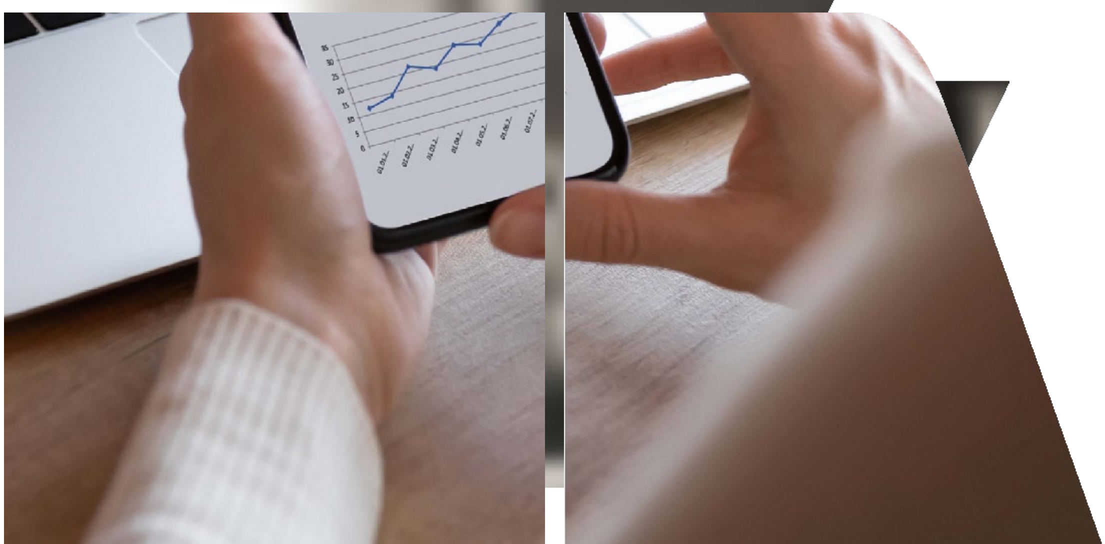
Vanguard®

Wealth Management Portfolio Trends 2022

Mexico Edition



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Portfolio Trends among Mexican Intermediary Clients

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What we do

At Vanguard, we are deeply committed to empowering our clients and giving them the best chance for investment success. As part of this mission, we are providing intermediary clients in Mexico with insights on how their peers are constructing portfolios based on our Portfolio Consulting Client engagements. The peers assessed included asset managers, registered investment advisors and private banks, all based in Mexico. The current allocations were provided by our clients before our portfolio consulting engagements for the 2022 calendar year.

2

Our goal

Our Portfolio Consulting service strives to help our clients achieve better investment outcomes. We analyze client portfolios to assess potential opportunities and risks, uncover hidden biases and discuss portfolio construction and implementation considerations to help them achieve their investment objectives.

3

What to expect

In this article, we highlight and dissect some of the major portfolio construction trends we witnessed in the portfolios we analyzed, and provide insights on portfolio construction best practices. Although our clients´business models vary and we cannot group all intermediary clients homogeneously, understanding some of these trends and insights may help you better manage your client portfolios.

Executive Summary

In this article we highlighted some of the major trends among intermediary investors in Mexico. Chief among them are a preference for global equity over Mexican equity. We also observed that clients were avoiding duration risk and changing the strategic asset allocation to increase exposure to equities. We also shared some insights on current portfolio construction trends and highlighted some best practices for our clients to help them achieve better outcomes and avoid taking unnecessary risks. At Vanguard we are committed to helping clients successfully reach their goals. Please reach out to your sales contact in Mexico if you are interested in a portfolio consultation. Our consultants can identify unintended biases and risks in a portfolio and work with you to determine potential solutions.

Key PortfolioTrends Summary

Asset class	Market Weight	Mexicanclient preference (Overweight = +) (Underweight = -)
U.S. Equities	58.9%	=
U.S. Growth	36.7%	-
U.S. Value	35.3%	+
Small Caps	5.3%	+
Duration (Global Aggregate Average)	7.58 years	-
Average Credit Quality (Global Aggregate)	A	-
Gov. and gov. related Bonds (% in Global Aggregate)	66%	-
Mexican equities (Optimal Home-Bias)	20%	-
Mexican bonds (Optimal Home-Bias)	75%	-

Note: The anchor points for the above categories are based on the FTSE All World Index for global equity categories and Bloomberg-Barclays Global Aggregate Index for global fixed income categories; for Mexican Equities and Bonds, we used optimal allocations for Mexican Investors based on Vanguard's historical returns analysis.

Portfolio Construction

Vanguard's principles for investment success recommend that our clients focus on investment factors within their control, set clear and appropriate investment goals, develop an appropriate strategic asset allocation, minimize costs, and maintain discipline over the long term.

We recommend our clients to adhere to a strategic asset allocation that aligns to their long-term goals, and to not adjust it based on short-term market trends.

During conversations with clients, we have observed that some of them do not have an appropriately defined strategic asset allocation, including clearly defined investment limits which dictate their dynamic asset allocation policy.

According to Vanguard research, **the strategic asset allocation is responsible for approximately 90% of the variability of returns**, making it the most important investment decision one can make to help achieve its long-term goals. Having a clearly defined strategic asset allocation and investment policy is of paramount importance for investment success.

We have continued to observe that select clients, despite a significantly improved outlook for fixed income, permanently adjust or consider modifying their strategic asset allocation more towards equities to achieve their desired outcome. During 2022, 60/40 portfolios had a 5% overweight to equities and within the fixed income sleeve we've seen an allocation of 25% to cash.

