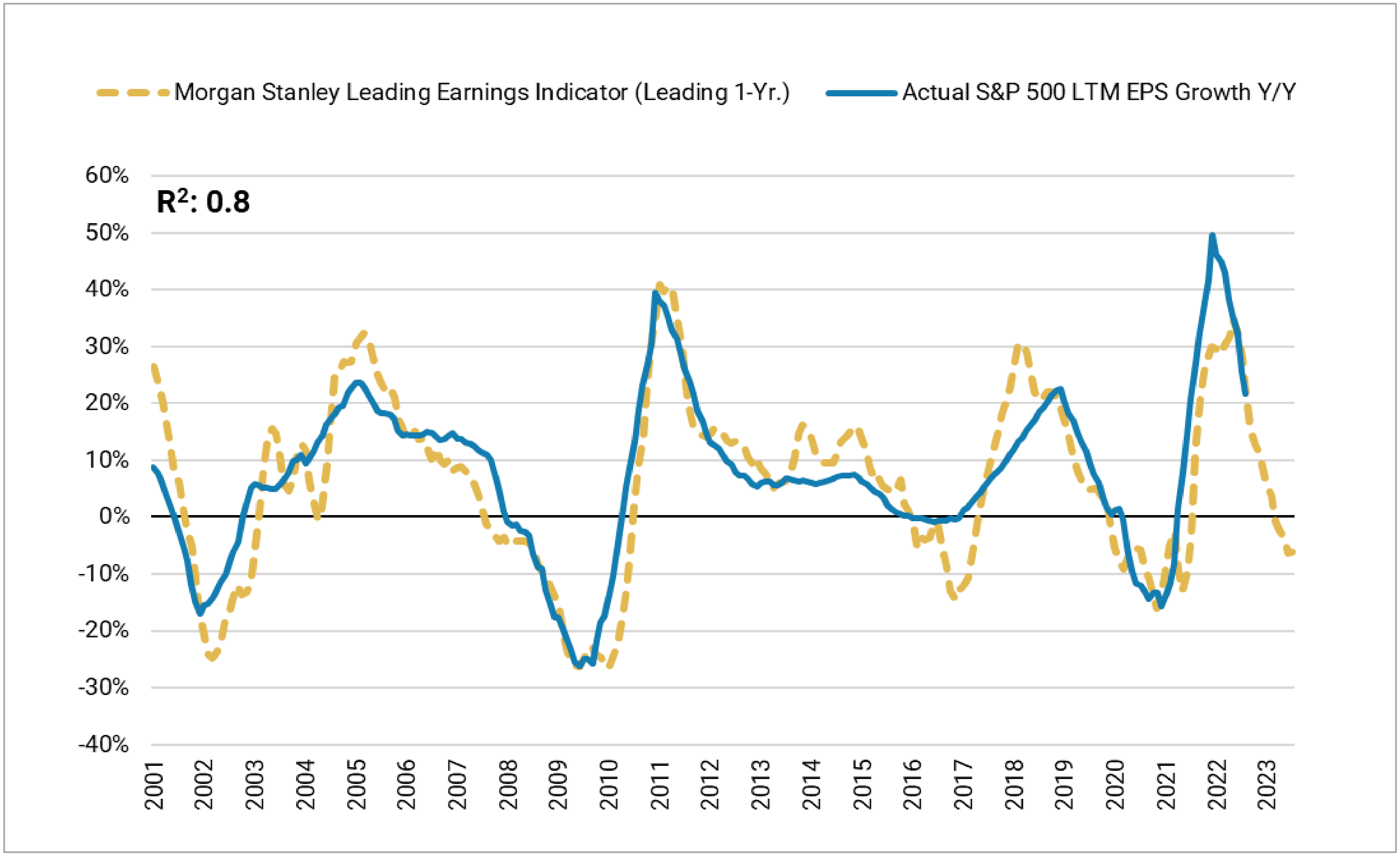
Morgan Stanley

Monthly Perspectives

From the Global Investment Committee

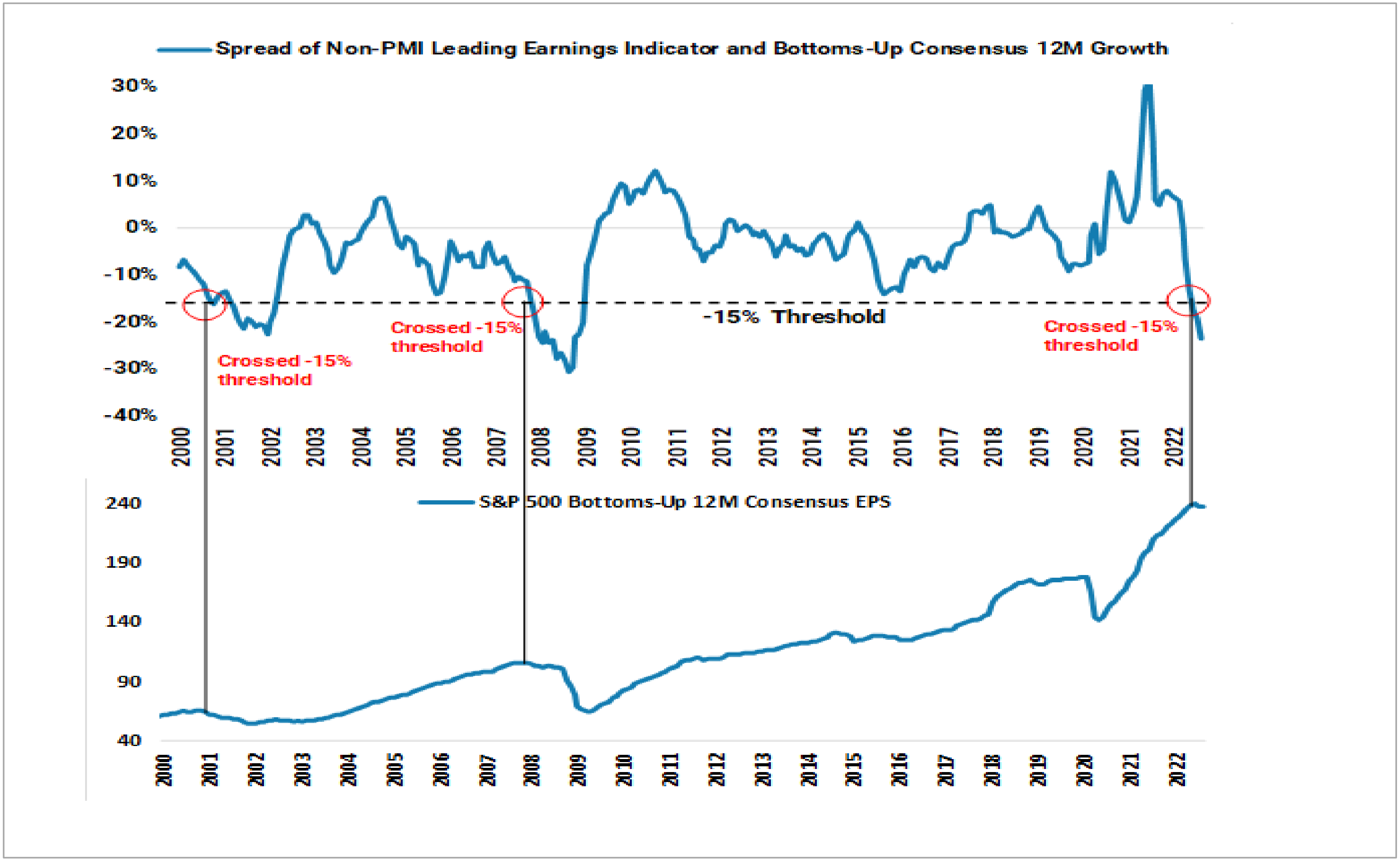
October 2022

Our Leading Earnings Indicator (LEI) Suggests Forecasts Are Too High



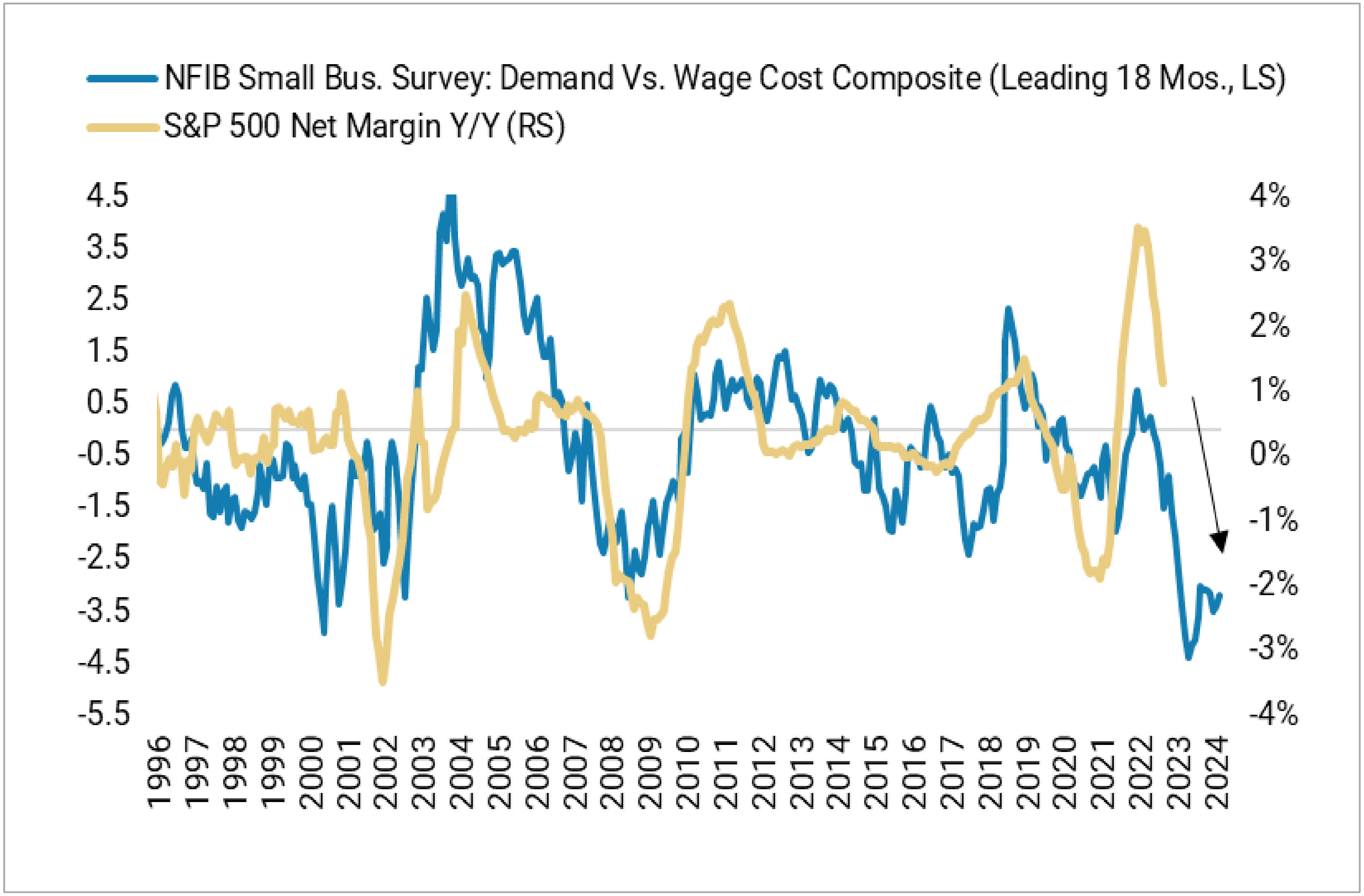
Source: Morgan Stanley & Co Research. As of Sept 30, 2022. LEI is based on Consumer Confidence, Housing Starts, Manufacturing PMI, Credit Spreads

The Spread Between Our LEI and Consensus Forecasts Rarely Higher



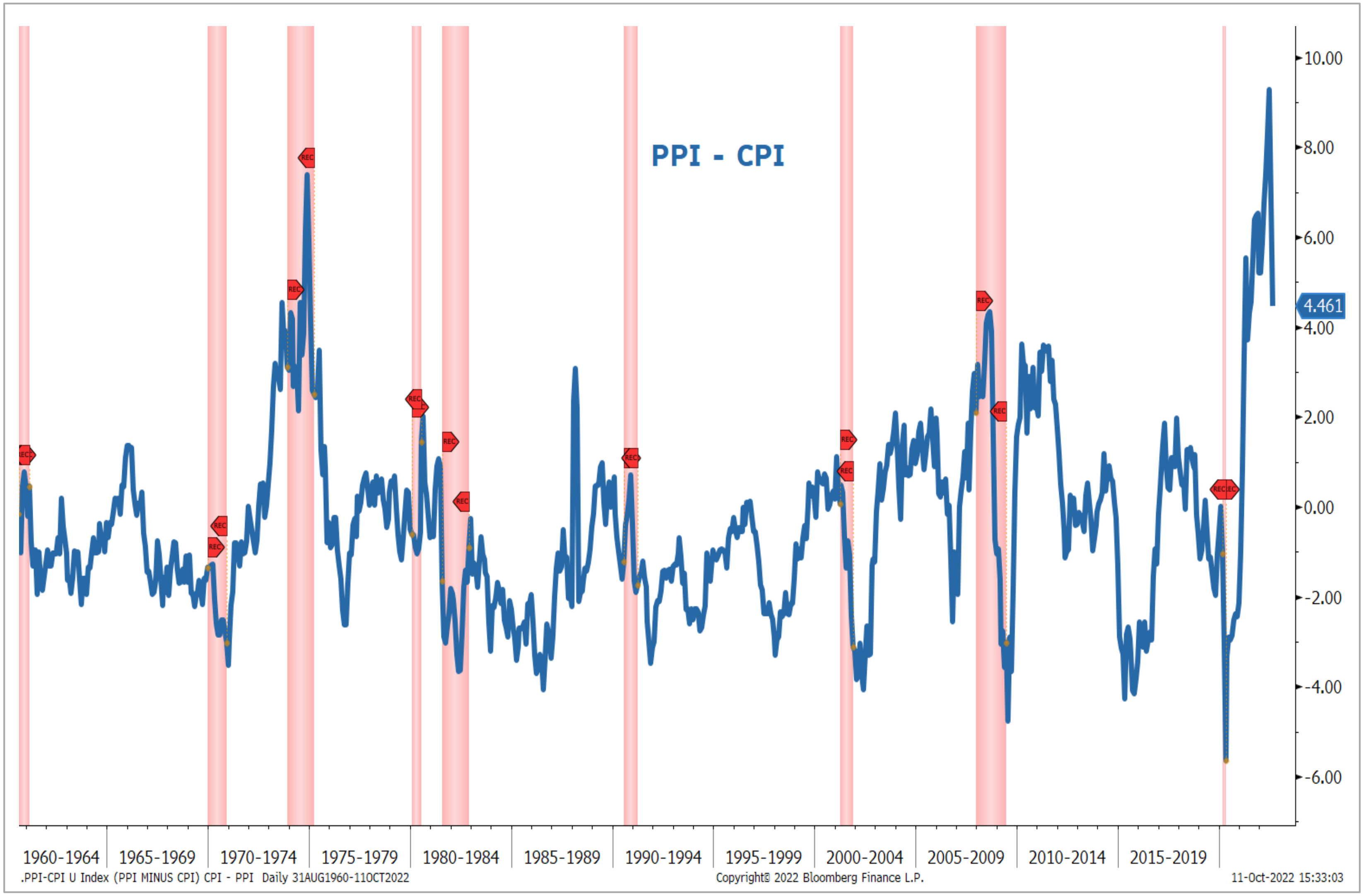
Source: Factset, Morgan Stanley Research & Co. Research as of Sept 30, 2022.

Small Business Surveys Suggest Big Margin Pressure Coming



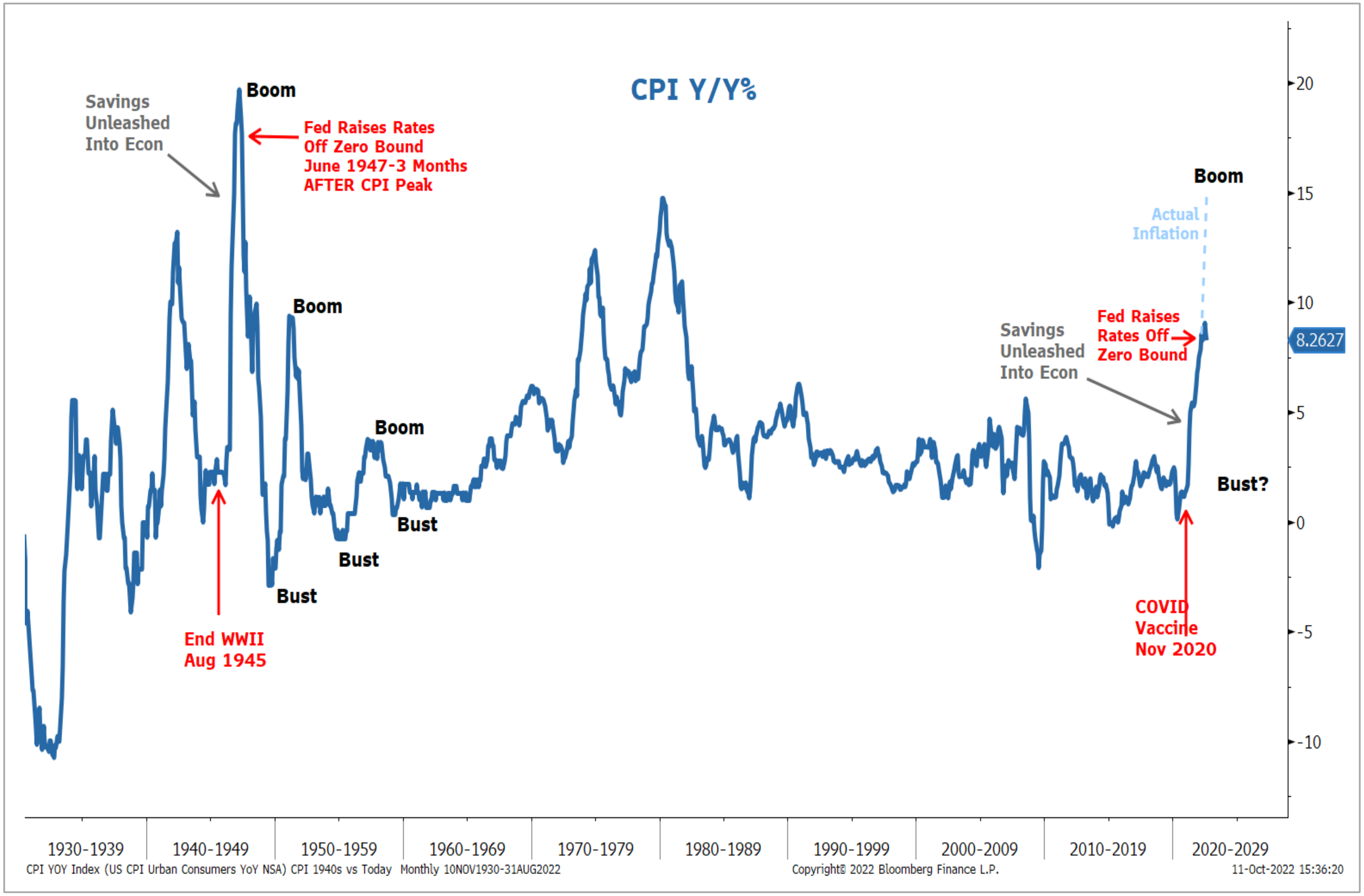
Source: Bloomberg, Morgan Stanley & Co. Research as of September 2022

PPI-CPI Is Another Important Barometer for Margins/Economic Cycle



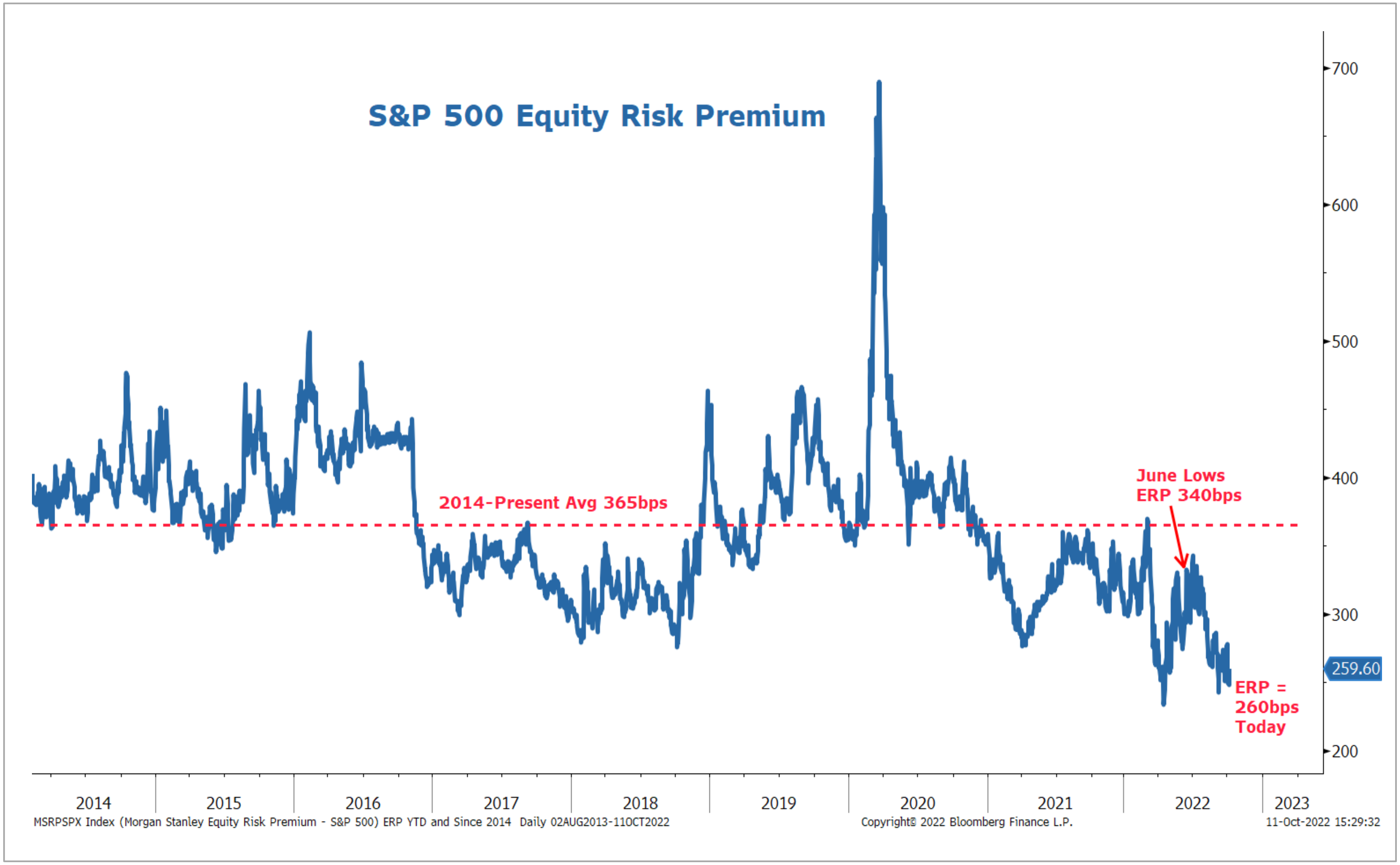
Source: Bloomberg, Morgan Stanley & Co. Research as of October 11, 2022

It Also Lines Up with Our Boom/Bust 1940s Analog—It's Not the '70s



Source: Bloomberg, Morgan Stanley & Co. Research as of August 31, 2022

Equity Risk Premium Looks Very Mis-Priced If Our EPS Forecast Is Right



Source: Bloomberg, Morgan Stanley & Co. Research as of October 11, 2022

Based on Current Data, Our FMV P/E is 12.5-12.8x, Which Implies 3000

S&P 500 Forward Equity Risk Premium Sensitivity (in bps; leveraging MS ERP/PMI model)

	ISM Composite PMI Level (percent rank vs. history)									
	44 (7th)	46 (10th)	48 (16th)	50 (22th)	52 (29th)	54 (43th)	56 (62th)	58 (78th)	60 (89th)	
	499	483	467	451	435	419	**403**	387	370	**ERP (bps)** *Current = 273*

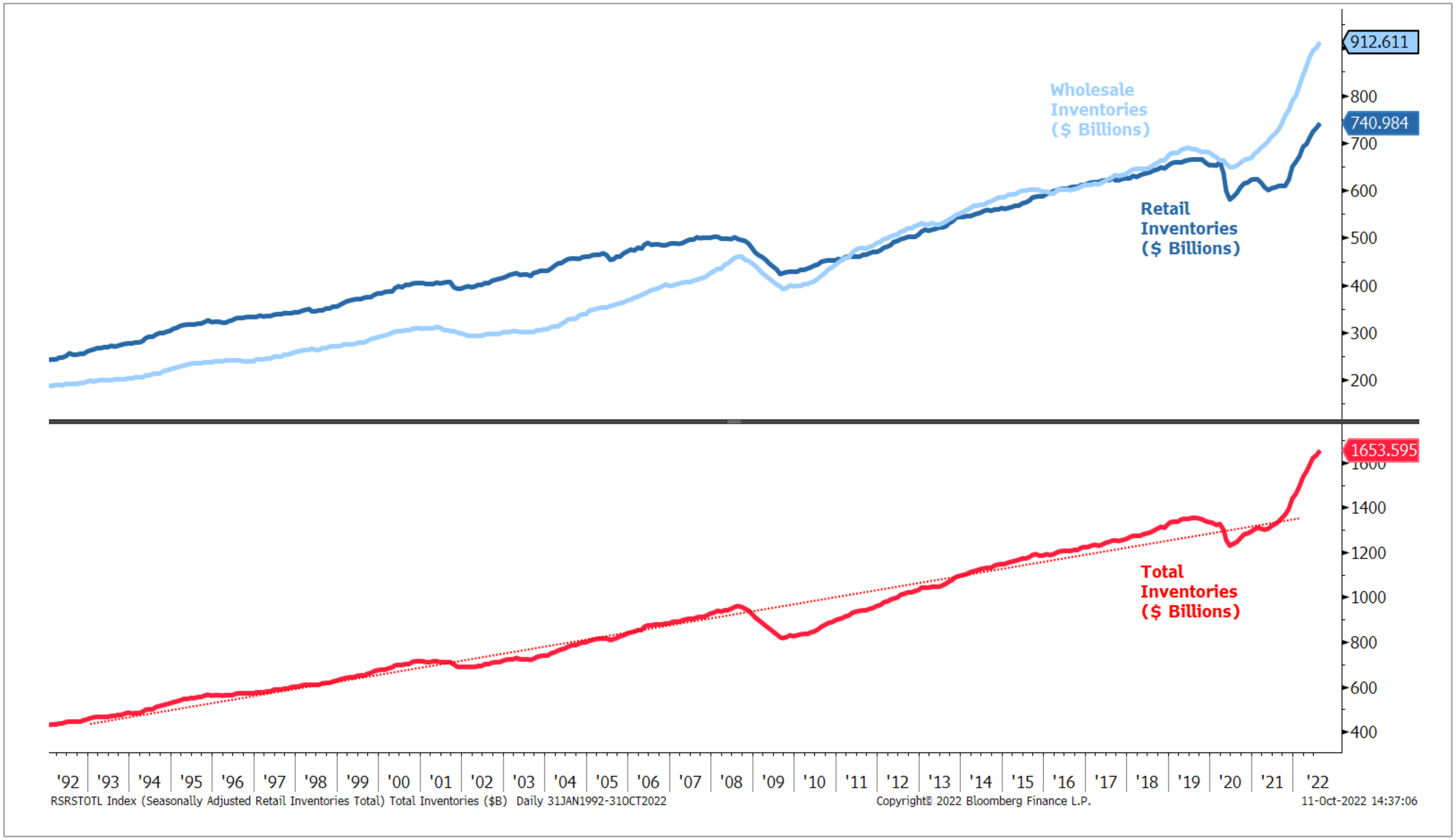
S&P 500 Forward P/E Sensitivity - PMI Vs. Rates (leveraging MS ERP/PMI model)

10-Year Yield (%)	ISM Composite PMI Level (percent rank vs. history)								
	44 (7th)	46 (10th)	48 (16th)	50 (22th)	52 (29th)	54 (43th)	56 (62th)	58 (78th)	60 (89th)
2.8	12.8	13.1	13.4	13.7	14.0	14.3	14.6	15.0	15.4
3.0	12.5	12.8	13.0	13.3	13.6	13.9	14.2	14.6	14.9
3.2	12.2	12.5	12.7	13.0	13.2	13.5	13.8	14.2	14.5
3.4	11.9	12.1	12.4	12.6	12.9	13.2	13.5	13.8	14.1
3.6	11.6	11.9	12.1	12.3	12.6	12.8	13.1	13.4	13.7
3.8	11.4	11.6	11.8	12.0	12.3	12.5	**12.8**	13.0	13.3
4.0	11.1	11.3	11.5	11.8	12.0	12.2	**12.5**	12.7	13.0
4.2	10.9	11.1	11.3	11.5	11.7	11.9	12.2	12.4	12.7
4.4	10.6	10.8	11.0	11.2	11.4	11.6	11.9	12.1	12.3

