



Secure Act 2.0 and the Impacts on Estate Plans

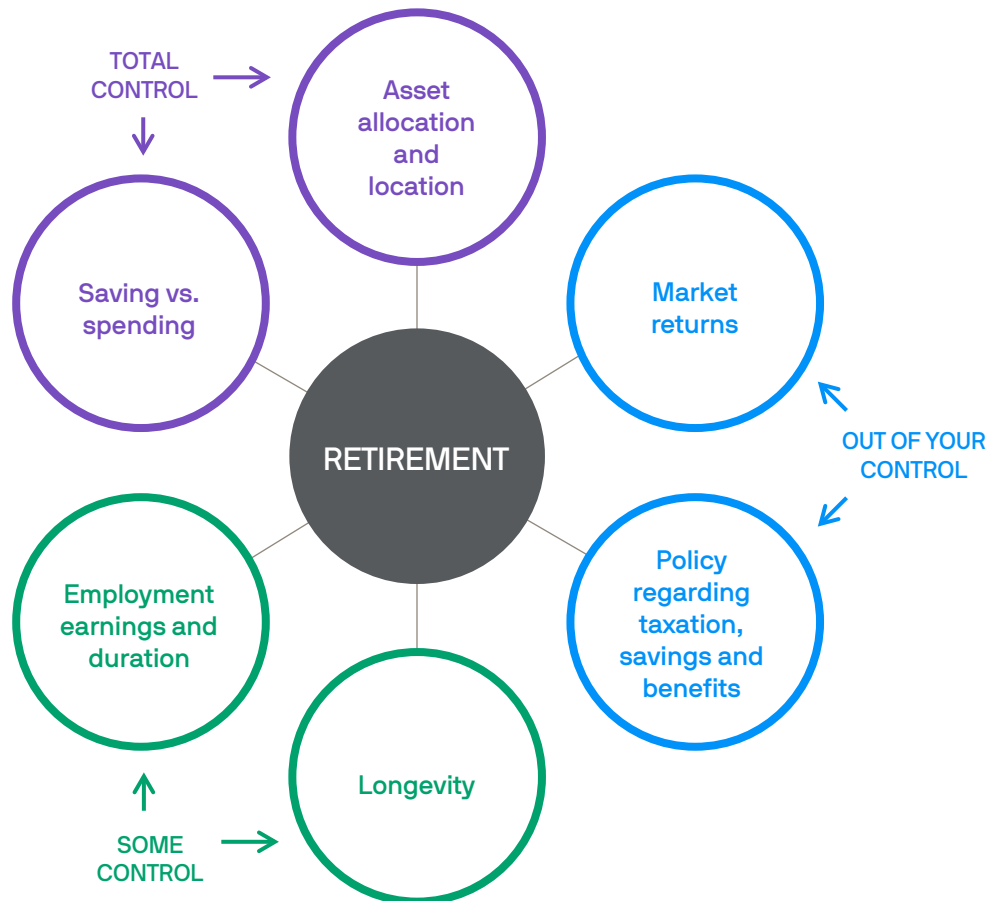




The retirement equation

GTR

3



A sound retirement plan

Make the most of the things that you can control but be sure to evaluate factors that are somewhat or completely out of your control within your comprehensive retirement plan.

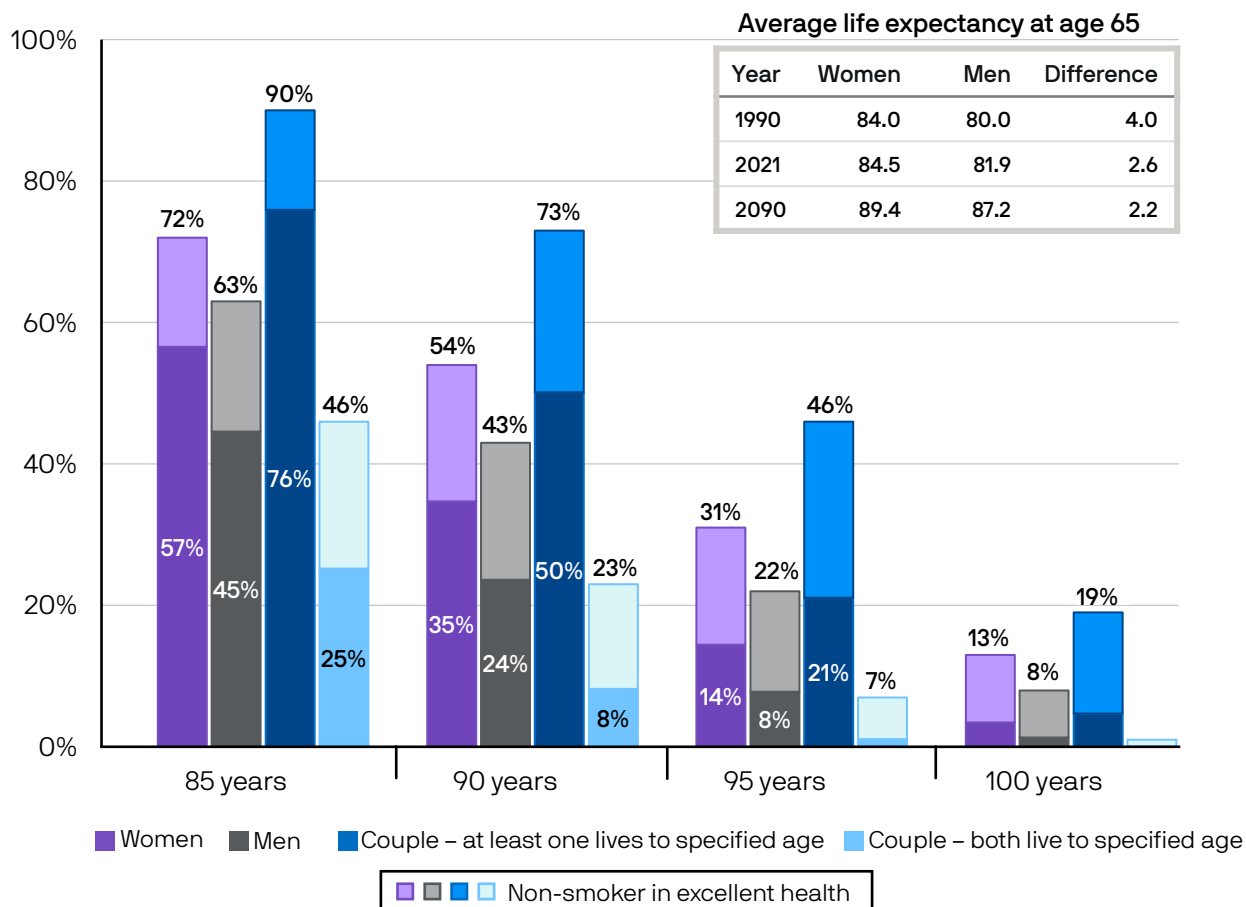


Life expectancy probabilities

GTR

4

If you're age 65 today, the probability of living to a specific age or beyond



Plan for longevity

Average life expectancy is a mid-point not an end-point. You may need to plan on the probability of living much longer – perhaps 35 years in retirement – particularly if you are a non-smoker in excellent health.

Investing a portion of your portfolio for growth is important to maintain your purchasing power over time.

Source (chart): Social Security Administration, Period Life Table, 2019 (published in the 2022 OASDI Trustees Report); American Academy of Actuaries and Society of Actuaries, Actuaries Longevity Illustrator, <http://www.longevityillustrator.org/> (accessed September 29, 2022), J.P. Morgan Asset Management. Source text: Social Security Administration 2022 OASDI Trustees Report.



SECURE 2.0 Act of 2022: broadening access to more people and increasing savings

GTR

10

KEY THEME	DETAILS	EFFECTIVE
 Encourage small businesses to create retirement plans through increased tax credits	Tax credit for 50% of startup cost up to \$5,000 per year for three years¹ Tax credit for employer contribution of up to \$1,000 per employee for five years²	2023
 Emergency savings accounts in defined contribution plans to build strong financial foundation	Maximum account value of \$2,500 ³ (after-tax contributions; tax-free distributions)	2024
 Help manage student loan debt burden	Employers will be allowed to make matching contributions to the plans for participants paying student loans	2024
 Allow greater savings in retirement plans	New plans will be required to auto enroll at a starting rate of at least 3% and auto escalate to at least 10% but no more than 15% Increased catch-up amount for individuals aged 60-63 by 50% more than the regular catch-up limit in employer-sponsored plans Replace the Saver's Credit with the Saver's Match equal to 50% of plan or IRA contributions, up to \$2,000	2025 2027

¹For employers with 100 or fewer employees. For employers with 50 or fewer employees, the 50% startup cost limit is 100%.

²For employers with up to 50 employees that make plan contributions on behalf of employees whose wages do not exceed \$100,000. The credit amount will be phased out for employers with between 51 and 100 employees.

³Contributions that exceed \$2,500 will spill over to the long-term retirement savings portion of the plan. Employers may automatically enroll participants at a rate of up to 3% of pay.

This list of provisions is not detailed or exhaustive.

Source: SECURE 2.0 Act of 2022. J.P. Morgan analysis. <https://am.jpmorgan.com/us/en/asset-management/adv/insights/retirement-insights/defined-contribution/secure-2-0/>. Not intended to be tax advice. Consult your tax professional.



SECURE 2.0 Act of 2022: new tax implications

GTR

11

KEY THEME	DETAILS	EFFECTIVE
 Increase the starting age for required minimum distributions (RMDs) from 72 to 75 over the next 10 years – <i>Deferring RMDs may increase taxes and Medicare surcharges late in life</i>	RMD starting age of 73 for individuals who reach age 72 after 2022 RMD starting age of 75 for individuals who reach age 74 after 2032	2023
 Greater importance of Roth in employer-sponsored retirement plans	Permit employer matching contributions on a Roth basis Require catch-up contributions to be made on an after-tax Roth basis for highly paid employees ¹ Exempt in-plan Roth accounts from lifetime RMDs	Dec 29, 2022 2024
 Enhance qualifying longevity annuity contracts (QLAC) – <i>Lifetime income starting late in life may help fund possible long-term care needs</i>	Allows up to \$200,000 to be used to purchase a QLAC and delay required minimum distribution as late as age 85 when annuity payments commence	Dec 29, 2022
 Permit rollovers from 529 accounts to Roth IRAs	Allow rollovers from 529 Plans that have been open for 15 years to Roth IRAs (subject to a \$35,000 lifetime limit and the annual IRA contribution limit)	2024

¹Employees with wages in excess of \$145,000 for the prior calendar year must make their catch-up contributions to a Roth account.

This list of provisions is not detailed or exhaustive.

Source: SECURE 2.0 Act of 2022. J.P. Morgan analysis. <https://am.jpmorgan.com/us/en/asset-management/adv/insights/retirement-insights/defined-contribution/secure-2-0/>. Not intended to be tax advice. Consult your tax professional.



Tax implications for retirement savings by account type

GTR

47

	Contributions ¹	Investment growth	Withdrawals
Pre-tax 401(k) / Traditional IRA	+	+	- (Taxed as ordinary income)
Roth 401(k) / Roth IRA	-	+	+ (For qualified withdrawals)
After-tax 401(k) / non-deductible Traditional IRA	-	+	- (Investment returns taxed as ordinary income)
Health Savings Account (HSA) ³	+	+	+ (For qualified health care expenses)

+

 Preferential tax treatment

-

 Subject to taxes

Retirement accounts:
Taxes generally apply to contributions or withdrawals. Most withdrawals must be qualified to avoid tax penalties.²

If not used for qualified health care expenses, withdrawals after age 65 will be taxed as ordinary income (without penalty).

Defined Contribution

Federal taxes; states may differ. This is not intended to be individual tax advice. Consult your tax professional.

¹Income and other restrictions may apply to contributions. Tax penalties usually apply for early withdrawals. Qualified withdrawals are generally those taken over age 59½; qualification requirements for amounts converted to a Roth from a traditional account may differ; for some account types, such as Roth accounts, contributions that are withdrawn may be qualified. See IRS Publications 590 and 560 for more information. ²Withdrawals from after-tax 401(k) and non-deductible IRAs must be taken on a pro-rata basis including contributions and earnings growth. For non-deductible IRAs, all Traditional IRAs must be aggregated when calculating the amount of pro-rata contributions and earnings growth. ³There are eligibility requirements. Qualified medical expenses include items such as prescriptions, teeth cleaning and eyeglasses and contacts for a medical reason. Cosmetic procedures, such as teeth whitening, and general health improvement, such as gym memberships and vitamins, are not qualified expenses. A 20% tax penalty applies on non-qualified distributions prior to age 65.

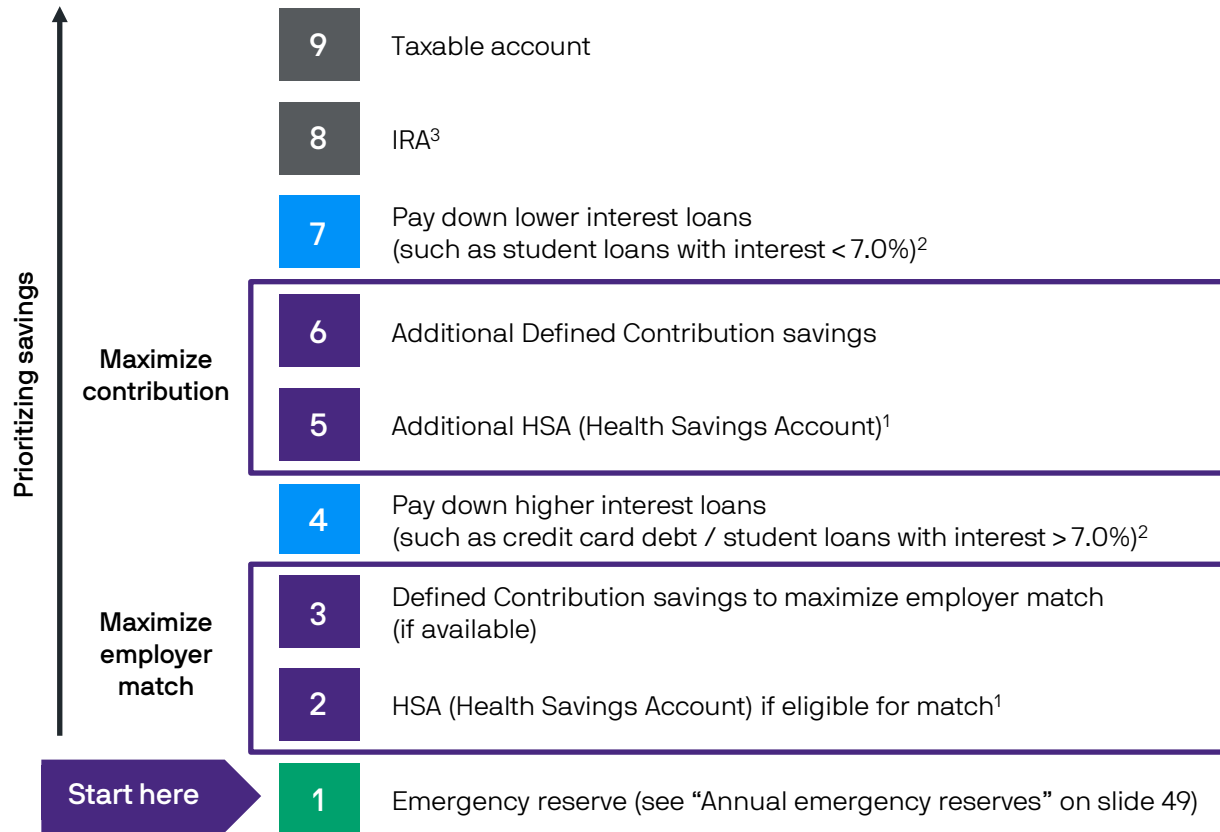
After age 65, taxes must be paid on non-qualified distributions. See IRS Publication 502 for details.
Source: J.P. Morgan Asset Management.



Prioritizing long-term retirement savings

GTR

48



Getting started

Start with emergency savings to weather spending and income shocks throughout the year and make sure to take advantage of employer matching funds if they are available.

An HSA offers triple tax benefits if used for qualified medical expenses in retirement. Prioritize contributions to an HSA before a Defined Contribution plan if current medical expenses can be funded from low-cost sources.⁴

¹Must have a high-deductible health insurance plan that is eligible to be paired with an HSA. Those taking Social Security benefits age 65 or older and those who are on Medicare are ineligible. Tax penalties apply for non-qualified distributions prior to age 65; consult IRS Publication 502 or your tax professional.

²This assumes that a diversified portfolio may earn 7.0% over the long term. Actual returns may be higher or lower. Generally, consider making additional payments on loans with a higher interest rate than your long-term expected investment return.

³Income limits may apply for IRAs. If ineligible for these, consider a non-deductible IRA or an after-tax 401(k) contribution. Individual situations will vary; consult your tax professional.

⁴Examples of low-cost funding sources include cash and current income.

Source: J.P. Morgan Asset Management analysis. Not intended to be a personal financial plan.