Vanguard's Principles for Investing Success

Goals

- An appropriate investment goal should be measurable and attainable
- Success should not depend upon outsize investment return

Balance

- Develop a suitable asset allocation using broadly diversified funds
- Have realistic return assumptions, not hopes

Costs

- Higher costs can significantly depress portfolios' growth over time
- The lower the costs, the greater the share of an investment's return, and the greater the impact of compounding

Discipline

- Enforce an asset allocation through periodic rebalancing to help manage portfolio risk
- Spontaneous departures from such an asset allocation can be costly

Source: Vanguard

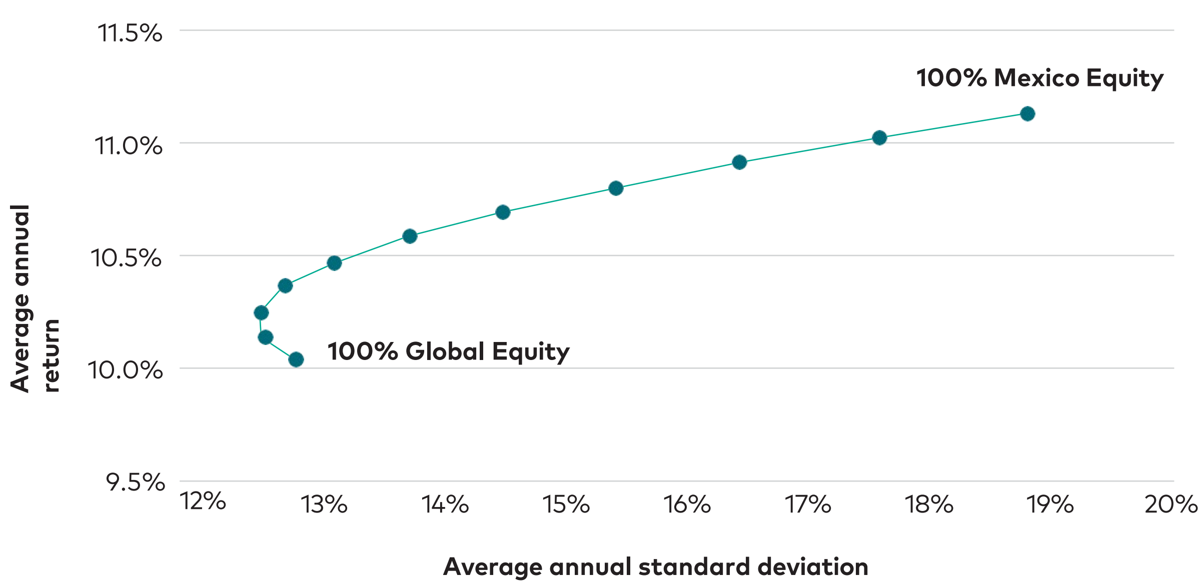
Equity Trends

Equity Home Bias

A common preference within the equity portion is a low allocation or home-bias to Mexican equities. Investors prefer global portfolios due to local political and economic concerns. We believe that Mexican investors seeking to take advantage of diversification benefits from a global portfolio can still balance a strategic allocation to local securities larger than the weighted global market capitalization for Mexico. **Our research shows risk reduction for portfolios with a 10-30% Mexico equity home bias**, although this can vary based on individual portfolio objectives.

In the portfolios assessed for 2022, we found a small home bias for Mexican equities. Mexican equities comprise 0.3% of global market cap and portfolios on average had a 2% allocation to Mexican equities.

During the assessed time period between 1999-2020, a 10%–30% allocation to Mexican equities resulted in the strongest risk-reduction



Source: Morningstar Global Equity: FTSE All World Index TR USD (converted to MXN at spot rates) Mexico Equity: S&P/BMV IRT Index TR MXN

Geographic Allocation

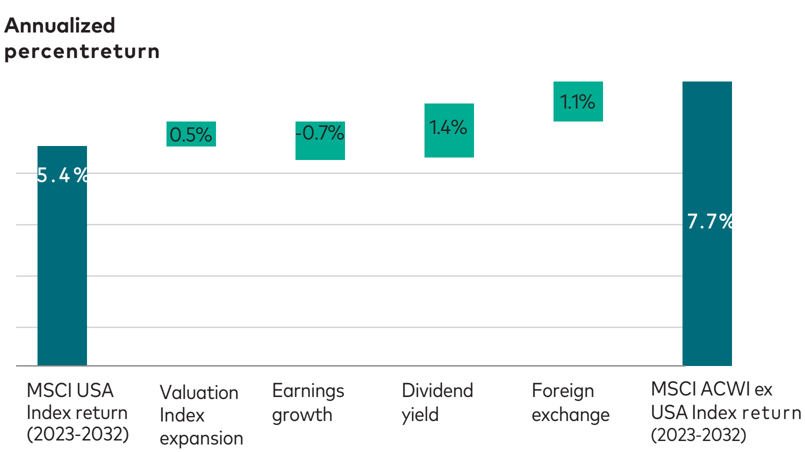
In terms of geographic allocation, in 2021 we had seen clients tilt their portfolios significantly towards US equities, often averaging 70-80% of total equity portfolio allocation. In 2022, on average, our clients had 61% allocated to US equities, marginally more than its market capitalization weight of 59%. US equities is an asset class that has significantly outpaced other major equity regions since the global financial crisis.

"Treat history with the respect it deserves,"
the late Vanguard founder John C. "Jack" Bogle said.
"Neither too much nor too little."

