

## Global real estate viewpoint

### BlackRock Real Estate Research

April 2023

#### **Authors**



Simon Durkin Head of EMEA Real Estate Research



Alex Symes Head of U.S. Real Estate Research

### **Key takeaways**

- The new investment regime of higher volatility creates capital markets disruption for real estate investors. Financial cracks have started to appear.
- The recent banking turmoil that started in March 2023 is an example of financial cracks that
  impacts the commercial real estate sector as regional banks make up a significant portion of the
  commercial real estate lending market. Credit is now more constrained than before. Longer-term,
  we expect more regulation for U.S. regional banks, which ultimately will result in lower amounts
  of debt availability.
- Real estate transaction volumes started declining during the latter half of 2022. Global transaction volumes were down 32% y/y (source: Real Capital Analytics). We expect **transaction volumes to remain subdued** as capital markets continue to be fractured and all players are experiencing higher cost of capital.
- At the same time, real estate fundamentals are largely steady thanks to a tight labor market globally, but there is dispersion between property types. For example, industrial and residential sectors are supported by long-term structural trends. Necessity based retail offers stability, but office will likely face meaningful correction as uncertain and weak tenant demand prevails.
- Not all office is the same. We expect continued performance dispersion between high and low quality office spaces and between regions with slightly more positive sentiment in European and Asia Pacific markets as utilization rates are higher.
- **Tighter credit conditions** from higher debt costs and constrained availability increases the cost of capital for many market participants and reduces competition for desirable properties. We are entering into a **window of opportunity** for a compelling investment environment for well-capitalized investors as cyclical and structural opportunities present themselves.
- We see this time as an opportunity for real estate investors to **add resiliency** to portfolios by allocating to assets with defensive characteristics with long-term structural trends in place such as industrial, residential, necessity-based retail (grocery and retail warehouses) and being highly selective on high beta sectors such as office. **Asset selection** is key.
- At the same time, real estate investors should consider **changing tenant needs** which will likely drive large dispersions in performance and may accelerate the obsolescence of existing stock.

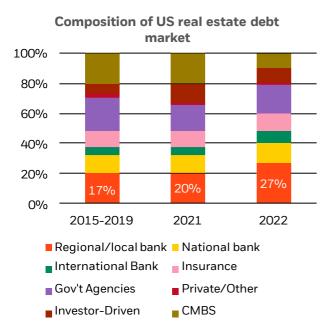
## Banking turmoil: impact for real estate investors

Financial cracks started to appear in the form of the banking turmoil in March 2023 which started with the regional U.S. banks. At the same time, central banks are sticking to a clear separation of financial stability and monetary policy objectives. We expect further rate hikes to combat inflation and a key impact to markets is further tightening of credit conditions.

Banks are active lenders in real estate. In the U.S., banks and thrifts comprise of 38% of outstanding commercial real estate (CRE) loans. Small and medium-sized banks hold 67% of CRE bank loans, which means their overall share is 25% of outstanding CRE loans. In 2022, US regional/local banks made up 27% of lender composition (source: Real Capital Analytics).

In the short term, other lenders can step in, such as high yield debt funds and mortgage REITs, but likely at higher costs to the borrower. Even though the transaction market has slowed, capital needs will come from refinancings. Longer term, tighter bank regulations, especially for smaller sized ones, will likely result in lower amounts of debt availability from traditional sources.

At this stage we do not expect widespread contagion to impact the European banking sector. Credit Suisse's financial position was much worse than that of other major European banks. However, the ECB has stated they are ready to deploy all tools at their disposal should the situation worsen.



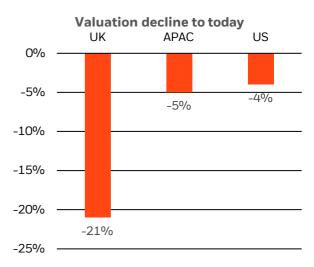
Source: Real Capital Analytics and BlackRock, as of February 2023

For real estate, we see **three main implications** from the recent tightening of credit conditions:

1. Performance dispersion with quality of cash flows in focus: Credit availability will ultimately result in a greater performance dispersion between sectors and markets. Equity investors and lenders alike will more carefully underwrite new deals. Quality of cash flow will matter more to investors and therefore dictate return performance.

As debt availability is challenged, buyers reliant on debt capital will be affected more than cash or low-leverage buyers.

2. Recent events a catalyst for further value declines:
Real estate is generally a debt driven asset class and therefore the lack of credit availability will likely trigger widening bid-ask spreads and ultimately further valuation declines in the short term. Valuations have meaningfully declined over the past year in the UK, but have been slower to unfold in the rest of Europe, the U.S. and Asia Pacific.