The “charitable IRA rollover”

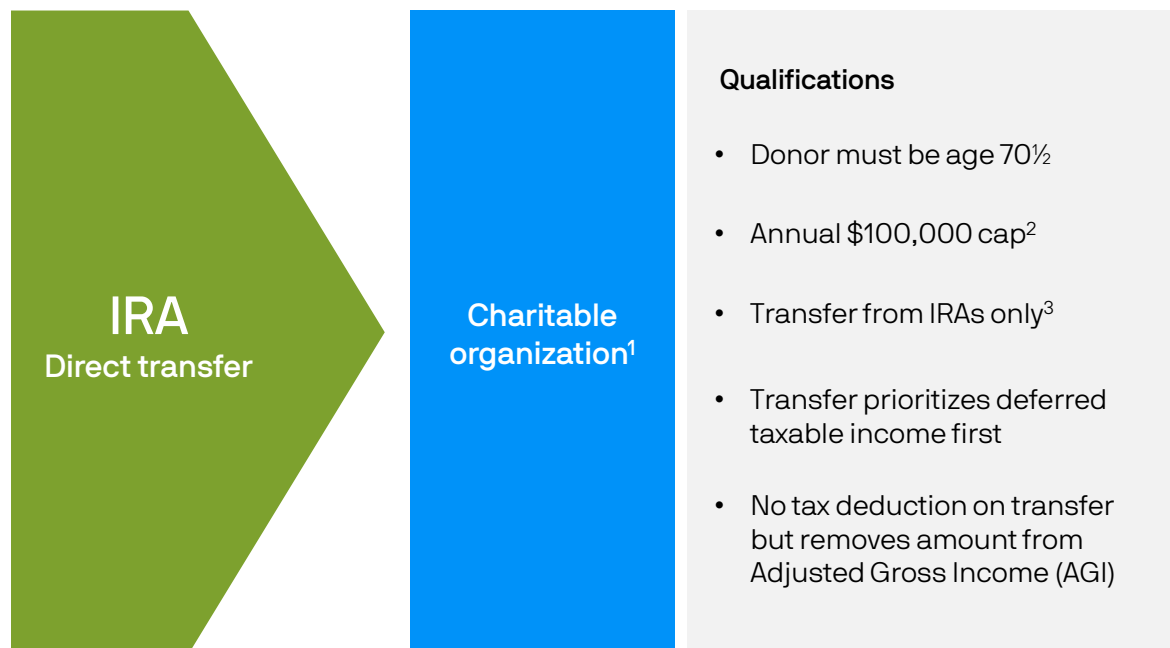
GTR-OTB

31

Qualified Charitable Distributions

This tax strategy helps someone who is charitably inclined to make a direct donation while eliminating the income taxes due on the distribution.

Spending



Giving more by paying less tax

Qualified Charitable Distributions (QCDs) allow Required Minimum Distributions (RMDs) to be transferred directly to charity and to not be included in the account owner’s taxable income.

Despite changes to the RMD age, **SECURE 2.0** did not change the rule that QCDs may be made beginning at age 70½.

¹Not applicable to supporting organizations, donor advised funds or private foundations. After 2022, SECURE 2.0 expands the charitable IRA rollover rule to include a one-time distribution of up to \$50,000 (indexed for inflation after tax year 2023) to a Charitable Remainder Unit Trust (CRUT), Charitable Remainder Annuity Trust (CRAT) or Charitable Gift Annuity (CGA). However, the CRUT or CRAT must be funded exclusively from the QCD, and the only income beneficiaries are the IRA owner or IRA owner’s spouse, and the income will be classified as ordinary income. CGAs funded with QCDs must begin income payments within one year after funding, and such payments must be established at a fixed rate of 5% or higher.

²Reduced by any deductible IRA contribution made in the same year. Indexed for inflation after tax year 2023.

³Traditional IRAs. While in certain circumstances a QCD could be made from a Roth IRA, a Roth is not subject to RMDs and typically withdrawals do not incur income tax so generally this strategy would not be recommended.

Not intended to be personal advice. Consult with your tax professional. Consolidated Appropriations Act of 2016 made the QCD permanent. Source: J.P. Morgan Asset Management.



2023 disclosures

GTR

52

Unless otherwise indicated, all illustrations are shown in U.S. dollars.

Past performance is no guarantee of comparable future results.

Diversification does not guarantee investment returns and does not eliminate the risk of loss.

Indices are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. This world-renowned index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. Although the S&P 500 Index focuses on the large cap segment of the market, with approximately 75% coverage of U.S. equities, it is also an ideal proxy for the total market. An investor cannot invest directly in an index.

The **Bloomberg Capital U.S. Aggregate Index** represents securities that are SEC-registered, taxable and dollar denominated. The index covers the U.S. investment-grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

The price of **equity** securities may rise or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk," meaning that stock prices in general may decline over short or extended periods of time.

Investing in **alternative assets** involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax professional prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Opinions and estimates offered constitute our judgment and are subject to change without notice, as are statements of financial market trends, which are based on current market conditions. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. References to future returns are not promises or even estimates of actual returns a client portfolio may achieve.

Asset class	20/80	40/60	50/50	60/40	80/20
U.S. large cap growth	4.8%	9.6%	12.0%	14.4%	19.3%
U.S. large cap value	4.8%	9.6%	12.0%	14.4%	19.3%
U.S. mid/small cap	2.5%	4.8%	6.0%	7.3%	9.5%
U.S. REITs	1.0%	2.0%	2.5%	3.0%	4.0%
Developed market equities	5.0%	10.0%	12.5%	15.0%	20.0%
Emerging market equities	2.0%	4.0%	5.0%	6.0%	8.0%
U.S. investment-grade bonds	62.8%	46.8%	38.5%	30.3%	12.5%
U.S. high yield bonds	10.5%	8.0%	7.0%	6.0%	4.5%
Emerging market debt	6.8%	5.3%	4.5%	3.8%	3.0%

Model portfolios can only be distributed by Intermediaries where Advisory Portfolios are available.

This document is a general communication being provided for informational purposes only. It is educational in nature and not designed to be a recommendation for any specific investment product, strategy, plan feature or other purposes. By receiving this communication you agree with the intended purpose described above. Any examples used in this material are generic, hypothetical and for illustration purposes only. None of J.P. Morgan Asset Management, its affiliates or representatives is suggesting that the recipient or any other person take a specific course of action or any action at all. Communications such as this are not impartial and are provided in connection with the advertising and marketing of products and services. Prior to making any investment or financial decisions, you should seek individualized advice from your personal financial, legal, tax and other professionals that take into account all of the particular facts and circumstances of your own situation.

Telephone calls and electronic communications may be monitored and/or recorded. Personal data will be collected, stored and processed by J.P. Morgan Asset Management in accordance with our privacy policies at <https://www.jpmorgan.com/privacy>.

JPMorgan Distribution Services, Inc., member FINRA.

J.P. Morgan Asset Management is the marketing name for the asset management businesses of JPMorgan Chase & Co. and its affiliates worldwide.

If you are a person with a disability and need additional support in viewing the material, please call us at 1-800-343-1113 for assistance.

Copyright © 2023 JPMorgan Chase & Co. All rights reserved.

JP-GTR | 0903c02a81c9c127

NOT FDIC INSURED. NO BANK GUARANTEE. MAY LOSE VALUE.

J.P.Morgan
ASSET MANAGEMENT



Guide to the Markets[®]

U.S. | 4Q 2023

As of October 3, 2023



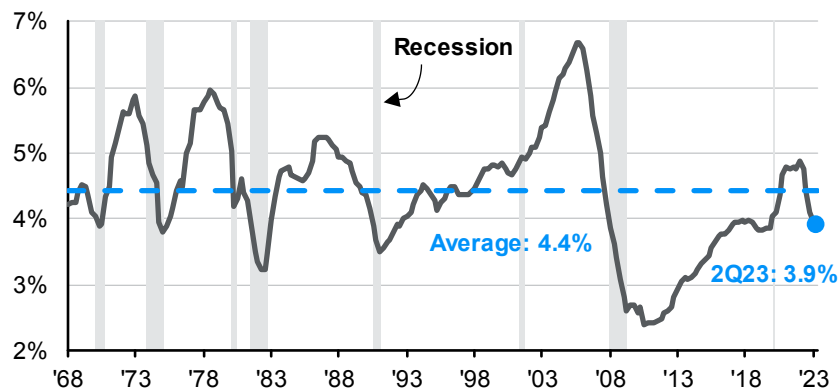


Cyclical sectors

GTM U.S. 18

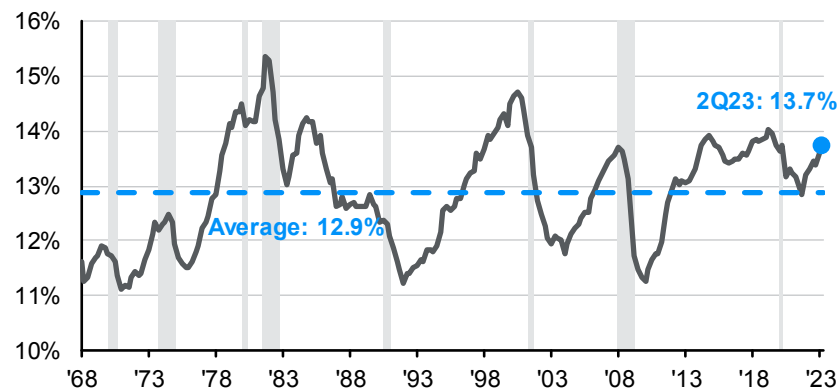
Residential investment as a % of GDP

Quarterly, seasonally adjusted



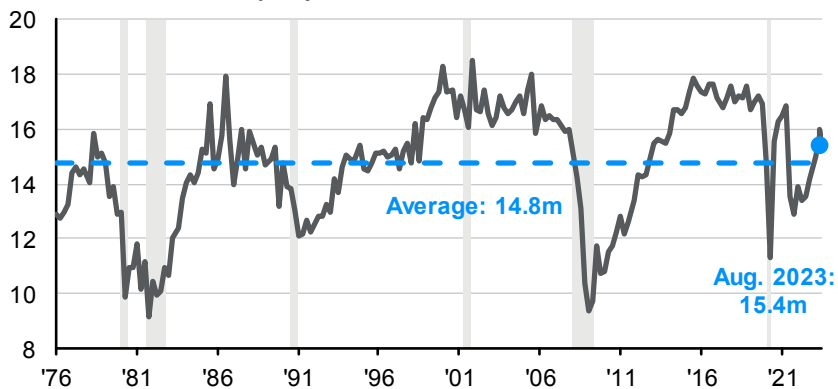
Business fixed investment as a % of GDP

Quarterly, seasonally adjusted



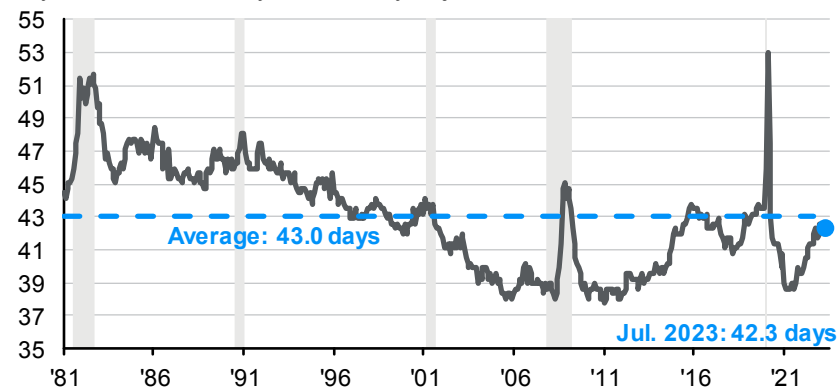
Light vehicle sales

Mil vehicles, seasonally adjusted ann. rate



Total business inventory/sales ratio

Days of sales, monthly, seasonally adjusted



Source: BEA, Census Bureau, FactSet, J.P. Morgan Asset Management. Data for light vehicle sales is quarterly apart from the latest monthly data point.
Guide to the Markets – U.S. Data are as of October 3, 2023.



Economic growth and the composition of GDP

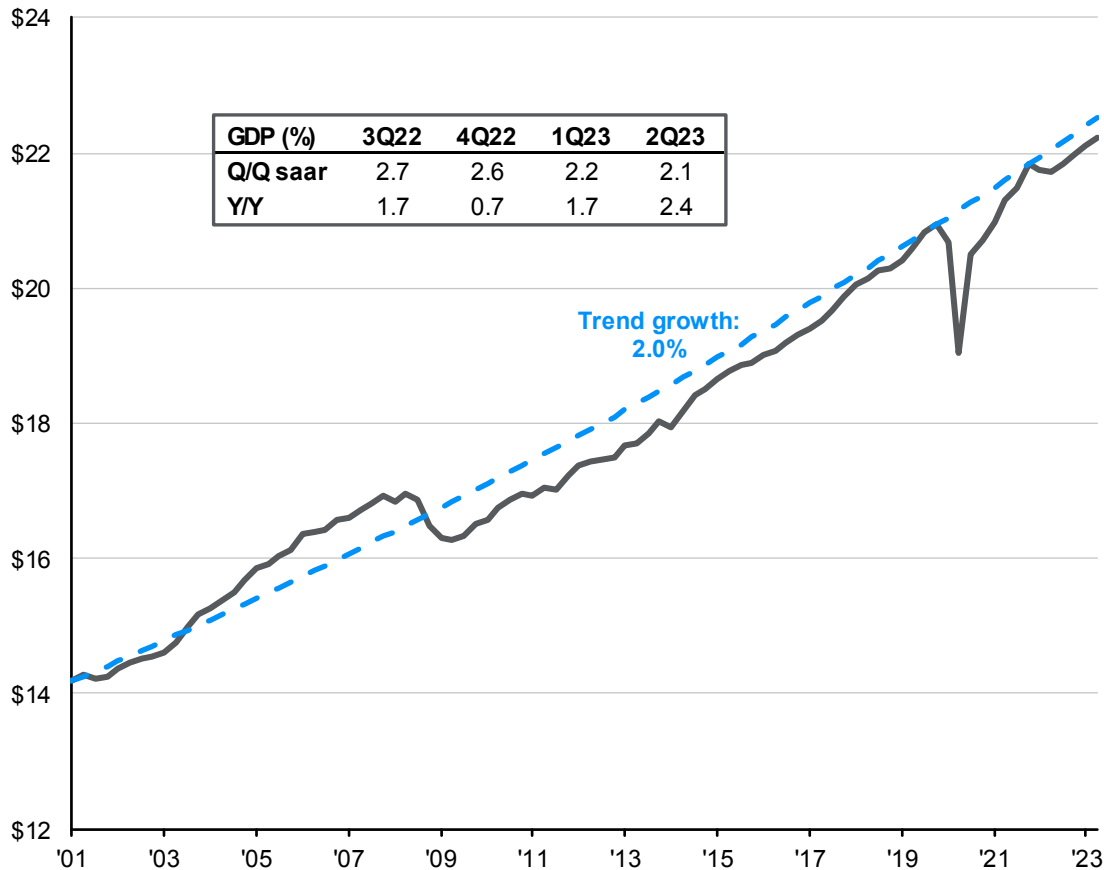
GTM

U.S.

16

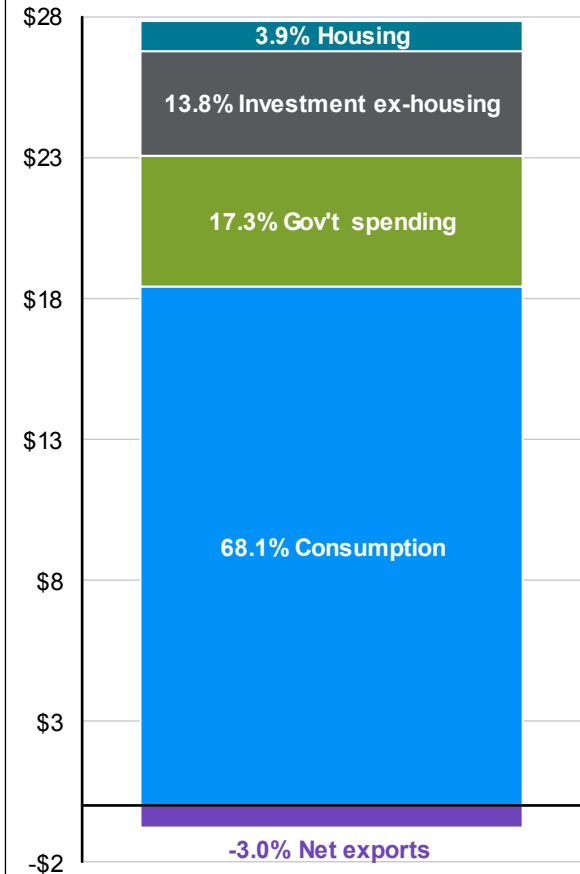
Real GDP

Trillions of chained (2017) dollars, seasonally adjusted at annual rates



Components of GDP

2Q23 nominal GDP, USD trillions



Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Trend growth is measured as the average annual growth rate from business cycle peak 1Q01 to business cycle peak 4Q19.

Guide to the Markets – U.S. Data are as of October 3, 2023.