Vanguard has developed its own Vanguard Capital Markets Model® (VCMM), to incorporate a rigorous and thoughtful forecasting framework to aid in making portfolio construction decisions. Currently, VCMM conveys that the last decade of U.S. outperformance is likely sowing the seeds for the next decade of underperformance; the valuation-driven outperformance in the U.S. is unsustainable. The valuation reversion component of our outlook has narrowed since the original publication of this work. That is largely due to the rise in developed market ex-U.S. valuations in 2022 and the more recent decline in U.S. valuations. U.S. companies will need to realize rich earnings in the years ahead for recent investor optimism to be similarly rewarded. Therefore, we caution our clients not to over allocate to US equities simply because the asset class has done well over the last decade.

VCMM projects U.S. equities to have relatively lower returns in US dollar terms. Our 10-year annualized, nominal return projection, ranges between 4.4-6.4% for US equities and between 6.7% - 8.7% for Global equities ex-US. The figures are based on a 1.0-point range around the rounded 50th percentile of the distribution of return outcomes.

We expect International equities to outperform U.S. equities by about 2.3% per year
Currency and dividends are expected to drive most of the excess returns internationally over the next 10 years



	Valuation expansion	Earnings growth	Dividend yield	Foreign exchange return	Total return
USA	–1.30%	**5.0%**	**1.8%**	**—**	**5.4%**
ACWI ex USA	–0.80%	**4.3%**	**3.2%**	**1.1%**	**7.7%**

IMPORTANT: The projections and other information generated by the 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 VCMM are derived from 10,000 simulations for each modeled asset class. Simulations as of December 31, 2022. Results from the model may vary with each use and over time. For more information, please see the "Important information" section.

Notes: Forward-looking return estimates are from the VCMM, as of December 31, 2022, for the period January 1, 2023, through December 31, 2032. The U.S. equity return is represented by the MSCI USA Index return; the international equity return is represented by the MSCI ACWI ex USA Index return. Returns do not take into account management fees and expenses, nor do they reflect the effect of taxes. Returns do reflect reinvestment of dividends and capital gains. The two end bars representing U.S. and international expected returns are median expectations. As a result, this comparison does not account for the correlation between U.S. and international equities. The sum of the individual bars in the middle may not equal the difference between the two end bars because of rounding.

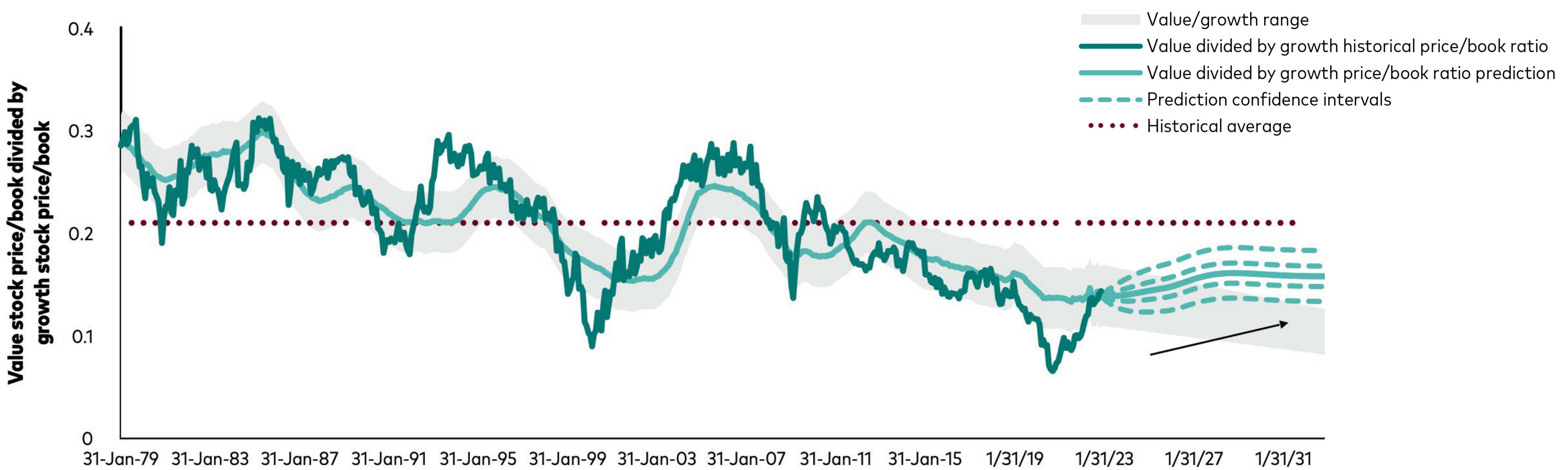
Source: Vanguard calculations, based on data from Refinitiv and Global Financial Data.

Equity Style Factor

We have observed that clients have moved away from an overallocation to the growth factor in 2022. On average, clients hold a 34% allocation to the growth factor, relative to 36% allocation in a global market-cap weighted portfolio. Over the last 10 years, U.S. growth stocks outperformed U.S. value stocks by an average of 2.86% per year. Vanguard's research suggests that the low interest rate and high-growth environment, coupled with subdued inflation, explains some of the growth stock's decade long boom. As the discount rate has risen due to a rise in inflation and higher Fed funds rate, the value of nearer term cash flows has risen and that has been a tailwind for value stocks. Growth stocks' valuations are still stretched despite their 2022 selloff, allowing room for value to continue its outperformance. We have also noticed clients holding almost 6% in small cap firms, slightly higher than their market cap of 5%. Vanguard projects a slight positive return to small-cap over large-cap in the next decade given small-cap is undervalued while large-cap is slightly overvalued relative to the U.S. broad market.

