
Market update: 7th inning stretch

June 2022

Michael Cembalest, Chairman of Market and Investment Strategy

INVESTMENT AND INSURANCE PRODUCTS ARE:

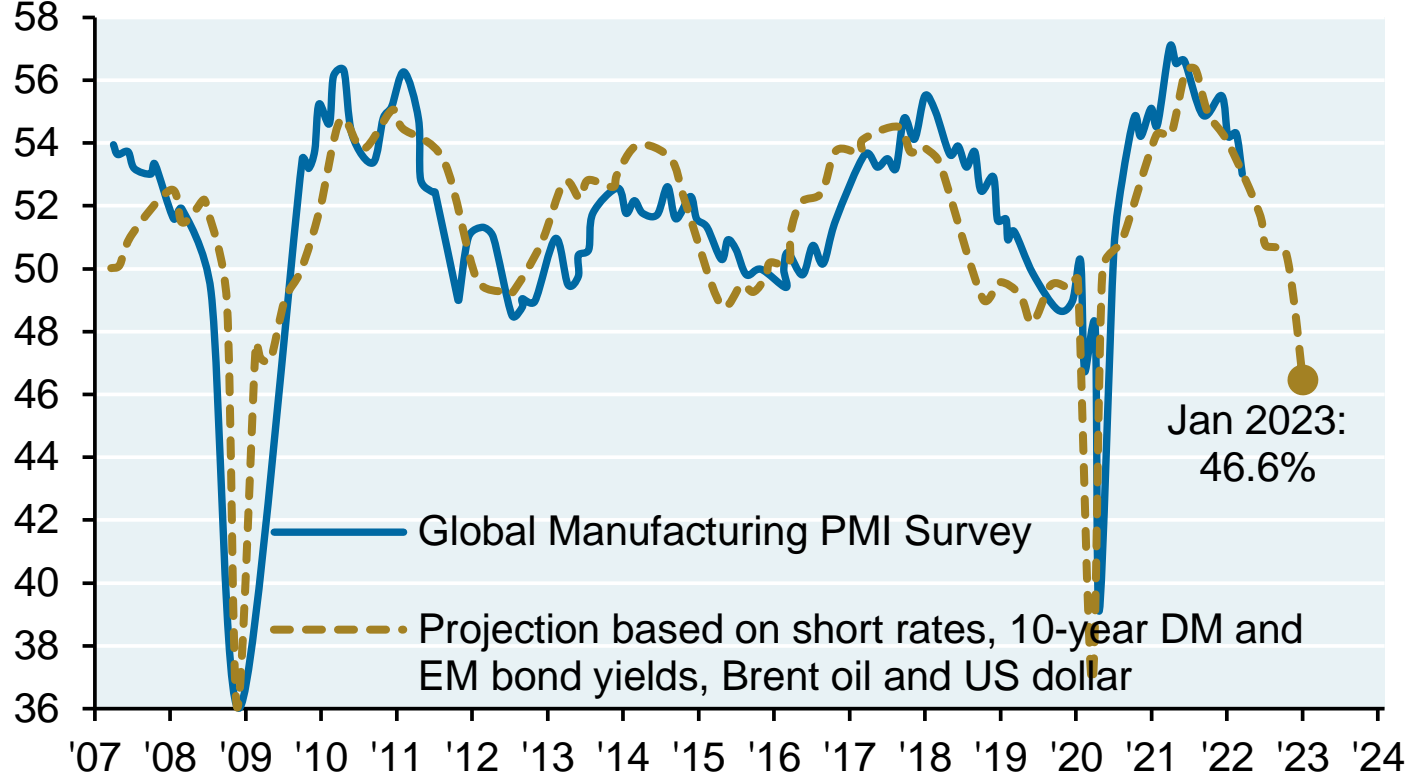
- NOT FDIC INSURED • NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY
- NOT A DEPOSIT OR OTHER OBLIGATION OF, OR GUARANTEED BY, JPMORGAN CHASE BANK, N.A. OR ANY OF ITS AFFILIATES
- SUBJECT TO INVESTMENT RISKS, INCLUDING POSSIBLE LOSS OF THE PRINCIPAL AMOUNT INVESTED

7th inning stretch

- **The big change since Jan 1: expelling a large producer of energy, industrial and agricultural commodities (Russia) when COVID, deglobalization and fiscal/monetary policy create unprecedented inflationary pressures**
- Most of the stimulus driven surge in valuations has been completely reversed
- Markets pricing in meaningful likelihood of recession but not certainty
- Expect intermittent rallies due to buybacks and institutional rebalancing before a final leg down later this year as full consequence of monetary/fiscal reset are clearer
- Profits recession more likely than growth recession
- Selling now would require excellent market timing and market breadth to benefit

Global slowdown approaching

Leading indicators point to sharp drawdown in global manufacturing, Global PMI survey



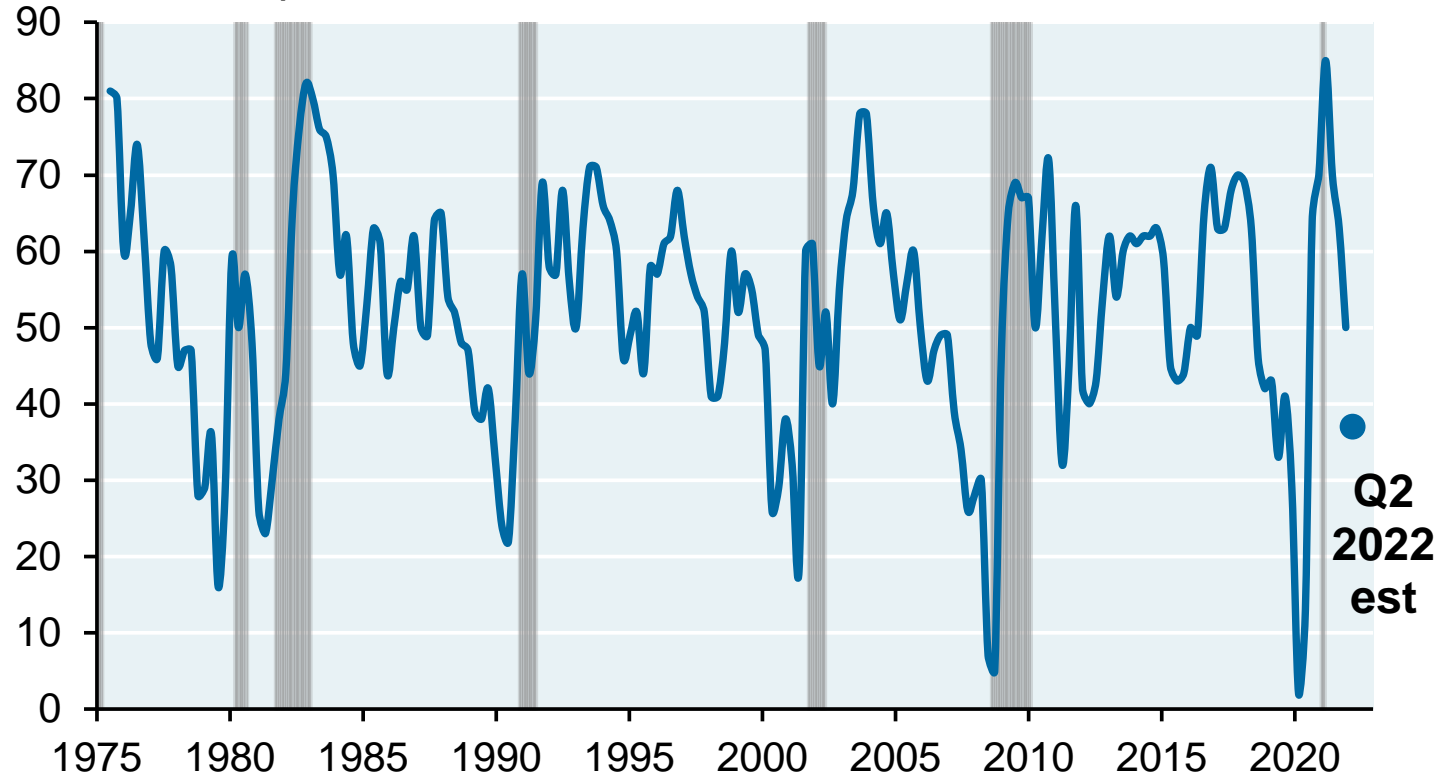
Source: Piper Sandler, JPMAM. April 18, 2022.

In 19 of the 21 market corrections since 1950, leading indicators bottomed before markets rebounded

CEOs can sense it, confidence approaching levels seen before prior recessions
Typically followed by sharp decline in capital spending and in profits

CEO confidence survey on economic conditions

Index, 50+ = positive outlook



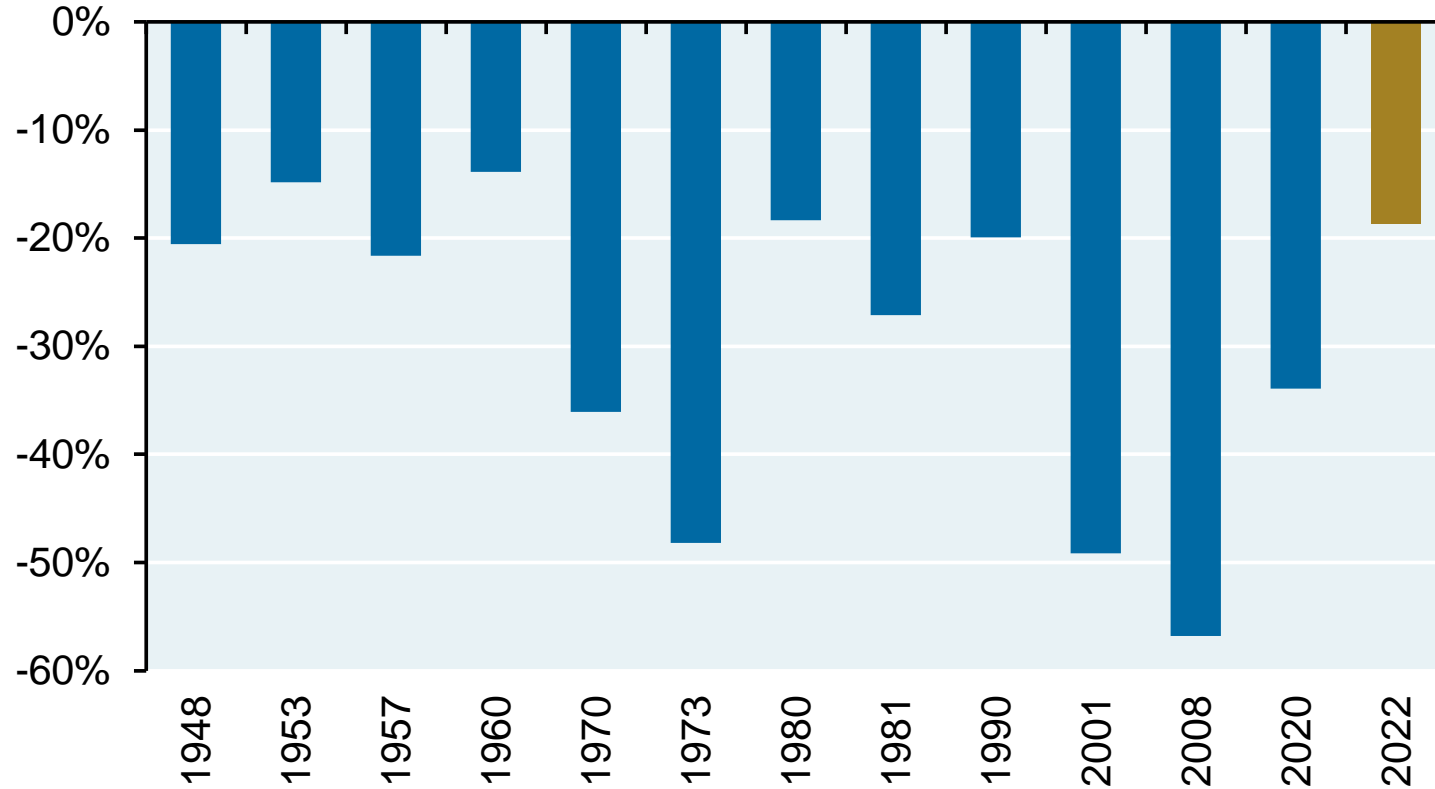
Source: Conference Board, JPMAM. Q1 2022. Shaded areas = recessions.