Source: MSCI, JLL, REIS, NCREIF and BlackRock, as of Dec. 31, 2022

3. A window of opportunity: In our view, as the market corrects, the current situation will create a *once-in-a-cycle opportunity* for real estate investors to enter at a much reduced basis. Buyers and sellers are mostly sitting on the sidelines, but there will be refinancing needs. We should expect even higher quality properties to come to market at attractive pricing which should yield outsized returns with the option of investing at different points of the capital stack.

While the clouds are darkening, real estate markets today are in much better shape compared to pre-GFC due to the following reasons:

- Underwriting standards are generally tighter than pre -2008, many lenders and owners demanding lower LTVs and higher coverage ratios when entering into a deal.
- Tighter bank regulations have also helped to keep up lending standards.
- Supply is generally lower today with less speculative construction, and the silver lining to higher costs of capital is it will likely limit supply in the outer years.
- Real estate fundamentals are buoyed by steady labor market conditions, critical as quality of cashflow becomes more important.

If a protracted recession with a substantially weaker jobs market should occur, we will likely see a deterioration in real estate fundamentals. Vacancy rates will likely increase across most property types and rental growth will likely slow or decline. In this downside scenario, investors would benefit from positioning more defensively and reducing exposure to higher beta sectors such as office and discretionary retail.

# United States: fractured capital markets...

Volatility has been a prevailing theme for real estate capital markets as participants face higher costs of capital. The regional bank crisis has resulted in a lack of capital availability for real estate sponsors, including those seeking construction financing. Some investors have found it difficult to underwrite deals with higher debt costs. In 2022, the transactions market was dominated by private buyers, according to Real Capital Analytics, with institutional and other buyers remaining on the sidelines. In general, all-cash and lower-leverage investors have continued to be active in the market, but high-leverage buyers have had to underwrite with higher debt costs. This will likely lead to more differentiation in pricing going forward according to the quality of cash flow. There are generally less bidders for deals today compared to earlier in the year, creating opportunity for some investors.

### ...but steady fundamentals

Real estate fundamentals are still broadly steady with low vacancies for many property types and markets. The job market remains tight, but cracks have started to emerge with higher layoff announcements.

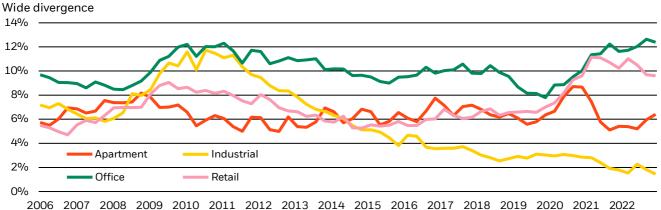
The **office** sector outlook remains negative in the U.S. More office workers have returned in-person and physical occupancy in many markets is increasing. However, downside risk remains as many employers are rethinking space needs, including large tech companies which used to be a bright spot in the leasing market. A few tech companies have relinquished space in the new year, a Uturn from the strong absorption during the pandemic. As the labor market tips back towards employers, more employees will be incentivised to work in-person. Modern state of the art spaces are seeing good tenant demand and investor interest, whereas commodity office space is languishing, a clear demand divergence. Nevertheless, a more prevalent issue is many lenders are stepping out of the market for this property type. We expect to see sizeable correction in this sector.

The **industrial** sector greatly outperformed over the past couple of years due to demand from strong e-commerce tenants, and the inventory build-up and on-shoring of production will likely drive additional demand going forward. The NCREIF Property Index (NPI) had U.S. industrial total returns at 14.5% y-o-y to Q4 2022 (-3.6% total returns during the quarter). While e-commerce growth will likely slow, the shift in consumer behavior is structural. Onshoring of manufacturing and production and rewiring of supply chains will likely boost incremental demand for industrial space. Rent growth and occupancy will likely soften in many markets as we head into a weaker economic landscape, but we still anticipate opportunities to significantly mark rents to market, especially in submarkets with tight vacancies.

The apartment sector has performed well, which has attracted strong investor interest. We believe the sector will continue to be buoyed by solid income growth, lack of affordable for-sale housing in many markets, higher home prices, and increasing household formation. Occupancy and rent growth has started moderating over the past two quarters from the extraordinarily high levels experienced in 2021 and H1 2022. Many secondary markets in the Southeast continued to outperform the national average, although incoming supply over the next two years will likely mar the outlook. Higher mortgage rates impact homebuying affordability, and many wouldbe homeowners continue to rent. We outperformance in suburban apartments as there is greater growth in renter demand in the family formationage category.

**Retail** is eking out a slower but steady recovery compared to many other property types, although there has been significant dispersion across the market and certain assets are still producing strong cash flow streams. Tenant demand has improved across the sector, and supply has been low. Necessity-based retail is a bright spot delivering steady performance with resilient cash flows, diverging from malls and power centers. The use of centers will likely evolve over the medium term as non-traditional tenants look for space, such as medical and fitness tenants.

