DWS

Marketing Material *

March 2020 / Research Report

CORONAVIRUS: IMPACT ON GLOBAL REAL ESTATE

The brand DWS represents DWS Group GmbH & Co. KGaA and any of its subsidiaries, such as DWS Distributors, Inc., which offers investment products, or DWS Investment Management Americas, Inc. and RREEF America L.L.C., which offer advisory services. There may be references in this document which do not yet reflect the DWS Brand.

Please note certain information in this presentation constitutes forward-looking statements. Due to various risks, uncertainties and assumptions made in our analysis, actual events or results or the actual performance of the markets covered by this presentation report may differ materially from those described. The information herein reflects our current views only, is subject to change, and is not intended to be promissory or relied upon by the reader. There can be no certainty that events will turn out as we have opined herein.

For Professional Clients (MiFID Directive 2014/65/EU Annex II) only. For Qualified Investors (Art. 10 Para. 3 of the Swiss Federal Collective Investment Schemes Act (CISA)). For Qualified Clients (Israeli Regulation of Investment Advice, Investment Marketing and Portfolio Management Law 5755-1995). Outside the U.S. for Institutional investors only. In the United States and Canada, for institutional client and registered representative use only. Not for retail distribution. Further distribution of this material is strictly prohibited. In APAC for institutional investors only. In Australia, for professional investors only. *For investors in Bermuda: This is not an offering of securities or interests in any product. Such securities may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda.

Table of Contents

1 / Introduction..3
1.1 Key Points..3
1.2 Background..3
2 / Economic Impact..4
3 / Real Estate Impact..5
3.1 United States..6
3.2 Europe..6
3.3 Asia Pacific..6
Research & Strategy—Alternatives..8
Important Information..9

The opinions and forecasts expressed are those of Coronavirus: Impact on Global Real Estate and not necessarily those of DWS. All opinions and claims are based upon data at the time of publication of this article (March 2020) and may not come to pass. This information is subject to change at any time, based upon economic, market and other conditions and should not be construed as a recommendation.

1 / Introduction

1.1 Key Points

- COVID-19 (coronavirus) has increased the risk of global recession in 2020.
- A recession would weaken fundamentals, including demand, occupancies, and rent growth.
- Disciplined supply and attractive valuations should temper the downside to prices.
- The impact would vary by sector and market. Office and Retail in our opinion are more vulnerable than Industrial and Apartment.

1.2 Background

In recent weeks, global financial markets have been upended by the spread of the coronavirus. While the number of new infections in China has seemingly dwindled, the virus has begun to proliferate around the world. As of March 17, ex-China infection rates were rising at an accelerating, double-digit daily pace, notably in Iran, Italy, France, Germany, Spain, and the U.S., pushing global totals past 190,000. [1]

Fears surrounding the potential impact of the virus on national economies and corporate profits have reverberated through the financial markets. Equity markets plunged more than 25% from their peak and credit spreads blew out.[2] Oil prices collapsed as weakening global demand sparked a Russia-Saudi Arabia price war. Central banks responded with loosening measures: The People's Bank of China was the first to act in February with significant liquidity injections into financial markets; the Federal Reserve and Bank of England delivered emergency cuts to policy rates of 150 and 50 basis points (bps), respectively; and the European Central Bank stepped up asset purchases, a move that the Bank of Japan was expected to soon follow. As investors priced in looser monetary policy and the deflationary effects of weaker economic activity and lower oil prices, 10-year sovereign bond rates tumbled below 1% in the U.S., near-zero in the UK and Japan, and close to -0.5% in Germany.[3]

[1] Johns Hopkins University. As of March 17, 2020.
[2] Bloomberg. As of March 17, 2020.
[3] Bloomberg. As of March 17, 2020.
Unless otherwise noted, the source for the commentary is RREEF America L.L.C as of March 2020.
No assurance can be given that events will turn out as we have opined herein.
Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect

