Q3

Quarterly Market Review

Third Quarter 2022

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Third Quarter 2022

This report features world capital market performance and a timeline of events for the past quarter. It begins with a global overview, then features the returns of stock and bond asset classes in the US and international markets.

The report also illustrates the impact of globally diversified portfolios and features a quarterly topic.

Overview:

Quarterly Market Commentary

Third Quarter 2022 – October 17, 2022

Well, it's official. Third quarter has ended in bear market territory across multiple markets. To place that news in meaningful context, we pose two questions:

1. In better times, had you boldly "pre-decided" what you would and would not do during the next bear market?

"Great investment experiences treat most portfolio decisions as non-decisions. They've been pre-decided, and are immune to market prices, sentiment, and human judgment. They remove agency, and thus reduce regret."

— Rubin Miller, Fortunes & Frictions

If you've been an Alldoium client for a while, you can probably recall our similar advice, as well as important actions we've already helped you take, so you wouldn't have to decide much when the next bear market came along. Still …

2. Even if you had disciplined bear market plans in place, have you been wondering whether you should un-decide anything anyway?

Admittedly, it's a tall order to whistle past the graveyard of recent market returns, without being haunted by at least a dash of indecision. Given how unsettling many third quarter and year-to-date events and performances have been, you may struggle to un-notice the usual swarm of hand-wringing predictions and *"this time it's different"* warnings about what may lie ahead.

Perhaps the scariest part isn't necessarily the numbers themselves, as much as the lingering uncertainty of it all. When will the pain end—or will it?

Unfortunately, we can't answer that, or guarantee the doomsday predictors aren't right. But we can be inspired to reframe the uncertainty and understand what to make of it based on recent reflections from Dimensional Fund Advisors' David Booth:

"You can feel empowered by uncertainty instead of beaten down by it. Without uncertainty, there would be no opportunity. … If you think about it, the life equivalent of compound interest is wisdom. Learning from the past helps you make better decisions in the future, and those lessons build on one another over time."

In that context, let's look back to the last time we encountered some of the inflationary and potentially recessionary economic conditions we're currently enduring. We now have the compound wisdom to know just how wrong an infamous 1979 BusinessWeek cover story turned out to be when it declared "The Death of Equities." Eventually, BusinessWeek rolled into Bloomberg's publications. Forty years later, in 2019, a Bloomberg columnist described how they were "still getting grief" about it:

"Three years after 'The Death of Equities' appeared, the stock market hit bottom and then began a remarkable resurgence. The total return on the Standard & Poor's 500-stock index since its 1982 low, with dividends reinvested, has been nearly 7,000%. Not bad for a corpse."

It would've been a bad idea to give up on capital markets in 1979. It remains a bad idea to give up on them today, especially given the compound wisdom we've acquired since then. Durable, well-diversified asset allocation remains our best strategy in bull and bear markets alike.

We encourage you to recall everything we've already done to manage your globally diversified mix of stock, bond, and appropriate alternative investments. We've based your portfolio on the assumption that markets are durable over the years, and frequently uncertain in real time. (And yes, as we're seeing, that can apply to bond markets too.) We can also discuss myriad bear market actions worth considering at this time, such as:

- Sticking with your well-planned portfolio mix (reallocating when appropriate for your personal financial goals).
- Periodically rebalancing to stay on target.
- Tax-loss harvesting in your taxable accounts
- Adding even more investable assets to your portfolio while prices are low (especially if you've got a long time to invest).
- Taking a close look at your discretionary spending (especially if you're in early retirement).

How else can we assist you and yours at this time? Please let us know if we can answer any questions about current market conditions, or anything else that may be on your mind.

Eric Hutchens

Chief Investment Officer
Allodium Investment Consultants

Quarterly Market Summary

Index Returns

Q3 2022	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
	STOCKS				BONDS	
	-4.46%	-9.20%	-11.57%	-11.12%	-4.75%	-2.21%

Since Jan. 2001	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
Average Quarterly Return	2.1%	1.3%	2.4%	2.2%	0.9%	0.9%
Best Quarter	22.0% **2020 Q2**	25.9% **2009 Q2**	34.7% **2009 Q2**	32.3% **2009 Q3**	4.6% **2001 Q3**	4.6% **2008 Q4**
Worst Quarter	-22.8% **2008 Q4**	-23.3% **2020 Q1**	-27.6% **2008 Q4**	-36.1% **2008 Q4**	-5.9% **2022 Q1**	-4.1% **2022 Q1**

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: US Stock Market (Russell 3000 Index), International Developed Stocks (MSCI World ex USA Index [net dividends]), Emerging Markets (MSCI Emerging Markets Index [net dividends]), Global Real Estate (S&P Global REIT Index [net dividends]), US Bond Market (Bloomberg US Aggregate Bond Index), and Global Bond Market ex US (Bloomberg Global Aggregate ex-USD Bond Index [hedged to USD]). S&P data © 2022 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2022, all rights reserved. Bloomberg data provided by Bloomberg.