#### Vacancy remains low



Sources: NCREIF and BlackRock, as of December 31, 2022

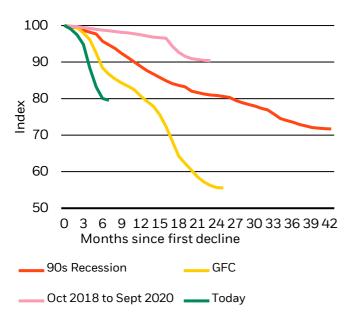
# Europe: Faster repricing, resilient occupier demand

Elevated debt costs and an unfavorable spread to bond yields, alongside an uncertain macro environment has continued to take a toll on investment volumes. European all property transaction volumes sat at €49 billion in Q4, a 65% decrease on the same period in 2022 (source: Real Capital Analytics). However, it is worth noting the relative record volumes observed in 2021.

Real estate valuations have come down significantly, especially in the UK, and at a fast pace particularly when compared with previous downturns. This could suggest that values could reach a floor soon especially considering the relatively resilient occupier markets. If central bank policies continue to bring inflation under control and the rate of capital value declines eases, we could see improving sentiment and increased pricing confidence leading to more transaction activity and price discovery.

This gives us greater confidence that we may be nearer to the bottom of the cycle than the top, and whilst cracks appearing in the banking sector might moderate this view, we still believe we could see a window of opportunity open later this year. Despite ongoing uncertainty, we believe now is the time for strategic positioning of portfolios ahead of the inevitable cyclical upturn, positioning to capitalize on the acceleration of structural change in a post pandemic world.

#### Rapid valuation falls in the UK



Source: MSCI UK Monthly Index, 1/2/2023. Indexes are unmanaged and one cannot invest directly in an index.

While the outlook for **offices** remains uncertain, a lack of Grade A space and a contracting development pipeline will likely facilitate future rental growth for prime office assets. The outlook is for the sector is more positive than in the US. Demand for the best office space remains steady with take-up in 2022 reaching 2% above its prepandemic average, despite occupiers re-evaluating their needs to adapt to new models of working.

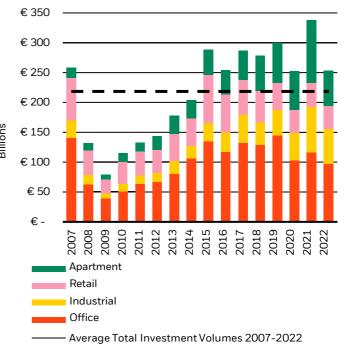
Vacancy rates have increased to 8% in Europe, however, most of this increase is a result of occupiers moving out of secondary space into grade A properties with the highest sustainability credentials, a trend that we expect only to continue and intensify. More stringent EPC regulation for offices is expected in all markets and will continue to drive the dispersion in performance between prime and secondary assets.

Logistics continue to have favorable fundamentals, though transaction volumes have been disproportionately impacted by the rising rates turmoil across Europe. Leasing activity has shown some signs of slowing, however historically low levels of available space are likely to support rental values and growth in the medium term. Long term structural trends, notably the widespread adoption of e-commerce across the Eurozone, and nearshoring for resilience ensure ongoing resilience of the sector.

**Residential** continues to be viewed as one of the most defensive sectors. Several demographic structural trends will ensure the sector remains attractive. Increased household formation, shrinking household sizes, increased mobility, rising house prices and the increasing cost of debt has made rental accommodation a more attractive option in recent years. This increased occupier demand is expected to continue to push up rents.

There has been a structural shift out of the **retail** sector in recent years, as investors continue to shrink their retail portfolios. Ongoing competition from e-commerce has left many retailers struggling to maintain profitability, and this challenge has only been exacerbated by the cost of living crisis. From an occupier perspective, 2023 has the potential to be a difficult year.

### European transaction volumes down, but only to long term average



Sources: RCA Transaction Volumes, 20/3/2023.

# Asia Pacific: Nascent repricing on fewer trades

A softer tone to the economic outlook persists for the Asia Pacific region, for now, driven by higher inflation, interest rates and slower global growth. The post-COVID reopening of China's economy will likely provide a boost in the region, but the languishing global economic outlook will continue to dampen activity. The moderation of this region is not as severe as what we have seen in Europe, given a more diverse supply of manufactured goods and energy. Nevertheless, economic growth is slowing and with prices visibly elevated in most APAC markets, valuation moderation is expected.

The real estate cycle will likely to slow down from here. In specific regions, asset values have retrenched a bit as funding costs lifted and there is likely to be greater spot pressures in some regions and segments in 2023. While activity relaxations are supportive of foot traffic and occupancy within city centers, higher mortgage rates and steeper prices are weighing heavily on discretionary household budgets, which impact disproportionately on some retail segments.

Higher construction costs are affecting new supply and lifting replacement costs for existing assets. Meanwhile, there is increasing scope for financial distress from overlevered, under-capitalized owners, specifically those not sufficiently hedged against interest rate and currency movements.