Based on our fair-value model, we expect value to slightly outperform growth over the next 10-year period. We also expect small-caps to outperform large caps marginally (refer to page 16).

Further gains to value are likely to come from higher rates and trend inflation



Notes: The valuation ratio is projected based on a vector error correction model and using a five-lag vector autoregression model to project the systematic drivers. The arrow signifies that we expect the actual ratio to converge to our estimate of fair value.
Sources: Vanguard calculations, based on data from FactSet, the U.S. Bureau of Labor Statistics, the Federal Reserve Board, Refinitiv, and Global Financial Data, as of November 30, 2022.

[2] https://www.im.natixis.com/resources/esg-investing-survey-2019

Thematic Investments

We have also seen a lower preference for thematic ETFs in 2022 versus 2021. Overall, less than 5% of the portfolios were comprised of these investments. These investments are characterized as less diversified exposures in specialized growth oriented sub-asset classes that may be dependent on the materialization of a few unpredictable events. Some of the most popular exposures include cybersecurity and clean energy. We have not seen any allocations to cryptocurrency. The trend towards thematic investments has been lower in 2022 in comparison to 2021.

These ETFs in particular carry a high degree of concentration risk, with a smaller-cap bias and higher relative valuations. This can result in higher volatility for clients, and liquidity concerns during risk-off events. While some thematic investments may have done well in the recent past, performance leadership is quick to change, and a portfolio that diversifies across markets is less vulnerable to the impact of significant swings in performance by any one segment. Thematic investments can add volatility to the portfolio and has the potential to dampen future portfolio returns as they tend to be concentrated within one asset class.

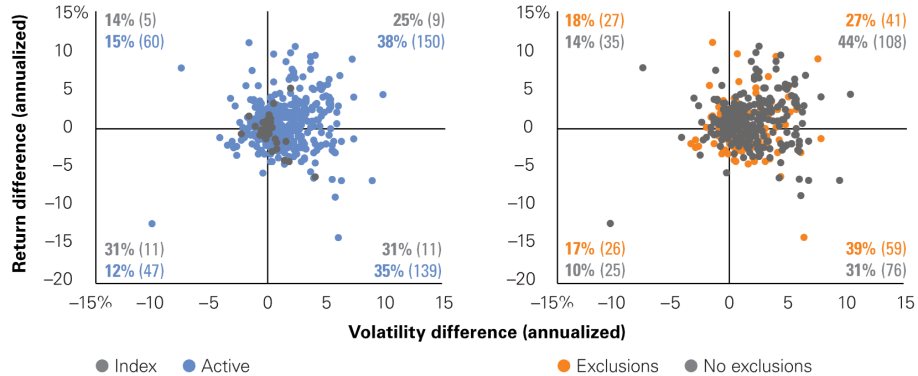
ESG Investments

In 2021 we observed that Mexican investors showed an increased interest in allocating to environmental, social, and governance (ESG) products to help satisfy their personal investment values towards sustainable investments. Asset managers had a higher tendency to incorporate ESG in their portfolios than Registered Investment Advisors.

However, ESG equity investments overall have a tilt to the growth factor and given that factor was out of favor amid rising rates in 2022, that negatively impacted interest in ESG investments.

Vanguard's Investment Strategy team looked at ESG mutual funds and ETFs focused on U.S.-listed stocks and investigated differences in their gross returns and volatility (standard deviation of returns) over a 15-year period compared with the FTSE USA All Cap Index. Overall, our findings suggest that ESG funds have neither systematically higher nor systematically lower raw returns or risk than the broader market. Therefore, we do not believe there is a performance price for ESG investing.

ESG funds produce mixed risk and return results versus the broad market



When exploring ESG funds and ETFs, we advise our client to focus on diversification, low-cost and conduct thorough due diligence on the fund manager firm, its people, the fund's philosophy and the investment process.

[2] https://www.spglobal.com/marketintelligence/en/mi/research-analysis/esg-and-exclusionary-policies-affecting-latin-america-.html

