



Guide to the Markets[®]

Latin America | 2Q 2022
As of March 31, 2022





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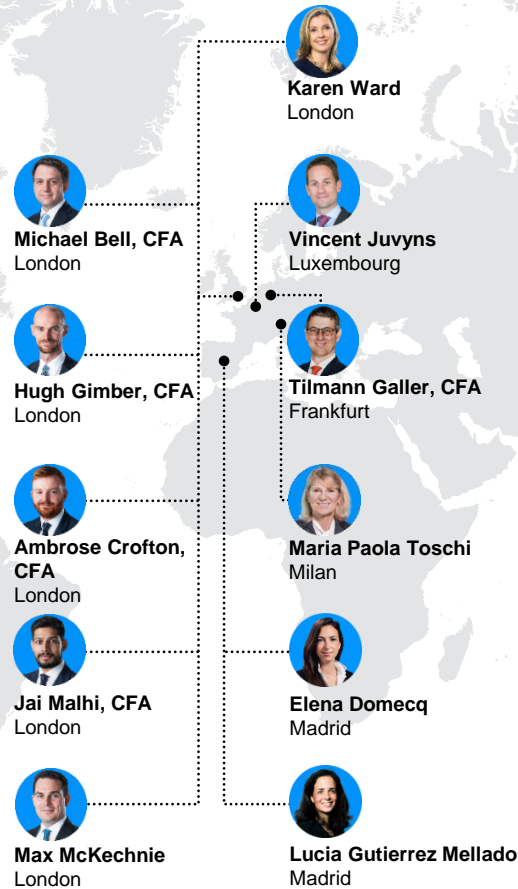
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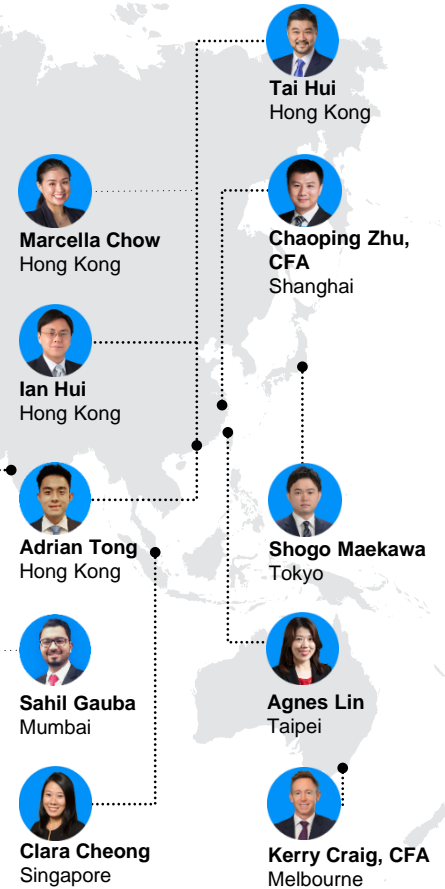
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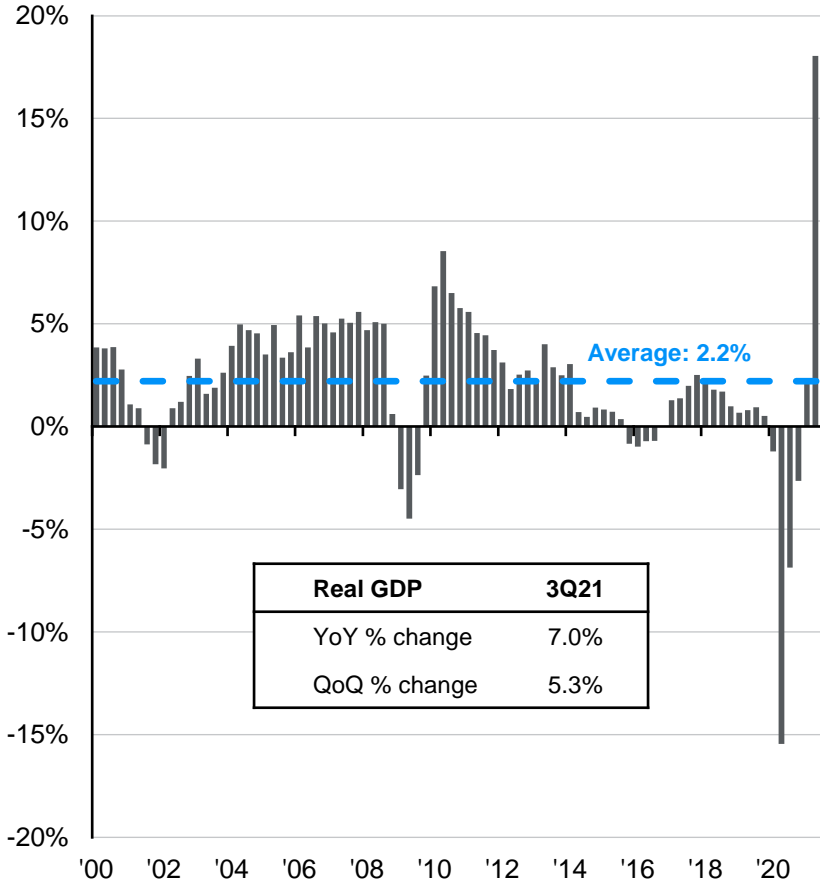
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Latin America: Economic growth, inflation and real rates

Real GDP

Year-over-year % change



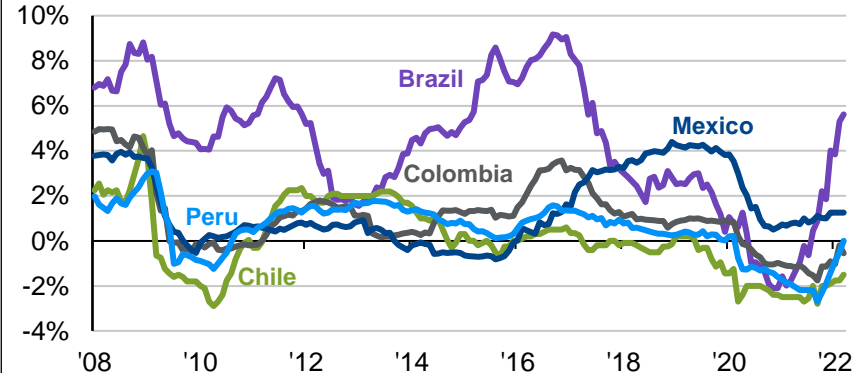
Inflation

Year-over-year % change



Real policy rates by country

Nominal policy rate deflated by 12-month inflation expectations



Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management; (Bottom right) Central Bank of Brazil, Central Bank of Chile, Central Bank of Colombia, Central Bank of Peru, Central Bank of Mexico. Latin America aggregate GDP growth includes Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Uruguay. Inflation does not include Argentina, Ecuador or Venezuela. Inflation expectations are based on surveys conducted by each central bank.
Guide to the Markets – Latin America. Data are as of March 31, 2022.

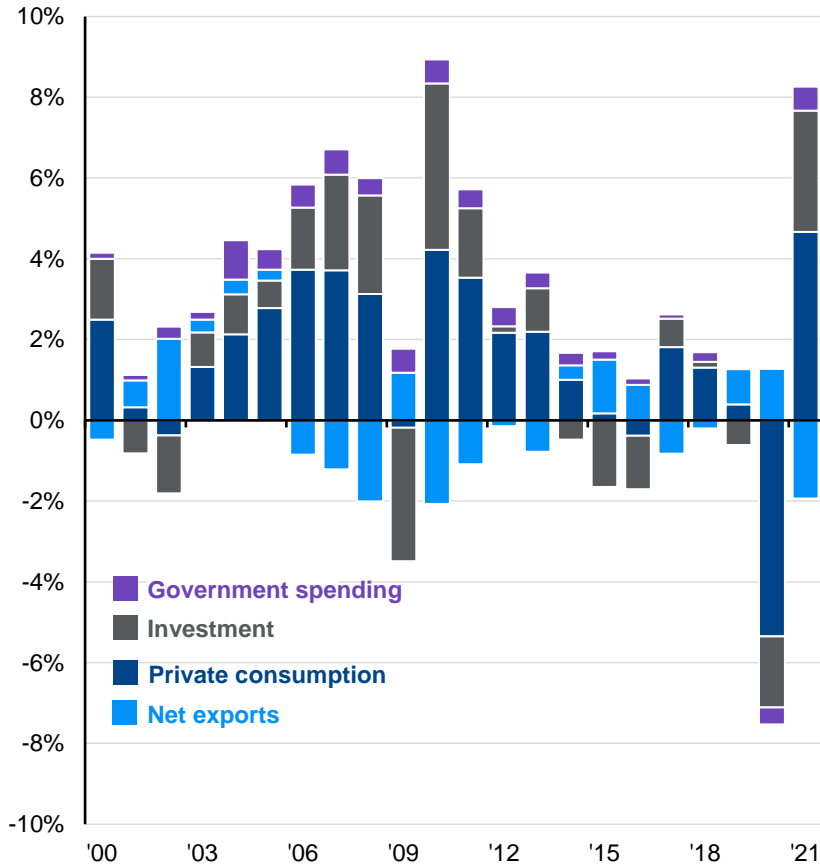


Latin America: Composition of economic growth

LATAM Economy

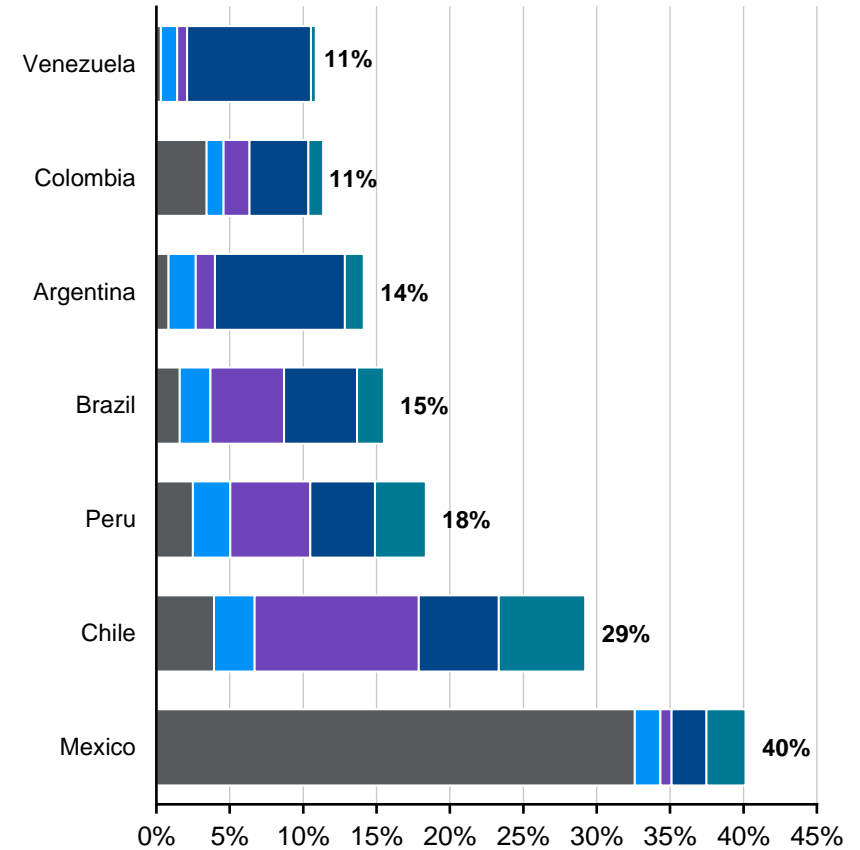
Exports

% of nominal GDP, USD terms, goods, 2021



Real GDP growth

Contribution to growth, year-over-year % change



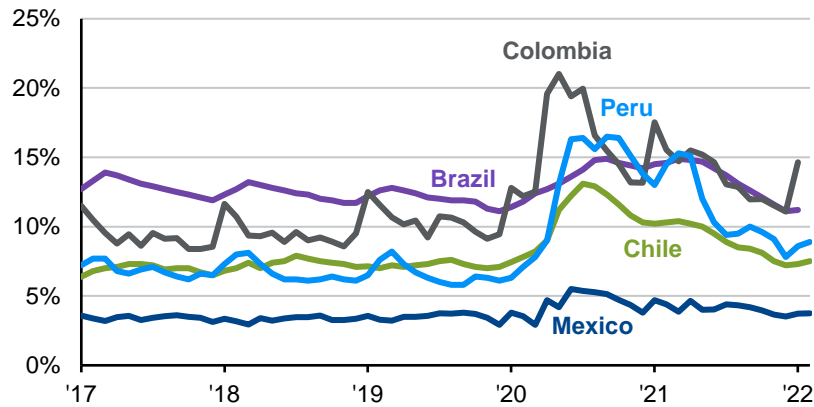
Source: IMF World Economic Outlook, J.P. Morgan Asset Management; (Left) Argentina Economy Ministry, BCE, BCRP, BCU, CBC, DANE, IBGE, INEGI; (Right) IMF Direction of Trade Statistics. Latin America aggregate GDP includes Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru and Uruguay. Uruguay is excluded from 2000 to 2005 due to data availability. Guide to the Markets – Latin America. Data are as of March 31, 2022.



Latin America: Impacts of COVID-19

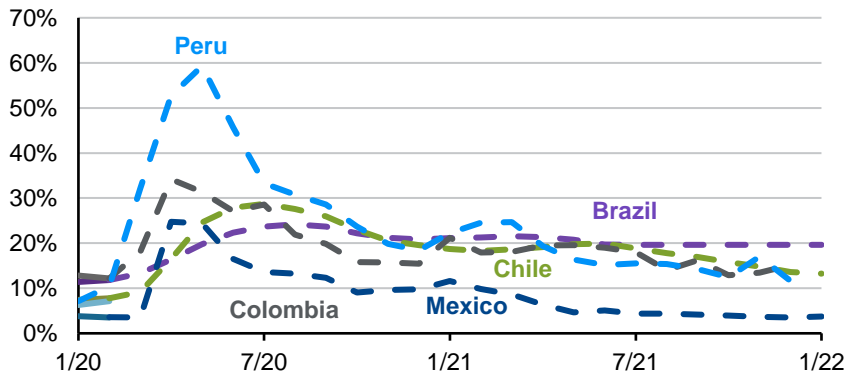
Official unemployment rates

Monthly, non-seasonally adjusted



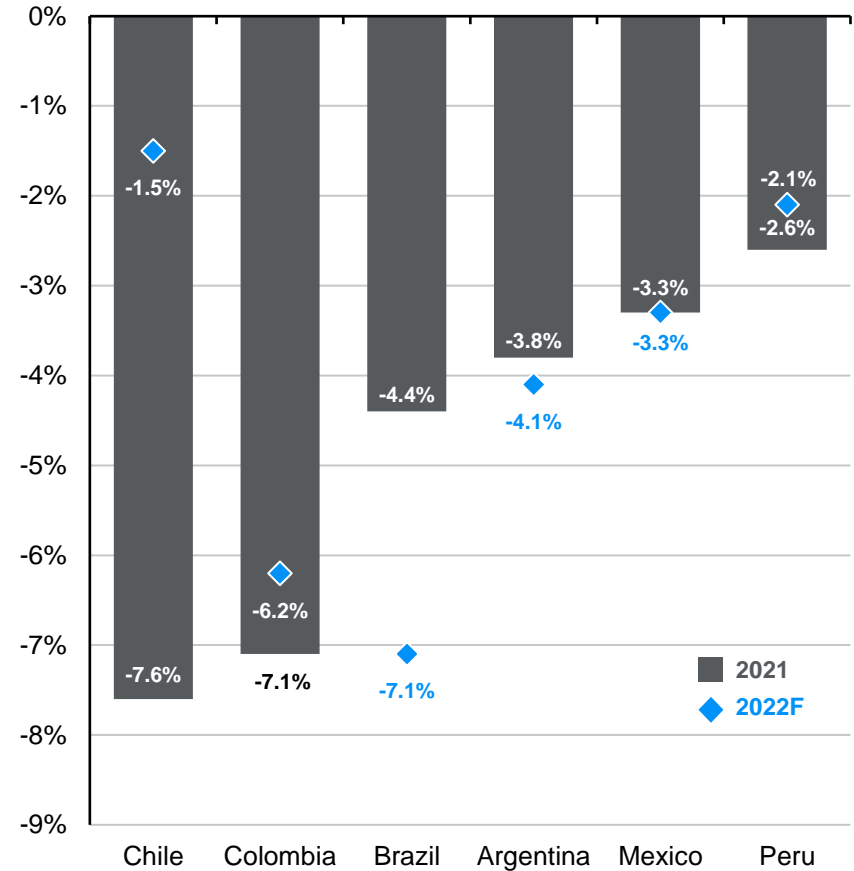
Shadow unemployment rates

Monthly, based on non-seasonally adjusted data



Fiscal deficit

Nominal deficit, % of GDP



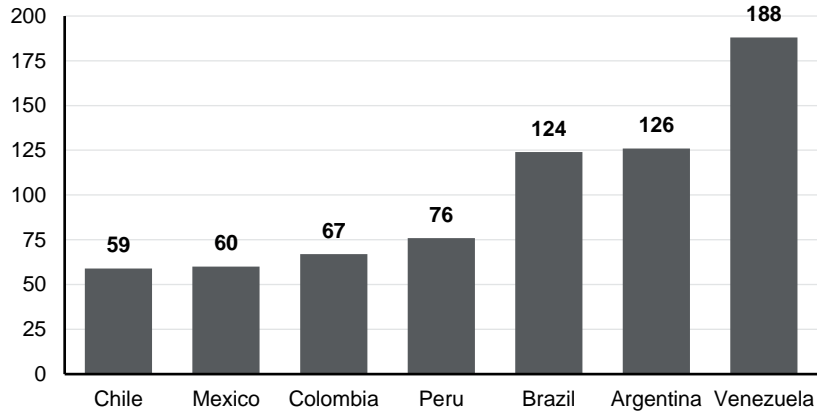
Source: Central Bank of Colombia, Central Reserve Bank of Peru, DANE (National Administration of Statistics), FactSet, INEGI (National Institute of Statistics and Geography of Mexico), J.P. Morgan Asset Management; (Top and bottom left) IBGE, INE; (Right) Central Bank of Brazil, Central Bank of Chile, Central Bank of Mexico, IMF, INDEC (National Institute of Statistics and Census of Argentina), Ministry of Economy of Argentina, J.P. Morgan Global Economic Research. Fiscal deficit forecasts are from J.P. Morgan Global Economic Research. Shadow unemployment rates are calculated based on the assumption that participation rate is kept constant since February 2020. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