2 / Economic Impact

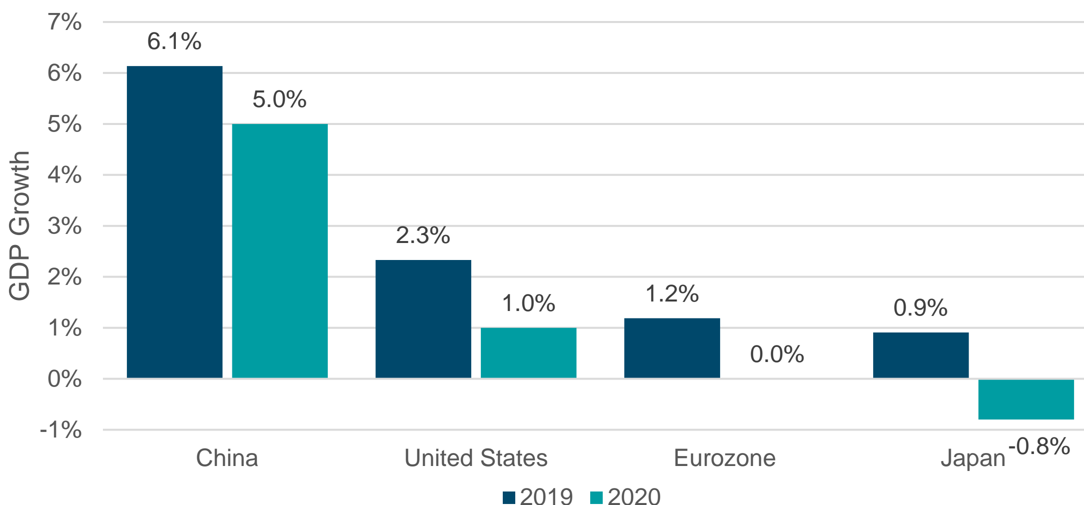
Given the speed of developments, it is difficult to measure the impact on economies to date. Japan's economy contracted in the fourth quarter of 2019, but this was largely attributed to an ill-timed tax hike.[4] More to the point, China's Purchasing Managers Index (PMI) slid to an all-time low in February 2020, implying a sharp slowdown — perhaps even a contraction — in China's economy in the first quarter 2020.[5] Otherwise, incoming data largely reflects pre-virus conditions. Given that quarterly GDP data is often released with a considerable lag, investors will no doubt be keenly focused on monthly reports covering labor markets, retail sales, PMIs, and industrial production.

In a data vacuum, economic predictions are inherently speculative. However, at least from a qualitative perspective, the scope of the impact is coming into view. In particular, the coronavirus has the potential to damage the economy through several channels (albeit to varying degrees across countries and cities).

- *Social Distancing*: Measures to contain the spread (school and business closures and event cancellations) impede economic activity and undermine confidence.
- *Supply chains*: In a globalized economy, supply disruptions in other countries stall domestic manufacturing activity.
- *Tourism*: Corporate restrictions and consumer caution reduce both business and personal travel.
- *Exports*: Weakness in foreign economies reduce demand for exported goods and services.
- *Financial conditions*: Stock-market declines increase the cost of capital and erode business and consumer confidence.

The severity of the impact, both globally and nationally, will in our opinion depend in part on the path of coronavirus infections. We believe that the virus will likely peak mid-year, either because containment efforts prove effective (as we have arguably witnessed in China) or because infections have reached saturation levels. To be sure, governments and central banks will probably combat the fallout with injections of fiscal and monetary stimulus. Lower oil prices could act like a tax cut for manufacturers and consumers. Nevertheless, under this scenario, we believe that Japan and Europe will likely endure recessions, and China and the U.S. will probably experience meaningful slowdowns, before staging a recovery toward the end of the year (see Exhibit). Downside risks include a more protracted epidemic, a more pronounced deterioration in financial markets, or the emergence of job losses that could further undermine consumer spending.

EXHIBIT: GDP GROWTH



Source: Oxford Economics (2019); DWS (2020). As of March 12, 2020.

[4] Oxford Economics. As of March 2020.
[5] Markit/Caixin. As of February 2020.
Unless otherwise noted, the source for the commentary is RREEF America L.L.C as of March 2020.
No assurance can be given that events will turn out as we have opined herein.
Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect

3 / Real Estate Impact

While the economic data has been sparse, real estate data has been nonexistent. Moreover, any impact on real estate will likely occur with a lag of perhaps two to three quarters: it takes time for changes in the economy to filter down to leasing activity and transactions markets, not to mention appraisals. Still, we can begin to anticipate what the implications might be.

Notwithstanding the tumultuous economic and financial backdrop, we are relatively sanguine about prospects for real estate, particularly on a relative basis. To be sure, a slowdown would dent real estate fundamentals through its negative effects on job creation (office), consumer spending (retail and industrial), and household formation (apartment). While conditions would vary by market, we believe that vacancy rates could begin escalate, and rent growth turn negative, toward the end of 2020. Still, the fallout may be limited thanks to the low level of existing vacancies and the generally disciplined levels of construction underway in most markets.

