Vanguard

Vanguard Perspective

Aug 2023

Portfolio perspectives

Commentary by: Vanguard Portfolio Solutions

Each month we bring you the latest insights from our Portfolio Solutions experts to help you address evolving issues that may affect your clients' portfolios.

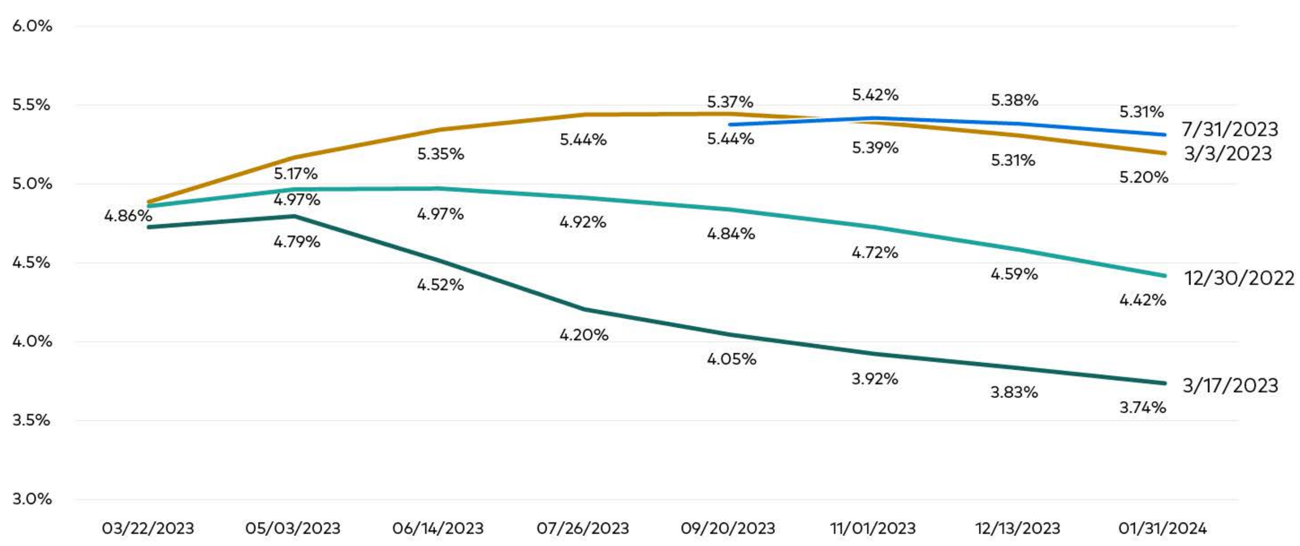
Fixed Income

What's next for fixed income in 2023?

One of the most common questions the Portfolio Solutions Team is fielding is about how the fixed income market can evolve through the end of the year. It's understandable as high inflation, a subsequent hawkish Fed, and the possibility for a slowdown in economic activity have left us with a deeply inverted yield curve and a challenging investing backdrop. The range of outcomes remains wide and a challenge to forecast. For perspective, Figure 1 shows the futures-implied federal funds rate during four different times throughout the year.

Figure 1: A range of outcomes makes predictions difficult

Futures-implied U.S. federal funds rate



Note: X-axis dates show Fed meeting data. Data as of dates noted. The federal funds effective rate is annualized. Forward rates are based on futures contracts.
Source: Bloomberg.

On March 3, (before the failure of Silicon Valley Banks and the subsequent short-term turmoil with regional banks), the market was still pricing in Federal Reserve hikes through the end of the year and two weeks later, implying there would be four rate cuts. Currently, the market anticipates the Fed will remain steady throughout 2023. Vanguard Fixed Income Group (FIG) evaluates all possible macro circumstances when allocating within our fixed income portfolios. FIG sees—in order of likelihood—the following broad scenarios and potential market outcomes:

- **Later landing.** Our base case is that the labor market remains strong, inflation is sticky and well above the Fed's target, recession doesn't occur in 2023, and the Fed makes a couple of hikes before the end of the year. The yield curve remains deeply inverted, ~4.25% on the 10-year is fair value and credit spreads stay in a tight range near current levels. **Considerations for advisors:** For those client portfolios that are built for capital preservation and income with the potential for relative outperformance in the 'later landing' scenario, Vanguard Short-Term Corporate Bond ETF (VCSH) and USD Corporate 1-3 Year Bond UCITS ETF Accumulating (VDCA) are compelling solutions.