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Long-Term Market Summary

Index Returns as of September 30, 2022

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
1 Year	STOCKS				BONDS	
	-17.63%	-23.91%	-28.11%	-20.49%	-14.60%	-9.86%
5 Years						
	8.62%	-0.39%	-1.81%	0.17%	-0.27%	0.71%
10 Years						
	11.39%	3.62%	1.05%	3.58%	0.89%	2.21%

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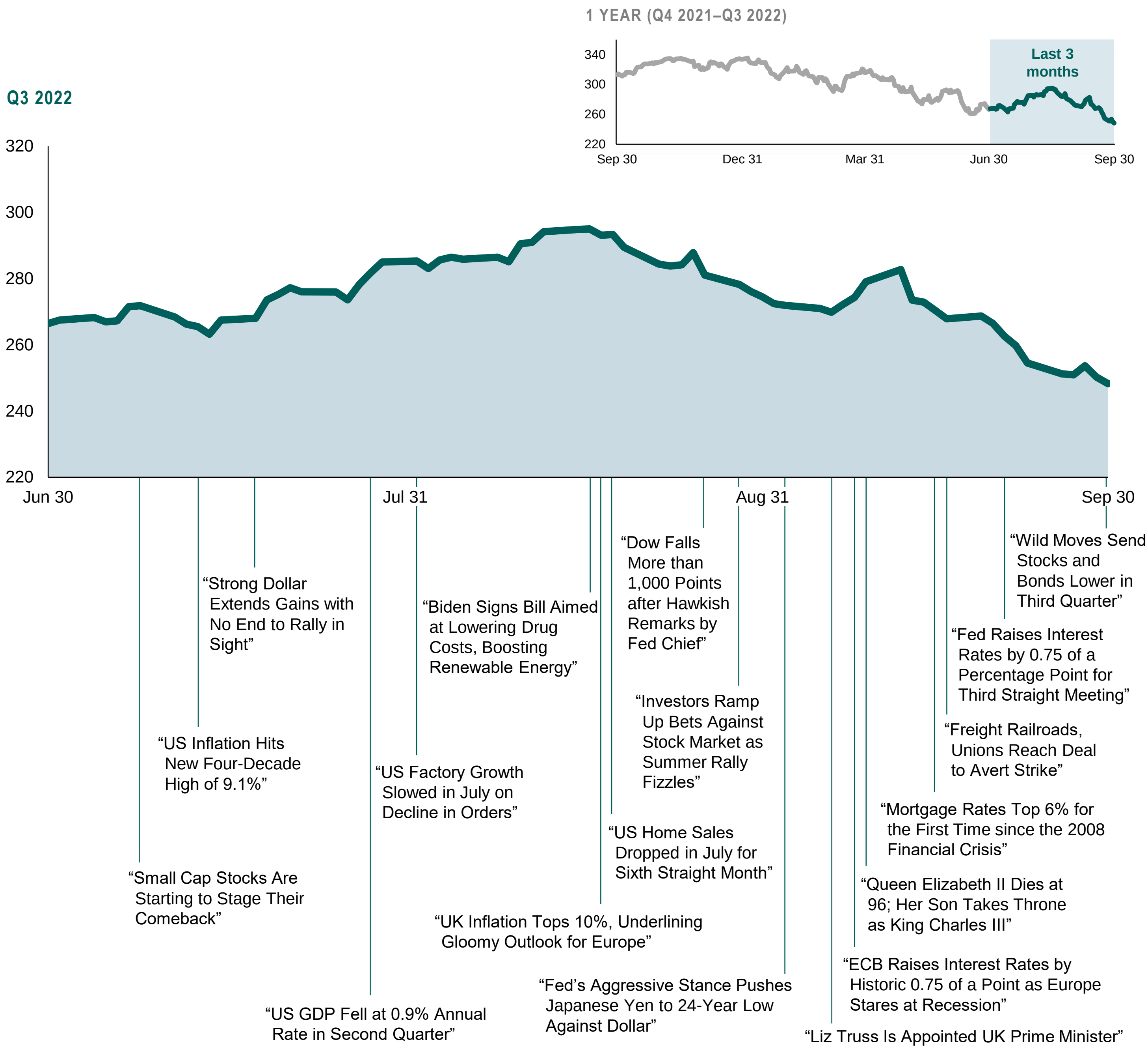
World Stock Market Performance

MSCI All Country World Index with selected headlines from Q3 2022



These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

Graph Source: MSCI ACWI Index (net dividends). MSCI data © MSCI 2022, all rights reserved.
It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio.
Past performance is not a guarantee of future results.