From a capital markets perspective, the potential consequences are mixed. There is no doubt that recent volatility could squeeze capital flows into real estate from institutions (which may rebalance portfolios) and listed REITs (whose cost of equity has increased). Yet lower interest rates could attract capital from levered buyers and yield-seeking investors. Meanwhile, the general discipline observed in debt markets over the course of this cycle minimizes the risk of widespread distressed selling. Ultimately, we believe that we could see some upward pressure on yields, but only modestly.

Real estate is not homogeneous, and we expect that sectors will respond to virus and economic pressures differently. In particular:

- *Retail* is historically defensive in recessions. However, the sector is struggling in the face of e-commerce, and while services such as dining and fitness have helped fill the void, these could be adversely affected by coronavirus concerns. Malls and high-street retail are especially vulnerable to a pullback in tourism and consumer spending: department stores and apparel vendors that were already on the brink may struggle to ride out the downturn. Yet retail centers that provide daily necessities (e.g., supermarkets, health care providers, and pharmacies) may hold up better.

- The *office* sector is sensitive to the economy. While in-place leases protect cash flows for a time, valuations price-in future vacancies more quickly. Additionally, the virus could pose a test for co-working companies and their landlords: if monthly leasing dwindles due to contagion fears or a general slowdown in the economy, co-working tenants may struggle to honor longer-term lease commitments. While co-working represents a small share of overall office tenancy (e.g., less than 2% in the U.S and 4% in New York), it has accounted for a significant share of recent leasing activity.

- *Industrial* should continue to benefit from e-commerce, which may gain added momentum as some consumers substitute delivery for shopping excursions. Vendors might also choose to accumulate more inventory — perhaps permanently — in order to protect against supply disruptions. However, markets that draw demand from major ports might feel the effects of reduced international trade.

- Residential might suffer from weaker household formation. In general, however, *Apartments* tend to hold up well in recessions, as risk-averse households eschew homeownership, notwithstanding lower mortgage rates. Moreover, we believe that housing shortages and affordability challenges will probably continue to provide structural support to this sector in many cities.

The bottom line is that while real estate could certainly be adversely affected this year by a slowing economy, we believe that the downside will probably be relatively limited. Current developments are reminiscent of 2001, a time when a global shock (9/11) similarly battered a vulnerable economy, while real estate supply and valuations were benign. Real estate was not immune to that cycle, but it suffered only modest declines in pricing overall (there were exceptions). And when the storm passed, attractive valuations (relative to reduced interest rates) supported a strong rally through most of the decade.

Unless otherwise noted, the source for the commentary is RREEF America L.L.C as of March 2020.
No assurance can be given that events will turn out as we have opined herein. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect

3.1 United States

The yield curve has been inverted for most of the past year, a historically reliable harbinger of recession. We had expected that consumer spending, supported by low interest rates, would carry the economy through 2020, giving way to a downturn in 2021. However, it is possible that the coronavirus has pulled forward the recession's arrival to the middle of 2020.

The slowdown is expected to disproportionately affect local economies — and real estate markets — that are more exposed to Asia trade (Seattle, San Francisco, and Los Angeles), travel and tourism (Florida), and energy (Houston and to some extent Denver). Washington D.C. should remain relatively insulated thanks to its large government employment base. Nevertheless, over the longer term we continue to favor markets driven by technology (e.g., Seattle, Bay Area, Denver), population growth (e.g., Texas, Atlanta, Florida), or both (e.g., Austin, Raleigh).

3.2 Europe

Europe entered 2020 already experiencing a period weak economic growth. While we had not expected this to result in recession, it now seems increasingly likely that this will be the case for a number of countries, including Italy and Germany. To date, the virus has had by far the biggest impact on Italy, with extended restrictions on movement and commerce implemented across the country. However, with the number of cases growing quickly, almost all major cities in Europe are likely to face further disruption and a period of reduced economic activity.

Similar to other regions, the European real estate market entered this period in good health. Vacancy rates, outside of the retail sector, were near record lows, the development pipeline was under control and relative pricing looked attractive. So far this picture hasn't changed, and indeed relative pricing has only improved. Nonetheless, lower business and consumer confidence, the potential for business failure, and probable reduction in market liquidity suggest real estate performance will likely weaken this year — particularly for non-core assets.

At the sector level, residential and urban logistics look to be most resilient. Mass market residential in particular looks well placed to preserve occupancy and NOI given the current supply demand imbalances across many European cities. Hotels and retail look to be most exposed to both restrictions on travel, lower consumer confidence and less tourist demand.