P/E
Current = 15.0

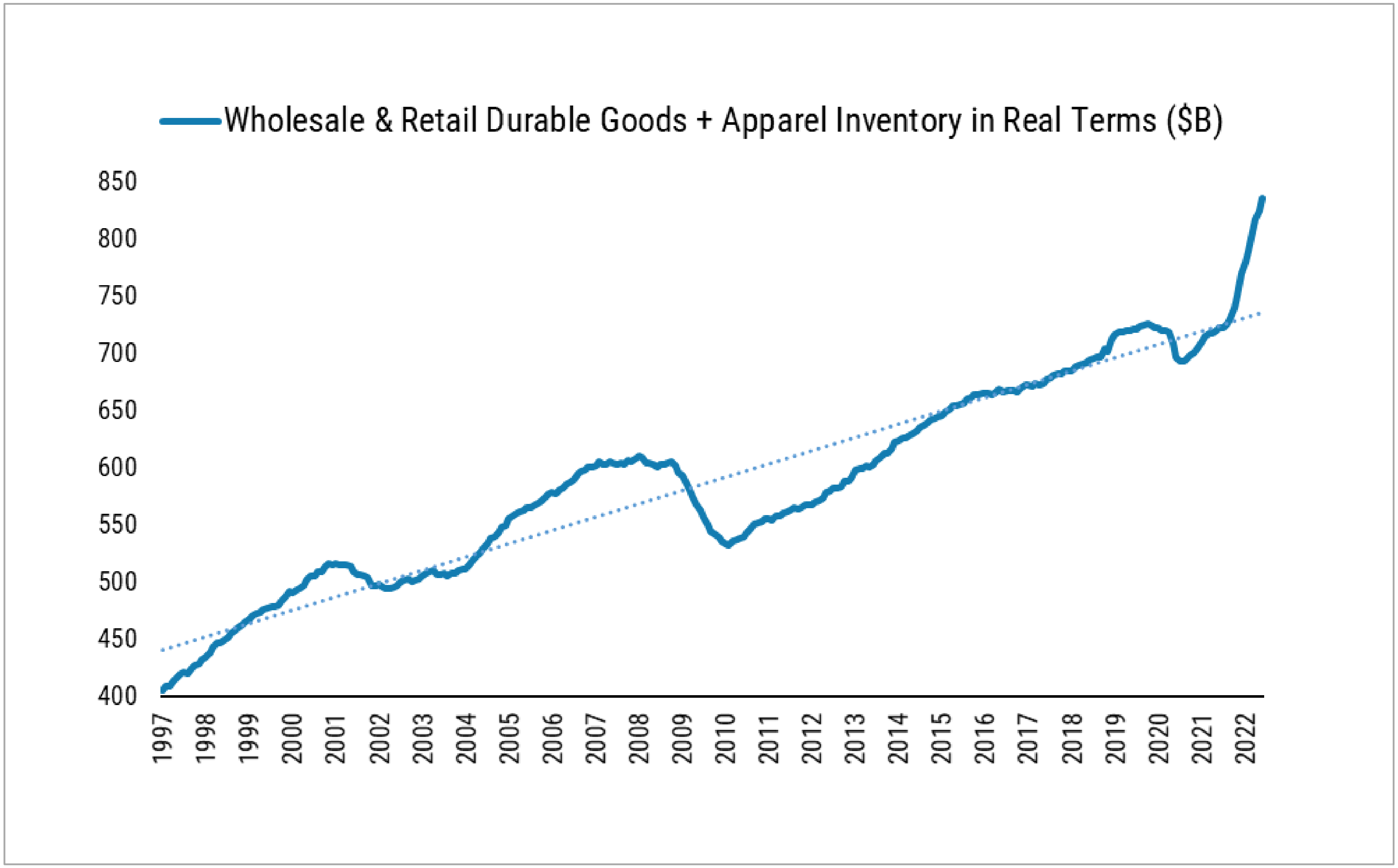
Source: Morgan Stanley Research & Co. as of October 11, 2022

As Projected, Inventories Are Now Rising Too Quickly and Affecting Margins



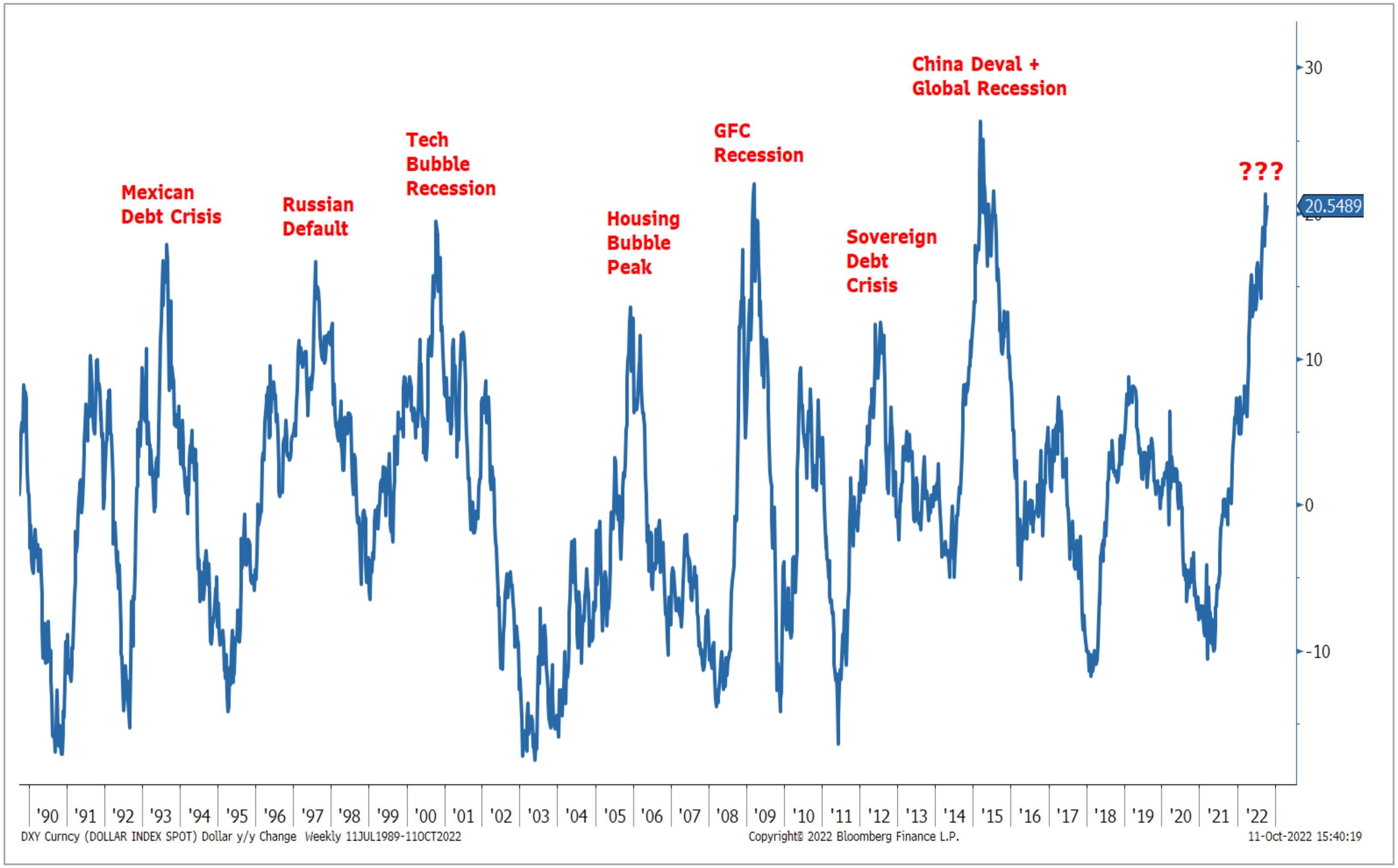
Source: Bloomberg, Morgan Stanley & Co. Research as of August 31, 2022

Excess Inventories Is the Next Earnings Shoe to Drop



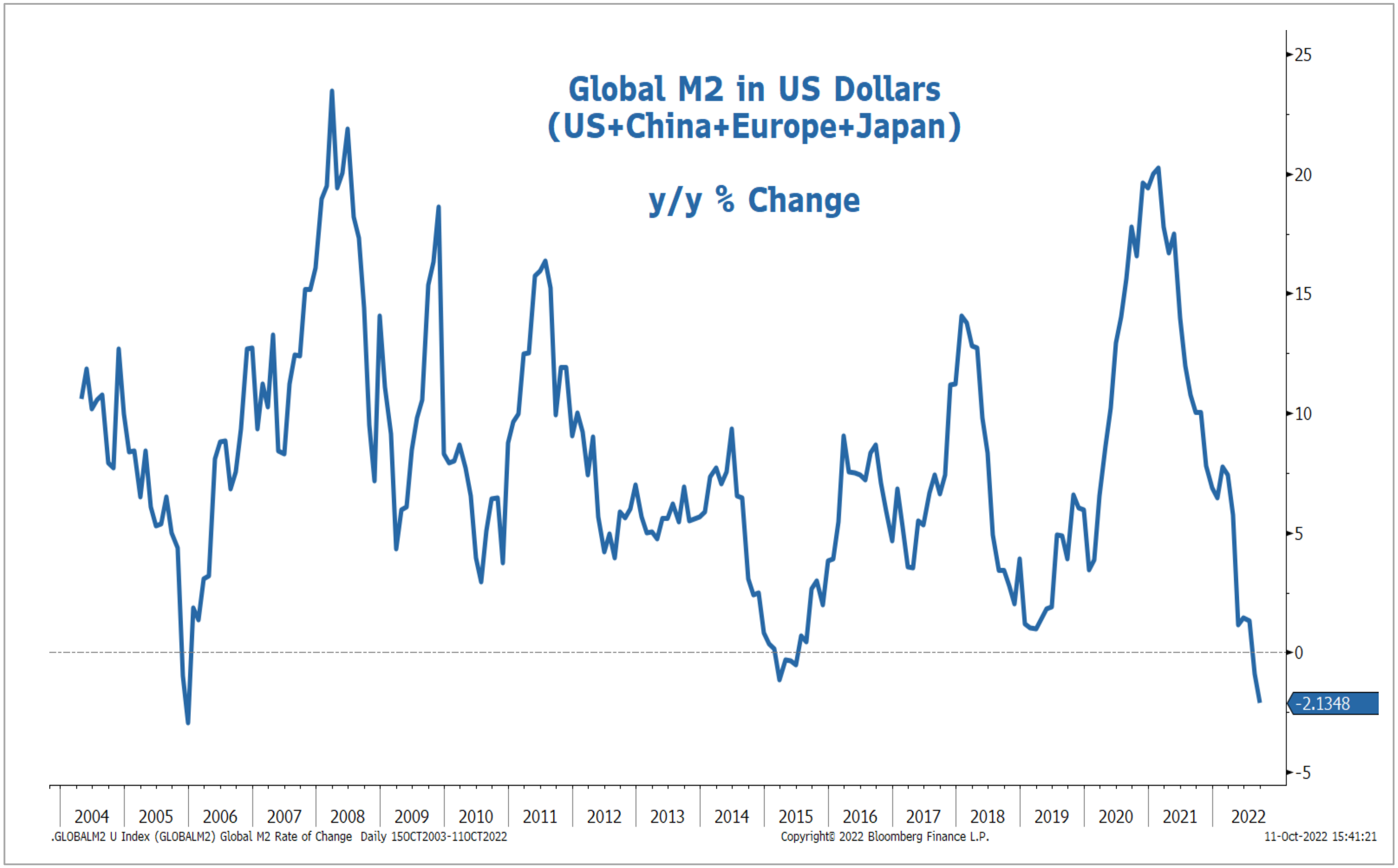
Source: Haver Analytics, Morgan Stanley & Co. Research as of August 31, 2022

Currencies May Provide the Cover for Companies to Throw in the Towel



Source: Bloomberg, Morgan Stanley & Co. Research as of October 11, 2022

USD M2 Growth Is the Key to All the Stress and Only the Fed Can Fix It



Bloomberg, Morgan Stanley & Co. Research as of September 30, 2022

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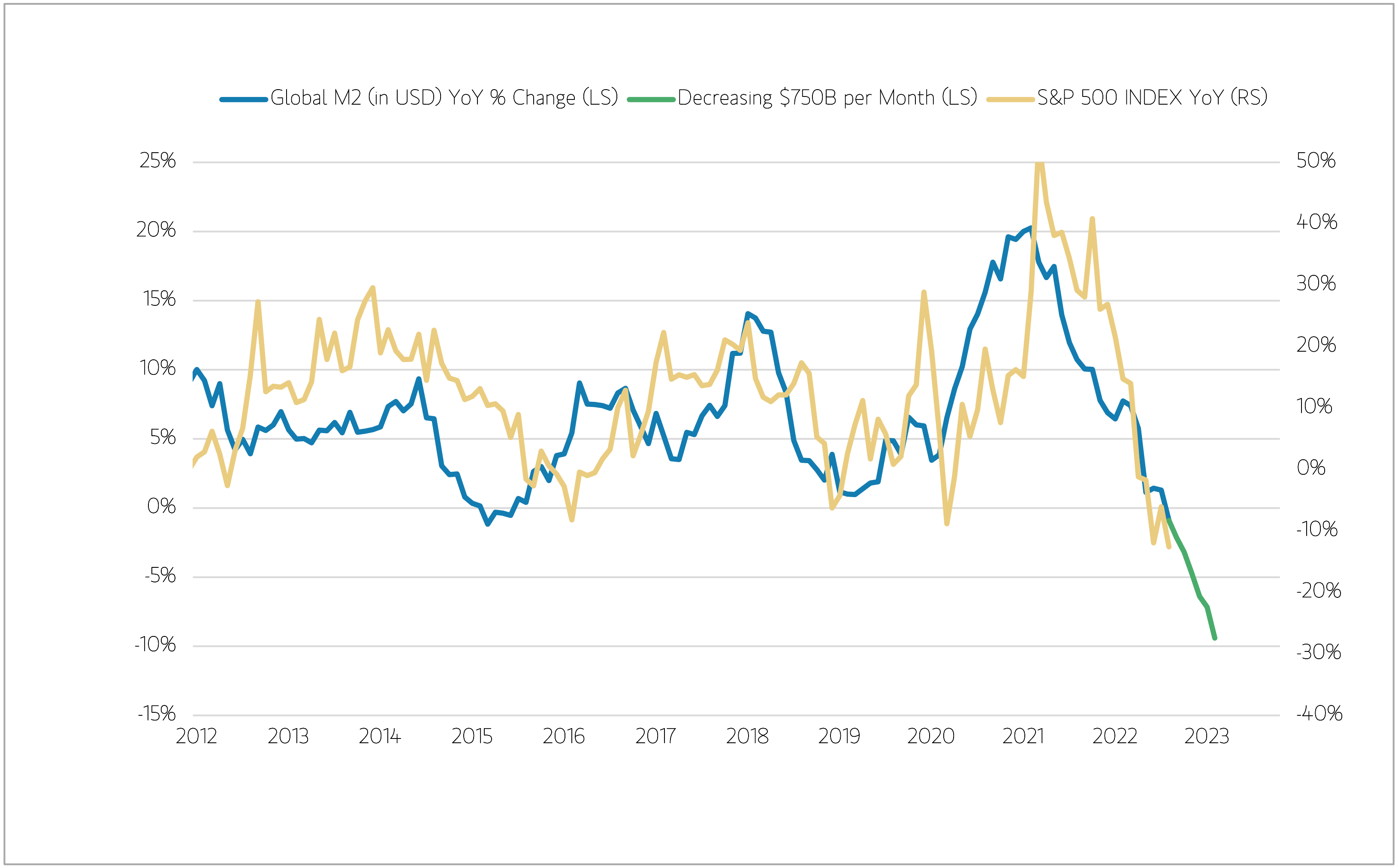


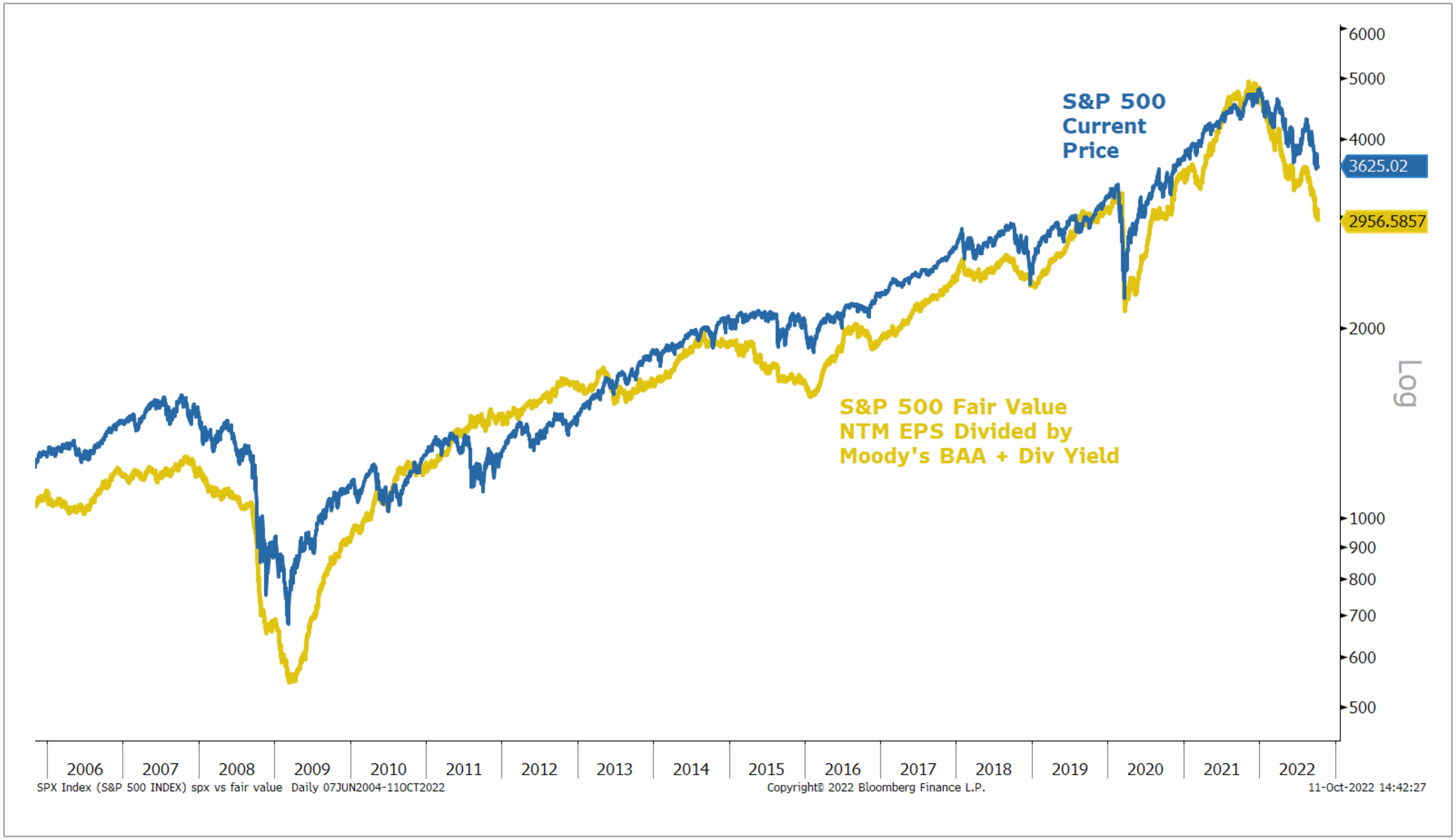
Bloomberg, Morgan Stanley & Co. Research as of September 30, 2022

Peak Inflation Suggests Defensive Positioning Is Appropriate

Sector Rel. Performance in Inflation Regimes, Jan 2000 - Feb 2022	Above Trend & Falling	Above Trend & Rising	Below Trend & Falling	Below Trend & Rising	Correlation with 10yr B/Es
S&P 500	-7.1%	17.2%	-19.2%	32.8%	0.45
Cyclical/Defensive	-11.1%	9.6%	-24.0%	26.0%	0.42
Energy	-5.4%	12.7%	-32.0%	28.9%	0.27
Materials	-0.9%	3.5%	-10.0%	14.6%	0.15
Industrials	0.4%	2.8%	-3.4%	3.5%	0.05
Consumer Discretionary	-0.6%	-3.1%	1.3%	7.9%	0.03
Consumer Staples	11.2%	-12.4%	21.4%	-18.3%	-0.41
Health Care	10.1%	-4.0%	13.8%	-9.6%	-0.25
Financials	-1.0%	1.4%	-3.9%	-1.0%	0.00
Information Technology	-7.2%	7.4%	-5.6%	5.4%	0.16
Communication Services	-13.6%	2.1%	-2.8%	4.1%	0.08
Utilities	13.1%	-9.7%	22.2%	-30.1%	-0.27
Real Estate	8.9%	-6.2%	8.9%	-10.4%	-0.14

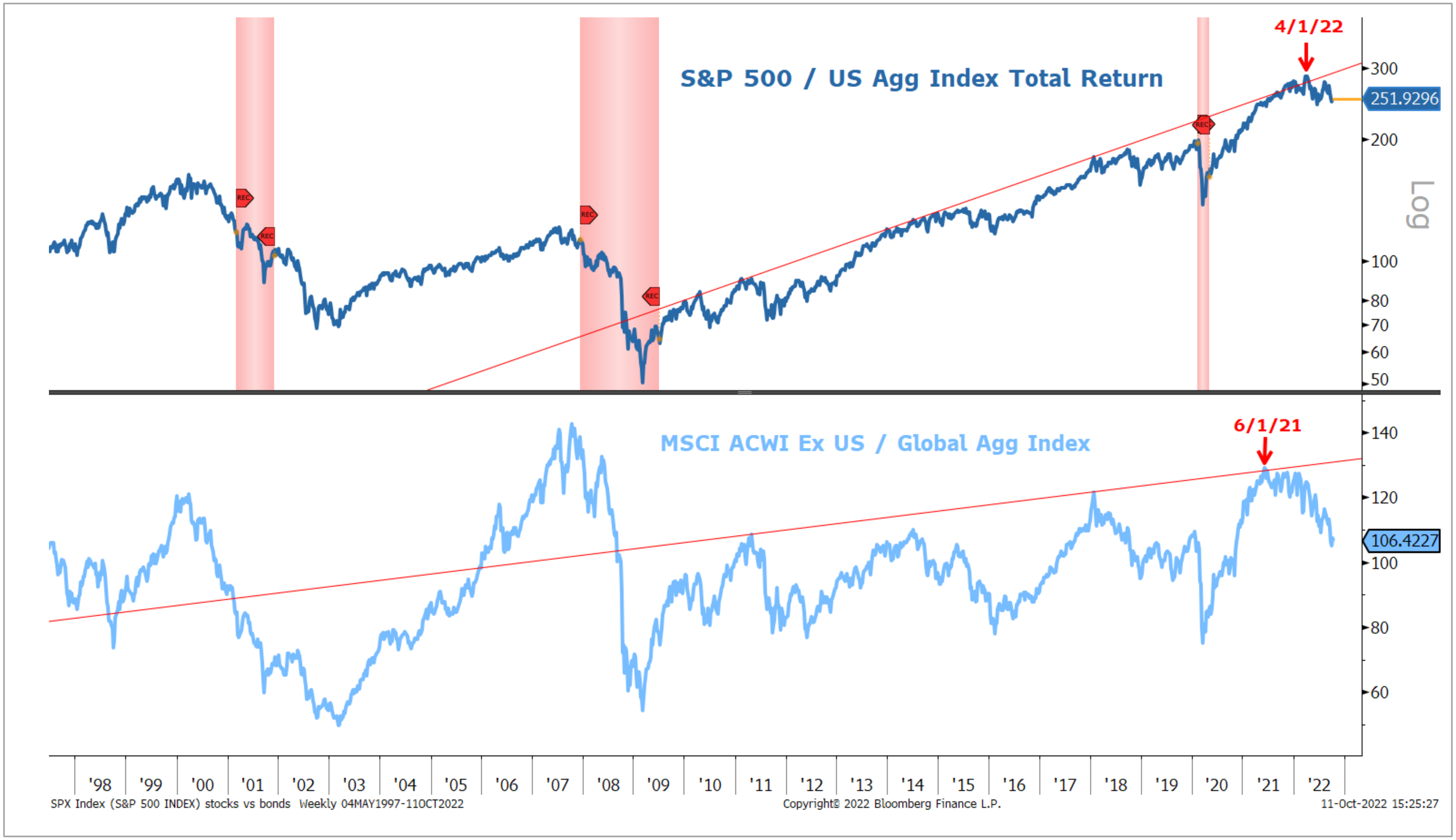
Source: Morgan Stanley & Co. Research as of May 31, 2022

Using Market-Based Cost of Capital, S&P 500 Fair Value Is 2950



Source: Bloomberg, Morgan Stanley & Co. Research as of Oct 11, 2022.

Bonds Should Outperform Stocks into the Next Recession



Source: Bloomberg, Morgan Stanley & Co. Research as of October 11, 2022

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Morgan Stanley's investment advisory programs may require a minimum asset level and, depending on your specific investment objectives and financial position, may not be appropriate for you. Please see the Morgan Stanley Smith Barney LLC program disclosure brochure (the "Morgan Stanley ADV") for more information in the investment advisory programs available. The Morgan Stanley ADV is available at www.morganstanley.com/ADV.

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Global Investment Manager Analysis (GIMA) Focus List, Approved List and Tactical Opportunities List; Watch Policy. GIMA uses two methods to evaluate investment products in applicable advisory programs: **Focus** (and investment products meeting this standard are described as being on the Focus List) and **Approved** (and investment products meeting this standard are described as being on the Approved List). In general, Focus entails a more thorough evaluation of an investment product than Approved. Sometimes an investment product may be evaluated using the Focus List process but then placed on the Approved List instead of the Focus List. Investment products may move from the Focus List to the Approved List, or vice versa. GIMA may also determine that an investment product no longer meets the criteria under either process and will no longer be recommended in investment advisory programs (in which case the investment product is given a "Not Approved" status). GIMA has a '**Watch**" policy and may describe a Focus List or Approved List investment product as being on "Watch" if GIMA identifies specific areas that (a) merit further evaluation by GIMA and (b) may, but are not certain to, result in the investment product becoming "Not Approved." The Watch period depends on the length of time needed for GIMA to conduct its evaluation and for the investment manager or fund to address any concerns. Certain investment products on either the Focus List or Approved List may also be recommended for the **Tactical Opportunities List** based in part on tactical opportunities existing at a given time. The investment products on the Tactical Opportunities List change over time. For more information on the Focus List, Approved List, Tactical Opportunities List and Watch processes, please see the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management. Your Financial Advisor or Private Wealth Advisor can also provide upon request a copy of a publication entitled "Manager Selection Process."

The **Global Investment Committee** is a group of seasoned investment professionals who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend model portfolio weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

The GIC Asset Allocation Models are not available to be directly implemented as part of an investment advisory service and should not be regarded as a recommendation of any Morgan Stanley investment advisory service. The GIC Asset Allocation Models do not represent actual trading or any type of account or any type of investment strategies and none of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, advisory fees, fund expenses) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models which, when compounded over a period of years, would decrease returns.

Adverse Active AlphaSM 2.0 is a patented screening and scoring process designed to help identify high-quality equity and fixed income managers with characteristics that may lead to future outperformance relative to index and peers. While highly ranked managers performed well as a group in our Adverse Active Alpha model back tests, not all of the managers will outperform. Please note that this data may be derived from back-testing, which has the benefit of hindsight. In addition, highly ranked managers can have differing risk profiles that might not be appropriate for all investors.

Our view is that Adverse Active Alpha is a good starting point and should be used in conjunction with other information. Morgan Stanley Wealth Management's qualitative and quantitative investment manager due diligence process are equally important factors for investors when considering managers for use through an investment advisory program. Factors including, but not limited to, manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors.

The proprietary **Value Score** methodology considers an active investment strategies' value proposition relative to its costs. From a historical quantitative study of several quantitative markers, Value Score measures perceived forward-looking benefit and computes (1) "fair value" expense ratios for most traditional investment managers across 40 categories and (2) managers' perceived "excess value" by comparing the fair value expense ratios to actual expense ratios. Managers are then ranked within each category by their excess value to assign a Value Score. Our analysis suggests that greater levels of excess value have historically corresponded to attractive subsequent performance.

For more information on the ranking models, please see Adverse Active AlphaSM 2.0: Scoring Active Managers According to Potential Alpha and Value Score: Scoring Fee Efficiency by Comparing Managers' "Fair Value" and Actual Expense Ratios. The whitepapers are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on AAA, please see the Adverse Active Alpha Ranking Model and Selecting Managers with Adverse Active Alpha whitepapers. The whitepaper are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

The Global Investment Manager Analysis (GIMA) Services Only Apply to Certain Investment Advisory Programs GIMA evaluates certain investment products for the purposes of some – but not all – of Morgan Stanley Smith Barney LLC's investment advisory programs (as described in more detail in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management). If you do not invest through one of these investment advisory programs, Morgan Stanley Wealth Management is not obligated to provide you notice of any GIMA Status changes even though it may give notice to clients in other programs.

Strategy May Be Available as a Separately Managed Account or Mutual Fund Strategies are sometimes available in Morgan Stanley Wealth Management investment advisory programs both in the form of a separately managed account ("SMA") and a mutual fund. These may have different expenses and investment minimums. Your Financial Advisor or Private Wealth Advisor can provide more information on whether any particular strategy is available in more than one form in a particular investment advisory program. Generally, investment advisory accounts are subject to an annual asset-based fee (the "Fee") which is payable monthly in advance (some account types may be billed differently). In general, the Fee covers Morgan Stanley investment advisory services, custody of securities with Morgan Stanley, trade execution with or through Morgan Stanley or its affiliates, as well as compensation to any Morgan Stanley Financial Advisor.

In addition, each account that is invested in a program that is eligible to purchase certain investment products, such as mutual funds, will also pay a Platform Fee (which is subject to a Platform Fee offset) as described in the applicable ADV brochure. Accounts invested in the Select UMA program may also pay a separate Sub-Manager fee, if applicable.

If your account is invested in mutual funds or exchange traded funds (collectively "funds"), you will pay the fees and expenses of any funds in which your account is invested. Fees and expenses are charged directly to the pool of assets the fund invests in and are reflected in each fund's share price. These fees and expenses are an additional cost to you and would not be included in the Fee amount in your account statements. The advisory program you choose is described in the applicable Morgan Stanley Smith Barney LLC ADV Brochure, available at www.morganstanley.com/ADV.

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may effect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instances, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at www.morganstanley.com/ADV, or contact your Financial Advisor / Private Wealth Advisor.

Conflicts of Interest: GIMA's goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth

Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients' assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. Separately, certain strategies managed or sub-advised by us or our affiliates, including but not limited to MSIM and Eaton Vance Management ("EVM") and its investment affiliates, may be included in your account. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA's evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS&Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts, and managers in various advisory programs. Morgan Stanley Wealth Management, managers, MS&Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account.

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Morgan Stanley charges each fund family we offer a mutual fund support fee, also called a "revenue-sharing payment," on client account holdings in fund families according to a tiered rate that increases along with the management fee of the fund so that lower management fee funds pay lower rates than those with higher management fees.

Consider Your Own Investment Needs: The model portfolios and strategies discussed in the material are formulated based on general client characteristics including risk tolerance. This material is not intended to be an analysis of whether particular investments or strategies are appropriate for you or a recommendation, or an offer to participate in any investment. Therefore, clients should not use this material as the sole basis for investment decisions. They should consider all relevant information, including their existing portfolio, investment objectives, risk tolerance, liquidity needs and investment time horizon. Such a determination may lead to asset allocation results that are materially different from the asset allocation shown in this profile. Talk to your Financial Advisor about what would be an appropriate asset allocation for you, whether Morgan Stanley Pathway Funds is an appropriate program for you.

No obligation to notify – Morgan Stanley Wealth Management has no obligation to notify you when the model portfolios, strategies, or any other information, in this material changes.

For index, indicator and survey definitions referenced in this report please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions

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Morgan Stanley Pathway Program Asset Allocation Models There are model portfolios corresponding to five risk-tolerance levels available in the Pathway program. Model 1 is the least aggressive portfolio and consists mostly of bonds. As the model numbers increase, the models have higher allocations to equities and become more aggressive. Pathway is a mutual fund asset allocation program. In constructing the Pathway Program Model Portfolios, Morgan Stanley Wealth Management uses, among other things, model asset allocations produced by Morgan Wealth Management's Global Investment Committee (the "GIC"). The Pathway Program Model Portfolios are specific to the Pathway program (based on program features and parameters, and any other requirements of Morgan Stanley Wealth Management's Consulting Group). The Pathway Program Model Portfolios may therefore differ in some respects from model portfolios available in other Morgan Stanley Wealth Management programs or from asset allocation models published by the Global Investment Committee.