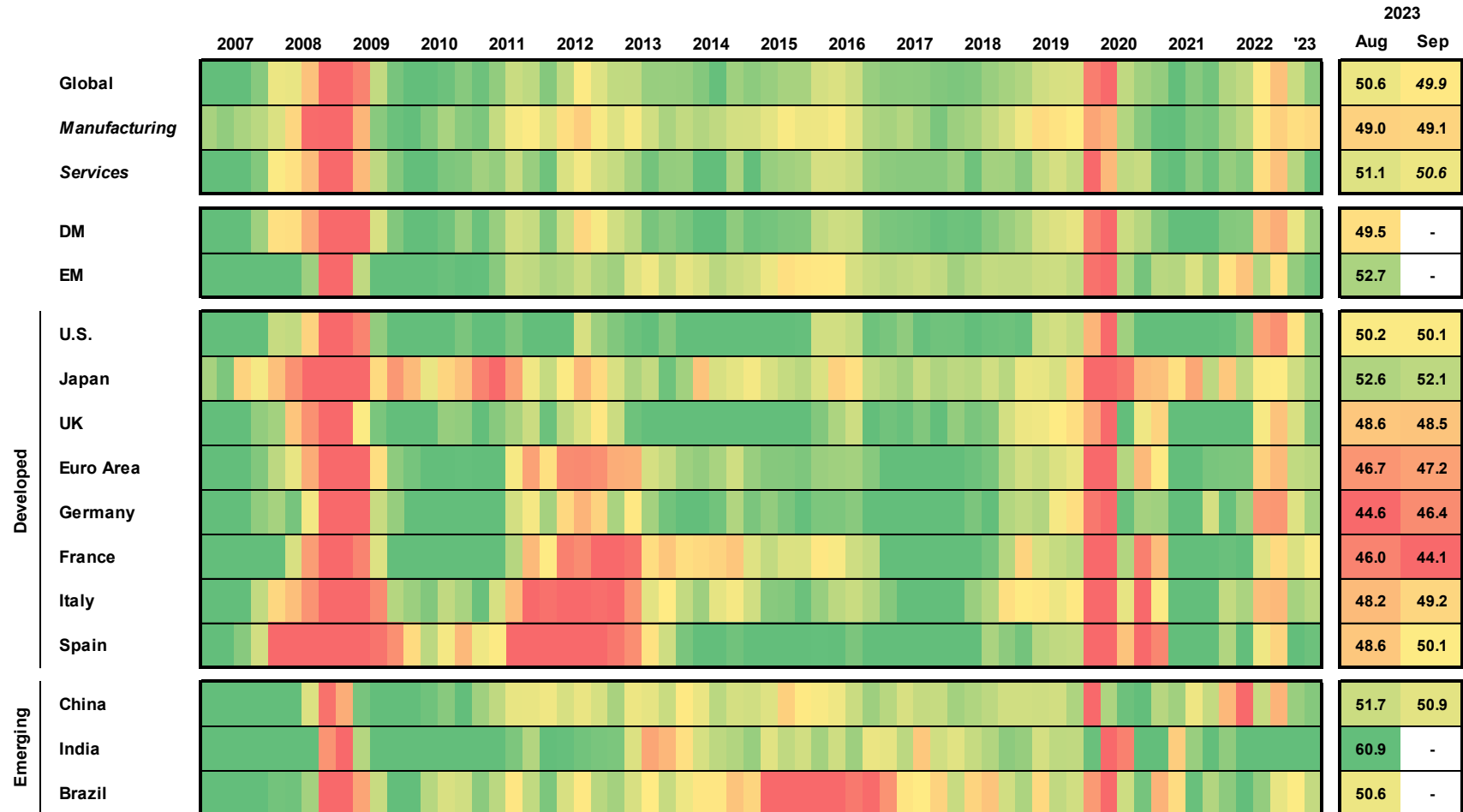
Global economic activity momentum

GTM

U.S.

48

Global Composite (manufacturing & services combined) Purchasing Managers' Index, quarterly



Source: Standard & Poor's, J.P. Morgan Economic Research, J.P. Morgan Asset Management.

The Composite PMI includes both manufacturing and services sub-indices. The global and services figures for September are estimates by J.P. Morgan Asset Management. Heatmap colors are based on PMI relative to the 50 level, which indicates acceleration or deceleration of the sector, for the time period shown. Heatmap is based on quarterly averages, except for the two most recent figures, which are single month readings. Data for the U.S. are back-tested and filled in for 2007-2009. Data for Japan are back-tested and filled in for the first two quarters of 2007. DM and EM represent developed markets and emerging markets, respectively.

Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
ASSET MANAGEMENT



Unemployment and wages

GTM

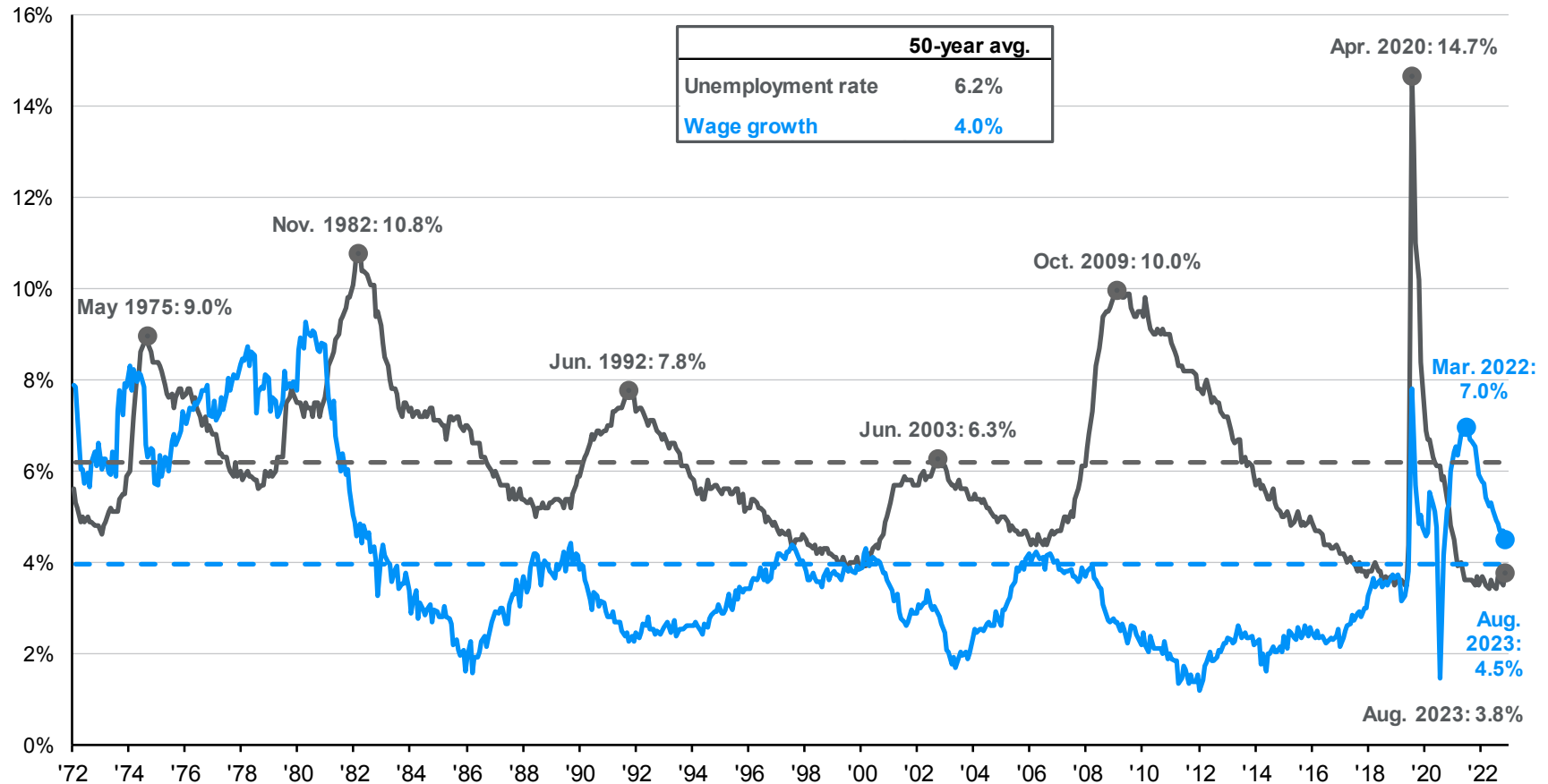
U.S.

27

Economy

Civilian unemployment rate and year-over-year wage growth

Private production and non-supervisory workers, seasonally adjusted, percent



Source: BLS, FactSet, J.P. Morgan Asset Management. Private production and non-supervisory jobs represent just over 80% of total private nonfarm jobs.

Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
ASSET MANAGEMENT

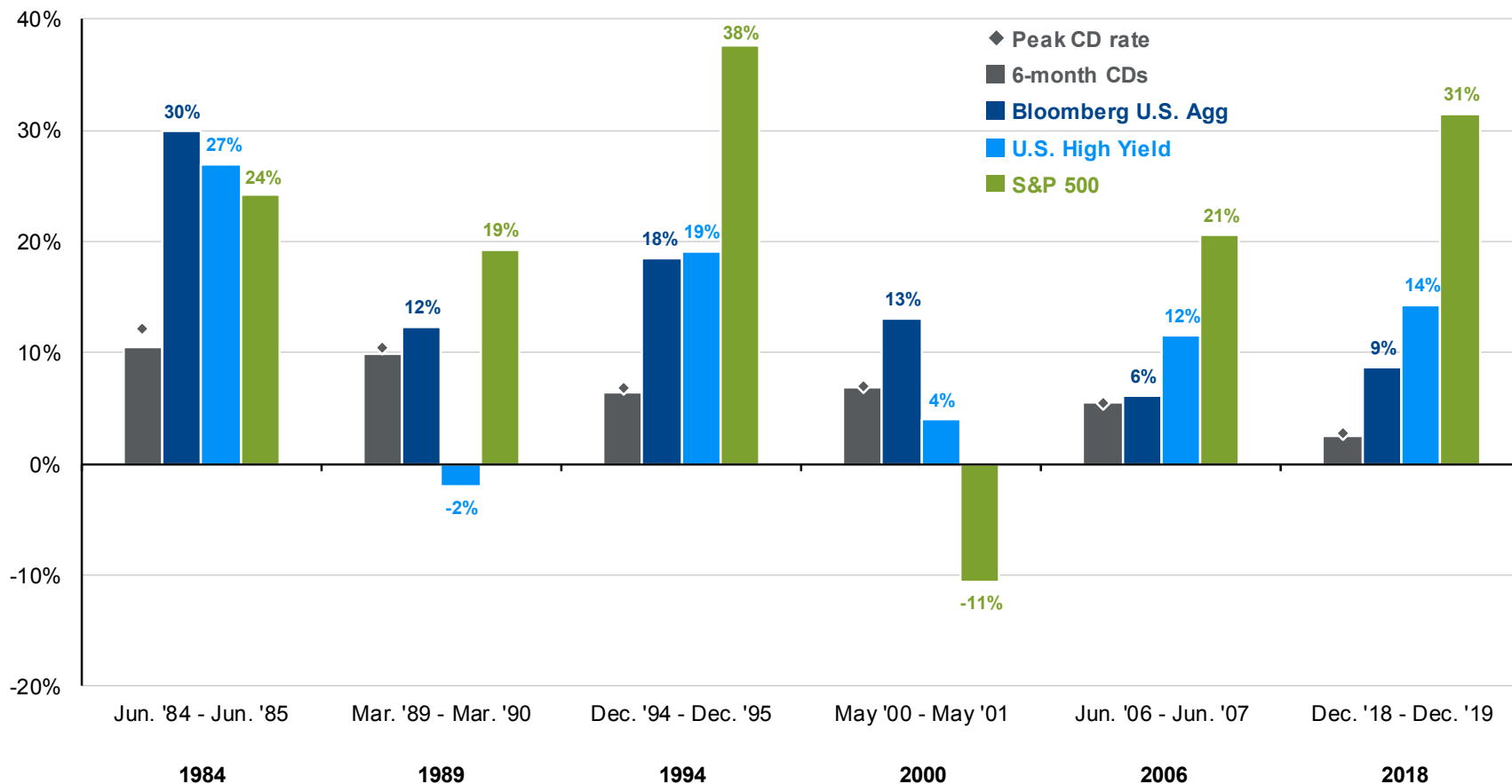


CD rates and other investment opportunities

GTM U.S. 67

Investment opportunities outside of CDs

Peak 6-month certificate of deposit (CD) rate during previous rate hiking cycles and subsequent 12-month total returns



Source: Bloomberg, FactSet, Federal Reserve, Robert Shiller, J.P. Morgan Asset Management.
U.S. High Yield: Bloomberg U.S. Corporate High Yield Index. The S&P 500 total return figure from the 1984 period was calculated using data from Robert Shiller. The analysis references the month in which the month-end 6-month CD rate peaked during previous rate hiking cycles. CD rate data prior to 2013 are sourced from the Federal Reserve, whereas data from 2013 to 2023 are sourced from Bloomberg. CD subsequent 12-month return calculation assumes reinvestment at the prevailing 6-month rate when the initial CD matures.
Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
ASSET MANAGEMENT



Equity market correlations and yields

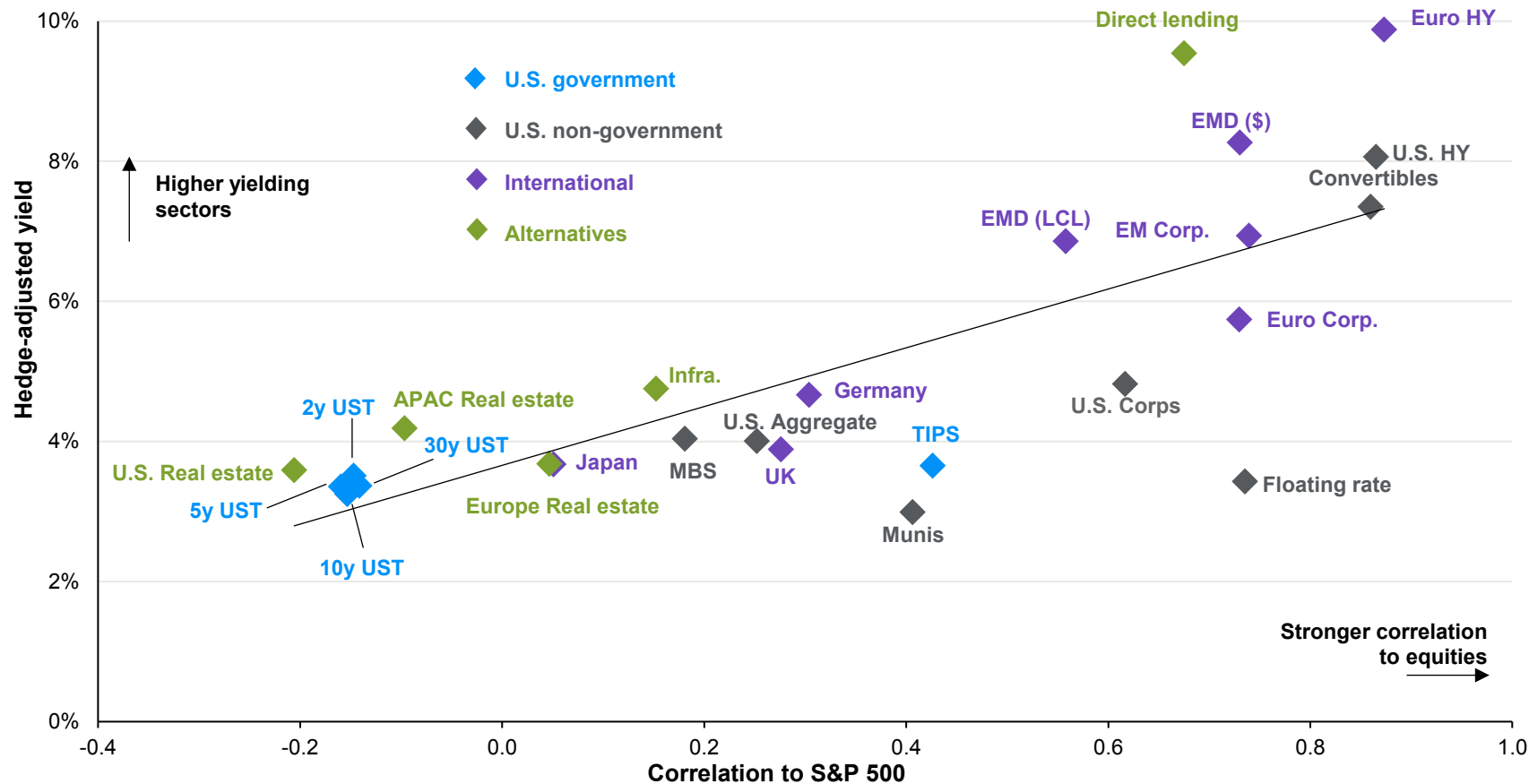
GTM

U.S.

56

Equity market correlations and yields

Hedge-adjusted yield, last 12 months, 10-year correlations, quarterly



Source: Bloomberg, NCREIF, MSCI, FactSet, ICE, J.P. Morgan Asset Management. Fixed income shown above are represented by Bloomberg indices except for EMD. MBS: U.S. Aggregate Securitized - MBS; U.S. corps: U.S. Corporates; Munis: Municipal Bond; U.S. HY: Corporate High Yield; TIPS: Treasury Inflation-Protected Securities (TIPS); Floating Rate: U.S. Floating Rate; Convertibles: U.S. Convertibles Composite; ABS: J.P. Morgan ABS Index; EMD (\$): J.P. Morgan EMBIG Diversified Index; EMD (LCL): J.P. Morgan GBIEM Global Diversified Index; EM Corp: J.P. Morgan CEMBI Broad Diversified Index; Euro Corp.: Euro Aggregate Corporate Index; Euro HY: Pan-European High Yield Index; U.S. Real Estate: NCREIF Property Index - ODCE; Europe Real Estate: Market weighted-avg. of MSCI Global Property Fund Indices - U.K. & Cont. Europe; APAC Real Estate: MSCI Global Property Index - Asia-Pacific; Global infra: MSCI Global Quarterly Infrastructure Asset Index (equal weighted blend); U.S. Direct Lending: Cliffwater Direct Lending Index. Convertibles yield is based on the U.S. portion of the Bloomberg Global Convertibles. Country yields are represented by the global aggregate for each country. Yield and return information based on bellwethers for Treasury securities. U.S. Real Estate yield is calculated using the MSCI Global Property Fund Index - North America. Alternative correlations are based on quarterly returns over the past 10 years through 9/30/2022, except U.S. Real estate, which is through 12/31/2022. Stock and bond correlations are based on quarterly returns over the past 10 years through 12/31/2022. All non-alternative yields are as of 2/28/2023. Alternative yields are as of 9/30/2022. This slide comes from our [Guide to Alternatives](#). [Guide to the Markets](#) - U.S. Data are as of June 20, 2023.

