

2022 economy and markets: 4 things to know

The Vanguard Economic and Market Outlook for 2022: Striking a Better Balance, is scheduled to be released in the United States on Monday, December 13.

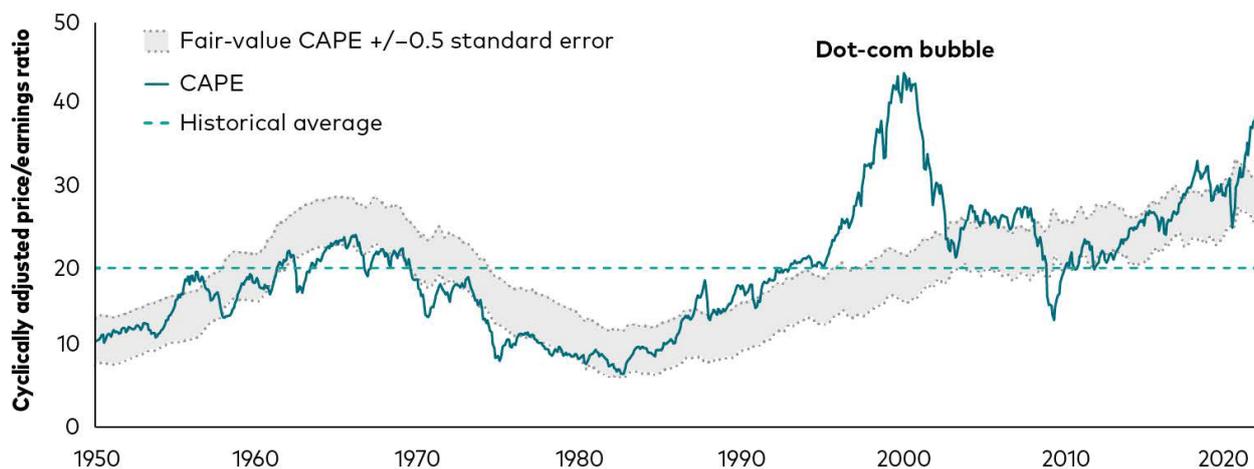
We offer perspective here on four of its key topics: the overvaluation of U.S. stocks, the market's likely underestimation of how high the U.S. Federal Reserve may raise its key interest rate target, why we don't foresee global financial-market contagion from debt woes in China's property sector, and how the new COVID-19 Omicron variant may affect economies.

U.S. equities more overvalued than any time since the dot-com bubble

One of the key takeaways from our economic and market outlook shouldn't be a surprise. We've said for a few years that U.S. equity valuations were approaching "stretched" territory. A strong 2021 run-up in prices driven more by valuation expansion than by increased profits makes U.S. equities more overvalued than at any other time since the dot-com bubble.

Our assessment is based on the latest quarterly running of the Vanguard Capital Markets Model® (VCMM), as of September 30, 2021. Our model considers equity valuations relative to their fair value, conditional on interest rates and inflation. Rising interest rates erode the present value of future cash flows, so interest rates and inflation tend to influence equity market valuations—and, by extension, prices.

U.S. equity valuations are well above their fair-value range



Notes: The U.S. fair-value CAPE (cyclically adjusted price/earnings ratio) is based on a statistical model that corrects CAPE measures for the level of inflation expectations and interest rates. The statistical model specification is a three-variable vector error correction, including equity-earnings yields, 10-year trailing inflation, and 10-year U.S. Treasury yields estimated over the period January 1940 to September 2021. The solid blue line extending above the gray band suggests overvaluation of U.S. equities.

Sources: Vanguard calculations, as of September 30, 2021, based on data from Robert Shiller's website at aida.wss.yale.edu/~shiller/data.htm, the U.S. Bureau of Labor Statistics, the Federal Reserve Board, Refinitiv, and Global Financial Data.

IMPORTANT: The projections or other information generated by the Vanguard Capital Markets Model® (VCMM) regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for each modeled asset class. Simulations are as of September 30, 2021. Results from the model may vary with each use and over time. For more information, please see important information below.