The type of mutual funds and ETFs discussed in this presentation utilizes nontraditional or complex investment strategies and/or derivatives. Examples of these types of funds include those that utilize one or more of the below noted investment strategies or categories or which seek exposure to the following markets: (1) commodities (e.g., agricultural, energy and metals), currency, precious metals; (2) managed futures; (3) leveraged, inverse or inverse leveraged; (4) bear market, hedging, long-short equity, market neutral; (5) real estate; (6) volatility (seeking exposure to the CBOE VIX Index). Investors should keep in mind that while mutual funds and ETFs may, at times, utilize nontraditional investment options and strategies, they should not be equated with unregistered privately offered alternative investments. Because of regulatory limitations, mutual funds and ETFs that seek alternative-like investment exposure must utilize a more limited investment universe. As a result, investment returns and portfolio characteristics of alternative mutual funds and ETFs may vary from traditional hedge funds pursuing similar investment objectives. Moreover, traditional hedge funds have limited liquidity with long "lock-up" periods allowing them to pursue investment strategies without having to factor in the need to meet client redemptions and ETFs trade on an exchange. On the other hand, mutual funds typically must meet daily client redemptions. This differing liquidity profile can have a material impact on the investment returns generated by a mutual fund or ETF pursuing an alternative investing strategy compared with a traditional hedge fund pursuing the same strategy.

Nontraditional investment options and strategies are often employed by a portfolio manager to further a fund's investment objective and to help offset market risks. However, these features may be complex, making it more difficult to understand the fund's essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage."

Please consider the investment objectives, risks, fees, and charges and expenses of mutual funds, ETFs, closed end funds, unit investment trusts, and variable insurance products carefully before investing. The prospectus contains this and other information about each fund. To obtain a prospectus, contact your Financial Advisor or Private Wealth Advisor or visit the Morgan Stanley website at www.morganstanley.com. Please read it carefully before investing.

Money Market Funds: You could lose money in money market funds. Although money market funds classified as government funds (i.e., money market funds that invest 99.5% of total assets in cash and/or securities backed by the U.S government) and retail funds (i.e., money market funds open to natural person investors only) seek to preserve value at $1.00 per share, they cannot guarantee they will do so. The price of other money market funds will fluctuate and when you sell shares they may be worth more or less than originally paid. Money market funds may impose a fee upon sale or temporarily suspend sales if liquidity falls below required minimums. During suspensions, shares would not be available for purchases, withdrawals, check writing or ATM debits. A money market fund investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or other government agency. The Fund's sponsor has no legal obligation to provide financial support to the Fund, and you should not expect that the sponsor will provide financial support to the Fund at any time.

Investors should carefully consider the investment objectives, risks, charges and expenses of a money market fund before investing. The prospectus contains this and other information about the money market fund. To obtain a prospectus, contact your Financial Advisor or visit the money market fund company's website. Please read the prospectus carefully before investing.

Exchange Funds are private placement vehicles that enable holders of concentrated single-stock positions to exchange those stocks for a diversified portfolio. Investors may benefit from greater diversification by exchanging a concentrated stock position for fund shares without triggering a taxable event. These funds are available only to qualified investors and may only be offered by Financial Advisors who are qualified to sell alternative investments. Before investing, investors should consider the following:
- Dividends are pooled
- Investors may forfeit their stock voting rights
- Investment may be illiquid for several years
- Investments may be leveraged or contain derivatives
- Significant early redemption fees may apply
- Changes to the U.S. tax code, which could be retroactive (potentially disallowing the favorable tax treatment of exchange funds)
- Investment risk and potential loss of principal

KEY ASSET CLASS CONSIDERATIONS AND OTHER RISKS

Investing in the markets entails the risk of market volatility. The value of all types of investments, including stocks, mutual funds, exchange-traded funds ("ETFs"), closed-end funds, and unit investment trusts, may increase or decrease over varying time periods. To the extent the investments depicted herein represent **international securities**, you should be aware that there may be additional risks associated with international investing, including foreign economic, political, monetary and/or legal factors, changing currency exchange rates, foreign taxes, and differences in financial and accounting standards. These risks may be magnified in **emerging markets and frontier markets**. Some funds also invest in foreign securities, which may involve currency risk. There is no assurance that the fund will achieve its investment objective. **Small- and mid-capitalization companies** may lack the financial resources, product diversification and competitive strengths of larger companies. In addition, the securities of small- and mid-capitalization companies may not trade as readily as, and be subject to higher volatility than, those of larger, more established companies. The value of **fixed income securities** will fluctuate and, upon a sale, may be worth more or less than their original cost or maturity value. Bonds are subject to interest rate risk, call risk, reinvestment risk, liquidity risk, and credit risk of the issuer. **High yield bonds** are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. In the case of **municipal bonds**, income is generally exempt from federal income taxes. Some income may be subject to state and local taxes and to the federal alternative minimum tax. Capital gains, if any, are subject to tax. **Treasury Inflation Protection Securities' (TIPS)** coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S.

Treasuries in times of low inflation. There is no guarantee that investors will receive par if TIPS are sold prior to maturity. The returns on a portfolio consisting primarily of **environmental, social, and governance-aware investments ("ESG")** may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria. The companies identified and investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantee that a client's account will be managed as described herein. **Options** and margin trading involve substantial risk and are not appropriate for all investors. Besides the general investment risk of holding securities that may decline in value and the possible loss of principal invested, **closed-end funds** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance and potential leverage. Closed-end funds, unlike open-end funds, are not continuously offered. There is a one-time public offering and once issued, shares of closed-end funds are sold in the open market through a stock exchange. Shares of closed-end funds frequently trade at a discount from their NAV which may increase investors' risk of loss. The risk of loss due to this discount may be greater for investors expecting to sell their shares in a relatively short period after completion of the public offering. This characteristic is a risk separate and distinct from the risk that a closed-end fund's net asset value may decrease as a result of investment activities. NAV is total assets less total liabilities divided by the number of shares outstanding. At the time an investor purchases or sells shares of a closed-end fund, shares may have a market price that is above or below NAV. Portfolios that invest a large percentage of assets in only one industry **sector** (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

Structured Investments are complex and not appropriate for all investors. An investment in Structures Investments involve risks. These risks can include but are not limited to: (1) Fluctuations in the price, level or yield of underlying instruments, interest rates, currency values and credit quality, (2) Substantial or total loss of principal, (3) Limits on participation in appreciation of underlying instrument, (4) Limited liquidity, (5) Issuer credit risk and (6) Conflicts of Interest. There is no assurance that a strategy of using structured product for wealth preservation, yield enhancement, and/or interest rate risk hedging will meet its objectives.

Alternative investments may be either traditional alternative investment vehicles, such as hedge funds, fund of hedge funds, private equity, private real estate and managed futures or, non-traditional products such as mutual funds and exchange-traded funds that also seek alternative-like exposure but have significant differences from traditional alternative investments. Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are appropriate only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Alternative Investments typically have higher fees than traditional investments. Investors should carefully review and consider potential risks before investing. Certain of these risks may include but are not limited to: Loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices; Lack of liquidity in that there may be no secondary market for a fund; Volatility of returns; Restrictions on transferring interests in a fund; Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized; Absence of information regarding valuations and pricing; Complex tax structures and delays in tax reporting; Less regulation and higher fees than mutual funds; and Risks associated with the operations, personnel, and processes of the manager. Further, opinions regarding Alternative Investments expressed herein may differ from the opinions expressed by Morgan Stanley Wealth Management and/or other businesses/affiliates of Morgan Stanley Wealth Management.

Certain information contained herein may constitute forward-looking statements. Due to various risks and uncertainties, actual events, results or the performance of a fund may differ materially from those reflected or contemplated in such forward-looking statements. Clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing.

Alternative investments involve complex tax structures, tax inefficient investing, and delays in distributing important tax information. Individual funds have specific risks related to their investment programs that will vary from fund to fund. Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

Interests in alternative investment products are offered pursuant to the terms of the applicable offering memorandum, are distributed by Morgan Stanley Smith Barney LLC and certain of its affiliates, and (1) are not FDIC-insured, (2) are not deposits or other obligations of Morgan Stanley or any of its affiliates, (3) are not guaranteed by Morgan Stanley and its affiliates, and (4) involve investment risks, including possible loss of principal. Morgan Stanley Smith Barney LLC is a registered broker-dealer, not a bank.

A majority of Alternative Investment managers reviewed and selected by GIMA pay or cause to be paid an ongoing fee for distribution from their management fees to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase an interest in an Alternative Investment and in some instances pay these fees on the investments held by advisory clients. Morgan Stanley Wealth Management rebates such fees that are received and attributable to an Investment held by an advisory client and retains the fees paid in connection with investments held by brokerage clients. Morgan Stanley Wealth Management has a conflict of interest in offering alternative investments because Morgan Stanley Wealth Management or our affiliates, in most instances, earn more money in your account from your investments in alternative investments than from other investment options.

It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 260 basis points or more annually depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, “blow ups,” or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. However, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial “lift” or upwards bias.

Hedge Funds of Funds and many funds of funds are private investment vehicles restricted to certain qualified private and institutional investors. They are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They may be highly illiquid, can engage in leverage and other speculative practices that may increase volatility and the risk of loss, and may be subject to large investment minimums and initial lockups. They involve complex tax structures, tax-inefficient investing and delays in distributing important tax information. Categorically, hedge funds and funds of funds have higher fees and expenses than traditional investments, and such fees and expenses can lower the returns achieved by investors. Funds of funds have an additional layer of fees over and above hedge fund fees that will offset returns. An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. An investment in a **target date portfolio** is subject to the risks attendant to the underlying funds in which it invests, in these portfolios the funds are the Consulting Group Capital Market funds. A target date portfolio is geared to investors who will retire and/or require income at an approximate year. The portfolio is managed to meet the investor’s goals by the pre-established year or “target date.” A target date portfolio will transition its invested assets from a more aggressive portfolio to a more conservative portfolio as the target date draws closer. An investment in the target date portfolio is not guaranteed at any time, including, before or after the target date is reached. **Managed futures** investments are speculative, involve a high degree of risk, use significant leverage, are generally illiquid, have substantial charges, subject investors to conflicts of interest, and are appropriate only for the risk capital portion of an investor’s portfolio. Managed futures investments do not replace equities or bonds but rather may act as a complement in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors.

<u>Virtual Currency Products (Cryptocurrencies)</u>

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets (“Digital Assets”), and related funds and products, is highly speculative and may result in a loss of the entire investment. Risks and considerations include but are not limited to:

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. **The price of Digital Assets could decline rapidly, and investors could lose their entire investment.**

- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.

- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor’s subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.

- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.

- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.

- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.

- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund’s or product’s ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.

- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product’s Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the “private keys” necessary to access a product’s Digital Asset.

- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from “airdrops” with respect to, or “forks” in, a Digital Asset’s blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a “fork” in the Digital Asset blockchain could materially decrease the price of such Digital Asset.

- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products’ use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.

- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result, like other investors have, you can lose some or all of your holdings of Digital Assets.

- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.

- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human tracking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting of entirely the ability to use or trade Digital Asset products.

- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.

- Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.

- The exchange rate of virtual currency products versus the USD historically has been very volatile and the exchange rate could drastically decline. For example, the exchange rate of certain Digital

Assets versus the USD has in the past dropped more than 50% in a single day. Other Digital Assets may be affected by such volatility as well.

- Digital Asset exchanges have limited operating and performance histories and are not regulated with the same controls or customer protections available to more traditional exchanges transacting equity, debt, and other assets and securities. There is no assurance that a person/exchange who currently accepts a Digital Asset as payment will continue to do so in the future.

- The regulatory framework of Digital Assets is evolving, and in some cases is uncertain, and Digital Assets themselves may not be governed and protected by applicable securities regulators and securities laws, including, but not limited to, Securities Investor Protection Corporation coverage, or other regulatory regimes.

- Morgan Stanley Smith Barney LLC or its affiliates (collectively, "Morgan Stanley") may currently, or in the future, offer or invest in Digital Asset products, services or platforms. The proprietary interests of Morgan Stanley may conflict with your interests.

- The foregoing list of considerations and risks are not and do not purport to be a complete enumeration or explanation of the risks involved in an investment in any product or fund investing or trading in Digital Assets.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets. Past performance is no guarantee of future results. Actual results may vary.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

Indices are unmanaged and investors cannot directly invest in them. They are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Composite index results are shown for illustrative purposes only, generally do not represent the performance of a specific investment, may not, for a variety of reasons, be an appropriate comparison or benchmark for a particular investment and may not necessarily reflect the actual investment strategy or objective of a particular investment. Consequently, comparing an investment to a particular index may be of limited use.

To obtain **Tax-Management Services**, a client must complete the Tax-Management Form, and deliver the signed form to Morgan Stanley. For more information on Tax-Management Services,

including its features and limitations, please ask your Financial Advisor for the Tax Management Form. Review the form carefully with your tax advisor. Tax-Management Services: (a) apply only to equity investments in separate account sleeves of client accounts; (b) are not available for all accounts or clients; and (c) may adversely impact account performance. Tax-management services do not constitute tax advice or a complete tax-sensitive investment management program. There is no guarantee that tax-management services will produce the desired tax results.

When Morgan Stanley Smith Barney LLC, its affiliates and Morgan Stanley Financial Advisors and Private Wealth Advisors (collectively, "Morgan Stanley") provide "investment advice" regarding a retirement or welfare benefit plan account, an individual retirement account or a Coverdell education savings account ("Retirement Account"), Morgan Stanley is a "fiduciary" as those terms are defined under the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and/or the Internal Revenue Code of 1986 (the "Code"), as applicable. When Morgan Stanley provides investment education, takes orders on an unsolicited basis or otherwise does not provide "investment advice", Morgan Stanley will not be considered a "fiduciary" under ERISA and/or the Code. For more information regarding Morgan Stanley's role with respect to a Retirement Account, please visit www.morganstanley.com/disclosures/dol. Tax laws are complex and subject to change. Morgan Stanley does not provide tax or legal advice. Individuals are encouraged to consult their tax and legal advisors (a) before establishing a Retirement Account, and (b) regarding any potential tax, ERISA and related consequences of any investments or other transactions made with respect to a Retirement Account. Individuals should consult their tax advisor for matters involving taxation and tax planning and their attorney for matters involving trust and estate planning, charitable giving, philanthropic planning and other legal matters.

Lifestyle Advisory Services: Products and services are provided by third party service providers, not Morgan Stanley Smith Barney LLC ("Morgan Stanley"). Morgan Stanley may not receive a referral fee or have any input concerning such products or services. There may be additional service providers for comparative purposes. Please perform a thorough due diligence and make your own independent decision.

This material is not a financial plan and does not create an investment advisory relationship between you and your Morgan Stanley Financial Advisor. We are not your fiduciary either under the

Employee Retirement Income Security Act of 1974 (ERISA) or the Internal Revenue Code of 1986, and any information in this report is not intended to be considered investment advice or a recommendation for either ERISA or Internal Revenue Code purposes and that (unless otherwise provided in a written agreement and/or as described at www.morganstanley.com/disclosures/dol) you remain solely responsible for your assets and all investment decisions with respect to your assets. Nevertheless, if Morgan Stanley or your Financial Advisor provides "investment advice," as that term is defined under Section 3(21) of ERISA, to you with respect to certain retirement, welfare benefit, or education savings account assets for a fee or other compensation, Morgan Stanley and/or your Financial Advisor will be providing such advice in its capacity as a fiduciary under ERISA and/or the Code. Morgan Stanley will only prepare a financial plan at your specific request using Morgan Stanley approved financial planning software.

A LifeView Financial Goal Analysis ("Financial Goal Analysis") or LifeView Financial Plan ("Financial Plan") is based on the methodology, estimates, and assumptions, as described in your report, as well as personal data provided by you. It should be considered a working document that can assist you with your objectives. Morgan Stanley makes no guarantees as to future results or that an individual's investment objectives will be achieved. The responsibility for implementing, monitoring and adjusting your Financial Goal Analysis or Financial Plan rests with you. After your Financial Advisor delivers your report to you, if you so desire, your Financial Advisor can help you implement any part that you choose; however, you are not obligated to work with your Financial Advisor or Morgan Stanley.

Important information about your relationship with your Financial Advisor and Morgan Stanley Smith Barney LLC when using LifeView Goal Analysis or LifeView Advisor. When your Financial Advisor prepares and delivers a Financial Goal Analysis (i.e., when using LifeView Goal Analysis), they will be acting in a brokerage capacity. When your Financial Advisor prepares a Financial Plan (i.e., when using LifeView Advisor), they will be acting in an investment advisory capacity with respect to the delivery of your Financial Plan. This Investment Advisory relationship will begin with the delivery of the Financial Plan and ends thirty days later, during which time your Financial Advisor can review the Financial Plan with you. To understand the differences between brokerage and advisory relationships, you should consult your Financial Advisor, or review our "Understanding Your Brokerage and Investment Advisory Relationships," brochure available at https://www.morganstanley.com/wealth-relationshipwithms/pdfs/understandingyourrelationship.pdf

We may act in the capacity of a broker or that of an advisor. As your broker, we are not your fiduciary and our interests may not always be identical to yours. Please consult with your Financial Advisor or Private Wealth Advisor to discuss our obligations to disclose to you any conflicts we may from time to time have and our duty to act in your best interest. We may be paid both by you and by others who compensate us based on what you buy. Our compensation, including that of your Financial Advisor or Private Wealth Advisor, may vary by product and over time.

Investment and services offered through Morgan Stanley Smith Barney LLC, Member SIPC.

GLOBAL INVESTMENT COMMITTEE (GIC) ASSET ALLOCATION MODELS: The Asset Allocation Models are created by Morgan Stanley Wealth Management's GIC.

HYPOTHETICAL MODEL PERFORMANCE (GROSS): Hypothetical model performance results do not reflect the investment or performance of an actual portfolio following a GIC Strategy, but simply reflect actual historical performance of selected indices on a real-time basis over the specified period of time representing the GIC's strategic and tactical allocations as of the date of this report. The past performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation or trading strategy. Hypothetical performance results do not represent actual trading and are generally designed with the benefit of hindsight. Actual performance results of accounts vary due to, for example, market factors (such as liquidity) and client-specific factors (such as investment vehicle selection, timing of contributions and withdrawals, restrictions and rebalancing schedules). Clients would not necessarily have obtained the performance results shown here if they had invested in accordance with any GIC Asset Allocation Model for the periods indicated. Despite the limitations of hypothetical performance, these hypothetical performance results allow clients and Financial Advisors to obtain a sense of the risk/return trade-off of different asset allocation constructs. The hypothetical performance results in this report are calculated using the returns of benchmark indices for the asset classes, and not the returns of securities, fund or other investment products. Models may contain allocations to Hedge Funds, Private Equity and Private Real Estate. The benchmark indices for these asset classes are not issued on a daily basis. When calculating model performance on a day for which no benchmark index data is issued, we have assumed straight line growth between the index levels issued before and after that date.

FEES REDUCE THE PERFORMANCE OF ACTUAL ACCOUNTS: None of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, fees) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models. The GIC Asset Allocation Models and any model performance included in this presentation are intended as educational materials. Were a client to use these models in connection with investing, any investment decisions made would be subject to transaction and other costs which, when compounded over a period of years, would decrease returns. Information regarding Morgan Stanley's standard advisory fees is available in the Form ADV Part 2, which is available at www.morganstanley.com/adv. The following hypothetical illustrates the compound effect fees have on investment returns: For example, if a portfolio's annual rate of return is 15% for 5 years and the account pays 50 basis points in fees per annum, the gross cumulative five-year return would be 101.1% and the five-year return net of fees would be 96.8%. Fees and/or expenses would apply to clients who invest in investments in an account based on these asset allocations, and would reduce clients' returns. The impact of fees and/or expenses can be material.

Variable annuities are long-term investments designed for retirement purposes and may be subject to market fluctuations, investment risk, and possible loss of principal. All guarantees, including optional benefits, are based on the financial strength and claims-paying ability of the issuing insurance company and do not apply to the underlying investment options. Optional riders may not be able to be purchased in combination and are available at an additional cost. Some optional riders must be elected at time of purchase. Optional riders may be subject to specific limitations, restrictions, holding periods, costs, and expenses as specified by the insurance company in the annuity contract. If you are investing in a **variable annuity** through a tax-advantaged retirement plan such as an IRA, you will get no additional tax advantage from the variable annuity. Under these circumstances, you should only consider buying a variable annuity because of its other features, such as lifetime income payments and death benefits protection. Taxable distributions (and certain deemed distributions) are subject to ordinary income tax and, if taken prior to age 59½, may be subject to a 10% federal income tax penalty. Early withdrawals will reduce the death benefit and cash surrender value.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment. **Ultrashort-term fixed income** asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk. Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk. The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value. MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV, and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention. **Physical precious metals** are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions. Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage. Principal is returned on a monthly basis over the life of a **mortgage-backed security.** Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. **Asset-backed securities** generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision. **Credit ratings** are subject to change. **Duration**, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price. The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk. The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more

or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield. Some $25 or $1000 **par preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.
Companies paying **dividends** can reduce or cut payouts at any time.

Nondiversification: For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time. Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. **Value investing** does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.
Any type of **continuous or periodic investment plan** does not assure a profit and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fluctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.
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City of South Pasadena

Western Asset Enhanced Cash Portfolios

November 30, 2022

WESTERN ASSET

Definition of Terms and Performance Disclosures

Western Asset Enhanced Cash SMA vs. 50% FTSE 3-Month U.S. Treasury Bill Index and 50% Bloomberg 1-3 Year Government Bond Index

Definition of Terms

Adjusted Spread Duration is spread duration scaled by the level of each security's spread to account for different spread volatilities.

Cash Flow Yield (CFY) the option-adjusted measure of expected return.

Convexity is the second order, option-adjusted price sensitivity to a parallel shift in interest rates.

Diversified Risk is the contribution of a group of risk factors to total tracking error (or volatility if the portfolio is not managed to a benchmark) from a group of risk factors that consider estimated correlations among all risk factors, rather than the worst-case assumptions embodied in total Undiversified Risk.

Duration is the option-adjusted price sensitivity to a parallel shift in interest rates.

Ex-Ante Expected Shortfall (ES) is the forward-looking estimate of average loss if the loss is more than VaR at predetermined confidence level assuming the exposures of portfolio and benchmark are held constant going forward. For example, a 99% ES of 450 bps/month means that within the worst 1% of cases that the portfolio loses more than the VAR of 400 bps; the average loss in those 1% worst cases is 450 bps.

Ex-Ante Tracking Error Volatility is the forward-looking estimate of standard deviation of the difference between portfolio return and benchmark return (i.e., active return) assuming the exposures of portfolio and benchmark are held constant going forward.

Ex-Ante Value at Risk (VaR) is the forward-looking estimate of maximum loss at a pre-defined confidence level assuming the exposures of portfolio and benchmark are held constant going forward. For example, a 99% VaR of 400 bps/month means that the portfolio is expected to not lose more than 400 bps in one month 99% of the time.

Ex-Ante Volatility Ratio is the forward-looking ratio of a portfolio's volatility to its benchmark's volatility assuming the exposures of portfolio and benchmark are held constant going forward.

Key Rate Duration (KRD) is the option-adjusted price sensitivity to the changes in interest rates located close to the given key interest rate tenors (e.g., 6M, 2Y, 5Y, 10Y, 20Y, 30Y).

Option Adjusted Spread (OAS) is a measure of expected excess return over the risk-free rates that considered embedded options and possible pre-payments.

Spread Duration is the option-adjusted price sensitivity to the change in option adjusted spread.

Undiversified Risk is the standard deviation of return contribution attributable to a group of risk factors on a standalone basis. Total undiversified risk is an indicator of the potential tracking error under a stress scenario whereby pre-selected groups of risk factors become perfectly correlated.

Yield-to-Worst (YTW) is the lesser of yield-to-maturity or yield-to-call across all known call dates.

Credit ratings are based on each portfolio security's rating as provided by the following Nationally Recognized Statistical Rating Organizations ("NRSRO"): Standard and Poor's ("S&P"), Moody's Investors Service ("Moody's"), Fitch Ratings, Ltd. In the absence of an NRSRO rating, Western Asset may assign a comparable rating. The credit quality of the investments in the portfolio does not apply to the stability or safety of the portfolio. The portfolio itself has not been rated by an independent rating agency.

Returns (%) as of 30 Sep 22	1 Yr	3 Yr	5 Yr	10 Yr	SI*
Portfolio (gross)	-2.81	0.26	1.05	1.05	2.50
Portfolio (net)	-4.25	-1.22	-0.45	-0.44	0.99
Benchmark	-2.24	0.02	0.84	0.63	2.01

Returns (%) as of 31 Dec 21	1 Yr	3 Yr	5 Yr	10 Yr	SI*
Portfolio (gross)	-0.14	2.02	1.81	1.50	2.71
Portfolio (net)	-1.62	0.51	0.31	0.00	1.19
Benchmark	-0.28	1.49	1.37	0.85	2.17

*Source: Franklin Templeton *Since Inception: 31 Dec 99*
The standard fee schedule for SMA Enhanced Cash (Retail) is 1.50%.
***Past investment results are not indicative of future investment results.** Returns for periods greater than one year are annualized.*
Gross-of-fees returns are presented before management fees, but after all trading expenses. Net-of-fees results are calculated using a model approach whereby the current highest tier of the appropriate strategy's fee schedule is used. Effective January 1, 2020, for annual periods where the actual account weighted fees are higher than the composite model fee, the actual account weighted fees will be used for the net-of-fee composite return calculations. Net-of-fee composite return calculations using actual account weighted fees may include fund returns that incur higher fees than those applied to separately managed accounts. Please see Performance and Risk Disclosure section for more information.

WESTERN ASSET

Table of Contents

About Western Asset

About Western Asset

Western Asset is a globally integrated fixed-income manager, sourcing ideas and investment solutions worldwide.

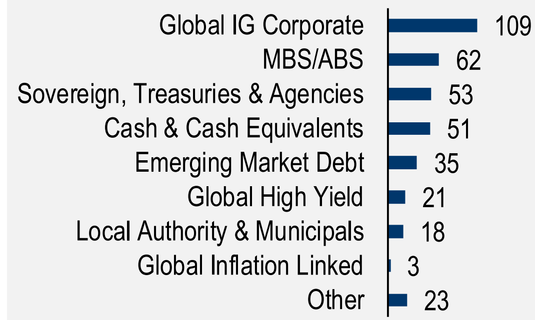
Western Asset At a Glance

- Founded in 1971. Specialist Investment Manager of Franklin Distributors, LLC since July 31, 2020
- Fixed-income value investors
- 375.5 billion (USD) AUM
  - 324.5 billion (USD) long-term assets
  - 51.0 billion (USD) cash and cash equivalent assets
- 757 employees

Organizational Pillars

- Clients first
- Globally integrated
- Team-based
- Active fixed-income
- Integrated risk management

AUM by Sector – Total 375.5 billion (USD)



Western Asset's Deep Global Integration Allows Us to Source Investment Ideas and Investment Solutions Across Regions

Investment Management

- 136 investment professionals on five continents and in seven offices
- 24 years average experience
- 44 portfolio and quantitative analysts in portfolio operations

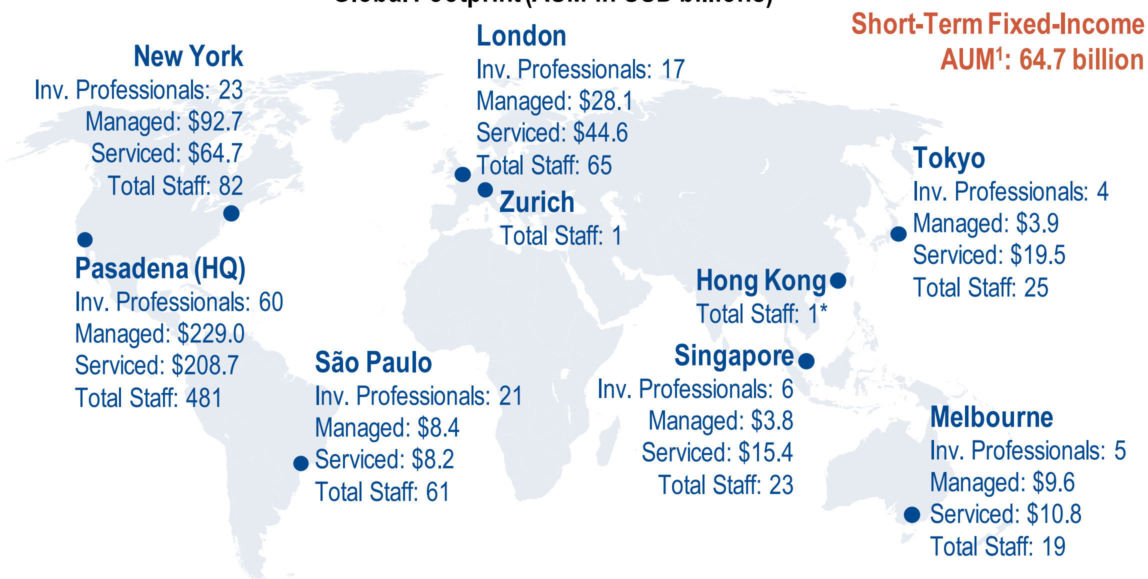
Client Service & Marketing

- 171 staff dedicated to client service
- Specialized teams to meet individual client needs

Risk Management & Operations

- Independent risk management function with 34 professionals including 13 PhDs
- 295 staff dedicated to globally integrated operations

Global Footprint (AUM in USD billions)



Source: Western Asset. As of 30 Sep 22 [1]*Short-Term Fixed-Income assets under management include Money Markets, US Enhanced Liquidity, US Liquidity, US Short Duration, US Short Duration Constrained and local office cash and liquidity strategies.* **Splits time between Hong Kong and Singapore offices*

WESTERN ASSET

Investment Solutions

Western Asset offers a full range of fixed-income products that can be tailored to meet the needs of our clients.

Identifying Investment Solutions to Align With Client Objectives and Risk Tolerances

- Protect from rising rates
- Protect from inflation
- Preserve capital
- Diversify globally
- Hedge liabilities
- Enhance income
- Generate tax-free income
- Generate total return
- Achieve ESG objectives

Selected Investment Strategies

Broad Market

- WA Core Bond Fund (WATFX)
- WA Core Plus Bond Fund (WACPX)
- WA Intermediate Bond Fund (WATIX)
- WA Active Bond Portfolios
- WA Core Portfolios
- WA Core Plus Portfolios
- WA Intermediate Portfolios

Credit

- WA Corporate Bond Fund (SIGYX)
- WA Global High Yield Bond Fund (SHYOX)
- WA Short Duration High Income Fund (SHIYX)
- WA High Yield Fund (WAHYX)
- WA Corporate Bond Ladders
- WA Intermediate Corporate Portfolios

Mortgage / Asset-Backed

- WA Mortgage Total Return Fund (SGVAX)[2]

US Municipals

- WA Managed Municipals Fund (SMMYX)
- WA Intermediate Term Municipals Fund (SBTYX)
- WA Short Duration Municipals Income Fund (SMDYX)
- WA Municipal High Income Fund (LMHIX)
- WA California Municipals Fund (LMCUX)
- WA Intermediate Maturity CA Municipals Fund (SICYX)
- WA New York Municipals Fund (SNPYX)
- WA Intermediate Maturity New York Municipals Fund (LMIIX)
- WA Massachusetts Municipals Fund (LHMIX)
- WA New Jersey Municipals Fund (LNJIX)
- WA Pennsylvania Municipals Fund (LPPIX)
- WA Oregon Municipals Fund (LMOOX)
- WA Current Market Muni Portfolios
- WA Managed Municipals Portfolios
- WA Municipal Bond Ladders
- WA Municipal Impact Bond Ladders
- WA Municipal Opportunities
- WA Short-Term Muni Portfolios

Unconstrained / Alternatives

- WA Income Fund[1] (SDSYX)
- WA Macro Opportunities Fund (LAOIX)
- WA Total Return Unconstrained Fund (WAARX)

Emerging Markets Debt

- WA Emerging Markets Debt Fund (SEMDX)

Short Duration

- WA Ultra-Short Income Fund[3] (SBAYX)
- WA Short Term Bond Fund (SBSYX)
- WA Enhanced Cash Portfolios

Inflation-Linked

- WA Inflation Indexed Plus Bond Fund (WAIIX)

[1]Prior to March 31, 2018, this fund was known as Western Asset Global Strategic Income Fund. [2]Prior to September 27, 2019 this fund was known as Western Asset Mortgage Backed Securities Fund. [3]Prior to April 22, 2020, this fund was known as the Western Asset Adjustable Rate Income Fund.

