts no liability whatsoever arising from the use or distribution of this material or for any action taken or decision made in respect of investments mentioned in this document the investor may have entered into or may enter in future.

The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries, including, without limitation, the United States. 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 Deutsche Bank to any registration or licensing requirement within such jurisdiction not currently met. Persons into whose possession this document may come are required to inform themselves of, and to observe, such restrictions. Past performance is no guarantee of future results; nothing contained herein shall constitute any representation, warranty or prediction as to future performance. Further information is available upon investor's request.

Kingdom of Bahrain

For Residents of the Kingdom of Bahrain: This document does not constitute an offer for sale of, or participation in, securities, derivatives or funds marketed in Bahrain within the meaning of Bahrain Monetary Agency Regulations. All applications for investment should be received and any allotments should be made, in each case from outside of Bahrain. This document has been prepared for private information purposes of intended investors only who will be institutions. No invitation shall be made to the public in the Kingdom of Bahrain and this document will not be issued, passed to, or made available to the public generally. The Central Bank (CBB) has not reviewed, nor has it approved, this document or other marketing of such securities, derivatives or funds in the Kingdom of Bahrain. Accordingly, the securities, derivatives or funds may not be offered or sold in Bahrain or to residents thereof except as permitted by Bahrain law. The CBB is not responsible for performance of the securities, derivatives or funds.

State of Kuwait

This document has been sent to you at your own request. This presentation is not for general circulation to the public in Kuwait. The Interests have not been licensed for offering in Kuwait by the Kuwait Capital Markets Authority or any other relevant Kuwaiti government agency. The offering of



Important information

the Interests in Kuwait on the basis a private placement or public offering is, therefore, restricted in accordance with Decree Law No. 31 of 1990 and the implementing regulations thereto (as amended) and Law No. 7 of 2010 and the bylaws thereto (as amended). No private or public offering of the Interests is being made in Kuwait, and no agreement relating to the sale of the Interests will be concluded in Kuwait. No marketing or solicitation or inducement activities are being used to offer or market the Interests in Kuwait.

United Arab Emirates

Deutsche Bank AG in the Dubai International Financial Centre (registered no. 00045) is regulated by the Dubai Financial Services Authority. Deutsche Bank AG -DIFC Branch may only undertake the financial services activities that fall within the scope of its existing DFSA license. Principal place of business in the DIFC: Dubai International Financial Centre, The Gate Village, Building 5, PO Box 504902, Dubai, U.A.E. This information has been distributed by Deutsche Bank AG. Related financial products or services are only available to Professional Clients, as defined by the Dubai Financial Services Authority.

State of Qatar

Deutsche Bank AG in the Qatar Financial Centre (registered no. 00032) is regulated by the Qatar Financial Centre Regulatory Authority. Deutsche Bank AG -QFC Branch may only undertake the financial services activities that fall within the scope of its existing QFCRA license. Principal place of business in the QFC: Qatar Financial Centre, Tower, West Bay, Level 5, PO Box 14928, Doha, Qatar. This information has been distributed by Deutsche Bank AG. Related financial products or services are only available to Business Customers, as defined by the Qatar Financial Centre Regulatory Authority.

Kingdom of Belgium

This document has been distributed in Belgium by Deutsche Bank AG acting through its Brussels Branch. Deutsche Bank AG is a stock corporation ("Aktiengesellschaft") incorporated under the laws of the Federal Republic of Germany and licensed to carry on banking business and to provide financial services subject to the supervision and control of the European Central Bank ("ECB") and the German Federal Financial Supervisory Authority ("Bundesanstalt für Finanzdienstleistungsaufsicht" or "BaFin"). Deutsche Bank AG, Brussels Branch has its registered address at Marnixlaan 13-15, B-1000 Brussels, registered at the RPM Brussels, under the number VAT BE 0418.371.094. Further details are available on request or can be found at www.deutschebank.be.

Kingdom of Saudi Arabia

Deutsche Securities Saudi Arabia Company (registered no. 07073-37) is regulated by the Capital Market Authority. Deutsche Securities Saudi Arabia may only undertake the financial services activities that fall within the scope of its existing CMA license. Principal place of business in Saudi Arabia: King Fahad Road, Al Olaya District, P.O. Box 301809, Faisaliah Tower, 17th Floor, 11372 Riyadh, Saudi Arabia.