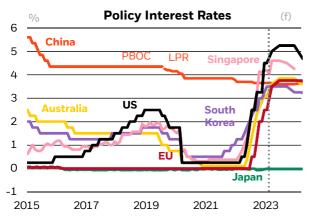
White-collar workers are continually shifting back into the **office** on a staggered basis. More broadly, the recovery of activity across the region are reflected in rising in-office presence. In most Asian markets, the office is again the default workplace for white-collar professionals. The permanent demand drag of working-from-home is becoming more apparent yet remains relatively muted for a broad range of APAC markets.

While improving mobility has put more people back into **shopping centers**, household budgets are being broadly impacted by rising prices and mortgage repayments, which weaken retail spending, particularly for discretionary, big-ticket household items. Consumer confidence is also being adversely affected. Volatile equity prices and downbeat house prices both weigh heavily on household wealth.

**Industrial and logistics** are still leading the way. The uplifts in e-commerce and logistics tenant demand are likely to be structural and persistent, in part reflecting the relative under-supply of modern, well-located warehousing facilities. Keen investor demand continues to support liquidity and values, at least partially, although higher funding costs are becoming a transitory overhang for markets like Australia and South Korea.

**Residential** markets show widening correction. With rising mortgage rates, built-for-sale housing markets are seeing deep price corrections in most part of the region. Meanwhile, built-for-rental markets such as Tokyo multifamily are holding up relatively well, on the back of firm investor demand for stable income and a steady recovery in occupancy.

### Interest rates are expected to stay elevated in 2023



 $Source: Bloomberg, BlackRock \, (28/2/2023). \, Forecasts \, may \, not \, come \, to \, pass. \, \\$ 

## Higher interest rates have been impacting short-term growth outlook in APAC

Real GDP (% p.a)	2022a	2023f	2024f
China	3.0	4.5	4.7
Hong Kong	-3.5	2.1	4.0
Australia	3.6 (f)	1.9	2.0
Singapore	3.6	0.9	2.8
Japan	1.1	0.7	1.3
South Korea	2.6	0.8	2.7
Asia-Pacific (US\$ basis)	3.3	3.4	4.1

Source: Oxford Economics, national statistics agency, BlackRock (22/2/2023). Forecasts may not come to pass. Arrows show revisions of forecasts in the past 3 months.

### **Viewpoint contributors**

**Authors** 

**Simon Durkin** 

Head of EMEA Real Estate Research

**Alex Symes** 

Head of U.S. Real Estate Research

**Contributors** 

Cynthia Parpa

EMEA Real Estate Research

**Chloe Soar** 

EMEA Real Estate Research

Yasmine Kamaruddin

U.S. Real Estate Research

William Yu

APAC Real Estate Research

Investing involves risk, including possible loss of principal. Asset allocation and diversification may not protect against market risk, loss of principal or volatility of returns. Actual investment outcomes may vary. The model portfolios should not be construed as investment advice. There is no guarantee that these investment strategies will work under all market conditions or are suitable for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market. No representation is being made that any account, product, or strategy will or is likely to achieve profits. The above are representations of various model portfolios and no guarantee is being made that the structure of other similar portfolios will remain the same or that similar results will be achieved.

#### Risk Warnings

Capital at risk. The value of investments and the income from them can fall as well as rise and are not guaranteed. Investors may not get back the amount originally invested.

Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy. Changes in the rates of exchange between currencies may cause the value of investments to diminish or increase. Fluctuation may be particularly marked in the case of a higher volatility fund and the value of an investment may fall suddenly and substantially. Levels and basis of taxation may change from time to time.

Real Estate Funds: Are funds which invest exclusively or almost exclusively in equity or debt, or equity or debt related instruments. Therefore, in addition to risks associated with investment in such equity or debt instrument, the performance of real estate funds may be material and adversely affected by risks associated with the related real estate assets. Past performance of funds investing in real estate are not indicative of the performance of the real estate market as a whole and the value of real property will generally be a matter of a Valuer's opinion rather than fact. The value of any real estate investment may be significantly diminished in the event of a downturn in the real estate market. Real estate investments are subject to many factors including adverse changes in economic conditions, adverse local market conditions and risks associated with the acquisition, financing, ownership, operation and disposal of real estate.

Risks associated with ownership and operation of real estate assets: These Funds may be exposed to risk of loss arising from, or relating, to the ownership, operation or management of any real estate in which it has an interest. Although the Fund seeks to mitigate these risks through the diligence process and otherwise, there can be no assurance that it will be able to avoid or effectively mitigate any such risks, which could have a material adverse effect on the Fund's returns.

The information contained in this document, does not constitute and should not be construed as an offer of, invitation or proposal to make an offer for, recommendation to apply for or an opinion or guidance on a financial product, service and/or strategy. Whilst great care has been taken to ensure that the information contained in this document is accurate, no responsibility can be accepted for any errors, mistakes or omissions or for any action taken in reliance thereon. You may only reproduce, circulate and use this document (or any part of it) with the consent of BlackRock.