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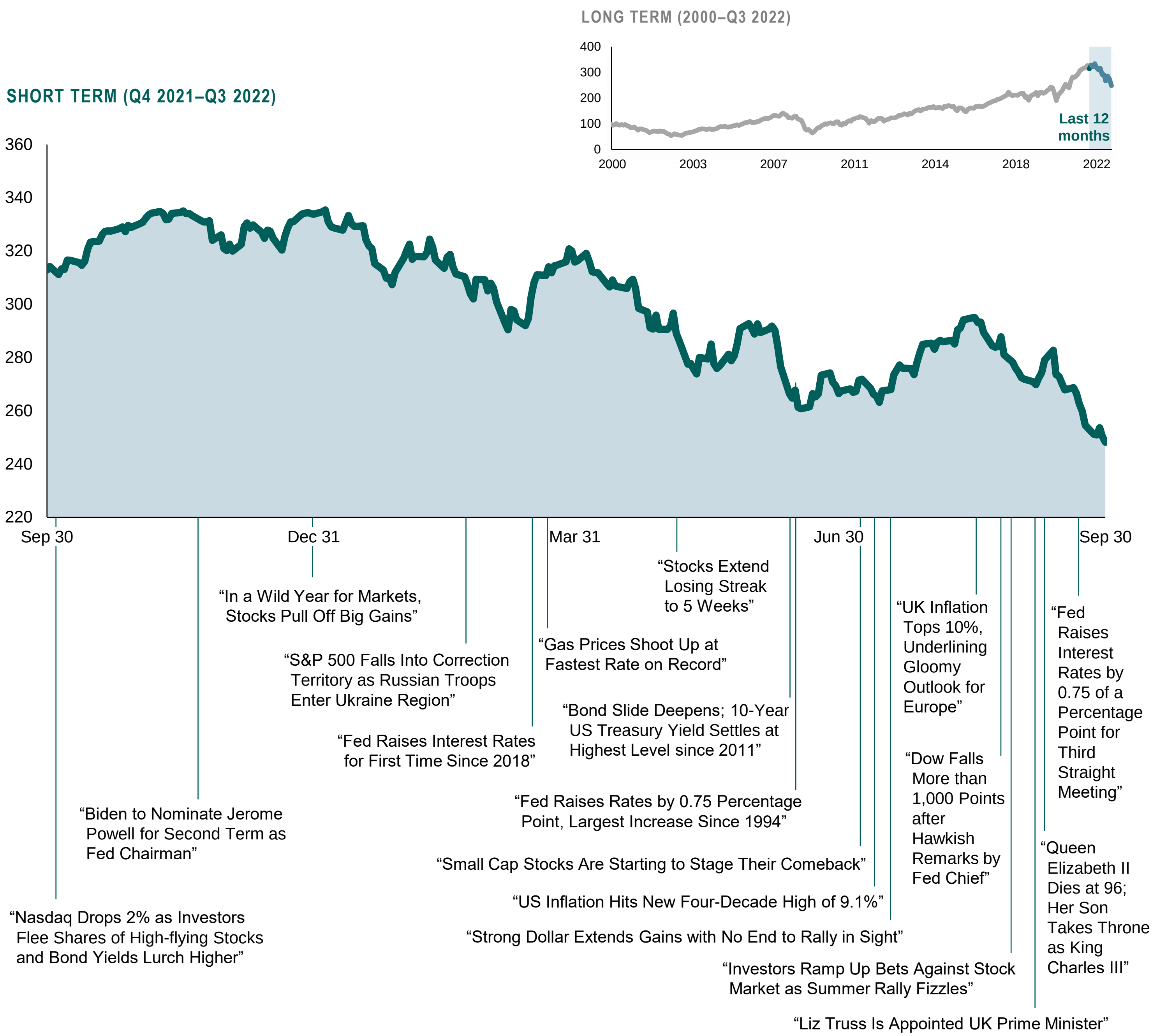
World Stock Market Performance

MSCI All Country World Index with selected headlines from past 12 months



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Graph Source: MSCI ACWI Index (net dividends). MSCI data © MSCI 2022, all rights reserved.
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US Stocks

Third quarter 2022 index returns

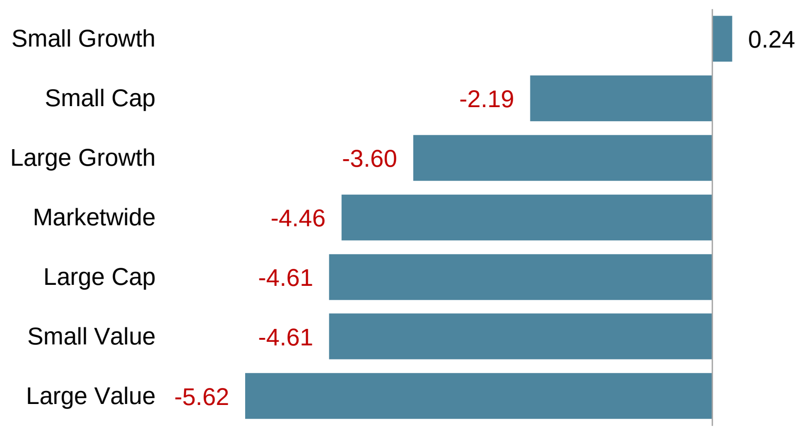
The US equity market posted negative returns for the quarter and outperformed both non-US developed and emerging markets.

Value underperformed growth.

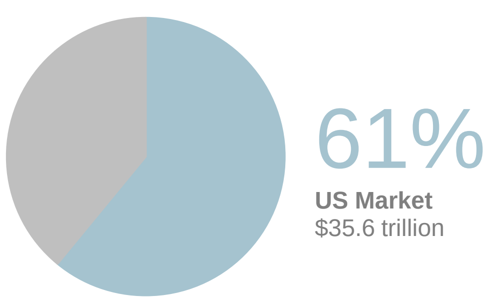
Small caps outperformed large caps.

REIT indices underperformed equity market indices.

Ranked Returns (%)



World Market Capitalization—US



Period Returns (%)

** Annualized*

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Small Growth	0.24	-29.28	-29.27	2.94	3.60	8.81
Small Cap	-2.19	-25.10	-23.50	4.29	3.55	8.55
Large Growth	-3.60	-30.66	-22.59	10.67	12.17	13.70
Marketwide	-4.46	-24.62	-17.63	7.70	8.62	11.39
Large Cap	-4.61	-24.59	-17.22	7.95	9.00	11.60
Small Value	-4.61	-21.12	-17.69	4.72	2.87	7.94
Large Value	-5.62	-17.75	-11.36	4.36	5.29	9.17

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Marketwide (Russell 3000 Index), Large Cap (Russell 1000 Index), Large Value (Russell 1000 Value Index), Large Growth (Russell 1000 Growth Index), Small Cap (Russell 2000 Index), Small Value (Russell 2000 Value Index), and Small Growth (Russell 2000 Growth Index). World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. Russell 3000 Index is used as the proxy for the US market. Dow Jones US Select REIT Index used as proxy for the US REIT market. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.