United Kingdom

In the United Kingdom ("UK"), this publication is considered a financial promotion and is approved by DB UK Bank Limited on behalf of all entities trading as Deutsche Bank Wealth Management in the UK. Deutsche Bank Wealth Management is a trading name of DB UK Bank Limited. Registered in England & Wales (No. 00315841). Registered Office: 23 Great Winchester Street, London EC2P 2AX. DB UK Bank Limited is authorised and regulated by the Financial Conduct Authority and its Financial Services Registration Number is 140848. Deutsche Bank reserves the right to distribute this publication through any of its UK subsidiaries, and in any such case, this publication is considered a financial promotion and is approved by such subsidiary where it is authorised by the appropriate UK regulator (if such subsidiary is not so authorised, then this publication is approved by another UK member of the Deutsche Bank Wealth Management group that has the requisite authorisation to provide such approval).

Hong Kong

This document and its contents are provided for information only. Nothing in this document is intended to be an offer of any investment or a solicitation or recommendation to buy or to sell an investment and should not be interpreted or construed as an offer, solicitation or recommendation. To the extent that this document makes reference to any specific investment opportunity, its contents have not been reviewed. The contents of this document have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the investments contained herein. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice. This document has not been approved by the Securities and Futures Commission in Hong Kong nor has a copy of this document been registered by the Registrar of Companies in Hong Kong and, accordingly, (a) the investments (except for investments which are a "structured product", as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (the "SFO")) may not be offered or sold in Hong Kong by means of this document or any other document other than to "professional investors" within the meaning of the SFO and any rules made thereunder, or in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) ("CO") or which do not constitute an offer to the public within the meaning of the CO and (b) no person shall issue or possess for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the investments which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the investments which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the SFO and any rules made thereunder.

Singapore

The contents of this document have not been reviewed by the Monetary Authority of Singapore ("MAS"). The investments mentioned herein are not allowed to be made to the public or any members of the public in Singapore other than (i) to an institutional investor under Section 274 or 304 of the Securities and Futures Act (Cap 289) ("SFA"), as the case may be (as any such Section of the SFA may be amended, supplemented and/or replaced from time to time), (ii) to a relevant person (which includes an Accredited Investor) pursuant to Section 275 or 305 and in accordance with other



Important information

conditions specified in Section 275 or 305 respectively of the SFA, as the case may be (as any such Section of the SFA may be amended, supplemented and/or replaced from time to time), (iii) to an institutional investor, an accredited investor, expert investor or overseas investor (each as defined under the Financial Advisers Regulations) ("FAR") (as any such definition may be amended, supplemented and/or replaced from time to time) or (iv) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA or the FAR (as the same may be amended, supplemented and/or replaced from time to time).

United States

In the United States, brokerage services are offered through Deutsche Bank Securities Inc., a broker-dealer and registered investment adviser, which conducts securities activities in the United States. Deutsche Bank Securities Inc. is a member of FINRA, NYSE and SIPC. Banking and lending services are offered through Deutsche Bank Trust Company Americas, member FDIC, and other members of the Deutsche Bank Group. In respect of the United States, see earlier statements made in this document. Deutsche Bank makes no representations or warranties that the information contained herein is appropriate or available for use in countries outside of the United States, or that services discussed in this document are available or appropriate for sale or use in all jurisdictions, or by all counterparties. Unless registered, licensed as otherwise may be permissible in accordance with applicable law, none of Deutsche Bank or its affiliates is offering any services in the United States or that are designed to attract US persons (as such term is defined under Regulation S of the United States Securities Act of 1933, as amended). This United States-specific disclaimer will be governed by and construed in accordance with the laws of the State of Delaware, without regard to any conflicts of law provisions that would mandate the application of the law of another jurisdiction.