The listed products may not be available at all broker/dealer firms.

Before investing, carefully consider a Fund's investment objectives, risks, charges and expenses. You can find this and other information in each prospectus, or summary prospectus, if available, which is available at www.franklintempleton.com. Please read it carefully.

About Western Asset – 3Q22

Business Update

Organizational and Product Updates

- Launched four collateralized loan obligations (CLOs) year-to-date resulting in over $1.5 billion in assets
- Fund launched:
  - Western Asset Global Sustainable Corporate Bond Fund

Tools and Resources

- Client portal
- WISER, a proprietary fixed-income risk analysis system
- Liability Driven Investing (LDI) portfolio modelling capabilities
- www.westernasset.com
- www.westernassetfunds.com
- Western Asset App – featuring our latest perspectives at your fingertips, now with notification

Download on the App Store

GET IT ON Google Play

Pensions&Investments BEST PLACES TO WORK IN MONEY MANAGEMENT 2020 MULTIYEAR WINNER 2012 2014-2019

MORNINGSTAR Awards 2014

2014 Fixed-Income Fund Manager of the Year

Greenwich Quality Leader 2021

Thought Leadership and Industry Recognition

Insights

- 3Q22 Market Commentary by CIO Ken Leech
- Global Bonds—Ripe for the Picking by Robert O. Abad

Key Convictions

- An at-a-glance dashboard that presents the Firm's overall investment views

The Western Asset Blog

- For Consumers, the Long Covid Night Is Mostly Over by Michael J. Bazdarich, PhD
- Banks Well Prepared for High Inflation and Recession by Sebastian Angerer, Ivor Schucking, Daniel Alexander
- Can CLO Equity Outperform If the Economy Tips Into Recession? by Jeff Helsing

Webcasts

- 4Q22 Market and Strategy Update Featuring CIO Ken Leech

Recognition

- Western Asset has been named a 2021 Greenwich Quality Leader in U.S. Institutional Investment Management Service
- Nominated for Morningstar's US Fixed-Income Fund Manager of the Year, Core Plus (2017)[1]
- Western Asset Core Bond Fund's IS share class (WACSX) received the Lipper award for the 3-year period ending December 31, 2016 in the Core Bond Funds category
- Nominated for Morningstar's US Fixed-Income Fund Manager of the Year, Core and Core Plus (2015)[2]
- Morningstar's US Fixed-Income Fund Manager of the Year, Core and Core Plus (2014)[3]
- Wealth & Finance's Best Performing Global Macro Strategy, Liquid Alternatives (2014)

Awards and Rankings are provided from independent third parties or industry publications and are based on unbiased quantitative and/or qualitative information determined independently by each 3rd party or publication. In some cases, Western Asset may subscribe to these 3rd party's standard industry services or publications. These standard subscriptions and services are available to all asset managers and do not influence rankings or awards in any way. 1534711
[1]Morningstar Awards 2017©. Morningstar, Inc. All Rights Reserved. Ken Leech and team; Western Asset Core Plus Bond (WACPX), nominated for 2017 Fixed-Income Fund Manager of the Year, US.
[2]Ken Leech, Carl Eichstaedt, Mark Lindbloom, Michael Buchanan and team were nominated for Morningstar 2015 U.S. Fixed Income Manager of the Year, United States of America for Western Asset Core Bond Fund (WACSX) and Western Asset Core Plus Bond Fund (WAPSX). Morningstar Awards 2015© Morningstar, Inc.
[3]Awarded to Ken Leech, Carl Eichstaedt, and Mark Lindbloom for Western Asset Core Bond Fund (WACSX) and Western Asset Core Plus Bond Fund (WAPSX) named Morningstar 2014 U.S. Fixed-Income Manager of the Year, United States of America. Morningstar Awards 2015© Morningstar, Inc.
Morningstar Fund Manager of the Year award recognizes portfolio managers who demonstrate excellent investment skill and the courage to differ from the consensus to benefit investors. To qualify for the award, managers' funds must have not only posted impressive returns for the year, but the managers also must have a record of delivering outstanding risk-adjusted long-term performance and of aligning their interests with shareholders'. The Fund Manager of the Year award winners are chosen based on Morningstar's proprietary research and in-depth evaluation by its fund analysts

Philosophy, Process and People

Investment Philosophy

These are the core beliefs that drive our investment decision-making.

Long-term fundamental value

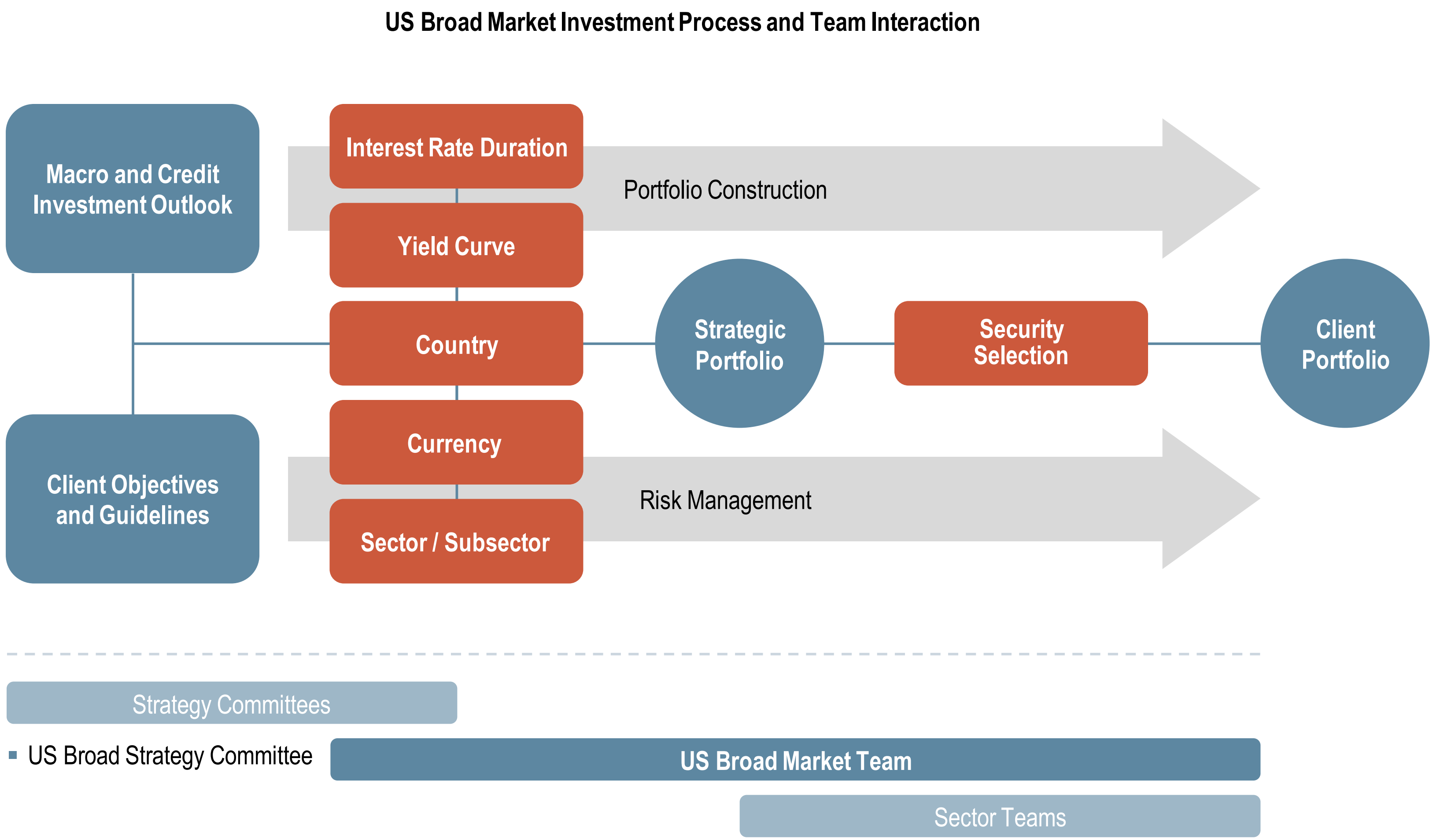
- **Markets often misprice securities.** Prices can deviate from fundamental fair value, but over time, they typically adjust to reflect inflation, credit quality fundamentals and liquidity conditions. Consistently investing in undervalued securities may deliver attractive investment returns.
- **We can systematically identify mispricings.** We believe we can identify and capitalize on markets and securities that are priced below fundamental fair value. We do this through disciplined and rigorous analysis, comparing prices to the fundamental fair values estimated by our macroeconomic and credit research teams around the globe.
- **Our portfolios emphasize our highest convictions.** The greater the difference between our view of fair value and markets' pricing, the bigger the potential value opportunity. The greater the degree of confidence in our view of fundamentals, the greater the emphasis of the strategies in our portfolios.

Multiple diversified strategies

- **We seek diversified sources of returns.** Our objective is to meet or exceed our investors' performance objectives within their tolerances for risk. We seek to diversify investments and add value across interest rate duration, yield curve, sector allocation, security selection, country and currency strategies. We deploy multiple diversified strategies that benefit in different environments so no one strategy dominates performance, helping to dampen volatility.

Investment Process

Our time-tested investment process is designed around our value philosophy and our team-based approach.



People

The US Broad Strategy Committee sets the overall themes for the US broad market investment strategies.

US Broad Strategy Committee

S. Kenneth Leech
Chief Investment Officer

- **John L. Bellows, CFA** — Fed Policy / US Broad Market
- **Ryan K. Brist, CFA** — Investment-Grade Credit
- **Michael C. Buchanan, CFA** — Deputy CIO / Global Credit
- **Amit Chopra, CFA** — Long Duration / US Broad Market
- **Greg E. Handler, CFA** — Mortgage and Consumer Credit
- **Kevin K. Kennedy** — Liquidity
- **Walter E. Kilcullen** — High Yield
- **Chia-Liang Lian, CFA** — Emerging Markets
- **Mark S. Lindbloom** — US Broad Market
- **Frederick R. Marki, CFA** — Inflation-Linked
- **Dennis J. McNamara, CFA** — US Broad Market
- **Rajiv Sachdeva** — Portfolio & Quantitative Analysis
- **Julien A. Scholnick, CFA** — US Broad Market
- **Bonnie M. Wongtrakool, CFA** — ESG Investments

- Sets macro and sector investment themes
- Meets weekly to evaluate and establish the US investment outlook over a 6-9 month horizon.
  - Within the context of our global investment outlook
  - Based on long-term economic developments and market valuations
  - Leveraging sector input and broad top-down analysis
- Evaluates risk factors and potential scenarios. Sets the risk tone for US investment strategies

As of 30 Sep 22

People

The US Broad Strategy Committee sets the overall themes for the US broad market investment strategies.

US Broad Market Team

Portfolio Management

S. Kenneth Leech
Portfolio Manager / CIO

Scott M. Beatty, CFA
Portfolio Manager

John L. Bellows, PhD, CFA
Portfolio Manager

Amit Chopra, CFA
Portfolio Manager

Eugene J. Kirkwood
Portfolio Manager (SMAs)

Mark S. Lindbloom
Portfolio Manager

Keith A. Luna, CFA
Portfolio Manager

Frederick R. Marki, CFA
Portfolio Manager

Nicholas Mastroianni, CFA
Portfolio Manager

Julien A. Scholnick, CFA
Portfolio Manager

Molly Schwartz, CFA
Portfolio Manager

Stephen Sibley, CFA
Portfolio Manager (SMAs)

Theresa Veres
Portfolio Manager

Bonnie M. Wongtrakool, CFA
Portfolio Manager

Rafael Zielonka, CFA
Portfolio Manager

Derivatives

Scott M. Beatty, CFA[1]
Portfolio Manager

Jim K. Huynh
Portfolio Manager

Keith A. Luna, CFA[1]
Portfolio Manager

Risk Management

Robert Gingrich, PhD
Manager of Alternatives & Derivatives Risk

Porntawee Nantamanasikarn, PhD
Portfolio Risk Manager

Product

Travis M. Carr, CFA
Product Specialist

Virgil Esguerra
Product Analyst

Douglas Wade, CFA
Product Specialist

Trading

Nicholas Mastroianni, CFA[1]
Trader

Ian J. Smith, CFA[2]
Trader

Rafael Zielonka, CFA[1]
Trader

Portfolio Analysis

Todd R. Cronin[3]
Portfolio Analyst/Trader (SMAs)

Ryan Jackson
Portfolio Analyst

Zachary Klein, CFA
Portfolio Analyst

Samantha Ritenband
Portfolio Analyst (SMAs)

John Rodli, CFA
Portfolio Analyst

Western Asset Investment Team

Investment Management Professionals

- Chief Investment Officer: S. Kenneth Leech
- Deputy CIO: Michael C. Buchanan
- 136 Investment Professionals on five continents and seven offices, as of September 30, 2022
- 24 years of average experience

Major Investment Committees

- Global Investment Strategy Committee
- Global Credit Committee
- US Broad Strategy Committee
- Global Emerging Markets Strategy Committee
- Unconstrained Asset Allocation Committee

Sector and Regional Teams

- Global credit
- Investment-grade
- High-yield
- Emerging markets
- Mortgage and consumer credit
- Long duration
- US municipal
- Liquidity
- Insurance
- US
- Europe
- UK
- Japan
- Asia
- Brazil
- Australia / New Zealand

Independent Risk Management Function

- Chief Risk Officer: Ahmet E. Kocagil
- Independent evaluation of strategies and risks
- Market and Credit Risk Committee
- 34 investment risk professionals

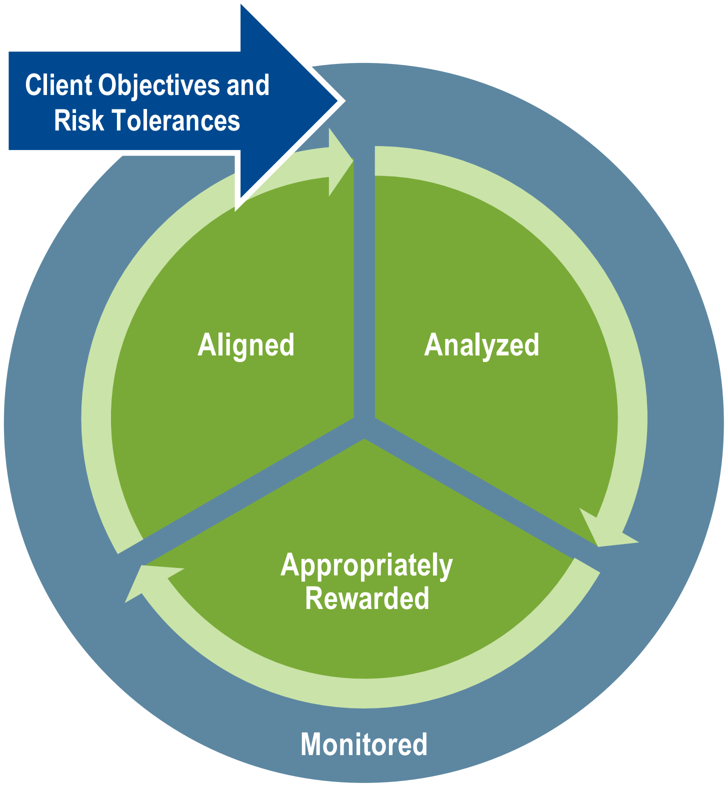
As of 30 Sep 22
[1]Dual role with Portfolio Management; [2]Dual role with Derivatives; [3]Dual role with Trading

WESTERN ASSET

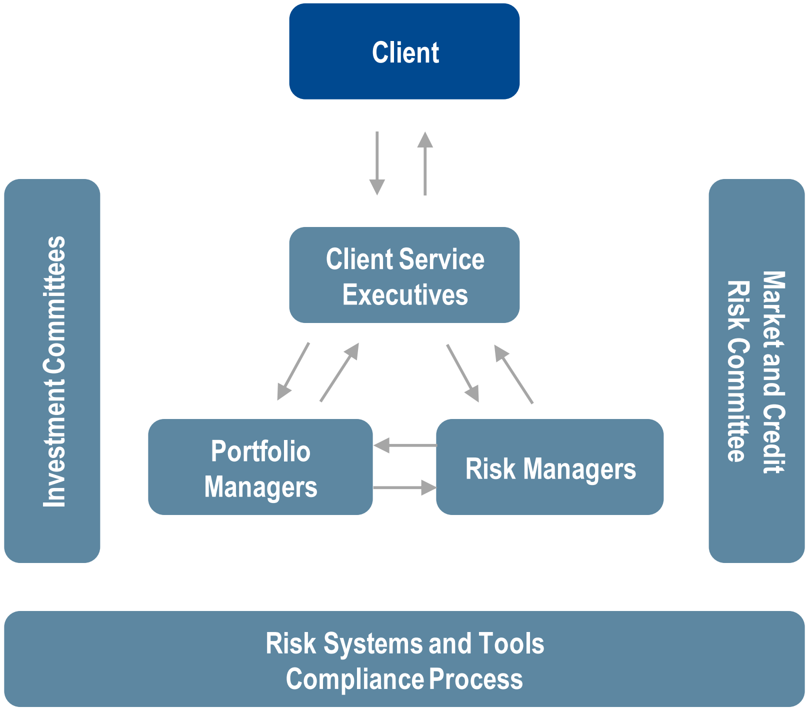
Risk Management

In our culture, effective risk management is critical to successful portfolio management.

Integrating risk management into portfolio construction and in the independent review of portfolio risks strengthens its effectiveness.



Risk management is a team effort. Robust communication and escalation procedures underpin the independence and transparency of risk management.



Source: Western Asset

Why Western Asset for Separately Managed Accounts (SMAs)?

$22.5 billion of SMA assets under management[1] with long-term track records

SMA suite of offerings allows clients to invest in domestic and global fixed-income markets

- Municipals
  - Short-Term Muni
  - Current Market Muni
  - Municipal Bond Ladders
  - Municipal Impact strategies
  - Municipal Opportunities
  - Managed Municipals
  - Tax-managed strategies
  - Custom portfolios
- Corporates
  - Enhanced Cash
  - Government Securities Management (GSM)
  - Active Bond strategies
  - Core and Core Plus Portfolios
  - Ladders Portfolios
  - Custom portfolios

Incorporation of Western Asset's macro themes within an SMA portfolio

Experienced team across credit, quantitative research and sector-dedicated risk analysts

Analytics and systems tailored to provide scale and reporting to large numbers of SMA portfolios

Flexibility to manage to a variety of custom, individual, client-driven preferences (e.g., state preferences, income considerations)

Access to inventory and competitively-priced securities driven by activity in market

Tax-efficient processes consider ability to harvest gains/losses as beneficial for the client

Ongoing credit analysis of all positions by Western Asset's Research Team

The listed products may not be available at all broker/dealer firms.
[1]Assets under management in USD (billions) as of 30 Sep 22.

WESTERN ASSET

Western Asset Enhanced Cash Portfolios

IMPORTANT INFORMATION:

RISKS:

All investments involve risk, including the loss of principal, and there is no guarantee that investment objectives will be met.

Fixed income securities are subject to interest rate and credit risk, which is a possibility that the issuer of a security will be unable to make interest payments and repay the principal on its debt. As interest rates rise, the price of fixed income securities falls.

Investments may also be made in mortgage-backed, asset-backed securities and taxable municipal securities. Asset-backed securities generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments. Mortgage-backed securities involve additional risk over more traditional fixed-income investments, including: interest rate risk, implied call and extension risks; and the possibility of premature return of principal due to mortgage prepayment, which can reduce expected yield and lead to price volatility.

Foreign securities, where permitted, are subject to the additional risks of fluctuations in foreign exchange rates, changes in political and economic conditions, foreign taxation, and differences in auditing and financial standards. These risks are magnified in the case of investments in emerging markets.

U.S. Treasuries are direct debt obligations issued and backed by the "full faith and credit" of the U.S. government. The U.S. government guarantees the principal and interest payments on U.S. Treasuries when the securities are held to maturity. Unlike U.S. Treasuries, debt securities issued by the federal agencies and instrumentalities and related investments may or may not be backed by the full faith and credit of the U.S. government. Even when the U.S. government guarantees principal and interest payments on securities, this guarantee does not apply to losses resulting from declines in the market value of these securities.

For tax-exempt securities, certain investors may be subject to the Federal Alternative Minimum Tax, and state and local taxes may apply. Capital gains, if any, are fully taxable. Depends on individual tax situation.

TAX:

Franklin Templeton, its affiliates, and its employees are not in the business of providing tax or legal advice to taxpayers. These materials and any tax-related statements are not intended or written to be used, and cannot be used or relied upon, by any such taxpayer for the purpose of avoiding tax penalties or complying with any applicable tax laws or regulations. Tax-related statements, if any, may have been written in connection with the "promotion or marketing" of the transaction(s) or matter(s) addressed by these materials, to the extent allowed by applicable law. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

BENCHMARK:

The Bloomberg 1-3 Year Government Bond Index is a broad measure of the performance of shortterm government bonds. The index is not managed and not subject to management or brokerage commission. Income from coupon is subject to reinvestment. The FTSE 3-Month U.S. Treasury Bill Index is an index based upon the average monthly yield of the 90-day Treasury bills. U.S. Treasury bills are secured by the "full faith and credit" of the U.S. government and offer a fixed rate of return. The portfolio composition typically varies from that of the above-noted, unmanaged indices. Investors cannot invest directly in an index and unmanaged index returns do not reflect any fees, expenses or sales charges.

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Western Asset Enhanced Cash Portfolios

Overview

- The Enhanced Cash SMA invest in short-term investment-grade securities with a maximum portfolio duration of two years or less and benchmarked to a variety of short-term indexes, such as the FTSE 3-Month U.S. Treasury Bill and the Bloomberg 1-3 Year Government Bond Index

Philosophy

- We believe that active portfolio management within a low volatility corporate liquidity framework can help preserve capital, maintain liquidity, and maximize total return

Objectives

- The strategy seeks total return superior to money market investment

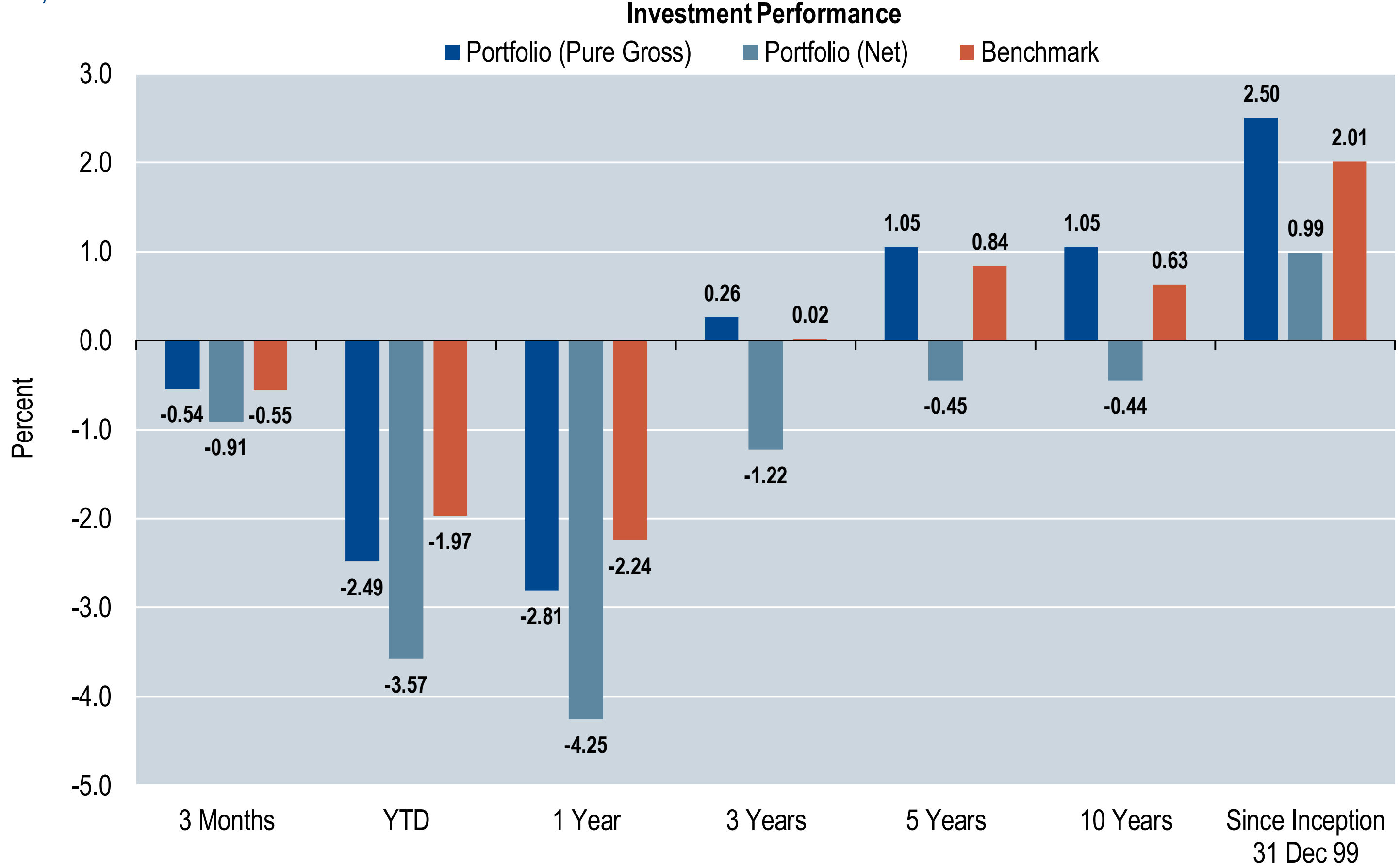
Client-focused solutions

- Portfolios can be tailored to adhere to investment policy statements, client objectives and/or cash flow needs

Investment Results

Western Asset Enhanced Cash SMA Portfolios vs. 50% FTSE 3-Month U.S. Treasury Bill Index and 50% Bloomberg 1-3 Year Government Bond Index

September 30, 2022



Source: Franklin Templeton

Past performance is not a guarantee of future results. Please see GIPS® Report in the Appendix for important additional information regarding the portfolio performance shown and for effects of fees.

Management and performance of individual accounts may vary for reasons that include the existence of different implementation practices and model requirements in different investment programs. Pure gross of fee returns do not reflect the deduction of any expenses, including transaction costs. Net performance includes the deduction of a 1.5% annual wrap fee, which is the maximum anticipated wrap fee for fixed income portfolios. Actual fees may vary. For fee schedules, contact your financial professional, or if you enter into an agreement directly with Legg Mason Private Portfolio Group ("LMPPG"), refer to LMPPG's Form ADV disclosure document. Returns reflect the reinvestment of dividends and other earnings. All performance is reported in US dollars. Returns for periods greater than one year are annualized.

Please see Definition of Terms and Performance Disclosures for more information.

City of South Pasadena

The information contained is for illustrative purposes only and is being provided to you at your specific request to illustrate how the portfolio manager manages the strategy/portfolio discussed. Individual client accounts in the program may differ. Information shown is not on behalf of an actual Western Asset managed portfolio.

Characteristics

City of South Pasadena vs. Bloomberg 1-5 Year Government Bond Index

November 28, 2022

Client Account			
Sector	**% Held**		
USD	100.00	Communications	0.98
Cash	0.39	Consumer Cyclical	3.21
U.S. Government	71.66	Consumer Non-Cyclical	3.52
Treasury	71.66	Technology	2.46
Nominal Pay	71.66	Transportation	1.49
Agency	0.00	Finance	13.01
Credit	27.94	Banking	7.83
Corporate	27.94	Brokerage/Asset Managers/Exchanges	1.98
Industrial	14.94	Insurance	3.2
Capital Goods	3.27		

Benchmark	
Sector	**% Held**
USD	100.00
Cash	0.00
U.S. Government	100.00
Treasury	96.00
Nominal Pay	96.00
Agency	4.00

Source: BondEdge, Western Asset

Swaps are not included in maturity years, effective duration years and coupon distribution. Forward Rate Agreements are excluded from all categories except sector.

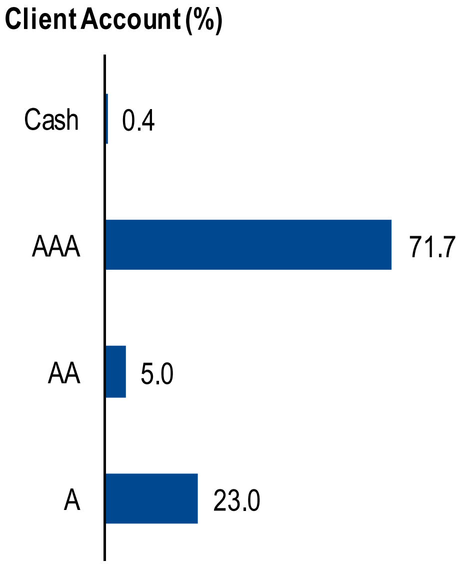
This information does not constitute, and under no circumstances is to be construed as, investment advice or recommendations with respect to the securities listed and should not be the sole basis for any investment decision. The above summary/prices/quotes/statistics have been obtained from sources we believe to be reliable, but we cannot guarantee its accuracy or completeness. Your Client Statement is the official record of your account. Therefore, if there are any discrepancies between this report and your client statement, you should rely upon the Client Statement and call your financial professional with any questions.