Latin America structural drags

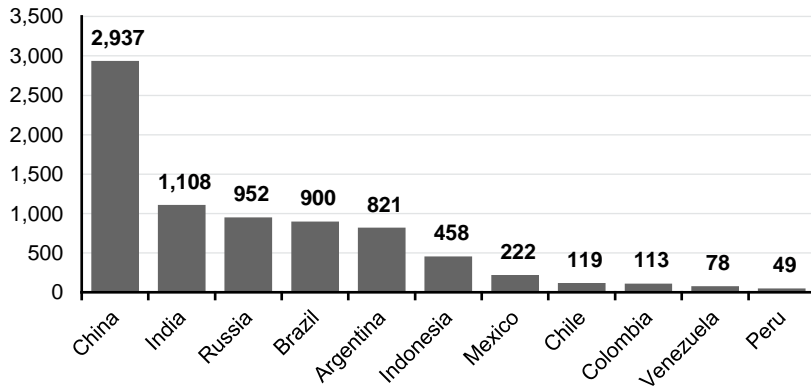
Ease of doing business

Overall ranking, 1= most ease of doing business, 2019



Protectionist trade measures*

Number of measures implemented, 2009-2020

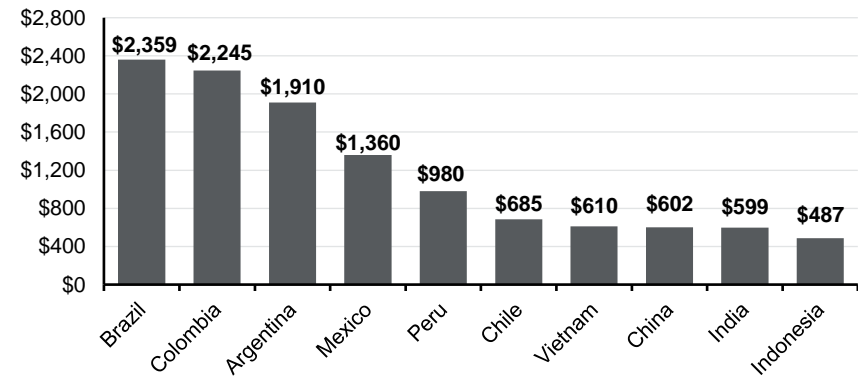


Selective competitiveness indicators: 2019

Indicator	LATAM	OECD High Income
Ease of doing business (rank, 1-189)	116	30
Days to register a new business	29	9
Days to deal with construction permits	191	152
Days to resolve a dispute	774	590
Recovery rate from insolvent firm (cents)	31	70
Number of hours spent preparing taxes	317	159
Total tax rate (% profit)	47	40

Cost to export goods

USD per container, 2019



Source: J.P. Morgan Asset Management; (Top left and right) World Bank "Doing Business in 2020" survey; (Bottom left) World Trade Alert.

*Measures that may involve or almost certainly do.

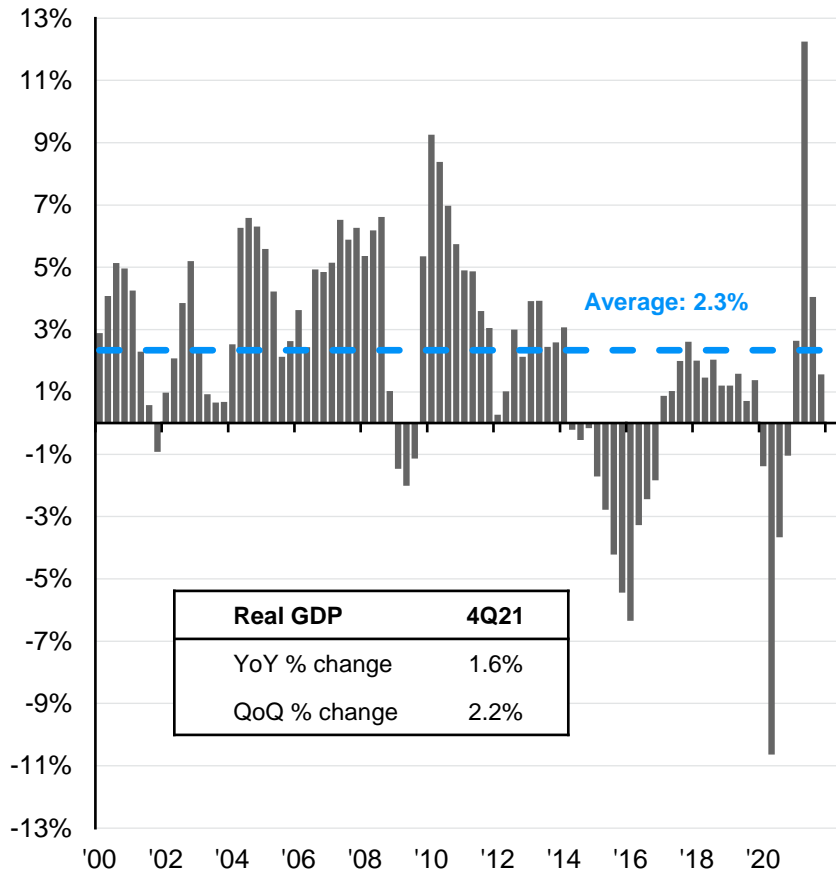
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Brazil: Economic snapshot

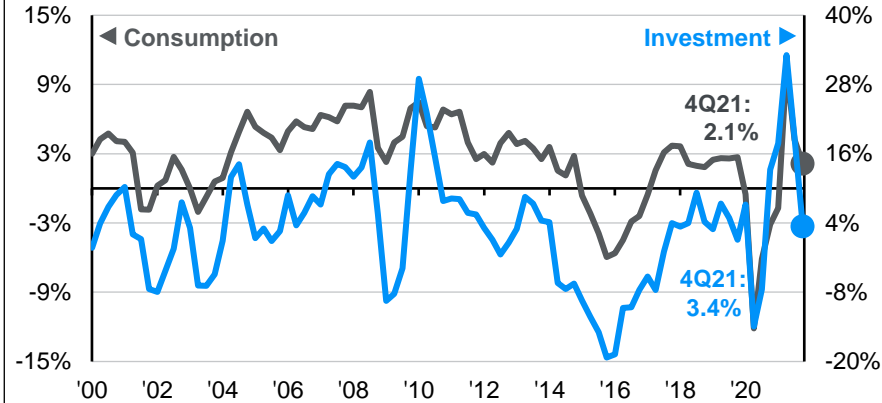
Real GDP

Year-over-year % change



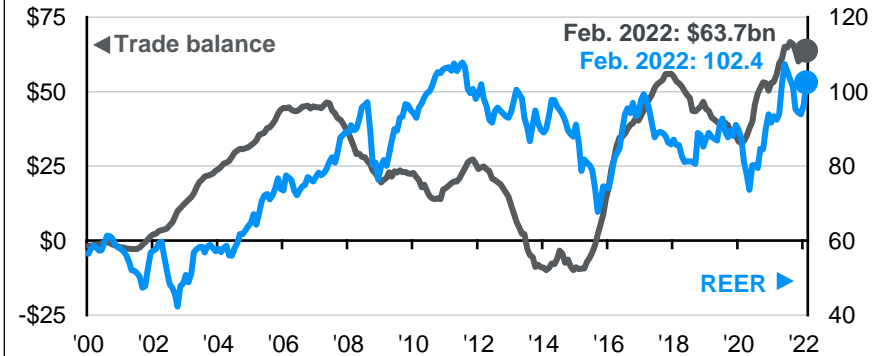
Real consumption and investment

Year-over-year % change



Trade balance and exchange rate

USD billions, accumulated past 12 months, real effective FX*



Source: IBGE (Brazilian Statistics and Geography Institute), J.P. Morgan Asset Management; (Bottom right) Central Bank of Brazil, MDIC (Ministry of Development, Industry and External Commerce), J.P. Morgan Global Economic Research.*Real effective exchange rates (REERs) compare the value of a currency to a weighted basket of several foreign currencies. They are deflated using a producer price index. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.

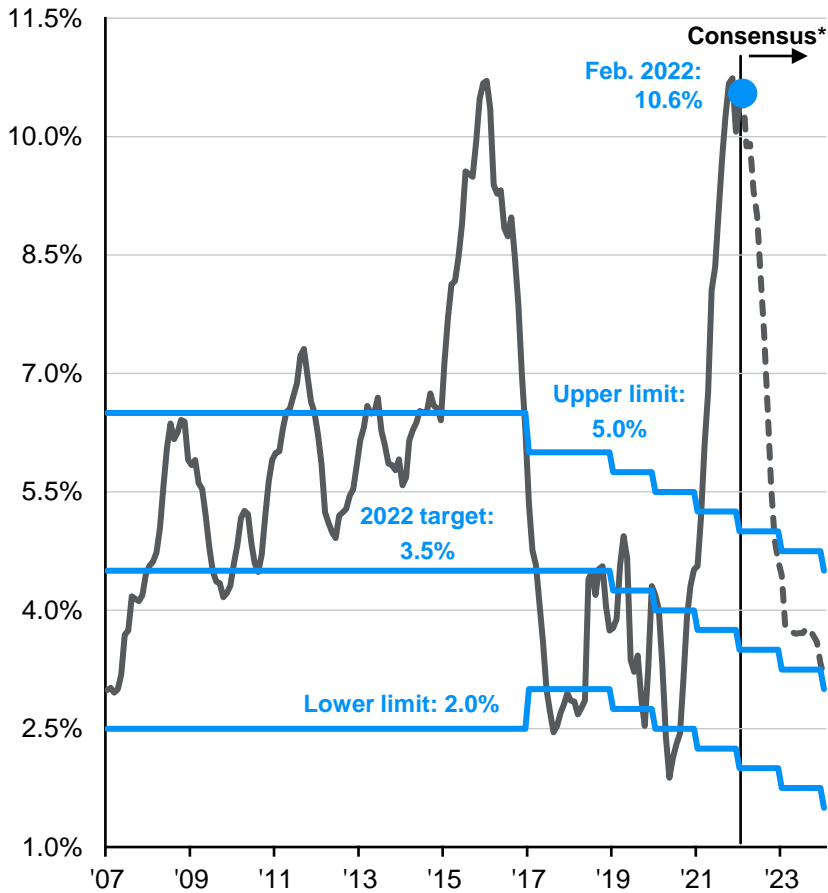


Brazil: Inflation and monetary policy

LATAM Economy

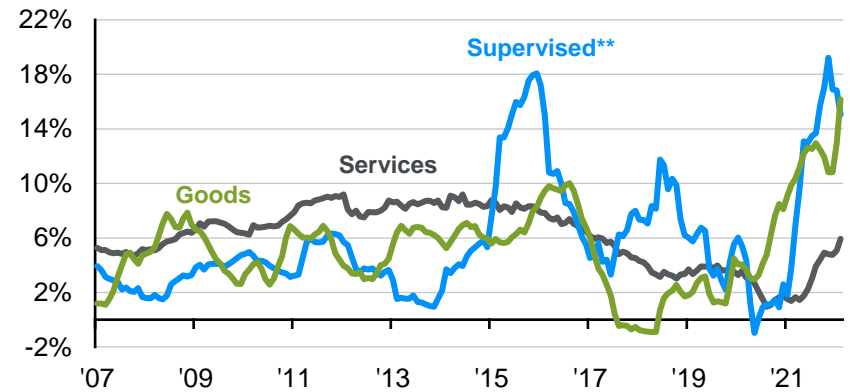
Inflation targeting and inflation

IPCA, 12-month accumulated % change



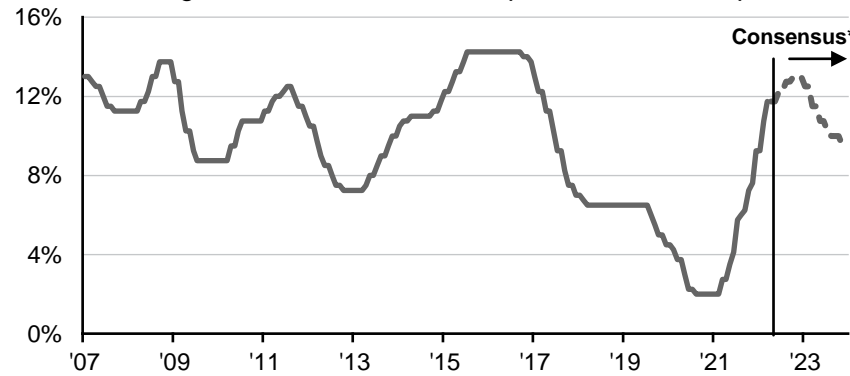
Inflation breakdown

IPCA, 12-month accumulated % change



Target policy rate and expectations

BCB Selic target rate and consensus expectations, end of period



Source: Central Bank of Brazil, IBGE (Brazilian Statistics and Geography Institute), J.P. Morgan Asset Management.
 Target inflation bands set by Central Bank of Brazil. *Focus survey conducted by Central Bank of Brazil. **Includes prices set at federal level (telephone services, petroleum derivatives, electricity, health plans) and state/municipal level (water and sewage taxes, value-added and real estate taxes, public transport costs).
 Guide to the Markets – Latin America. Data are as of March 31, 2022.