The illustration makes the extent of the overvaluation clear. The solid blue line representing U.S. equities' cyclically adjusted price/earnings ratio leaps from its fair-value range, represented by the gray band, just as it did for an extended period before the dot-com bubble burst.¹

Although our model provides a 10-year outlook for equity returns, it doesn't provide insight as to when and how a return to fair value may occur. "There is nothing in valuation levels' relationships with interest rates and inflation that keeps an overvalued market from continuing on to greater highs," said Kevin DiCiurcio, who leads the VCMM research team. "You look at the growing deviation in the late 1990s; that lasted five years before it returned to fair value."

Mr. DiCiurcio and his team are studying the relationship between deviations from fair value and the probability of a correction. They have observed that past reversions from overvaluation to a fair-value range have more so been a function of prices falling than of earnings rising, and that market corrections of 10% or more have occurred with greater frequency when equities were overvalued as opposed to when they were valued fairly.

Investors may find this to be a good time to assess whether recent equity price run-ups have left their asset mix out of proportion to their risk comfort level.

Markets may underestimate how high the Fed may raise rates

Financial markets have focused recently on when developed-market central banks will likely raise interest rates. Just as important is the terminal rate, or how high central banks will ultimately raise rates.

Vanguard believes that markets are underestimating the U.S. Federal Reserve's terminal rate. To understand why, it's useful to understand the terminal rate's relationship with the neutral rate, a long-term equilibrium that roughly depicts monetary policy that is neither accommodative nor restrictive.

"Short-term changes in the economy—headwinds or tailwinds—will push interest rates above or below neutral," said Alexis Gray, a Vanguard senior economist in Australia who studies the neutral rate. "If the economy experiences tailwinds, interest rates might rise above neutral."

Our 2022 economic and market outlook discusses the challenges that policymakers face in removing accommodative measures that were essential to economies' surviving the COVID-19 pandemic but that, left unchecked, could produce too-strong tailwinds.

Market expectations for a terminal rate around 1.5% are more than a percentage point higher than the Fed's current federal funds rate target of 0% to 0.25%. But they're below the Fed's 2.5% neutral-rate estimate and Vanguard's 2% to 3% neutral-rate estimate.

We emphasize that the neutral rate has fallen for several decades, in part a function of global savings and investment relationships. We don't anticipate a return to interest rates higher than those that prevailed before the 2008 global financial crisis, and the journey to the terminal rate could take several years.

"But the risk exists that run-ups in inflation and tight labor markets could cause the Fed to raise rates not only sooner than anticipated, but somewhat more sharply, which could spook the markets," said Andrew Patterson, Vanguard's U.S.-based senior international economist. "This highlights the importance for investors to remain disciplined and focused on their long-term goals."

China housing defaults unlikely to cause global financial contagion

Defaults among private housing developers in China have risen in 2021, but Vanguard doesn't foresee global financial market contagion from the sector for several reasons.

The default rate for private enterprises in China rose to 7% through the first 10 months of 2021. That's largely attributable to property developers and compares with a 5% default rate at the start of the year. But it's not unfamiliar territory; the default rate for private enterprises reached 8% at the peak of a deleveraging cycle in 2018.²

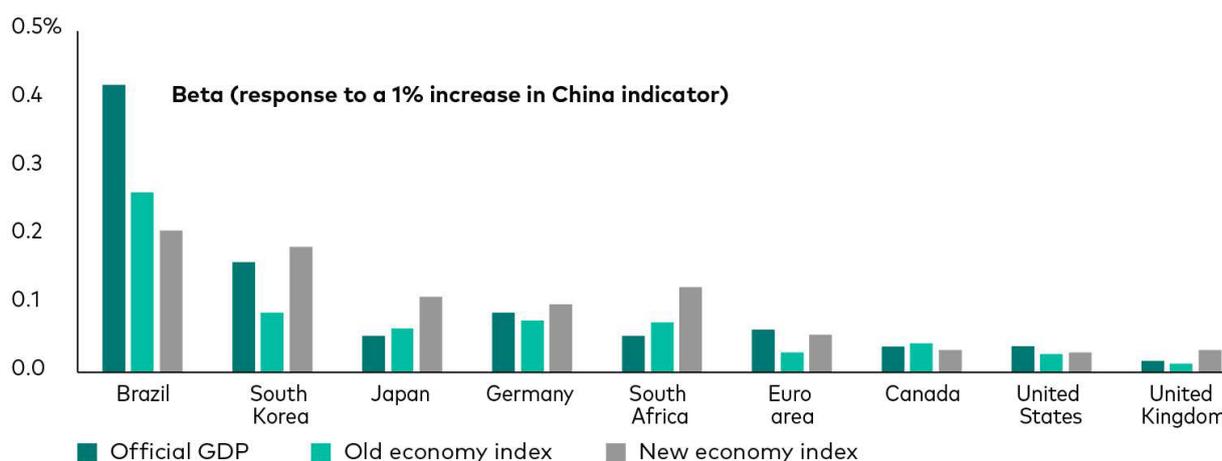
The risk of defaults may grow in 2022 as principal repayments become due for some of the largest private developers. "We think defaults are inevitable, especially as policymakers structurally shift toward a new policy regime that is dependent on more sustainable growth drivers," said Beatrice Yeo, a Melbourne-based Vanguard economist who studies China. "However, we think policymakers will do enough to prevent excessive contagion in the financial system."