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International Developed Stocks

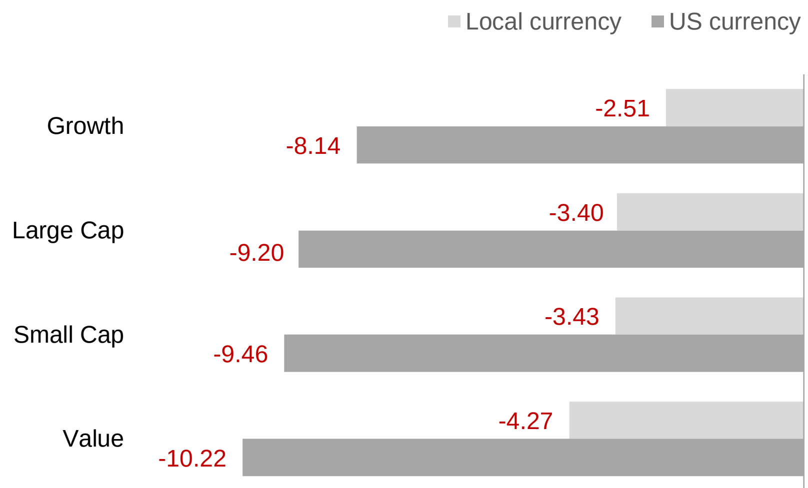
Third quarter 2022 index returns

Developed markets outside of the US posted negative returns for the quarter and underperformed the US market, but outperformed emerging markets.

Value underperformed growth.

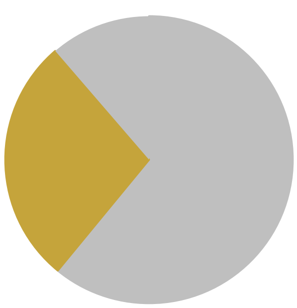
Small caps underperformed large caps.

Ranked Returns (%)



World Market Capitalization—International Developed

28%
International Developed Market
$16.2 trillion



Period Returns (%)

** Annualized*

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Growth	-8.14	-32.33	-29.44	-1.14	0.85	4.46
Large Cap	-9.20	-26.23	-23.91	-1.21	-0.39	3.62
Small Cap	-9.46	-31.07	-30.80	-1.27	-1.24	4.78
Value	-10.22	-20.10	-18.58	-1.97	-2.08	2.53

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI World ex USA Index), Small Cap (MSCI World ex USA Small Cap Index), Value (MSCI World ex USA Value Index), and Growth (MSCI World ex USA Growth Index). All index returns are net of withholding tax on dividends. World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. MSCI World ex USA IMI Index is used as the proxy for the International Developed market.

Emerging Markets Stocks

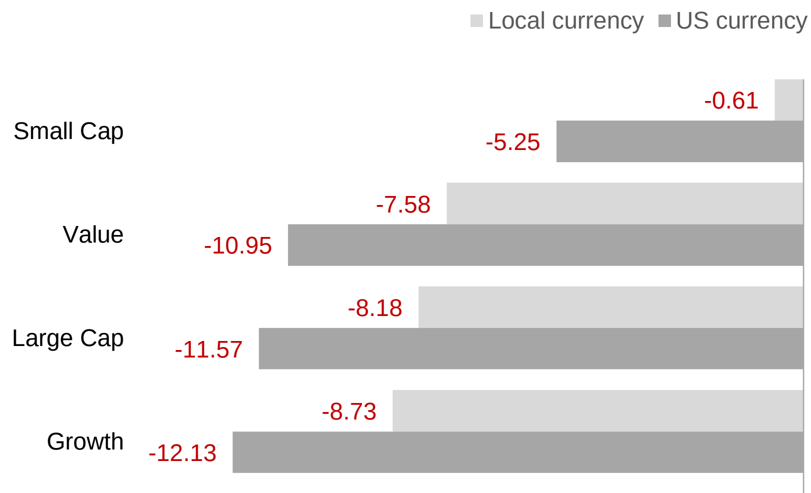
Third quarter 2022 index returns

Emerging markets posted negative returns for the quarter and underperformed both US and non-US developed markets.

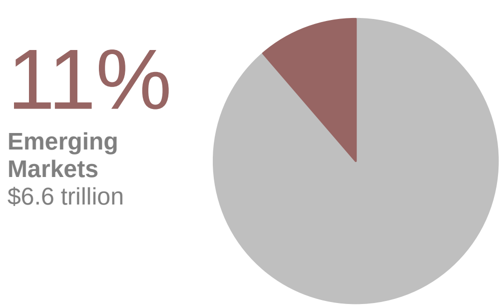
Value outperformed growth.

Small caps outperformed large caps.

Ranked Returns (%)



World Market Capitalization—Emerging Markets



Period Returns (%)