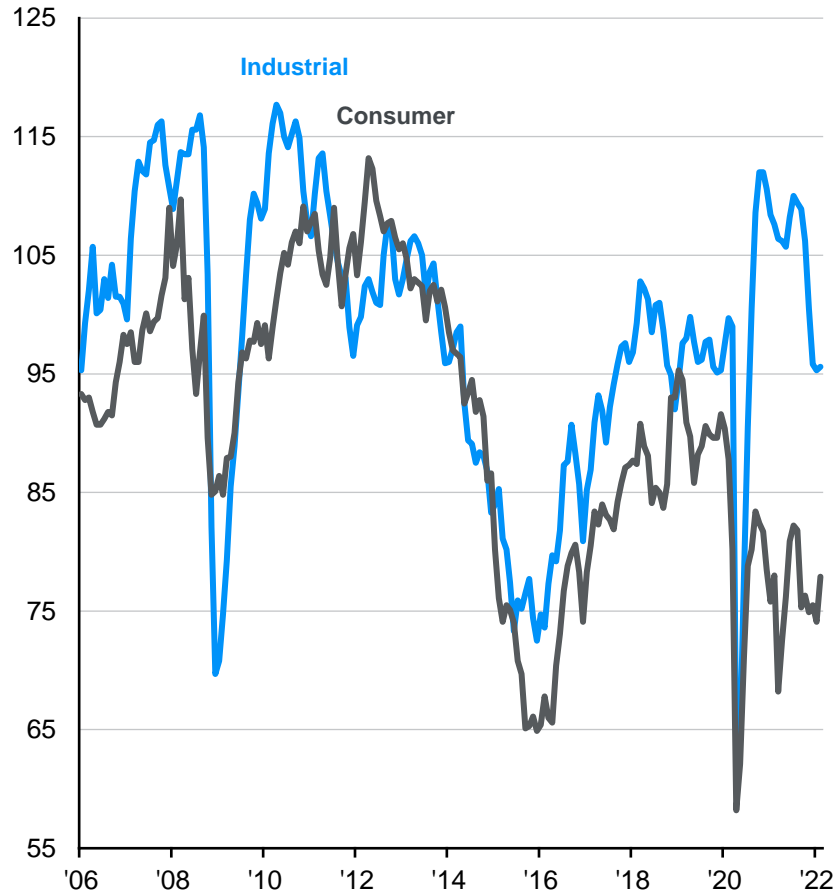
Brazil: Consumer and business dynamics

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LATAM Economy

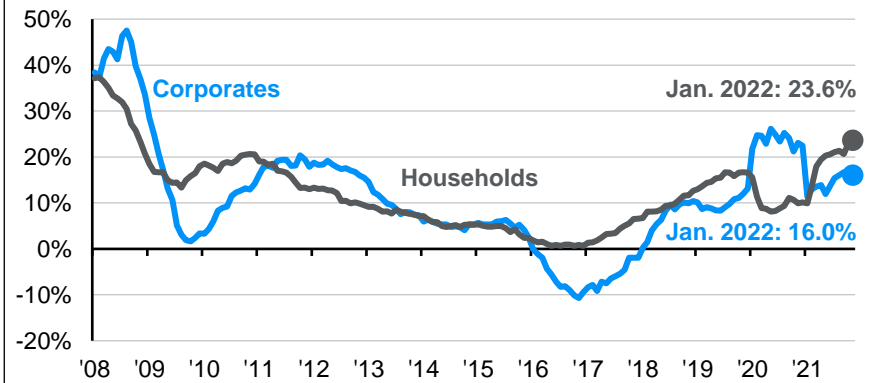
Consumer and industrial confidence

Seasonally adjusted



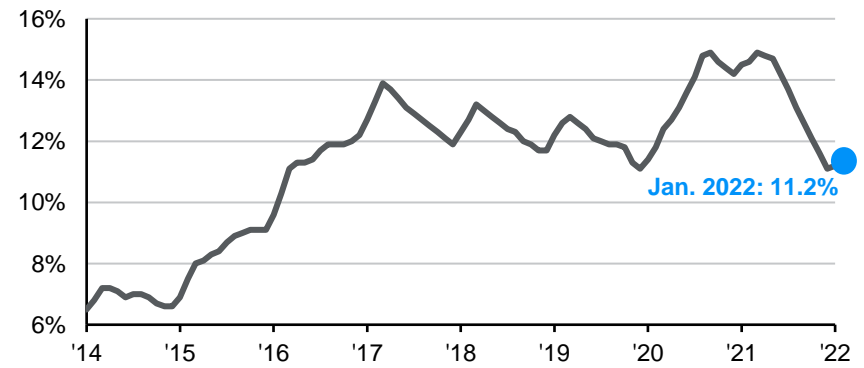
Credit growth

Year-over-year % change, non-earmarked credit*



Unemployment rate

Non-seasonally adjusted, 3-month average



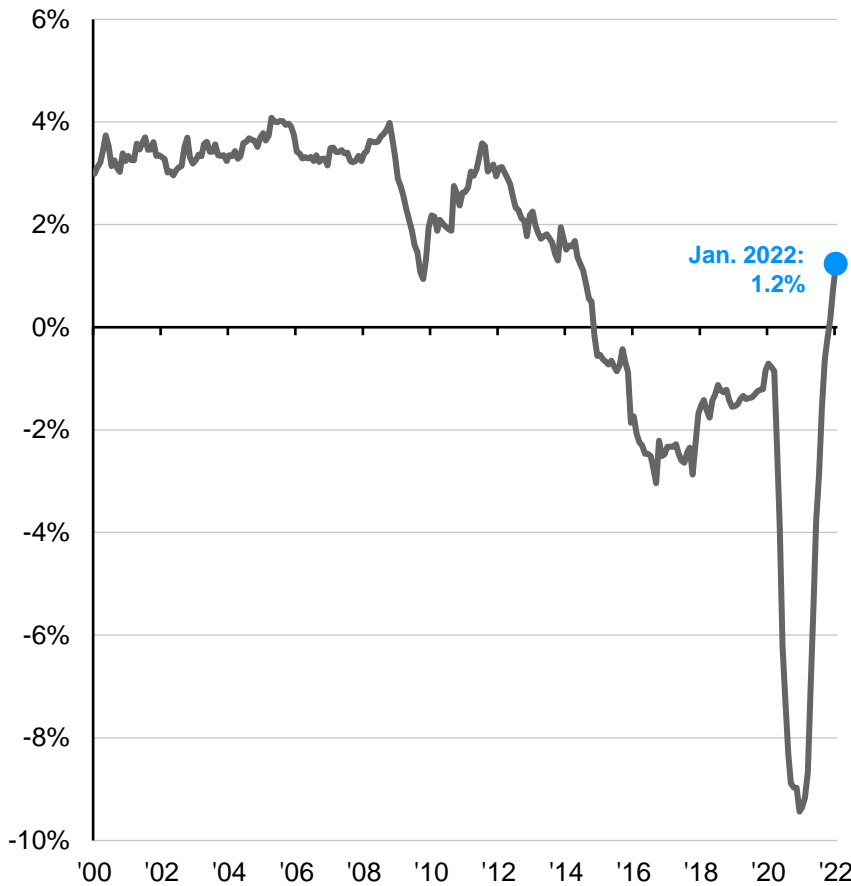
Source: J.P. Morgan Asset Management; (Left) FGV/IBRE (Brazilian Institute of Economics of the Getulio Vargas Foundation); (Top right) Central Bank of Brazil; (Bottom right) IBGE (Brazilian Statistics and Geography Institute). *Non-earmarked funds are those where interest rates are determined by market conditions.
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Brazil: Fiscal policy

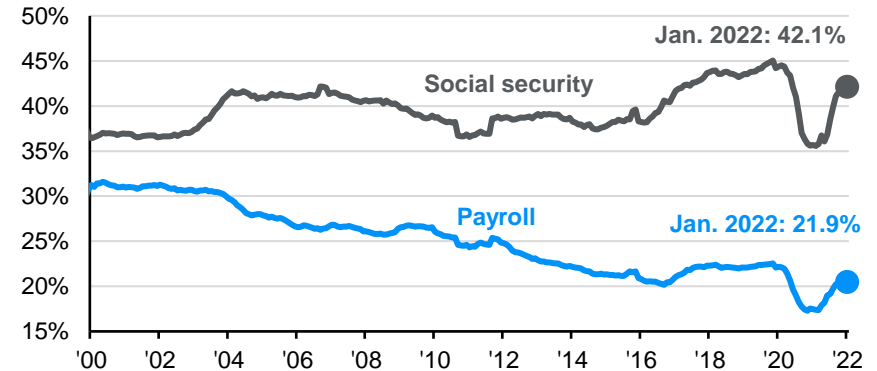
Public sector primary balance

% of GDP, 12-month sum



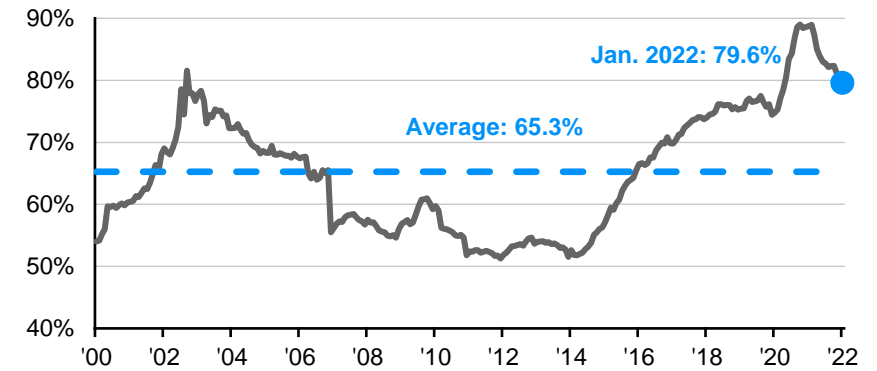
Social security and payroll expenditures

% of total expenses, 12-month moving average



Gross debt

% of GDP



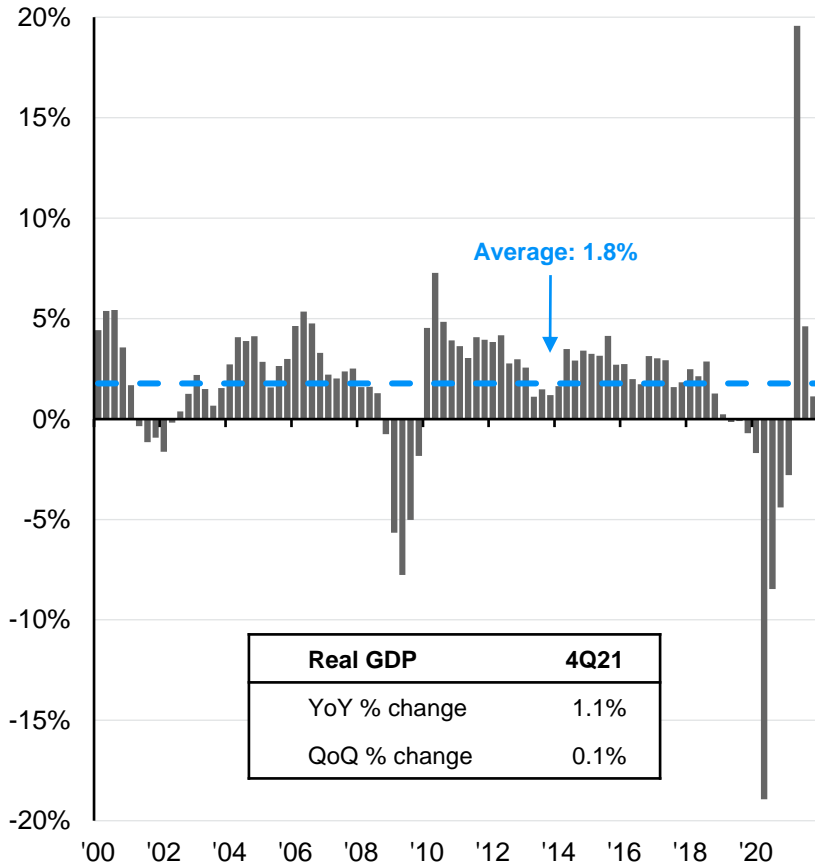
Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management; (Left and bottom right) Central Bank of Brazil; (Top right) National Treasury of Brazil. Public sector includes central government, local governments and selected state-owned companies. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



Mexico: Economic snapshot

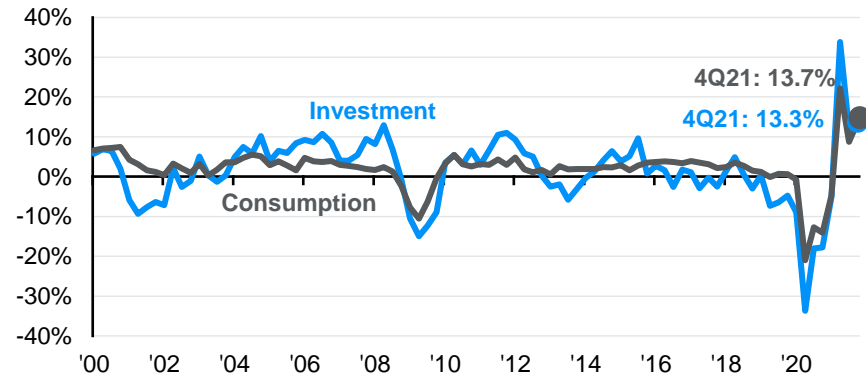
Real GDP

Year-over-year % change



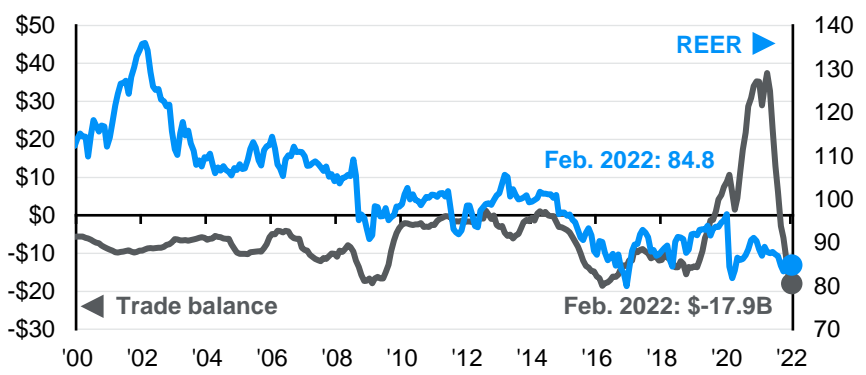
Real consumption and investment

Year-over-year % change



Trade balance and exchange rate

USD billions, accumulated past 12 months, real effective FX*



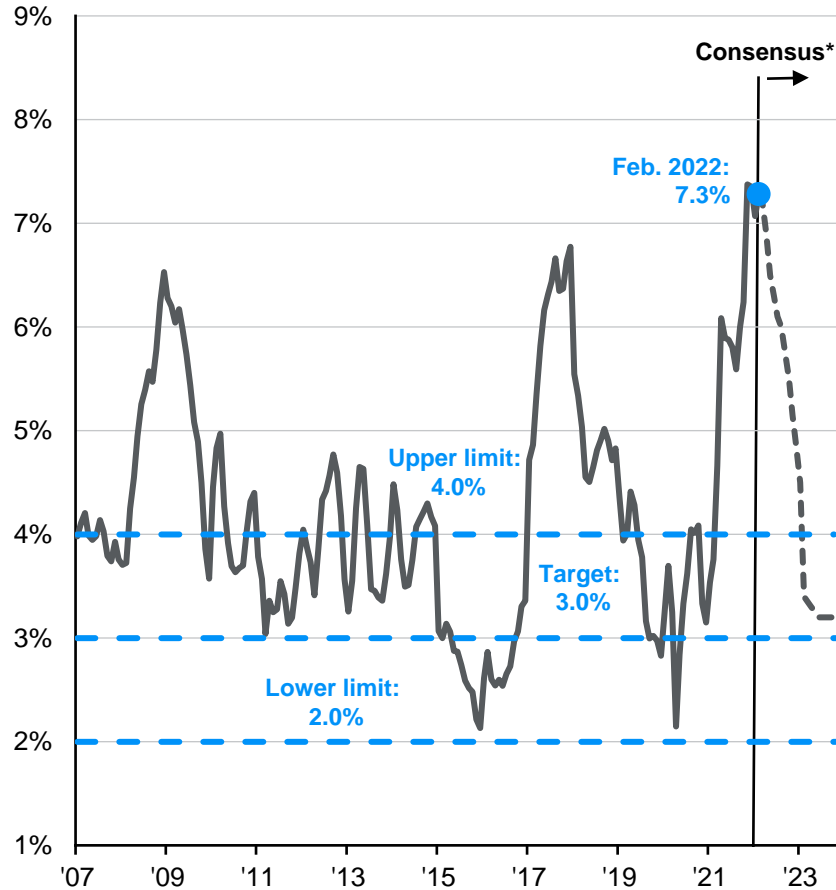
Source: INEGI (National Institute of Statistics and Geography of Mexico), J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.
 *Real effective exchange rates (REERs) compare the value of a currency to a weighted basket of several foreign currencies. They are deflated using a producer price index.
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Mexico: Inflation and monetary policy

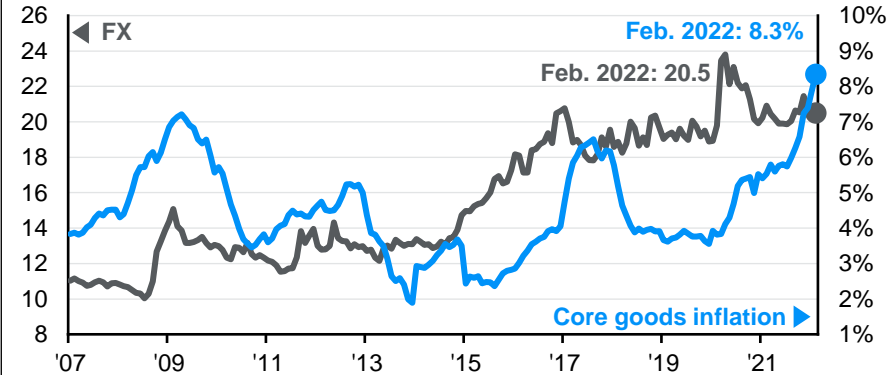
Inflation targeting and inflation

IPCA, 12-month accumulated % change



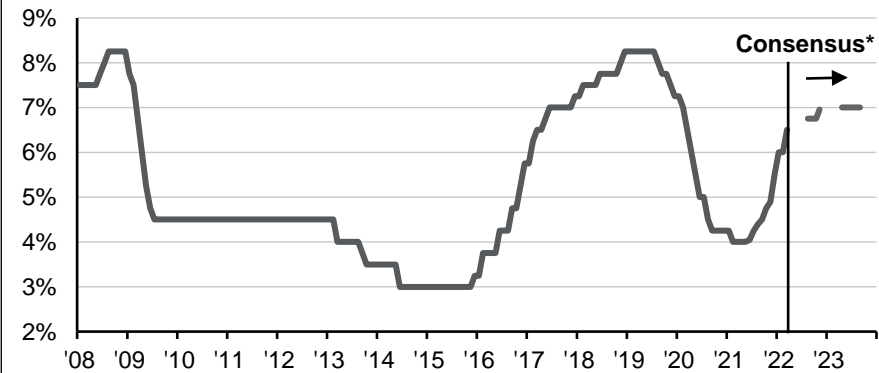
FX and core goods inflation

Peso per USD spot rate, monthly average, year-over-year % chg.