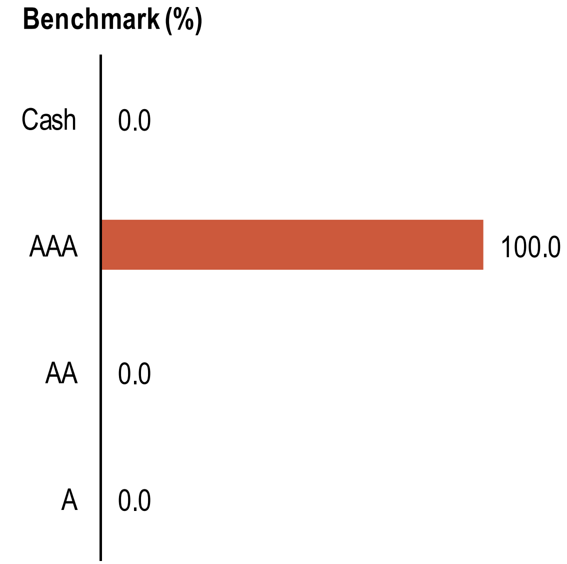
Past investment results are not indicative of future investment results. *Please see Definition of Terms and Performance Disclosures for more information.*

Characteristics

City of South Pasadena vs. Bloomberg 1-5 Year Government Bond Index

November 28, 2022





Client Account	
Duration (yrs)	1.61
Average Maturity (yrs)	1.70
Yield to Worst (%)	4.42

Benchmark Characteristics	
Duration (yrs)	2.59
Average Maturity (yrs)	2.74
Yield to Worst (%)	4.35

Source: BondEdge, Western Asset
Swaps are not included in maturity years, effective duration years and coupon distribution. Forward Rate Agreements are excluded from all categories except sector.
Credit quality is a measure of a bond issuer's ability to repay interest and principal in a timely manner. The credit ratings shown are based on each portfolio security's rating as provided by one of the following Nationally Recognized Statistical Rating Organizations ("NRSRO"): Standard and Poor's ("S&P"), Moody's Investors Service ("Moody's"), Fitch Ratings, Ltd. In the event a portfolio security is rated by more than one NRSRO, the higher rating is shown.In the case where a security is not rated by an NRSRO, these are listed as "Non Rated". The credit quality of the investments in the Portfolio does not apply to the stability or safety of the Portfolio. These ratings may change over time. The Portfolio itself has not been rated by an NRSRO.
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City of South Pasadena Holdings

Holdings (1/3)

City of South Pasadena

November 28, 2022

Sector 1	Par (000)	Identifier	Issuer Name	Coupon	Maturity	Moody's	S&P	Price	Curr Yield	YTW	YTM	Avg Life	Eff Dur (Par)	Mkt Value	% Held (MV)
CASH	**185**			**3.98**	**0.08**			**100.00**	**3.98**	**3.97**	**3.97**	**0.08**	**0.08**	**185,000**	**0.39**
	185	000000CM9	CASH & EQUIVALENTS	3.98	12/28/2022	Aaa	AAA	100.00	3.98	3.97	3.97	0.08	0.08	185,000	0.39
TSY	**35,551**			**1.05**	**1.65**			**94.48**	**1.11**	**4.32**	**4.32**	**1.65**	**1.57**	**33,682,953**	**71.66**
	2,000	912796X61	UNITED STATES TREAS BILL	0.00	12/08/2022	TSY	TSY	99.91	0.00	3.29	3.29	0.03	0.03	1,998,200	4.25
	2,500	912796XR5	UNITED STATES TREAS BILL	0.00	01/12/2023	TSY	TSY	99.53	0.00	3.84	3.84	0.12	0.12	2,488,225	5.29
	2,246	912828P38	UNITED STATES TREAS NTS	1.75	01/31/2023	TSY	TSY	99.60	1.76	4.07	4.07	0.17	0.17	2,249,721	4.79
	2,648	912828S35	UNITED STATES TREAS NTS	1.38	06/30/2023	TSY	TSY	98.11	1.40	4.67	4.67	0.58	0.57	2,612,787	5.56
	1,471	91282CDA6	UNITED STATES TREAS BDS	0.25	09/30/2023	TSY	TSY	96.30	0.26	4.81	4.81	0.83	0.82	1,417,184	3.02
	1,065	91282CDE8	UNITED STATES TREAS NTS	4.21	10/31/2023	TSY	TSY	100.08	4.21	4.30	4.30	0.92	-0.02	1,069,341	2.28
	2,133	9128285P1	UNITED STATES TREAS NTS	2.88	11/30/2023	TSY	TSY	98.17	2.93	4.76	4.76	1.00	0.96	2,124,335	4.52
	2,036	912828W71	UNITED STATES TREAS NTS	2.13	03/31/2024	TSY	TSY	96.61	2.20	4.77	4.77	1.33	1.29	1,973,972	4.20
	2,888	912828X70	UNITED STATES TREAS NTS	2.00	04/30/2024	TSY	TSY	96.24	2.08	4.77	4.77	1.42	1.37	2,783,821	5.92
	2,753	91282CDB4	UNITED STATES TREAS NTS	0.63	10/15/2024	TSY	TSY	93.05	0.67	4.53	4.53	1.92	1.83	2,563,664	5.45
	2,539	912828ZF0	UNITED STATES TREAS NTS	0.50	03/31/2025	TSY	TSY	91.58	0.55	4.32	4.32	2.33	2.27	2,327,325	4.95
	2,320	912828ZW3	UNITED STATES TREAS NTS	0.25	06/30/2025	TSY	TSY	90.36	0.28	4.22	4.22	2.58	2.52	2,098,616	4.46
	2,077	91282CAZ4	UNITED STATES TREAS NTS	0.38	11/30/2025	TSY	TSY	89.27	0.42	4.22	4.22	3.00	2.91	1,857,907	3.95
	2,215	91282CBH3	UNITED STATES TREAS NTS	0.38	01/31/2026	TSY	TSY	88.77	0.42	4.19	4.19	3.17	3.08	1,968,875	4.19
	2,062	91282CBT7	UNITED STATES TREAS NTS	0.75	03/31/2026	TSY	TSY	89.48	0.84	4.16	4.16	3.33	3.22	1,847,584	3.93
	2,598	91282CCW9	UNITED STATES TREAS NTS	0.75	08/31/2026	TSY	TSY	88.40	0.85	4.12	4.12	3.75	3.61	2,301,397	4.90
IND	**7,267**			**2.64**	**1.76**			**96.25**	**2.74**	**4.64**	**4.64**	**1.78**	**1.66**	**7,020,931**	**14.94**
	353	023135AW6	AMAZON COM INC	2.40	02/22/2023	A1	AA	99.51	2.41	4.48	4.48	0.25	0.23	353,544	0.75

Source: BondEdge, Western Asset
Current Yield is defined as the coupon of a bond divided by its price.
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Holdings (2/3)

City of South Pasadena

November 28, 2022

Sector 1	Par (000)	Identifier	Issuer Name	Coupon	Maturity	Moody's	S&P	Price	Curr Yield	YTW	YTM	Avg Life	Eff Dur (Par)	Mkt Value	% Held (MV)
	470	369550BD9	GENERAL DYNAMICS CORP	3.38	05/15/2023	A3	A-	99.40	3.40	4.69	4.69	0.50	0.45	467,753	1.00
	466	12189LAQ4	BURLINGTON NORTHN SANTA FE	3.85	09/01/2023	A3	AA-	99.32	3.88	4.76	4.76	0.75	0.72	467,186	0.99
	237	17275RBH4	CISCO SYS INC	2.20	09/20/2023	A1	AA-	98.18	2.24	4.51	4.51	0.83	0.79	233,662	0.50
	373	24422EUM9	DEERE JOHN CAPITAL CORP	3.65	10/12/2023	A2	A	99.01	3.69	4.82	4.82	0.83	0.84	371,043	0.79
	469	14912L5X5	CATERPILLAR FINL SVCS MTNS B	3.75	11/24/2023	A2	A	98.89	3.79	4.92	4.92	1.00	0.96	463,971	0.99
	237	88579YBB6	3M CO	3.25	02/14/2024	A1	A+	98.19	3.31	4.80	4.80	1.25	1.15	234,931	0.50
	468	20030NCR0	COMCAST CORP NEW	3.70	04/15/2024	A3	A-	98.47	3.76	4.85	4.85	1.42	1.30	462,927	0.98
	478	882508BB9	TEXAS INSTRS INC	2.63	05/15/2024	Aa3	A+	97.13	2.70	4.68	4.68	1.50	1.40	464,725	0.99
	242	69371RQ25	PACCAR FINANCIAL CORP	2.15	08/15/2024	A1	A+	95.35	2.26	5.01	5.01	1.75	1.64	232,243	0.49
	241	911312BT2	UNITED PARCEL SVCS INC	2.20	09/01/2024	A2	A	95.69	2.30	4.78	4.78	1.75	1.68	231,889	0.49
	390	191216CL2	COCA COLA CO	1.75	09/06/2024	A1	A+	95.69	1.83	4.30	4.30	1.75	1.71	374,757	0.80
	483	713448EQ7	PEPSICO INC	2.25	03/19/2025	A1	A+	94.97	2.37	4.57	4.57	2.33	2.19	460,764	0.98
	487	87612EBL9	TARGET CORP	2.25	04/15/2025	A2	A	94.83	2.37	4.57	4.57	2.42	2.26	463,116	0.99
	472	437076BK7	HOME DEPOT INC	3.35	09/15/2025	A2	A	97.00	3.45	4.50	4.50	2.83	2.53	461,032	0.98
	513	110122DN5	BRISTOL-MYERS SQUIBB CO	0.75	11/13/2025	A2	A+	89.64	0.84	4.53	4.53	3.00	2.85	459,988	0.98
	403	742718FP9	PROCTER & GAMBLE CO	1.00	04/23/2026	Aa3	AA-	89.49	1.12	4.36	4.36	3.42	3.26	361,045	0.77
	485	458140AU4	INTEL CORP	2.60	05/19/2026	A1	A+	94.03	2.77	4.47	4.47	3.50	3.22	456,356	0.97
FIN	**6,302**			**2.90**	**1.94**			**96.33**	**3.02**	**4.75**	**4.75**	**1.95**	**1.82**	**6,113,635**	**13.01**
	383	06406RAE7	BANK NEW YORK MELLON CORP	2.95	01/29/2023	A1	A	99.72	2.96	4.57	4.57	0.17	0.17	385,666	0.82
	374	857477AM5	STATE STR CORP	3.70	11/20/2023	A1	A	98.78	3.75	5.00	5.00	1.00	0.95	369,733	0.79
	468	05531FBF9	TRUIST FINL CORP	3.75	12/06/2023	A3	A-	98.98	3.79	4.78	4.78	1.00	0.96	471,625	1.00

Source: BondEdge, Western Asset

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WESTERN ASSET

Holdings (3/3)

City of South Pasadena

November 28, 2022

Sector 1	Par (000)	Identifier	Issuer Name	Coupon	Maturity	Moody's	S&P	Price	Curr Yield	YTW	YTM	Avg Life	Eff Dur (Par)	Mkt Value	% Held (MV)
	467	09247XAL5	BLACKROCK INC	3.50	03/18/2024	Aa3	AA-	98.45	3.56	4.73	4.73	1.33	1.25	462,949	0.98
	235	59156RBH0	METLIFE INC	3.60	04/10/2024	A3	A-	98.23	3.67	4.96	4.96	1.33	1.31	231,959	0.49
	470	00440EAR8	CHUBB INA HLDGS INC	3.35	05/15/2024	A3	A	97.82	3.43	4.91	4.91	1.50	1.40	460,332	0.98
	598	91324PDR0	UNITEDHEALTH GROUP INC	2.38	08/15/2024	A3	A+	96.11	2.47	4.77	4.77	1.75	1.64	578,777	1.23
	610	693475AY1	PNC FINL SVCS GROUP INC	2.20	11/01/2024	A3	A-	94.97	2.32	4.97	4.97	1.92	1.84	580,311	1.23
	504	91159HHZ6	US BANCORP	1.45	05/12/2025	A2	A+	92.45	1.57	4.75	4.75	2.42	2.35	466,248	0.99
	827	46625HMN7	JPMORGAN CHASE & CO	3.90	07/15/2025	A1	A-	98.51	3.96	4.51	4.51	2.67	2.31	826,585	1.76
	585	06051GFS3	BK OF AMERICA CORP	3.88	08/01/2025	A2	A-	98.12	3.95	4.63	4.63	2.67	2.47	581,352	1.24
	257	74432QCH6	PRUDENTIAL FINL INC	1.50	03/10/2026	A3	A	90.10	1.67	4.79	4.79	3.25	3.11	232,392	0.49
	524	808513BR5	CHARLES SCHWAB CORP	1.15	05/13/2026	A2	A	88.83	1.30	4.69	4.69	3.50	3.30	465,705	0.99
Total:	**49,305**			**1.53**	**1.70**			**95.00**	**1.62**	**4.42**	**4.42**	**1.70**	**1.61**	**47,002,519**	**100.00**

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WESTERN ASSET

Appendix

Performance Disclosure

December 31, 2021

WESTERN ASSET ENHANCED CASH

Reporting Currency: USD

Strategy Inception Date: January 2000 | **Composite Creation Date: January 2006**

Period	Total Return (Net)	Total Return (*Pure Gross)	Benchmark Return	Benchmark Return	Number of Portfolios	% of Bundled Fee Portfolios in the Composite	Composite Dispersion	Composite 3 Yr. St. Dev.	Benchmark 3 Yr. St. Dev.	Total Composite Assets at End of Period (USD million)	Percentage of Firm Assets	Total Firm Assets at End of Period (USD million)
2021	-1.62%	-0.14%	-0.28%		5	100	n/m	1.16%	0.69%	113.1	0.02%	488,490.0
2020	1.33%	2.85%	1.86%		<5	100	n/m	1.11%	0.65%	107.5	0.02%	479,809.9
2019	1.86%	3.39%	2.92%		<5	100	n/m	0.60%	0.54%	56.6	0.01%	455,275.9
2018	0.26%	1.77%	1.72%		<5	100	n/m	0.62%	0.47%	50.6	0.01%	424,136.1
2017	-0.24%	1.25%	0.64%		<5	100	n/m	0.64%	0.38%	64.9	0.01%	436,309.0
2016	-0.12%	1.38%	0.57%		<5	100	n/m	0.65%	0.38%	64.2	0.02%	419,206.9
2015	-0.66%	0.83%	0.30%		<5	100	n/m	0.65%	0.29%	92.0	0.02%	433,747.1
2014	-0.58%	0.91%	0.34%		<5	100	n/m	0.71%	0.22%	91.4	0.02%	466,035.9
2013	-0.81%	0.68%	0.21%		<5	100	n/m	0.80%	0.25%	100.8	0.02%	451,631.8
2012	0.65%	2.16%	0.29%		<5	100	n/m	0.75%	0.36%	100.3	0.02%	461,890.9

***Pure gross of fee returns do not reflect the deduction of any expenses, including transaction costs, and are presented as supplemental to the net of fee returns.**
n/m - Information is not statistically meaningful due to an insufficient number of portfolios in the composite for the entire year.

Composite Information:
Western Asset - Enhanced Cash portfolios are discretionary fixed income portfolios that offer - to individual and taxable institutional investors - customized taxable approach for a client's core or excess cash not requiring daily liquidity. Western Asset performs both duration and yield curve analysis to determine a maturity position and structure it believes will provide total returns superior to money market investments. Western Asset may invest Enhanced Cash portfolios in dollar denominated U.S. Treasury or Agency securities, corporate obligations including commercial paper, corporate bonds, Eurobonds and Yankee debt, asset-backed securities, non-U.S. sovereign debt, and U.S. Agency collateralized mortgage obligations. The composite is comprised of accounts that are separately managed accounts (SMAs) managed in accordance with the strategy. The composite employs a 10% significant cash flow policy.
Benchmark Information:
For comparison purposes, composite returns are shown against a blend index of 50% FTSE 3-month Treasury Bill Index and 50% Bloomberg U.S. Government Bond Index, 1-3 Year, rebalanced monthly.

WESTERN ASSET

Performance Disclosure

December 31, 2021

Compliance Statement:

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Input and Calculation Data:

The current fee schedule is 1.50% on all assets. Net returns are calculated by deducting the anticipated maximum annual bundled fee applied on a monthly basis from the "pure" gross monthly return. The bundled fee includes all charges for trading costs, portfolio management, custody, and other administrative fees. Bundled fees may vary across different financial firms and across different accounts based upon account size and other factors. Dispersion is calculated using the asset-weighted standard deviation of annual gross returns of those portfolios that were included in the composite for the entire year (equal-weighted prior to 2014). Periods with five or fewer accounts are not statistically representative and are not presented. The three-year annualized ex-post standard deviation measures the variability of the composite and the benchmark returns over the preceding 36-month period. Past investment results are not indicative of future investment results. Information contained herein is believed to be accurate, but cannot be guaranteed. Employees and/or clients of Western Asset may have a position in the securities mentioned. A list of composite and limited distribution pooled fund descriptions and a list of broad distribution pooled funds is available upon request. Policies for valuing investments, calculating performance, and preparing GIPS Reports are available upon request.

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2022-10-31

Global Investment Manager Analysis | November 04, 2021

Approved List Report

Western Asset Management Enhanced Cash Portfolio

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Highlights

- Global Investment Manager Analysis (GIMA) believes the Western Asset Management Enhanced Cash Portfolios strategy may be appropriate for clients seeking an enhanced cash portfolio that typically invests in US Treasuries, US agencies, corporates, and asset-backed securities. The portfolio may also invest in Treasury Inflation Protected Securities (TIPS). The corporate allocation is typically greater than 80% of total portfolio assets.
- The portfolio seeks to add value through sector rotation, duration, and yield curve positioning. The strategy's duration generally ranges between one and two years, longer than some peers in the ultra-short category. Asset class exposure is not tied to benchmark weights, and will vary contingent upon relative value in the market.
- Investors should be aware that this portfolio should not be used as a substitute for money market funds due to the longer duration profile.
- On July 31, 2020, Franklin Templeton announced that it has completed its previous announced agreement to purchase Legg Mason, Inc. Western will continue to operate the organization as an independent, autonomous affiliate.

Performance Expectations

- GIMA typically compares ultra-short strategies to the FTSE 3-Month T-Bill Index. Western uses 50% the FTSE 3-Month T-Bill Index and 50% the Bloomberg 1-3 Year Government Index.
- We anticipate low correlation with the benchmark and high tracking error given the allocation to corporate securities.

Strategy Details

Investment Style:
Ultra-Short Term F.I.

Sub-Style:
Ultra-Short Term Fixed Income

Benchmark:
FTSE 3-Month T-Bill Index

GIMA Status:
Approved List

Product Type:
Separately Managed Account
http://www.westernasset.com

Strategy Description

The strategy is an ultra-short fixed income strategy that typically invests in US Treasuries, US agencies, corporates, and asset-backed securities. Duration typically ranges 1 to 2 years. Western applies the same managed duration, relative value sector rotation and security selection style to the management of all of its fixed income mandates.

APPROVED LIST REPORT

PORTFOLIO TRAITS

PORTFOLIO TRAITS	
Range of Holdings	35 to 50
Max. Single Non-Treas Issue	Government: Unlimited; Non-Government 5%
Duration Range	+/-20% relative to the index duration.
Maturity Range	0 to 5 years
Typical Annual Turnover	50 to 100%
Invests in Derivatives	No

Source: Western

SECTORS

SECTORS	EXPECTED RANGE (%)
Treasuries/Agencies	0 to 40
Agency Mortgages	0
ABS	0 to 20
CMBS	0
US Investment Grade Corp	80 to 100
Cash (& Equivalents)	0 to 10

Source: Western

CREDIT QUALITY

CREDIT QUALITY	EXPECTED RANGE (%)
AAA	0 to 50
AA	0 to 10
A	40 to 70
BBB	15 to 30
BB	0
B	0
CCC & Below	0
Non-Rated	0

Source: Western

Disclosure Section

Definitions

FTSE 3-month T-bill Index measures monthly return equivalents of yield averages that are not marked to market. The Three-Month Treasury Bill Indexes consist of the last three three-month Treasury bill issues.

Sub-Styles: Subjective classifications designed to assist with manager selection and performance evaluation based on GIMA's understanding of a manager's long-term investment philosophy and portfolio structuring biases and techniques. At points in time managers may display attributes of other sub-style classifications, and these classifications may change due to changes in the capital markets, evolution of performance benchmarks, industry trends, or changes involving a manager's personnel or process.

Ultra-Short Term Fixed Income - portfolio comprised of fixed income securities with very short maturities, typically less than one year. The portfolios are subject to the risks associated with debt securities such as credit and interest rate risk. Portfolio duration generally ranges between 0.5 - 1.5 years. Plus sector exposure is generally less than 5%.

Glossary of Terms

Active Share – is a measure of the percentage of stock holdings in a manager's portfolio that differ from the benchmark index; Active Share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the manager's portfolio versus the weight of each holding in the benchmark index and dividing by two.

Alpha – measures the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by Beta. A positive Alpha figure indicates the portfolio has performed better than its Beta would predict. A negative Alpha indicates the portfolio's underperformance given the expectations established by the Beta. The accuracy of the Alpha is therefore dependent on the accuracy of the Beta. Alpha is often viewed as a measurement of the value added or subtracted by a portfolio's manager.

Asset-backed securities (ABS) - securities backed by a pool of assets, typically loans or accounts receivable, originated by banks, specialty finance companies, or other credit providers.

Beta – measures a portfolio's volatility relative to its benchmark. A portfolio with a Beta higher than 1.0 has historically been more volatile than the benchmark, while a portfolio with a Beta lower than 1.0 has been less volatile. The accuracy of the Beta is dependent on R-Squared.

Commercial Mortgage-Backed Security (CMBS) – mortgage-backed security that is secured by the loan on a commercial property.

Collateralized Mortgage Obligation (CMOs) – mortgage-backed security that creates separate pools of pass-through payments for different classes of bondholders with varying maturities, called tranches. The repayments from the pool of pass-through securities are used to retire the bonds in the order specified by the bonds' prospectus.

Convexity – measures the sensitivity of a bond's duration to changes in interest rates. Convexity can be positive or negative. Unlike most fixed income securities, bonds with negative convexity tend to fall in value as interest rates decline and vice versa.

Correlation – a statistical measure of how two securities move in relation to each other. This measure is often converted into what is known as correlation coefficient, which ranges between -1 and +1. Perfect positive correlation (a correlation coefficient of +1) implies that as one security moves, either up or down, the other security will move in lockstep, in the same direction. Alternatively, perfect negative correlation means that if one security moves in either direction the security that is perfectly negatively correlated will move in the opposite direction. If the correlation is 0, the movements of the securities are said to have no correlation; they are completely random. A correlation greater than 0.8 is generally described as strong, whereas a correlation less than 0.5 is generally described as weak.

Credit Quality Rating – weighted average of the assessments of credit worthiness given by credit rating agencies such as Standard & Poor's Ratings Services, Moody's Investors Service, and Fitch Ratings to bonds in the portfolio. Credit rating agencies evaluate issuers and assign ratings based of their opinions of the issuer's ability to pay interest and principal as scheduled.

Duration – quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. Generally, if interest rates rise, bond prices fall and vice versa. Longer-term bonds carry a longer or higher duration than shorter-term bonds; as such, they would be affected by changing interest rates for a greater period of time if interest rates were to increase. Consequently, the price of a long-term bond would drop significantly as compared to the price of a short-term bond.

Excess Return – represents the average quarterly total return of the portfolio relative to its benchmark. A portfolio with a positive Excess Return has on average outperformed its benchmark on a quarterly basis. This statistic is obtained by subtracting the benchmark return from the portfolio's return.

London Interbank Offered Rate (LIBOR) – is an interest rate at which banks can borrow funds, in marketable size, from other banks in the London interbank market. The LIBOR is fixed on a daily basis by the British Bankers' Association and is calculated from a filtered average of the world's most creditworthy banks' interbank deposit rates for larger loans with maturities between overnight and one full year.

Maturity – the weighted average portfolio length of time until the principal amount of a bond must be repaid.

Mortgage-backed securities (MBS) – securities backed by a mortgage loan or a pool of mortgage loans secured by real property. Investors receive payments of interest and principal that are derived from payments received on the underlying mortgage loans.

Pass-Through Security – security backed by a package of assets. A servicing intermediary collects the monthly payments from issuers and, after deducting a fee, remits or passes them through to the holders of the pass-through security.

R-Squared (R^2) – represents the percentage of the volatility of returns that is attributable to movements of the benchmark. It is a measure of "co-movement" between portfolio returns and benchmark returns. The closer the portfolio's R^2 is to 100%, the more closely the portfolio correlates to, or follows, the benchmark. Generally, highly diversified portfolios have higher R2 percentages.

Yield to Worst – is a measure of the lowest potential yield that can be received on a bond portfolio without the issuers actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the portfolio issues by calculating the returns that would be received if provisions, including prepayment, call or sinking fund, are used by the issuer.

Tracking Error – represents the Standard Deviation of the Excess Return. This provides a historical measure of the variability of the portfolio's returns relative to its benchmark. A portfolio with a low Tracking Error would have quarterly Excess Returns that have exhibited very low volatility.

Sharpe Ratio – measures a portfolio's rate of return based on the risk it assumed and is often referred to as its risk-adjusted performance. Using Standard Deviation and returns in excess of the returns of T-bills, it determines reward per unit of risk. This measurement can help determine if the portfolio is reaching its goal of increasing returns while managing risk.

Standard Deviation – quantifies the volatility associated with a portfolio's returns. The statistic measures the variation in returns around the mean return. Unlike Beta, which measures volatility relative to the aggregate market, Standard Deviation measures the absolute volatility of a portfolio's return.

Important Disclosures

Report for Use Only in Investment Advisory Programs

This report is only to be used in Morgan Stanley Wealth Management investment advisory programs and not in connection with brokerage accounts.

The Global Investment Manager Analysis (GIMA) services Only Apply to Certain Investment Advisory Programs

GIMA evaluates certain investment products for the purposes of some – but not all – of Morgan Stanley Smith Barney LLC's investment advisory programs (as described in more detail in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management). If you do not invest through one of these investment advisory programs, Morgan Stanley Wealth Management is not obligated to provide you notice of any GIMA status changes even though it may give notice to clients in other programs.

Focus List, Approved List and Tactical Opportunities List; Watch Policy

GIMA uses two methods to evaluate investment products in applicable advisory programs: Focus (and investment products meeting this standard are described as being on the Focus List) and Approved (and investment products meeting this standard are described as being on the Approved List). In general, Focus entails a more thorough evaluation of an investment product than Approved. Sometimes an investment product may be evaluated using the Focus List process but then placed on the Approved List instead of the Focus List. Investment products may move from the Focus List to the Approved List, or vice versa. GIMA may also determine that an investment product no longer meets the criteria under either process and will no longer be recommended in investment advisory programs (in which case the investment product is given a "Not Approved" status).

GIMA has a 'Watch" policy and may describe a Focus List or Approved List investment product as being on "Watch" if GIMA identifies specific areas that (a) merit further evaluation by GIMA and (b) may, but are not certain to, result in the investment product becoming "Not Approved." The Watch period depends on the length of time needed for GIMA to conduct its evaluation and for the investment manager or fund to address any concerns. GIMA may, but is not obligated to, note the Watch status in this report with a "W" or "Watch" next to the "Status" on the cover page.

Certain investment products on either the Focus List or Approved List may also be recommended for the Tactical Opportunities List based in part on tactical opportunities existing at a given time. The investment products on the Tactical Opportunities List change over time.

For more information on the Focus List, Approved List, Tactical Opportunities List and Watch processes, please see the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management. Your Financial Advisor or Private Wealth Advisor can also provide upon request a copy of a publication entitled "GIMA at a Glance".

No Obligation to Update

Morgan Stanley Wealth Management has no obligation to update you when any information or opinion in this report changes.

Strategy May Be Available as a Separately Managed Account or Mutual Fund

Strategies are sometimes available in Morgan Stanley Wealth Management investment advisory programs both in the form of a separately managed account ("SMA") and a mutual fund. These may have different expenses and investment minimums. Your Financial Advisor or Private Wealth Advisor can provide more information on whether any particular strategy is available in more than one form in a particular investment advisory program.

Morgan Stanley or Executing Sub-Managers, as applicable, in some of Morgan Stanley's Separately Managed Account ("SMA") programs may effect transactions through broker-dealers other than Morgan Stanley or our affiliates. In such instance, you may be assessed additional costs by the other firm in addition to the Morgan Stanley and Sub-Manager fees. Those costs will be included in the net price of the security, not separately reported on trade confirmations or account statements. Certain Sub-Managers have historically directed most, if not all, of their trades to outside firms. Information provided by Sub-Managers concerning trade execution away from Morgan Stanley is summarized at: www.morganstanley.com/wealth/investmentsolutions/pdfs/adv/sotresponse.pdf. For more information on trading and costs, please refer to the ADV Brochure for your program(s), available at www.morganstanley.com/ADV, or contact your Financial Advisor / Private Wealth Advisor.

<u>Consider Your Own Investment Needs</u>

This report is not intended to be a client specific analysis or recommendation, an offer to participate in any investment, or a recommendation to buy, hold or sell securities (includes securities of Morgan Stanley, and/or their affiliates if shown in this report). Do not use this report as the sole basis for investment decisions. Do not select an asset class or investment product based on performance alone. Consider all relevant information, including your existing portfolio, investment objectives, risk tolerance, liquidity needs and investment time horizon.

<u>Performance and Other Portfolio Information</u>

General

Past performance does not guarantee future results. There is no guarantee that this investment strategy will work under all market conditions. As a result of recent market activity, current performance may vary from the performance referenced in this report.

For mutual funds, the investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. To obtain performance information, current to the most recent month-end, please contact the fund directly at the website set out on the cover page of this report.

Benchmark index

Depending on the composition of your account and your investment objectives, any indices shown in this report may not be an appropriate measure for comparison purposes and are therefore presented for illustration only.

Indices are unmanaged. They do not reflect any management, custody, transaction or other expenses, and generally assume reinvestment of dividends, accrued income and capital gains. Past performance of indices does not guarantee future results. You cannot invest directly in an index.

Performance of indices may be more or less volatile than any investment product. The risk of loss in value of a specific investment (such as with an investment manager or in a fund) is not the same as the risk of loss in a broad market index. Therefore, the historical returns of an index will not be the same as the historical returns of a particular investment product.

Other data

Portfolio analysis may be based on information on less than all of the securities held in the portfolio. For equity portfolios, the analysis typically reflects securities representing at least 95% of portfolio assets. This may differ for other strategies, including those in the fixed income and specialty asset classes, due to availability of portfolio information.

Other data in this report is accurate as of the date this report was prepared unless stated otherwise. Data in this report may be calculated by the investment manager, Morgan Stanley Wealth Management or a third party service provider, and may be based on a representative account or a composite of accounts.

Securities holdings

Holdings are subject to change daily, so any securities discussed in this report may or may not be included in your portfolio if you invest in this investment product. Your portfolio may also include other securities in addition to or instead of any securities discussed in this report. Do not assume that any holdings mentioned were, or will be, profitable.

<u>Sources of Data</u>

Material in this report has been obtained from sources that we believe to be reliable, but we do not guarantee its accuracy, completeness or timeliness. Third party data providers make no warranties or representations relating to the accuracy, completeness or timeliness of the data they provide and are not liable for any damages relating to this data.

<u>Asset Class and Other Risks</u>

Investing in ***stocks***, ***mutual funds*** and ***exchange-traded funds ("ETFs")*** entails the risks of market volatility. The value of all types of investments may increase or decrease over varying time periods. Besides the general risk of holding securities that may decline in value, ***closed-end funds*** may have additional risks related to declining market prices relative to net asset values (NAVs), active manager underperformance, and potential leverage. Some funds also invest in foreign securities, which may involve currency risk.