3.3 Asia Pacific

The virus outbreak has increased the risk of a significant economic slowdown, and possibly recession, in Asia Pacific economies in the first half of 2020, including China, Hong Kong, Japan and South Korea, and to some degree Singapore and Australia. We believe real estate transaction volumes would likely decline sharply in the first half in the region, although the impact on asset values should be mitigated by lower interest rates, modest leverage, low vacancy and disciplined supply. A further prolonged recession scenario, however, could undermine real estate fundamentals and hurt occupier leasing demand in the commercial sectors, and potentially lead to weaker valuation.

Among the real estate sectors, hospitality will likely be most affected, followed by high street retail due to the significant decline in tourist arrivals as well as lower foot traffic from domestic consumers. Those asset owners face increases in tenant incentives, rent abatements and expenditures. Within retail we favor assets with non-discretionary exposure. Demand for space expansion and relocation will probably be muted in the office sector while we favor markets with controlled supply and relatively resilient demand (e.g., Sydney, Melbourne, Brisbane, Osaka, Nagoya, Fukuoka, Seoul Gangnam). Logistics assets catering to domestic consumption and e-commerce retailing will probably continue to outperform other sectors (key markets in Australia and Japan, Seoul and Singapore). Occupier fundamentals remain strong in Japan's residential sector, while in the investment market the travel restrictions could be a stumbling block for cross border investors who have been the main driver of mega deals in the past two to three years.

Unless otherwise noted, the source for the commentary is RREEF America L.L.C as of March 2020.
No assurance can be given that events will turn out as we have opined herein. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect

Research & Strategy—Alternatives

OFFICE LOCATIONS:

Chicago
222 South Riverside Plaza
34th Floor
Chicago
IL 60606-1901
United States
Tel: +1 312 537 7000

Frankfurt
Taunusanlage 12
60325 Frankfurt am Main
Germany
Tel: +49 69 71909 0

London
Winchester House
1 Great Winchester Street
London EC2N 2DB
United Kingdom
Tel: +44 20 754 58000

New York
875 Third Avenue
26th Floor
New York
NY 10022-6225
United States
Tel: +1 212 454 3414

San Francisco
101 California Street
24th Floor
San Francisco
CA 94111
United States
Tel: +1 415 781 3300

Singapore
One Raffles Quay
South Tower
20th Floor
Singapore 048583
Tel: +65 6538 7011

Tokyo
Sanno Park Tower
2-11-1 Nagata-cho
Chiyoda-Ku
18th Floor
Tokyo
Japan
Tel: +81 3 5156 6000

TEAM:

Global

Kevin White, CFA
Co-Head of Research & Strategy
kevin.white@dws.com

Simon Wallace
Co-Head of Research & Strategy
simon.wallace@dws.com

Gianluca Minella
Head of Infrastructure Research
gianluca.minella@dws.com

Yasmine Kamaruddin
Global Strategy
yasmine.kamaruddin@dws.com

Americas

Brooks Wells
Head of Research, Americas
brooks.wells@dws.com

Liliana Diaconu, CFA
Office Research
liliana.diaconu@dws.com

Ross Adams
Industrial Research
ross.adams@dws.com

Ryan DeFeo
Property Market Research
ryan-c.defeo@dws.com

Ana Leon
Retail Research
ana.leon@dws.com

Joseph Pecora, CFA
Apartment Research
joseph.pecora@dws.com

Europe

Tom Francis
Property Market Research
tom.francis@dws.com

Martin Lippmann
Property Market Research
martin.lippmann@dws.com

Farhaz Miah
Property Market Research
farhaz.miah@dws.com

Aizhan Meldebek
Infrastructure Research
aizhan.meldebek@dws.com

Siena Golan
Property Market Research
siena.golan@dws.com

Asia Pacific

Koichiro Obu
Head of Research & Strategy, Asia Pacific
koichiro-a.obu@dws.com

Natasha Lee
Property Market Research
natasha-j.lee@dws.com

Seng-Hong Teng
Property Market Research
seng-hong.teng@dws.com

Hyunwoo Kim
Property Market Research
hyunwoo.kim@dws.com

Important Information

The brand DWS represents DWS Group GmbH & Co. KGaA and any of its subsidiaries, such as DWS Distributors, Inc., which offers investment products, or DWS Investment Management Americas, Inc. and RREEF America L.L.C., which offer advisory services.