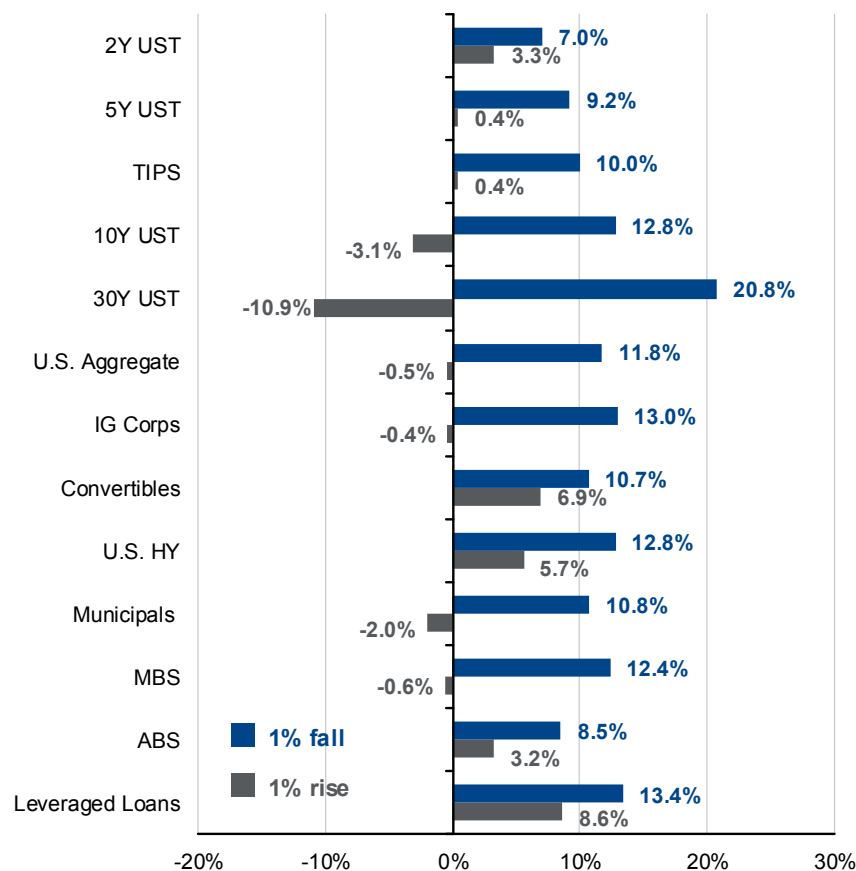


Fixed income market dynamics

U.S. Treasuries	Yield		Return			
	10/3/2023	12/31/2022	2023 YTD	Avg. Maturity	Correlation to 10-year	Correlation to S&P 500
2-Year	5.15%	4.41%	1.00%	2 years	0.74	-0.12
5-Year	4.80%	3.99%	-1.37%	5	0.93	-0.11
TIPS	5.20%	4.38%	-2.05%	7.2	0.62	0.37
10-Year	4.81%	3.88%	-5.14%	10	1.00	-0.12
30-Year	4.95%	3.97%	-13.03%	30	0.93	-0.15
Sector						
U.S. Aggregate	5.61%	4.68%	-2.67%	8.6	0.86	0.22
IG Corps	6.27%	5.42%	-1.62%	10.6	0.58	0.46
Convertibles	8.42%	7.58%	6.00%	-	-0.13	0.87
U.S. HY	9.25%	8.96%	4.45%	5.0	-0.09	0.73
Municipals	4.39%	3.55%	-1.80%	13.1	0.57	0.20
MBS	5.87%	4.71%	-4.19%	8.6	0.78	0.17
ABS	6.51%	5.89%	3.87%	3.3	0.13	0.00
Leveraged Loans	11.01%	11.41%	9.91%	2.4	-0.34	0.58

Impact of a 1% rise or fall in interest rates

Total return, assumes a parallel shift in the yield curve



Source: Bloomberg, FactSet, Standard & Poor's, U.S. Treasury, J.P. Morgan Asset Management. Sectors shown above are provided by Bloomberg unless otherwise noted and are represented by – U.S. Aggregate; MBS: U.S. Aggregate Securitized – MBS; ABS: J.P. Morgan ABS Index; Corporates: U.S. Corporates; Municipals: Muni Bond; High Yield: Corporate High Yield; Leveraged Loans: J.P. Morgan Leveraged Loan Index; TIPS: Treasury Inflation-Protected Securities; Convertibles: U.S. Convertibles Composite. Convertibles yield is as of most recent month-end and is based on U.S. portion of Bloomberg Global Convertibles Index. Yield and return information based on bellwethers for Treasury securities. Sector yields reflect yield-to-worst. Convertibles yield is based on U.S. portion of Bloomberg Global Convertibles. Correlations are based on 15-years of monthly returns for all sectors. Past performance is not indicative of future results.
Guide to the Markets – U.S. Data are as of October 3, 2023.



High yield bonds

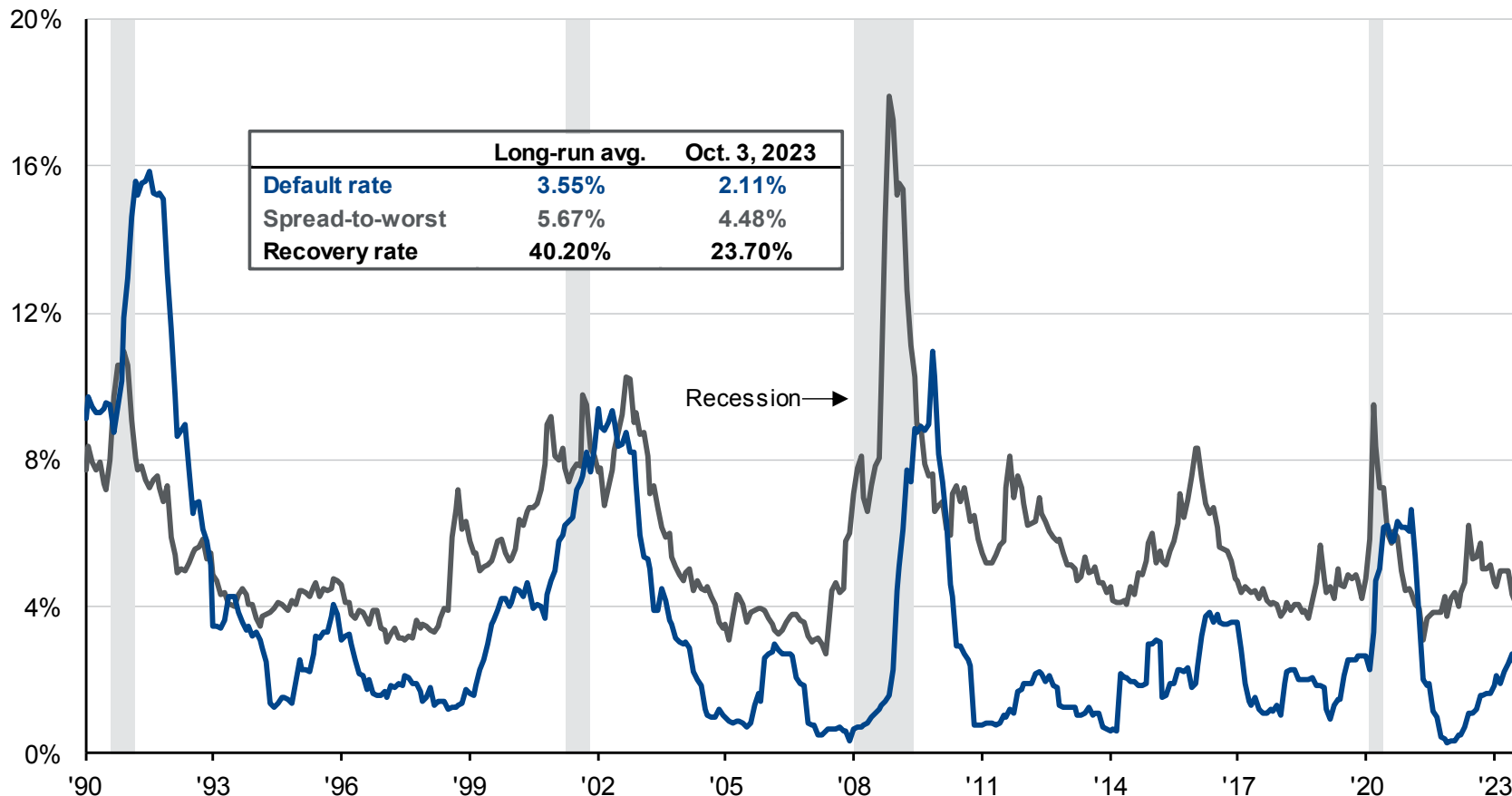
GTM

U.S.

37

Default rate and spread-to-worst

Percent



Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.

Long-run average is based on monthly historical data beginning in January 1990. Default rates are defined as the par value percentage of the total market trading at or below 50% of par value and include any Chapter 11 filing, prepackaged filing or missed interest payments. The default rate is an LTM figure (last 12 months) and tracks the % of defaults over the period. Recovery rates are based on the price of the defaulted bonds or loans 30 days post the default date. Default and recovery rates are as of most recent month-end. Spread-to-worst indicated are the difference between the yield-to-worst of a bond and yield-to-worst of a U.S. Treasury security with a similar duration. High yield is represented by the J.P. Morgan Domestic High Yield Index.

Guide to the Markets – U.S. Data are as of October 3, 2023.



Returns and valuations by style

GTM

U.S.

13

10-year annualized

	Value	Blend	Growth
Large	8.2%	11.8%	14.4%
Mid	7.6%	8.7%	9.7%
Small	5.9%	6.3%	6.4%

YTD

	Value	Blend	Growth
Large	-0.4%	11.5%	23.8%
Mid	-2.3%	1.1%	7.3%
Small	-3.9%	-0.8%	2.0%

Since market peak (February 2020)

	Value	Blend	Growth
Large	17.0%	32.5%	41.9%
Mid	13.7%	15.6%	12.3%
Small	12.6%	7.1%	-1.0%

Since market low (March 2020)

	Value	Blend	Growth
Large	89.3%	100.0%	107.0%
Mid	101.1%	93.5%	74.7%
Small	98.0%	80.4%	60.9%

Current P/E vs. 20-year avg. P/E

	Value	Blend	Growth
Large	13.5 / 13.7	17.8 / 15.6	24.6 / 18.8
Mid	13.1 / 14.5	15.1 / 16.4	23.5 / 20.5
Small	13.8 / 16.8	18.9 / 21.4	30.6 / 40.3

Current P/E as % of 20-year avg. P/E

	Value	Blend	Growth
Large	98.8%	114.5%	130.8%
Mid	90.3%	91.9%	115.1%
Small	82.4%	88.2%	75.8%

Source: FactSet, Refinitiv Datastream, Russell Investment Group, Standard & Poor's, J.P. Morgan Asset Management.

All calculations are cumulative total return, including dividends reinvested for the stated period. Since market peak represents period from 2/19/2020 to 9/30/2023. Since market low represents period from 3/23/2020 to 9/30/2023. Returns are cumulative returns, not annualized. For all time periods, total return is based on Russell style indices except for the large blend category, which is based on the S&P 500 Index. Past performance is not indicative of future returns. The price-to-earnings is a bottom-up calculation based on the most recent index price, divided by consensus estimates for earnings in the next 12 months (NTM) and is provided by FactSet Market Aggregates and J.P. Morgan Asset Management. *Guide to the Markets* – U.S. Data are as of October 3, 2023.



S&P 500 valuation measures

GTM

U.S.

5

S&P 500 Index: Forward P/E ratio



Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.

Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since November 1998 and by FactSet since January 2022. Current next 12-months consensus earnings estimates are \$241. Average P/E and standard deviations are calculated using 25 years of history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. *P/CF is a 20-year average due to cash flow availability.

Guide to the Markets – U.S. Data are as of October 3, 2023.



Annual returns and intra-year declines

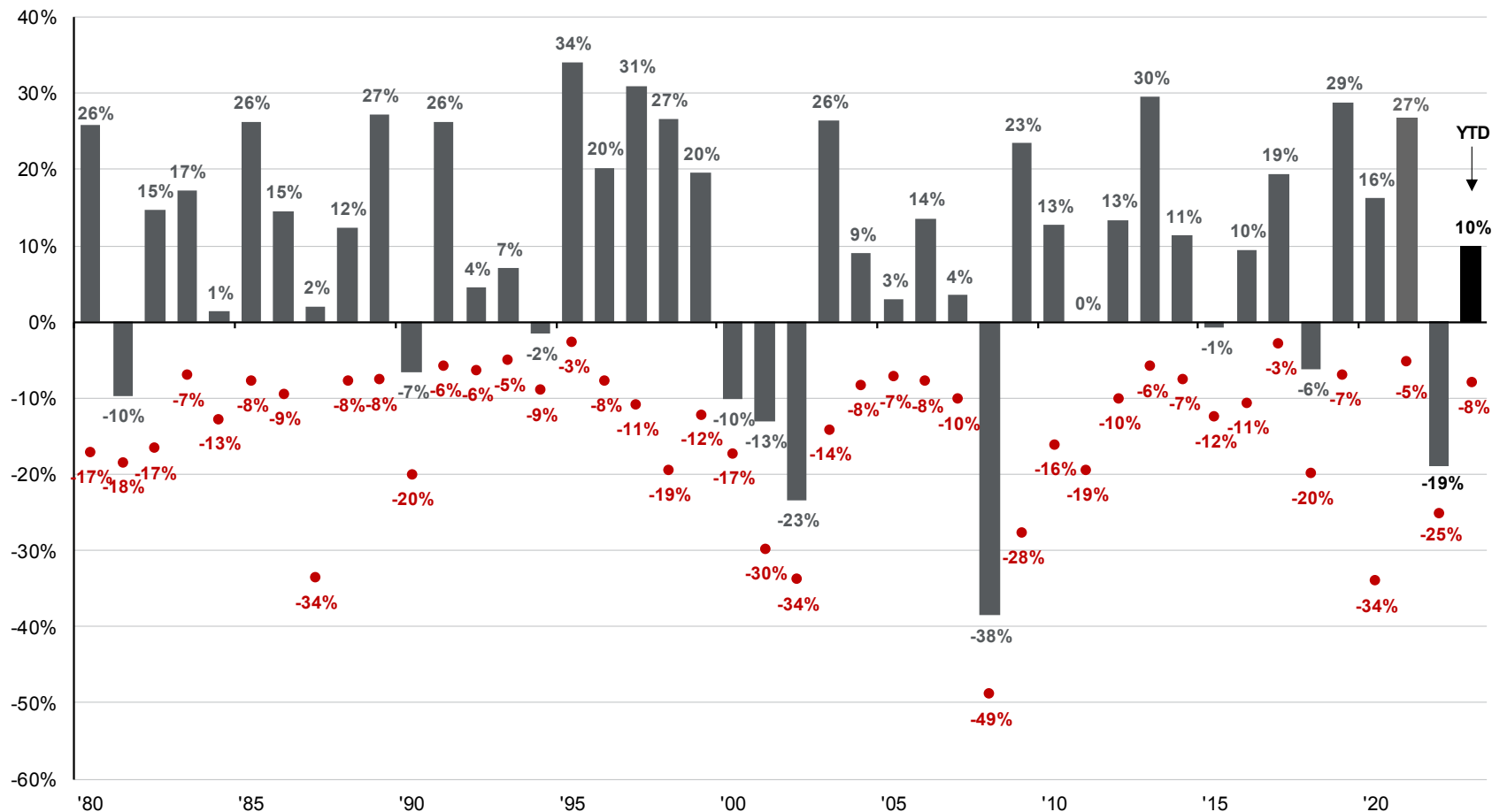
GTM

U.S.

15

S&P intra-year declines vs. calendar year returns

Despite average intra-year drops of 14.3%, annual returns were positive in 32 of 43 years



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.

Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2022, over which time period the average annual return was 8.7%.

Guide to the Markets – U.S. Data are as of October 3, 2023.



Bloomberg U.S. Agg. annual returns and intra-year declines

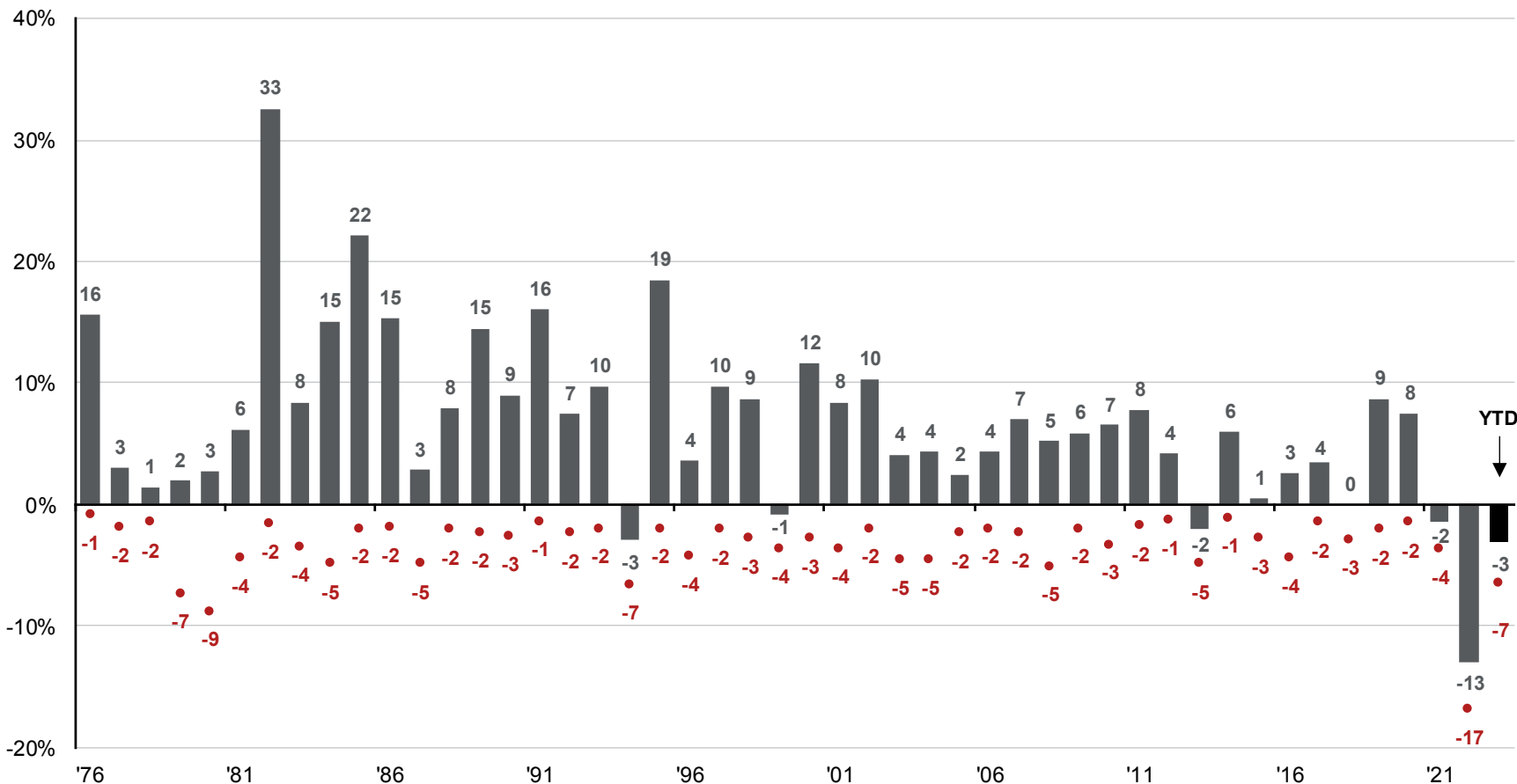
GTM

U.S.