The composition of property-related loans may also mitigate contagion concerns. Though such loans accounted for more than a quarter of outstanding bank loan balances through the first half of 2021, the vast majority was in mortgage loans, where credit risk is lower given hefty down-payment requirements, Ms. Yeo said. Nonpublic housing developer loans, which arguably bear greater credit risk than public housing developer loans, accounted for just 4% of total bank loans.

Vanguard believes that any fallout from the property sector is more likely to be realized through slower economic growth, with a reduction in Chinese property investment likely to lessen demand for commodity imports from countries including Australia, Brazil, and Canada.

The takeaway for investors is to remain disciplined and not to read too much into headlines about defaults that may be inevitable.

Uneven regional impacts from a rebalancing Chinese economy



Notes: Vanguard used a vector autoregression model to measure the effects of China's old and new economy growth momentum on respective countries' or regions' growth. The sample period covers from 2006 to 2018. Brazil would be hardest hit because a slowdown in China's old-economy industries disproportionately affects Brazilian exports. Regional trading partners such as South Korea would benefit from increased Chinese consumption. Textiles and mining are examples of China's old-economy sectors; health care, high-tech manufacturing, and innovative green technology are examples of China's new-economy sectors.

Sources: Vanguard calculations, based on data from Thomson Reuters Datastream, CEIC, and Bloomberg.

A variant keeps COVID-19 well in the economic discussion

The recent emergence of the COVID-19 Omicron variant underscores the extent to which healthy economies still depend on keeping populations healthy.

Before the potential seriousness of Omicron became known, Vanguard believed that Northern Hemisphere developed markets were in for a disease-filled winter, owing to a combination of waning vaccination immunity and slow uptake of booster shots. Yet we believed these economies would be less likely to resort to shutdowns than during earlier waves, emboldened by reasonably high levels of infection-acquired immunity and the knowledge that infection fatality rates have fallen with each successive wave.

It's too early to tell whether Omicron might change our views on the global economy as we'll set them forth in our 2022 outlook. "It's unclear whether Omicron will outcompete the Delta variant," said Maximilian Wieland, a U.S.-based Vanguard economist who studies COVID-19. "If it doesn't, then the Delta variant remains the predominant strain and our economic forecasts remain intact. But there's a lot we don't know yet about the Omicron variant, such as whether it's more transmissible than Delta and the extent of its immune evasiveness. The answers may cause us to adjust our economic forecasts."

An Omicron strain that outcompeted Delta would be felt around the world, Mr. Wieland said, with the effect especially pronounced in Asia. Both developed and emerging Asia benefit from the recency of their vaccination efforts, Mr. Wieland said—benefit that would succumb to a COVID-19 strain resistant to current vaccines. Asia's low levels of infection-acquired immunity would add to the risk.

The world is eager to move on from COVID-19. When it can do so—and the extent to which economic shutdowns occur in the interim—relies on the course of COVID-19 variants.

¹ The Nasdaq Composite Index fell 78% from its March 10, 2000, high until its October 9, 2002, post-bubble low. The Standard & Poor's 500 Index fell 49% from its March 24, 2000, high until its October 9, 2002, post-bubble low.

² Source: Wind Economic Database.