Inspecting the damage

S&P decline already similar to some of the less damaging recessionary bear markets

S&P 500 drawdowns from peak to trough

% decline

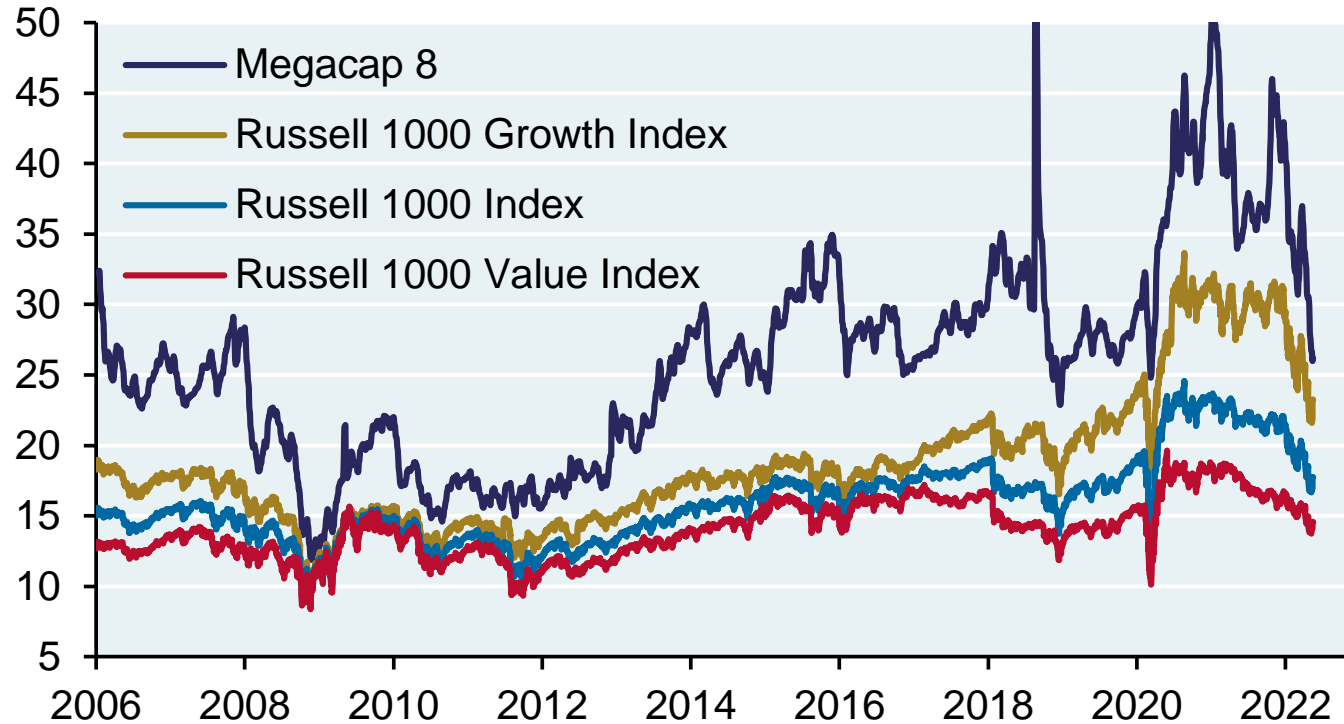


Source: Bloomberg, JPMAM. May 27, 2022. Blue bars represent recessions.

COVID stimulus valuation premiums are gone

P/E ratios: Megacap, Core, Growth and Value

Price / consensus 12 month forward earnings per share

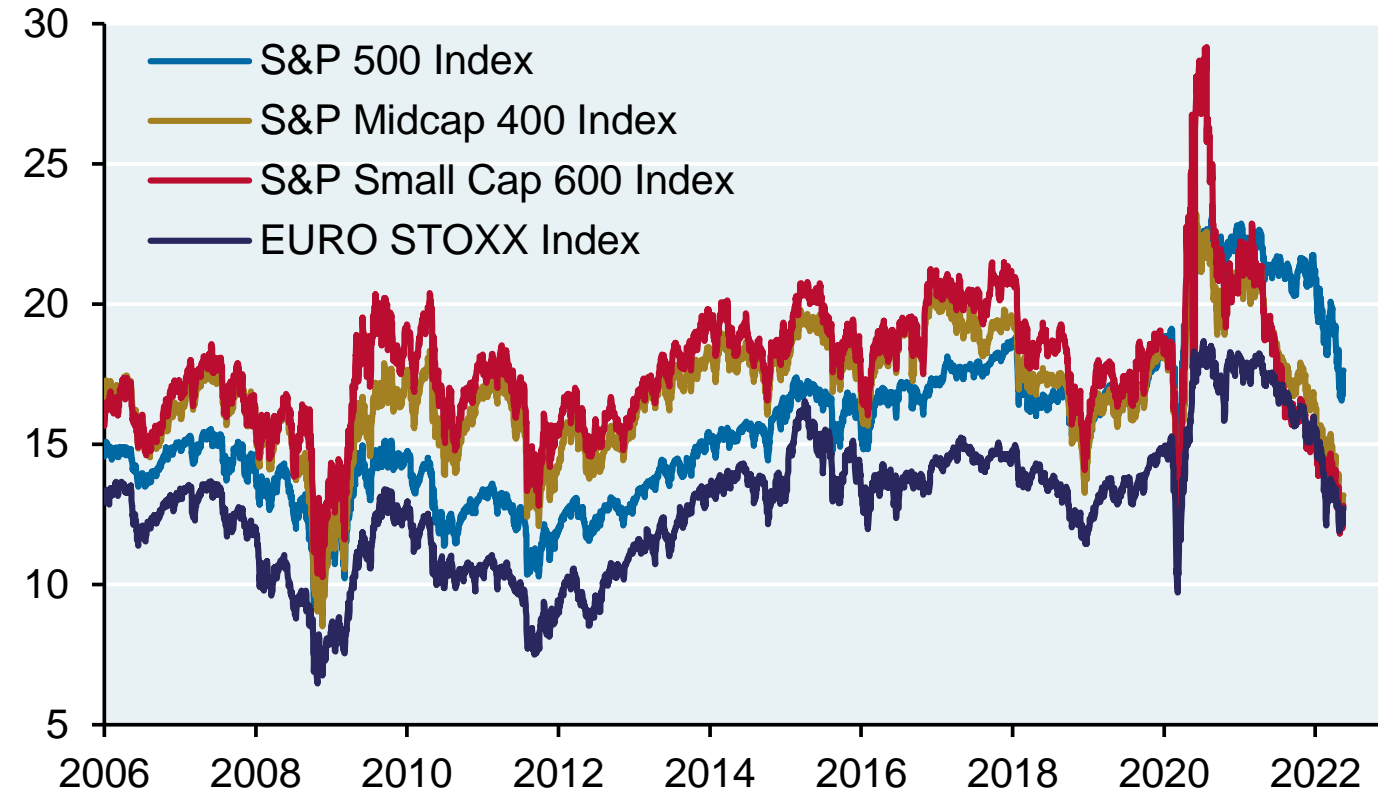


Source: Datastream, Bloomberg, JPMAM. May 30, 2022. Megacap 8 includes GOOGL, AMZN, AAPL, FB, MSFT, NFLX, NVDA, TSLA.

COVID stimulus valuation premiums are gone (continued)

P/E ratios: US by market cap and Europe

Price / consensus 12 month forward earnings per share

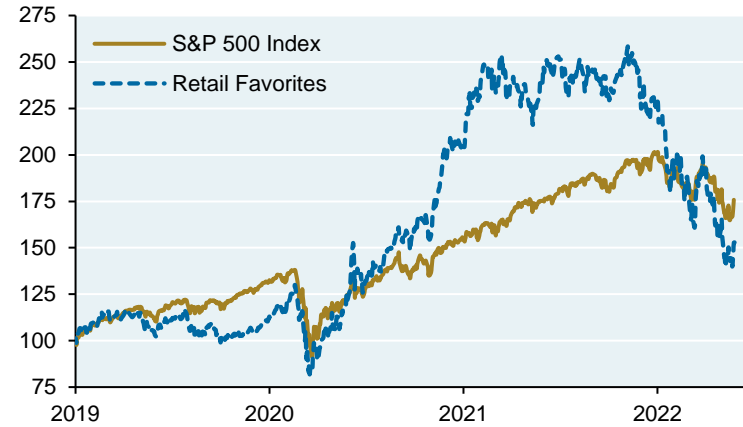


Source: Datastream, JPMAM. May 30, 2022.

Aesop's Fables: meme stocks, innovation ETFs, hydrogen, Bitcoin and SPACs

Retail favorites vs S&P 500

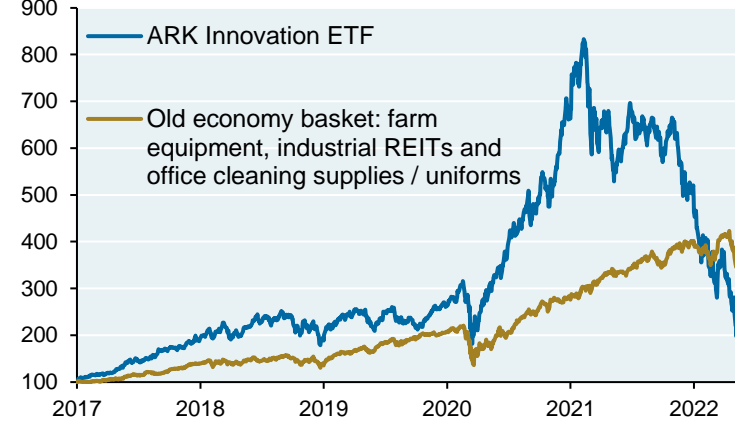
Index (100 = Jan 2019)



Source: Bloomberg, JPMAM. May 30, 2022

The Tortoise and the Hare

Index (100 = Dec 2016)



Source: Bloomberg, JPMAM. May 27, 2022.

Performance of companies taken public via SPAC

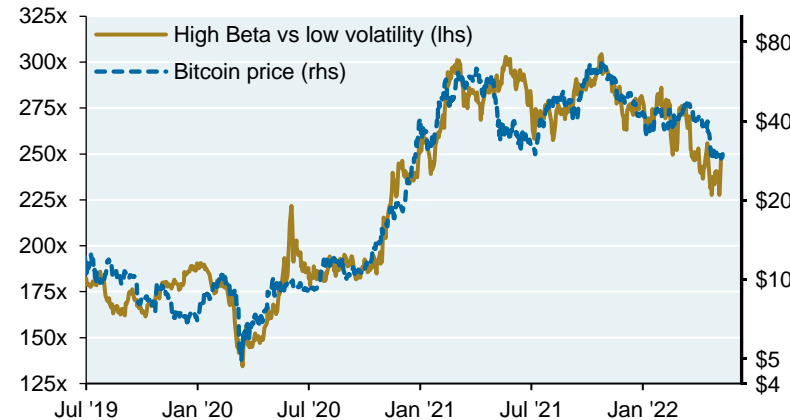
Equal weighted index (100 = Feb 2020)



Source: Bloomberg, JPMAM. May 31, 2022. Company returns included starting 7 days prior to merger close.

Bitcoin vs relative performance of high Beta stocks

Ratio US\$, thousands (log scale)



Source: Bloomberg, JPMAM. May 31, 2022.

Solactive Hydrogen Economy Index

Index (100 = Jan 2019)



Source: Bloomberg. May 31, 2022.