42

Bloomberg U.S. Aggregate intra-year declines vs. calendar year returns

Despite average intra-year drops of 3.3%, annual returns positive in 42 of 47 years



Source: Bloomberg, FactSet, J.P. Morgan Asset Management.

Returns are based on total return. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1976 to 2022, over which time period the average annual return was 6.6%. Returns from 1976 to 1989 are calculated on a monthly basis; daily data are used afterward.

Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
ASSET MANAGEMENT



60/40 annual returns

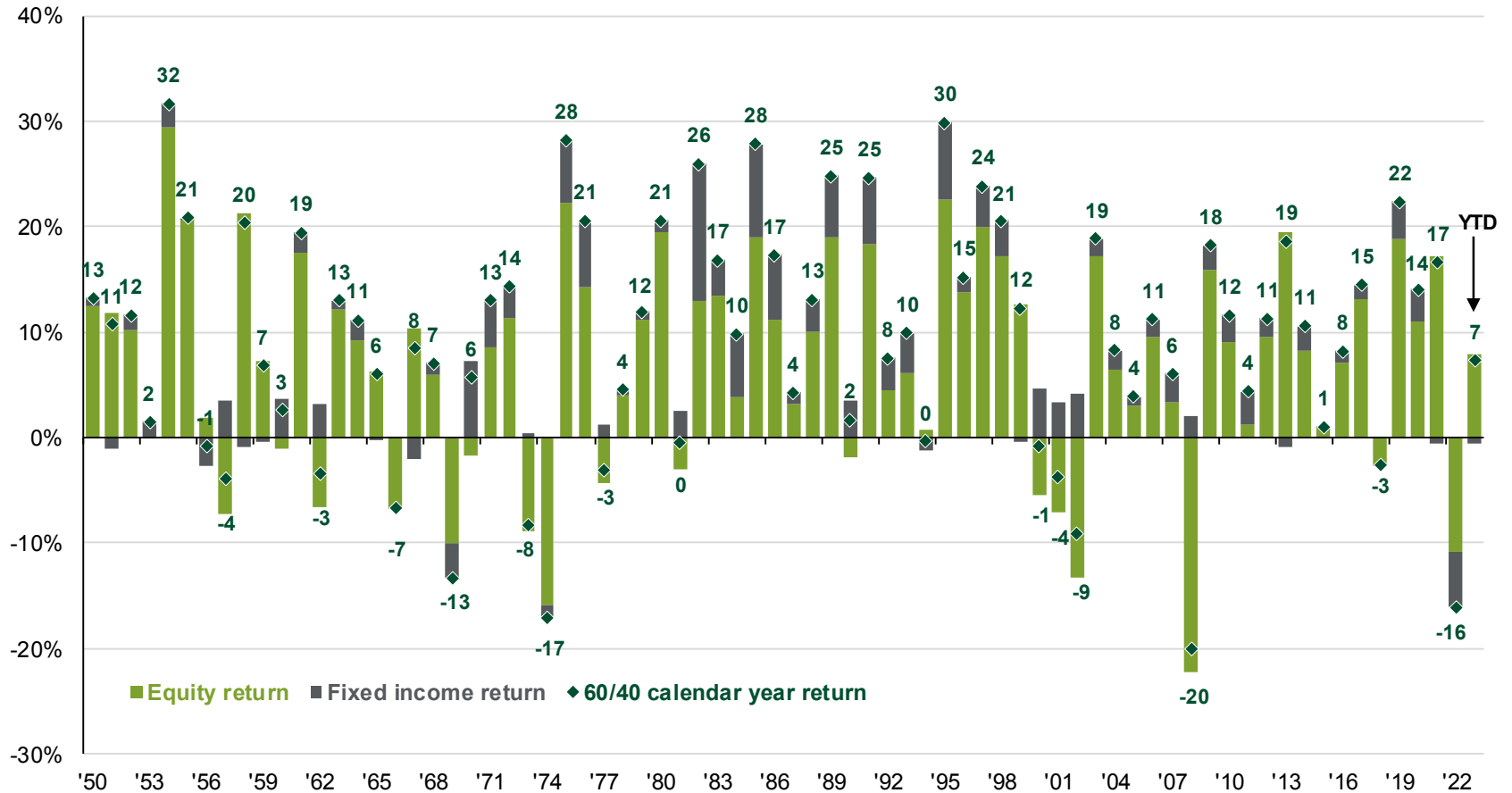
GTM

U.S.

64

60/40 annual return decomposition

Total returns, 1950 – present



Source: Bloomberg, FactSet, Ibbotson/Strategas, Robert Shiller, Standard & Poor's, Yale University, J.P. Morgan Asset Management. The 60/40 portfolio is 60% invested in S&P 500 Total Return Index and 40% invested in Bloomberg U.S. Aggregate Total Return Index. S&P 500 returns from 1950 to 1970 are estimated using the Shiller S&P Composite. U.S. fixed income total returns from 1950 to 1975 are estimated using data from Strategas/Ibbotson. The portfolio is rebalanced annually. Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
ASSET MANAGEMENT



Asset class returns

GTM U.S. 62

2008 - 2022		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD
Ann.	Vol.																
Large Cap	REITs	Fixed Income	EM Equity	REITs	REITs	REITs	Small Cap	REITs	REITs	Small Cap	EM Equity	Cash	Large Cap	Small Cap	REITs	Comdty.	Large Cap
8.8%	23.4%	5.2%	79.0%	27.9%	8.3%	19.7%	38.8%	28.0%	2.8%	21.3%	37.8%	1.8%	31.5%	20.0%	41.3%	16.1%	13.1%
Small Cap	Small Cap	Cash	High Yield	Small Cap	Fixed Income	High Yield	Large Cap	Large Cap	Large Cap	High Yield	DM Equity	Fixed Income	REITs	EM Equity	Large Cap	Cash	DM Equity
7.2%	23.2%	1.8%	59.4%	26.9%	7.8%	19.6%	32.4%	13.7%	1.4%	14.3%	25.6%	0.0%	28.7%	18.7%	28.7%	1.5%	7.6%
REITs	EM Equity	Asset Alloc.	DM Equity	EM Equity	High Yield	EM Equity	DM Equity	Fixed Income	Fixed Income	Large Cap	Large Cap	REITs	Small Cap	Large Cap	Comdty.	High Yield	High Yield
6.6%	23.0%	-25.4%	32.5%	19.2%	3.1%	18.6%	23.3%	6.0%	0.5%	12.0%	21.8%	-4.0%	25.5%	18.4%	27.1%	-12.7%	5.0%
Asset Alloc.	Comdty.	High Yield	REITs	Comdty.	Large Cap	DM Equity	Asset Alloc.	Asset Alloc.	Cash	Comdty.	Small Cap	High Yield	DM Equity	Asset Alloc.	Small Cap	Fixed Income	Asset Alloc.
6.1%	20.2%	-26.9%	28.0%	16.8%	2.1%	17.9%	14.9%	5.2%	0.0%	11.8%	14.6%	-4.1%	22.7%	10.6%	14.8%	-13.0%	4.5%
High Yield	DM Equity	Small Cap	Small Cap	Large Cap	Cash	Small Cap	High Yield	Small Cap	DM Equity	EM Equity	Asset Alloc.	Large Cap	Asset Alloc.	DM Equity	Asset Alloc.	Asset Alloc.	Cash
5.4%	20.0%	-33.8%	27.2%	15.1%	0.1%	16.3%	7.3%	4.9%	-0.4%	11.6%	14.6%	-4.4%	19.5%	8.3%	13.5%	-13.9%	3.7%
Fixed Income	Large Cap	Comdty.	Large Cap	High Yield	Asset Alloc.	Large Cap	REITs	Cash	Asset Alloc.	REITs	High Yield	Asset Alloc.	EM Equity	Fixed Income	DM Equity	DM Equity	Small Cap
2.7%	17.7%	-35.6%	26.5%	14.8%	-0.7%	16.0%	2.9%	0.0%	-2.0%	8.6%	10.4%	-5.8%	18.9%	7.5%	11.8%	-14.0%	2.5%
DM Equity	High Yield	Large Cap	Asset Alloc.	Asset Alloc.	Small Cap	Asset Alloc.	Cash	High Yield	High Yield	Asset Alloc.	REITs	Small Cap	High Yield	High Yield	High Yield	Large Cap	EM Equity
2.3%	13.0%	-37.0%	25.0%	13.3%	-4.2%	12.2%	0.0%	0.0%	-2.7%	8.3%	8.7%	-11.0%	12.6%	7.0%	1.0%	-18.1%	2.2%
EM Equity	Asset Alloc.	REITs	Comdty.	DM Equity	DM Equity	Fixed Income	Fixed Income	EM Equity	Small Cap	Fixed Income	Fixed Income	Comdty.	Fixed Income	Cash	Cash	EM Equity	Fixed Income
1.0%	12.4%	-37.7%	18.9%	8.2%	-11.7%	4.2%	-2.0%	-1.8%	-4.4%	2.6%	3.5%	-11.2%	8.7%	0.5%	0.0%	-19.7%	-1.2%
Cash	Fixed Income	DM Equity	Fixed Income	Fixed Income	Comdty.	Cash	EM Equity	DM Equity	EM Equity	DM Equity	Comdty.	DM Equity	Comdty.	Comdty.	Fixed Income	Small Cap	Comdty.
0.6%	4.2%	-43.1%	5.9%	6.5%	-13.3%	0.1%	-2.3%	-4.5%	-14.6%	1.5%	1.7%	-13.4%	7.7%	-3.1%	-1.5%	-20.4%	-3.4%
Comdty.	Cash	EM Equity	Cash	Cash	EM Equity	Comdty.	Comdty.	Comdty.	Comdty.	Cash	Cash	EM Equity	Cash	REITs	EM Equity	REITs	REITs
-2.6%	0.4%	-53.2%	0.1%	0.1%	-18.2%	-1.1%	-9.5%	-17.0%	-24.7%	0.3%	0.8%	-14.2%	2.2%	-5.1%	-2.2%	-24.9%	-5.6%

Source: Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management.

Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Bloomberg Global HY Index, Fixed Income: Bloomberg US Aggregate, REITs: NAREIT Equity REIT Index, Cash: Bloomberg 1-3m Treasury. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Bloomberg US Aggregate, 5% in the Bloomberg 1-3m Treasury, 5% in the Bloomberg Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period from 12/31/2007 to 12/31/2022. Please see disclosure page at end for index definitions. All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. Past performance is not indicative of future returns.

Guide to the Markets – U.S. Data are as of October 3, 2023.



Time, diversification and the volatility of returns

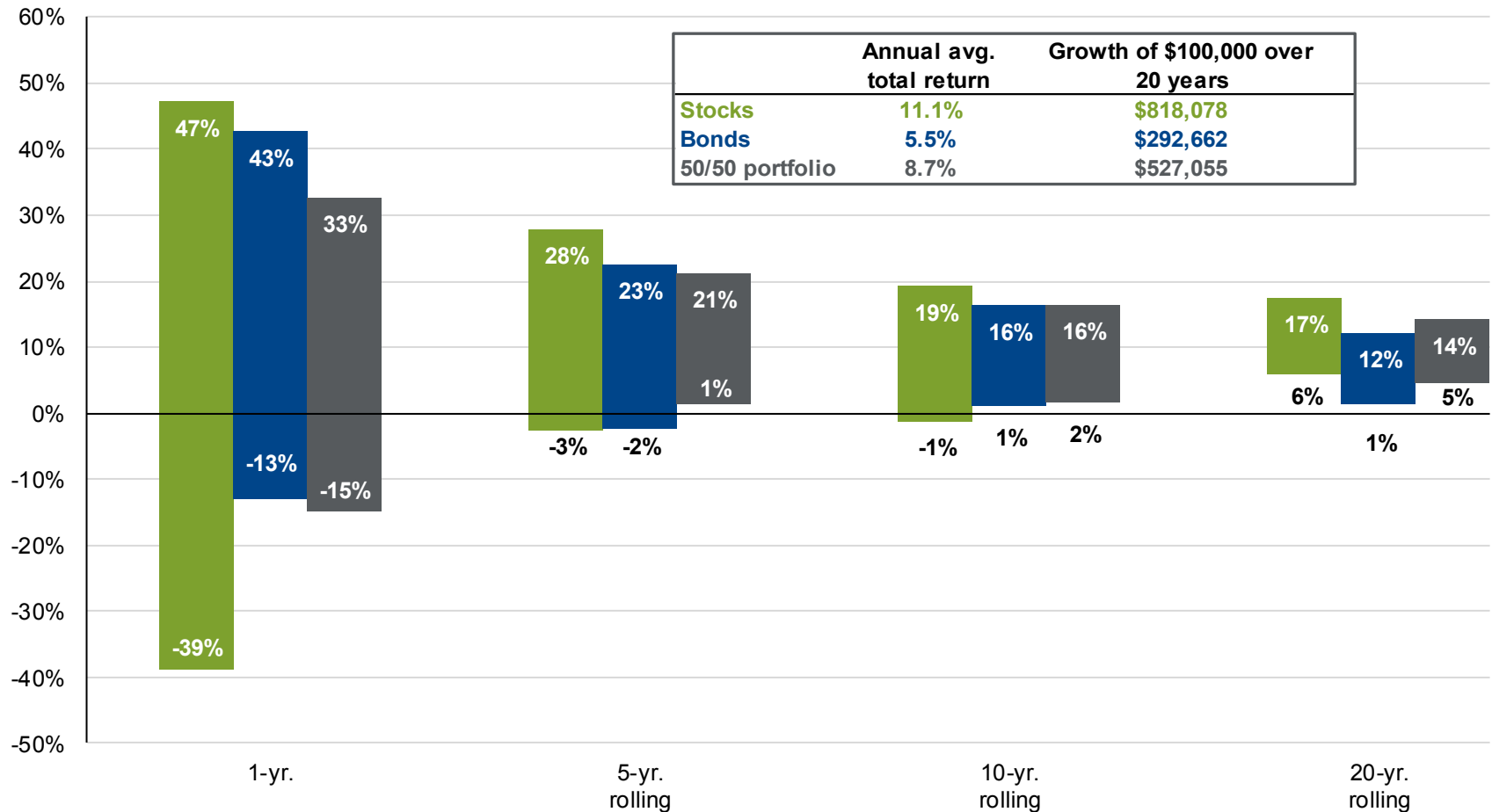
GTM

U.S.

65

Range of stock, bond and blended total returns

Annual total returns, 1950-2022



Source: Bloomberg, FactSet, Federal Reserve, Robert Shiller, Strategas/Ibbotson, J.P. Morgan Asset Management.

Returns shown are based on calendar year returns from 1950 to 2021. Stocks represent the S&P 500 Shiller Composite and Bonds represent Strategas/Ibbotson for periods from 1950 to 2010 and Bloomberg Aggregate thereafter. Growth of \$100,000 is based on annual average total returns from 1950 to 2022.

Guide to the Markets – U.S. Data are as of October 3, 2023 .

J.P.Morgan
ASSET MANAGEMENT



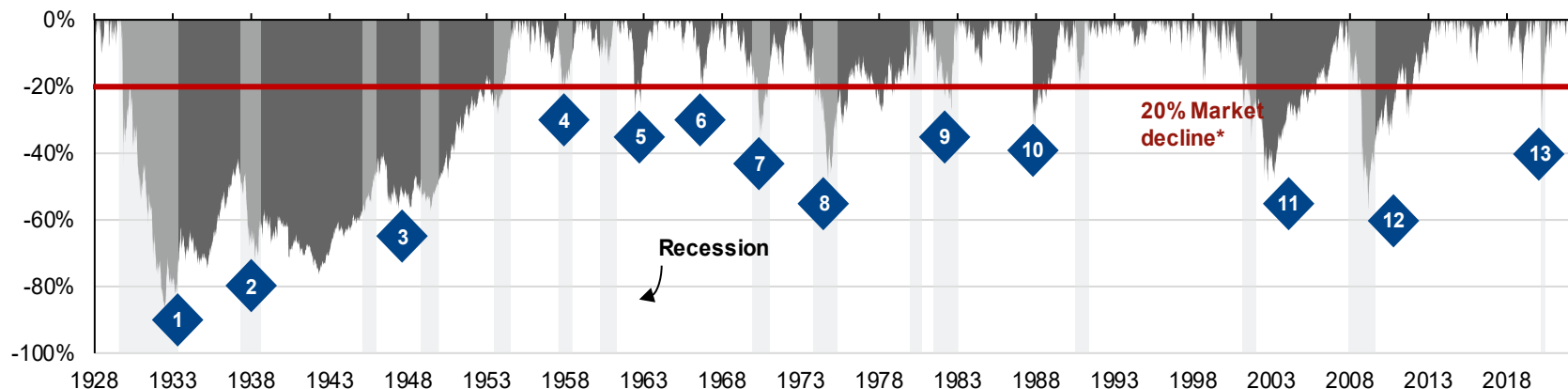
Bear markets and subsequent bull runs

GTM

U.S.