DWS represents the asset management activities conducted by DWS Group GmbH & Co. KGaA or any of its subsidiaries. In the U.S., DWS relates to the asset management activities of RREEF America L.L.C.; in Germany: DWS Grundbesitz GmbH, DWS Real Estate GmbH, and DWS Alternatives GmbH ; in Australia: DWS Investments Australia Limited (ABN 52 074 599 401) an Australian financial services incense holder; in Japan: DWS Investments Japan Limited; in Hong Kong: Deutsche Bank Aktiengesellschaft, Hong Kong Branch (for direct real estate business), and DWS Investments Hong Kong Limited (for real estate securities business); in Singapore: DWS Investments Singapore Limited (Company Reg. No. 198701485N); in the United Kingdom: Deutsche Alternative Asset Management (UK) Limited, DWS Alternatives Global Limited and DWS Investments UK Limited; and in Denmark, Finland, Norway and Sweden: DWS Investments UK Limited and DWS Alternatives Global Limited; in addition to other regional entities in the Deutsche Bank Group. Key DWS research personnel are voting members of various investment committees. Members of the investment committees vote with respect to underlying investments and/or transactions and certain other matters subjected to a vote of such investment committee. The views expressed in this document have been approved by the responsible portfolio management team and real estate committee and may not necessarily be the views of any other division within DWS.

This material was prepared without regard to the specific objectives, financial situation or needs of any particular person who may receive it. It is intended for informational purposes only. It does not constitute investment advice, a recommendation, an offer, solicitation, the basis for any contract to purchase or sell any security or other instrument, or for DWS or its affiliates to enter into or arrange any type of transaction as a consequence of any information contained herein. Neither DWS nor any of its affiliates gives any warranty as to the accuracy, reliability or completeness of information which is contained in this document. Except insofar as liability under any statute cannot be excluded, no member of the DWS, the Issuer or any office, employee or associate of them accepts any liability (whether arising in contract, in tort or negligence or otherwise) for any error or omission in this document or for any resulting loss or damage whether direct, indirect, consequential or otherwise suffered by the recipient of this document or any other person.

The views expressed in this document constitute DWS Group's judgment at the time of issue and are subject to change. This document is only for professional investors. This document was prepared without regard to the specific objectives, financial situation or needs of any particular person who may receive it. No further distribution is allowed without prior written consent of the Issuer.

Investments are subject to risk, including market fluctuations, regulatory change, possible delays in repayment and loss of income and principal invested. The value of investments can fall as well as rise and you might not get back the amount originally invested at any point in time.

Investment in real estate may be or become nonperforming after acquisition for a wide variety of reasons. Non-performing real estate investment may require substantial workout negotiations and/ or restructuring. Environmental liabilities may pose a risk such that the owner or operator of real property may become liable for the costs of removal or remediation of certain hazardous substances released on, about, under, or in its property. Additionally, to the extent real estate investments are made in foreign countries, such countries may prove to be politically or economically unstable. Finally, exposure to fluctuations in currency exchange rates may affect the value of a real estate investment.

Investments in Real Estate are subject to various risks, including but not limited to the following:

Adverse changes in economic conditions including changes in the financial conditions of tenants, buyer and sellers, changes in the availability of debt financing, changes in interest rates, real estate tax rates and other operating expenses;
Adverse changes in law and regulation including environmental laws and regulations, zoning laws and other governmental rules and fiscal policies;
Environmental claims arising in respect of real estate acquired with undisclosed or unknown environmental problems or as to which inadequate reserves have been established;
Changes in the relative popularity of property types and locations;
Risks and operating problems arising out of the presence of certain construction materials; and
Currency / exchange rate risks where the investments are denominated in a currency other than the investor's home currency.

An investment in real estate involves a high degree of risk, including possible loss of principal amount invested, and is suitable only for sophisticated investors who can bear such losses. The value of shares/ units and their derived income may fall or rise.

Any forecasts provided herein are based upon DWS's opinion of the market at this date and are subject to change dependent on the market. Past performance or any prediction, projection or forecast on the economy or markets is not indicative of future

performance.

In Australia: Issued by DWS Investments Australia Limited (ABN 52 074 599 401), holder of an Australian Financial Services License (AFSL 499 640). This information is only available to persons who are professional, sophisticated, or wholesale investors as defined under section 761 G of the Corporations Act 2001 (Cth). The information provided is not to be construed as investment, legal or tax advice and any recipient should take their own investment, legal and tax advice before investing. DWS Investments Australia Limited is an asset management subsidiary of DWS Group GmbH & CO. KGaA ("DWS Group"). The capital value of and performance of an investment is not in any way guaranteed by DWS Group, DWS Investments Australia Limited or any other member of the DWS Group. Any forecasts provided herein are based upon our opinion of the market as at this date and are subject to change, dependent on future changes in the market. Any prediction, projection or forecast on the economy, stock market, bond market or the economic trends of the markets is not necessarily indicative of the future or likely performance. Investments are subject to investment risk, including possible delays in repayment and loss of income and principal invested. DWS Investments Australia Limited is not an Authorised Deposit-taking Institution under the Banking Act 1959 nor regulated by APRA.