Cryptocurrency market cap ex stablecoins

US\$, trillions



Source: TradingView, JPMAM. May 31, 2022.

Growth stocks have been repriced, but only part of the way

Markets are still paying a high premium for growth

P/E ratio spread, growth - value



Source: JPMAM. May 2022.

Same with the NASDAQ 100: hard to describe current valuations as “distressed”

NASDAQ 100 Index price to sales ratio

Price to trailing 12 month sales ratio

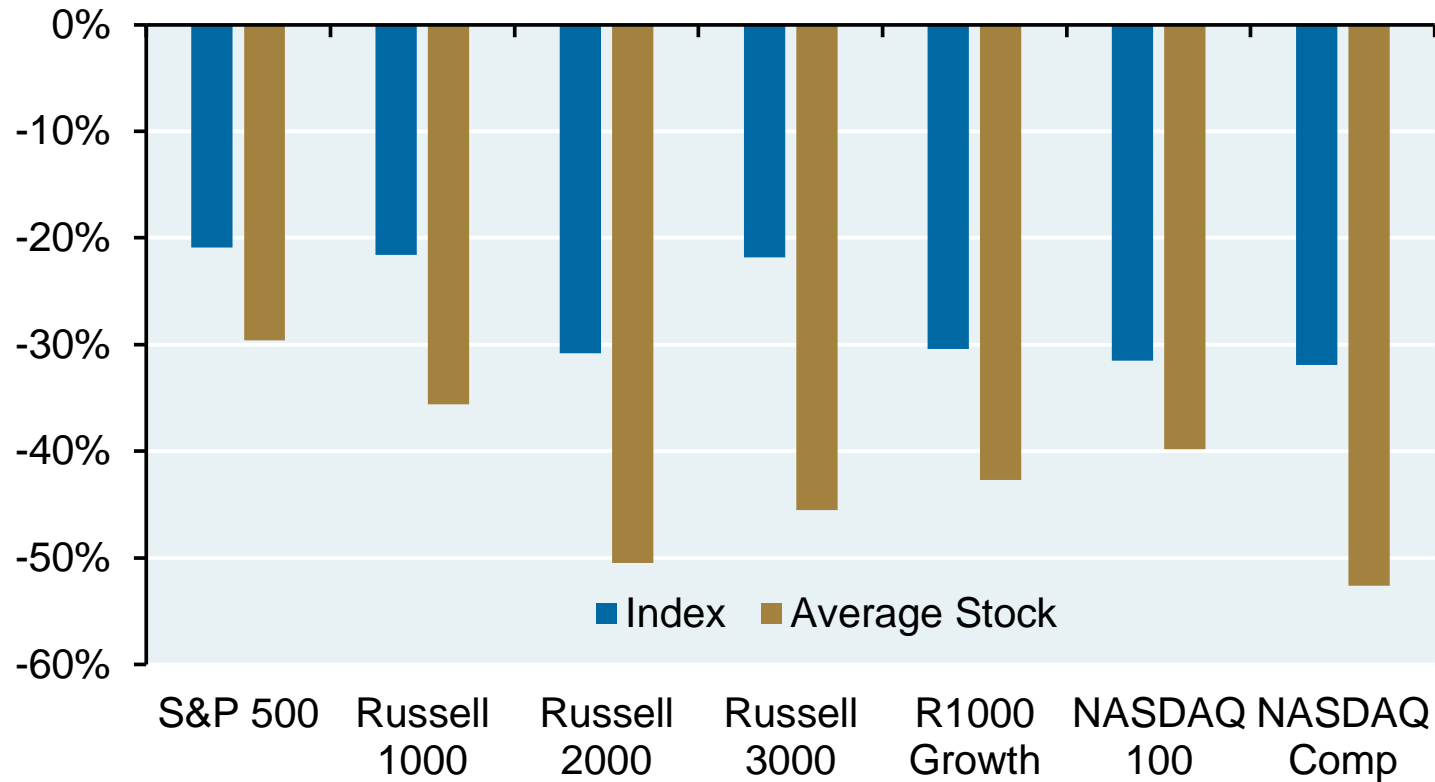


Source: Bloomberg, JPMAM. May 27, 2022.

A lot more damage seen in smaller stocks within each universe

12 month drawdown of indices vs constituents

Percent



Source: JP Morgan Equity Macro Research. May 24, 2022.

Market pessimism is nothing like the selloff in early 2020...

Market pricing of S&P 500 dividend growth

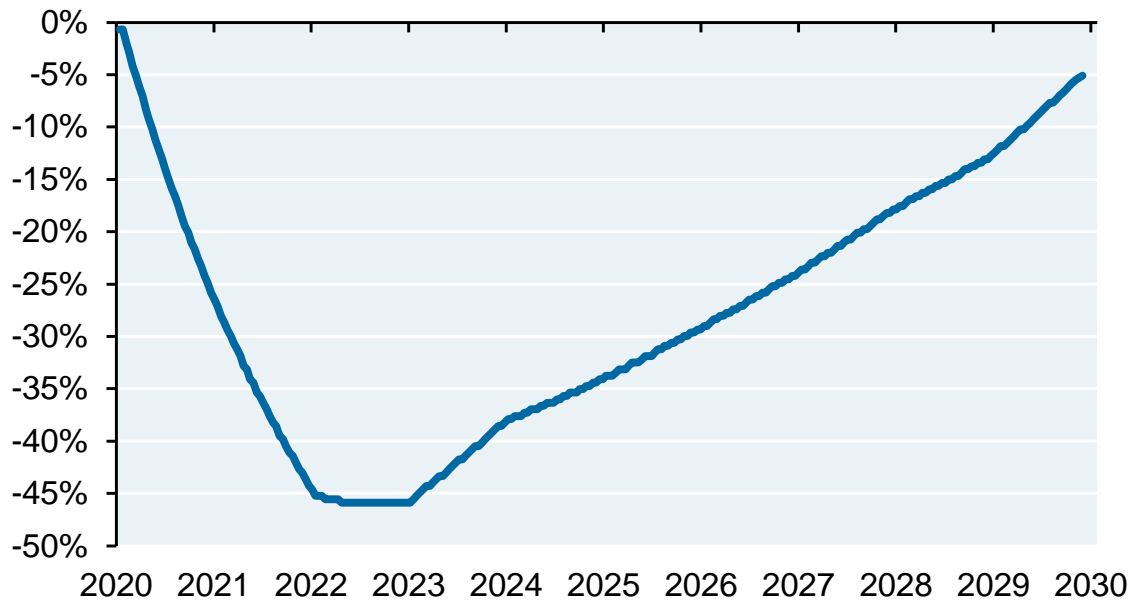
Percent, FY2 dividend growth vs FY1



Source: Bloomberg, JPMAM. May 27, 2022.

...when we noted in the Eye on the Market that equity markets were assuming a decade for earnings to recover. Typical recovery: around 3 years

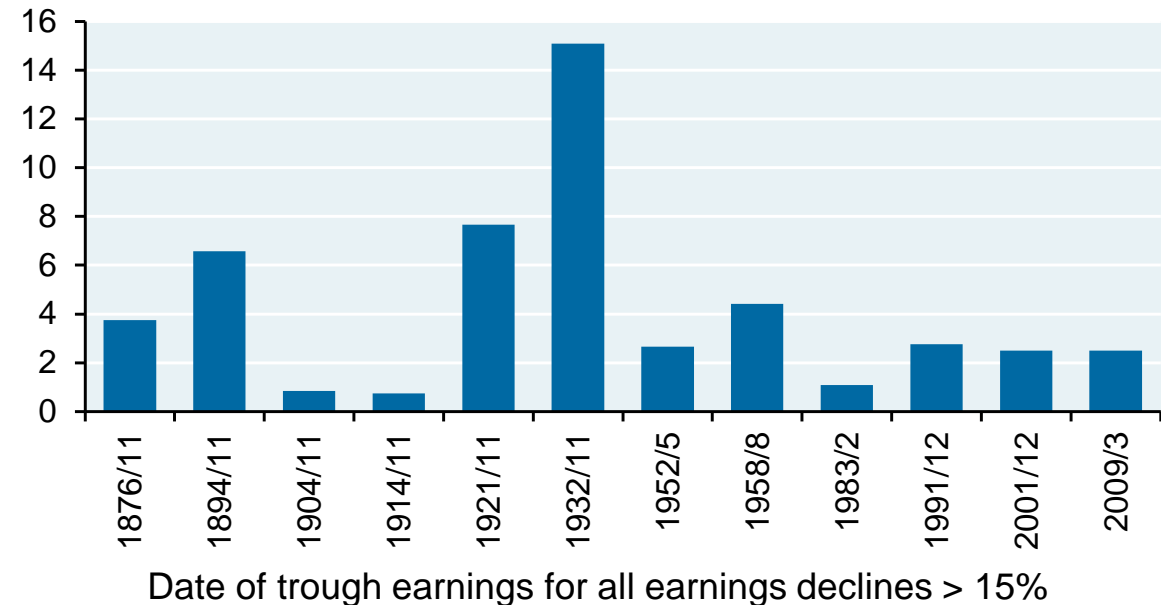
March 2020: US earnings per share level implied by dividend futures, % of pre-virus level



Source: Bridgewater. March 17, 2020.

Time required to reattain prior earnings peak

Years required to regain prior peak

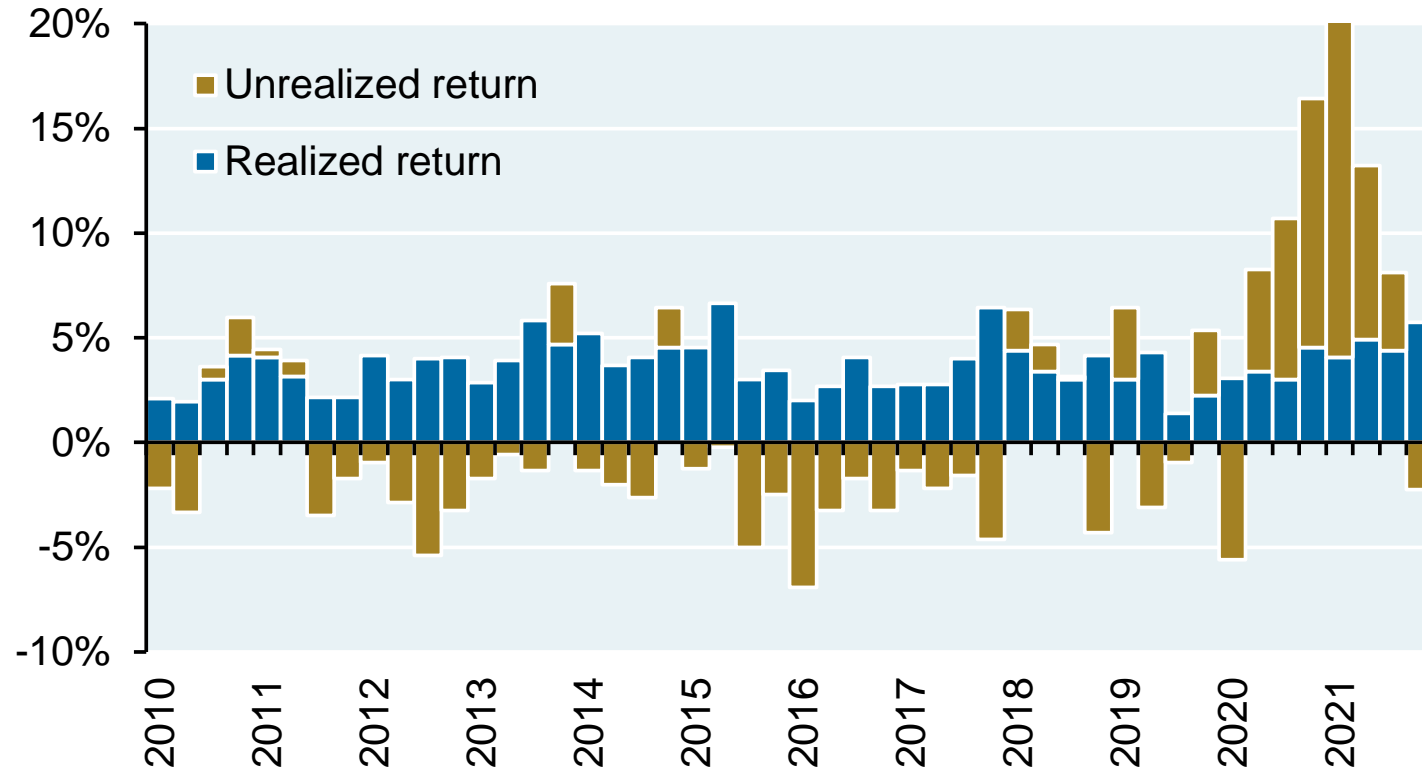


Source: Bloomberg, J.P. Morgan Asset Management. 2020.