Target policy rate and expectations

Banxico target rate



Source: Central Bank of Mexico, J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.
 *Survey conducted by the Central Bank of Mexico as of March 2022.
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Mexico: Consumer and business dynamics

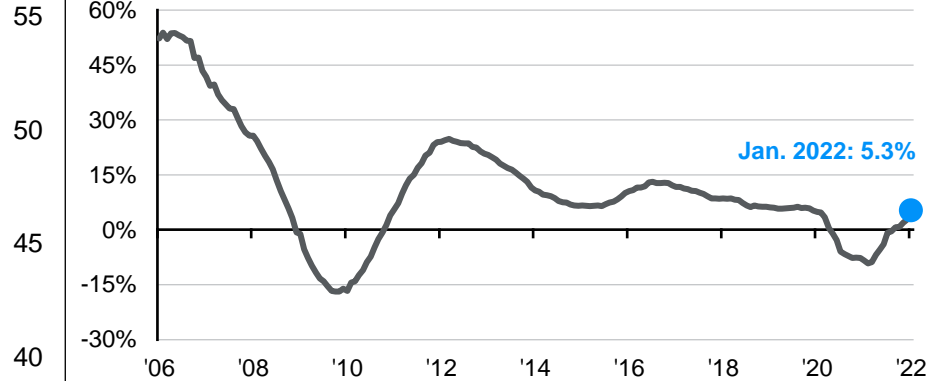
Consumer and industrial confidence

Composite consumer index, mfg. producer confidence, sa



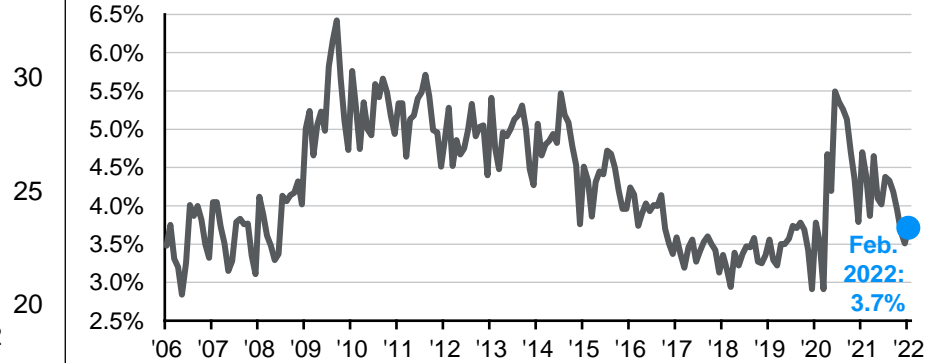
Private sector credit growth

Households, year-over-year % change, net of bad debts



Unemployment rate

Non-seasonally adjusted



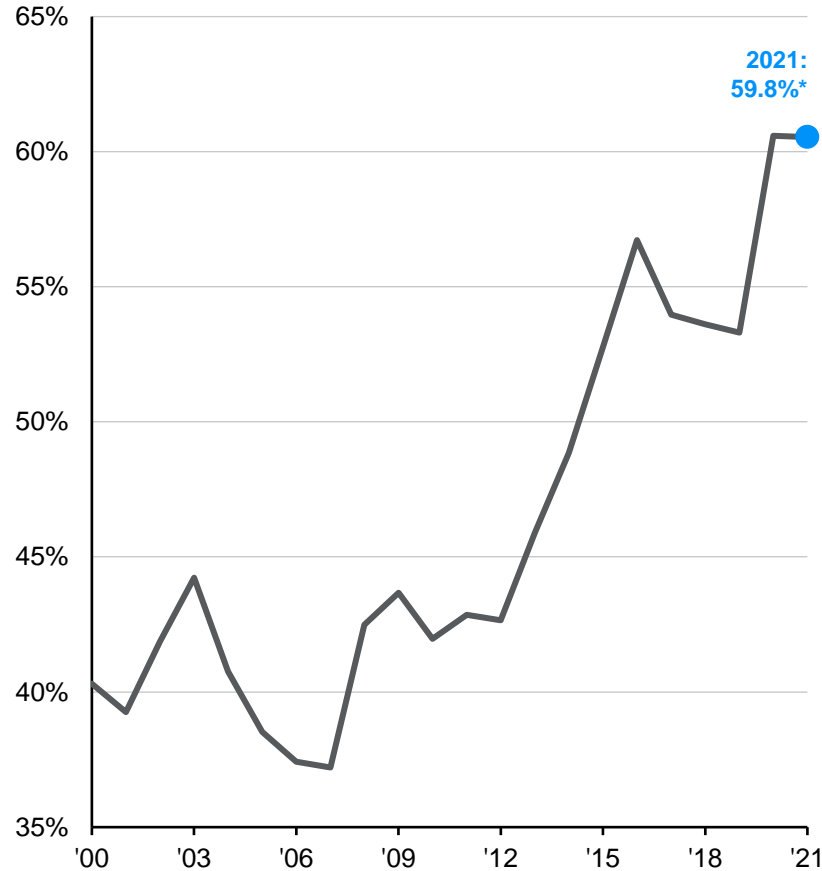
Source: J.P. Morgan Asset Management; (Left) INEGI-Central Bank of Mexico; (Top right) Central Bank of Mexico; (Bottom right) INEGI (National Institute of Statistics and Geography of Mexico).
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Mexico: Fiscal dynamics

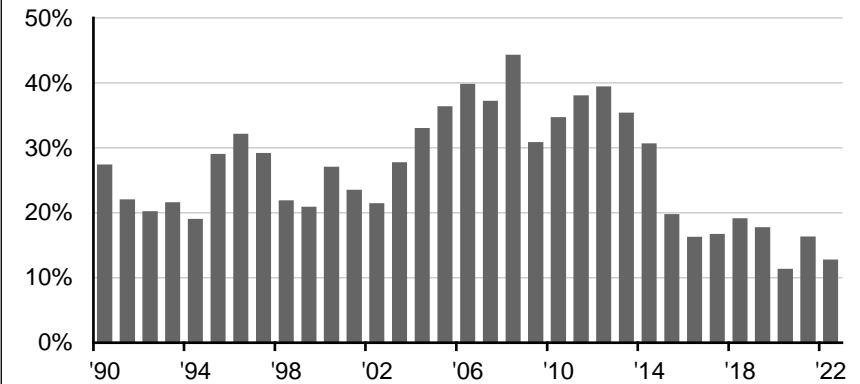
Gross debt

% of GDP



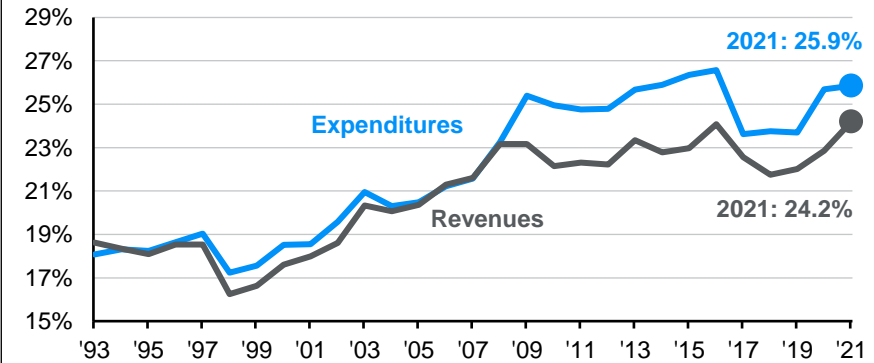
Government oil revenues

% of total government revenues



Public sector revenues and expenditures

% of GDP, annual



Source: J.P. Morgan Asset Management; (Left) IMF; (Top right) Ministry of Finance and Public Credit; (Bottom right) Central Bank of Mexico, INEGI.

*2021 is an IMF estimate.

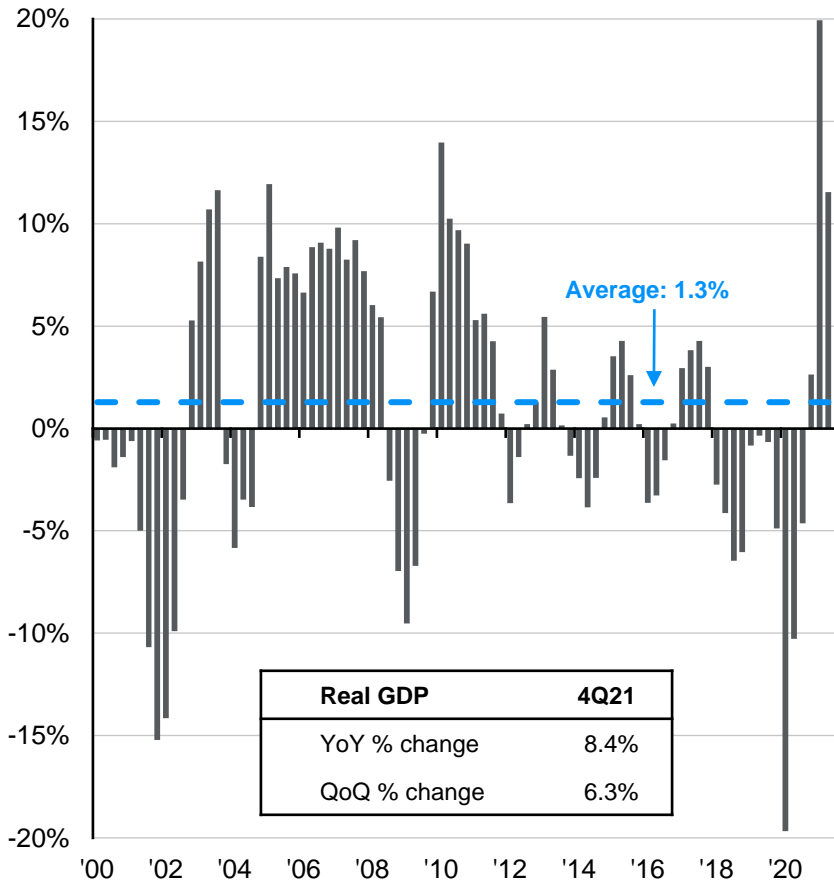
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Argentina: Economic snapshot

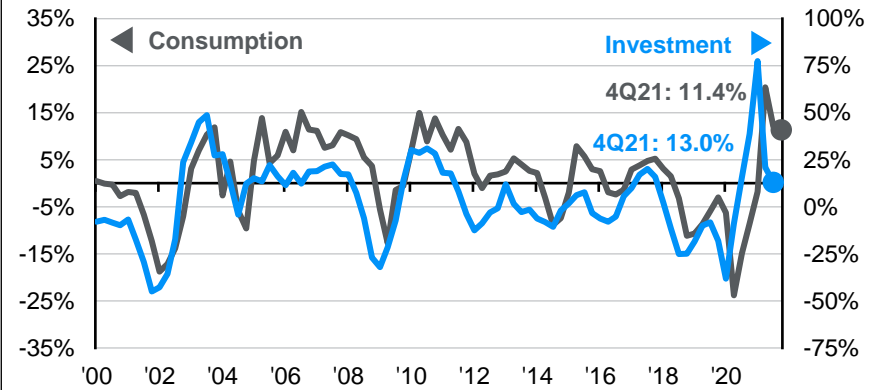
Real GDP

Year-over-year % change



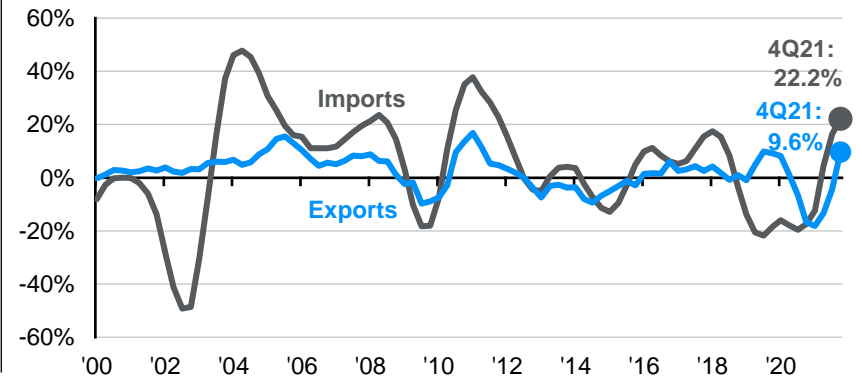
Real consumption and investment

Year-over-year % change



International trade

Year-over-year % change, 4-quarter moving average



Source: Economic Ministry, J.P. Morgan Asset Management. Guide to the Markets – Latin America. Data are as of March 31, 2022.

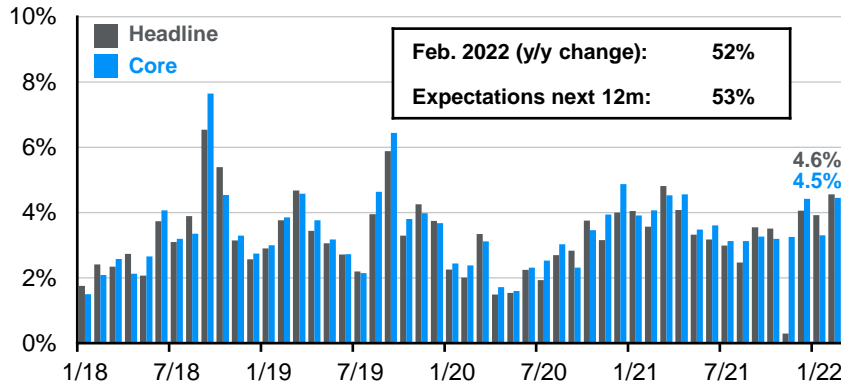


Argentina: Inflation, monetary and fiscal policy

LATAM Economy

Inflation

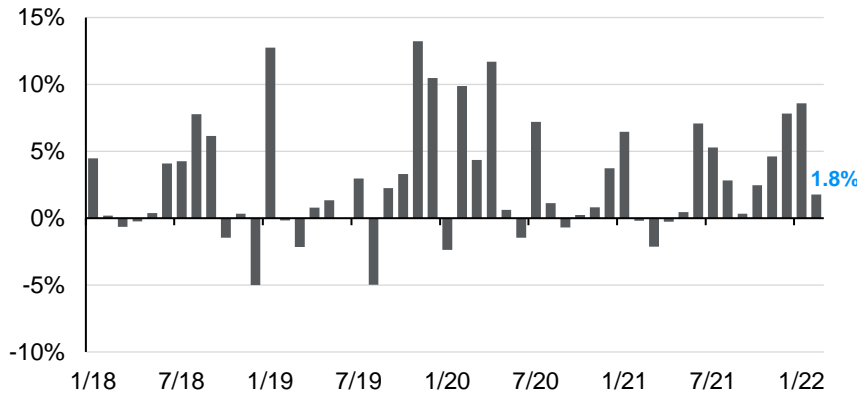
% change month-over-month, national IPC



Feb. 2022 (y/y change): 52%
 Expectations next 12m: 53%

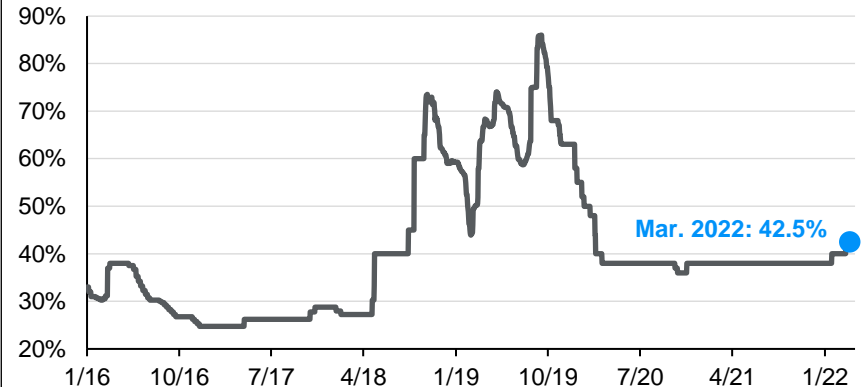
Monetary base

% change month-over-month



Monetary policy rate

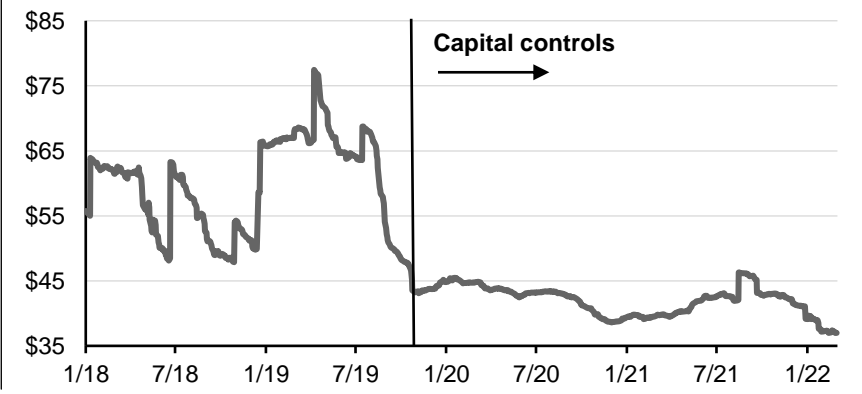
Price per annum



Mar. 2022: 42.5%

International reserves

Billions, USD



Capital controls

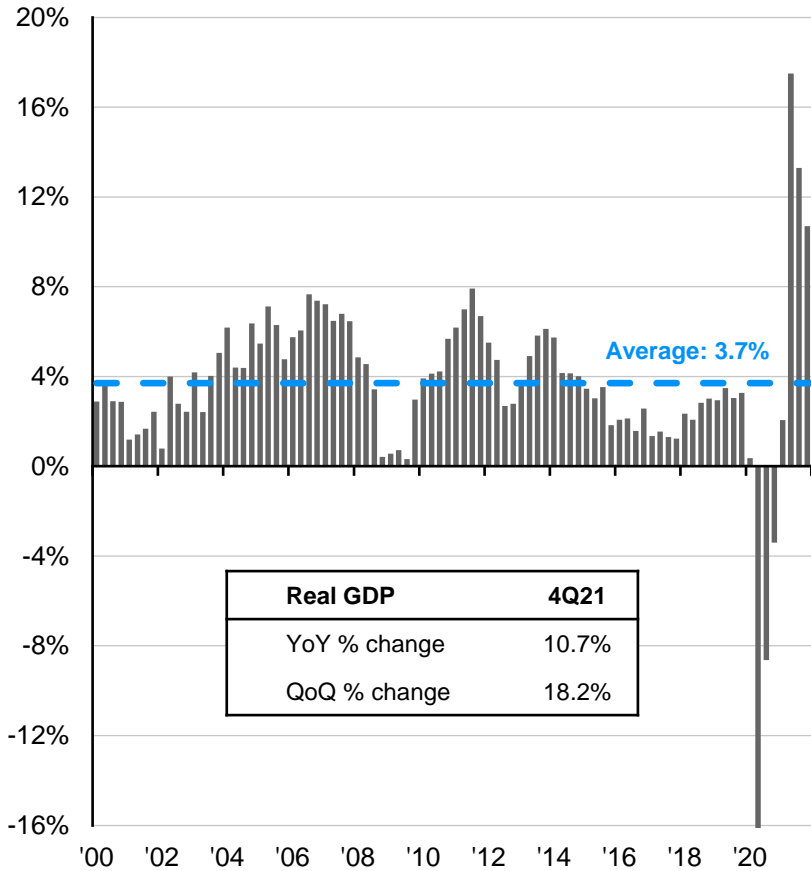
Source: Central Bank of Argentina, INDEC (National Institute of Statistics and Census of Argentina), J.P. Morgan Asset Management. Guide to the Markets – Latin America. Data are as of March 31, 2022.