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which allows the issuer to retain the right to redeem the debt, fully or partially, before the scheduled maturity date. Proceeds from sales prior to maturity may be more or less than originally invested due to changes in market conditions or changes in the credit quality of the issuer

Ultra-short bond funds generally invest in fixed income securities with very short maturities, typically less than one year. They are not money market funds. While money market funds attempt to maintain a stable net asset value, an ultra-short bond fund's net asset value will fluctuate, which may result in the loss of the principal amount invested. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Treasury Inflation-protected Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

Asset-backed securities generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.

No Tax Advice

Tax laws are complex and subject to change. Morgan Stanley Smith Barney LLC ("Morgan Stanley"), its affiliates and Morgan Stanley Financial Advisors and Private Wealth Advisors do not provide tax or legal advice and are not "fiduciaries" (under ERISA, the Internal Revenue Code or otherwise) with respect to the services or activities described herein except as otherwise provided in writing by Morgan Stanley and/or as described at www.morganstanley.com/disclosures/dol. Individuals are encouraged to consult their tax and legal advisors (a) before establishing a retirement plan or account, and (b) regarding any potential tax, ERISA and related consequences of any investments made under such plan or account.

If any investments in this report are described as "tax free", the income from these investments may be subject to state and local taxes and (if applicable) the federal Alternative Minimum Tax. Realized capital gains on these investments may be subject to federal, state and local capital gains tax.

Conflicts of Interest

GIMA's goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients' assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. Separately, certain strategies managed or sub-advised by us or our affiliates, including but not limited to MSIM and Eaton Vance Management ("EVM") and its investment affiliates, may be included in your account. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA's evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS&Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts, and managers in various advisory programs. Morgan Stanley Wealth Management, managers, MS&Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account.

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WEALTH MANAGEMENT

Morgan Stanley

Monthly Perspectives

From the Global Investment Committee

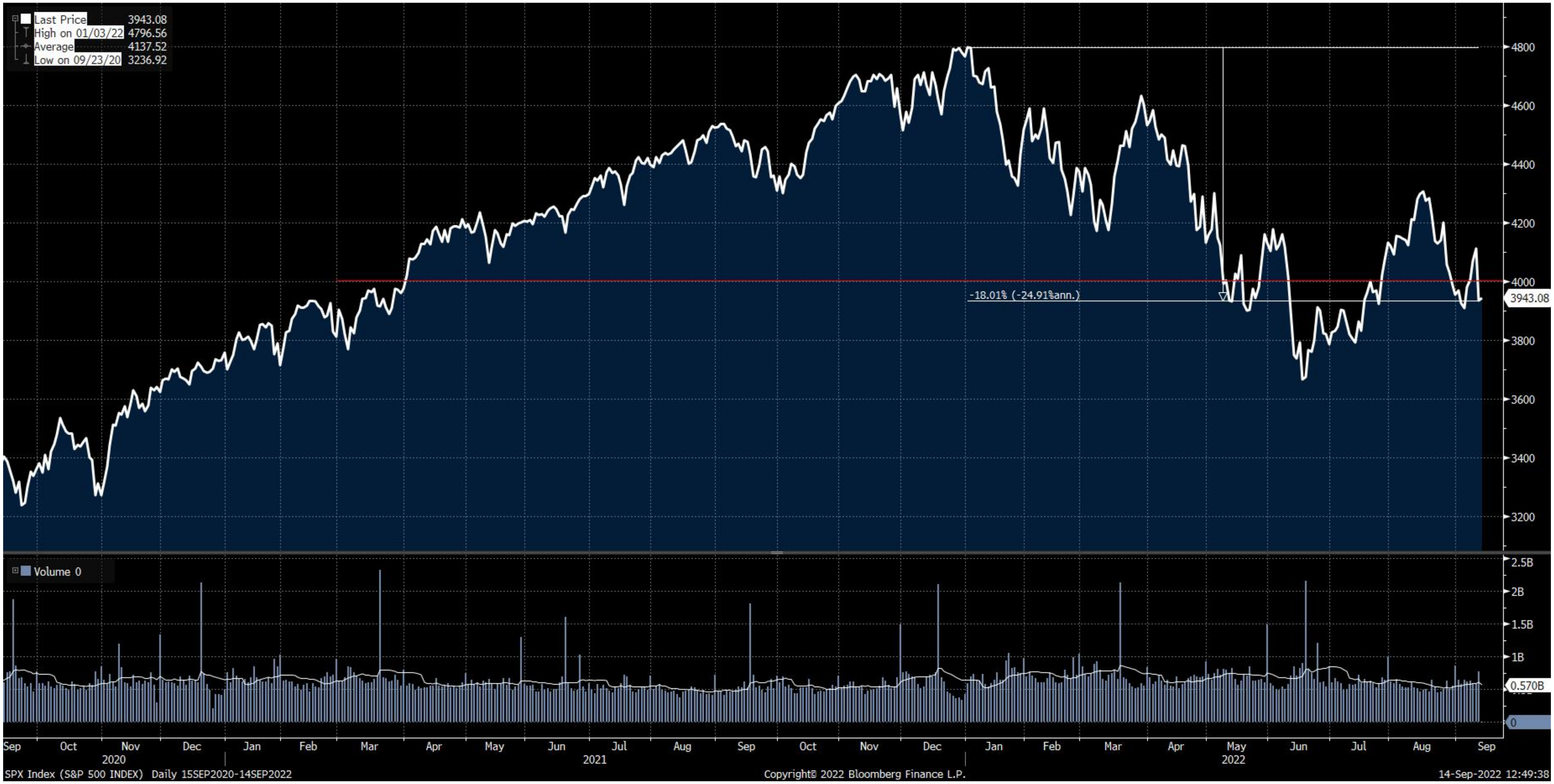
September 2022

Rates Poised to Go Higher; Earnings to Go Lower

- **After a record drawdown for the 60/40 portfolio in 1H22, investors have been impatient for a turn, yielding the "roller coaster to nowhere**." The June-to-August bear market rally, like the 1H cyclical bear market drawdown, was textbook in nature; lasting exactly 8 weeks, up 17% from the cycle low (vs. average 18% rebound) and marking more than a 50% retracement, but failing at the 200-day moving average. The original premise of the rally, that the Fed would recognize a peaking of inflation as an opportunity to pause or pivot, was completely extinguished by Chairman Powell's hawkish Jackson Hole Symposium speech where he noted that "containing inflation" might require inducing some economic pain and impact to the labor markets.
- **Data continue to suggest a longer battle on inflation, and the Fed concurs.** Since mid-August the data has confirmed Fed hawkishness as the labor market has remained resilient and August CPI inflation data proved shocking—with core up 0.6% m/m and 6.3% year over year in the face of plummeting gasoline prices and improvements in supply chains. The implication has been a 2-year Treasury that is now at 3.78%; 10-year real rates are back at 94bps and expectations are for 75bps of hikes in the September 21-22 meeting. Furthermore, the Fed Funds futures curve is up and to the right meaning estimates of cycle terminal rates are now up through 4.3% with cuts still priced by end 2023. This has created huge valuation headwinds for high multiple stocks.
- **Fed policy operates with a lag; the next shoe to drop is earnings.** Consensus estimates for full-year 2022 and 2023 have remained relatively resilient, helping fuel the more bullish narrative. While we are not calling for an economic recession in 2023 given the strength of the labor market and likely continued momentum for capital spending, we do see a potential profits recession and believe that investors are underestimating the impact of the goods/services mix shift, the steepness of negative operating leverage, the headwinds from a 20-year high in the US dollar and the potential loss of price power (lower inflation) which has been enhancing nominal results (profits are in nominal dollars!). Mike Wilson recently cut his S&P 500 estimates for 2022 and 2023 to $220/sh and $212/share, respectively.
- **US Dollar strength increasingly a risk.** US dollar strength has helped the Fed in the short term, taming inflation in large part by helping crush commodity prices, which are priced in dollars. But dollar strength versus most other majors is getting extreme with the euro trading below parity (2002 low), pound sterling at a 1985 low, and a yen at 1997 lows. This level of dispersion in the past has caused instability and potential policy intervention, a scenario the market is not positioned for given the skewing of long dollar bets in the derivatives markets.
- **Hotter but shorter cycle is playing out even faster. Now labor market holds the key.** This entire COVID recession and V-shaped recovery has been one of the fastest on record. In fact, based on the data it now looks like we are already late cycle. This late cycle has been confirmed by the very defensive leadership exhibited within equity markets, suggesting we avoid "Boom/Bust". Furthermore, consumption likely will not go negative if people still have jobs.
- **The year of the stock picker.** With tightening financial conditions and slowing growth making this a much more difficult year for stocks, investors are going to have to be better stock pickers to generate strong returns. The high dispersion between stocks suggests that opportunity is available, if difficult to find in the current environment. We are focused on companies with high operational efficiency and earnings stability in a world of higher inflation and cost of capital. This means low capex, low inventory/sales growth and low labor costs. We remain overweight health care, energy, financials, materials, defense and some consumer names.

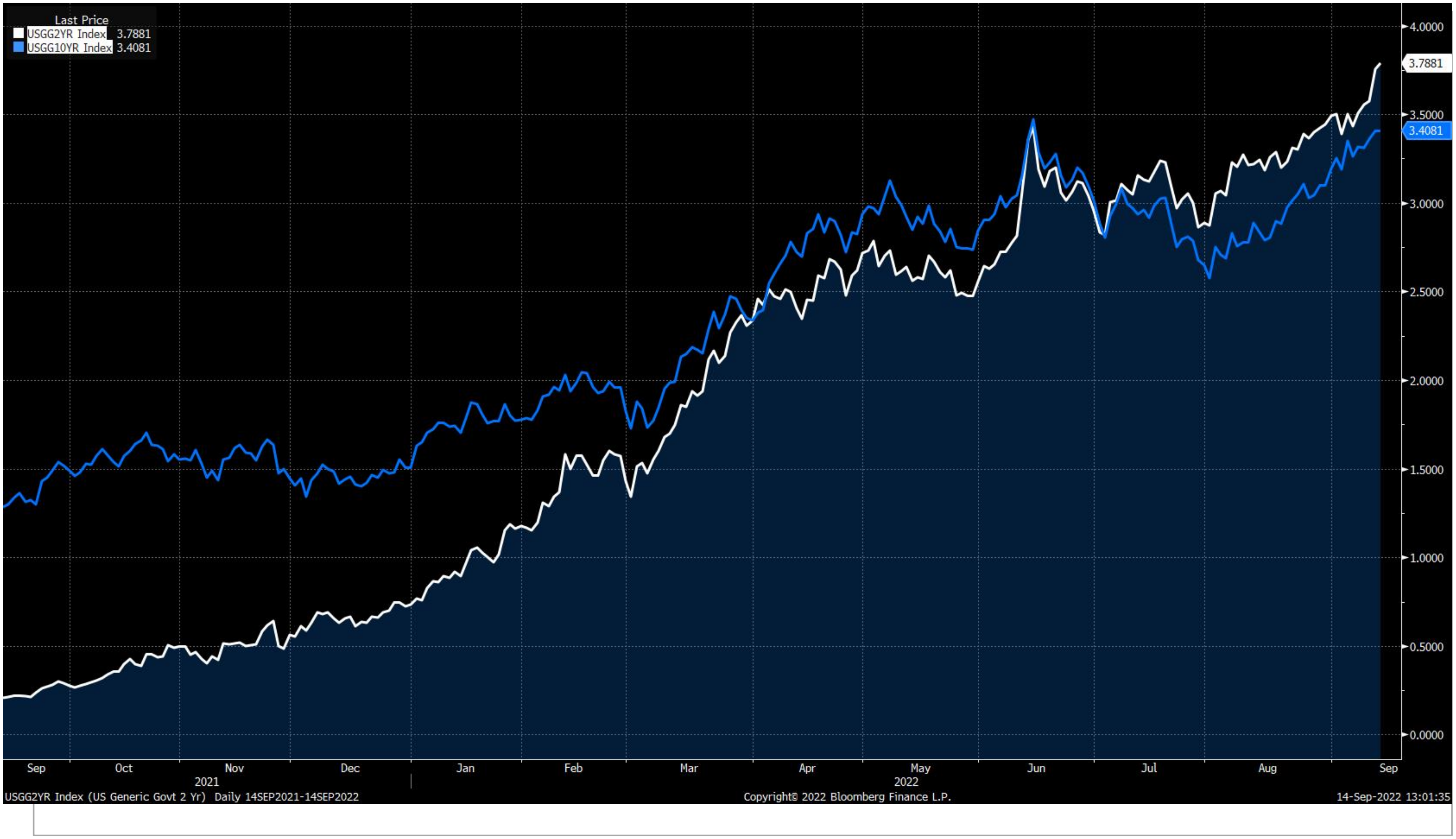
Source: Morgan Stanley & Co. Research.

We Have Been on the 'Roller Coaster to Nowhere'



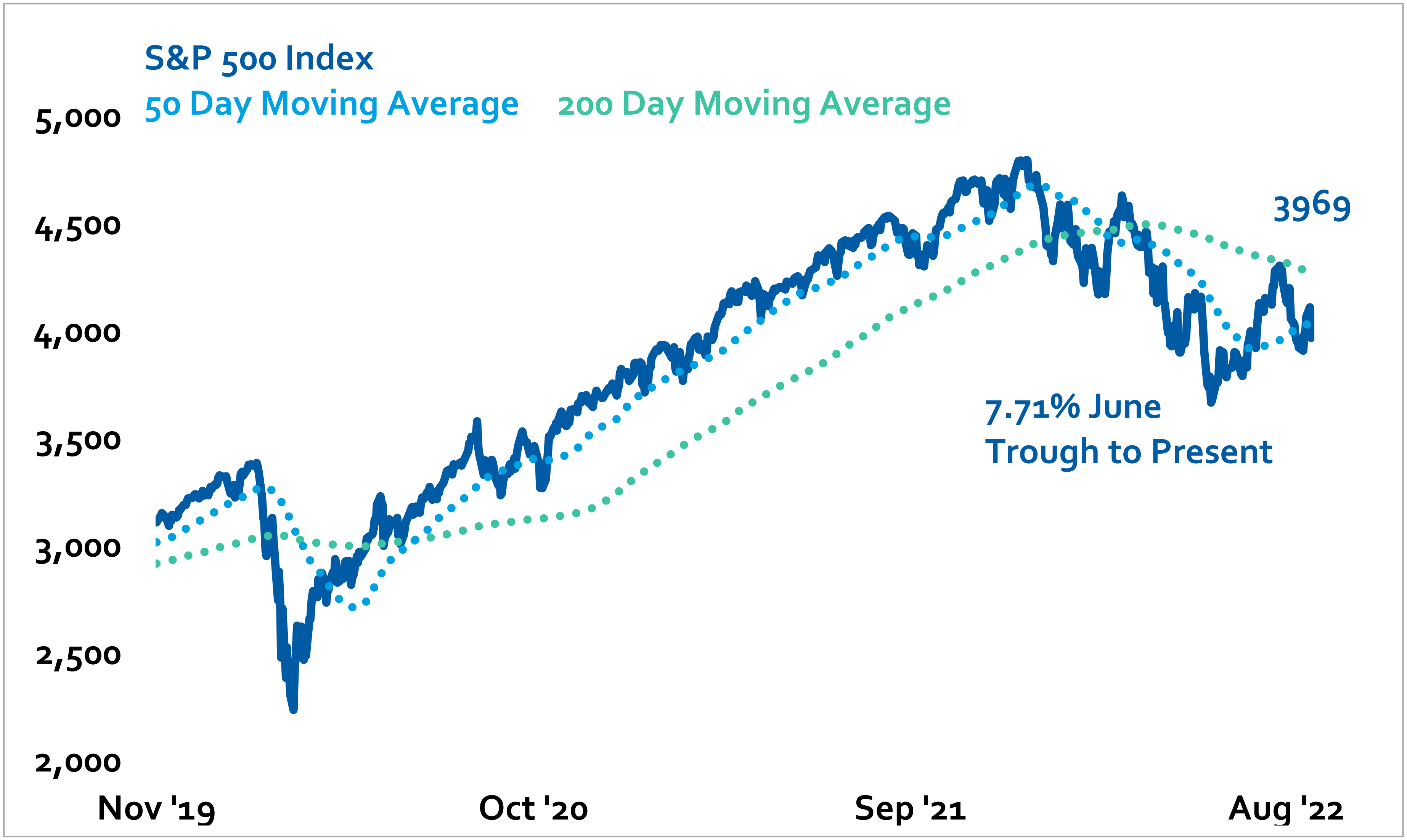
Source: Bloomberg, Morgan Stanley & Co. Research as of September 12, 2022

Given the Move in Rates, Stock Resilience Is Impressive



Source: Bloomberg, Morgan Stanley & Co. Research as of September 12, 2022

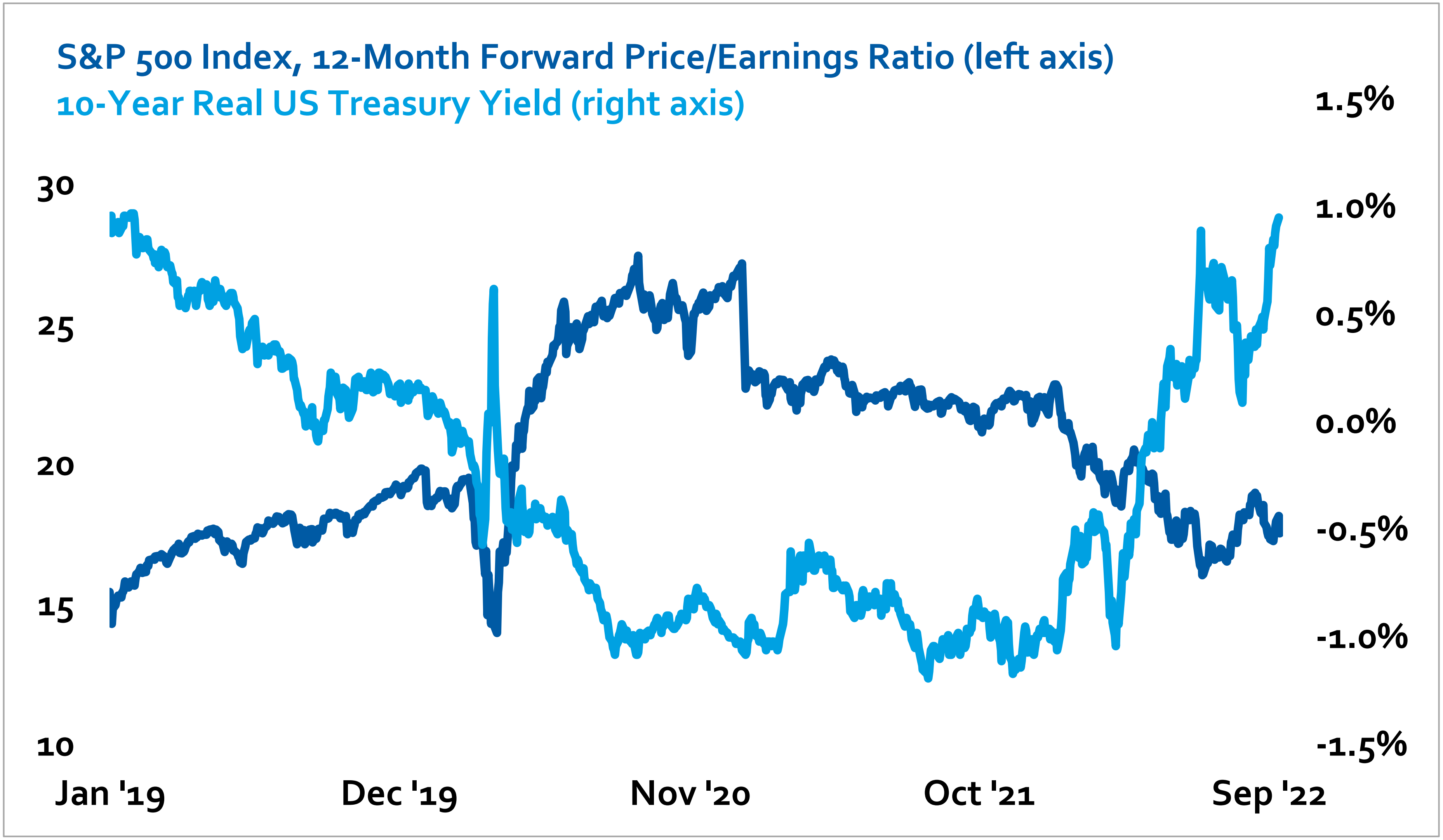
The S&P 500 Has Retraced the Worst of the Losses



Source: Bloomberg, Morgan Stanley & Co. Research as of September 13, 2022

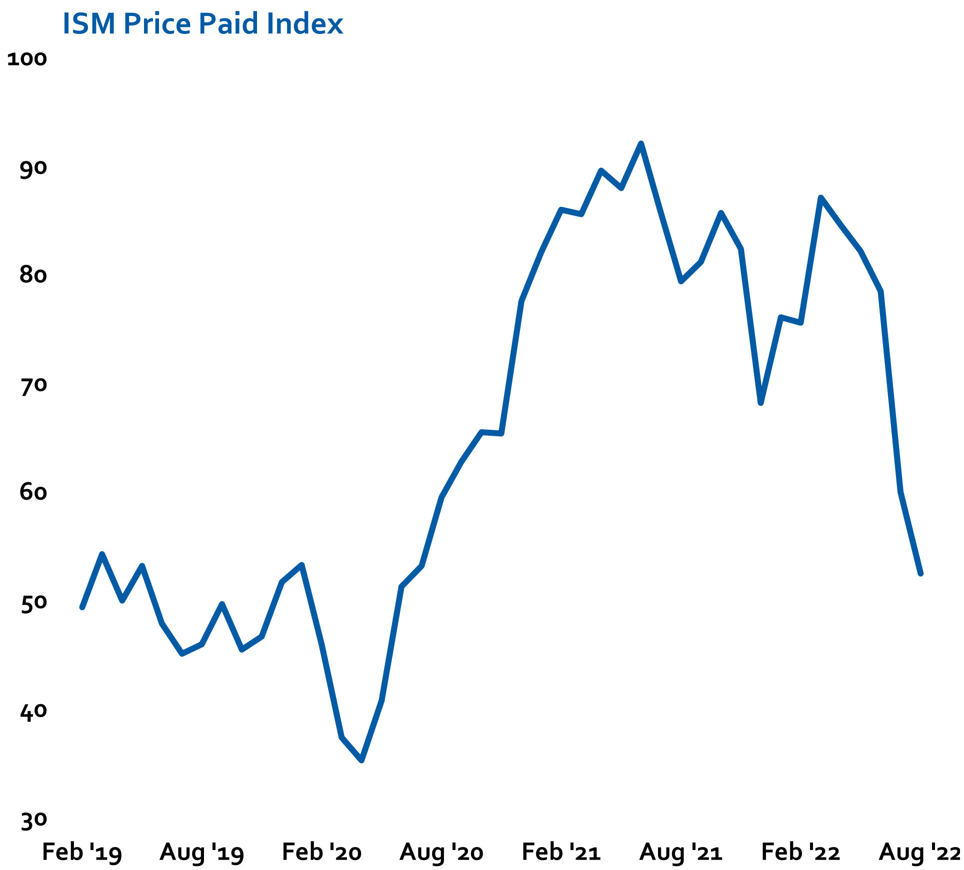
Past performance is no guarantee of future results. Estimates of future performance are based on assumptions that may not be realized. This material is not a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Please refer to important information, disclosures and qualifications at the end of this material.

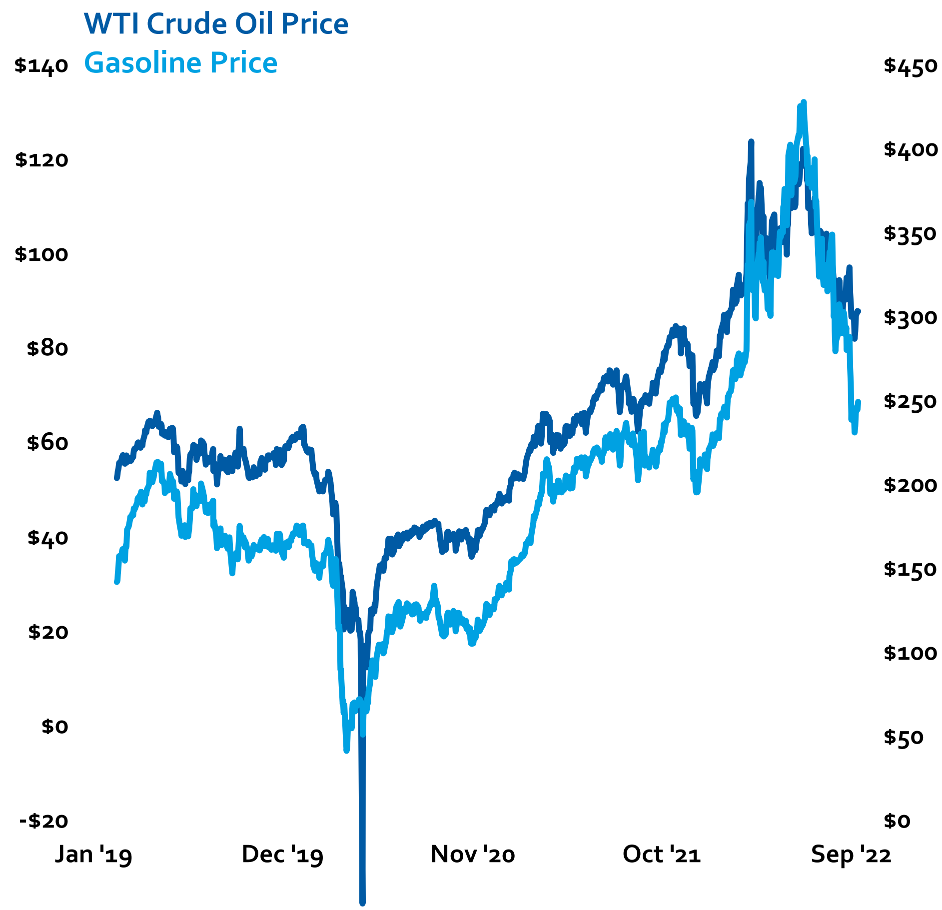
But It Premised on Multiples Expanding Since June Bottom



Source: Bloomberg, Morgan Stanley & Co. Research as of September 12, 2022

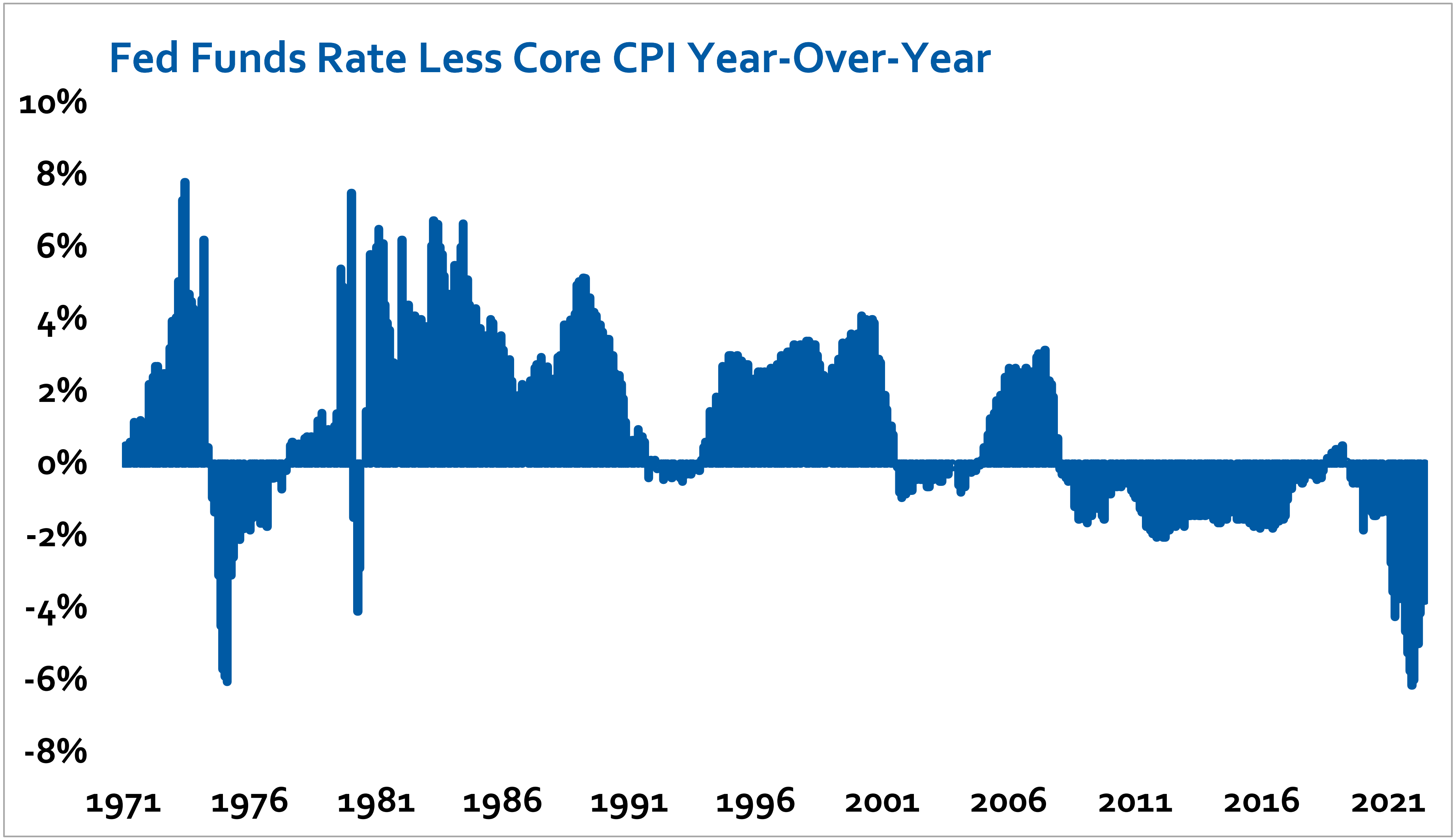
Prices Paid + Gas Prices Have Come Down





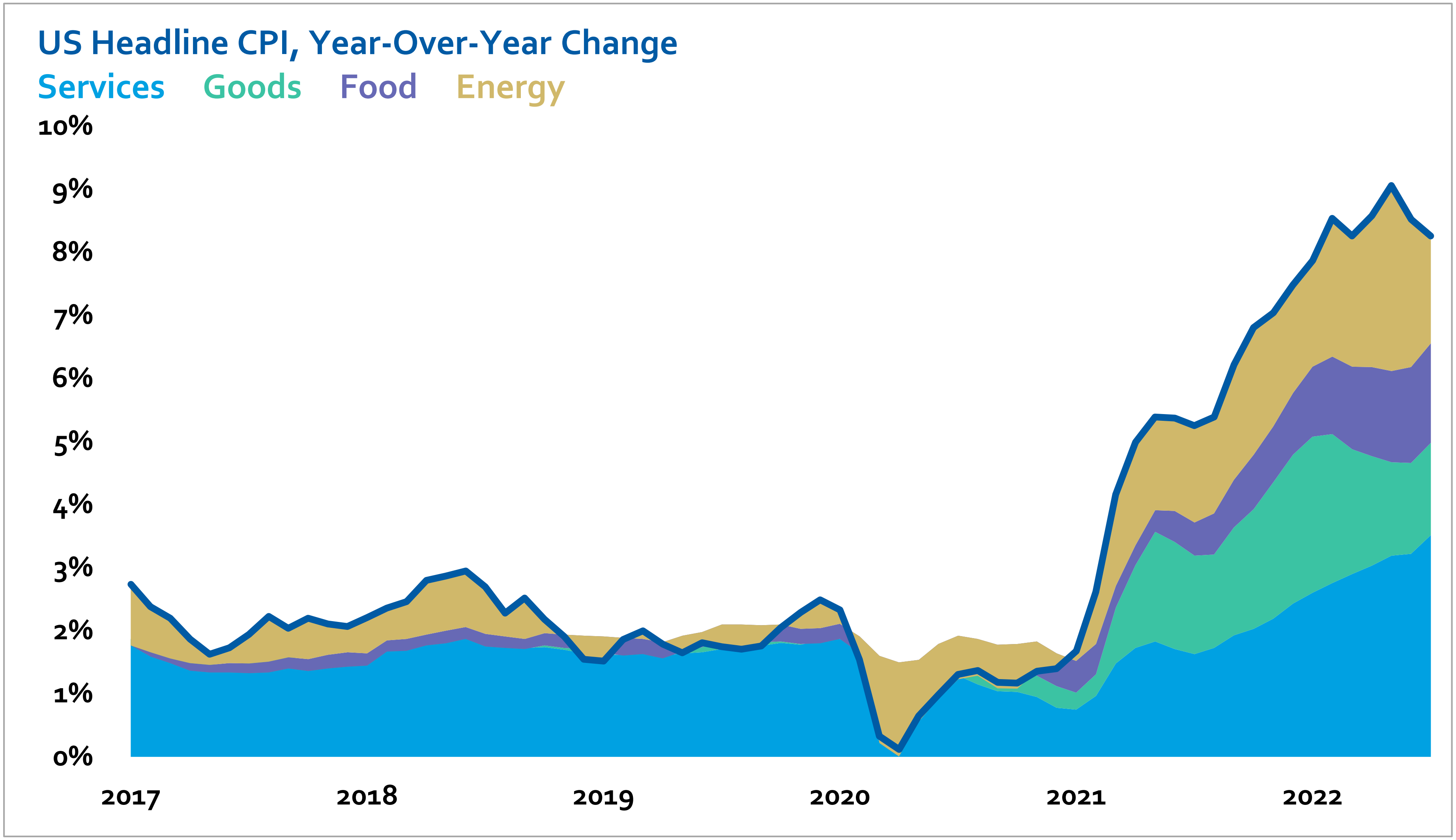
Source: Haver Analytics, Morgan Stanley & Co. Research; Prices Paid as of August 31st, 2022; Crude Oil + Gasoline as of September 13th, 2022