Fixed Income Trends

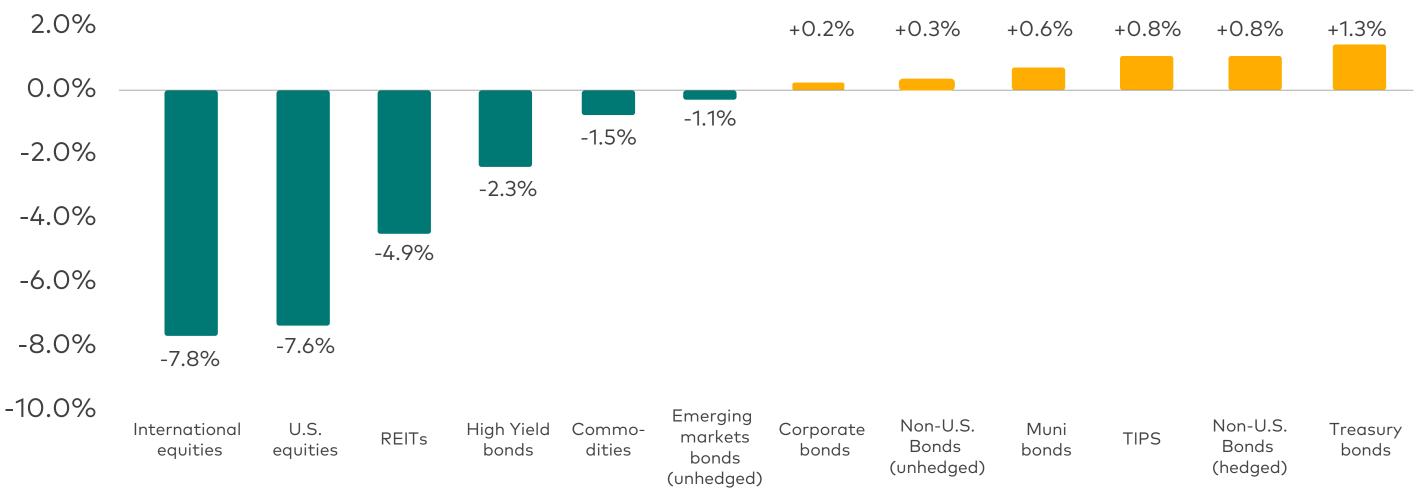
Credit Quality Exposure

A fixed income trend we have observed is clients' preference to allocate to below-investment grade bonds, similar to what they did in 2021. The average allocation to high yield in 2022 was 16%. At Vanguard, we believe that investment-grade and treasury bonds provide a strong ballast to equities. High yield has a strong correlation to equities, and we believe that high yield should generally be funded from the equity component of the asset mix as it exhibits more similarities with equities from a correlation and risk standpoint.

We also observed that our clients have slightly more exposure to corporate bonds than treasuries. Government and government related bonds comprise approximately 66% of the global bond market, and the average portfolio had 47% in government bonds. In 2022, clients increased exposure to government bonds as interest rate rose in most regions. **Despite their lower yields, high-quality government bonds provide superior protection to portfolios against equity drawdowns**. If over-allocated to corporate bonds, consider maintaining credit quality to maintain adequate diversification at the portfolio level.

Bonds provide ballast in an equity bear market

Median return of various asset classes during the worst decile of monthly equity returns 1988 - 2022



Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest in an index.
Sources: Vanguard calculations based on data from Bloomberg Barclays, MSCI, FTSE, CRSP, ICE BAML, S&P and Dow Jones
Notes: U.S. stocks represented by Dow Jones U.S. Total Stock Market Index (formerly known as the Dow Jones Wilshire 5000 Index) through April 22, 2005; MSCI US Broad Market Index through June 2, 2013; annd CRSP U.S. Total Market Index thereafter. International equities represented by Total International Composite Index through August 31, 2006; MSCI EAFE + Emerging Markets Index through December 15, 2010; MSCI ACWI ex USA IMI Index through June 2, 2013; and FTSE Global All Cap ex U.S. Index thereafter. REITS represented by Dow Jones U.S. Select REIT Index. High Yield bonds represented by Bloomberg Barclays U.S: Corp High Yield Index. Commodities represented by Bloomberg Commodity Index TR. EM bonds represented by JP Morgan EMBI Global Diversified Index. Corporate bonds represented by Bloomberg Barclays US Corporate Bond Index. Unhedged Non-U.S. bonds represented by Bloomberg Barclays Global Agg Index ex USD. Hedged non-U.S. bonds represented by Bloomberg Barclays Global Agg Index Hedged USD. Muni bonds represented by Bloomberg Barclays Municipal Bond Index. TIPS represented by Bloomberg Barclays U.S. Treasury Inflation Protected Index. Treasury bonds represented by ICE BofAML U.S. Treasury Index. Unhedged non-U.S. bond data starts in January of 1990, Hedged non-U.S. bond data begins in February of 1990, Unhedged emerging market bond data begins in January of 1994, U.S. corporate bond index data begins in January of 1989. TIPS data begins March of 1997. All data is through December 31, 2022.

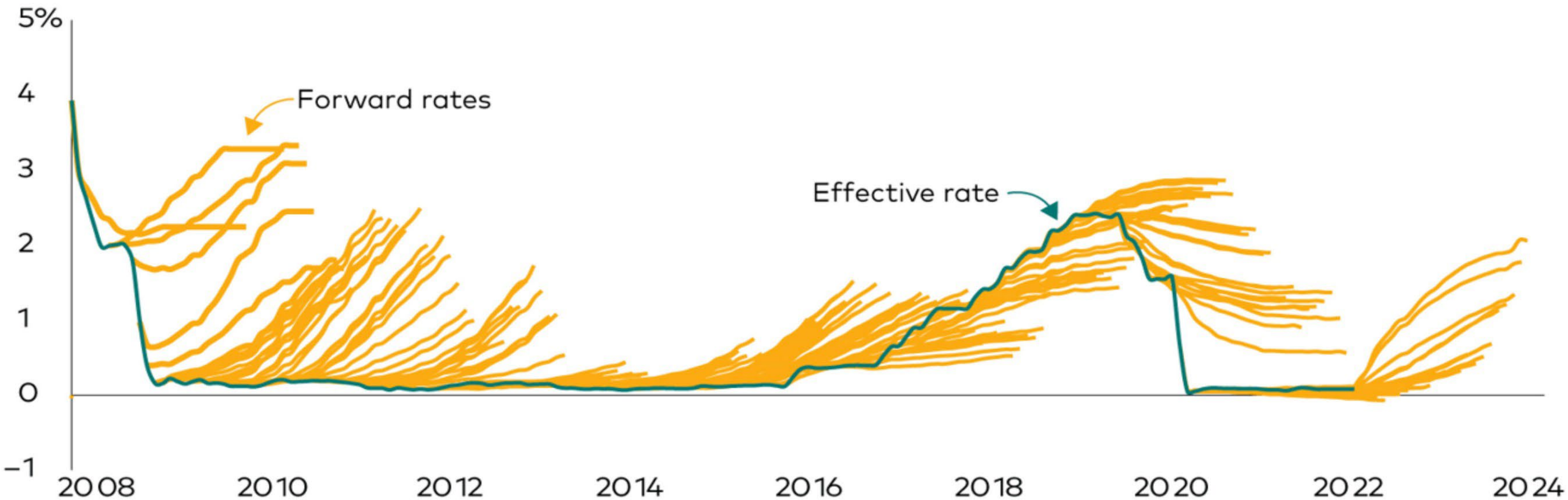
Duration Exposure

An additional trend we have observed is towards shorter duration allocations, typically between 0-5 year duration, higher than 0-3 year duration in 2021.