Colombia: Economic snapshot

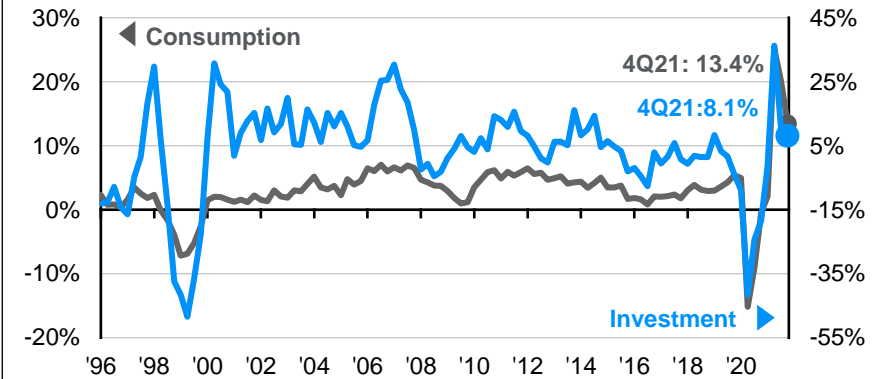
Real GDP

Year-over-year % change



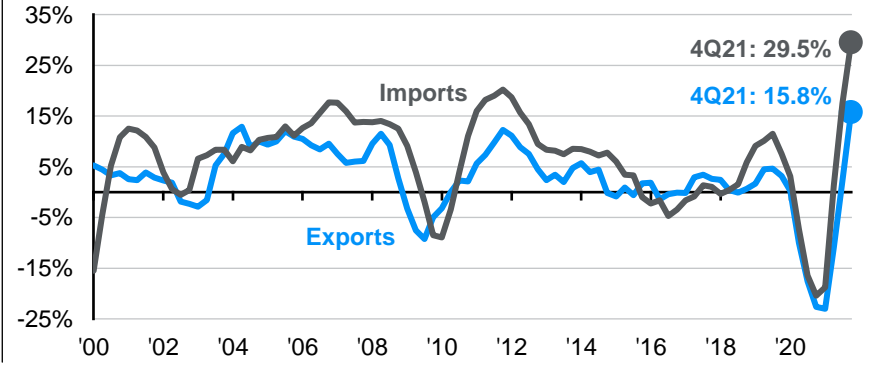
Real consumption and investment

Year-over-year % change



International trade

Year-over-year % change, 4-quarter moving average



Source: DANE (National Administration of Statistics), J.P. Morgan Asset Management. Guide to the Markets – Latin America. Data are as of March 31, 2022.

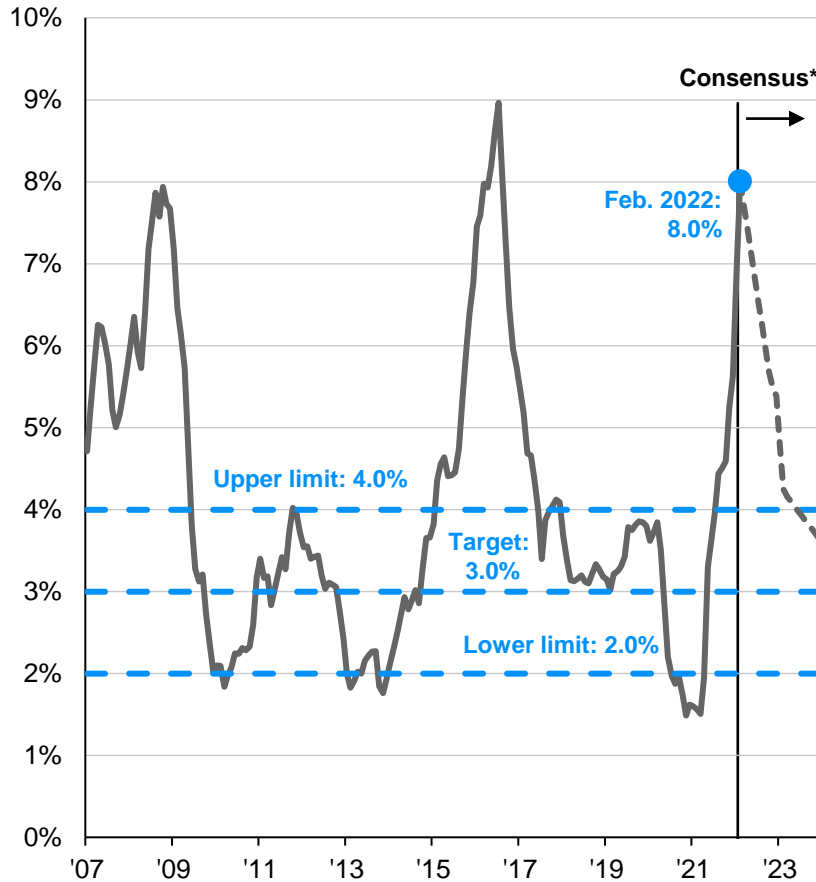


Colombia: Inflation and monetary policy

LATAM Economy

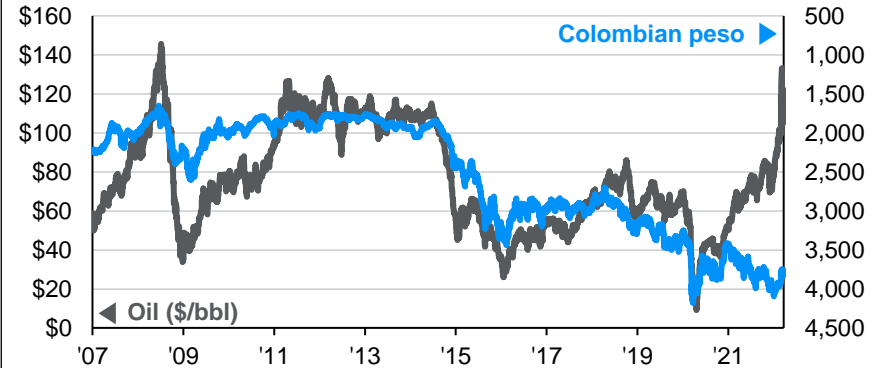
Inflation targeting and inflation

Headline inflation, 12-month accumulated % change



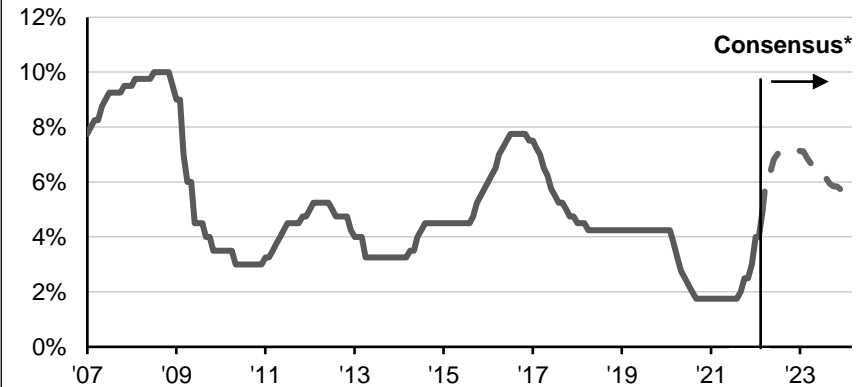
Oil prices and the Colombian peso

COP per USD (inverted); Brent US\$ per barrel



Target policy rates and expectations

BanRep, repo rate, end of period, % per annum



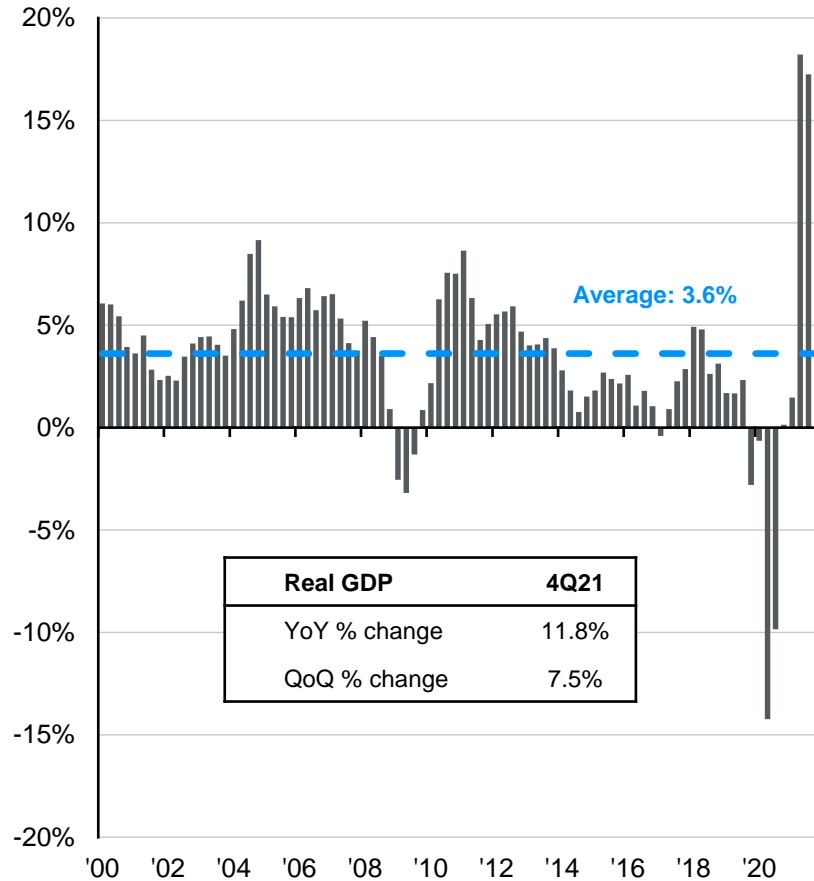
Source: J.P. Morgan Asset Management; (Left and bottom right) Central Bank of Colombia, DANE (National Administration of Statistics); (Top right) Commodity Research Bureau, FactSet, Reuters. *Survey conducted by the Central Bank of Colombia. Guide to the Markets – Latin America. Data are as of March 31, 2022.



Chile: Economic snapshot

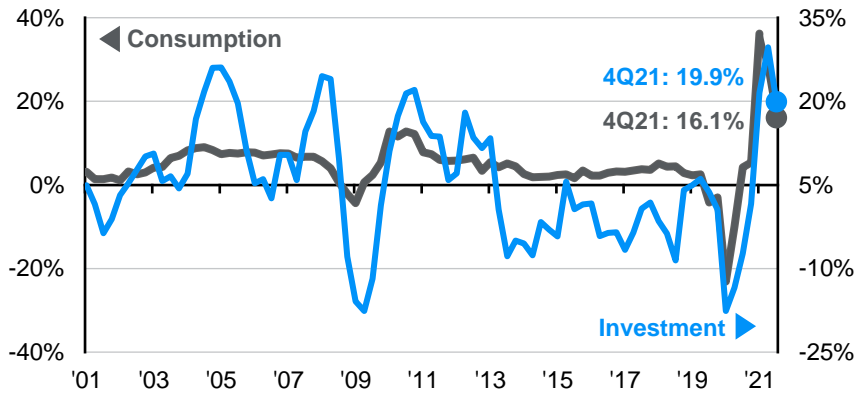
Real GDP

Year-over-year % change



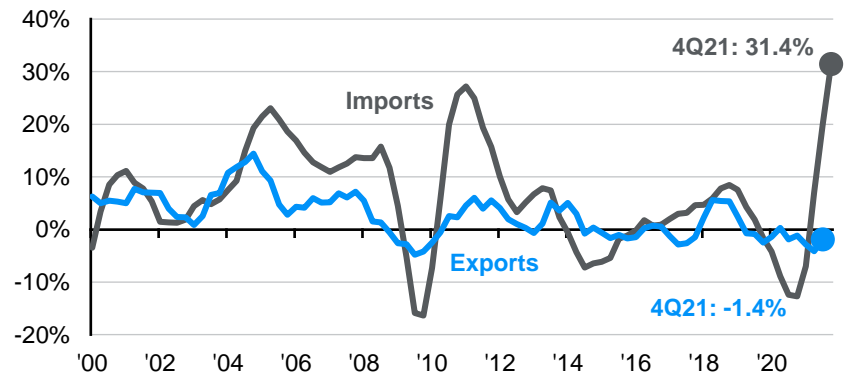
Real consumption and investment

Year-over-year % change



International trade

Year-over-year % change, 4-quarter moving average



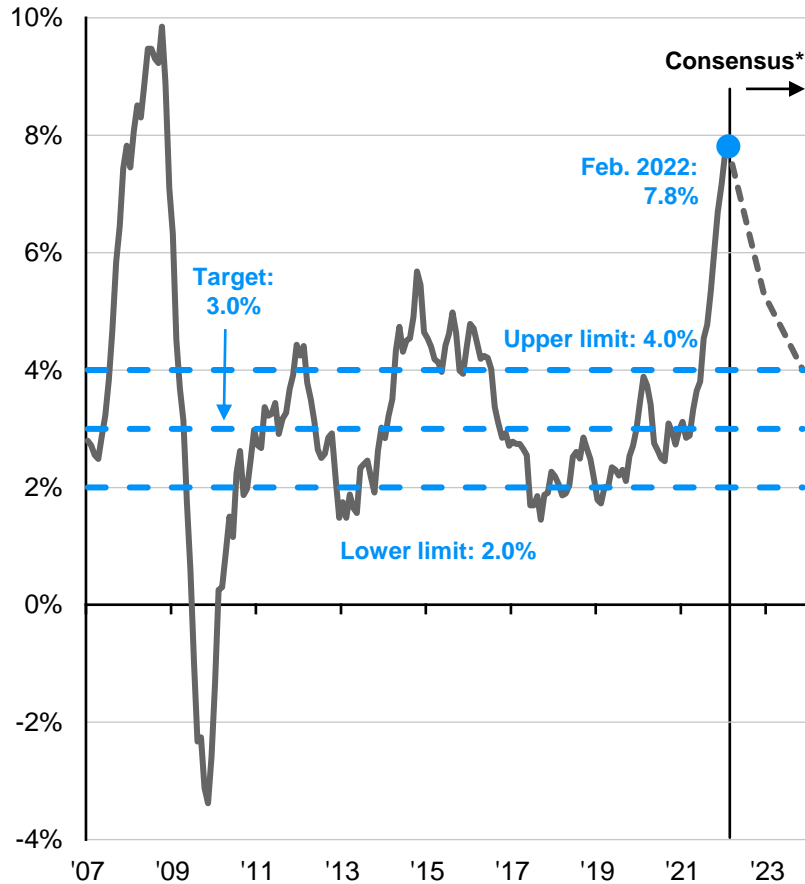
Source: Central Bank of Chile, J.P. Morgan Asset Management. Guide to the Markets – Latin America. Data are as of March 31, 2022.



Chile: Inflation and monetary policy

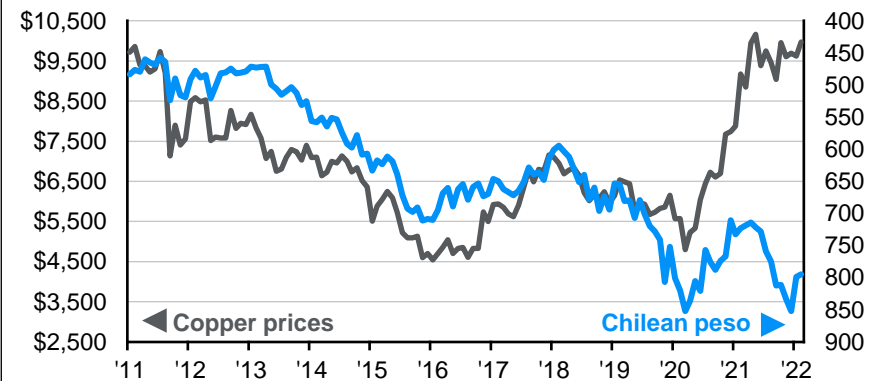
Inflation targeting and inflation

Headline inflation, 12-month accumulated % change



Copper prices and the Chilean peso

CLP per USD (inverted); \$/mt



Target policy rates and expectations

Central Bank of Chile rate, end of period, % per annum



Source: J.P. Morgan Asset Management; (Left) INE (National Statistics Institute of Chile); (Top right) INE, Reuters; (Bottom right) Central Bank of Chile. *Survey conducted by the Central Bank of Chile. Guide to the Markets – Latin America. Data are as of March 31, 2022.