In Israel: DWS is not a holder of a license granted in Israel pursuant to the Regulation of Investment Advising, Investment Marketing and Portfolio Management Law, 1995 ("the Investment Law") and does not hold the insurance coverage required of a licensee pursuant to the Investment Law.

This document and any information provided by DWS in relation to the contents thereof will not under any circumstances be deemed investment "advice" (as such term is defined in the Investment Law). DWS is acting as a "marketing agent" (as such term is defined in the Investment Law) and any use of the word "advice" or any derivative thereof in this document should not be taken to mean that DWS is offering "advice" as such term is defined in the Investment Law.
The transaction or investment described in this document ("the investment") may have been produced or issued by DWS or by a third party. In either case, in the event that a client of DWS enters into the investment, DWS may receive a financial benefit that is separate from, and in addition to, any fee, commission or other payment (if any) made to it by the client.
DWS has chosen to market the investment because DWS receives certain benefits when one of its clients invests in the investment. Other similar transactions or investment opportunities to which DWS has no connection, may also be available however DWS has chosen not to market these.

This document may not be reproduced or used for any other purpose, nor be furnished to any other person other than those to whom copies have been sent.

This document has been prepared exclusively for Qualified Clients as such term is defined in the First Schedule to the Investment Law and/or the First Schedule of the Israel Securities Law, 5728-1968 ("Securities Law"). As a prerequisite to the receipt of a copy of this document a recipient may be required to provide confirmation and evidence that it is a Qualified Client.

This document has not been approved by the Israeli Securities Authority and will not constitute "an offer to the public" under sections 15 and 15a of the Securities Law or section 25 of the Joint Investment Trusts Law, 5754-1994.

Notice to prospective Investors in Japan: This document is distributed in Japan by DWS Investments Japan Limited. Please contact the responsible employee of DWS Investments Japan Limited in case you have any question on this document because DWS Investments Japan Limited serves as contacts for the product or service described in this document. This document is for distribution to Professional Investors only under the Financial Instruments and Exchange Law.

Dubai International Financial Centre: 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.

Kingdom of Saudi Arabia: 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 take any responsibility for the contents of this document, does not make any representation as to its accuracy or completeness, 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 adviser.

For Investors in Switzerland: This material is intended for information purposes only and does not constitute investment advice or a personal recommendation. This document should not be construed as an offer to sell any investment or service. Furthermore, this document does not constitute the solicitation of an offer to purchase or subscribe for any investment or service in any jurisdiction where, or from any person in respect of whom, such a solicitation of an offer is unlawful. Neither DWS CH AG nor any of its affiliates, gives any warranty as to the accuracy, reliability or completeness of information which is contained in this document. Past performance or any prediction or forecast is not indicative of future results.

The views expressed in this document constitute DWS Group's judgment at the time of issue and are subject to change. DWS Group has no obligation to update, modify or amend this letter or to otherwise notify a reader thereof in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subsequently becomes inaccurate, or if research on the subject company is withdrawn. Prices and availability of financial instruments also are subject to change without notice.

The information provided in this document is addressed solely to Qualified Investors pursuant to Article 10 paragraph 3 of the Swiss Federal Act on Collective Investment Schemes (CISA) and Article 6 of the Ordinance on Collective Investment Schemes. This document is not a prospectus within the meaning of Articles 1156 and 652a of the Swiss Code of Obligations and may not comply with the information standards required thereunder. This document may not be copied, reproduced, distributed or passed on to others without the prior written consent of DWS CH AG or its affiliates.

For investors in Spain: This document has not been prepared in accordance with the requirements of Spanish regulations for sales prospectus (Act 35/2003, as of 4th November, Collective Investment Schemes, RD 1082/2014, as of 13th July that approves Regulation of the previous Act, and Circular 3/2006, as of 26th October, sales prospectus). The prospectus of the Fund has not been registered at the Spanish regulator as there is no intention to distribute the shares in Spain through any public offering, public advertisement or any other similar way. This Fund will only be offered individualized to a limited number of qualified investors. This document is confidential and will be of the exclusive use of the recipient specifically addressed.