- **Recession starts in 2023.** Signs of a shallow recession start to occur, and the Fed halts its hiking cycle. While the curve can remain inverted for a bit longer, yields broadly fall with ~3.50% on the 10-year being fair value, and credit spreads widen modestly through the end of the year. **Considerations for advisors:** Bonds provide a ballast to a diversified portfolio with a strong likelihood that the intermediate-term portion of the curve outperforms the short. Having a diversified fixed income portfolio that includes credit and government securities with full exposure to the entire yield curve, like Global Aggregate Bond UCITS ETF USD Hedged Accumulating (VAGU), Total Bond Market ETF (BND) and Total World Bond ETF (BNDW) are possible alternatives. BND provides exposure to the US markets which is more correlated to the US economic factors whereas BDNW and VAGU provide exposure to ex-US bonds and global bonds respectively.

- **Deep downturn.** This lower-probability event before year-end cannot be ruled out. Recession comes faster than the market anticipates as the labor market quickly deteriorates, and rates fall along the curve, with the short end falling more than the long. The curve is now upward sloping with a 10-year yield at ~3%. Credit spreads widen ~150-200 bps on economic weakness. **Considerations for advisors:** Bonds provide an even a greater ballast to stocks, with the highest quality and most liquid outperforming. Duration and equity market risk are generally negatively correlated, and treasuries have provided the strongest ballast for equity market risk. Consider an allocation to Vanguard's intermediate and/or long-term Treasury ETFs to balance your portfolio. Two such ETFs to consider are Vanguard Intermediate-Term Treasury (VGIT) ETF and Vanguard Long-Term Treasury ETF (VGLT).

LIQUID ALTERNATIVES

Rethinking liquid alternatives as a replacement for fixed income

Many investors who owned bonds as a diversifier to equities felt as though they were caught offsides in 2022 with a steep sell-off in fixed income because of higher interest rates and inflation, pushing nominal rates higher.

Our portfolio analytics and consulting team found that investors often were adding alternative investments to their portfolios, allured by the chance that they would deliver an uncorrelated return stream to traditional asset classes and perhaps higher returns.

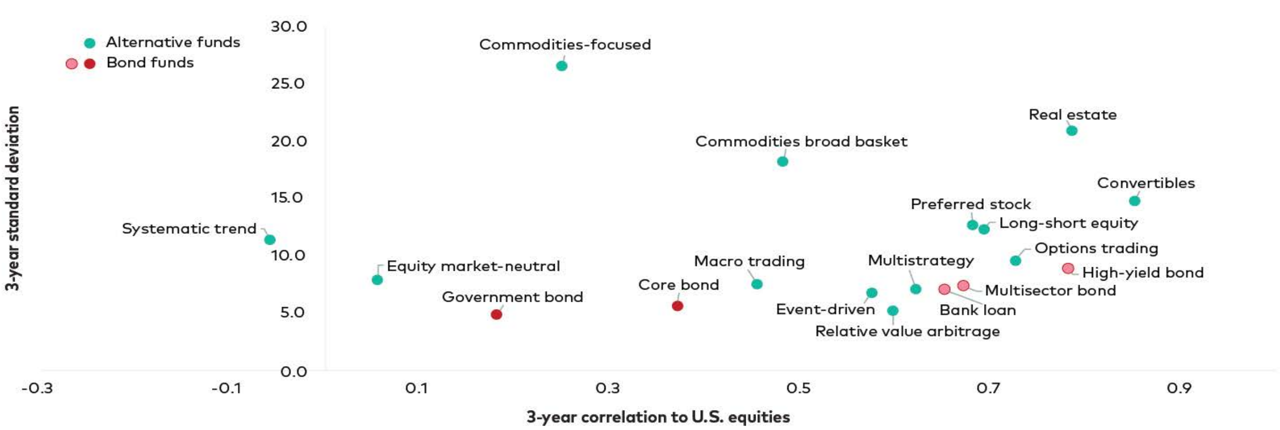
Despite the drawdown in 2022 and the Federal Reserve's hiking interest rates in the first half of 2023, advisors continue to hold a meaningful allocation to liquid alternatives—often funded from their fixed income allocation. According to our data on advisor portfolio trends, we found that when alts were a part of a portfolio, advisors allocated 8% on average to alternatives. The average expense ratio on these products ranges widely with the 25th to 75th percentile being 55 and 103 bps respectively (source: Vanguard Portfolio Solutions trends data, as of June 30, 2023), and the most popular alternative categories are commodities (broad basket), options trading, commodities (focused), and multi-strategy.