Venture Capital returns will come down to earth as well, eventually

Venture capital quarterly fund returns

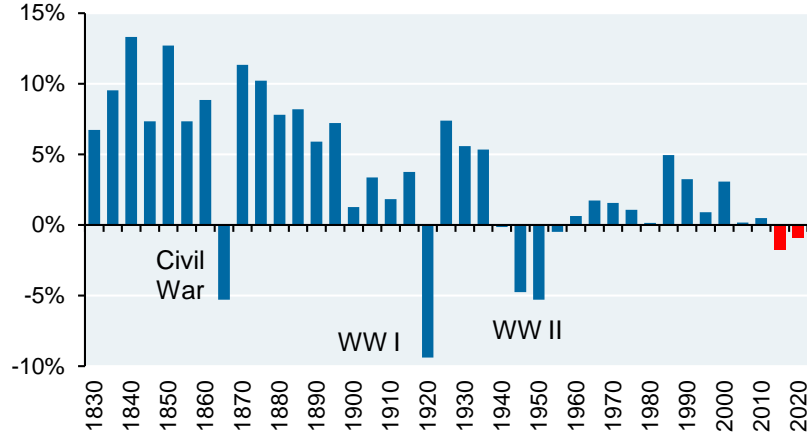
Percent



Source: Pitchbook. Q4 2021.

The end of this journey was always going to be a rough one

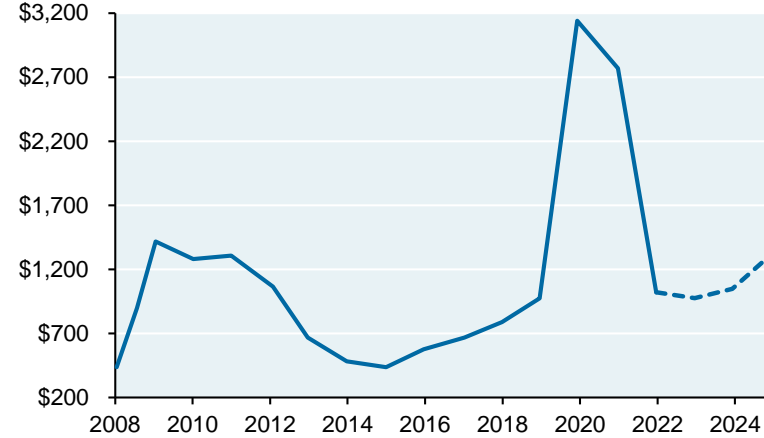
Lowest real yields on cash since 1830, other than during wartime, T-bill/Funds rate less inflation, 5-year average



Source: FRB, Robert Shiller, GFD, BLS, JPMAM. 2020.

US budget deficit

US\$, billions



Source: CRFB, JPMAM. May 25, 2022. Dotted line indicates projections.

Fed balance sheet

US\$ trillions

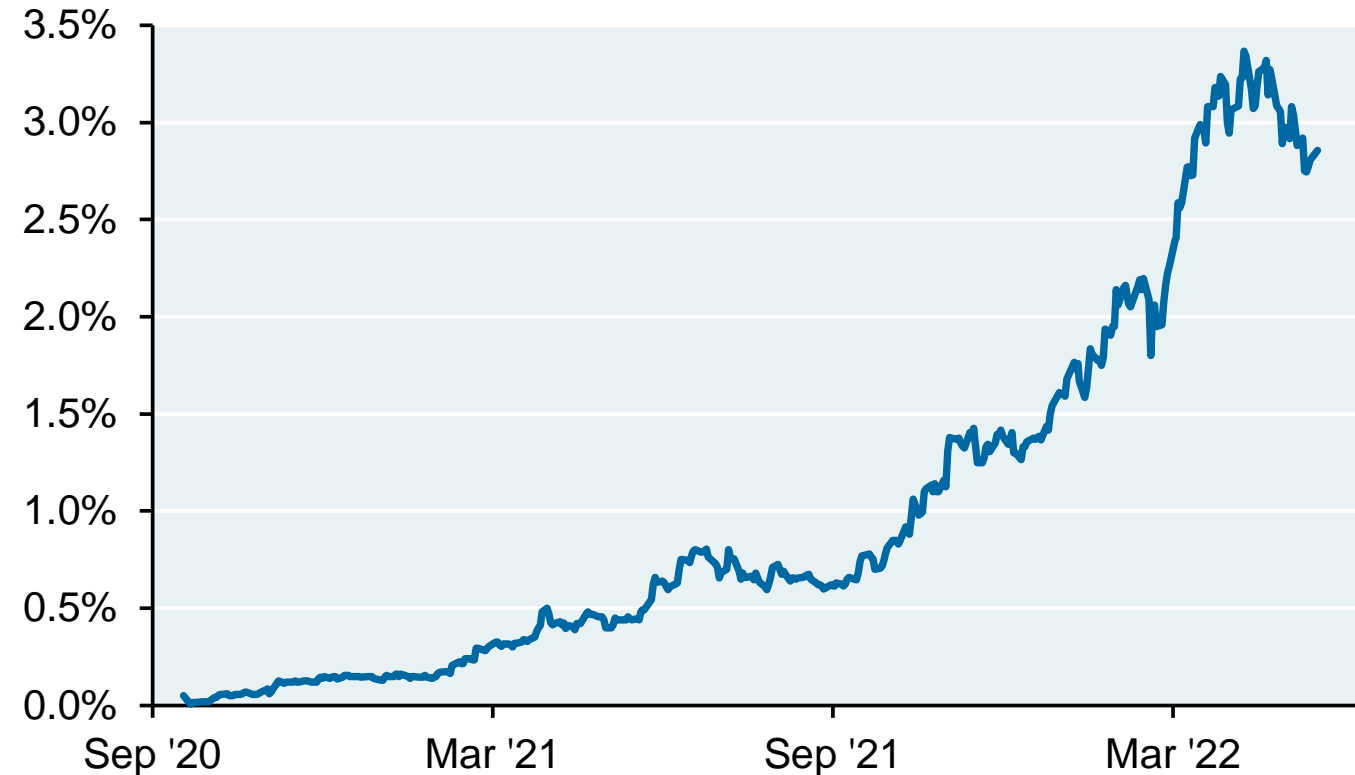


Source: Federal Reserve Board, Fitch Ratings. May 25, 2022.

The market and the Fed have been wildly wrong on inflation so I take little comfort from the assumed terminal level of interest rates

Market implied December 2023 Fed Funds rate

Percent

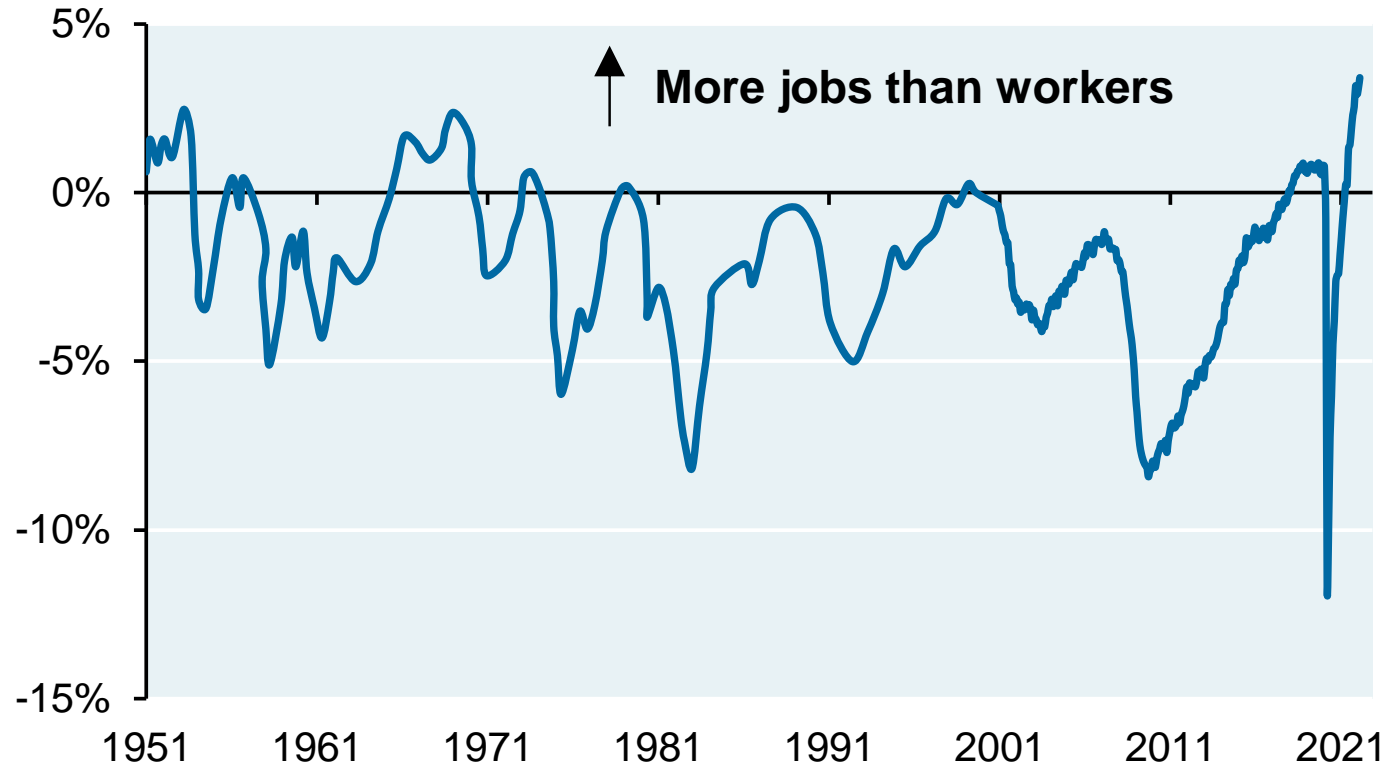


Source: Bloomberg, JPMAM. May 31, 2022.