OTB

U.S. recessions and S&P 500 composite declines from all-time highs



Characteristics of bull and bear markets

Market correction	Bear Market			Macro environment				Bull markets		
	Market peak	Bear return*	Duration (months)*	Recession	Commodity Spike	Aggressive Fed	Extreme Valuation	Bull begin date	Bull return	Duration (months)
1 Crash of 1929 - Excessive leverage, irrational exuberance	Sep 1929	-86%	32	◆			◆	Jul 1926	152%	37
2 1937 Fed Tightening - Premature policy tightening	Mar 1937	-60%	61	◆		◆		Mar 1935	129%	23
3 Post WWII Crash - Post-war demobilization, recession fears	May 1946	-30%	36	◆			◆	Apr 1942	158%	49
4 Eisenhower Recession - Worldwide recession	Aug 1956	-22%	14	◆		◆	◆	Jun 1949	267%	85
5 Flash Crash of 1962 - Flash crash, Cuban Missile Crisis	Dec 1961	-28%	6				◆	Oct 1960	39%	13
6 1966 Financial Crisis - Credit crunch	Feb 1966	-22%	7			◆	◆	Oct 1962	76%	39
7 Tech Crash of 1970 - Economic overheating, civil unrest	Nov 1968	-36%	17	◆	◆	◆	◆	Oct 1966	48%	25
8 Stagflation - OPEC oil embargo	Jan 1973	-48%	20	◆	◆			May 1970	74%	31
9 Volcker Tightening - Whip Inflation Now	Nov 1980	-27%	20	◆	◆	◆		Mar 1978	62%	32
10 1987 Crash - Program trading, overheating markets	Aug 1987	-34%	3				◆	Aug 1982	229%	60
11 Tech Bubble - Extreme valuations, .com boom/bust	Mar 2000	-49%	30	◆			◆	Oct 1990	417%	113
12 Global Financial Crisis - Leverage/housing, Lehman collapse	Oct 2007	-57%	17	◆	◆	◆		Oct 2002	101%	60
13 Global Pandemic Recession	Feb 2020	-34%	1	◆				Mar 2009	401%	131
Averages	-	-41%	20					-	162%	51

Source: FactSet, NBER, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management.

*A bear market is defined as a 20% or more decline from the previous market high. The related market return is the peak to trough return over the cycle. Periods of "Recession" are defined using NBER business cycle dates. "Commodity spikes" are defined as movement in oil prices of over 100% over an 18-month period. Periods of "Extreme Valuations" are those where S&P 500 last 12-months P/E levels were approximately two standard deviations above long-run averages, or time periods where equity market valuations appeared expensive given the broader macroeconomic environment. "Aggressive Fed Tightening" is defined as Federal Reserve monetary tightening that was unexpected and/or significant in magnitude. Bear and bull returns are price returns.

Guide to the Markets – U.S. Data are as of December 31, 2022.



Equity scenarios: Bull, bear and in-between

GTM

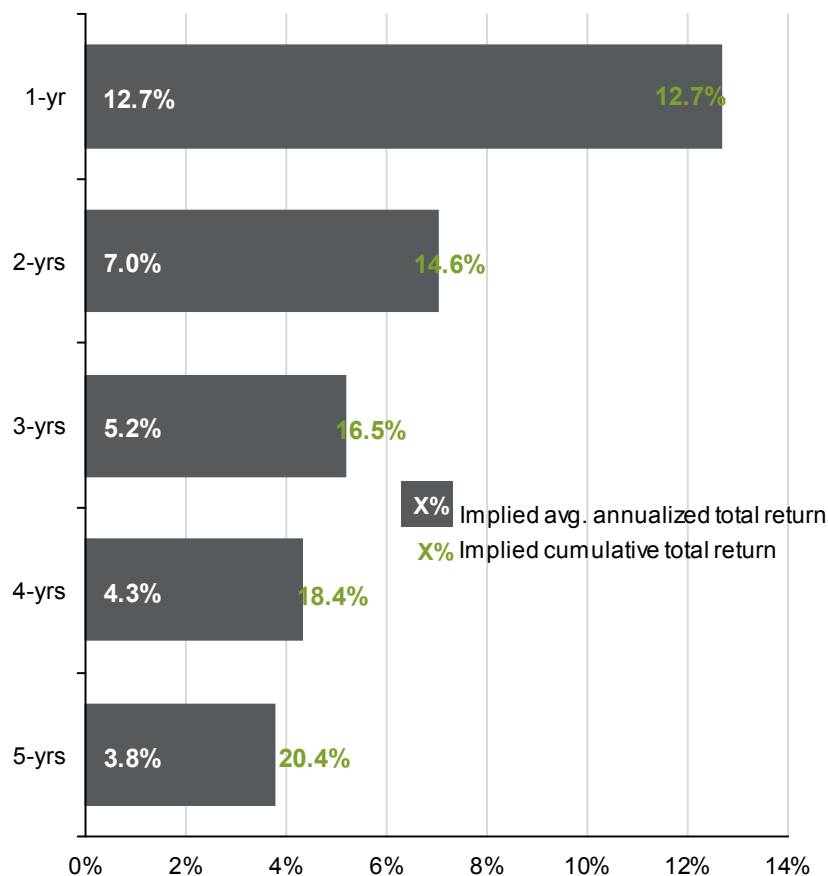
U.S.

16

Equities

Return needed to reach January 2022 peak of 4,797

S&P 500 level as of 9/22/2023 is 4,320



Bull and bear markets

Bull markets			Bear markets		
Bull begin date	Bull return	Duration (months)	Market peak	Bear return*	Duration (months)*
Jul 1926	152%	37	Sep 1929	-86%	32
Mar 1935	129%	23	Mar 1937	-60%	61
Apr 1942	158%	49	May 1946	-30%	36
Jun 1949	267%	85	Aug 1956	-22%	14
Oct 1960	39%	13	Dec 1961	-28%	6
Oct 1962	76%	39	Feb 1966	-22%	7
Oct 1966	48%	25	Nov 1968	-36%	17
May 1970	74%	31	Jan 1973	-48%	20
Mar 1978	62%	32	Nov 1980	-27%	20
Aug 1982	229%	60	Aug 1987	-34%	3
Oct 1990	417%	113	Mar 2000	-49%	30
Oct 2002	101%	60	Oct 2007	-57%	17
Mar 2009	401%	131	Feb 2020	-34%	1
Mar 2020	114%	21	Jan. 2022**	-25%	9
Averages	162%	51	-	-41%	20

Source: FactSet, NBER, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management. (Left) The current peak of 4,797 was observed on 1/3/2022. (Right) *A bear market is defined as a 20% or more decline from the previous market high. The related market return is the peak to trough return over the cycle. Bear and bull returns are price returns. **The bear market beginning in January 2022 is currently ongoing, with the "bear return" and duration for this period calculated from the January 2022 market peak through the current trough in October 2022. Averages for the bear market return and duration do not include figures from the current cycle. *Guide to the Markets* – U.S. Data are as of September 22, 2023.

J.P.Morgan
ASSET MANAGEMENT



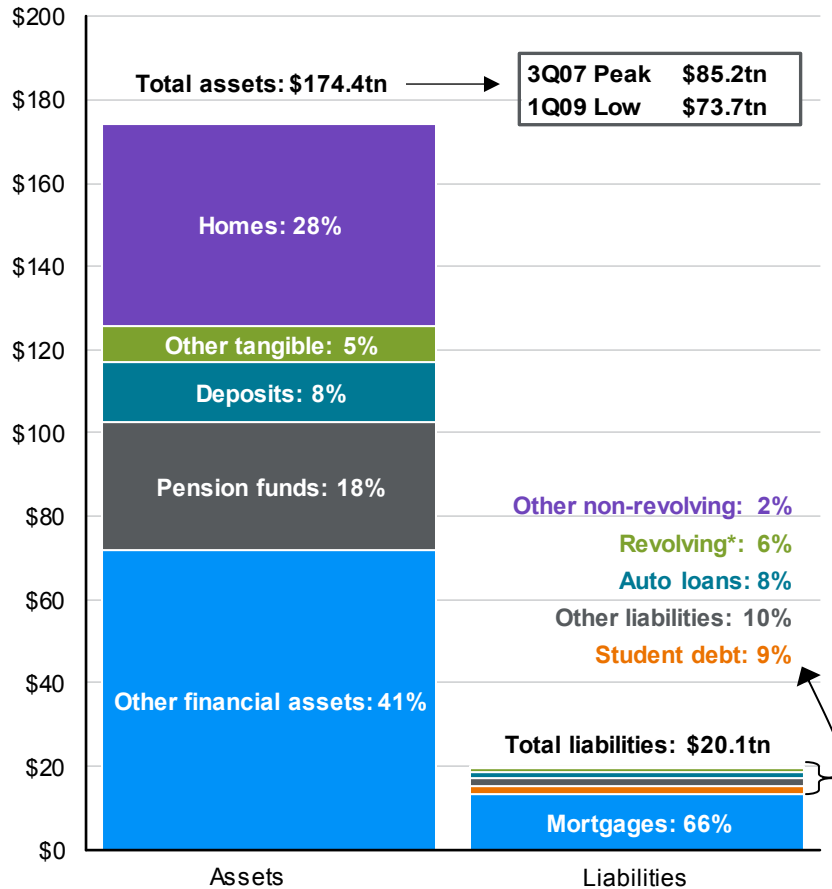
Consumer finances

GTM U.S. 21

Economy

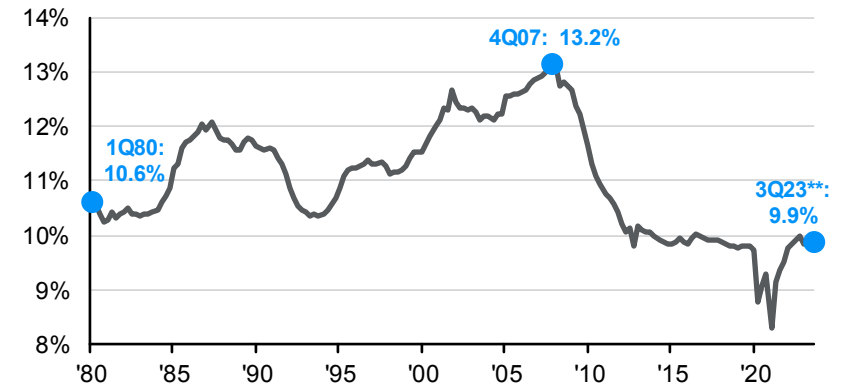
Consumer balance sheet

2Q23, USD trillions, not seasonally adjusted



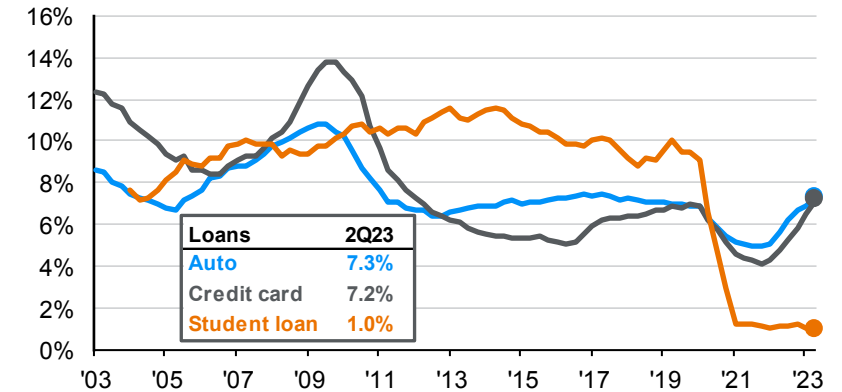
Household debt service ratio

Debt payments as % of disposable personal income, SA



Flows into early delinquencies

% of balance delinquent 30+ days



Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) BEA. Data include households and nonprofit organizations. SA – seasonally adjusted. *Revolving includes credit cards. Values may not sum to 100% due to rounding. **3Q23 figures for debt service ratio are J.P. Morgan Asset Management estimates. Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
ASSET MANAGEMENT



Federal finances

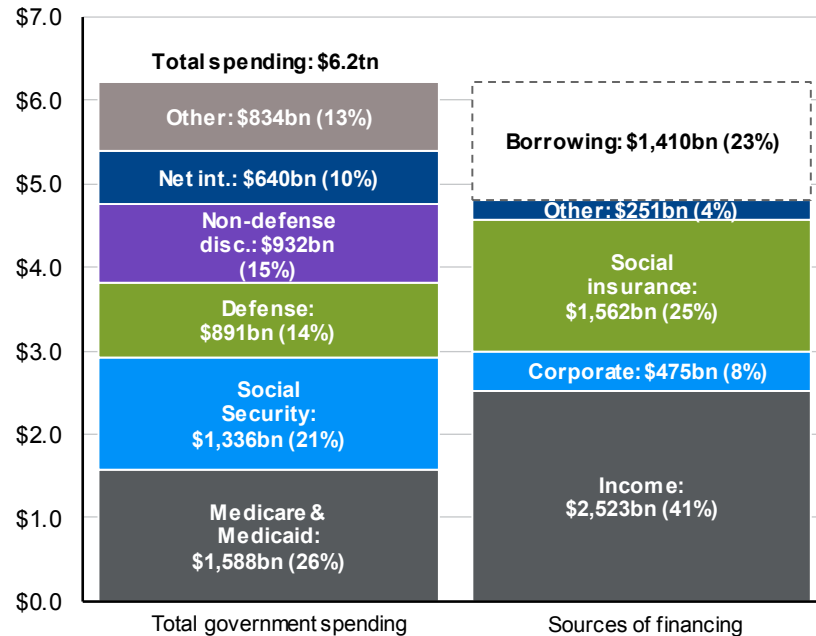
GTM

U.S.

20

The 2023 federal budget

CBO Baseline forecast, USD trillions

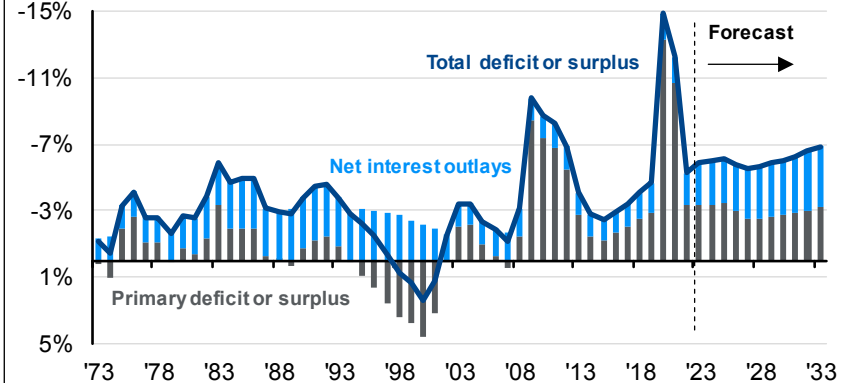


CBO's Baseline economic assumptions

	2023	'24-'25	'26-'27	'28-'33
Real GDP growth	0.9%	2.0%	2.4%	1.9%
10-year Treasury	4.0%	3.8%	3.8%	3.8%
Headline inflation (CPI)	3.3%	2.5%	2.1%	2.2%
Unemployment	4.1%	4.6%	4.5%	4.5%

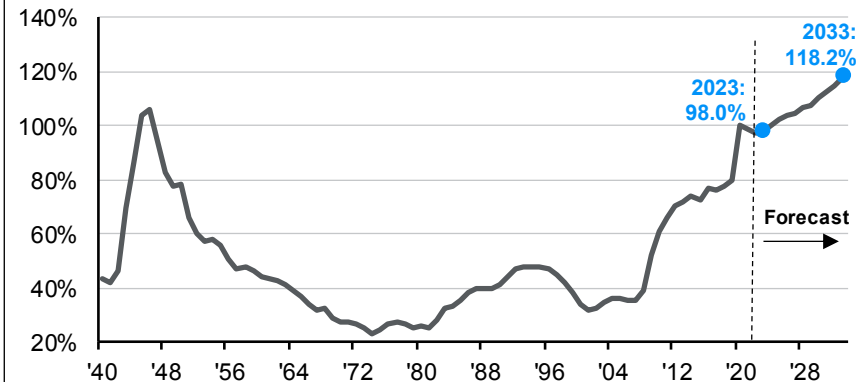
Federal deficit and net interest outlays

% of GDP, 1973-2033, CBO Baseline Forecast



Federal net debt (accumulated deficits)

% of GDP, 1940 – 2033, CBO Baseline Forecast, end of fiscal year



Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department.

Estimates are based on the Congressional Budget Office (CBO) February 2023 The Budget and Economic Outlook, except for baseline economic assumptions, which are based on the July 2023 CBO Update to the Economic Outlook. Other spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Note: Years shown are fiscal years. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.

Guide to the Markets – U.S. Data are as of October 3, 2023.