Duration exposure produced negative returns in 2022 and bonds didn't provide the ballast to equities that investors are used to. However, we advice our client to be disciplined and not focus on short-term stock/bond correlations.

As we see in the chart below, the market and professional investors alike have generally not been successful in timing duration. The effective rate is the actual U.S. funds rate whereas the forward rate is what the market predicted. As you will observe, the divergence is significant. In fact, Vanguard's Oversight and Manager Research (OMR) found that fixed income managers who focused predominantly on duration-focused strategies were associated with lower realized alpha.

Making the right call on rates has proven difficult
U.S. federal funds effective rate and forward rates



Notes: Monthly data are from January 31, 2008, to February 28, 2022. The federal funds effective rate is annualized. Forward rates are based on futures contracts with tenor up to two years. Sources: Bloomberg

Duration Exposure (continued)

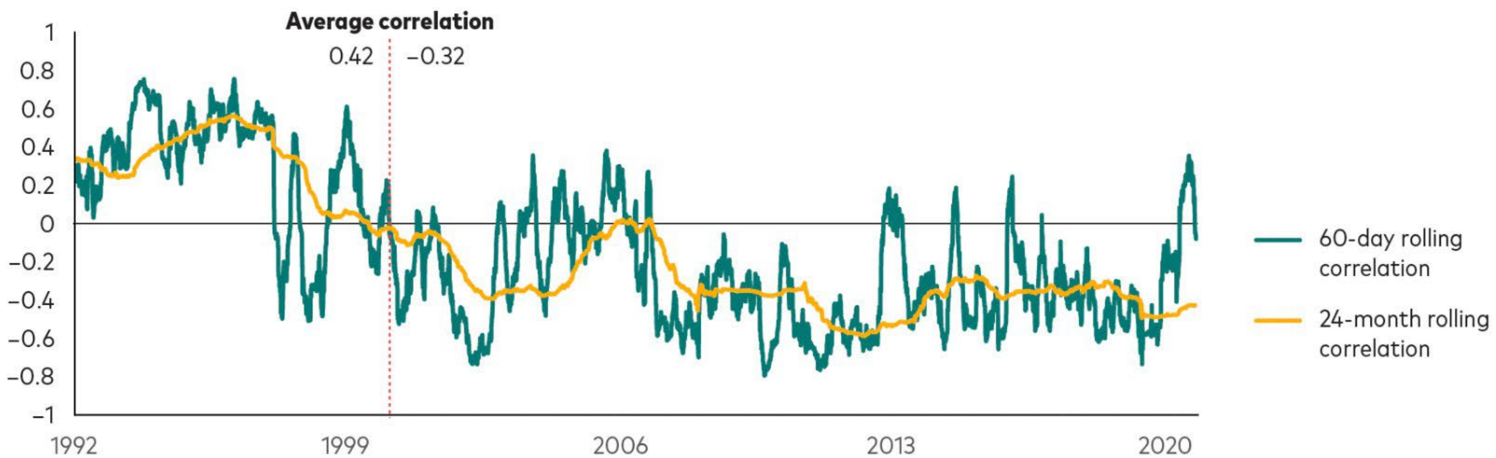
We also advise our clients to focus on longer-term stock/bond correlation. As evident in the chart below, stock and bond returns have at times moved in the same direction in the short term and thus have been positively correlated. But these positive correlations have happened for relatively brief periods. The 60-day rolling correlation is erratic. It has moved positive and negative since 1999. The pre-1999 period going back to 1992 had high inflation. However, the 24-month rolling correlation has almost always been negative thus providing good diversification benefits. As with any investment performance, looking solely at short periods will tell you only so much. We expect the pattern of longer-term correlations to remain negative.

The average client portfolio duration for 2022 was 3.48 years and our clients generally had a risk aversion towards intermediate-long duration. This preference mainly stems from client fears of rising rates and client preference for little or no volatility from the fixed income sleeve. However, in the context of a total portfolio, **taking on duration risk can result in significant diversification benefits, particularly during periods of market stress.**

The important point is that **credit risk and equity risk are generally positively correlated whereas duration risk and equity risk tend to have a negative correlation and thus dampen risk.**

In an attempt to avoid duration, we have also continued to witness a bias towards floating-rate bonds. **Some considerations worth highlighting are that floating-rate bonds tend to be less liquid** (they account for ~4% of the US corporate bond universe), which can be evidenced in times of market stress. During March 2020, some floating-rate bond ETFs traded at a max discount to NAV of 12.3%, compared to 5.5% for short-term corporate bonds. Adding to the risks of floating-rate bonds is the fact that ETFs with such exposures tend to have higher concentration in the financial sector (~53% of the index), making it difficult to get sufficient sector diversification which will likely be beneficial during periods of market volatility.

Short-term trends can vary; long-term positive or negative correlations can last decades



Notes: Long-term stock/bond correlations were largely positive during much of the 1990s but have mostly been negative since about 2000. It is not uncommon for the correlation to turn positive over the shorter term, but this has not altered the longer-term negative relationship..