Important information

All investing is subject to risk, including the possible loss of the money you invest. Past performance is no guarantee of future results.

About the Vanguard Capital Markets Model:

IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. VCMM results will vary with each use and over time.

The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More important, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model® is a proprietary financial simulation tool developed and maintained by Vanguard's Investment Strategy Group. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include U.S. and international equity markets, several maturities of the U.S. Treasury and corporate fixed income markets, international fixed income markets, U.S. money markets, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis based on available monthly financial and economic data. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. Results produced by the tool will vary with each use and over time.

Important Information

VIGM, S.A. de C.V. Asesor en Inversiones Independiente ("Vanguard Mexico") registration number: 30119-001-(14831)-19/09/2018. The registration of Vanguard Mexico before the Comisión Nacional Bancaria y de Valores ("CNBV") as an Asesor en Inversiones Independiente is not a certification of Vanguard Mexico's compliance with regulation applicable to Advisory Investment Services (Servicios de Inversión Asesorados) nor a certification on the accuracy of the information provided herein. The supervision scope of the CNBV is limited to Advisory Investment Services only and not all services provided by Vanguard Mexico.

This material is solely for informational purposes and does not constitute an offer or solicitation to sell or a solicitation of an offer to buy any security, nor shall any such 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 law of that jurisdiction. Reliance upon information in this material is at the sole discretion of the recipient.

Securities information provided in this document must be reviewed together with the offering information of each of the securities which may be found on Vanguard's website: <https://www.vanguardmexico.com/institutional/products/en/list/overview> or www.vanguard.com

Vanguard Mexico may recommend products of The Vanguard Group Inc. and its affiliates and such affiliates and their clients may maintain positions in the securities recommended by Vanguard Mexico.

ETFs can be bought and sold only through a broker and cannot be redeemed with the issuing fund other than in very large aggregations. Investing in ETFs entails stockbroker commission and a bid-offer spread which should be considered fully before investing. The market price of ETF Shares may be more or less than net asset value.

All investments are subject to risk, including the possible loss of the money you invest. Investments in bond funds are subject to interest rate, credit, and inflation risk. Governmental backing of securities applies only to the underlying securities and does not prevent share-price fluctuations. High-yield bonds generally have medium- and lower-range credit quality ratings and are therefore subject to a higher level of credit risk than bonds with higher credit quality ratings.

There is no guarantee that any forecasts made will come to pass. Past performance is no guarantee of future results.

Prices of mid- and small-cap stocks often fluctuate more than those of large-company stocks. Funds that concentrate on a relatively narrow market sector face the risk of higher share-price volatility. Stocks of companies are subject to national and regional political and economic risks and to the risk of currency fluctuations, these risks are especially high in emerging markets. Changes in exchange rates may have an adverse effect on the value, price or income of a fund.

The information contained in this material derived from third-party sources is deemed reliable, however Vanguard Mexico and The Vanguard Group Inc. are not responsible and do not guarantee the completeness or accuracy of such information.

This document should not be considered as an investment recommendation, a recommendation can only be provided by Vanguard Mexico upon completion of the relevant profiling and legal processes.

This document is for educational purposes only and does not take into consideration your background and specific circumstances nor any other investment profiling circumstances that could be material for taking an investment decision. We recommend getting professional advice based on your individual circumstances before taking an investment decision.

These materials are intended for institutional and sophisticated investors use only and not for public distribution.

Materials are provided only for the recipient's exclusive use and shall not be distributed to any other individual or entity. Broker-dealers, advisers, and other intermediaries must determine whether their clients are eligible for investment in the products discussed herein.

The information contained herein does not constitute an offer or solicitation and may not be treated as such in any jurisdiction where such an offer or solicitation is against the law, or to anyone for whom it is unlawful to make such an offer or solicitation, or if the person making the offer or solicitation is not qualified to do so.