But Inflation Is Far from Tamed



Source: Bloomberg, Morgan Stanley & Co. Research as of August 31, 2022

And Inflation Drivers Remain Broad and "Sticky"

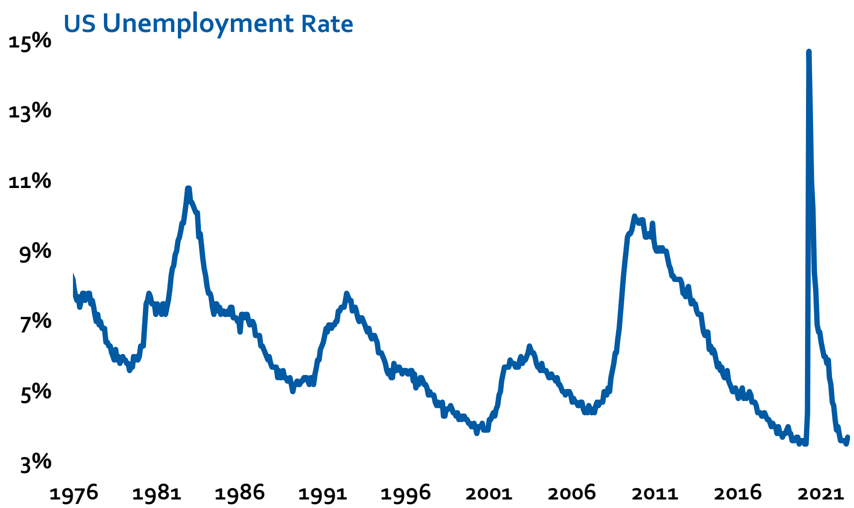


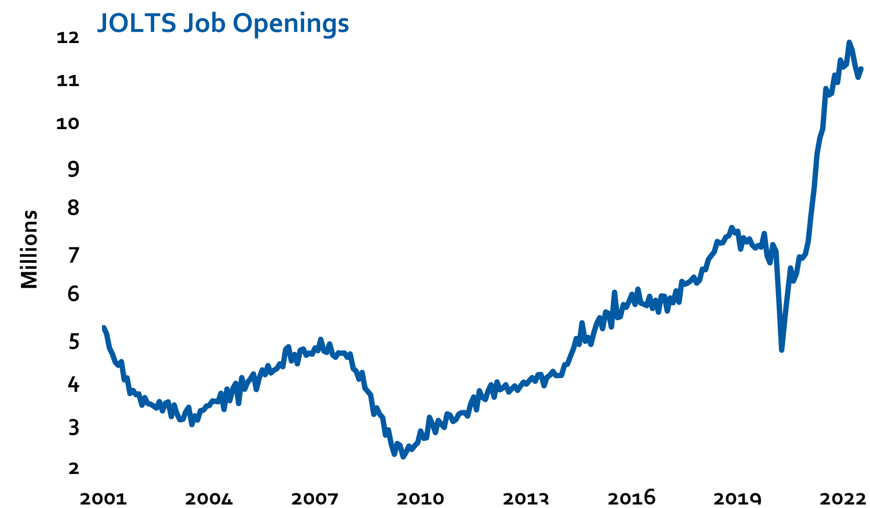
Source: Bloomberg, Morgan Stanley & Co. Research as of August 31, 2022

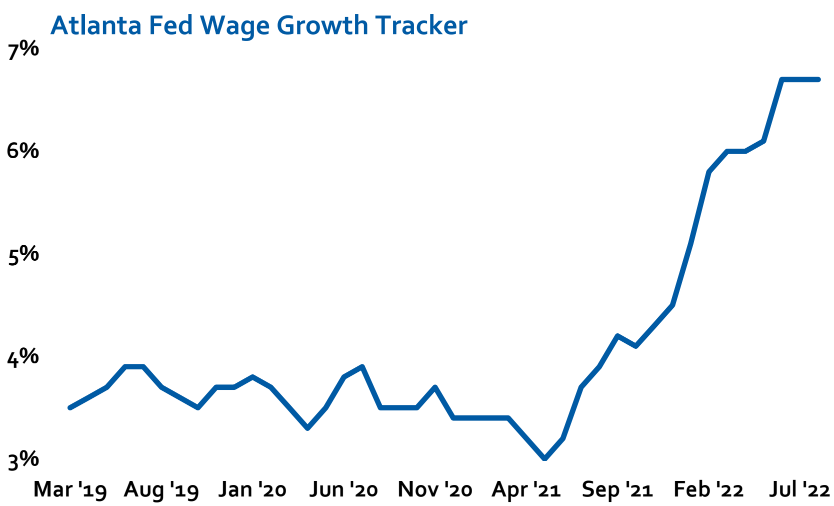
ISM Services Ticked Up for Second Consecutive Month

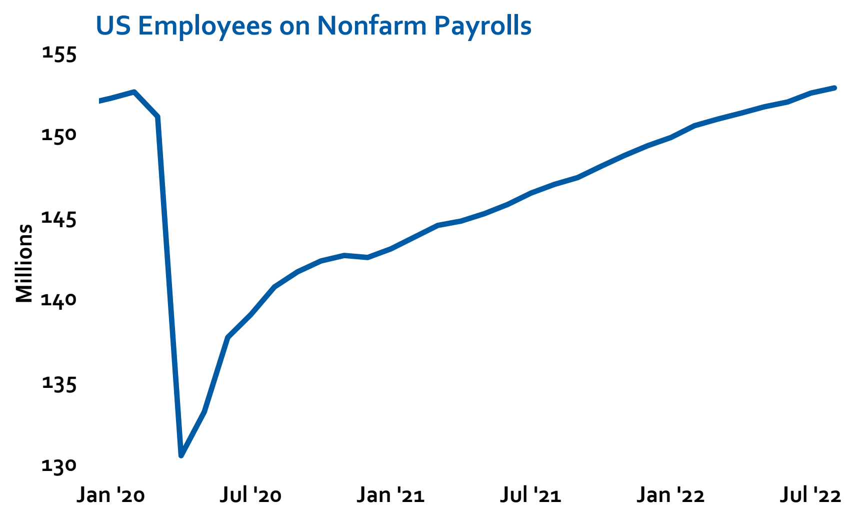
Source: Bloomberg, Morgan Stanley & Co. Research as of August 31, 2022

Labor Market Is Structurally Strong



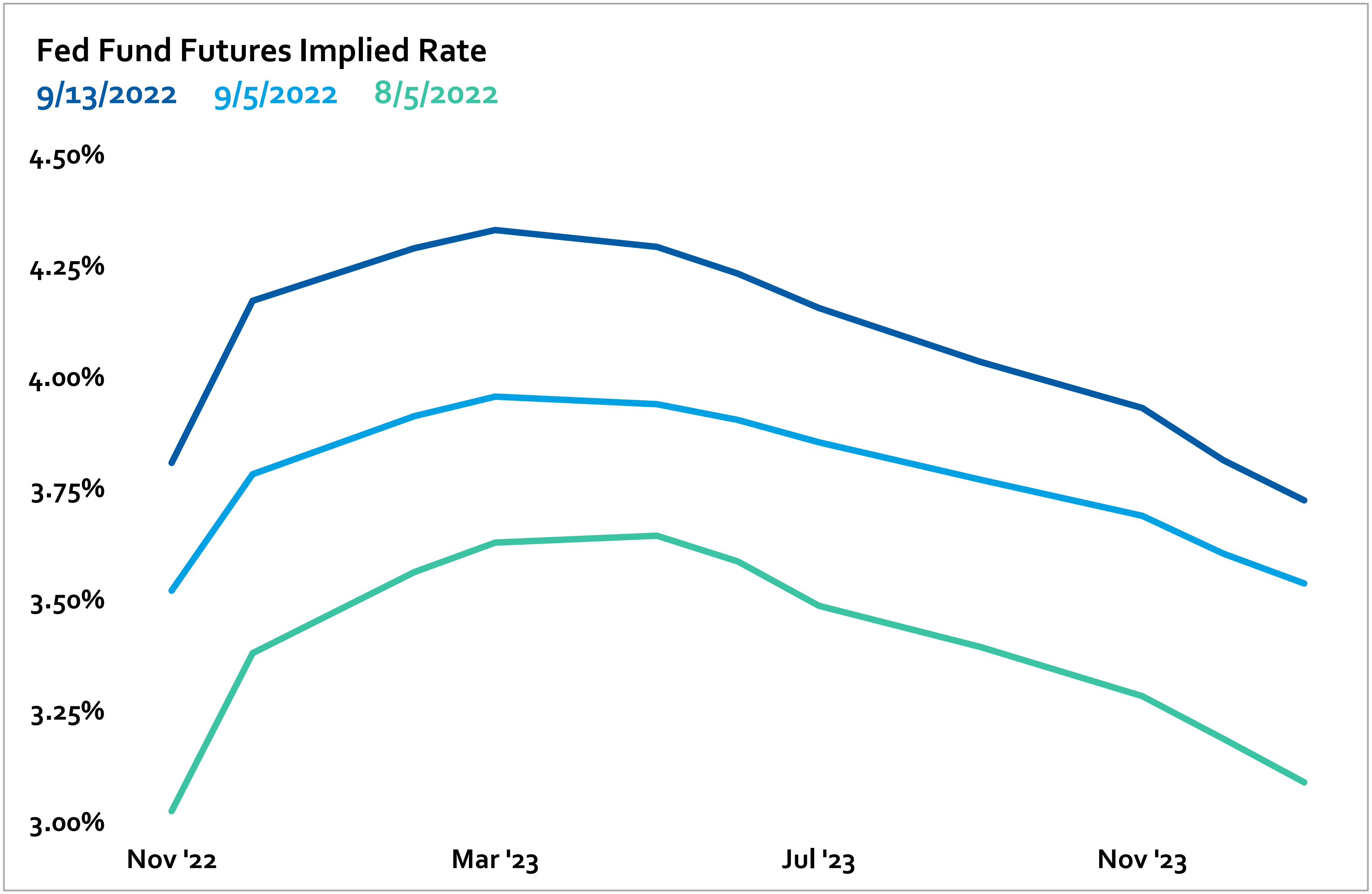






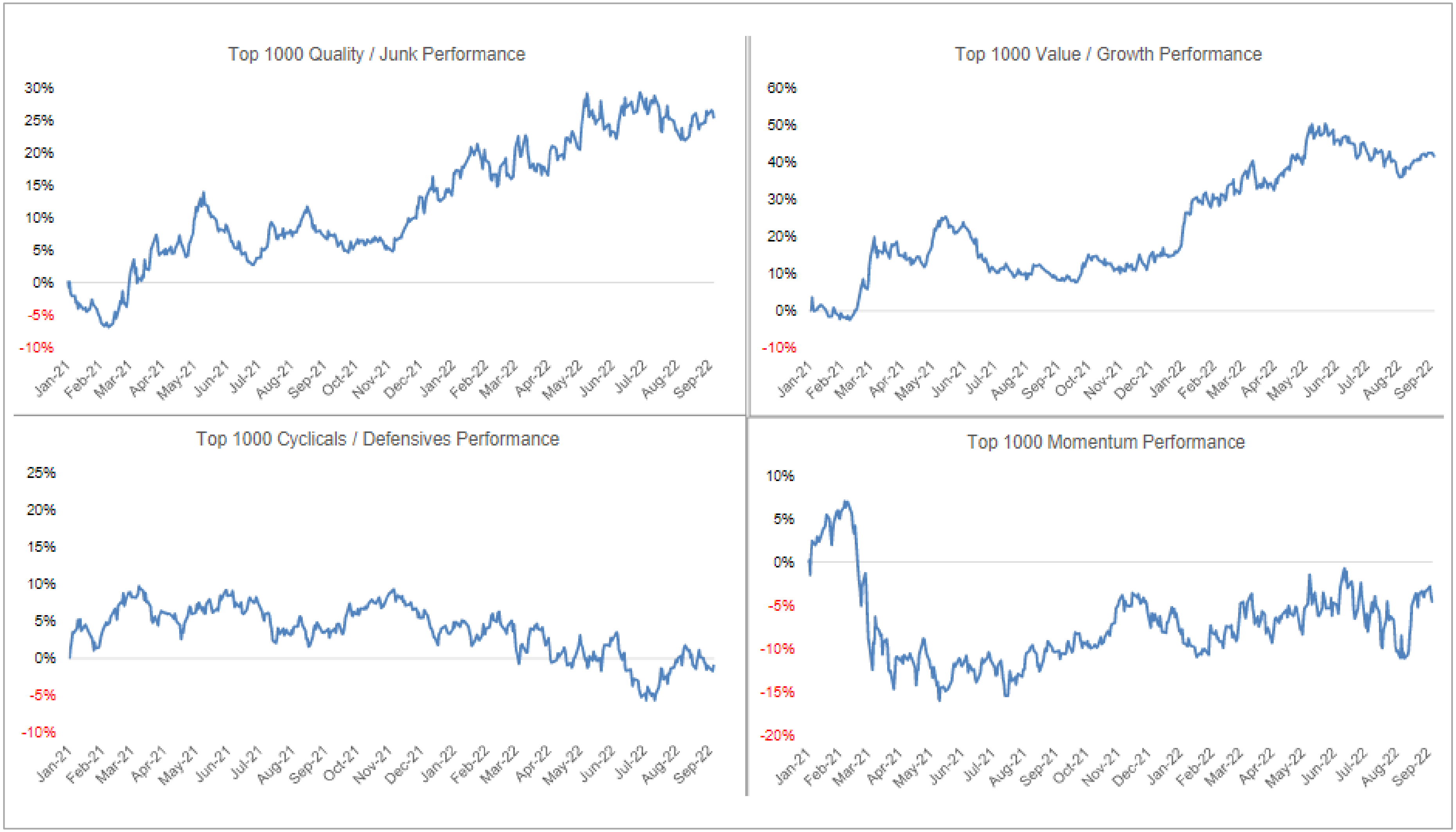
Source: Bloomberg, Morgan Stanley & Co. Research as of August 31, 2022.

Fed Funds Futures Curves Have Shifted



Source: Haver Analytics, Morgan Stanley & Co. Research as of September 13, 2022

Positioning Is Neutral as Investors Grapple with Direction



Source: Bloomberg, Morgan Stanley & Co. Research as of September 12, 2022.

The US Dollar Strength Is Increasingly a Risk

Source: Bloomberg, Morgan Stanley & Co. Research as of August 31, 2022

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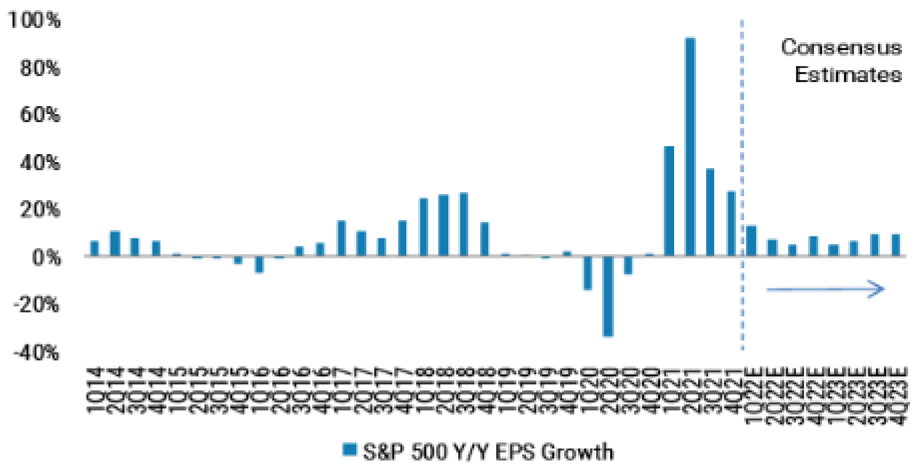
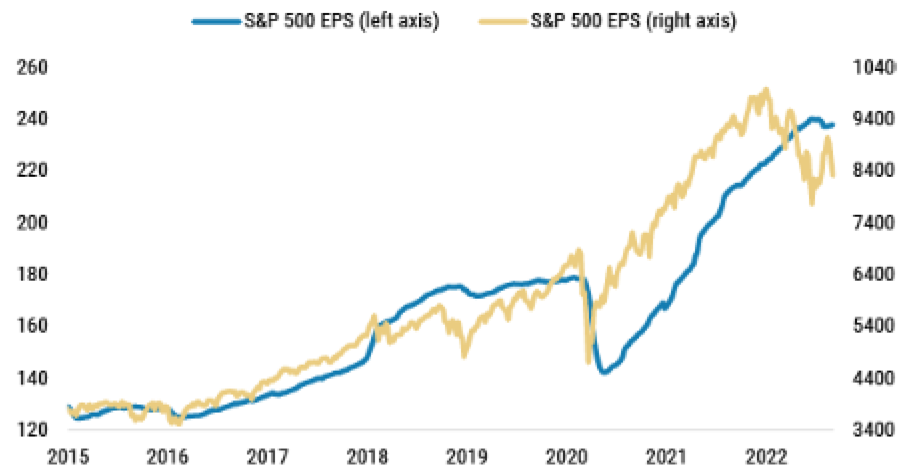
US Earnings Snapshot

S&P 500 Y/Y EPS Growth

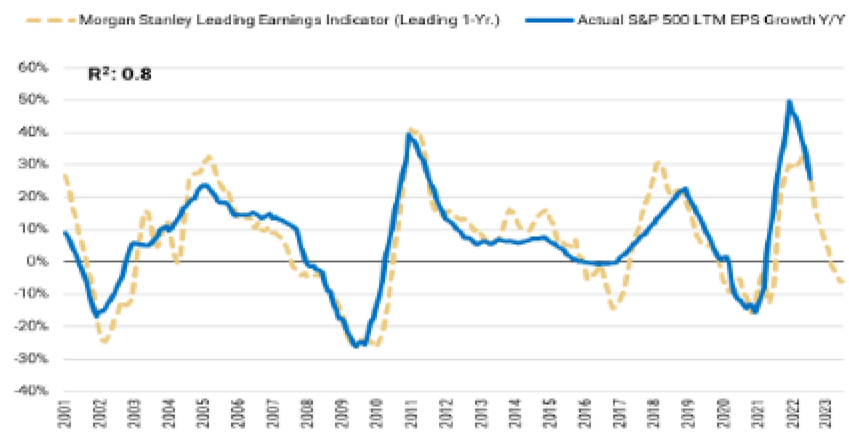


S&P 500 NTM EPS vs. Total Return Level



S&P 500 Earnings Revisions Breadth

US Leading Earnings Indicator



Source: Bloomberg, Morgan Stanley & Co. Research as of September 12, 2022

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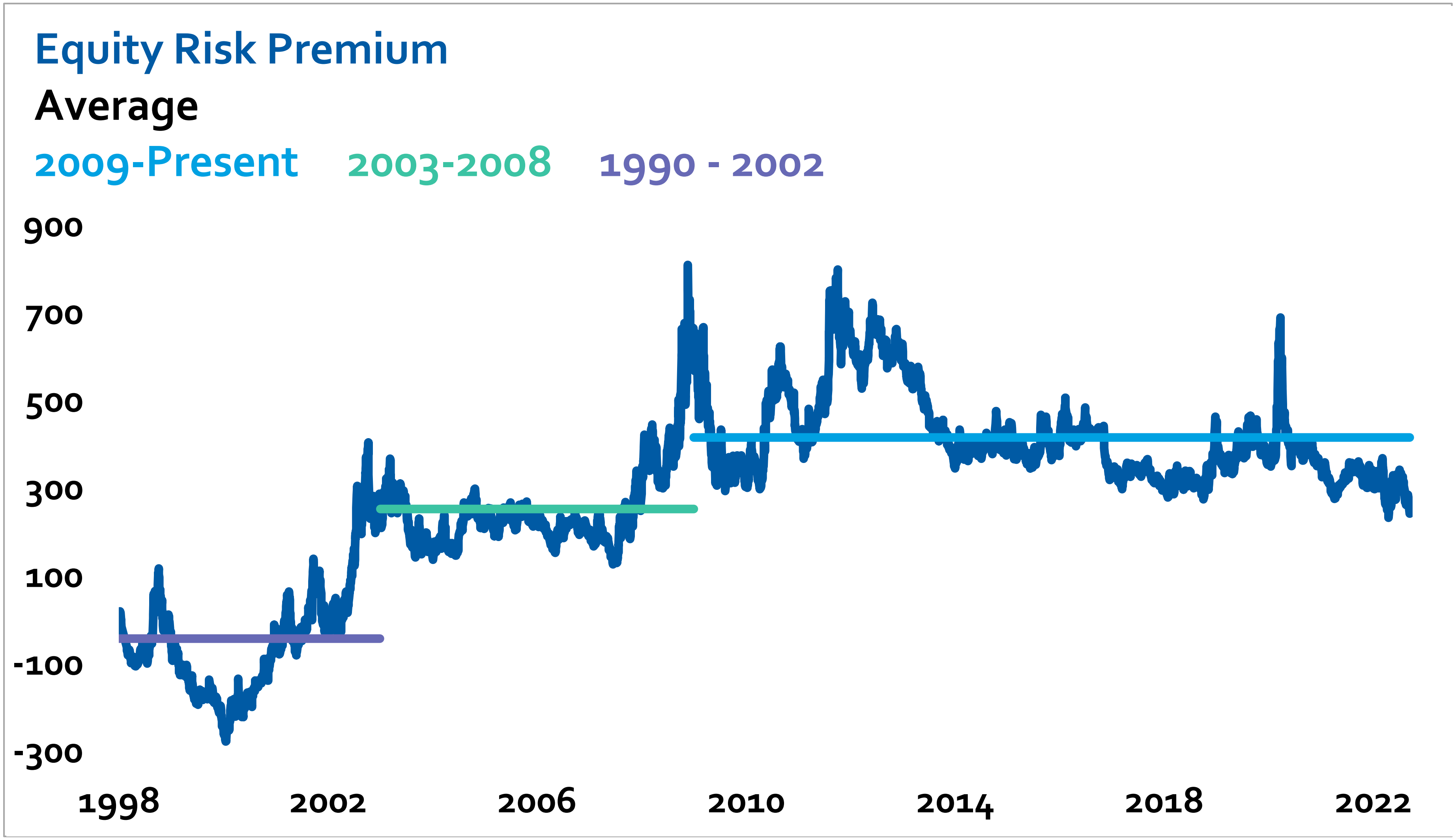
MS & Co. Updated EPS Estimates

	Current Price	MS June '23 Price Target	MS June '23 Price Target % to Current	Current P/E	MS June '23 P/E Target
Bear *Growth*	3,924	3,350	-15%	16.5x	16.3x
Base *Growth*	3,924	3,900	-1%	16.5x	17.7x
Bull *Growth*	3,924	4,450	13%	16.5x	18.2x

MS Top Down EPS Estimates				Bottoms Up Consensus EPS Estimates			
2022	2023	June 2024	2024	2022	2023	June 2024	2024
$214	$190	$205	$220	$226	$244	$254	$264
3%	*-11%*	*1%*	*15%*	*8%*	*8%*	*8%*	*8%*
$220	$212	$219	$226	$226	$244	$254	$264
5%	*-3%*	*2%*	*7%*	*8%*	*8%*	*8%*	*8%*
$228	$234	$244	$253	$226	$244	$254	$264
9%	*3%*	*6%*	*8%*	*8%*	*8%*	*8%*	*8%*

Source: Morgan Stanley & Co. Research as of September 5, 2022

Valuations Are NOT Compelling



Source: Bloomberg, Morgan Stanley & Co. Research as of September 12, 2022

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The **Global Investment Committee** is a group of seasoned investment professionals who meet regularly to discuss the global economy and markets. The committee determines the investment outlook that guides our advice to clients. They continually monitor developing economic and market conditions, review tactical outlooks and recommend model portfolio weightings, as well as produce a suite of strategy, analysis, commentary, portfolio positioning suggestions and other reports and broadcasts.

The GIC Asset Allocation Models are not available to be directly implemented as part of an investment advisory service and should not be regarded as a recommendation of any Morgan Stanley investment advisory service. The GIC Asset Allocation Models do not represent actual trading or any type of account or any type of investment strategies and none of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, advisory fees, fund expenses) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models which , when compounded over a period of years, would decrease returns.

Adverse Active AlphaSM 2.0 is a patented screening and scoring process designed to help identify high-quality equity and fixed income managers with characteristics that may lead to future outperformance relative to index and peers. While highly ranked managers performed well as a group in our Adverse Active Alpha model back tests, not all of the managers will outperform. Please note that this data may be derived from back-testing, which has the benefit of hindsight. In addition, highly ranked managers can have differing risk profiles that might not be appropriate for all investors.

Our view is that Adverse Active Alpha is a good starting point and should be used in conjunction with other information. Morgan Stanley Wealth Management's qualitative and quantitative investment manager due diligence process are equally important factors for investors when considering managers for use through an investment advisory program. Factors including, but not limited to, manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors.

The proprietary **Value Score** methodology considers an active investment strategies' value proposition relative to its costs. From a historical quantitative study of several quantitative markers, Value Score measures perceived forward-looking benefit and computes (1) "fair value" expense ratios for most traditional investment managers across 40 categories and (2) managers' perceived "excess value" by comparing the fair value expense ratios to actual expense ratios. Managers are then ranked within each category by their excess value to assign a Value Score. Our analysis suggests that greater levels of excess value have historically corresponded to attractive subsequent performance.

For more information on the ranking models, please see Adverse Active AlphaSM 2.0: Scoring Active Managers According to Potential Alpha and Value Score: Scoring Fee Efficiency by Comparing Managers' "Fair Value" and Actual Expense Ratios. The whitepapers are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

Additionally, highly ranked managers can have differing risk profiles that might not be appropriate for all investors. For more information on AAA, please see the Adverse Active Alpha Ranking Model and Selecting Managers with Adverse Active Alpha whitepapers. The whitepaper are available from your Financial Advisor or Private Wealth Advisor. ADVERSE ACTIVE ALPHA is a registered service mark of Morgan Stanley and/or its affiliates. U.S. Pat. No. 8,756,098 applies to the Adverse Active Alpha system and/or methodology.

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Nontraditional investment options and strategies are often employed by a portfolio manager to further a fund's investment objective and to help offset market risks. However, these features may be complex, making it more difficult to understand the fund's essential characteristics and risks, and how it will perform in different market environments and over various periods of time. They may also expose the fund to increased volatility and unanticipated risks particularly when used in complex combinations and/or accompanied by the use of borrowing or "leverage."

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Investment products in this category may employ various investment strategies and techniques for both hedging and more speculative purposes such as short -selling, leverage, derivatives and options, which can increase volatility and the risk of investment loss. Alternative investments are not appropriate for all investors. As a diversified global financial services firm, Morgan Stanley Wealth Management engages in a broad spectrum of activities including financial advisory services, investment management activities, sponsoring and managing private investment funds, engaging in broker-dealer transactions and principal securities, commodities and foreign exchange transactions, research publication, and other activities. In the ordinary course of its business, Morgan Stanley Wealth Management therefore engages in activities where Morgan Stanley Wealth Management's interests may conflict with the interests of its clients, including the private investment funds it manages. 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Clients should consult their own tax and legal advisors as Morgan Stanley Wealth Management does not provide tax or legal advice.

A majority of Alternative Investment managers reviewed and selected by GIMA pay or cause to be paid an ongoing fee for distribution from their management fees to Morgan Stanley Wealth Management in connection with Morgan Stanley Wealth Management clients that purchase an interest in an Alternative Investment and in some instances pay these fees on the investments held by investments held by brokerage clients. Morgan Stanley Wealth Management has a conflict of interest in offering alternative investments because Morgan Stanley Wealth Management or our affiliates, in most instances, earn more money in your account from your investments in alternative investments than from other investment options.

It should be noted that the majority of hedge fund indexes are comprised of hedge fund manager returns. This is in contrast to traditional indexes, which are comprised of individual securities in the various market segments they represent and offer complete transparency as to membership and construction methodology. As such, some believe that hedge fund index returns have certain biases that are not present in traditional indexes. Some of these biases inflate index performance, while others may skew performance negatively. However, many studies indicate that overall hedge fund index performance has been biased to the upside. Some studies suggest performance has been inflated by up to 260 basis points or more annually depending on the types of biases included and the time period studied. Although there are numerous potential biases that could affect hedge fund returns, we identify some of the more common ones throughout this paper.