Source: Vanguard, based on data from Refinitiv from January 1, 1990, through July 26, 2021. Data appear on chart only at the start of 1992 to reflect the end of the first 24-month rolling correlation.

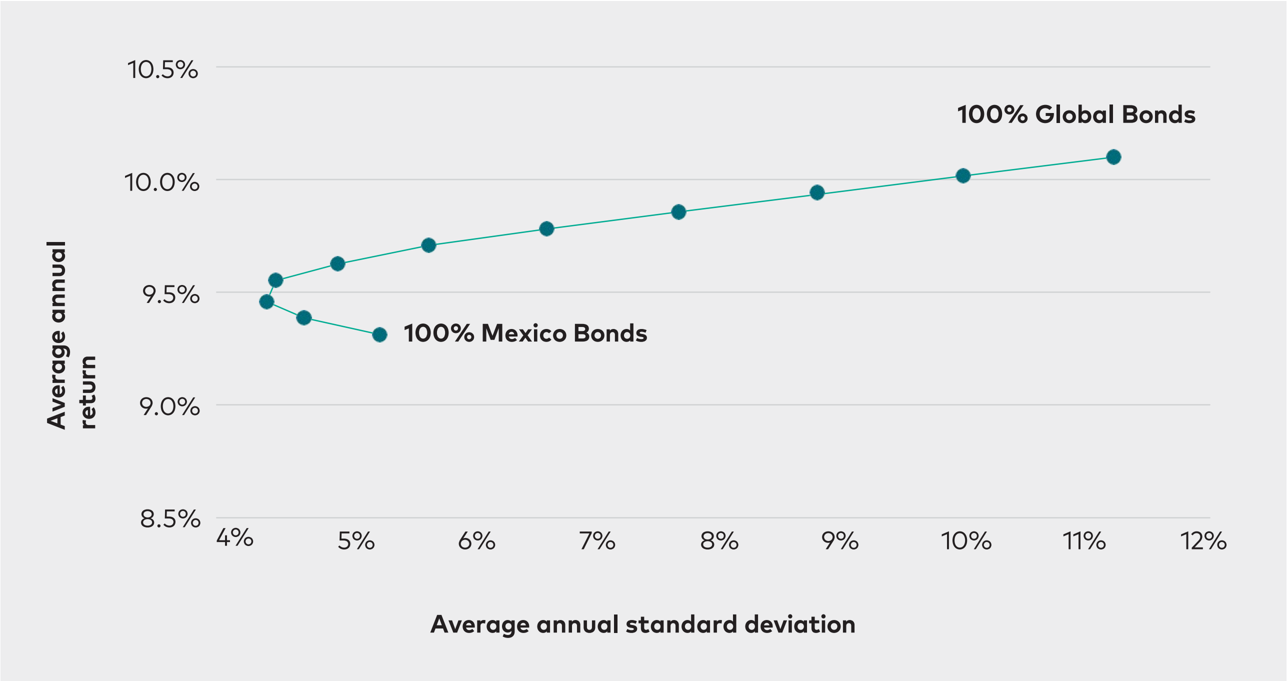
Past performance is no guarantee of future returns.

Home Bias

For local portfolios in MXN, we have seen a moderate bias of 7% toward local fixed income; however, we have witnessed a growing trend in diversifying towards global (ex-Mexico) fixed income. As part of this trend towards global fixed income, clients have noted the benefits of currency hedging to eliminate unnecessary currency volatility from international fixed income investing.

MXN-hedged fixed income ETFs have grown in popularity. They can help clients diversify local sovereign risk, while still earning local-like returns. While unique investor objectives and circumstances should dictate the level of home bias, **from a historical risk and return period over the last 20 years, we have observed risk-reduction from allocating 60-90% in Mexican sovereign bonds**.

During the assessed time period, between 2001-2020, a 60%–90% allocation to Mexican sovereign bonds resulted in risk-reduction

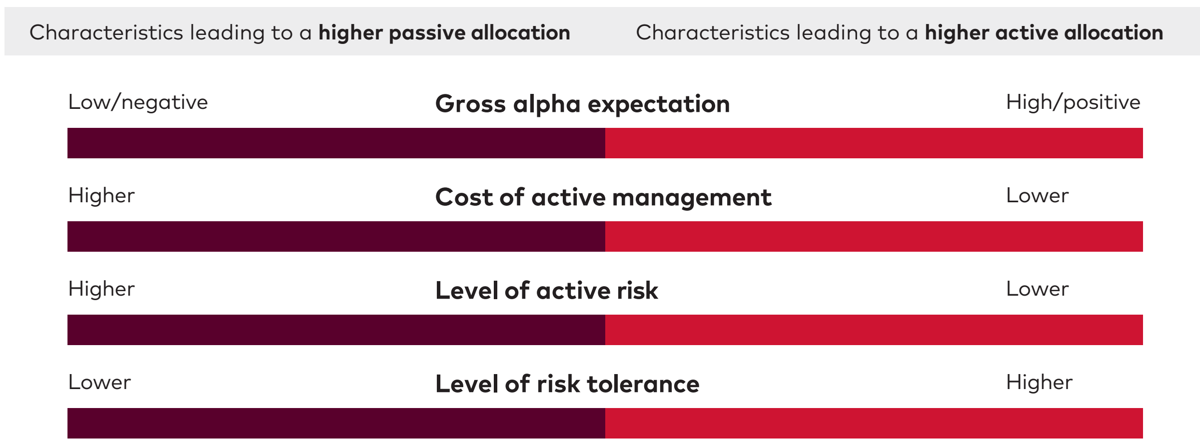


Source: Morningstar. For Global Bonds, the Bloomberg Barclays Global Aggregate TR (converted to MXN at spot rates) was used and for Mexico Bonds the S&P/BMV Sovereign MBONOS Bond 24 TR MXN Index