For investors in the United Kingdom: FOR PROFESSIONAL CLIENTS ONLY

Issued and approved by DWS Investments UK Limited of Winchester House, 1 Great Winchester Street, London EC2N 2DB, authorised and regulated by the Financial Conduct Authority (“FCA”).

This document is a “non-retail communication” within the meaning of the FCA's Rules and is directed only at persons satisfying the FCA’s client categorisation criteria for an eligible counterparty or a professional client. This document is not intended for and should not be relied upon by a retail client. This document may not be reproduced or circulated without written consent of the issuer.

This document is intended for discussion purposes only and does not create any legally binding obligations on the part of DWS Group GmbH & Co. KGaA and/or its affiliates (“DWS”). Without limitation, this document does not constitute investment advice or a recommendation or an offer or solicitation and is not the basis for any contract to purchase or sell any security or other instrument, or for DWS to enter into or arrange any type of transaction as a consequence of any information contained herein. The information contained in this document is based on material we believe to be reliable; however, we do not represent that it is accurate, current, complete, or error free. Assumptions, estimates and opinions contained in this document constitute our judgment as of the date of the document and are subject to change without notice. Past performance is not a guarantee of future results. Any forecasts provided herein are based upon our opinion of the market as at this date and are subject to change, dependent on future changes in the market. Any prediction, projection or forecast on the economy, stock market, bond market or the economic trends of the markets is not necessarily indicative of the future or likely performance. Investments are subject to risks, including possible loss of principal amount invested.

When making an investment decision, potential investors should rely solely on the final documentation relating to the investment or service and not the information contained herein. The investments or services mentioned herein may not be appropriate for all investors and before entering into any transaction you should take steps to ensure that you fully understand the transaction and have made an independent assessment of the appropriateness of the transaction in the light of your own objectives and circumstances, including the possible risks and benefits of entering into such transaction. For general information regarding the nature and risks of the proposed transaction and types of financial instruments please go to https://www.db.com/company/en/risk-disclosures.htm. You should also consider seeking advice from your own advisers in making this assessment. If you decide to enter into a transaction with us you do so in reliance on your own judgment.

Any opinions expressed herein may differ from the opinions expressed by Deutsche Bank AG and/or any other of its affiliates (“DB”). DB may engage in transactions in a manner inconsistent with the views discussed herein. DB trades or may trade as principal in the instruments (or related derivatives), and may have proprietary positions in the instruments (or related derivatives) discussed herein. DB may make a market in the instruments (or related derivatives) discussed herein. You may not distribute this document, in whole or in part, without our express written permission.

DWS SPECIFICALLY DISCLAIMS ALL LIABILITY FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL OR OTHER LOSSES OR DAMAGES INCLUDING LOSS OF PROFITS INCURRED BY YOU OR ANY THIRD PARTY THAT MAY ARISE FROM ANY RELIANCE ON THIS DOCUMENT OR FOR THE RELIABILITY, ACCURACY, COMPLETENESS OR TIMELINESS THEREOF.

Any reference to “DWS”, “Deutsche Asset Management” or “Deutsche AM” shall, unless otherwise required by the context, be understood as a reference to asset management activities conducted by DWS Group GmbH & Co. KGaA and/or any of its affiliates. Clients will be provided DWS products or services by one or more legal entities that will be identified to clients pursuant to the contracts, agreements, offering materials or other documentation relevant to such products or services. DWS’s infrastructure investment business is part of the Alternatives platform. In the U.S., DWS relates to the asset management activities of RREEF America L.L.C.; in Germany: DWS Grundbesitz GmbH, DWS Real Estate GmbH, and DWS Alternatives

GmbH; in Japan: DWS Investments Japan Limited; in Hong Kong: Deutsche Bank Aktiengesellschaft, Hong Kong Branch (for direct real estate business), and DWS investments Hong Kong Limited (for real estate securities business); in Singapore: DWS Investments Singapore Limited (Company Reg. No. 198701485N); in the United Kingdom: Deutsche Alternative Asset Management (UK) Limited, DWS Alternatives Global Limited and DWS Investments UK Limited; and in Denmark, Finland, Norway and Sweden: Deutsche Bank AG; in Australia: DWS Investments Australia Limited (ABN 52 074 599 401) an Australian financial services license holder.

© 2020. All rights reserved.