The information contained in this document is for information purposes only. It is not intended for and should not be distributed to, or relied upon by, members of the public

The information contained in this document, may contain statements that are not purely historical in nature but are "forward-looking statem ents". These include, amongst other things, projections, forecasts or estimates of income. These forward-looking statements are based upon certain assumptions, some of which are described in other relevant documents or materials. If you do not understand the contents of this document, you should consult an authorised financial adviser

© 2023 BlackRock, Inc. or its affiliates. All Rights reserved. BLACKROCK, iSHARES and ALADDIN are trademarks of BlackRock, Inc. or its affiliates. All other trademarks are those of their respective owners.



In the UK and Non-European Economic Area (EEA) countries: this is Issued by BlackRock Investment Management (UK) Limited, authorised and regulated by the Financial Conduct Authority. Registered office: 12 Throgmorton Avenue, London, EC2N 2DL. Tel: +44 (0)20 7743 3000. Registered in England and Wales No. 02020394. For your protection telephone calls are usually recorded. Please refer to the Financial Conduct Authority website for a list of authorised activities conducted by BlackRock.

In the European Economic Area (EEA): this is Issued by BlackRock (Netherlands) B.V. is authorised and regulated by the Netherlands Authority for the Financial Markets. Registered office Amstelplein 1, 1096 HA, Amsterdam, Tel: 020 – 549 5200, Tel: 31-20-549-5200. Trade Register No. 17068311 For your protection telephone calls are usually recorded.

For qualified investors in Switzerland: This document is marketing material. This document shall be exclusively made available to, and directed at, qualified investors as defined in Article 10 (3) of the CISA of 23 June 2006, as amended, at the exclusion of qualified investors with an opting-out pursuant to Art. 5 (1) of the Swiss Federal Act on Financial Services ("FinSA").

For information on art. 8 / 9 Financial Services Act (FinSA) and on your client segmentation under art. 4 FinSA, please see the following website: <a href="https://www.blackrock.com/finsa">www.blackrock.com/finsa</a>

For investors in Israel: BlackRock Investment Management (UK) Limited is not licenced under Israel's Regulation of Investment Advice, Investment Marketing and Portfolio Management Law, 5755-1995 (the "Advice Law"), nor does it carry insurance thereunder.

For information on investor rights and how to raise complaints please go to https://www.blackrock.com/corporate/compliance/investor-right available in Italian.

Please be advised that BlackRock Investment Management (UK) Limited is an authorised Financial Services provider with the South African Financial Services Conduct Authority, FSP No. 43288.

In Saudi Arabia, Qatar and Bahrain: The information contained in this document is intended strictly for sophisticated institutions.

In UAE: The information contained in this document is intended strictly for non-natural Qualified Investors as defined in the UAE Securities and Commodities Authority's Board Decision No. 3/R.M of 2017 concerning Promoting and Introducing Regulations.

In the DIFC: The information contained in this document is intended strictly for Professional Clients as defined under the Dubai Financial Services Authority ("DFSA") Conduct of Business (COB) Rules. BlackRock Advisors (UK) Limited -Dubai Branch is a DIFC Foreign Recognised Company registered with the DIFC Registrar of Companies (DIFC Registered Number 546), with its office at Unit L15 - 01A, ICD Brookfield Place, Dubai International Financial Centre, PO Box 506661, Dubai, UAE, and is regulated by the DFSA to engage in the regulated activities of 'Advising on Financial Products' and 'Arranging Deals in Investments' in or from the DIFC, both of which are limited to units in a collective investment fund (DFSA Reference Number F000738).

In Kuwait: The information contained in this document is intended strictly for sophisticated institutions that are 'Professional Clients' as defined under the Kuwait Capital Markets Law and its Executive Bylaws.

Any research in this document has been procured and may have been acted on by BlackRock for its own purpose. The results of such research are being made available only incidentally. The views expressed do not constitute investment or any other advice and are subject to change. They do not necessarily reflect the views of any company in the BlackRock Group or any part thereof and no assurances are made as to their accuracy.

This document is for information purposes only and does not constitute an offer or invitation to anyone to invest in any BlackRock funds and has not been prepared in connection with any such offer.

© 2023 BlackRock, Inc. All Rights reserved. BLACKROCK, BLACKROCK SOLUTIONS, and iSHARES are trademarks of BlackRock, Inc. or its subsidiaries in the United States and elsewhere. All other trademarks are those of their respective owners

In Hong Kong, this material is issued by BlackRock Asset Management North Asia Limited and has not been reviewed by the Securities and Futures Commission of Hong Kong. This material is for distribution to "Professional Investors" (as defined in the Securities and Futures Ordinance (Cap.571 of the laws of Hong Kong) and any rules made under that ordinance) and should not be relied upon by any other persons or redistributed to retail clients in Hong Kong.