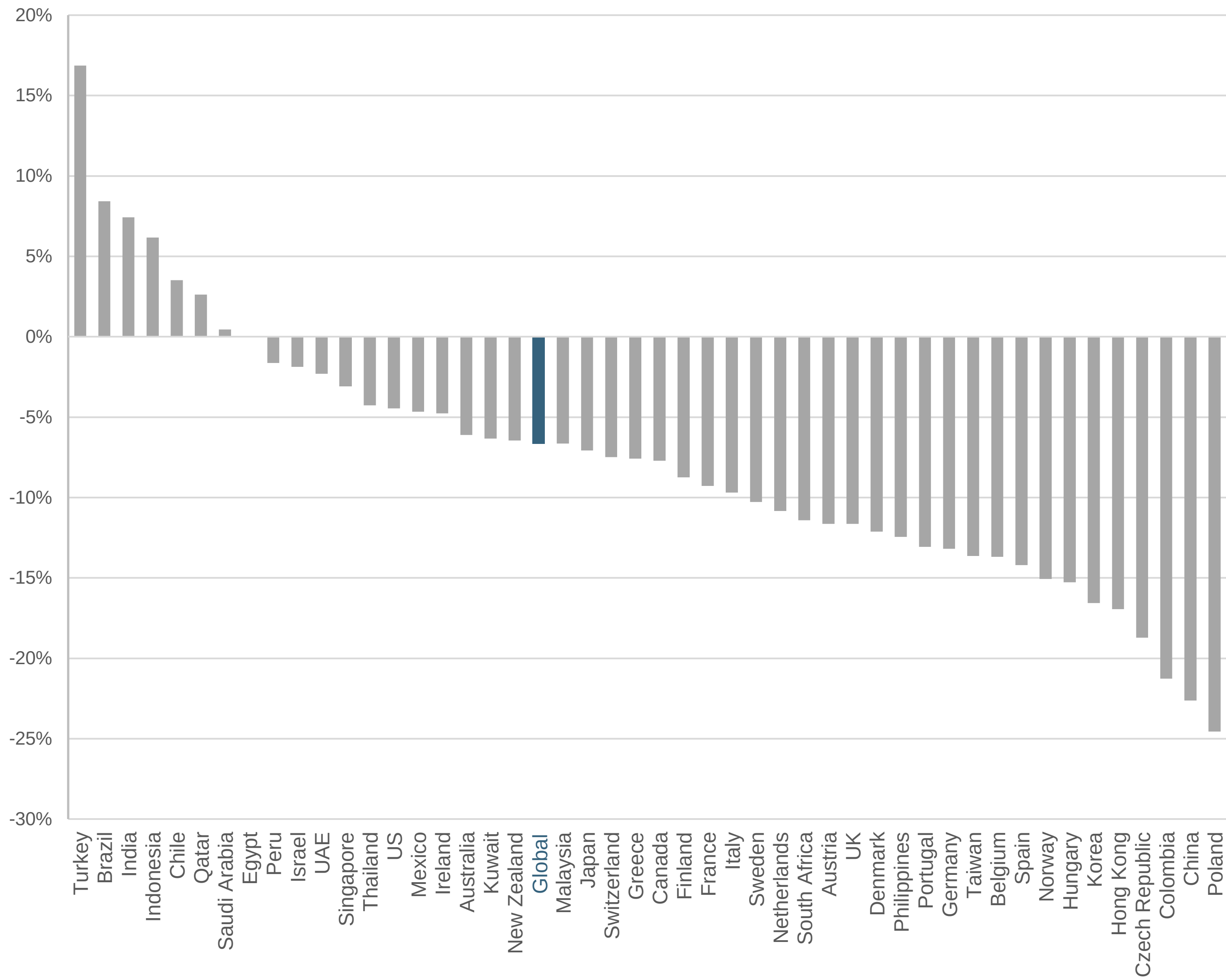
** Annualized*

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Small Cap	-5.25	-24.23	-23.23	5.54	1.25	2.91
Value	-10.95	-23.32	-23.63	-2.57	-2.13	-0.41
Large Cap	-11.57	-27.16	-28.11	-2.07	-1.81	1.05
Grow th	-12.13	-30.65	-32.09	-1.75	-1.64	2.38

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI Emerging Markets Index), Small Cap (MSCI Emerging Markets Small Cap Index), Value (MSCI Emerging Markets Value Index), and Growth (MSCI Emerging Markets Growth Index). All index returns are net of withholding tax on dividends. World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. MSCI Emerging Markets IMI Index used as the proxy for the emerging market portion of the market.

Country Returns

Third quarter 2022 index returns



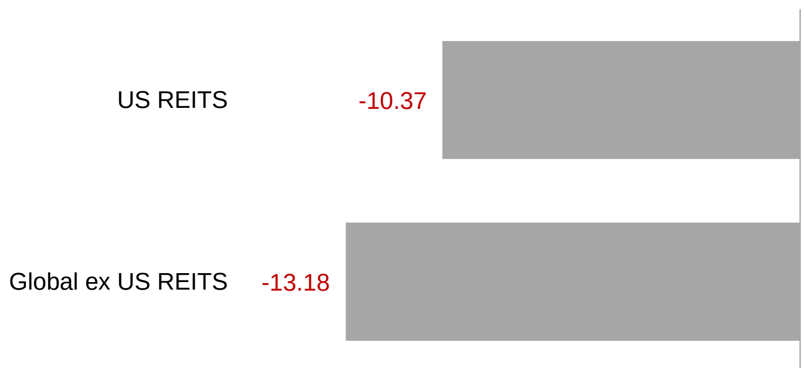
Past performance is no guarantee of future results.
Country returns are the country component indices of the MSCI All Country World IMI Index for all countries except the United States, where the Russell 3000 Index is used instead. Global is the return of the MSCI All Country World IMI Index. MSCI index returns are net dividend. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Frank Russell Company is the source and owner of the trademarks, service marks and copyrights related to the Russell Indexes. MSCI data © MSCI 2022, all rights reserved.

Real Estate Investment Trusts (REITs)

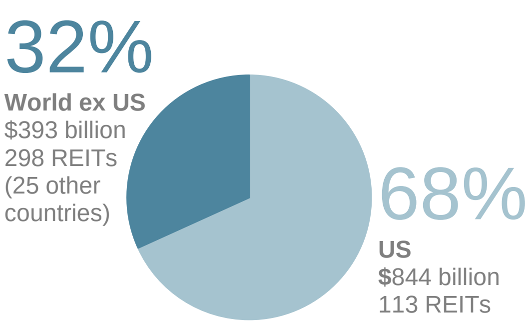
Third quarter 2022 index returns

US real estate investment trusts outperformed non-US REITs during the quarter.