For investors in Nordics: Deutsche Bank AG is authorised under German Banking Law (competent authority: European Central Bank and the BaFin, Germany's Federal Financial Supervisory Authority). Deutsche Bank AG Stockholm branch ("DBS", Bolagsverket nr. 516401-9985) is authorised by BaFin and regulated by Finansinspektionen for the conduct of licensed activities in Sweden, Denmark, Norway and Finland. Deutsche Bank branches operate within the EEA on the back of the legal entity (Deutsche Bank AG) EU Passports within the European Economic Area ("EEA"). Reference is made to European Union Regulatory Background and Corporate and Regulatory Disclosures at https://www.db.com/en/content/eu_disclosures_uk.htm. Details about the extent of our authorisation and regulation by BaFin and respective Nordic Region Financial Supervisory Authority are available from us on request.

Without limitation, this document and any attachment does not constitute an offer or a recommendation to enter into any transaction with DBS. This material and attachments is for information purposes only and is not intended to be an offer or an advice or recommendation or solicitation, or the basis for any contract to purchase or sell any security, or other instrument, or for DBS to enter into or arrange any type of transaction as a consequence of any information contained herein. The implicit or explicit views and recommendations expressed in marketing or other financial presentation material as well as any financial proposals are solely those of the issuer of such material, and forwarded to you on behalf of the contracting party.

The views set out in this presentation are those of the author and may not necessarily the views of any other division within Deutsche Bank, including the Sales and Trading functions of the Corporate and Investment Bank or the Global Client Group of Deutsche Asset Management and Private Wealth Management: all services provided by these the Sales and Trading functions of the Corporate and Investment Bank are purely on a non-advised, execution-only basis. DB may engage in transactions in a manner inconsistent with the views discussed herein. DB trades or may trade as principal in the instruments (or related derivatives), and may have proprietary positions in the instruments (or related derivatives) discussed herein. DB may make a market in the instruments (or related derivatives) discussed herein. Sales and Trading personnel are compensated in part based on the volume of transactions effected by them. You may not distribute this document, in whole or in part, without our express written permission.

DBS is solely acting for and on behalf of Deutsche Bank AG and/or any of its affiliates. Potential investors should be aware that if they decide to enter into a transaction with Deutsche Bank AG or any of its affiliates acting in their capacity as principal to the transaction ("contracting party"), any and all agreements will be entered into with that contracting party (unless re-negotiated) and pursuant to the financial laws and regulations of the country where the contracting party is licensed.

Unless DBS is entering into a separate and explicit contractual relationship with you for the provision of investment services, it is neither obliged to categorise you in accordance with MiFID nor perform MiFID suitability and/or appropriateness assessment (as enacted into Swedish laws and regulations). The investments or services mentioned in this material or an attachment thereto may not be appropriate for all investors and before entering into a transaction you should take steps to ensure that you fully understand the transaction and have made an independent assessment of the appropriateness of the transaction in the light of your own objectives and circumstances, including the possible risks and benefits of entering into such transaction. You should also consider seeking advice from your own advisers in making this assessment. If you decide to enter into a transaction with a contracting party you do so in reliance on your own judgment. For general information regarding the nature and risks and types of financial instruments please go to www.globalmarkets.db.com/riskdisclosures.

DB SPECIFICALLY DISCLAIMS ALL LIABILITY FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL OR OTHER LOSSES OR DAMAGES INCLUDING LOSS OF PROFITS INCURRED BY YOU OR ANY THIRD PARTY THAT MAY ARISE FROM ANY RELIANCE ON THIS DOCUMENT OR FOR THE RELIABILITY, ACCURACY, COMPLETENESS OR TIMELINESS THEREOF.

For Investors in Belgium: The information contained herein is only intended for and must only be distributed to institutional and/or professional investors (as defined in the Royal Decree dated 19 December 2017 implementing MiFID directive). In reviewing this presentation you confirm that you are such an institutional or professional investor. When making an investment decision, potential investors should rely solely on the final documentation (including the prospectus) relating to the investment or service and not the information contained herein. The investments or services mentioned herein may not be adequate or appropriate for all investors and before entering into any transaction you should take steps to ensure that you fully understand the transaction and have made an independent assessment of the suitability or appropriateness of the transaction in the light of your own objectives and circumstances, including the possible risks and benefits of entering into such transaction. You should also consider seeking advice from your own advisers in making this assessment. If you decide to enter into a transaction with us you do so in reliance on your own judgment.

For investors in Bermuda: This is not an offering of securities or interests in any product. Such securities may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

© 2020 DWS Group GmbH & Co. KGaA. All rights reserved. I-074433-1.0 (03/2020)