Tightest labor market on record

Largest worker shortage in the post war era

Job openings plus employment as % of labor force

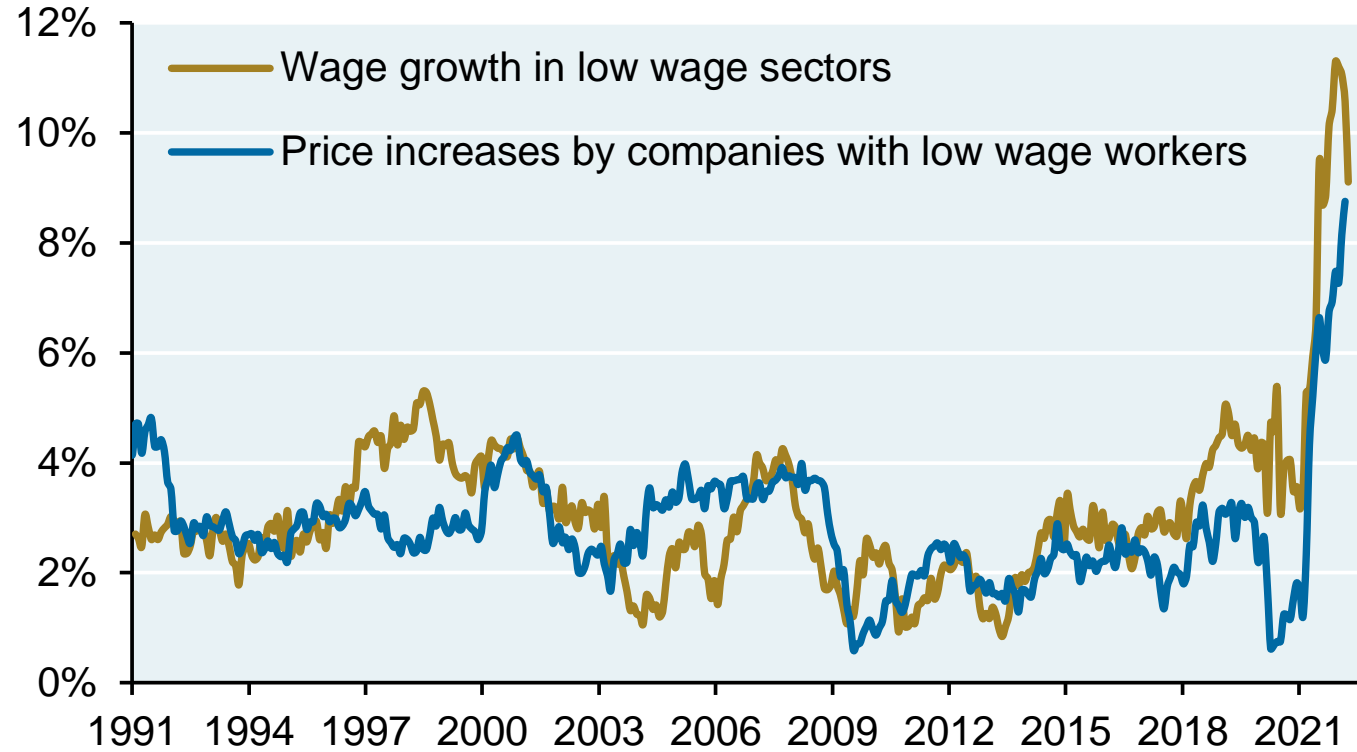


Source: BLS, JPMAM. March 2022.

Wage-price dynamics are getting away from the Fed pretty quickly

Evidence of a wage-price spiral in low wage industries

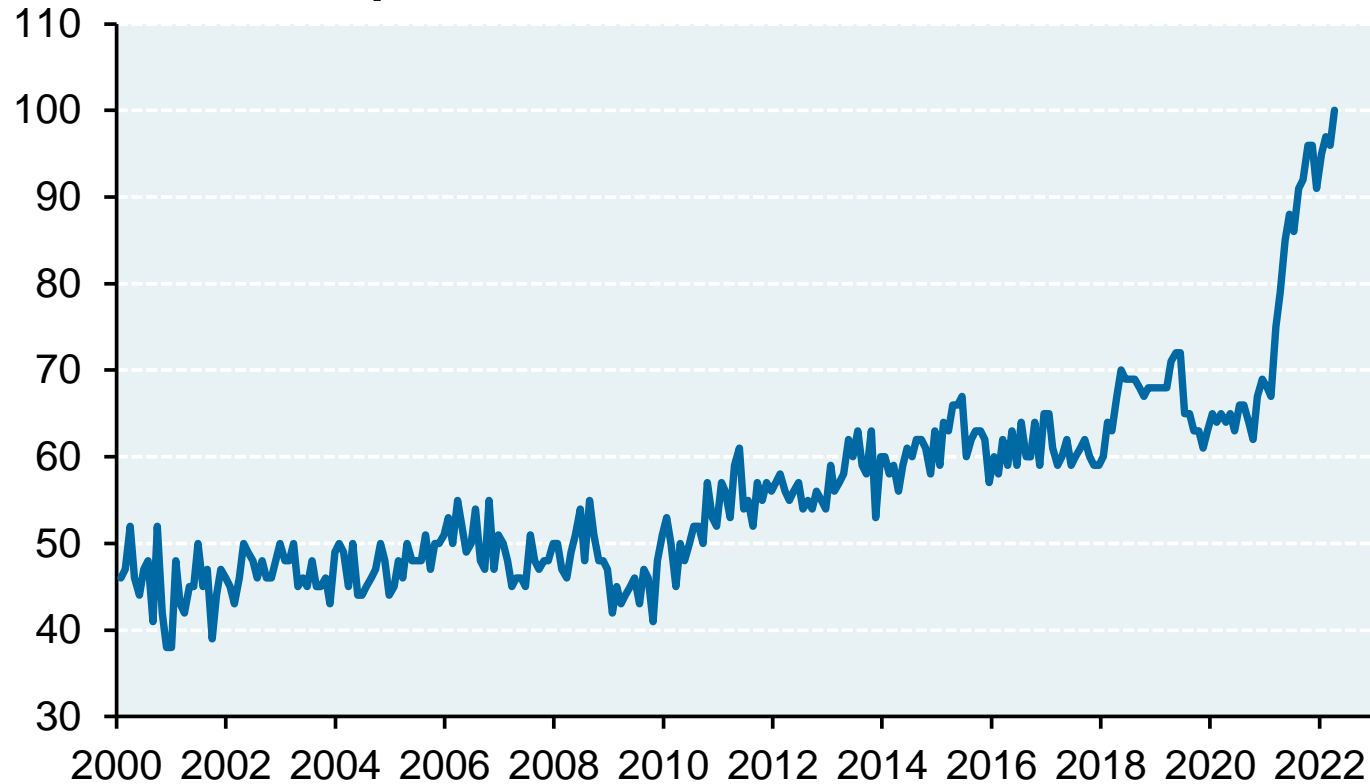
%, y/y change



Source: BLS, BEA, JPMAM. April 2022.

Supply chains are still a mess

Time required for producers to acquire raw materials and intermediate inputs, Days



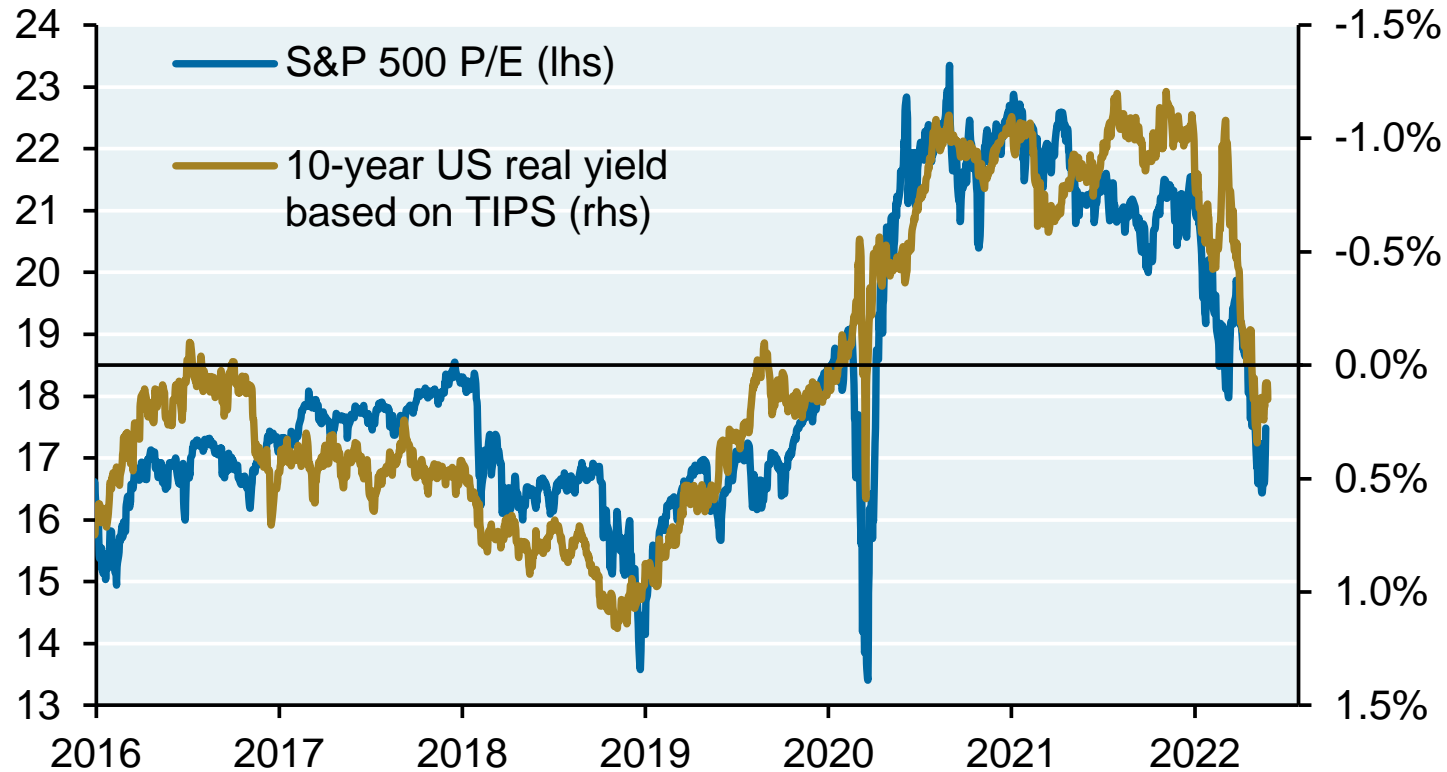
Source: ISM, JPMAM. April 2022.

If real interest rates reset to traditionally positive territory, valuations may have further to fall

S&P 500 P/E vs real interest rates

Price / 12 month forward earnings

US real yield (inverted)



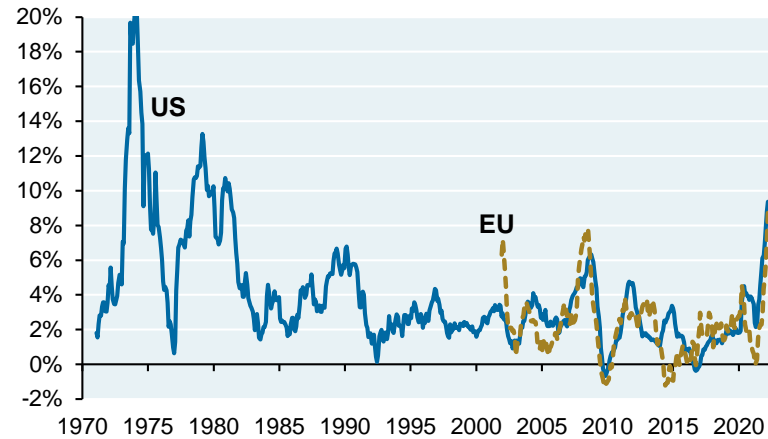
Source: Bloomberg, JPMAM. May 31, 2022.

Other factors arguing against a quick V-shaped market rebound

- Highest food price inflation since the 1980's
- Savings rates have plunged, and the US economy no longer benefits from unmet inventory demand

Consumer price index: food prices

%, y/y change



Source: BLS, European Statistical Office, JPMAM. April 2022.

US saving rate

Percent



Source: BEA. April 2022.