THESE MATERIALS ARE PROVIDED AT THE REQUEST OF AND FOR THE EXCLUSIVE USE OF RECIPIENT AND CONTAIN HIGHLY CONFIDENTIAL INFORMATION, WHICH SHALL NOT BE REPRODUCED OR TRANSMITTED TO ANY THIRD PARTIES WITHOUT VANGUARD'S PRIOR WRITTEN CONSENT. THE CONTENTS OF THESE MATERIALS SHALL NOT BE UNDERSTOOD AS AN OFFER OR SOLICITATION TO BUY OR SELL SECURITIES IN BRAZIL AND VANGUARD IS NOT MAKING ANY REPRESENTATION WITH RESPECT TO THE ELIGIBILITY OF ANY RECIPIENT OF THESE MATERIALS TO ACQUIRE THE INTERESTS IN THE SECURITIES DESCRIBED HEREIN UNDER THE LAWS OF BRAZIL. SUCH SECURITIES HAVE NOT BEEN REGISTERED IN BRAZIL AND NONE OF THE INTERESTS IN SUCH SECURITIES MAY BE OFFERED, SOLD, OR DELIVERED, DIRECTLY OR INDIRECTLY, IN BRAZIL OR TO ANY RESIDENT OF BRAZIL EXCEPT PURSUANT TO THE APPLICABLE LAWS AND REGULATIONS OF BRAZIL.

PROVIDED AT THE REQUEST OF AND FOR THE EXCLUSIVE USE OF THE RECIPIENT. THE CONTENTS OF THIS DOCUMENT SHALL NOT BE UNDERSTOOD AS AN OFFER OR SOLICITATION TO BUY OR SELL SECURITIES IN BRAZIL AND VANGUARD IS NOT MAKING ANY REPRESENTATION WITH RESPECT TO THE ELIGIBILITY OF ANY RECIPIENT OF THIS DOCUMENT TO INVEST IN SECURITIES DESCRIBED HEREIN.

This document is provided at the request of and for the exclusive use of the recipient and does not constitute, and is not intended to constitute, a public offer in the Republic of Colombia, or an unlawful promotion of financial/capital market products. The offer of the financial products described herein is addressed to fewer than one hundred specifically identified investors. The financial products described herein may not be promoted or marketed in Colombia or to Colombian residents, unless such promotion and marketing is made in compliance with Decree 2555/2010 and other applicable rules and regulations related to the promotion of foreign financial/capital market products in Colombia.

The financial products described herein are not and will not be registered before the Colombian National Registry of Securities and Issuers (Registro Nacional de Valores y Emisores - RNVE) maintained by the Colombian Financial Superintendency, or before the Colombian Stock Exchange. Accordingly, the distribution of any documentation in regard to the financial products described here in will not constitute a public offering of securities in Colombia.

The financial products described herein may not be offered, sold or negotiated in Colombia, except under circumstances which do not constitute a public offering of securities under applicable Colombian securities laws and regulations; provided that, any authorized person of a firm authorized to offer foreign securities in Colombia must abide by the terms of Decree 2555/2010 to offer such products privately to its Colombian clients.

The distribution of this material and the offering of securities may be restricted in certain jurisdictions. The information contained in this material is for general guidance only, and it is the responsibility of any person or persons in possession of this material and wishing to make application for securities to inform themselves of, and to observe, all applicable laws and regulations of any relevant jurisdiction. Prospective applicants for securities should inform themselves of any applicable legal requirements, exchange control regulations and applicable taxes in the countries of their respective citizenship, residence or domicile.

This offer conforms to General Rule No. 336 of the Chilean Financial Market Commission (Comisión para el Mercado Financiero). The offer deals with securities not registered under Securities Market Law, nor in the Securities Registry nor in the Foreign Securities Registry of the Chilean Financial Market Commission, and therefore such securities are not subject to its oversight. Since such securities are not registered in Chile, the issuer is not obligated to provide public information in Chile regarding the securities. The securities shall not be subject to public offering unless they are duly registered in the corresponding Securities Registry in Chile. The issuer of the securities is not registered in the Registries maintained by the Chilean Financial Market Commission, therefore it is not subject to the supervision of the Chilean Financial Market Commission or the obligations of continuous information.