Ranked Returns (%)



Total Value of REIT Stocks



Period Returns (%)

** Annualized*

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
US REITS	-10.37	-29.32	-17.15	-3.29	1.95	5.49
Global ex US REITS	-13.18	-30.48	-27.32	-9.72	-3.01	1.12

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Number of REIT stocks and total value based on the two indices. All index returns are net of withholding tax on dividends. Total value of REIT stocks represented by Dow Jones US Select REIT Index and the S&P Global ex US REIT Index. Dow Jones US Select REIT Index used as proxy for the US market, and S&P Global ex US REIT Index used as proxy for the World ex US market. Dow Jones and S&P data

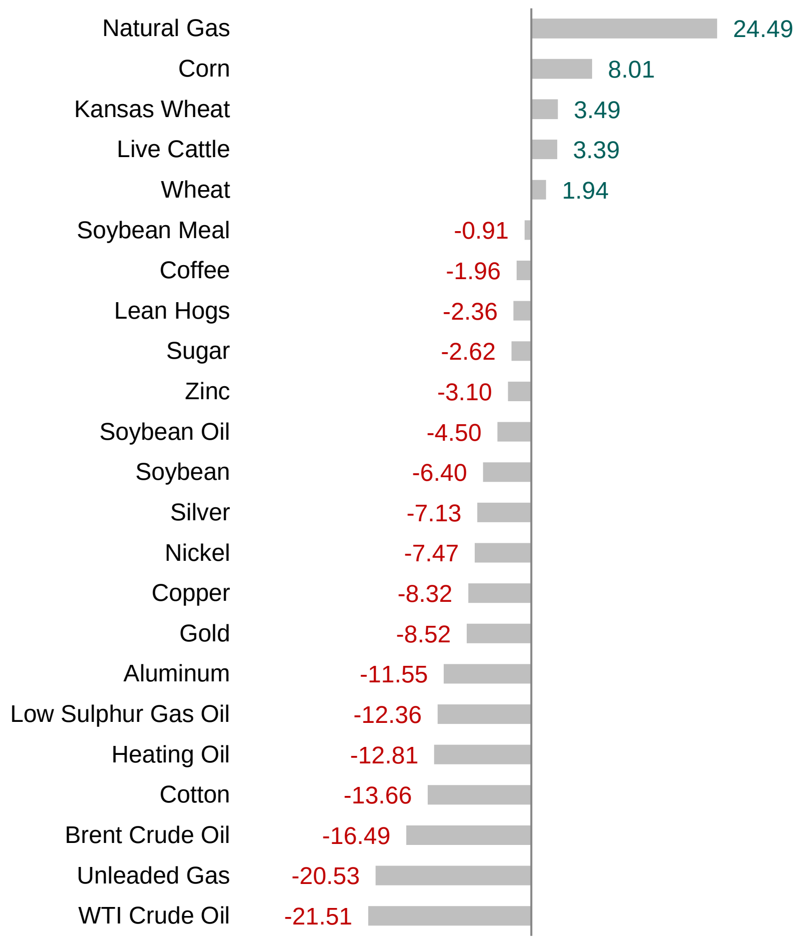
Commodities

Third quarter 2022 index returns

The Bloomberg Commodity Total Return Index returned -4.11% for the third quarter of 2022.

WTI Crude Oil and Unleaded Gas were the worst performers, returning -21.51% and -20.53% during the quarter, respectively. Natural Gas and Corn were the best performers, returning +24.49% and +8.01% during the quarter, respectively.

Ranked Returns (%)



Period Returns (%)

** Annualized*

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Commodities	-4.11	13.57	11.80	13.45	6.96	-2.14

Past performance is not a guarantee of future results. Index is not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Commodities returns represent the return of the Bloomberg Commodity Total Return Index. Individual commodities are sub-index values of the Bloomberg Commodity Total Return Index. Data provided by Bloomberg.

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Fixed Income

Third quarter 2022 index returns

Interest rates increased across all bond maturities in the US Treasury market for the quarter.

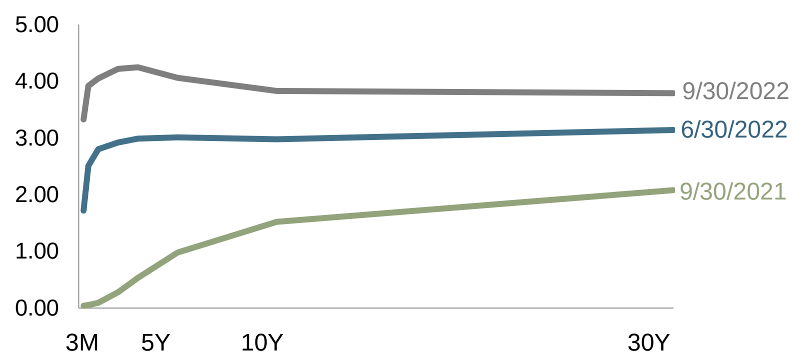
The yield on the 5-Year US Treasury Note increased 105 basis points (bps) to 4.06%. The yield on the 10-Year US Treasury Note increased 85 bps to 3.83%. The yield on the 30-Year US Treasury Bond increased 65 bps to 3.79%.

On the short end of the yield curve, the 1-Month US Treasury Bill yield increased 151 bps to 2.79%, while the 1-Year US Treasury Bill yield increased 125 bps to 4.05%. The yield on the 2-Year US Treasury Note increased 130 bps to 4.22%.