In Singapore, this is issued by BlackRock (Singapore) Limited (Co. registration no. 200010143N) for use only with institutional investors as defined in Section 4A of the Securities and Futures Act, Chapter 289 of Singapore. This advertisement or publication has not been reviewed by the Monetary Authority of Singapore.

In South Korea, this information is issued by BlackRock Investment (Korea) Limited. This material is for distribution to the Qualified Professional Investors (as defined in the Financial Investment Services and Capital Market Act and its sub-regulations) and for information or educational purposes only, and does not constitute investment advice or an offer or solicitation to purchase or sells in any securities or any investment strategies.

In Taiwan, independently operated by BlackRock Investment Management (Taiwan) Limited. Address: 28F., No. 100, Songren Rd., Xinyi Dist., Taipei City 110, Taiwan. Tel: (02)23261600.



In Australia & New Zealand, issued by BlackRock Investment Management (Australia) Limited ABN 13 006 165 975, AFSL 230 523 (BIMAL) for the exclusive use of the recipient, who warrants by receipt of this material that they are a wholesale client as defined under the Australian Corporations Act 2001 (Cth) and the New Zealand Financial Advisers Act 2008 respectively. This material provides general information only and does not take into account your individual objectives, financial situation, needs or circumstances. Before making any investment decision, you should therefore assess whether the material is appropriate for you and obtain financial advice tailored to you having regard to your individual objectives, financial situation, needs and circumstances. Refer to BIMAL's Financial Services Guide on its website for more information. This material is not a financial product recommendation or an offer or solicitation with respect to the purchase or sale of any financial product in any jurisdiction. This material is not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to local law or regulation. BIMAL is a part of the global BlackRock Group which comprises of financial product issuers and investment managers around the world. BIMAL is the issuer of financial products and acts as an investment manager in Australia. BIMAL does not offer financial products to persons in New Zealand who are retail investors (as that term is defined in the Financial Markets Conduct Act 2013 (FMCA)). This material does not constitute or relate to such an offer. To the extent that this material does constitute or relate to such an offer of financial products, the offer is only made to, and capable of acceptance by, persons in New Zealand who are wholesale investors (as that term is defined in the FMCA). BIMAL, its officers, employees and agents believe that the information in this material and the sources on which it is based (which may be sourced from third parties) are correct as at the date of publication. While every care has been taken in the preparation of this material, no warranty of accuracy or reliability is given and no responsibility for the information is accepted by BIMAL, its officers, employees or agents. Except where contrary to law, BIMAL excludes all liability for this information

In China, this material may not be distributed to individuals resident in the People's Republic of China ("PRC", for such purposes, not applicable to Hong Kong, Macau and Taiwan) or entities registered in the PRC unless such parties have received all the required PRC government approvals to participate in any investment or receive any investment advisory or investment management services.

For Southeast Asia: This document is issued by BlackRock and is intended for the exclusive use of any recipient who warrants, by receipt of this material, that such recipient is an institutional investors or professional/sophisticated/qualified/accredited/expert investor as such term may apply under the relevant legislations in Southeast Asia (for such purposes, includes only Malaysia, the Philippines, Thailand, Brunei and Indonesia). BlackRock does not hold any regulatory licenses or registrations in Southeast Asia countries listed above, and is therefore not licensed to conduct any regulated business activity under the relevant laws and regulations as they apply to any entity intending to carry on business in Southeast Asia, nor does BlackRock purport to carry on, any regulated activity in any country in Southeast Asia. BlackRock funds, and/or services shall not be offered or sold to any person in any jurisdiction in which such an offer, solicitation, purchase, or sale would be deemed unlawful under the securities laws or any other relevant laws of such jurisdiction(s).

For Other Countries in APAC: This material is provided for your informational purposes only and must not be distributed to any other persons or redistributed. This material is issued for Institutional Investors only (or professional/sophisticated/qualified investors as such term may apply in local jurisdictions) and does not constitute investment advice or an offer or solicitation to purchase or sell in any securities, BlackRock funds or any investment strategy nor shall any securities be offered or sold to any person in any jurisdiction in which an offer, solicitation, purchase or sale would be unlawful under the securities laws of such jurisdiction of BlackRock, Inc. or its subsidiaries in the United States and elsewhere. All other trademarks are those of their respective owners

In Canada, this material is intended for institutional investors, is for educational purposes only, does not constitute investment advice and should not be construed as a solicitation or offering of units of any fund or other security in any jurisdiction.

In Latin America, for institutional investors and financial intermediaries only (not for public distribution). This material is for educational purposes only and does not constitute investment advice or an offer or solicitation to sell or a solicitation of an offer to buy any shares of any fund or security and it is your responsibility to inform yourself of, and to observe, all applicable laws and regulations of your relevant jurisdiction. If any funds are mentioned or inferred in this material, such funds may not been registered with the securities regulators of Argentina, Brazil, Chile, Colombia, Mexico, Panama, Peru, Uruguay or any other securities regulator in any Latin American country and thus, may not be publicly offered in any such countries. The securities regulators of any country within Latin America have not confirmed the accuracy of any information contained herein. No information discussed herein can be provided to the general public in Latin America. The contents of this material are strictly confidential and must not be passed to any third party.