Portfolio Implementation

Active vs. Passive

In the portfolios we analyzed, we witnessed several actively managed portfolios that used passive products such as ETFs for international exposure within equities and fixed income. The reverse is true for local asset classes, Mexican equities and fixed income, where we observed a strong preference for stock and bond picking. This can be mainly attributed to manager skill and local knowledge of Mexican equity and fixed income markets, along with the tax advantages from using passive exposure for international allocations. **At Vanguard we employ a model four key variables — gross alpha expectation, cost, active risk[3], active risk tolerance[4] — to establish active and passive investment allocation targets** for a range of investor types.



Source: Vanguard

Fund Structure – US-domiciled vs. UCITS

In terms of fund structure, many of our clients have a split between US-domiciled ETFs and UCITS ETFs. In our portfolio consulting engagements, **we have generally seen clients moving away from US-domiciled ETFs and toward UCITS ETFs** although the absolute percentage split between the two structures is about 60/40 in favor of US-domiciled ETFs. UCITS generally provide a stronger tax advantage, given that they do not face withholding tax, which can be as high as 30%, on fund-level distributions. They also have the ability to accumulate income and defer gains until the sale of shares. However, **the decision to use UCITS ETFs from a tax-efficiency perspective must also be weighed against the total cost of ownership**, including the ETF management fees and trading costs, along with client preferences.

[3] The uncertainty of future manager performance

[4] Active risk tolerance is defined as the willingness with which an investor would take on active risk in return for an uncertain benefit of positive alpha.

Number of Holdings

Our portfolio consulting clients have had a wide dispersion in the number of holdings such as ETFs, Funds and underlying securities they hold. Overall, **the tendency has been to have a large number of holdings**, some of which have a very low weight, often lower than 1%. Some of **the benefits of reducing the number of holdings include operational efficiency, increased transparency, having a better understanding of portfolio exposures, reducing the variability of outcomes, lower trading costs and improved portfolio stability**.

A potential approach that provides a high degree of diversification, while still employing active management, could involve using a core/satellite approach. The core leverages low-cost, diversified global building blocks, and the satellite would include the client's active bets to implement their own investment views within the portfolio.

The result can lead to a reduced variability of outcomes, lower costs, and portfolio implementation benefits.

Asset Manager Concentration

We have noticed a number of our clients invest a high proportion of their assets with one or few asset managers. Although this approach is not inherently wrong, **from a practice management standpoint manager diversification provides several advantages**. Working with various asset managers can increase diversity of perspectives on the market, and provide clients access to varied thought leadership and support in the form of portfolio consulting and product implementation.

Equity 10 Year Forecasts in USD

Nominal
Distribution of geometric returns as of December 2022

The Vanguard Capital Markets Model®(VCMM)[5] is a powerful forecasting tool used for setting reasonable investment return expectations and evaluating the risk-and-return trade-offs inherent in portfolio decisions.

The model presents a potential range of portfolio return outcomes and the probabilities of achieving return objectives or realizing downside-risk events across global asset classes. Our model provides you guidance on portfolio implementation.

Equities	**Return Projection**	Median Volatility
U.S. equities	**4.4%-6.4%**	17.2%
U.S. value	**4.5%-6.5%**	19.8%
U.S. growth	**2.4%-4.4%**	18.3%
U.S. large-cap	**4.3%-6.3%**	16.9%
U.S. small-cap	**4.7%-6.7%**	22.6%
U.S. REITS	**4.6%-6.6%**	20.3%
Global equities ex-U.S. (unhedged)	**6.7%-8.7%**	18.5%
Global ex-U.S. developed markets equities (unhedged)	**6.5%-8.5%**	16.7%
Emerging markets equities (unhedged)	**6.3%-8.3%**	26.3%

IMPORTANT: The projections or 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. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for each modeled asset class. Simulations are as of December 31, 2022. Results from the model may vary with each use and over time. For more information, see the Notes section.

Source: Vanguard Group

* The figures are based on a 1.0 - point range around the rounded 50th percentile of the distribution of return outcomes.

Fixed Income 10 Year Forecast in USD

Nominal
Distribution of geometric returns as of December 2022

The Vanguard Capital Markets Model®(VCMM) is a powerful forecasting tool used for setting reasonable investment return expectations and evaluating the risk-and-return trade-offs inherent in portfolio decisions.

The model presents a potential range of portfolio return outcomes and the probabilities of achieving return objectives or realizing downside-risk events across global asset classes. Our model provides you guidance on portfolio implementation.

Fixed Income	**Return Projection**	Median Volatility
U.S. aggregate bonds	**4.0%-5.0%**	5.5%
U.S. Treasury bonds	**3.6%-4.6%**	5.8%
U.S. credit bonds	**4.5%-5.5%**	5.2%
U.S. high-yield corporate bonds	**6.1%-7.1%**	10.2%
U.S. TIPS	**3.0%-4.0%**	5.0%
U.S. cash	**3.4%-4.4%**	1.4%
Global bonds ex-U.S. (hedged)	**3.9%-4.9%**	4.4%
Emerging markets sovereign bonds	**5.6%-6.6%**	10.6%
U.S. inflation	**2.0%-3.0%**	2.3%

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Source: Vanguard Group
* The figures are based on a 1.0 - point range around the rounded 50th percentile of the distribution of return outcomes.

Important Information

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