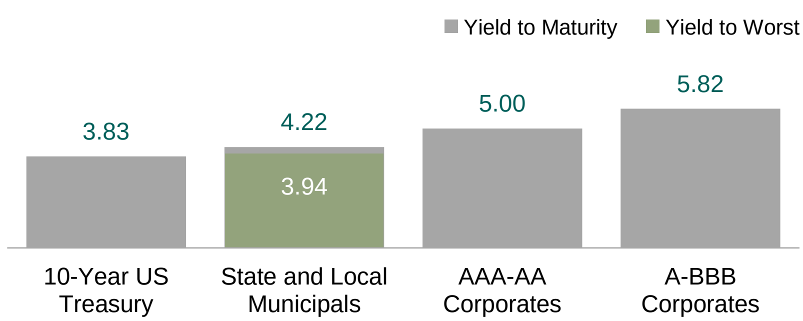
In terms of total returns, short-term corporate bonds returned -1.94% and intermediate-term corporate bonds returned -3.11%.[1]

The total return for short-term municipal bonds was -1.88% and -2.65% for intermediate-term municipal bonds. Within the municipal fixed income market, general obligation bonds outperformed revenue bonds, returning -3.30% vs -3.62%, respectively.[2]

US Treasury Yield Curve (%)



Bond Yields Across Issuers (%)



Period Returns (%)

*Annualized

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
ICE BofA US 3-Month Treasury Bill Index	0.46	0.61	0.62	0.59	1.15	0.68
ICE BofA 1-Year US Treasury Note Index	-0.50	-1.77	-1.95	0.18	0.94	0.67
Bloomberg U.S. High Yield Corporate Bond Index	-0.65	-14.74	-14.14	-0.45	1.57	3.94
FTSE World Government Bond Index 1-5 Years (hedged to USD)	-1.79	-5.03	-5.53	-0.87	0.63	0.96
Bloomberg Municipal Bond Index	-3.46	-12.13	-11.50	-1.85	0.59	1.79
Bloomberg U.S. Aggregate Bond Index	-4.75	-14.61	-14.60	-3.26	-0.27	0.89
FTSE World Government Bond Index 1-5 Years	-4.77	-12.10	-13.34	-3.33	-1.83	-1.74
Bloomberg U.S. TIPS Index	-5.14	-13.61	-11.57	0.79	1.95	0.98
Bloomberg U.S. Government Bond Index Long	-9.60	-28.77	-26.60	-8.48	-1.62	0.60

1. Bloomberg US Corporate Bond Index.
2. Bloomberg Municipal Bond Index.
One basis point (bps) equals 0.01%. Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Yield curve data from Federal Reserve. State and local bonds, and the Yield to Worst are from the S&P National AMT-Free Municipal Bond Index. AAA-AA Corporates represent the ICE BofA US Corporates, AA-AAA rated. A-BBB Corporates represent the ICE BofA Corporates, BBB-A rated. Bloomberg data provided by Bloomberg. US long-term bonds, bills, inflation, and fixed income factor data © Stocks, Bonds, Bills, and Inflation (SBBI) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefield). Bloomberg data provided by Bloomberg.

Global Fixed Income

Third quarter 2022 yield curves

Interest rates generally increased within global developed markets for the quarter.

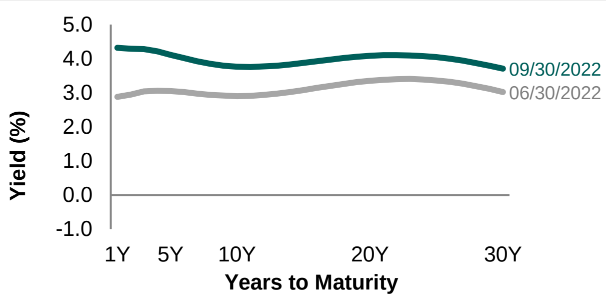
Realized term premiums were negative in global developed markets.

In Japan, short-term nominal interest rates remained negative. In Canada, the short-term segment of the yield curve inverted.

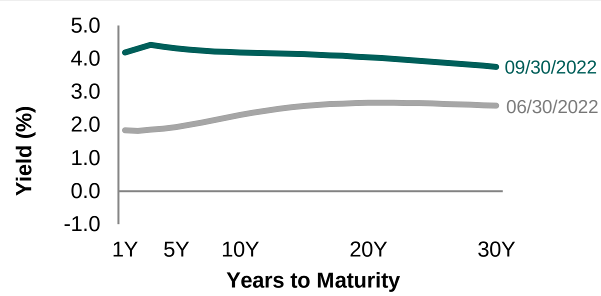
Changes in Yields (bps) since 6/30/2022

	1Y	5Y	10Y	20Y	30Y
US	143.7	106.4	86.3	72.8	68.6
UK	235.1	238.0	188.6	137.8	117.5
Germany	128.0	88.7	73.9	53.5	50.9
Japan	-1.1	4.4	2.6	12.1	15.7
Canada	90.6	18.6	-4.1	-0.6	-3.5
Australia	81.1	34.8	23.4	27.6	22.6