In Argentina, only for use with Qualified Investors under the definition as set by the Comisión Nacional de Valores (CNV). In Brazil, this private offer does not constitute a public offer, and is not registered with the Brazilian Securities and Exchange Commission, for use only with professional investors as such term is defined by the Comissão de Valores Mobiliários. In Colombia, the sale of each fund discussed herein, if any, is addressed to less than one hundred specifically identified investors, and such fund may not be promoted or marketed in Colombia or to Colombian residents unless such promotion and marketing is made in compliance with Decree 2555 of 2010 and other applicable rules and regulations related to the promotion of foreign financial and/or securities related products or services in Colombia. In Chile, the sale of each fund not registered with the CMF is subject to General Rule No. 336 issued by the SVS (now the CMF). The subject matter of this sale may include securities not registered with the CMF; therefore, such securities are not subject to the supervision of the CMF. Since the securities are not registered in Chile, there is no obligation of the issuer to make publicly available information about the securities in Chile. The securities shall not be subject to public offering in Chile unless registered with the relevant registry of the CMF. In Peru, this private offer does not constitute a public offer, and is not registered with the Securities Market Public Registry of the Peruvian Securities Market Commission, for use only with institutional investors as such term is defined by the Superintendencia de Banca, Seguros y AFP. In Uruguay, the Securities are not and will not be registered with the Central Bank of Uruguay. The Securities are not and will not be announced to the public and offering materials will not be made available to the general public except in circumstances which do not constitute a public offering of securities in Uruguay, in compliance with the requirements of the Urugu



IN MEXICO, FOR INSTITUTIONAL AND QUALIFIED INVESTORS USE ONLY. INVESTING INVOLVES RISK, INCLUDING POSSIBLE LOSS OF PRINCIPAL. THIS MATERIAL IS PROVIDED FOR EDUCATIONAL AND INFORMATIONAL PURPOSES ONLY AND DOES NOT CONSTITUTE AN OFFER OR SOLICITATION TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY SHARES OF ANY FUND OR SECURITY. This information does not consider the investment objectives, risk tolerance or the financial circumstances of any specific investor. This information does not replace the obligation of financial advisor to apply his/her best judgment in making investment decisions or investment recommendations. It is your responsibility to inform yourself of, and to observe, all applicable laws and regulations of Mexico. If any funds, securities or investment strategies are mentioned or inferred in this material, such funds, securities or strategies have not been registered with the Mexican National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores, the "CNBV") and thus, may not be publicly offered in Mexico. The CNBV has not confirmed the accuracy of any information contained herein. The provision of investment management and investment advisory services ("Investment Services") is a regulated activity in Mexico, subject to strict rules, and performed under the supervision of the CNBV. These materials are shared for information purposes only, do not constitute investment advice, and are being shared in the understanding that the addressee is an Institutional or Qualified investor as defined under Mexican Securities (Ley del Mercado de Valores). Each potential investor shall make its own investment decision based on their own analysis of the available information. Please note that by receiving these materials, it shall be construed as a representation by the receiver that it is an Institutional or Qualified investor as defined under Mexican law. BlackRock México Operadora, S.A. de C.V., Sociedad Operadora de Fondos de Inversión ("BlackRock México Operadora") is a Mexican subsidiary of BlackRock, Inc., authorized by the CNBV as a Mutual Fund Manager (Operadora de Fondos), and as such, authorized to manage Mexican mutual funds, ETFs and provide Investment Advisory Services. For more information on the Investment Services offered by BlackRock Mexico, please review our Investment Services Guide available in www.blackrock.com/mx. This material represents an assessment at a specific time and its information should not be relied upon by the you as research or investment advice regarding the funds, any security or investment strategy in particular. Reliance upon information in this material is at your sole discretion. BlackRock México is not authorized to receive deposits, carry out intermediation activities, or act as a broker dealer, or bank in Mexico. For more information on BlackRock México, please visit: www.blackRock.com/mx. BlackRock receives revenue in the form of advisory fees for our advisory services and management fees for our mutual funds, exchange traded funds and collective investment trusts. Any modification, change, distribution or inadequate use of information of this document is not responsibility of BlackRock or any of its affiliates. Pursuant to the Mexican Data Privacy Law (Ley Federal de Protección de Datos Personales en Posesión de Particulares), to register your personal data you must confirm that you have read and understood the Privacy Notice of BlackRock México Operadora. For the full disclosure, please visit www.blackRock.com/mx and accept that your personal information will be managed according with the terms and conditions set forth therein. BlackRock® is a registered trademark of BlackRock, Inc. All other trademarks are the property of their respective owners.