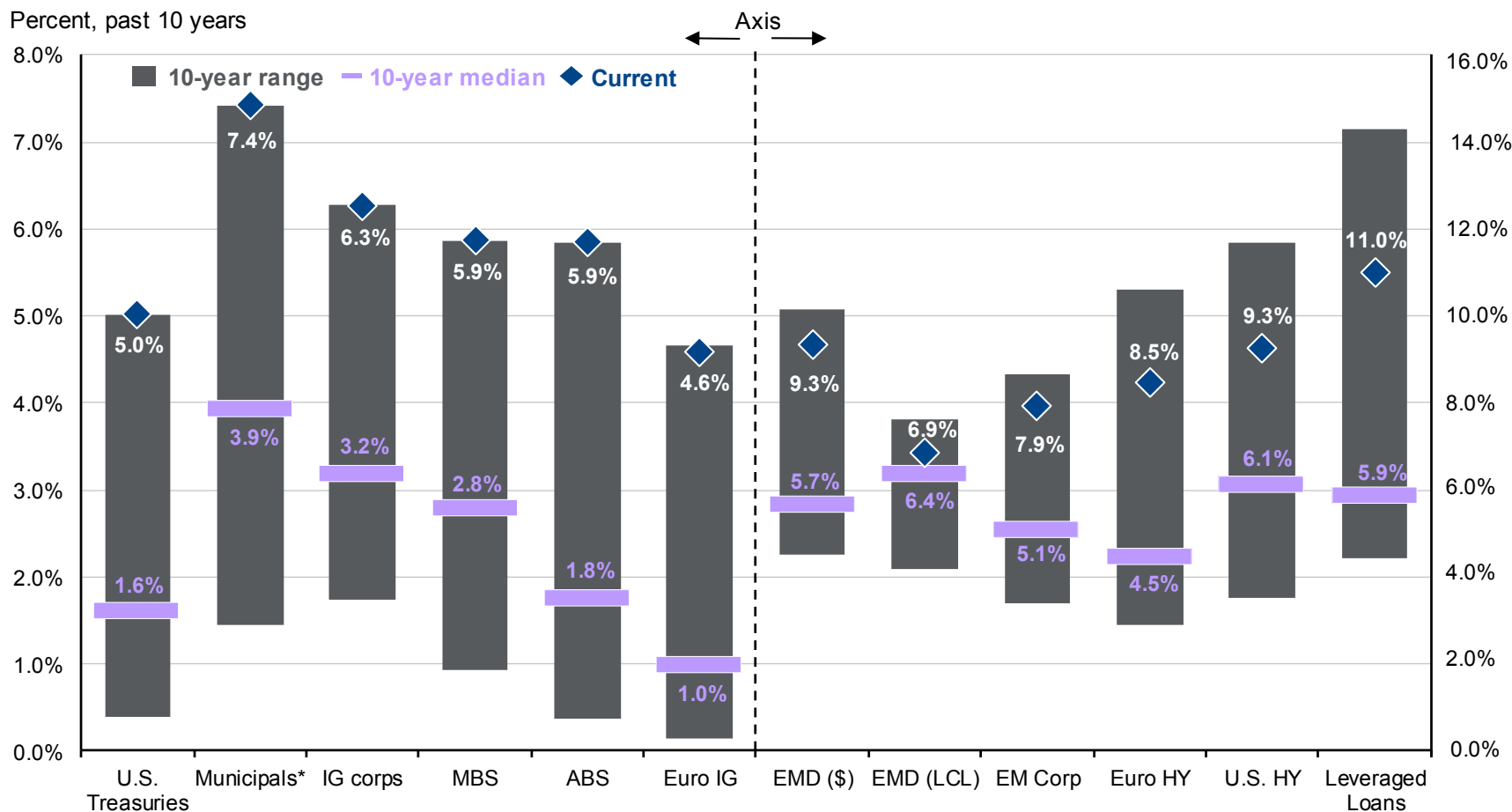
Fixed income valuations

GTM U.S. 38

Fixed Income

Yield-to-worst across fixed income sectors

Percent, past 10 years



Source: Bloomberg, FactSet, J.P. Morgan Credit Research, J.P. Morgan Asset Management.

Indices used are Bloomberg except for emerging market debt and leveraged loans: EMD (USD): J.P. Morgan EMIGLOBAL Diversified Index; EMD (LCL): J.P. Morgan GBI-EM Global Diversified Index; EM Corp.: J.P. Morgan CEMBI Broad Diversified; Leveraged Loans: JPM Leveraged Loan Index; Euro IG: Bloomberg Euro Aggregate Corporate Index; Euro HY: Bloomberg Pan-European High Yield Index. Yield-to-worst is the lowest possible yield that can be received on a bond apart from the company defaulting. *All sectors shown are yield-to-worst except for Municipals, which is based on the tax-equivalent yield-to-worst assuming a top-income tax bracket rate of 37% plus a Medicare tax rate of 3.8%.

Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
ASSET MANAGEMENT



U.S. expansions and recessions

GTM

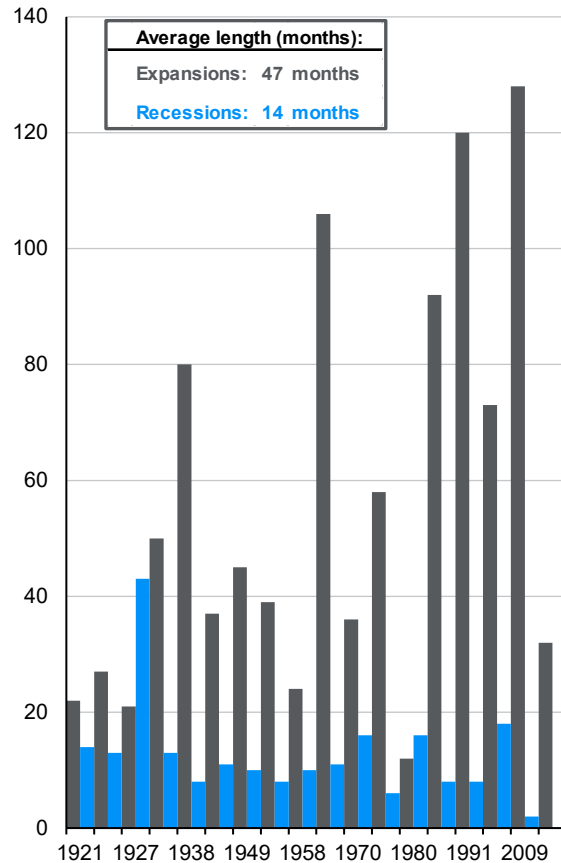
U.S.

OTB

Economy

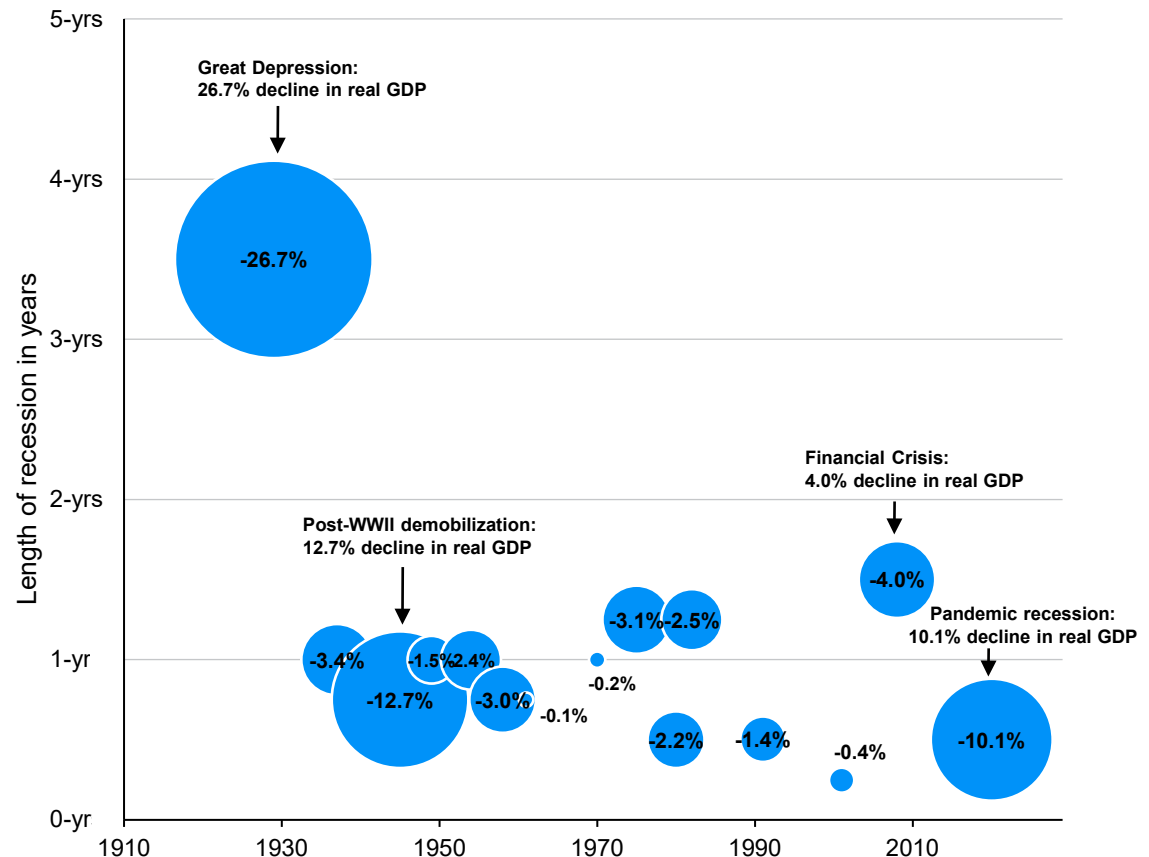
Length of expansions and recessions

Months



The Great Depression and post-war recessions

Length and severity of recession



Source: BEA, NBER, J.P. Morgan Asset Management.

(Left) Chart assumes the current expansion lasted until at least December 2022. (Right) Bubble size reflects the severity of the recession, which is calculated as the decline in real GDP from the peak quarter to the trough quarter except in the case of the Great Depression, where it is calculated from the peak year (1929) to the trough year (1933), due to a lack of available quarterly data. Data for length of economic expansions and recessions obtained from the National Bureau of Economic Research (NBER). Past performance is not a reliable indicator of current and future results.

Guide to the Markets – U.S. Data are as of December 31, 2022.

J.P.Morgan
ASSET MANAGEMENT



Returns in different inflation environments

GTM

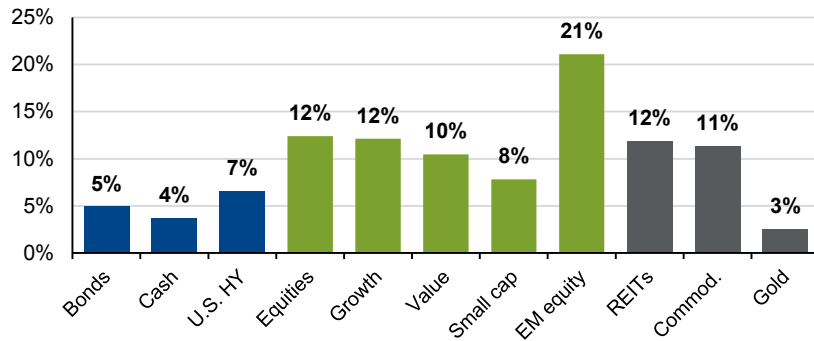
U.S.

OTB

Rising inflation

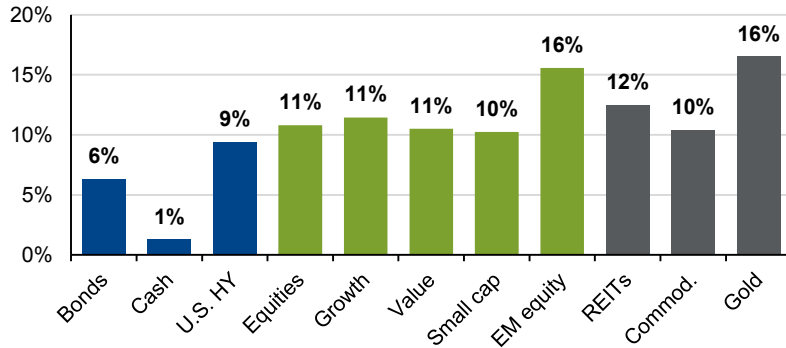
High and rising inflation*

Occurred 12 times since 1988



Low and rising inflation

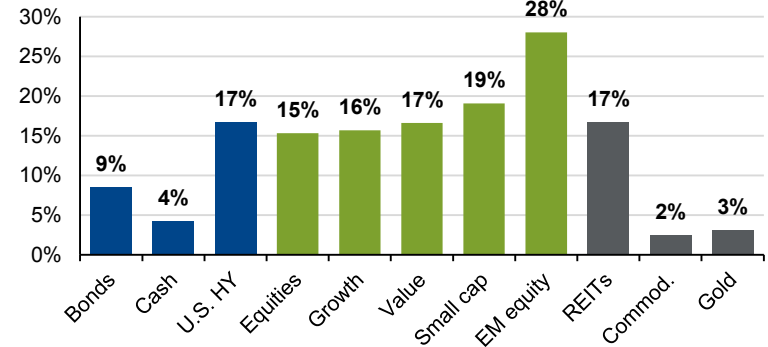
Occurred 4 times since 1988



Falling inflation

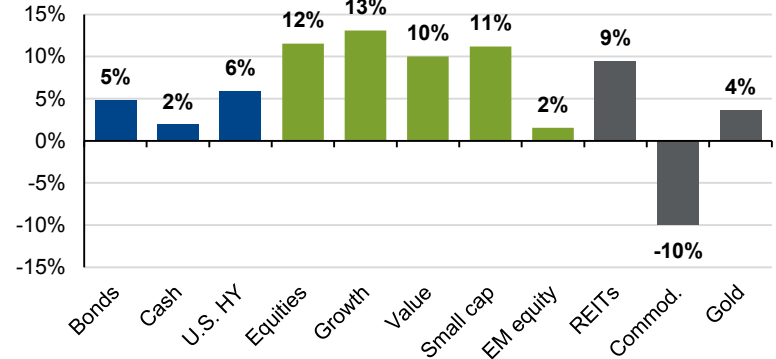
High and falling inflation

Occurred 6 times since 1988



Low and falling inflation

Occurred 13 times since 1988



Above median

Median inflation:
2.5%

Below median

Source: J.P. Morgan Asset Management. Returns are based on calendar year performance and are total return, with the exception of 2022 which is based on year-to-date performance. *High or low inflation distinction is relative to median CPI-U inflation for the period 1988 to 2020 (33 years), which was 2.5% y/y. Rising or falling inflation distinction is relative to previous year CPI-U inflation rate. Indices: Bonds – Bloomberg Barclays U.S. Aggregate; Cash – Bloomberg Barclays 1-3 Month T-Bill index since its inception in 1992 and 3-month T-Bill rates prior to that; U.S. high yield – Bloomberg Barclays US Aggregate Credit (corporate high yield); Equities – S&P 500; Value – Russell 1000 Value; Growth – Russell 1000 Growth; Small Cap – Russell 2000; EM equity – MSCI Emerging Markets (USD); REITs – FTSE NAREIT/ All Equity REITs; Commodities – Bloomberg Commodity Index since its inception in 1992 and S&P GSCI prior to that; Gold – NYM \$/ozt continuous future closing price. For illustrative purposes only. Past performance is not indicative of comparable future returns. Guide to the Markets – U.S. Data are as of June 30, 2022.



Inflation heatmap

GTM

U.S.