How liquid alts compare as a diversifier

Here's some context around alts versus fixed income. Investors experienced the worst year on record for fixed income in 2022 with a –13.1% return for the Bloomberg US Aggregate Index, yet this drawdown pales in comparison to what can happen in alternative investments. When reviewing median max drawdowns for popular alternative categories since product inception, we found that diversified commodities had a median max drawdown of –61.2%, options trading at –13.7%, commodities focused at –54.0%, and multistrategy at –18.3% (source: Morningstar, Inc., as of June 30, 2023). Data is as of each product's inception within the category). Typically, these max drawdowns occur during times of risk-off sentiment in the equity markets, thereby not acting as a diversifier to equity exposure.

Figure 2: Comparing the risk and correlation of liquid alternatives and fixed income vs. U.S. equities

Investors are weighing liquid alternatives as diversifiers to equities at the expense of their fixed income allocation



Notes: Calculations are based on historical returns of Morningstar categories.
Sources: Vanguard calculations based on Morningstar, Inc., data, as of June 30, 2023.

Furthermore, as shown in Figure 2, when looking at the standard deviation of returns (i.e., volatility) for alternative categories along the y-axis, you will find that most alternative categories deliver higher volatility than the government bond and core bond categories. Despite the recent uptick in correlations of stocks to bonds, high-quality fixed income still delivers less volatility and a lower correlation to equities than most liquid alternatives over the last three years (source: Morningstar, Inc., as of June 30, 2023).

This is not to say that investors cannot have success in alternatives, but success in this space requires careful management selection—including both the strategy and manager—as the distribution of outcomes in alternative investments tends to be greater than that of traditional stocks and bonds. In other words, there are more big winners and more big losers. In review of returns history over the last 10 years, we found that in 12 out of 14 alternative fund categories, the majority of funds underperformed the traditional 60/40 portfolio (source: Morningstar, Inc., as of June 30, 2023). As an advisor, this means having to coach clients on not just the potential for greater drawdowns, but also for the higher probability of lagging their equity and fixed income investments.

We encourage investors to not lose faith in high-quality fixed income serving as the primary diversifier in a multi-asset class portfolio and suggest that including an allocation to alternatives will add more complexity but not necessarily a greater level of diversification against equity risk.

Next steps to consider: Get a portfolio checkup

For help determining the role of alts in your client portfolios, partner with Vanguard Portfolio Solutions for unparalleled experience, expert insight, and the perspective of more than 2,500 advisor consulting engagements each year. Our team can analyze your liquid alternatives and provide an evaluation of whether your liquid alternative funds are adding sufficient value in your clients' portfolios.