US retail inventory to sales ex motor vehicles

Ratio, inventory / sales

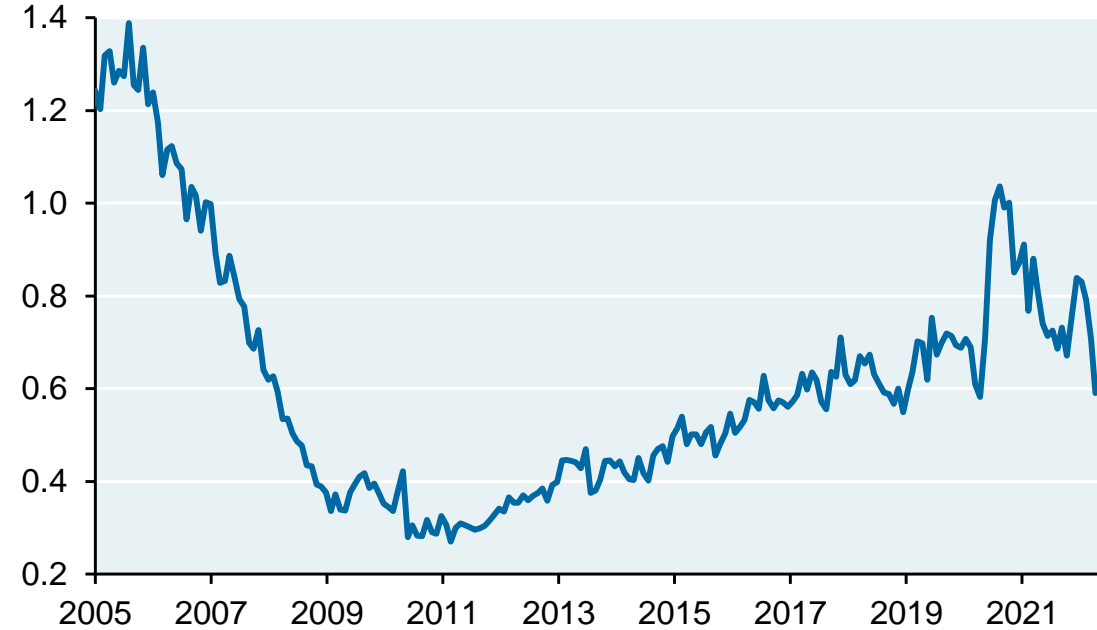


Source: Piper Sandler, JPMAM. March 2022. Dot represents estimate.

And of course housing is on the way down too

US new single family home sales

Annualized sales, millions



Source: US Census Bureau. April 2022.

Months supply of new single family homes

Months, inventory / monthly sales



Source: US Census Bureau. April 2022.

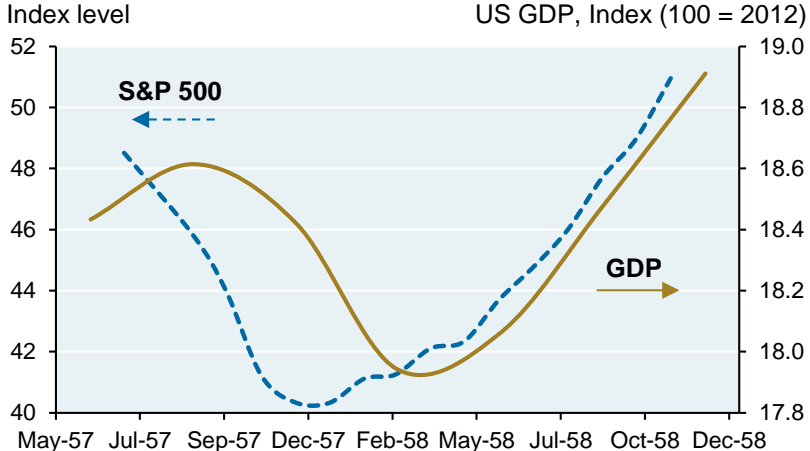
Now what?

- All things considered, a lot of the damage is priced in
- Probably another leg down sometime this year as the full impact of monetary and fiscal stimulus withdrawal kicks in
- Profits recession more likely than a growth recession (US Q2 GDP tracking 3%+ real growth)
- Beware of using economic and profit indicators as market timing indicators since they are usually lagging indicators
 - Business surveys like the PMI/ISM have historically been the best predictors of where the economy and the markets are headed
 - In 19 of the 21 market corrections since 1950, leading indicators bottomed before markets rebounded

Be careful trying to time the next stage of this selloff

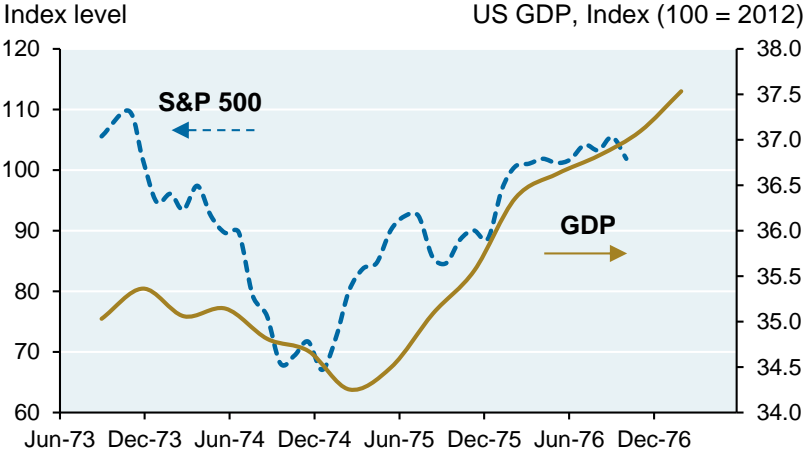
Equity markets tend to bottom well before economic growth does

Eisenhower recession



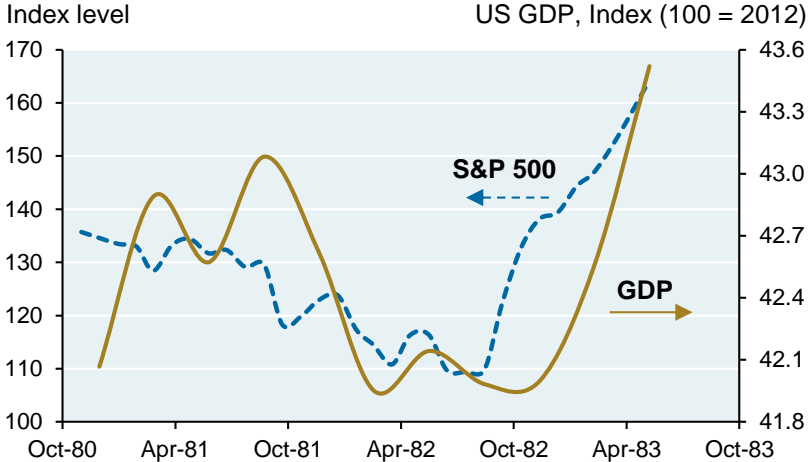
Source: BEA, Shiller. 2022.

Stagflation era



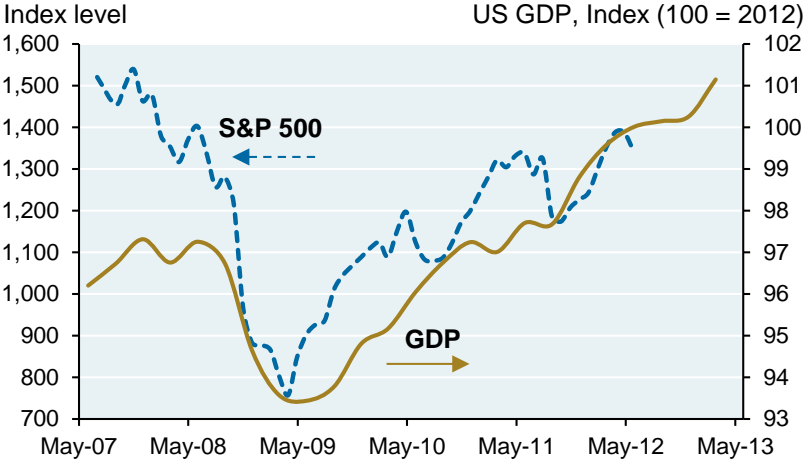
Source: BEA, Shiller. 2022.

1980's double-dip recession



Source: BEA, Shiller. 2022.

Global financial crisis

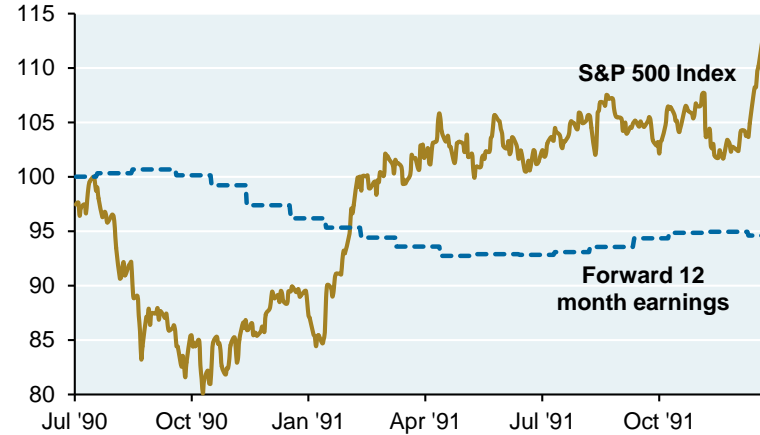


Source: BEA, Shiller. 2022.

Equity markets also tend to bottom well before signs of an earnings rebound

1990-1991 recession: S&P 500 price & earnings

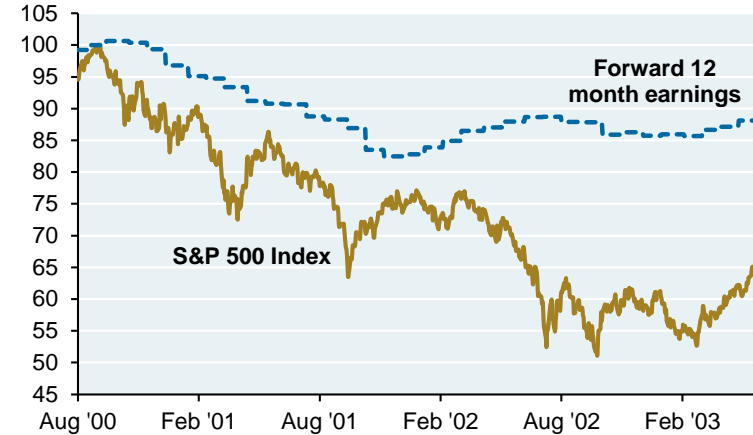
Index (100 = July 16, 1990)



Source: Datastream, JPMAM. 2022.

Early 2000s recession: S&P 500 price & earnings

Index (100 = September 1, 2000)



Source: Datastream, JPMAM. 2022.

Great Recession: S&P 500 price & earnings

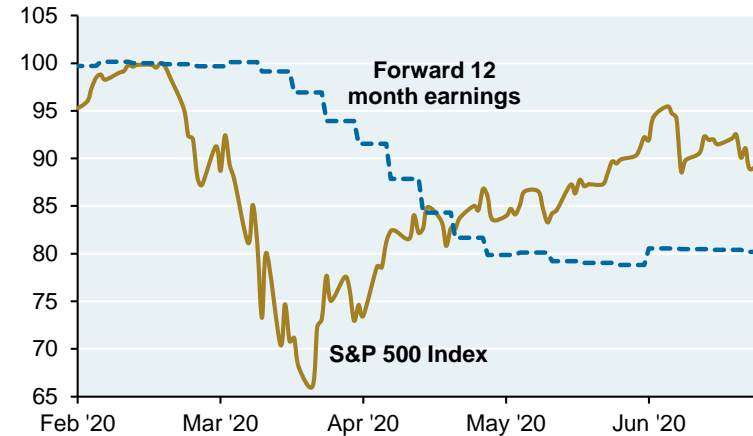
Index (100 = October 9, 2007)



Source: Datastream, JPMAM. 2022.