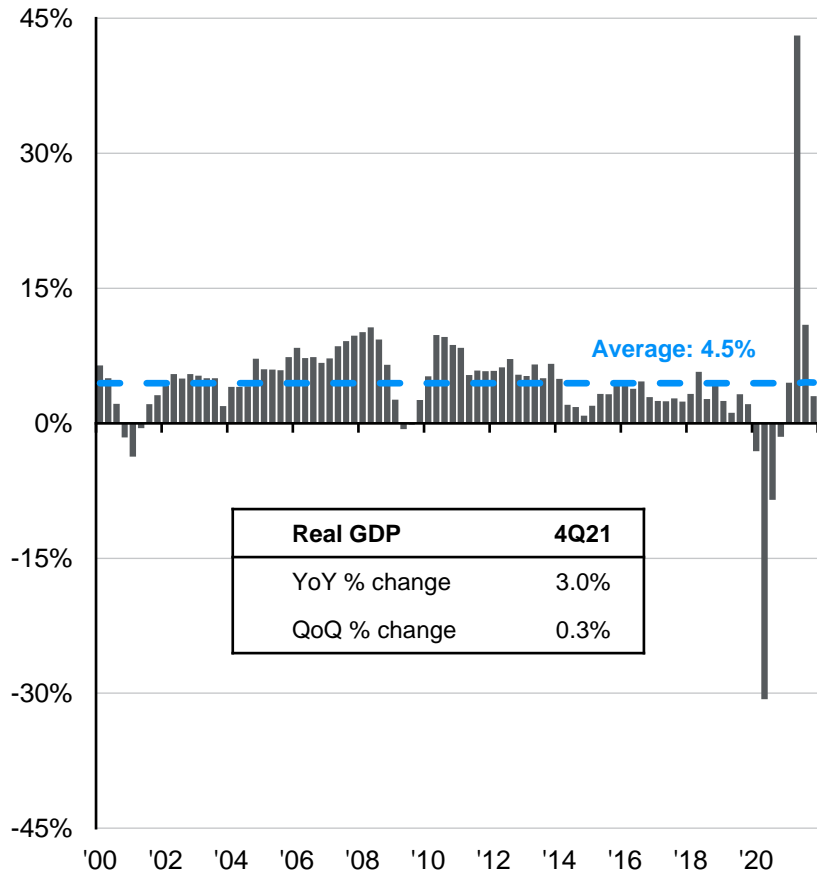


Peru: Economic snapshot

LATAM Economy

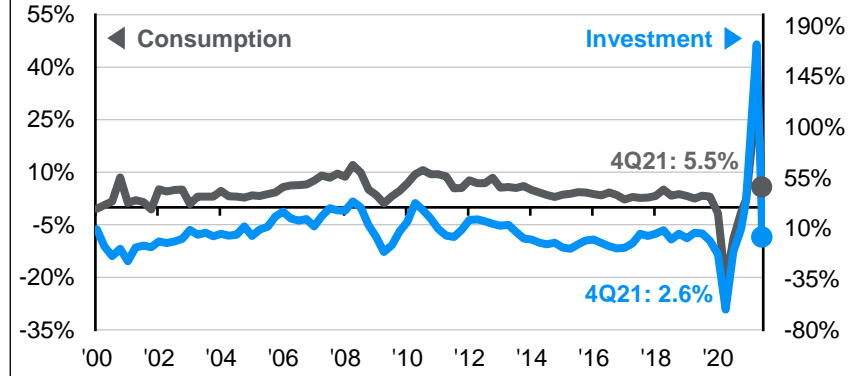
Real GDP

Average of 3 months, year-over-year % change



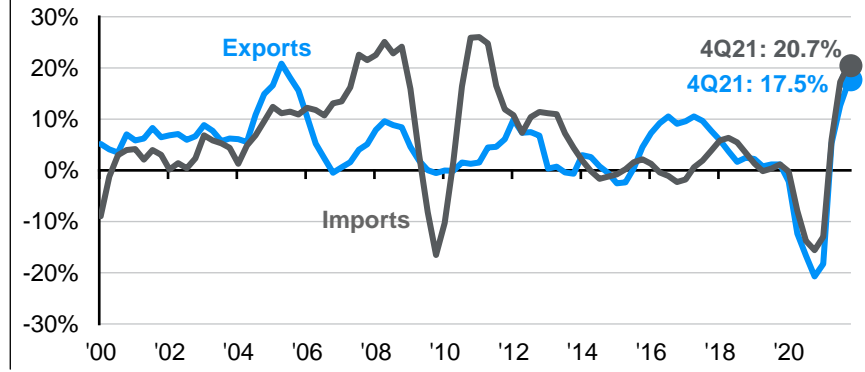
Real consumption and investment

Year-over-year % change



International trade

Year-over-year % change, 4-quarter moving average



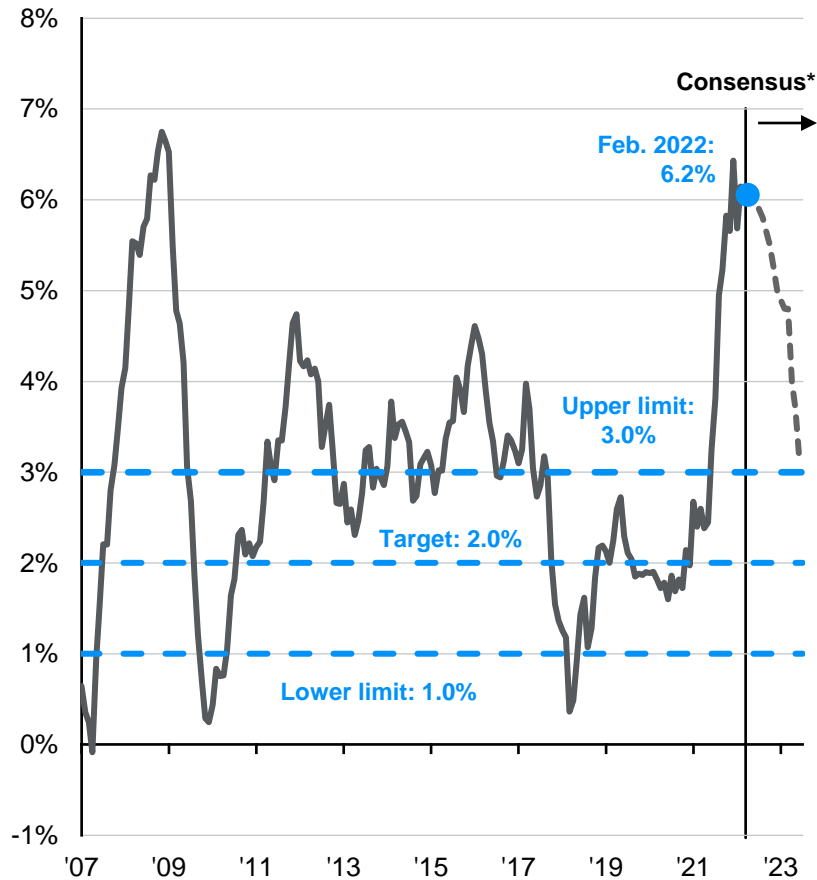
Source: Central Reserve Bank of Peru, INEI (National Statistics Institute of Peru), J.P. Morgan Asset Management. Guide to the Markets – Latin America. Data are as of March 31, 2022.



Peru: Inflation and monetary policy

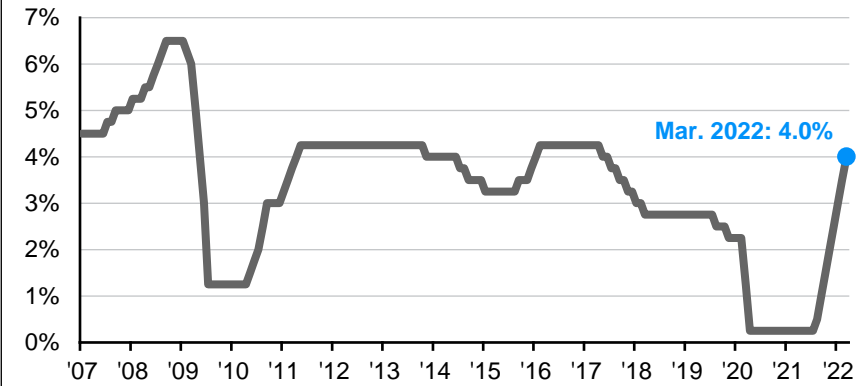
Inflation targeting and inflation

Headline inflation, Lima, year-over-year % change



Target policy rate and expectations

BCRP official reference rate, end of period, % per annum



Reserve requirements

Reserve requirements as % of total deposits



Source: J.P. Morgan Asset Management; (Left) INEI; (Top and bottom right) Central Reserve Bank of Peru.

*Survey conducted by the Central Bank of Peru.

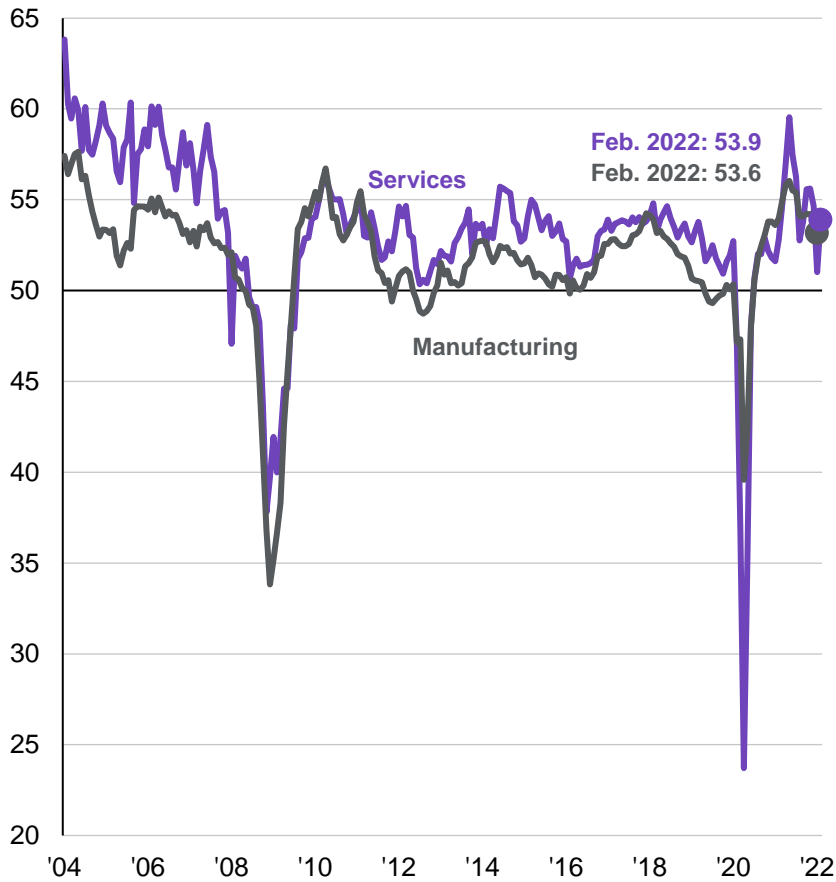
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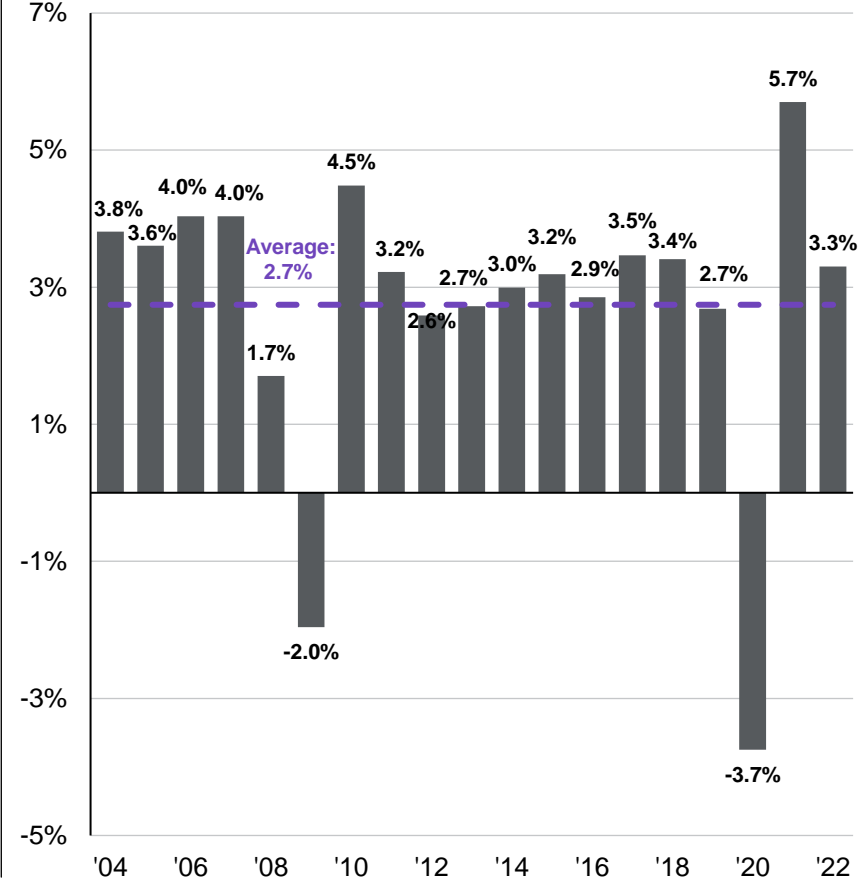
Global economic growth

Global Economy

Global PMI for manufacturing and services Monthly



Global real GDP growth % change, year-over-year



Source: J.P. Morgan Asset Management; (Left) Markit; (Right) J.P. Morgan Global Economic Research. PMI is the Purchasing Managers' Index. Global GDP growth is a GDP-weighted measure of real GDP at U.S. dollar market exchange rates. 2022 growth rates is a forecast. 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 – Latin America*. Data are as of March 31, 2022.