PORTFOLIO CONSTRUCTION

Portfolio construction: Mind the gap (and overlap)

A common challenge advisors face in constructing portfolios is how to most efficiently pair passive products to avoid unintended holding overlaps or gaps. It's an important consideration as our Portfolio Solutions trends data shows that roughly one in two advisors uses multiple index products from different index providers in their equity sleeve.

While market concentration has received a ton of attention for driving market returns, we are noticing a larger portion of stocks joining the rally, resulting in greater market breadth. This is welcome news as our trends data shows that most advisors are intentionally overweighting small-cap equities.

Look under the hood of your portfolios

Overlaps (or gaps) in a portfolio are not necessarily a cause for concern, especially when those are intentional to achieve a desired exposure, such as to a particular style, sector, or size.

Where overlaps or gaps can cause headaches for advisors is if the resulting exposure is unintended, possibly leading to undesired outcomes.

Next steps to consider: Seek out a second opinion

If you're interested in understanding possible overlaps and gaps in your portfolio, or simply want a fresh perspective on equity portfolio construction, leverage our Portfolio Solutions team's expertise.

Notes;

- Vanguard ETF Shares are not redeemable with the issuing Fund other than in very large aggregations worth millions of dollars. Instead, investors must buy and sell Vanguard ETF Shares in the secondary market and hold those shares in a brokerage account. In doing so, the investor may incur brokerage commissions and may pay more than net asset value when buying and receive less than net asset value when selling.
- All investing is subject to risk, including the possible loss of the money you invest.
- Diversification does not ensure a profit or protect against a loss.
- Investments in bonds are subject to interest rate, credit, and inflation risk.
- Bond funds are subject to the risk that an issuer will fail to make payments on time, and that bond prices will decline because of rising interest rates or negative perceptions of an issuer's ability to make payments.
- U.S. government backing of Treasury or agency securities applies only to the underlying securities and does not prevent share-price fluctuations. Unlike stocks and bonds, U.S. Treasury bills are guaranteed as to the timely payment of principal and interest.
- Funds that concentrate on a relatively narrow market sector face the risk of higher share-price volatility.
- Prices of mid- and small-cap stocks often fluctuate more than those of large-company stocks.
- Be aware that fluctuations in the financial markets and other factors may cause declines in the value of your account. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income. Diversification does not ensure a profit or protect against a loss.
- CFA® is a registered trademark owned by CFA Institute.

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 shareprice 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.

The sale of the VCSH, VAGU, BND, BNDW, VGIT and VGLT qualifies as a private placement pursuant to section 2 of Uruguayan law 18.627. Vanguard represents and agrees that it has not offered or sold, and will not offer or sell, any VCSH, VAGU, BND, BNDW, VGIT and VGLT to the public in Uruguay, except in circumstances which do not constitute a public offering or distribution under Uruguayan laws and regulations. Neither the VCSH, VAGU, BND, BNDW, VGIT and VGLT nor issuer are or will be registered with the Superintendency of Financial Services of the Central Bank of Uruguay to be publicly offered in Uruguay."

The VCSH, VAGU, BND, BNDW, VGIT and VGLT correspond to investment funds that are not investment funds regulated by Uruguayan law 16,774 dated 27 September 1996, as amended.

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.

Bloomberg® and Bloomberg Indexes mentioned herein are service marks of Bloomberg Finance LP and its affiliates, including Bloomberg Index Services Limited ("BISL"), the administrator of the index (collectively, "Bloomberg") and have been licensed for use for certain purposes by Vanguard. Bloomberg is not affiliated with Vanguard and Bloomberg does not approve, endorse, review, or recommend the Financial Products included in this document. Bloomberg does not guarantee the timeliness, accurateness or completeness of any data or information related to the Financial Products included in this document.

Data provided by Morningstar is property of Morningstar and Morningstar's data providers and it should therefore not be copied or distributed. Morningstar and its data providers are not responsible for any certification or representation with respect to data validity, certainty, or accuracy and are therefore not responsible for any losses derived from the use of such information.

Connect with Vanguard®

Vanguard®