COVID recession: S&P 500 price & earnings

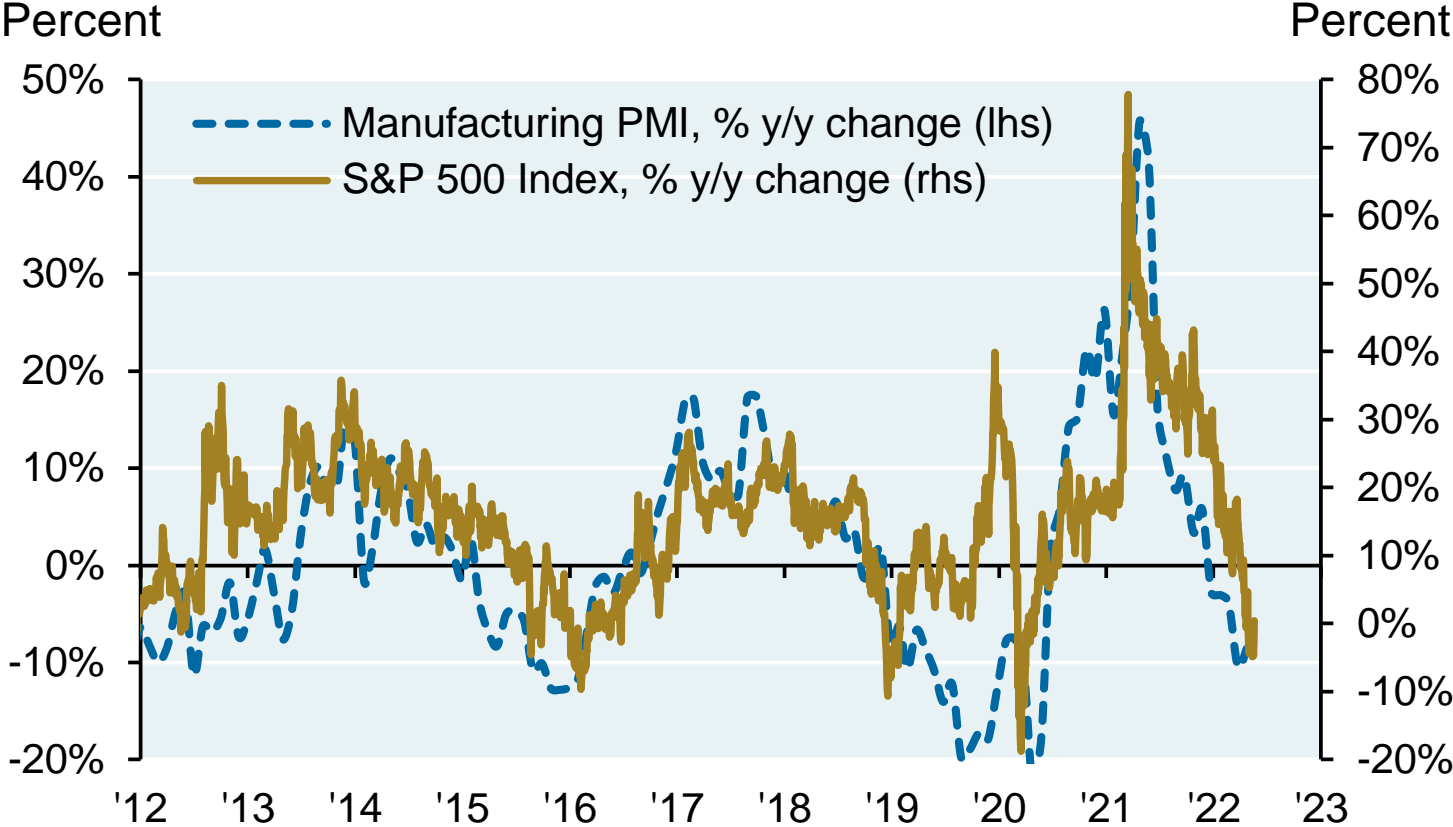
Index (100 = February 19, 2020)



Source: Datastream, JPMAM. 2022.

Business surveys are used for a reason

ISM manufacturing PMI vs S&P 500 performance



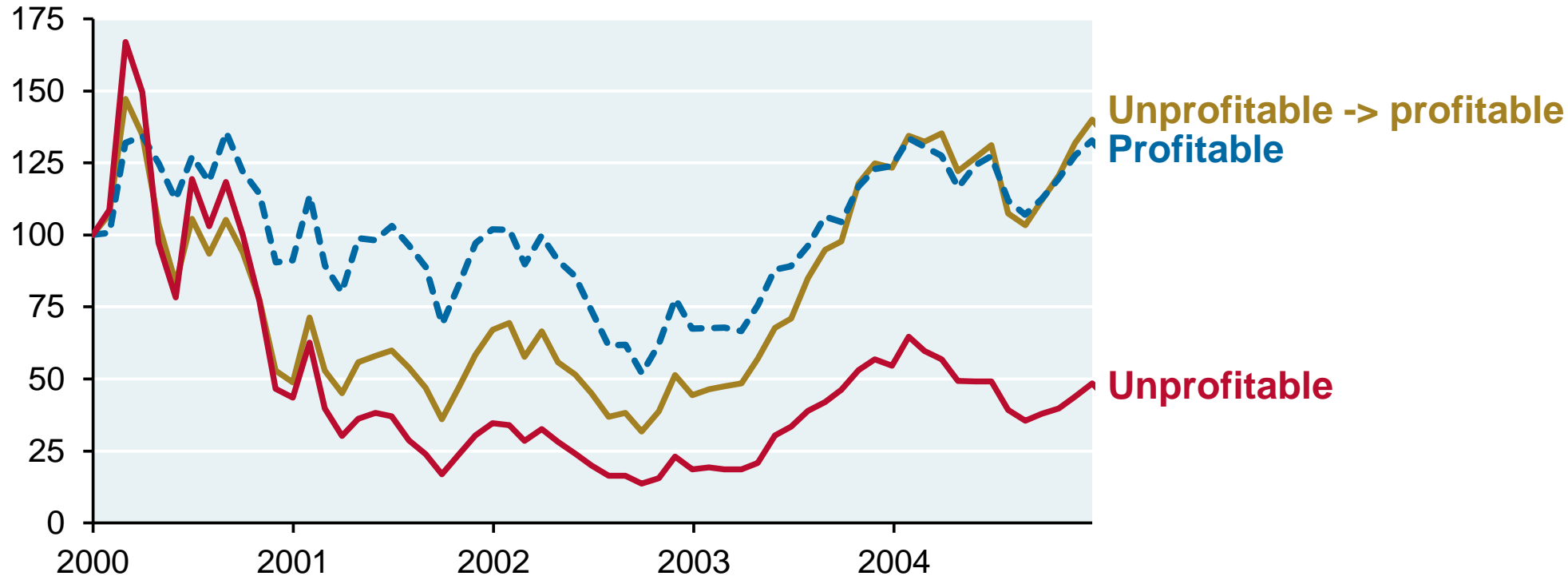
Source: Bloomberg, ISM, JPMAM. May 27, 2022.

Time capsule: 2000-2004 NASDAQ collapse and recovery

Stick with profitable companies and try to identify the ones which will become profitable

Average info tech returns

Index (100 = Jan 2000), includes stocks with market cap > \$400mm

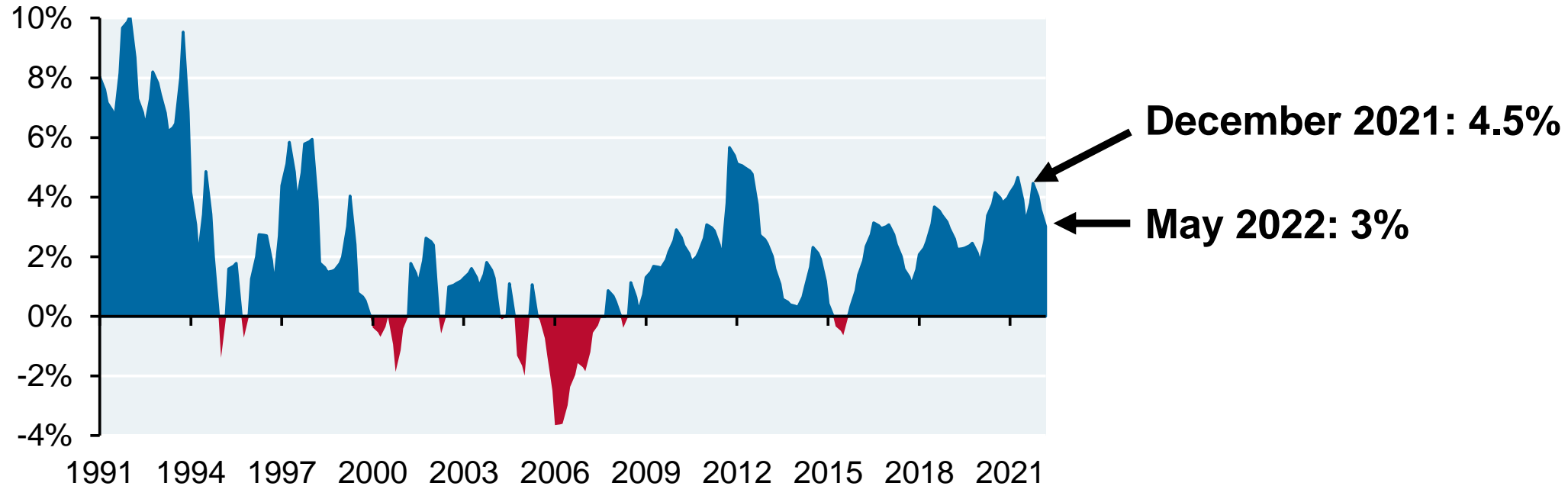


Source: Factset, JPMAM. 2022. Profitability measured as positive or negative net income in Q1 2000 and Q4 2004.

US and EM have taken a hit this year relative to Europe and Japan, but the ongoing benefits from overweighting them have barely been dented

Overweight US & EM, underweight Europe & Japan

3-year rolling out (under) performance vs MSCI All World Index



Source: Bloomberg, JPMAM. May 2022. All equity portfolio, rebalanced quarterly. 10% OW to US, 10% UW to Europe, 5% OW to EM, 5% UW to Japan. Assumes no currency hedging.

Important Information

IMPORTANT INFORMATION

This report uses rigorous security protocols for selected data sourced from Chase credit and debit card transactions to ensure all information is kept confidential and secure. All selected data is highly aggregated and all unique identifiable information, including names, account numbers, addresses, dates of birth, and Social Security Numbers, is removed from the data before the report's author receives it. The data in this report is not representative of Chase's overall credit and debit cardholder population.

The views, opinions and estimates expressed herein constitute Michael Cembalest's judgment based on current market conditions and are subject to change without notice. Information herein may differ from those expressed by other areas of J.P. Morgan. This information in no way constitutes J.P. Morgan Research and should not be treated as such.

The views contained herein are not to be taken as advice or a recommendation to buy or sell any investment in any jurisdiction, nor is it a commitment from J.P. Morgan or any of its subsidiaries to participate in any of the transactions mentioned herein. 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. 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 professional advisers, if any investment mentioned herein is believed to be suitable to their personal goals. Investors should ensure that they obtain all available relevant information before making any investment. 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.

Non-affiliated entities mentioned are for informational purposes only and should not be construed as an endorsement or sponsorship of J.P. Morgan Chase & Co. or its affiliates.

For J.P. Morgan Asset Management Clients:

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>.

ACCESSIBILITY

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.

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), which 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.

Important Information

For J.P. Morgan Private Bank Clients:

ACCESSIBILITY

J.P. Morgan is committed to making our products and services accessible to meet the financial services needs of all our clients. Please direct any accessibility issues to the Private Bank Client Service Center at 1-866-265-1727.

LEGAL ENTITY, BRAND & REGULATORY INFORMATION

In the **United States**, bank deposit accounts and related services, such as checking, savings and bank lending, are offered by JPMorgan Chase Bank, N.A. Member FDIC.

JPMorgan Chase Bank, N.A. and its affiliates (collectively “**JPMCB**”) offer investment products, which may include bank-managed investment accounts and custody, as part of its trust and fiduciary services. Other investment products and services, such as brokerage and advisory accounts, are offered through **J.P. Morgan Securities LLC (“JPMS”)**, a member of FINRA and SIPC. JPMCB and JPMS are affiliated companies under the common control of JPM. Products not available in all states.