Esta oferta se acoge a la norma de carácter general No. 336 de la Comisión para el Mercado Financiero. La oferta versa sobre valores no inscritos bajo la Ley de Mercado de Valores en el Registro de Valores o en el Registro de Valores extranjeros que lleva la Comisión para el Mercado Financiero, por lo que tales valores no están sujetos a la fiscalización de ésta. Por tratarse de valores no inscritos, no existe la obligación por parte del emisor de entregar en Chile información pública respecto de esos valores. Los valores no podrán ser objeto de oferta pública mientras no sean inscritos en el Registro de Valores correspondiente. El emisor de los valores no se encuentra inscrito en los Registros que mantiene la Comisión para el Mercado Financiero, por lo que no se encuentra sometido a la fiscalización de la Comisión para el Mercado financiero ni a las obligaciones de información continua.

The securities described herein have not been registered under the Peruvian Securities Market Law (Decreto Supremo No 093-2002-EF) or before the Superintendencia del Mercado de Valores (the "SMV"). There will be no public offering of the securities in Peru and the securities may only be offered or sold to institutional investors (as defined in Appendix I of the Institutional Investors Market Regulation) in Peru by means of a private placement. The securities offered and sold in Peru may not be sold or transferred to any person other than an institutional investor unless such securities have been registered with the Registro Público del Mercado de Valores kept by the SMV. The SMV has not reviewed the information provided to the investor. This material is for the exclusive use of institutional investors in Peru and is not for public distribution.

The financial products described herein may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act 2003 of Bermuda. Additionally, non-Bermudian persons may not carry on or engage in any trade or business in Bermuda unless such persons are authorized to do so under applicable Bermuda legislation. Engaging in the activity of offering or marketing the financial products described herein in Bermuda to persons in Bermuda may be deemed to be carrying on business in Bermuda.

Vanguard does not intend, and is not licensed or registered, to conduct business in, from or within the Cayman Islands, and the interests in the financial products described herein shall not be offered to members of the public in the Cayman Islands.

The financial products described herein have not been and will not be registered with the Securities Commission of The Bahamas. The financial products described herein are offered to persons who are non-resident or otherwise deemed non-resident for Bahamian Exchange Control purposes. The financial products described herein are not intended for persons (natural persons or legal entities) for which an offer or purchase would contravene the laws of their state (on account of nationality or domicile/registered office of the person concerned or for other reasons). Further, the offer constitutes an exempt distribution for the purposes of the Securities Industry Act, 2011 and the Securities Industry Regulations, 2012 of the Commonwealth of The Bahamas.

This document is not, and is not intended as, a public offer or advertisement of, or solicitation in respect of, securities, investments, or other investment business in the British Virgin Islands ("BVI"), and is not an offer to sell, or a solicitation or invitation to make offers to purchase or subscribe for, any securities, other investments, or services constituting investment business in BVI. Neither the securities mentioned in this document nor any prospectus or other document relating to them have been or are intended to be registered or filed with the Financial Services Commission of BVI or any department thereof.

This document is not intended to be distributed to individuals that are members of the public in the BVI or otherwise to individuals in the BVI. The funds are only available to, and any invitation or offer to subscribe, purchase, or otherwise acquire such funds will be made only to, persons outside the BVI, with the exception of persons resident in the BVI solely by virtue of being a company incorporated in the BVI or persons who are not considered to be "members of the public" under the Securities and Investment Business Act, 2010 ("SIBA").

Any person who receives this document in the BVI (other than a person who is not considered a member of the public in the BVI for purposes of SIBA, or a person resident in the BVI solely by virtue of being a company incorporated in the BVI and this document is received at its registered office in the BVI) should not act or rely on this document or any of its contents.

Any person who receives this document in the BVI (other than a person who is not considered a member of the public in the BVI for purposes of SIBA, or a person resident in the BVI solely by virtue of being a company incorporated in the BVI and this document is received at its registered office in the BVI) should not act or rely on this document or any of its contents.

This document does not constitute an offer or solicitation to invest in the securities mentioned herein. It is directed at professional / sophisticated investors in the United States for their use and information. The financial products describe herein are only available for investment by non-U.S. investors, and this document should not be given to a retail investor in the United States. Any entity responsible for forwarding this material, which is produced by VIGM, S.A. de C.V., Asesor en Inversiones Independiente in Mexico, to other parties takes responsibility for ensuring compliance with applicable securities laws in connection with its distribution.

Connect with Vanguard® > vanguardmexico.com

Vanguard®

© 2021 The Vanguard Group, Inc.
All rights reserved.

ISGFBY 062021