29

Consumer Price Index, components

m/m % change, seasonally adjusted

		2021								2022								2023							
	Weight	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Headline CPI, y/y	100.0	5.4%	6.2%	6.9%	7.2%	7.6%	8.0%	8.5%	8.2%	8.5%	8.9%	8.4%	8.2%	8.2%	7.8%	7.1%	6.4%	6.3%	6.0%	5.0%	5.0%	4.1%	3.1%	3.3%	3.7%
Core CPI, y/y	79.6	4.0%	4.6%	5.0%	5.5%	6.1%	6.4%	6.5%	6.1%	6.0%	5.9%	5.9%	6.3%	6.6%	6.3%	6.0%	5.7%	5.5%	5.6%	5.5%	5.3%	4.9%	4.7%	4.4%	
Core svcs. ex-housing PCE, y/y*	-	4.4%	4.6%	5.1%	5.3%	5.1%	5.0%	5.0%	4.9%	4.8%	4.9%	4.5%	4.8%	5.0%	5.2%	5.1%	4.9%	5.2%	5.2%	4.9%	4.9%	4.7%	4.5%	4.8%	4.5%
Headline CPI, m/m	100.0	0.4%	0.9%	0.8%	0.8%	0.6%	0.7%	1.0%	0.4%	0.9%	1.2%	0.0%	0.2%	0.4%	0.5%	0.2%	0.1%	0.5%	0.4%	0.1%	0.4%	0.1%	0.2%	0.2%	0.6%
Core CPI, m/m	79.6	0.3%	0.7%	0.6%	0.7%	0.6%	0.5%	0.3%	0.5%	0.6%	0.6%	0.3%	0.6%	0.6%	0.3%	0.3%	0.4%	0.4%	0.5%	0.4%	0.4%	0.4%	0.2%	0.2%	0.3%
Core svcs. ex-housing PCE, m/m*	-	0.2%	0.3%	0.5%	0.6%	0.2%	0.4%	0.6%	0.4%	0.3%	0.5%	0.1%	0.5%	0.5%	0.5%	0.4%	0.5%	0.5%	0.4%	0.3%	0.3%	0.2%	0.2%	0.5%	0.1%
Energy	7.0	1.5%	3.6%	2.6%	2.4%	0.8%	2.7%	8.2%	-1.0%	3.4%	6.9%	-4.7%	-3.9%	-1.7%	1.7%	-1.4%	-3.1%	2.0%	-0.6%	-3.5%	0.6%	-3.6%	0.6%	0.1%	5.6%
Gasoline	3.4	1.5%	4.1%	4.2%	3.8%	-0.3%	4.7%	13.2%	-3.1%	3.2%	10.3%	-8.1%	-8.4%	-4.2%	3.4%	-2.3%	-7.0%	2.4%	1.0%	-4.6%	3.0%	-5.6%	1.0%	0.2%	10.6%
Electricity	2.6	1.0%	1.6%	0.7%	0.9%	2.7%	-0.3%	1.7%	0.9%	1.3%	1.5%	1.5%	1.2%	0.8%	0.5%	0.5%	1.3%	0.5%	0.5%	-0.7%	-0.7%	-1.0%	0.9%	-0.7%	0.2%
Utility Gas	0.7	2.2%	6.7%	0.5%	0.1%	0.5%	2.0%	0.6%	2.5%	7.2%	7.5%	-3.8%	3.5%	2.2%	-3.7%	-3.4%	3.5%	6.7%	-8.0%	-7.1%	-4.9%	-2.6%	-1.7%	2.0%	0.1%
Food	13.4	0.9%	0.9%	0.8%	0.6%	0.8%	1.0%	0.9%	0.8%	1.1%	1.0%	1.1%	0.8%	0.8%	0.7%	0.6%	0.4%	0.5%	0.4%	0.0%	0.0%	0.2%	0.1%	0.2%	0.2%
Food at home	8.6	1.2%	1.0%	1.0%	0.6%	0.9%	1.3%	1.3%	0.9%	1.3%	1.0%	1.3%	0.8%	0.7%	0.5%	0.6%	0.5%	0.4%	0.3%	-0.3%	-0.2%	0.1%	0.0%	0.3%	0.2%
Food away from home	4.8	0.5%	0.8%	0.6%	0.6%	0.7%	0.4%	0.3%	0.6%	0.7%	0.9%	0.7%	0.9%	0.9%	0.9%	0.5%	0.4%	0.6%	0.6%	0.6%	0.4%	0.5%	0.4%	0.2%	0.3%
Core goods	21.3	0.3%	1.3%	1.1%	1.4%	0.9%	0.3%	-0.4%	0.1%	0.6%	0.6%	0.1%	0.4%	0.0%	-0.1%	-0.2%	-0.1%	0.1%	0.0%	0.2%	0.6%	0.6%	-0.1%	-0.3%	-0.1%
Apparel	2.5	-0.5%	1.0%	0.7%	0.9%	0.7%	0.6%	0.3%	-0.1%	0.4%	0.7%	-0.1%	0.3%	0.0%	-0.2%	0.1%	0.2%	0.8%	0.8%	0.3%	0.3%	0.3%	0.3%	0.0%	0.2%
New vehicles	4.3	1.3%	1.5%	1.6%	1.8%	0.3%	0.1%	0.1%	0.4%	0.6%	0.5%	0.5%	0.8%	0.7%	0.6%	0.5%	0.6%	0.2%	0.2%	0.4%	-0.2%	-0.1%	0.0%	-0.1%	0.3%
Used cars	2.8	-0.5%	3.1%	3.2%	3.9%	1.4%	-0.6%	-3.6%	-0.7%	1.9%	0.5%	-0.8%	-0.2%	-1.1%	-1.7%	-2.0%	-2.0%	-1.9%	-2.8%	-0.9%	4.4%	4.4%	-0.5%	-1.3%	-1.2%
Medical care commod	1.5	0.3%	0.6%	0.1%	0.0%	0.9%	0.3%	0.2%	0.1%	0.3%	0.4%	0.6%	0.2%	-0.1%	0.0%	0.2%	0.1%	1.1%	0.1%	0.6%	0.5%	0.6%	0.2%	0.5%	0.6%
Core services	58.3	0.2%	0.4%	0.4%	0.4%	0.4%	0.5%	0.6%	0.6%	0.6%	0.6%	0.4%	0.6%	0.8%	0.5%	0.5%	0.6%	0.5%	0.6%	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%
Shelter	34.7	0.4%	0.4%	0.5%	0.4%	0.3%	0.6%	0.5%	0.5%	0.6%	0.6%	0.6%	0.7%	0.7%	0.7%	0.6%	0.8%	0.7%	0.8%	0.6%	0.4%	0.6%	0.4%	0.4%	0.3%
Rent of primary res.	7.6	0.4%	0.4%	0.4%	0.4%	0.5%	0.6%	0.4%	0.6%	0.6%	0.8%	0.7%	0.7%	0.8%	0.7%	0.8%	0.8%	0.7%	0.8%	0.5%	0.6%	0.5%	0.5%	0.4%	0.5%
OER	25.5	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%	0.6%	0.7%	0.6%	0.7%	0.8%	0.6%	0.7%	0.8%	0.7%	0.7%	0.5%	0.5%	0.5%	0.4%	0.5%	0.4%
Medical care services	6.4	0.0%	0.6%	0.5%	0.5%	0.5%	0.1%	0.6%	0.5%	0.4%	0.7%	0.4%	0.7%	0.8%	-0.4%	-0.5%	0.3%	-0.7%	-0.7%	-0.5%	-0.1%	-0.1%	0.0%	-0.4%	0.1%
Transportation services	5.9	-0.9%	0.0%	1.2%	0.5%	0.7%	1.1%	2.1%	2.2%	1.6%	1.8%	-0.4%	1.0%	1.9%	0.6%	0.3%	0.6%	0.9%	1.1%	1.4%	-0.2%	0.8%	0.1%	0.3%	2.0%

Source: BLS, FactSet, J.P. Morgan Asset Management. Heatmap shading is relative to the two-year period shown. Component weights may not add to 100. OER refers to owners' equivalent rent. *Core services ex-housing is an approximation by J.P. Morgan Asset Management. It reflects the custom PCE index of services excluding energy and housing referenced in the U.S. Federal Reserve's Monetary Policy Report. Data for the custom PCE index is provided by the BEA and is distinct from the CPI data provided by the BLS. "Housing" is a PCE component that is measured separately from the CPI "shelter" component.

Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
ASSET MANAGEMENT



Valuations monitor

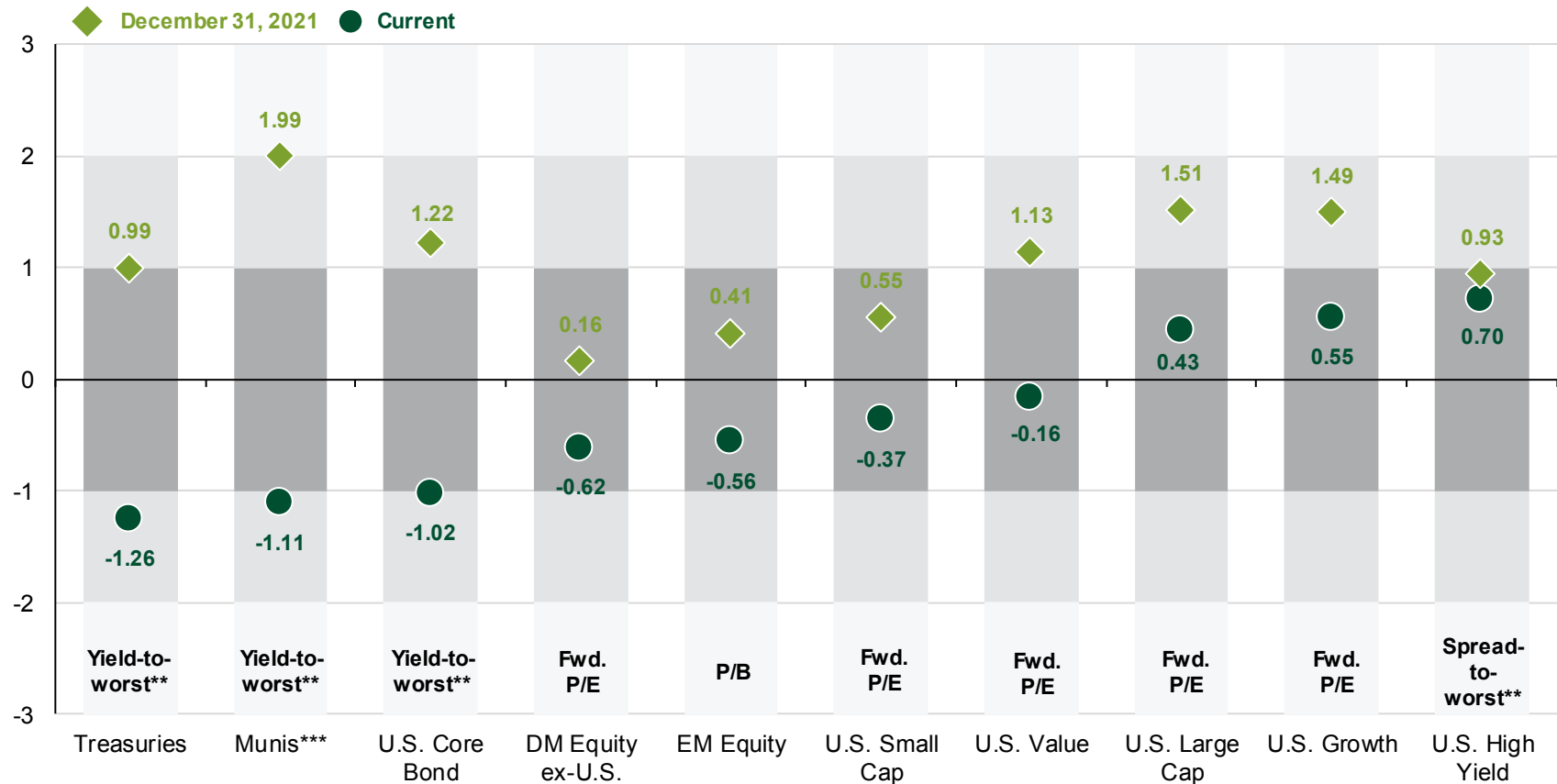
GTM

U.S.

63

Asset class valuations

Z-scores based on 25-year average valuation measures*



Source: Bloomberg, BLS, CME, FactSet, MSCI, Russell, Standard & Poor's, J.P. Morgan Asset Management.
 U.S. Large Cap: S&P 500, U.S. Small Cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, U.S. Value: Russell 1000 Value, U.S. Growth: Russell 1000 Growth, U.S. High Yield: J.P. Morgan Domestic High Yield Index, U.S. Core Bond: Bloomberg US Aggregate, Treasuries: Bloomberg U.S. Aggregate Government – Treasury, Munis: Bloomberg Municipal Bond. *Averages for U.S. High Yield and U.S. Small Cap are since January 1999 and November 1998, respectively, due to limited data availability. **Yield-to-worst and spread-to-worst are inversely related to fixed income prices. ***Munis yield-to-worst is based on the tax-equivalent yield-to-worst assuming a top-income tax bracket rate of 37% plus a Medicare tax rate of 3.8%.

Guide to the Markets – U.S. Data are as of October 3, 2023.

J.P.Morgan
 ASSET MANAGEMENT



J.P. Morgan Asset Management – Index definitions

GTM

U.S.

69

All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

Equities:

The **Dow Jones Industrial Average** is a price-weighted average of 30 actively traded blue-chip U.S. stocks.

The **MSCI ACWI (All Country World Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

The **MSCI EAFE Index(Europe, Australasia, Far East)** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

The **MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The **MSCI Pacific Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region.

The **Russell 1000 Index®** measures the performance of the 1,000 largest companies in the Russell 3000.

The **Russell 1000 Growth Index®** measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 1000 Value Index®** measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 2000 Index®** measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

The **Russell 2000 Growth Index®** measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index®** measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell 3000 Index®** measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The **Russell Midcap Index®** measures the performance of the 800 smallest companies in the Russell 1000 Index.

The **Russell Midcap Growth Index®** measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index®** measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

Fixed income:

The **Bloomberg 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The **Bloomberg Global High Yield Index** is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

The **Bloomberg Municipal Index** consists of a broad selection of investment-grade general obligation and revenue bonds of maturities ranging from one year to 30 years. It is an unmanaged index representative of the tax-exempt bond market.

The **Bloomberg US Dollar Floating Rate Note (FRN) Index** provides a measure of the U.S. dollar denominated floating rate note market.

The **Bloomberg US Corporate Investment Grade Index** is an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures and secured notes that are rated investment grade (Baa3/BBB or higher) by at least two ratings agencies, have at least one year to final maturity and have at least \$250 million par amount outstanding. To qualify, bonds must be SEC-registered.

The **Bloomberg US High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The **Bloomberg US Mortgage Backed Securities Index** is an unmanaged index that measures the performance of investment grade fixed-rate mortgage backed pass-through securities of GNMA, FNMA and FHLMC.

The **Bloomberg US TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan Emerging Market Bond Global Index(EMBI)** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The **J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified)** is an expansion of the **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**. The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **U.S. Treasury Index** is a component of the U.S. Government index.



J.P. Morgan Asset Management – Definitions

GTM

U.S.

70

Other asset classes:

The **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for the asset class.

The **Bloomberg Commodity Index** and related sub-indices are composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc

The **Cambridge Associates U.S. Global Buyout and Growth Index®** is based on data compiled from 1,768 global (U.S. & ex-U.S.) buyout and growth equity funds, including fully liquidated partnerships, formed between 1986 and 2013.

The **CS/Tremont Hedge Fund Index** is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US\$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC.

The **HFRI Monthly Indices (HFRI)** are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 4 main strategies, each with multiple sub strategies. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database.

The **NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance, and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

The **NFI-ODCE**, short for NCREIF Fund Index -Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted.

Definitions:

Investing in **alternative assets** involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

Distressed Restructuring Strategies employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings.

Investments in **emerging markets** can be more volatile. The normal risks of investing in foreign countries are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

The price of **equity** securities may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

Equity market neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Global macro strategies trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations.

There is no guarantee that the use of **long and short positions** will succeed in limiting an investor's exposure to domestic stock market movements, capitalization, sector swings or other risk factors. Using long and short selling strategies may have higher portfolio turnover rates. Short selling involves certain risks, including additional costs associated with covering short positions and a possibility of unlimited loss on certain short sale positions.

Merger arbitrage strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction.

Mid-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid-cap companies' stock has experienced a greater degree of market volatility than the average stock.

Price to forward earnings is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a share on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

Relative Value Strategies maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

Small-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.



J.P. Morgan Asset Management – Risks & disclosures

GTM

U.S.

71

The Market Insights program provides comprehensive data and commentary on global markets without reference to products. Designed as a tool to help clients understand the markets and support investment decision-making, the program explores the implications of current economic data and changing market conditions.

For the purposes of MiFID II, the JPM Market Insights and Portfolio Insights programs are marketing communications and are not in scope for any MiFID II / MiFIR requirements specifically related to investment research. Furthermore, the J.P. Morgan Asset Management Market Insights and Portfolio Insights programs, as non-independent research, have not been prepared in accordance with legal requirements designed to promote the independence of investment research, nor are they subject to any prohibition on dealing ahead of the dissemination of investment research.

This document is a general communication being provided for informational purposes only. It is educational in nature and not designed to be taken as advice or a recommendation for any specific investment product, strategy, plan feature or other purpose in any jurisdiction, nor is it a commitment from J.P. Morgan Asset Management or any of its subsidiaries to participate in any of the transactions mentioned herein. Any examples used are generic, hypothetical and for illustration purposes only. This material does not contain sufficient information to support an investment decision and it should not be relied upon by you in evaluating the merits of investing in any securities or products. In addition, users should make an independent assessment of the legal, regulatory, tax, credit, and accounting implications and determine, together with their own financial professional, if any investment mentioned herein is believed to be appropriate to their personal goals. Investors should ensure that they obtain all available relevant information before making any investment. Any forecasts, figures, opinions or investment techniques and strategies set out are for information purposes only, based on certain assumptions and current market conditions and are subject to change without prior notice. All information presented herein is considered to be accurate at the time of production, but no warranty of accuracy is given and no liability in respect of any error or omission is accepted. It should be noted that investment involves risks, the value of investments and the income from them may fluctuate in accordance with market conditions and taxation agreements and investors may not get back the full amount invested. Both past performance and yields are not reliable indicators of current and future results.

J.P. Morgan Asset Management is the brand for the asset management business of JPMorgan Chase & Co. and its affiliates worldwide.

To the extent permitted by applicable law, we may record telephone calls and monitor electronic communications to comply with our legal and regulatory obligations and internal policies. Personal data will be collected, stored and processed by J.P. Morgan Asset Management in accordance with our privacy policies at <https://am.jpmorgan.com/global/privacy>.

This communication is issued by the following entities:

In the United States, by J.P. Morgan Investment Management Inc. or J.P. Morgan Alternative Asset Management, Inc., both regulated by the Securities and Exchange Commission; in Latin America, for intended recipients' use only, by local J.P. Morgan entities, as the case may be. In Canada, for institutional clients' use only, by JPMorgan Asset Management (Canada) Inc., which is a registered Portfolio Manager and Exempt Market Dealer in all Canadian provinces and territories except the Yukon and is also registered as an Investment Fund Manager in British Columbia, Ontario, Quebec and Newfoundland and Labrador. In the United Kingdom, by JPMorgan Asset Management (UK) Limited, which is authorized and regulated by the Financial Conduct Authority; in other European jurisdictions, by JPMorgan Asset Management (Europe) S.à r.l. In Asia Pacific ("APAC"), by the following issuing entities and in the respective jurisdictions in which they are primarily regulated: JPMorgan Asset Management (Asia Pacific) Limited, or JPMorgan Funds (Asia) Limited, or JPMorgan Asset Management Real Assets (Asia) Limited, each of which is regulated by the Securities and Futures Commission of Hong Kong; JPMorgan Asset Management (Singapore) Limited (Co. Reg. No. 197601586K), this advertisement or publication has not been reviewed by the Monetary Authority of Singapore; JPMorgan Asset Management (Taiwan) Limited; JPMorgan Asset Management (Japan) Limited, which is a member of the Investment Trusts Association, Japan, the Japan Investment Advisers Association, Type II Financial Instruments Firms Association and the Japan Securities Dealers Association and is regulated by the Financial Services Agency (registration number "Kanto Local Finance Bureau (Financial Instruments Firm) No. 330"); in Australia, to wholesale clients only as defined in section 761A and 761G of the Corporations Act 2001 (Commonwealth), by JPMorgan Asset Management (Australia) Limited (ABN 55143832080) (AFSL 376919). For all other markets in APAC, to intended recipients only.

For U.S. only: If you are a person with a disability and need additional support in viewing the material, please call us at 1-800-343-1113 for assistance.

Copyright 2022 JPMorgan Chase & Co. All rights reserved

Google assistant is a trademark of Google Inc.

Amazon, Alexa and all related logos are trademarks of Amazon.com, Inc. or its affiliates.

Prepared by: David P. Kelly, Jordan K. Jackson, David M. Lebovitz, John C. Manley, Meera Pandit, Gabriela D. Santos, Stephanie Aliaga, Sahil Gauba, Olivia C. Schubert and Nimish Vyas.

Unless otherwise stated, all data are as of February 28, 2023 or most recently available.

Guide to the Markets – U.S.

JP-LITTLEBOOK | 0903c02a82565a44

J.P.Morgan
ASSET MANAGEMENT