For investors in Central America, these securities have not been registered before the Securities Superintendence of the Republic of Panama, nor did the offer, sale or their trading procedures. The registration exemption has made according to numeral 3 of Article 129 of the Consolidated Text containing of the Decree-Law No. 1 of July 8, 1999 (institutional investors). Consequently, the tax treatment set forth in Articles 334 to 336 of the Unified Text containing Decree-Law No. 1 of July 8, 1999, does not apply to them. These securities are not under the supervision of the Securities Superintendence of the Republic of Panama. The information contained herein does not describe any product that is supervised or regulated by the National Banking and Insurance Commission (CNBS) in Honduras. Therefore any investment described herein is done at the investor's own risk. This is an individual and private offer which is made in Costa Rica upon reliance on an exemption from registration before the General Superintendence of Securities ("SUGEVAL"), pursuant to articles 7 and 8 of the Regulations on the Public Offering of Securities ("Reglamento sobre Oferta Pública de Valores"). This information is confidential, and is not to be reproduced or distributed to third parties as this is NOT a public offering of securities in Costa Rica. The product being offered is not intended for the Costa Rican public or market and neither is registered or will be registered before the SUGEVAL, nor can be traded in the secondary market. If any recipient of this documentation receives this document in El Salvador, such recipient acknowledges that the same has been delivered upon his request and instructions, and on a private placement basis. For Guatemala Investors, This communication and any accompanying information (the "Materials") are intended solely for informational purposes and do not constitute (and should not be interpreted to constitute) the offering, selling, or conducting of business with respect to such securities, products or services in the jurisdiction of the addressee (this "Jurisdiction"), or the conducting of any brokerage, banking, or other similarly regulated activities ("Financial Activities") in the Jurisdiction. Neither BLACKROCK, nor the securities, products and services described herein, are registered (or intended to be registered) in the Jurisdiction. Furthermore, neither BLACKROCK, nor the securities, products, services, or activities described herein, are regulated, or supervised by any governmental or similar authority in the Jurisdiction. The Materials are private, confidential and are sent by BLACKROCK only for the exclusive use of the addressee. The Materials must not be publicly distributed and any use of the Materials by anyone other than the addressee is not authorized. The addressee is required to comply with all applicable laws in the Jurisdiction, including, without limitation, tax laws and exchange control regulations, if any. In Guatemala, this communication, and any accompanying information (the "Materials") are intended solely for informational purposes and do not constitute (and should not be interpreted to constitute) the offering, selling, or conducting of business with respect to such securities, products or services in the jurisdiction of the addressee (this "Jurisdiction"), or the conducting of any brokerage, banking or other similarly regulated activities ("Financial Activities") in the Jurisdiction. Neither BlackRock, nor the securities, products and services described herein, are registered (or intended to be registered) in the Jurisdiction. Furthermore, neither BlackRock, nor the securities, products, services or activities described herein, are regulated or supervised by any governmental or similar authority in the Jurisdiction. The Materials are private, confidential and are sent by BlackRock only for the exclusive use of the addressee. The Materials must not be publicly distributed and any use of the Materials by anyone other than the addressee is not authorized. The addressee is required to comply with all applicable laws in the Jurisdiction, including, without limitation, tax laws and exchange control regulations, if any.

For investors in the Caribbean, any funds mentioned or inferred in this material have not been registered under the provisions of the Investment Funds Act of 2003 of the Bahamas, nor have they been registered with the securities regulators of Bermuda, Dominica, the Cayman Islands, the British Virgin Islands, Grenada, Trinidad & Tobago or any jurisdiction in the Organisation of Eastern Caribbean States, and thus, may not be publicly offered in any such jurisdiction. The shares of any fund mentioned herein may only be marketed in Bermuda by or on behalf of the fund or fund manager only in compliance with the provision of the Investment Business Act 2003 of Bermuda and the Companies Act of 1981. Engaging in marketing, offering or selling any fund from within the Cayman Islands to persons or entities in the Cayman Islands may be deemed carrying on business in the Cayman Islands. As a non-Cayman Islands person, BlackRock may not carry on or engage in any trade or business unless it properly registers and obtains a license for such activities in accordance with the applicable Cayman Islands law. For Domincan Republic, any securities mentioned or inferred in this material may only be offered in a private character according to the laws of the Dominican Republic, falling beyond the scope of articles 1 numeral (31), 46 et al of Law 249-17 dated 19 December 2017, as amended and its Regulations. Since no governmental authorizations are required in such offering, any "securities" mentioned or inferred in this material have not been and will not be registered with the Stock Market Superintendency of the Dominican Republic (Superintendencia de Mercado de Valores de la República Dominicana), and these "securities" may only be circulated, offered and sold in the Dominican Republic in a private manner based on the criteria established under Dominican laws and regulations.