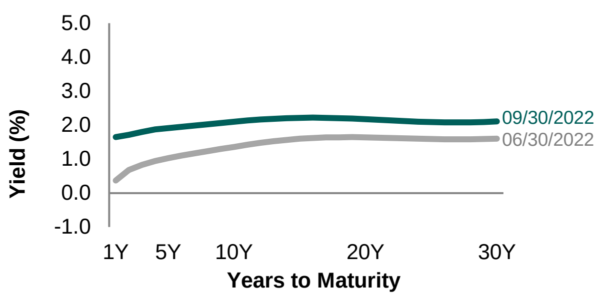
US



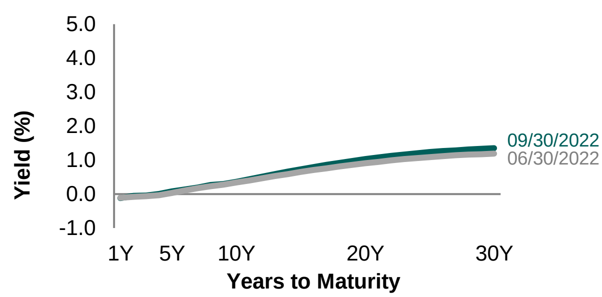
UK



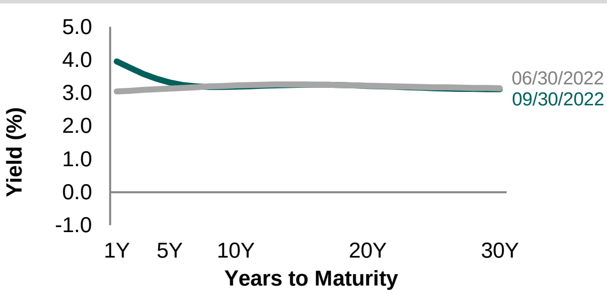
Germany



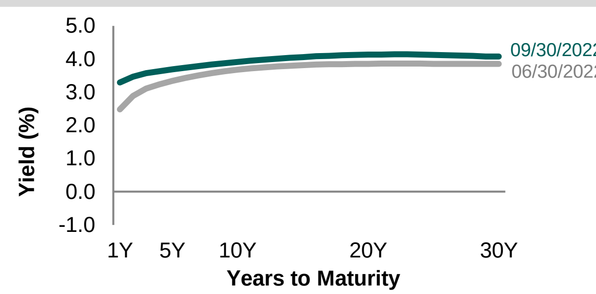
Japan



Canada



Australia



One basis point (bps) equals 0.01%. Source: ICE BofA government yield. ICE BofA index data © 2022 ICE Data Indices, LLC.

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Impact of Diversification

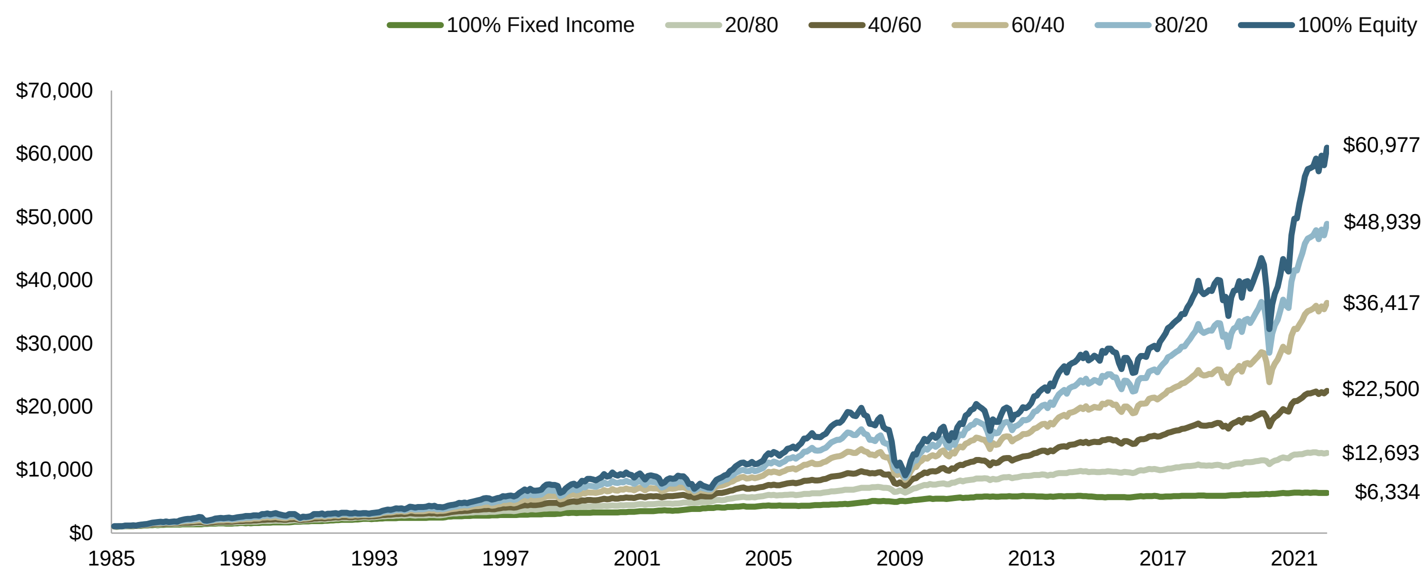
As of December 31, 2021

These portfolios illustrate the performance of different global stock/bond mixes and highlight the benefits of diversification. Mixes with larger allocations to stocks are considered riskier but have higher expected returns over time.

Period Returns (%) ** Annualized*

Dimensional Core Plus Wealth Index Model	3 Months	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV[1]
100% Equity	6.61	22.63	21.12	14.57	13.24	14.11
80/20	5.30	17.70	18.49	12.90	11.94	11.76
60/40	3.86	12.63	15.37	10.82	9.99	9.07
40/60	2.22	7.79	10.82	7.75	7.28	6.13
20/80	0.55	2.10	6.40	4.89	4.05	3.71
100% Fixed Income	-0.51	-0.93	2.20	1.98	0.97	1.73

Growth of Wealth: The Relationship Between Risk and Return



1. STDEV (standard deviation) is a measure of the variation or dispersion of a set of data points. Standard deviations are often used to quantify the historical return volatility of a security or portfolio.

Diversification does not eliminate the risk of market loss. For illustrative purposes only. Past performance is no guarantee of future results. The performance reflects the growth of a hypothetical $10,000. Assumes all models have been rebalanced monthly. See appendix for allocation information. All performance results are based on performance of indexes with model/back-tested asset allocations; the performance was achieved with the benefit of hindsight; it does not represent actual investment strategies. The index models are unmanaged and the model's performance does not reflect advisory fees or other expenses associated with the management of an actual portfolio. In particular, Model performance may not reflect the impact that economic and market factors may have had on the advisor's decision making if the advisor were actually managing client money. The models are not recommendations for an actual allocation. Indices are not available for direct investment. Backtested performance results assume the reinvestment of dividends and capital gains. Sources: Dimensional Fund Advisors LP for Dimensional Indices.