Germany

This document has been created by Deutsche Bank Wealth Management, acting through Deutsche Bank AG and has neither been presented to nor approved by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht). For certain of the investments referred to in this document, prospectuses have been approved by competent authorities and published. Investors are required to base their investment decision on such approved prospectuses including possible supplements. Further, this document does not constitute financial analysis within the meaning of the German Securities Trading Act (Wertpapierhandelsgesetz) and, thus, does not have to comply with the statutory requirements for financial analysis. Deutsche Bank AG is a stock corporation ("Aktiengesellschaft") incorporated under the laws of the Federal Republic of Germany with principal office in Frankfurt am Main. It is registered with the district court ("Amtsgericht") in Frankfurt am Main under No HRB 30 000 and licensed to carry on banking business and to provide financial services. Supervisory authorities: The European Central Bank ("ECB"), Sonnemannstrasse 22, 60314 Frankfurt am Main, Germany and the German Federal Financial Supervisory Authority ("Bundesanstalt für Finanzdienstleistungsaufsicht" or "BaFin"), Graurheindorfer Strasse 108, 53117 Bonn and Marie-Curie-Strasse 24-28, 60439 Frankfurt am Main, Germany.

India

The investments mentioned in this document are not being offered to the Indian public for sale or subscription. This document is not registered and/or approved by the Securities and Exchange Board of India, the Reserve Bank of India or any other governmental/ regulatory authority in India. This document is not and should not be deemed to be a "prospectus" as defined under the provisions of the Companies Act, 2013 (18 of 2013) and the same shall not be filed with any regulatory authority in India. Pursuant to the Foreign Exchange Management Act, 1999 and the regulations issued there under, any investor resident in India may be required to obtain prior special permission of the Reserve Bank of India before making investments outside of India including any investments mentioned in this document.

Italy

This report is distributed in Italy by Deutsche Bank S.p.A., a bank incorporated and registered under Italian law subject to the supervision and control of Banca d'Italia and CONSOB.

Luxembourg

This report is distributed in Luxembourg by Deutsche Bank Luxembourg S.A., a bank incorporated and registered under Luxembourg law subject to the supervision and control of the Commission de Surveillance du Secteur Financier.

Spain

Deutsche Bank, Sociedad Anónima Española is a credit institution regulated by the Bank of Spain and the CNMV, and registered in their respective Official Registries under the Code 019. Deutsche Bank, Sociedad Anónima Española may only undertake the financial services and banking activities that fall within the scope of its existing license. The principal place of business in Spain is located in Paseo de la Castellana number 18, 28046 - Madrid. This information has been distributed by Deutsche Bank, Sociedad Anónima Española.

Portugal

Deutsche Bank AG, Portugal Branch is a credit institution regulated by the Bank of Portugal and the Portuguese Securities Commission ("CMVM"), registered with numbers 43 and 349, respectively and with commercial registry number 980459079. Deutsche Bank AG, Portugal Branch may only undertake the financial services and banking activities that fall within the scope of its existing license. The registered address is Rua Castilho, 20, 1250-069 Lisbon, Portugal. This information has been distributed by Deutsche Bank AG, Portugal Branch.



Important information

Austria

This document is distributed by Deutsche Bank AG Vienna Branch, registered in the commercial register of the Vienna Commercial Court under number FN 140266z. Deutsche Bank AG is a public company incorporated under German law and authorized to conduct banking business and provide financial services. It is supervised by the European Central Bank (ECB), Sonnemannstraße 22, 60314 Frankfurt am Main, Germany and by the Federal Financial Supervisory Authority (BaFin), Graurheindorfer Straße 108, 53117 Bonn, Germany and Marie-Curie-Strasse 24-28, 60439 Frankfurt am Main, Germany. The Vienna branch is also supervised by the Austrian Financial Market Authority (FMA), Otto-Wagner Platz 5, 1090 Vienna. This document has neither been submitted to nor approved by the aforementioned supervisory authorities. Prospectuses may have been published for certain of the investments mentioned in this document. In such a case, investment decisions should be made solely on the basis of the published prospectuses, including any annexes. Only these documents are binding. This document constitutes marketing material for informational and promotional purposes only and is not the result of any financial analysis or research.

The Netherlands

This document is distributed by Deutsche Bank AG, Amsterdam Branch, with registered address at De entree 195 (1101 HE) in Amsterdam, the Netherlands, and registered in the Netherlands trade register under number 33304583 and in the register within the meaning of Section 1:107 of the Netherlands Financial Supervision Act (Wet op het financieel toezicht). This register can be consulted through www.dnb.nl.

031050 071221