Self-selection bias results when certain manager returns are not included in the index returns and may result in performance being skewed up or down. Because hedge funds are private placements, hedge fund managers are able to decide which fund returns they want to report and are able to opt out of reporting to the various databases. Certain hedge fund managers may choose only to report returns for funds with strong returns and opt out of reporting returns for weak performers. Other hedge funds that close may decide to stop reporting in order to retain secrecy, which may cause a downward bias in returns.

Survivorship bias results when certain constituents are removed from an index. This often results from the closure of funds due to poor performance, "blow ups," or other such events. As such, this bias typically results in performance being skewed higher. As noted, hedge fund index performance biases can result in positive or negative skew. However, it would appear that the skew is more often positive. While it is difficult to quantify the effects precisely, investors should be aware that idiosyncratic factors may be giving hedge fund index returns an artificial "lift" or upwards bias.

Hedge Funds of Funds and many funds of funds are private investment vehicles restricted to certain qualified private and institutional investors. They are often speculative and include a high degree of risk. Investors can lose all or a substantial amount of their investment. They may be highly illiquid, can engage in leverage and other speculative practices that may increase volatility and the risk of loss, and may be subject to large investment minimums and initial lockups. They involve complex tax structures, tax-inefficient investing and delays in distributing important tax information. Categorically, hedge funds and funds of funds have higher fees and expenses than traditional investments, and such fees and expenses can lower the returns achieved by investors. Funds of funds have an additional layer of fees over and above hedge fund fees that will offset returns. An investment in an **exchange-traded fund** involves risks similar to those of investing in a broadly based portfolio of equity securities traded on an exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock and bond prices. An investment in a **target date portfolio** is subject to the risks attendant to the underlying funds in which it invests, in these portfolios the funds are the Consulting Group Capital Market funds. A target date portfolio is geared to investors who will retire and/or require income at an approximate year. The portfolio is managed to meet the investor's goals by the pre-established year or "target date." A target date portfolio will transition its invested assets from a more aggressive portfolio to a more conservative portfolio as the target date draws closer. An investment in the target date portfolio is not guaranteed at any time, including, before or after the target date is reached. **Managed futures** investments are speculative, involve a high degree of risk, use significant leverage, are generally illiquid, have substantial charges, subject investors to conflicts of interest, and are appropriate only for the risk capital portion of an investor's portfolio. Managed futures investments do not replace equities or bonds but rather may act as a complement in a well diversified portfolio. Managed Futures are complex and not appropriate for all investors. **Rebalancing** does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy.

Virtual Currency Products (Cryptocurrencies)

Buying, selling, and transacting in Bitcoin, Ethereum or other digital assets ("Digital Assets"), and related funds and products, is highly speculative and may result in a loss of the entire investment. Risks and considerations include but are not limited to:

- Digital Assets have only been in existence for a short period of time and historical trading prices for Digital Assets have been highly volatile. The price of Digital Assets could decline rapidly, and **investors could lose their entire investment.**

- Certain Digital Asset funds and products, allow investors to invest on a more frequent basis than investors may withdraw from the fund or product, and interests in such funds or products are generally not freely transferrable. This means that, particularly given the volatility of Digital Assets, an investor will have to bear any losses with respect to its investment for an extended period of time and will not be able to react to changes in the price of the Digital Asset once invested (for example, by seeking to withdraw) as quickly as when making the decision to invest. Such Digital Asset funds and products, are intended only for persons who are able to bear the economic risk of investment and who do not need liquidity with respect to their investments.

- Given the volatility in the price of Digital Assets, the net asset value of a fund or product that invests in such assets at the time an investor's subscription for interests in the fund or product is accepted may be significantly below or above the net asset value of the product or fund at the time the investor submitted subscription materials.

- Certain Digital Assets are not intended to function as currencies but are intended to have other use cases. These other Digital Assets may be subject to some or all of the risks and considerations set forth herein, as well as additional risks applicable to such Digital Assets. Buyers, sellers and users of such Digital Assets should thoroughly familiarize themselves with such risks and considerations before transacting in such Digital Assets.

- The value of Digital Assets may be negatively impacted by future legal and regulatory developments, including but not limited to increased regulation of such Digital Assets. Any such developments may make such Digital Assets less valuable, impose additional burdens and expenses on a fund or product investing in such assets or impact the ability of such a fund or product to continue to operate, which may materially decrease the value of an investment therein.

- Due to the new and evolving nature of digital currencies and the absence of comprehensive guidance, many significant aspects of the tax treatment of Digital Assets are uncertain. Prospective investors should consult their own tax advisors concerning the tax consequences to them of the purchase, ownership and disposition of Digital Assets, directly or indirectly through a fund or product, under U.S. federal income tax law, as well as the tax law of any relevant state, local or other jurisdiction.

- Over the past several years, certain Digital Asset exchanges have experienced failures or interruptions in service due to fraud, security breaches, operational problems or business failure. Such events in the future could impact any fund's or product's ability to transact in Digital Assets if the fund or product relies on an impacted exchange and may also materially decrease the price of Digital Assets, thereby impacting the value of your investment, regardless of whether the fund or product relies on such an impacted exchange.

- Although any Digital Asset product and its service providers have in place significant safeguards against loss, theft, destruction and inaccessibility, there is nonetheless a risk that some or all of a product's Digital Asset could be permanently lost, stolen, destroyed or inaccessible by virtue of, among other things, the loss or theft of the "private keys" necessary to access a product's Digital Asset.

- Investors in funds or products investing or transacting in Digital Assets may not benefit to the same extent (or at all) from "airdrops" with respect to, or "forks" in, a Digital Asset's blockchain, compared to investors who hold Digital Assets directly instead of through a fund or product. Additionally, a "fork" in the Digital Asset blockchain could materially decrease the price of such Digital Asset.

- Digital Assets are not legal tender, and are not backed by any government, corporation or other identified body, other than with respect to certain digital currencies that certain governments are or may be developing now or in the future. No law requires companies or individuals to accept digital currency as a form of payment (except, potentially, with respect to digital currencies developed by certain governments where such acceptance may be mandated). Instead, other than as described in the preceding sentences, Digital Asset products' use is limited to businesses and individuals that are willing to accept them. If no one were to accept digital currencies, virtual currency products would very likely become worthless.

- Platforms that buy and sell Digital Assets can be hacked, and some have failed. In addition, like the platforms themselves, digital wallets can be hacked, and are subject to theft and fraud. As a result, like other investors have, you can lose some or all of your holdings of Digital Assets.

- Unlike US banks and credit unions that provide certain guarantees of safety to depositors, there are no such safeguards provided to Digital Assets held in digital wallets by their providers or by regulators.

- Due to the anonymity Digital Assets offer, they have known use in illegal activity, including drug dealing, money laundering, human trafficking, sanction evasion and other forms of illegal commerce. Abuses could impact legitimate consumers and speculators; for instance, law enforcement agencies could shut down or restrict the use of platforms and exchanges, limiting or shutting off entirely the ability to use or trade Digital Asset products.

- Digital Assets may not have an established track record of credibility and trust. Further, any performance data relating to Digital Asset products may not be verifiable as pricing models are not uniform.

- Investors should be aware of the potentially increased risks of transacting in Digital Assets relating to the risks and considerations, including fraud, theft, and lack of legitimacy, and other aspects and qualities of Digital Assets, before transacting in such assets.

- The exchange rate of virtual currency products versus the USD historically has been very volatile and the exchange rate could drastically decline. For example, the exchange rate of certain Digital Assets versus the USD has in the past dropped more than 50% in a single day. Other Digital Assets may be affected by such volatility as well.

- Digital Asset exchanges have limited operating and performance histories and are not regulated with the same controls or customer protections available to more traditional exchanges transacting equity, debt, and other assets and securities. There is no assurance that a person/exchange who currently accepts a Digital Asset as payment will continue to do so in the future.

- The regulatory framework of Digital Assets is evolving, and in some cases is uncertain, and Digital Assets themselves may not be governed and protected by applicable securities regulators and securities laws, including, but not limited to, Securities Investor Protection Corporation coverage, or other regulatory regimes.

- Morgan Stanley Smith Barney LLC or its affiliates (collectively, "Morgan Stanley") may currently, or in the future, offer or invest in Digital Asset products, services or platforms. The proprietary interests of Morgan Stanley may conflict with your interests.

- The foregoing list of considerations and risks are not and do not purport to be a complete enumeration or explanation of the risks involved in an investment in any product or fund investing or trading in Digital Assets.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets. Past performance is no guarantee of future results. Actual results may vary.

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Annuities and insurance products are offered in conjunction with Morgan Stanley Smith Barney LLC's licensed insurance agency affiliates.

Indices are unmanaged and investors cannot directly invest in them. They are not subject to expenses or fees and are often comprised of securities and other investment instruments the liquidity of which is not restricted. A particular investment product may consist of securities significantly different than those in any index referred to herein. Composite index results are shown for illustrative purposes only, generally do not represent the performance of a specific investment, may not, for a variety of reasons, be an appropriate comparison or benchmark for a particular investment and may not necessarily reflect the actual investment strategy or objective of a particular investment. Consequently, comparing an investment to a particular index may be of limited use.

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We may act in the capacity of a broker or that of an advisor. As your broker, we are not your fiduciary and our interests may not always be identical to yours. Please consult with your Private Wealth Advisor to discuss our obligations to disclose to you any conflicts we may from time to time have and our duty to act in your best interest. We may be paid both by you and by others who compensate us based on what you buy. Our compensation, including that of your Private Wealth Advisor, may vary by product and over time.

Investment and services offered through Morgan Stanley Private Wealth Management, a division of Morgan Stanley Smith Barney LLC, Member SIPC.

For index, indicator and survey definitions referenced in this report please visit the following: https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions

GLOBAL INVESTMENT COMMITTEE (GIC) ASSET ALLOCATION MODELS: The Asset Allocation Models are created by Morgan Stanley Wealth Management's GIC.

HYPOTHETICAL MODEL PERFORMANCE (GROSS): Hypothetical model performance results do not reflect the investment or performance of an actual portfolio following a GIC Strategy, but simply reflect actual historical performance of selected indices on a real-time basis over the specified period of time representing the GIC's strategic and tactical allocations as of the date of this report. The past performance shown here is simulated performance based on benchmark indices, not investment results from an actual portfolio or actual trading. There can be large differences between hypothetical and actual performance results achieved by a particular asset allocation or trading strategy. Hypothetical performance results do not represent actual trading and are generally designed with the benefit of hindsight. Actual performance results of accounts vary due to, for example, market factors (such as liquidity) and client-specific factors (such as investment vehicle selection, timing of contributions and withdrawals, restrictions and rebalancing schedules). Clients would not necessarily have obtained the performance results shown here if they had invested in accordance with any GIC Asset Allocation Model for the periods indicated. Despite the limitations of hypothetical performance, these hypothetical performance results allow clients and Financial Advisors to obtain a sense of the risk/return trade-off of different asset allocation constructs. The hypothetical performance results in this report are calculated using the returns of benchmark indices for the asset classes, and not the returns of securities, fund or other investment products. Models may contain allocations to Hedge Funds, Private Equity and Private Real Estate. The benchmark indices for these asset classes are not issued on a daily basis. When calculating model performance on a day for which no benchmark index data is issued, we have assumed straight line growth between the index levels issued before and after that date.

FEES REDUCE THE PERFORMANCE OF ACTUAL ACCOUNTS: None of the fees or other expenses (e.g. commissions, mark-ups, mark-downs, fees) associated with actual trading or accounts are reflected in the GIC Asset Allocation Models. The GIC Asset Allocation Models and any model performance included in this presentation are intended as educational materials. Were a client to use these models in connection with investing, any investment decisions made would be subject to transaction and other costs which, when compounded over a period of years, would decrease returns. Information regarding Morgan Stanley's standard advisory fees is available in the Form ADV Part 2, which is available at www.morganstanley.com/adv. The following hypothetical illustrates the compound effect fees have on investment returns: For example, if a portfolio's annual rate of return is 15% for 5 years and the account pays 50 basis points in fees per annum, the gross cumulative five-year return would be 101.1% and the five-year return net of fees would be 96.8%. Fees and/or expenses would apply to clients who invest in investments in an account based on these asset allocations, and would reduce clients' returns. The impact of fees and/or expenses can be material.

Variable annuities are long-term investments designed for retirement purposes and may be subject to market fluctuations, investment risk, and possible loss of principal. All guarantees, including optional benefits, are based on the financial strength and claims-paying ability of the issuing insurance company and do not apply to the underlying investment options. Optional riders may not be able to be purchased in combination and are available at an additional cost. Some optional riders must be elected at time of purchase. Optional riders may be subject to specific limitations, restrictions, holding periods, costs, and expenses as specified by the insurance company in the annuity contract. If you are investing in a **variable annuity** through a tax-advantaged retirement plan such as an IRA, you will get no additional tax advantage from the variable annuity. Under these circumstances, you should only consider buying a variable annuity because of its other features, such as lifetime income payments and death benefits protection. Taxable distributions (and certain deemed distributions) are subject to ordinary income tax and, if taken prior to age 59½, may be subject to a 10% federal income tax penalty. Early withdrawals will reduce the death benefit and cash surrender value.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment. **Ultrashort-term fixed income** asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Master Limited Partnerships (MLPs) are limited partnerships or limited liability companies that are taxed as partnerships and whose interests (limited partnership units or limited liability company units) are traded on securities exchanges like shares of common stock. Currently, most MLPs operate in the energy, natural resources or real estate sectors. Investments in MLP interests are subject to the risks generally applicable to companies in the energy and natural resources sectors, including commodity pricing risk, supply and demand risk, depletion risk and exploration risk. Individual MLPs are publicly traded partnerships that have unique risks related to their structure. These include, but are not limited to, their reliance on the capital markets to fund growth, adverse ruling on the current tax treatment of distributions (typically mostly tax deferred), and commodity volume risk. The potential tax benefits from investing in MLPs depend on their being treated as partnerships for federal income tax purposes and, if the MLP is deemed to be a corporation, then its income would be subject to federal taxation at the entity level, reducing the amount of cash available for distribution to the fund which could result in a reduction of the fund's value. MLPs carry interest rate risk and may underperform in a rising interest rate environment. MLP funds accrue deferred income taxes for future tax liabilities associated with the portion of MLP distributions considered to be a tax-deferred return of capital and for any net operating gains as well as capital appreciation of its investments; this deferred tax liability is reflected in the daily NAV, and, as a result, the MLP fund's after-tax performance could differ significantly from the underlying assets even if the pre-tax performance is closely tracked.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention. **Physical precious metals** are non-regulated products. Precious metals are speculative investments, which may experience short-term and long term price volatility. The value of precious metals investments may fluctuate and may appreciate or decline, depending on market conditions. Unlike bonds and stocks, precious metals do not make interest or dividend payments. Therefore, precious metals may not be appropriate for investors who require current income. Precious metals are commodities that should be safely stored, which may impose additional costs on the investor.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions. Risks of **private real estate** include: illiquidity; a long-term investment horizon with a limited or nonexistent secondary market; lack of transparency; volatility (risk of loss); and leverage. Principal is returned on a monthly basis over the life of a **mortgage-backed security.** Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. **Asset-backed securities** generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.
Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision. **Credit ratings** are subject to change. **Duration**, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price. The initial interest rate on a **floating-rate security** may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk. The market value of **convertible bonds** and the underlying common stock(s) will fluctuate and after purchase may be worth more or less than original cost. If sold prior to maturity, investors may receive more or less than their original purchase price or maturity value, depending on market conditions. Callable bonds may be redeemed by the issuer prior to maturity. Additional call features may exist that could affect yield. Some $25 or $1000 **par preferred securities** are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible preferreds qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.
Companies paying **dividends** can reduce or cut payouts at any time.

Nondiversification: For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. The **indices selected by Morgan Stanley Wealth Management** to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time. Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations. **Value investing** does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.
Any type of **continuous or periodic investment plan** does not assure a profit and does not protect against loss in declining markets. Since such a plan involves continuous investment in securities regardless of fluctuating price levels of such securities, the investor should consider his financial ability to continue his purchases through periods of low price levels.
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“EXHIBIT A”
CITY OF SOUTH PASADENA
INVESTMENT POLICY
FY 2022-23

1. Introduction

The purpose of this document is to define the City’s policy for investment and cash management. In accordance with California law and the public trust, it is the City’s policy to invest public funds in a manner that will provide the highest investment return with the maximum security while meeting the daily cash flow demands.

2. Scope

This policy covers all financial assets and investment activities under the direct control of the City of South Pasadena.

3. Prudence

The City adheres to the guidance provided by the “prudent investor” standard, as codified in Government Code Section 53600.3. This obligates a fiduciary to insure that:

> “When investing, reinvesting, purchasing, acquiring, exchanging, selling, or managing public funds, a trustee shall act with care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the agency, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the agency. Within the limitations of this section and considering individual investments as part of an overall strategy, investments may be acquired as authorized by law.

All participants in the investment process shall act as custodians of the public trust. Investment officials shall recognize that the investment portfolio is subject to public review and evaluation. Accordingly, the overall program shall be designed and managed with a degree of professionalism that is worthy of the public trust.

4. Objectives

The primary objectives of investment activity, in order of priority, are shown below, and shall be in conformity with California Government Code Section 53600.5:

Safety - Safety of principal is the foremost objective of the investment program. Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio.

Liquidity - The investment portfolio will remain sufficiently liquid to enable the City to meet all operating requirements as prescribed by state law and which might be reasonably anticipated. An adequate portion of the portfolio should be maintained in liquid short-term securities that can be converted to cash if necessary to meet disbursement requirements. Since unanticipated cash requirements do, indeed, arise, most investments will be in securities with active secondary or resale markets. Emphasis shall be on marketable securities with low sensitivity to market risk.

Yield - Yield should become a consideration only after the more basic requirements of safety and liquidity have been met. The investment portfolio shall be designed with the objective of attaining a rate of return throughout budgetary and economic cycles commensurate with the City's investment risk restraints and the cash flow characteristics of the portfolio.

5. Delegation of Authority

Authority to manage the City's investment program is derived from California Government Code Sections 53600 *et seq*. By adoption of this policy, the City Council delegates investment authority to the City Treasurer. Such authority may be revoked by the City Council in writing at any time. The Treasurer shall establish procedures for the operation of the investment program consistent with this investment policy. Such procedures shall include explicit delegation of authority to persons responsible for investment transactions. By adoption of this policy, the City Treasurer appoints the Finance Director and Finance Manager as Deputy City Treasurer(s). The names of those persons to whom investment authority is delegated will be submitted to City Council for approval. No person may engage in an investment transaction except as provided under the terms of this policy and its related procedures. The Treasurer shall be responsible for all transactions undertaken and shall establish a system of controls to regulate the investment activities.

6. Reporting

The City Treasurer shall submit a monthly investment report to the City Council and copied to the Finance Commission based on summaries provided by the Finance Department. This report will include the following required elements:

A. A report of investment activity for the month
   1. Maturities, withdrawals, sales and called investments
   2. New investments

B. A statement of investment balances at month end
   1. Type of investment and par value, if applicable
   2. Issuing institution
   3. Date of maturity
   4. Amount of deposit or cost of security
   5. Current market value of securities with maturity in excess of twelve months
   6. Rate of interest or yield to maturity at purchase date
   7. Rate of interest or yield to maturity at the report date
   8. A representation certifying compliance of the City's investment activities to the City's Statement of Investment Policy.
   9. A representation as to the availability of cash to meet the City's expenditures over the next six months, as required in Section 53646 (2) (b) (3), based on cash flow projections provided by the Finance Department.

7. Authorized and Suitable Investment Instruments

Purchase of investments will be made with surplus funds available. The investments will be paid for, in full, as soon as practical after the time of trade. Purchases will not be made using leverage, margin accounts, or other unfunded mechanisms. No investments shall conflict with Government Code section 53601. Additionally, investments in businesses that refine and/or extract oil or coal will not be permitted. Eligible vehicles for the investment of funds shall be limited to Exhibit A – Local Agency Investment Guideline (As of January 1, 2022).

8. Maturities

To the extent possible, the City of South Pasadena will attempt to match its investments with anticipated cash flow requirements. Securities shall not be purchased which have maturity dates of more than five years. At the time of purchase, no more than one third of the investment portfolio shall have a maturity date in excess of three years into the future.

All investment instruments will be acquired with a view toward holding such instruments to their maturity, thereby avoiding risks to loss of principal due to market fluctuations.

9. Portfolio Adjustments

The moneys entrusted to the City Treasurer will be a passively managed portfolio. However, the City Treasurer will make best efforts to observe, review, and react to changing conditions that affect the portfolio. Should any investments exceed a percentage-of-portfolio limitation due to an incident such as fluctuation in portfolio size, the affected securities may be held to maturity to avoid losses. When no loss is indicated, the Treasurer shall consider restructuring the portfolio basing his decision on the expected length of time the portfolio will be unbalanced. If this occurs, the City Council shall be notified by information contained in the next monthly report as required in Section 6 of this policy.

10. Authorized Banks and Security Dealers

In selecting financial institutions for the deposit or investment of City funds, the Treasurer shall consider the credit-worthiness of institutions, and utilize only those depositories that are qualified public depositories as established by state law. In addition, only broker-dealers that are authorized in the state of California will be utilized. The Treasurer shall continue to monitor financial institutions' credit characteristics and financial history throughout the period in which City funds are deposited or invested.

All broker-dealers who desire to become qualified bidders for investment transactions must supply the treasurer with the following items: audited financial statements; Financial Industry Regulatory Authority (FINRA) certification; proof of state registration; and certification of awareness of, and familiarity with South Pasadena’s investment policy.

From time to time, the Finance Director will review the broker-dealer relationships, fees and charges for reasonableness and competitiveness.

11. Ethics and Conflicts of Interest

Officers and employees involved in the investment process shall refrain from personal business activity that could conflict with proper execution of the investment program, or which could impair their ability to make impartial investment decisions. Employees and investment officials shall disclose to the City Manager any financial interests in financial institutions that conduct business within the City of South Pasadena, and they shall further disclose any large personal financial investment positions that could be related to the performance of the City, particularly with regard to the timing of purchases and sales.

12. Safekeeping and Custody

At a minimum, securities will be held in safekeeping in an account in the name of the City of South Pasadena at a broker which is adequately insured by Securities Investor Protection

Corporation. Securities purchased from broker/dealers may be on a “delivery versus payment” basis and held in a third party custodian account in a manner that establishes the City's right of ownership.

13. Internal Control

The City Treasurer and Deputy City Treasurers are responsible for ensuring compliance with the City's Investment Policy as well as for establishing systems of internal control designed to prevent losses due to fraud, employee error, misrepresentation by third parties, unanticipated changes in financial markets or imprudent actions by City officers and employees. No investment personnel may engage in an investment transaction except as provided under the terms of this policy. No investment transaction, other than cash movements between Bank of the West and LAIF, will occur without the authorization of the City Treasurer and one of the Deputy City Treasurers as defined in Section 5 of this policy. In the absence of the City Treasurer, the Mayor shall authorize investment transactions on his/her behalf.

To strengthen internal control there are specific limits set on the locations to which the Treasurer or his representative may make transfers of funds via telephone. The Treasurer hereby has the limited authorization to make telephone transfers of funds *only* between the City’s bank account, the City’s investment accounts at the LAIF and the City’s broker-dealer after an investment decision has been made. Telephone transfers can only be made among these three accounts. Any other transfers of funds must be executed through written means (such as a check or warrant) or normal electronic funds transfers with adequate written documentation and approval. The City’s bank, broker-dealer, and the Local Agency Investment Fund are informed in writing of these limitations.

At the time of the annual audit of the City’s financial statements, the audit program by the independent auditor will include an evaluation and report to the City Council regarding the compliance with the City’s investment policy.

14. Statement of Investment Policy

The Statement of Investment Policy shall be updated annually in the month of August by the City Treasurer and Finance Commission, and submitted to the City Council for review and adoption.

Exhibit A

FIGURE 1

ALLOWABLE INVESTMENT INSTRUMENTS PER STATE GOVERNMENT CODE (AS OF JANUARY 1, 2022)[A] APPLICABLE TO ALL LOCAL AGENCIES[B]

See "Table of Notes for Figure 1" on the next page for footnotes related to this figure.

INVESTMENT TYPE	MAXIMUM MATURITY[C]	MAXIMUM SPECIFIED % OF PORTFOLIO[D]	MINIMUM QUALITY REQUIREMENTS	GOV'T CODE SECTIONS
Local Agency Bonds	5 years	None	None	53601(a)
U.S. Treasury Obligations	5 years	None	None	53601(b)
State Obligations—CA And Others	5 years	None	None	53601(c) 53601(d)
CA Local Agency Obligations	5 years	None	None	53601(e)
U.S Agency Obligations	5 years	None	None	53601(f)
Bankers' Acceptances	180 days	40%[E]	None	53601(g)
Commercial Paper—Non-Pooled Funds[F] (under $100,000,000 of investments)	270 days or less	25% of the agency's money[G]	Highest letter and number rating by an NRSRO[H]	53601(h)(2)(c)
Commercial Paper—Non-Pooled Funds (min. $100,000,000 of investments)	270 days or less	40% of the agency's money[G]	Highest letter and number rating by an NRSRO[H]	53601(h)(2)(c)
Commercial Paper—Pooled Funds[I]	270 days or less	40% of the agency's money[G]	Highest letter and number rating by an NRSRO[H]	53635(a)(1)
Negotiable Certificates of Deposit	5 years	30%[J]	None	53601(i)
Non-negotiable Certificates of Deposit	5 years	None	None	53630 et seq.
Placement Service Deposits	5 years	50%[K]	None	53601.8 and 53635.8
Placement Service Certificates of Deposit	5 years	50%[K]	None	53601.8 and 53635.8
Repurchase Agreements	1 year	None	None	53601(j)
Reverse Repurchase Agreements and Securities Lending Agreements	92 days[L]	20% of the base value of the portfolio	None[M]	53601(j)
Medium-Term Notes[N]	5 years or less	30%	"A" rating category or its equivalent or better	53601(k)
Mutual Funds And Money Market Mutual Funds	N/A	20%	Multiple[P,Q]	53601(l) and 53601.6(b)
Collateralized Bank Deposits[R]	5 years	None	None	53630 et seq. and 53601(n)
Mortgage Pass–Through and Asset–Backed Securities	5 years or less	20%	"AA" rating category or its equivalent or better	53601(o)
County Pooled Investment Funds	N/A	None	None	27133
Joint Powers Authority Pool	N/A	None	Multiple[S]	53601(p)
Local Agency Investment Fund (LAIF)	N/A	None	None	16429.1
Voluntary Investment Program Fund[T]	N/A	None	None	16340
Supranational Obligations[U]	5 years or less	30%	"AA" rating category or its equivalent or better	53601(q)
Public Bank Obligations	5 years	None	None	53601(r), 53635(c) and 57603

TABLE OF NOTES FOR FIGURE 1

[A] Sources: Sections 16340, 16429.1, 27133, 53601, 53601.6, 53601.8, 53630 et seq., 53635, 53635.8, and 57603.

[B] Municipal Utilities Districts have the authority under the Public Utilities Code Section 12871 to invest in certain securities not addressed here.

[C] Section 53601 provides that the maximum term of any investment authorized under this section, unless otherwise stated, is five years. However, the legislative body may grant express authority to make investments either specifically or as a part of an investment program approved by the legislative body that exceeds this five year remaining maturity limit. Such approval must be issued no less than three months prior to the purchase of any security exceeding the five-year maturity limit.

[D] Percentages apply to all portfolio investments regardless of source of funds. For instance, cash from a reverse repur-chase agreement would be subject to the restrictions.

[E] No more than 30 percent of the agency's money may be in bankers' acceptances of any one commercial bank.

[F] Includes agencies defined as a city, a district, or other local agency that do not pool money in deposits or investment with other local agencies, other than local agencies that have the same governing body.

[G] Local agencies, other than counties or a city and county, may purchase no more than 10 percent of the outstanding commercial paper and medium-term notes of any single issuer.

[H] Issuing corporation must be organized and operating within the U.S., have assets in excess of $500 million, and debt other than commercial paper must be in a rating category of "A" or its equivalent or higher by a nationally recognized statistical rating organization, or the issuing corporation must be organized within the U.S. as a special purpose corporation, trust, or LLC, have program wide credit enhancements, and have commercial paper that is rated "A-1" or higher, or the equivalent, by a nationally recognized statistical rating agency.

[I] Includes agencies defined as a county, a city and county, or other local agency that pools money in deposits or investments with other local agencies, including local agencies that have the same governing body. Local agencies that pool exclusively with other local agencies that have the same governing body must adhere to the limits set forth in Section 53601(h)(2)(C).

[J] No more than 30 percent of the agency's money may be in negotiable certificates of deposit that are authorized under Section 53601(i).

[K] Effective January 1, 2020, no more than 50 percent of the agency's money may be invested in deposits, including certificates of deposit, through a placement service as authorized under 53601.8 (excludes negotiable certificates of deposit authorized under Section 53601(i)). On January 1, 2026, the maximum percentage of the portfolio reverts back to 30 percent. Investments made pursuant to 53635.8 remain subject to a maximum of 30 percent of the portfolio.

[L] Reverse repurchase agreements or securities lending agreements may exceed the 92-day term if the agreement includes a written codicil guaranteeing a minimum earning or spread for the entire period between the sale of a security using a reverse repurchase agreement or securities lending agreement and the final maturity dates of the same security.

[M] Reverse repurchase agreements must be made with primary dealers of the Federal Reserve Bank of New York or with a nationally or state chartered bank that has a significant relationship with the local agency. The local agency must have held the securities used for the agreements for at least 30 days.

[N] "Medium-term notes" are defined in Section 53601 as "all corporate and depository institution debt securities with a maximum remaining maturity of five years or less, issued by corporations organized and operating within the United States or by depository institutions licensed by the United States or any state and operating within the United States."

[O] No more than 10 percent invested in any one mutual fund. This limitation does not apply to money market mutual funds.

[P] A mutual fund must receive the highest ranking by not less than two nationally recognized rating agencies or the fund must retain an investment advisor who is registered with the SEC (or exempt from registration), has assets under management in excess of $500 million, and has at least five years' experience investing in instruments authorized by Sections 53601 and 53635.

[Q] A money market mutual fund must receive the highest ranking by not less than two nationally recognized statistical rating organizations or retain an investment advisor registered with the SEC or exempt from registration and who has not less than five years' experience investing in money market instruments with assets under management in excess of $500 million.

[R] Investments in notes, bonds, or other obligations under Section 53601(n) require that collateral be placed into the custody of a trust company or the trust department of a bank that is not affiliated with the issuer of the secured obligation, among other specific collateral requirements.

[S] A joint powers authority pool must retain an investment advisor who is registered with the SEC (or exempt from registration), has assets under management in excess of $500 million, and has at least five years' experience investing in instruments authorized by Section 53601, subdivisions (a) to (o).

[T] Local entities can deposit between $200 million and $10 billion into the Voluntary Investment Program Fund, upon approval by their governing bodies. Deposits in the fund will be invested in the Pooled Money Investment Account.

[U] Only those obligations issued or unconditionally guaranteed by the International Bank for Reconstruction and Development (IBRD), International Finance Corporation (IFC), and Inter-American Development Bank (IADB), with a maximum remaining maturity of five years or less.