In **Luxembourg**, this material is issued by **J.P. Morgan Bank Luxembourg S.A. (JPMBL)**, with registered office at European Bank and Business Centre, 6 route de Treves, L-2633, Senningerberg, Luxembourg. R.C.S Luxembourg B10.958. Authorized and regulated by Commission de Surveillance du Secteur Financier (CSSF) and jointly supervised by the European Central Bank (ECB) and the CSSF. J.P. Morgan Bank Luxembourg S.A. is authorized as a credit institution in accordance with the Law of 5th April 1993. In the **United Kingdom**, this material is issued by **J.P. Morgan Bank Luxembourg S.A., London Branch**, registered office at 25 Bank Street, Canary Wharf, London E14 5JP. Authorized and regulated by Commission de Surveillance du Secteur Financier (CSSF) and jointly supervised by the European Central Bank (ECB) and the CSSF. Deemed authorised by the Prudential Regulation Authority. Subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details of the Temporary Permissions Regime, which allows EEA-based firms to operate in the UK for a limited period while seeking full authorisation, are available on the Financial Conduct Authority’s website.

In **Spain**, this material is distributed by **J.P. Morgan Bank Luxembourg S.A., Sucursal en España**, with registered office at Paseo de la Castellana, 31, 28046 Madrid, Spain. J.P. Morgan Bank Luxembourg S.A., Sucursal en España is registered under number 1516 within the administrative registry of the Bank of Spain and supervised by the Spanish Securities Market Commission (CNMV). In **Germany**, this material is distributed by **J.P. Morgan Bank Luxembourg S.A., Frankfurt Branch**, registered office at Taunustor 1 (TaunusTurm), 60310 Frankfurt, Germany, jointly supervised by the Commission de Surveillance du Secteur Financier (CSSF) and the European Central Bank (ECB), and in certain areas also supervised by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin). In **Italy**, this material is distributed by **J.P. Morgan Bank Luxembourg S.A., Milan Branch**, registered office at Via Catena Adalberto 4, Milan 20121, Italy and regulated by Bank of Italy and the Commissione Nazionale per le Società e la Borsa (CONSOB). In the **Netherlands**, this material is distributed by **J.P. Morgan Bank Luxembourg S.A., Amsterdam Branch**, with registered office at World Trade Centre, Tower B, Strawinskylaan 1135, 1077 XX, Amsterdam, The Netherlands. J.P. Morgan Bank Luxembourg S.A., Amsterdam Branch is authorized and regulated by the Commission de Surveillance du Secteur Financier (CSSF) and jointly supervised by the European Central Bank (ECB) and the CSSF in Luxembourg; J.P. Morgan Bank Luxembourg S.A., Amsterdam Branch is also authorized and supervised by De Nederlandsche Bank (DNB) and the Autoriteit Financiële Markten (AFM) in the Netherlands. Registered with the Kamer van Koophandel as a branch of J.P. Morgan Bank Luxembourg S.A. under registration number 71651845. In **Denmark**, this material is distributed by **J.P. Morgan Bank Luxembourg, Copenhagen Br, filial af J.P. Morgan Bank Luxembourg S.A.** with registered office at Kalvebod Brygge 39-41, 1560 København V, Denmark. J.P. Morgan Bank Luxembourg, Copenhagen Br, filial af J.P. Morgan Bank Luxembourg S.A. is authorized and regulated by Commission de Surveillance du Secteur Financier (CSSF) and jointly supervised by the European Central Bank (ECB) and the CSSF. J.P. Morgan Bank Luxembourg, Copenhagen Br, filial af J.P. Morgan Bank Luxembourg S.A. is also subject to the supervision of Finanstilsynet (Danish FSA) and registered with Finanstilsynet as a branch of J.P. Morgan Bank Luxembourg S.A. under code 29009. In **Sweden**, this material is distributed by **J.P. Morgan Bank Luxembourg S.A., Stockholm Bankfilial**, with registered office at Hamngatan 15, Stockholm, 11147, Sweden. J.P. Morgan Bank Luxembourg S.A., Stockholm Bankfilial is authorized and regulated by Commission de Surveillance du Secteur Financier (CSSF) and jointly supervised by the European Central Bank (ECB) and the CSSF. J.P. Morgan Bank Luxembourg S.A., Stockholm Bankfilial is also subject to the supervision of Finansinspektionen (Swedish FSA). Registered with Finansinspektionen as a branch of J.P. Morgan Bank Luxembourg S.A. In **France**, this material is distributed by **JPMorgan Chase Bank, N.A. (“JPMCB”), Paris branch**, which is regulated by the French banking authorities Autorité de Contrôle Prudentiel et de Résolution and Autorité des Marchés Financiers. In **Switzerland**, this material is distributed by **J.P. Morgan (Suisse) SA**, which is regulated in Switzerland by the Swiss Financial Market Supervisory Authority (FINMA).

Important Information

In **Hong Kong**, this material is distributed by **JPMCB, Hong Kong branch**. JPMCB, Hong Kong branch is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission of Hong Kong. In Hong Kong, we will cease to use your personal data for our marketing purposes without charge if you so request. In **Singapore**, this material is distributed by **JPMCB, Singapore branch**. JPMCB, Singapore branch is regulated by the Monetary Authority of Singapore. Dealing and advisory services and discretionary investment management services are provided to you by JPMCB, Hong Kong/Singapore branch (as notified to you). Banking and custody services are provided to you by JPMCB Singapore Branch. The contents of this document have not been reviewed by any regulatory authority in Hong Kong, Singapore or any other jurisdictions. You are advised to exercise caution in relation to this document. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice. For materials which constitute product advertisement under the Securities and Futures Act and the Financial Advisers Act, this advertisement has not been reviewed by the Monetary Authority of Singapore. JPMorgan Chase Bank, N.A. is a national banking association chartered under the laws of the United States, and as a body corporate, its shareholder's liability is limited.

With respect to countries in **Latin America**, the distribution of this material may be restricted in certain jurisdictions. We may offer and/or sell to you securities or other financial instruments which may not be registered under, and are not the subject of a public offering under, the securities or other financial regulatory laws of your home country. Such securities or instruments are offered and/or sold to you on a private basis only. Any communication by us to you regarding such securities or instruments, including without limitation the delivery of a prospectus, term sheet or other offering document, is not intended by us as an offer to sell or a solicitation of an offer to buy any securities or instruments in any jurisdiction in which such an offer or a solicitation is unlawful. Furthermore, such securities or instruments may be subject to certain regulatory and/or contractual restrictions on subsequent transfer by you, and you are solely responsible for ascertaining and complying with such restrictions. To the extent this content makes reference to a fund, the Fund may not be publicly offered in any Latin American country, without previous registration of such fund's securities in compliance with the laws of the corresponding jurisdiction. Public offering of any security, including the shares of the Fund, without previous registration at Brazilian Securities and Exchange Commission—CVM is completely prohibited. Some products or services contained in the materials might not be currently provided by the Brazilian and Mexican platforms.

JPMorgan Chase Bank, N.A. (JPMCBNA) (ABN 43 074 112 011/AFS Licence No: 238367) is regulated by the Australian Securities and Investment Commission and the Australian Prudential Regulation Authority. Material provided by JPMCBNA in Australia is to "wholesale clients" only. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001 (Cth). Please inform us if you are not a Wholesale Client now or if you cease to be a Wholesale Client at any time in the future.

JPMS is a registered foreign company (overseas) (ARBN 109293610) incorporated in Delaware, U.S.A. Under Australian financial services licensing requirements, carrying on a financial services business in Australia requires a financial service provider, such as J.P. Morgan Securities LLC (JPMS), to hold an Australian Financial Services Licence (AFSL), unless an exemption applies. **JPMS is exempt from the requirement to hold an AFSL under the Corporations Act 2001 (Cth) (Act) in respect of financial services it provides to you, and is regulated by the SEC, FINRA and CFTC under U.S. laws, which differ from Australian laws.** Material provided by JPMS in Australia is to "wholesale clients" only. The information provided in this material is not intended to be, and must not be, distributed or passed on, directly or indirectly, to any other class of persons in Australia. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Act. Please inform us immediately if you are not a Wholesale Client now or if you cease to be a Wholesale Client at any time in the future.

This material has not been prepared specifically for Australian investors. It:

- May contain references to dollar amounts which are not Australian dollars;
- May contain financial information which is not prepared in accordance with Australian law or practices;
- May not address risks associated with investment in foreign currency denominated investments; and
- Does not address Australian tax issues.

References to "J.P. Morgan" are to JPM, its subsidiaries and affiliates worldwide. "J.P. Morgan Private Bank" is the brand name for the private banking business conducted by JPM. This material is intended for your personal use and should not be circulated to or used by any other person, or duplicated for non-personal use, without our permission. If you have any questions or no longer wish to receive these communications, please contact your J.P. Morgan team.

© 2022 JPMorgan Chase & Co. All rights reserved.

Important Information

For J.P. Morgan Wealth Management Clients:

Purpose of This Material: This material is for information purposes only. The views, opinions, estimates and strategies expressed herein constitutes Michael Cembalest's judgment based on current market conditions and are subject to change without notice, and may differ from those expressed by other areas of J.P. Morgan. **This information in no way constitutes J.P. Morgan Research and should not be treated as such.**

J.P. Morgan is committed to making our products and services accessible to meet the financial services needs of all our clients. If you are a person with a disability and need additional support, please contact your J.P. Morgan representative or email us at accessibility.support@jpmorgan.com for assistance.

J.P. Morgan Wealth Management is a business of JPMorgan Chase & Co., which offers investment products and services through **J.P. Morgan Securities LLC (JPMS)**, a registered broker-dealer and investment advisor, member FINRA and SIPC. Annuities are made available through Chase Insurance Agency, Inc. (CIA), a licensed insurance agency, doing business as Chase Insurance Agency Services, Inc. in Florida. Certain custody and other services are provided by JPMorgan Chase Bank, N.A. (JPMCB). JPMS, CIA and JPMCB are affiliated companies under the common control of JPMorgan Chase & Co. Products not available in all states.

This material is intended for your personal use and should not be circulated to or used by any other person, or duplicated for non-personal use, without our permission. If you have any questions or no longer wish to receive these communications, please contact your J.P. Morgan representative.

LEGAL ENTITY, BRAND & REGULATORY INFORMATION

The views, opinions and estimates expressed herein constitute Michael Cembalest's judgment based on current market conditions and are subject to change without notice. Information herein may differ from those expressed by other areas of J.P. Morgan. This information in no way constitutes J.P. Morgan Research and should not be treated as such. The views contained herein are not to be taken as an advice or a recommendation to buy or sell any investment in any jurisdiction and there is no guarantee that any of the views expressed will materialize. Any forecasts, figures, opinions or investment techniques and strategies set out are for information purposes only; based on certain assumptions, current market conditions and are subject to change without prior notice. All information presented herein is considered to be accurate at the time of writing, but no warranty of accuracy is given and no liability in respect of any error or omission is accepted. 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, investors should make an independent assessment of the legal, regulatory, tax, credit, and accounting implications and determine, together with their own professional advisers, if any investment mentioned herein is believed to be suitable to their personal goals. Investors should ensure that they obtain all available relevant information before making any investment. 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 investors may not get back the full amount invested. Both past performance and yield may not be a reliable guide to future performance.

Non-affiliated entities mentioned are for informational purposes only and should not be construed as an endorsement or sponsorship of J.P. Morgan Chase & Co. or its affiliates.

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

- **For J.P. Morgan Private Bank Clients:** Please read the [Legal Disclaimer](#).
- **For J.P. Morgan Asset Management Clients:** Please read the [Legal Disclaimer](#)
- **For J.P. Morgan Securities:** Please read the [Legal Disclaimer](#).
- **For Chase Private Client:** Please read the [Legal Disclaimer](#)

© 2022 JPMorgan Chase & Co. All rights reserved.