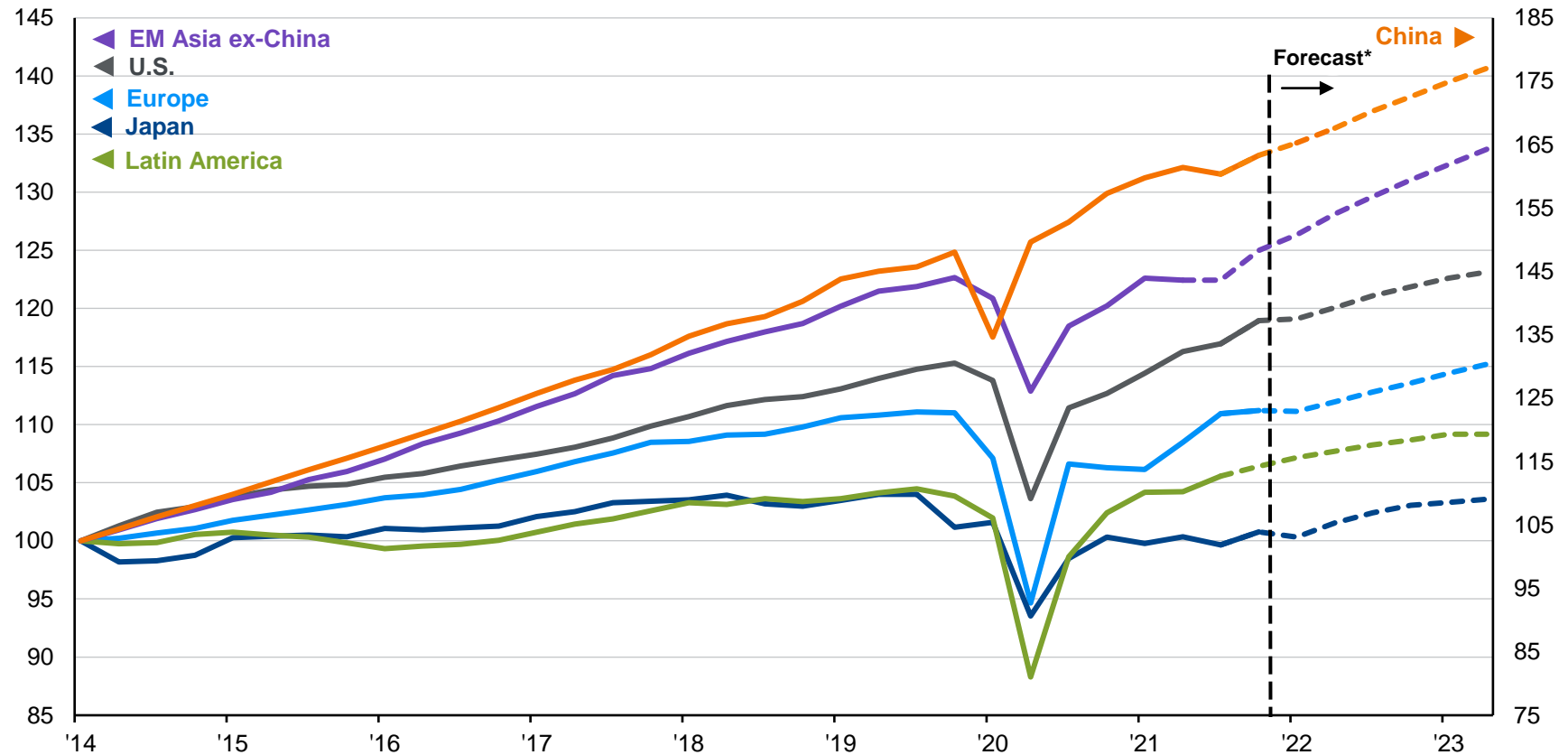


Regional economic growth

Global Economy

Real GDP growth

1Q14=100



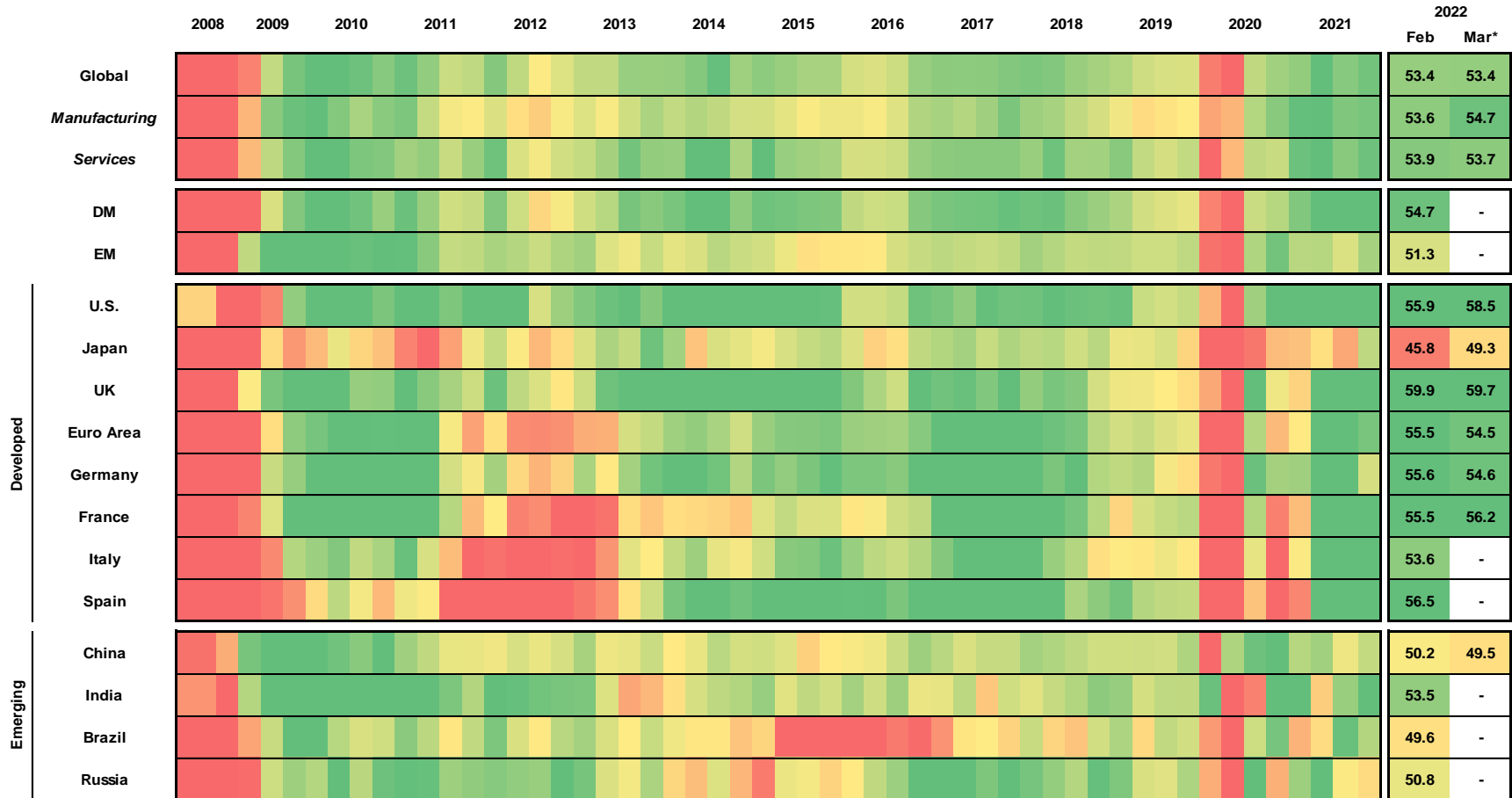
Source: Cabinet Office Economic and Social Research Institute (ESRI), Eurostat, J.P. Morgan Global Economic Research, National Bureau of Statistics of China, U.S. Bureau of Economic Analysis, J.P. Morgan Asset Management. *Forecasts begin in 1Q22 for U.S., China, Europe and Japan and 4Q21 for Latin America and 3Q21 for EM Asia ex-China
 Guide to the Markets – Latin America. Data are as of March 31, 2022.



Global economic activity momentum

Global Economy

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



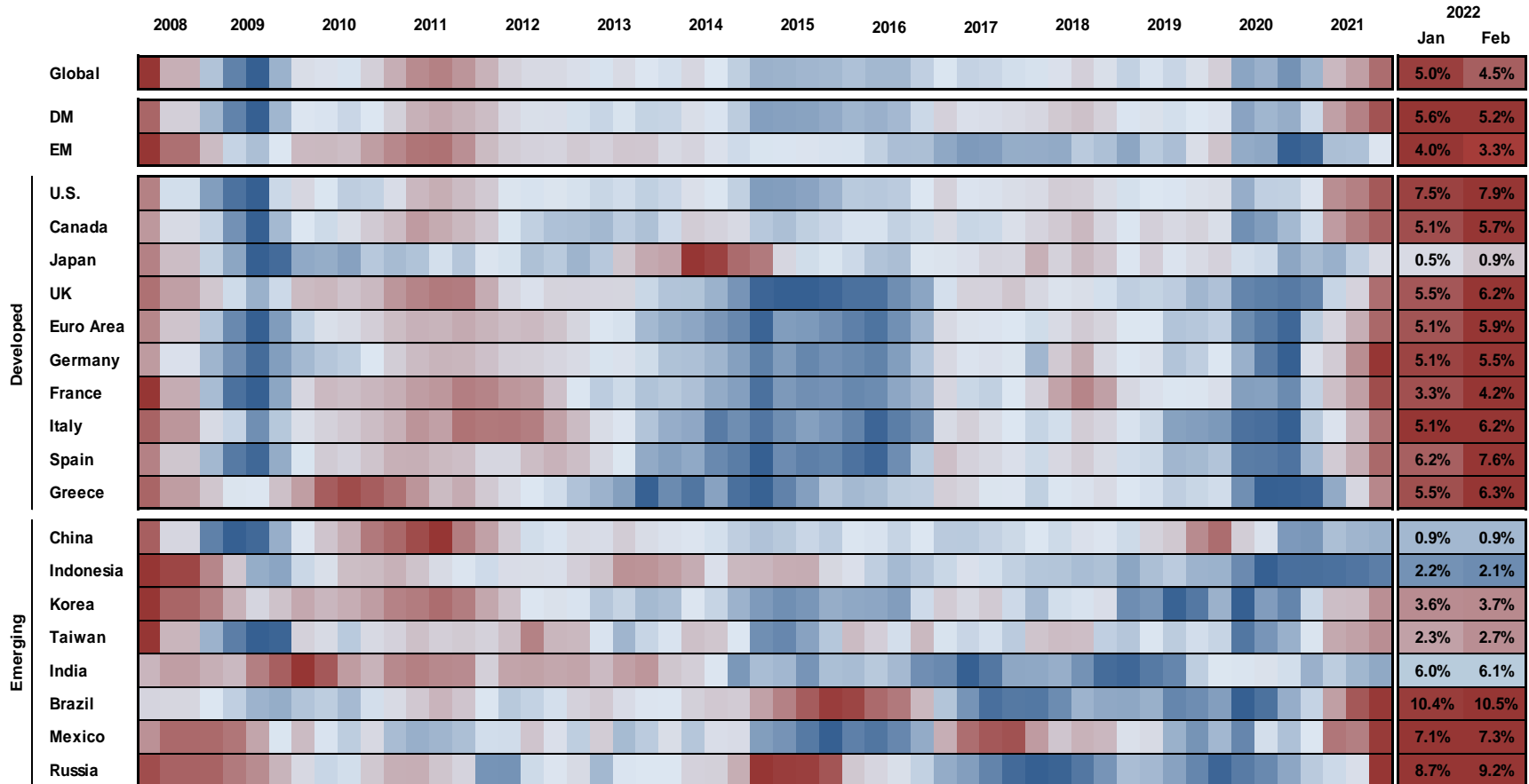
Source: Markit, J.P. Morgan Asset Management.
 The Composite PMI includes both manufacturing and services sub-indices. Heatmap colors are based on PMI relative to the 50 level, which indicates acceleration or deceleration of the sector, for the time period shown. Heatmap is based on quarterly averages, with the exception of the two most recent figures, which are single month readings. Data for the U.S. are back-tested and filled in from December 2007 to September 2009 due to lack of existing PMI figures. DM and EM represent developed markets and emerging markets, respectively. *March Global, Manufacturing, and Services PMIs are based on estimates from J.P. Morgan Asset Management.
Guide to the Markets – Latin America. Data are as of March 31, 2022.



Global inflation

Global Economy

Year-over-year headline inflation by country and region, quarterly



Source: Bank of Mexico, DGBAS, Eurostat, FactSet, Federal Reserve, Goskomstat of Russia, IBGE, India Ministry of Statistics & Programme Implementation, Japan Ministry of Internal Affairs & Communications, Korean National Statistical Office, Melbourne Institute, National Bureau of Statistics China, Statistics Canada, Statistics Indonesia, UK Office for National Statistics (ONS), J.P. Morgan Asset Management. Heatmap is based on quarterly averages, with the exception of the two most recent figures, which are single month readings. Colors determined by percentiles of inflation values over the time period shown. Deep blue = lowest value, light blue = median, deep red = highest value. DM and EM represent developed markets and emerging markets, respectively.

Guide to the Markets – Latin America. Data are as of March 31, 2022.



Global supply chain pressures

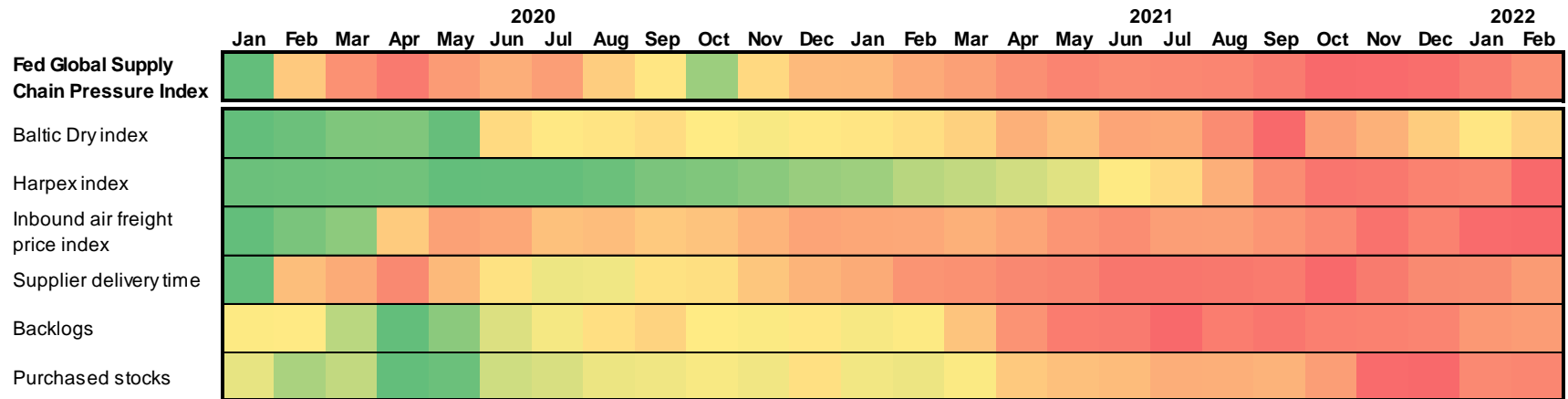
Global Economy

Fed Global Supply Chain Pressure Index*

Standard deviation from average value



Fed Global Supply Chain Pressure Index subcomponents



Source: Federal Reserve Bank of New York, IHS Markit, J.P. Morgan Asset Management.

*The Federal Reserve Bank of New York bases its Global Supply Chain Pressure Index on the Baltic Dry Index (benchmark for the price of moving raw materials by sea), Harpex Index (benchmark for the rate liners pay to charter ships), BLS airfreight cost indices (benchmarks for measuring change in rates for air transportation) and 3 PMI supply chain-related components: delivery times (the amount of time elapsed between the time an order is placed and the time it is shipped), backlogs (the volume of orders that a company has received, but not yet fulfilled) and purchased stocks (the level of inventory of materials purchased in the current month compared to the month prior) for manufacturing firms across seven interconnected economies: China, the euro area, Japan, South Korea, Taiwan, the United Kingdom and the United States. Heatmap colors determined by that month's level compared to 10-year average. Red = Very slow/constrained, Yellow = Average/moderate, and Green = Fast/least constrained. Guide to the Markets - Latin America. Data are as of March 31, 2022.

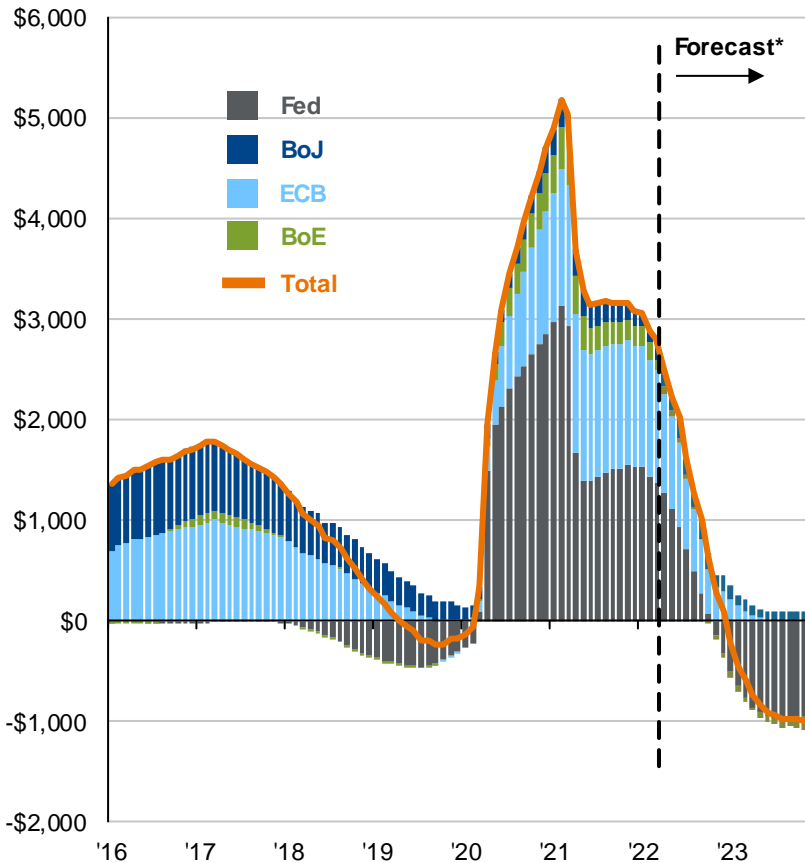


Global monetary policy

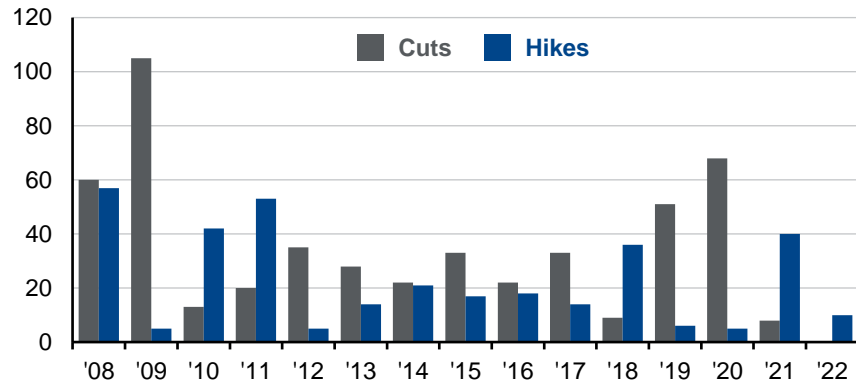
Global Economy

Developed market central bank bond purchases

USD billions, 12-month rolling flow

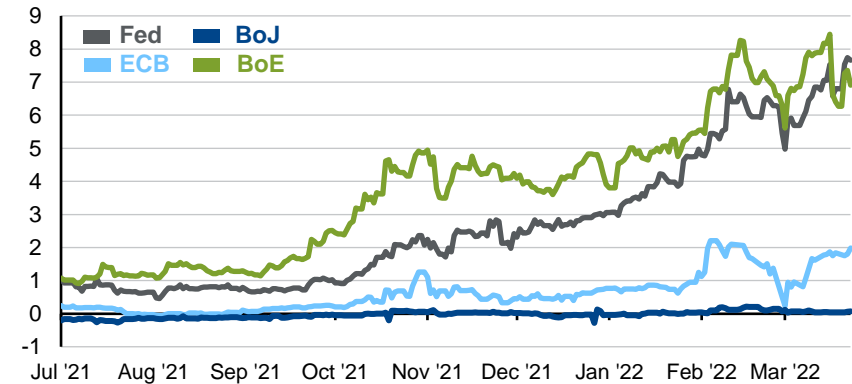


Number of rate changes by EM and DM central banks***



Market pricing for central bank hikes in 2022

Number of 25bp hikes priced into OIS contracts for year-end 2022**



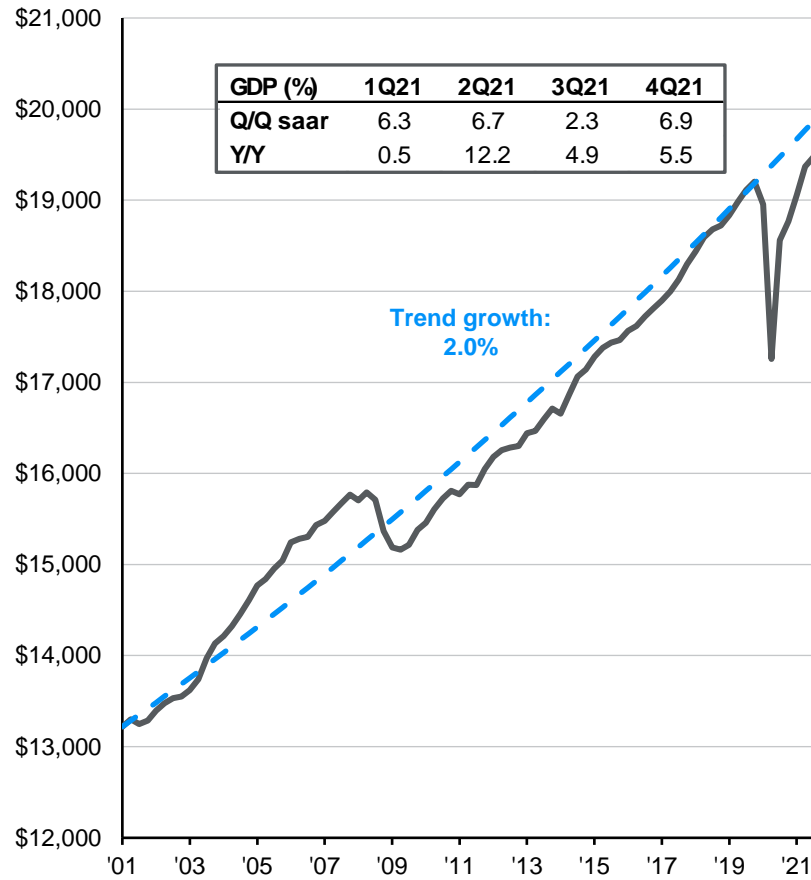
Source: BIS, Bloomberg, FactSet, J.P. Morgan Asset Management; (Left) Bank of England (BoE), Bank of Japan (BoJ), European Central Bank (ECB), Federal Reserve System (Fed), J.P. Morgan Global Economic Research. *DM bond purchase forecasts are internal assumptions based on government bond purchases as outlined in the most recent monetary policy announcements from the BoE, BoJ, ECB, and Federal Reserve through December 2023. **Rate hikes shown are cumulative and reflect hikes delivered year-to-date. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and are not a reliable indicator of future performance. Given the inherent uncertainties and risks associated with forecast, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



U.S.: Economic growth and the composition of GDP

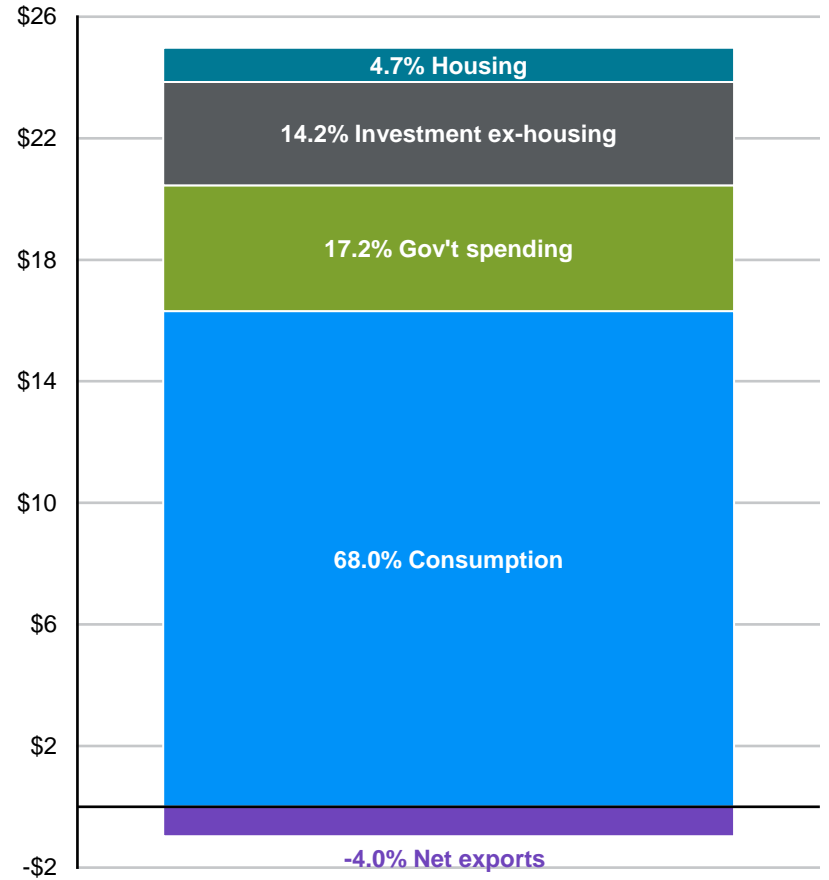
Real GDP

Billions of chained (2012) USD, seasonally adjusted at annual rates



Components of GDP

4Q21 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 – Latin America. Data are as of March 31, 2022.

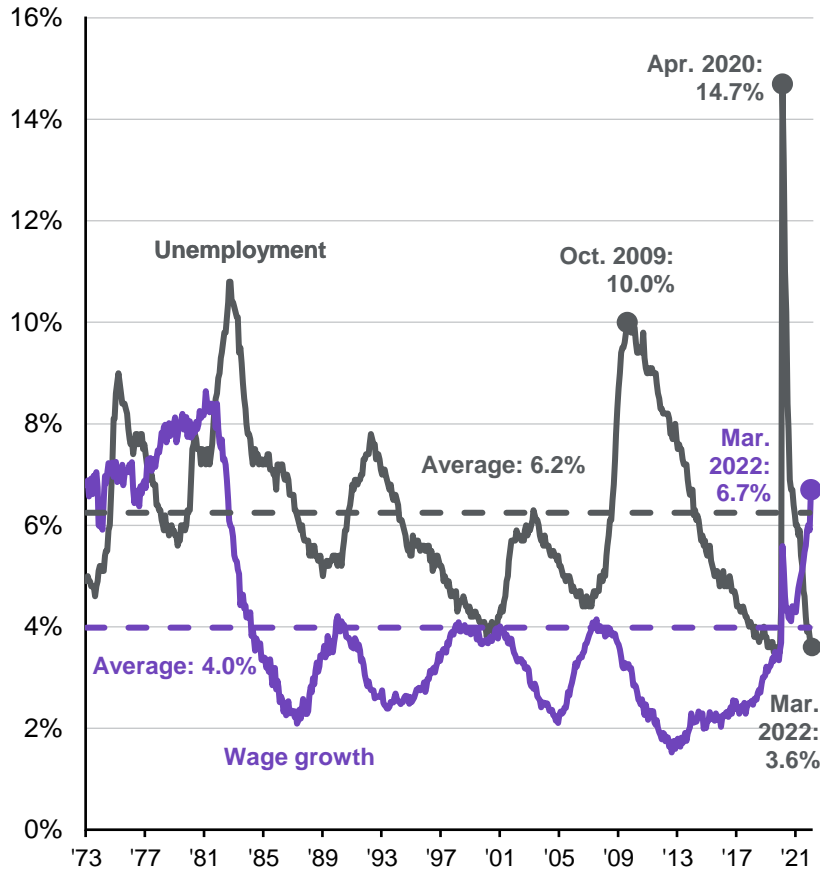


U.S.: Inflation and unemployment

Global Economy

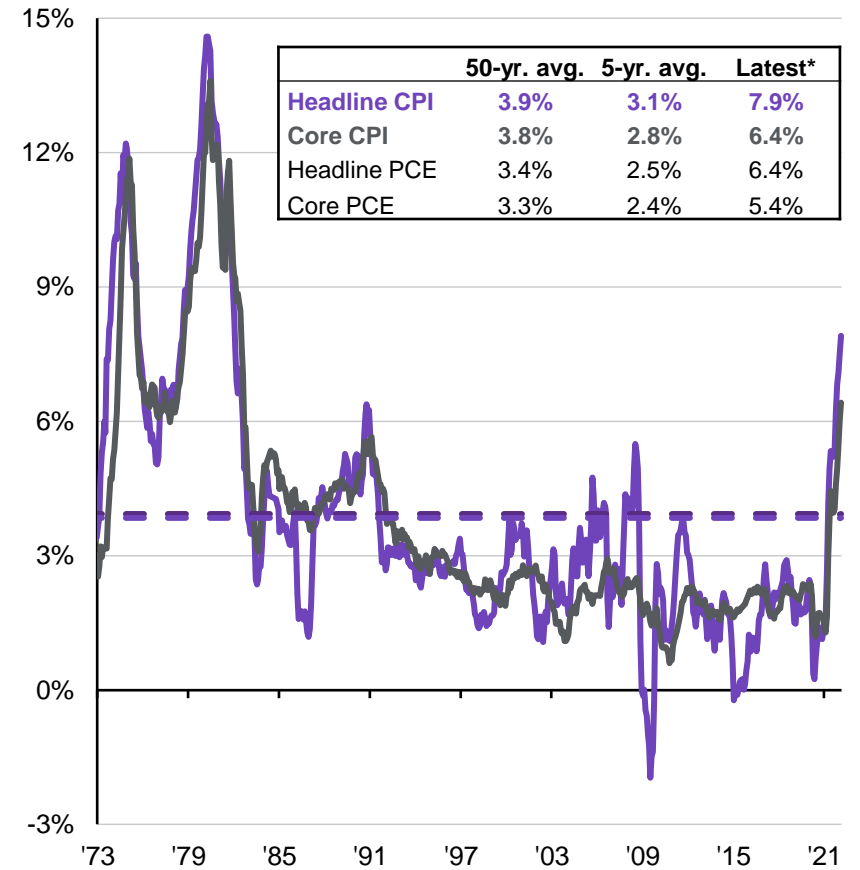
Civilian unemployment rate and annualized y/2y growth

Seasonally adjusted, percent



CPI and core CPI

% change vs. prior year, seasonally adjusted



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

CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations.*Headline CPI, core CPI, headline PCE and core PCE are from February 2022.

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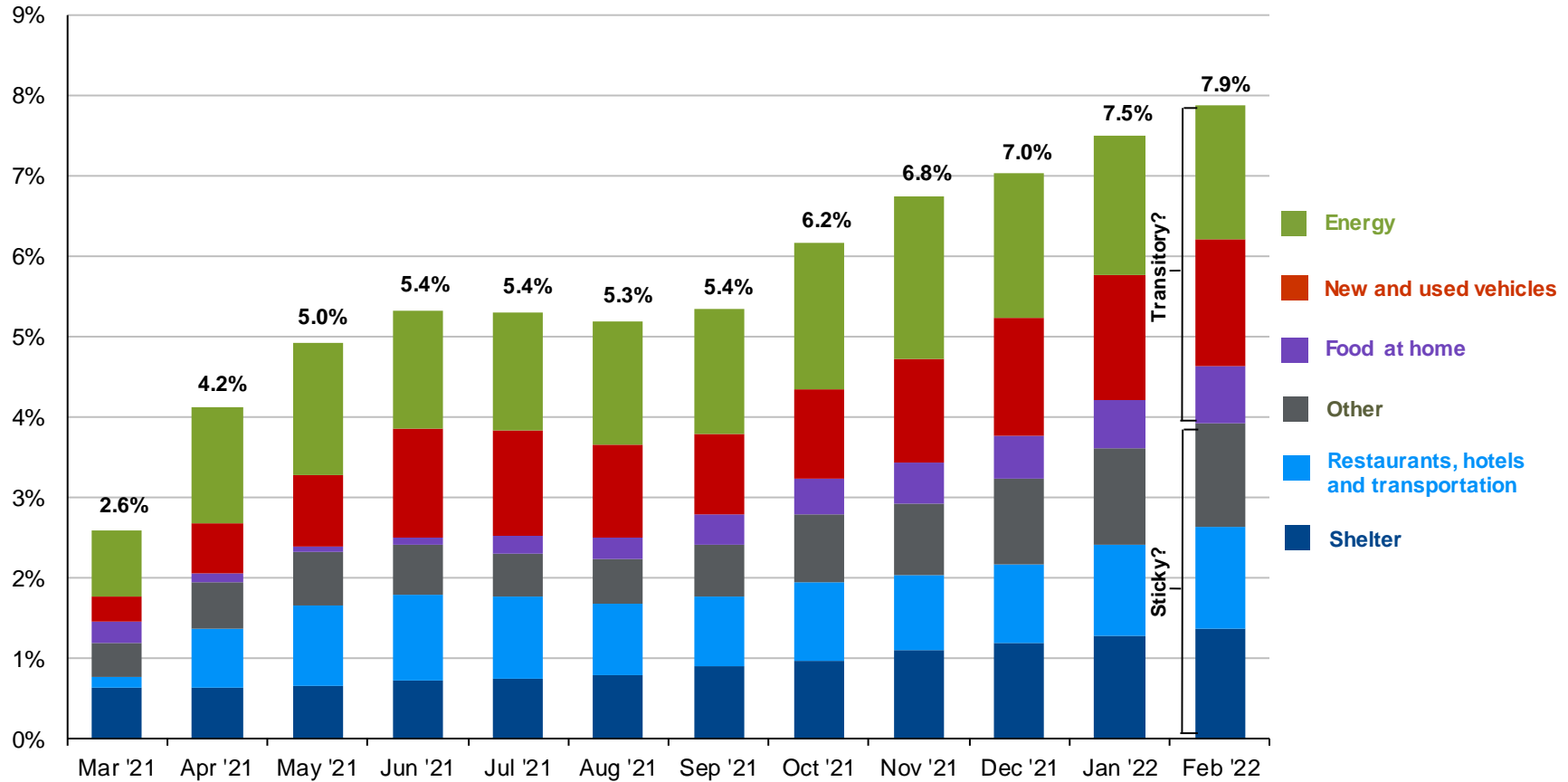


U.S.: Inflation components

Global Economy

Contributors to headline CPI

% change vs. prior year, seasonally adjusted



Source: BLS, J.P. Morgan Asset Management. Headline values reflect the seasonally adjusted year-over-year % change in CPI. Values may not sum to headline CPI figures due to rounding and underlying calculations. "Shelter" includes owners equivalent rent and rent of primary residence. "Other" primarily reflects household furnishings, apparel and medical care services. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



U.S.: Long-run inflation expectations

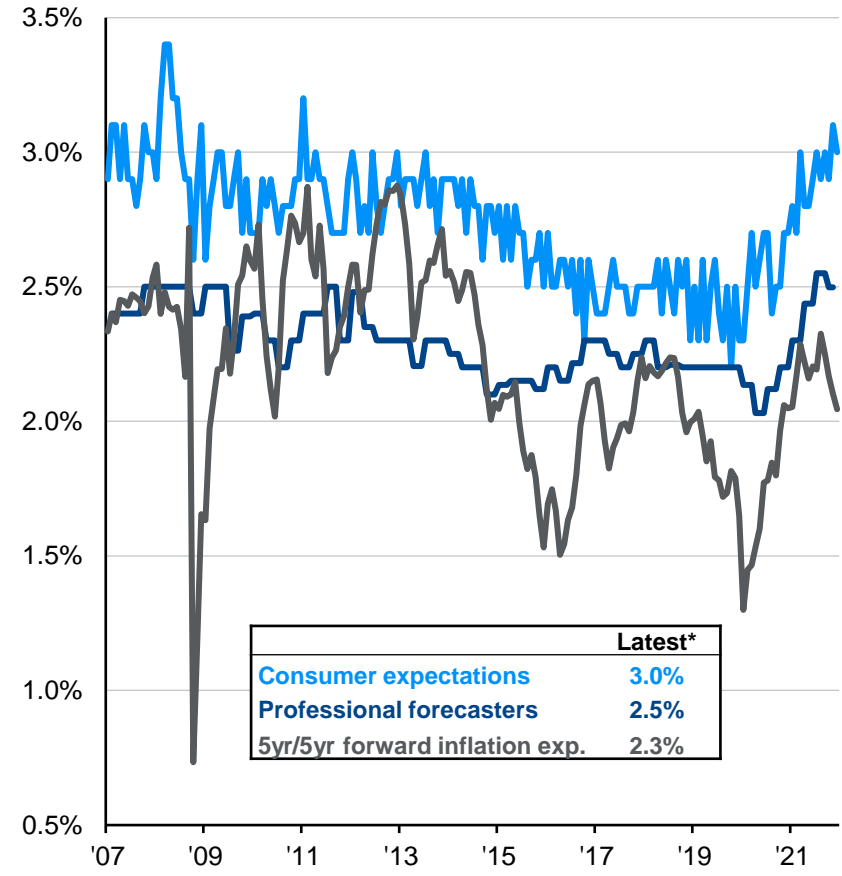
Index of common inflation expectations

% change vs. prior year, not seasonally adjusted



Inflation expectations, next 10 years

%, not seasonally adjusted



Source: Federal Reserve Bank of Philadelphia, Federal Reserve Bank of St. Louis, University of Michigan, Factset, J.P. Morgan Asset Management. The University of Michigan Survey of Consumer asks consumers, "By about what percent per year do you expect prices to go (up/down) on the average, during the next 5-10 years?". The Survey of Professional Forecasters is conducted by the Philadelphia Fed and reflects the median estimate by professional forecasters of average CPI inflation over the next 10 years. The 5-year, 5-year forward inflation expectation rate measures the expected inflation rate (on average) over the five-year period that begins five years from today. The Index of Common Inflation Expectations is constructed by the Fed using 21 inflation expectation indicators as an index to track broad changes in inflation expectations. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.

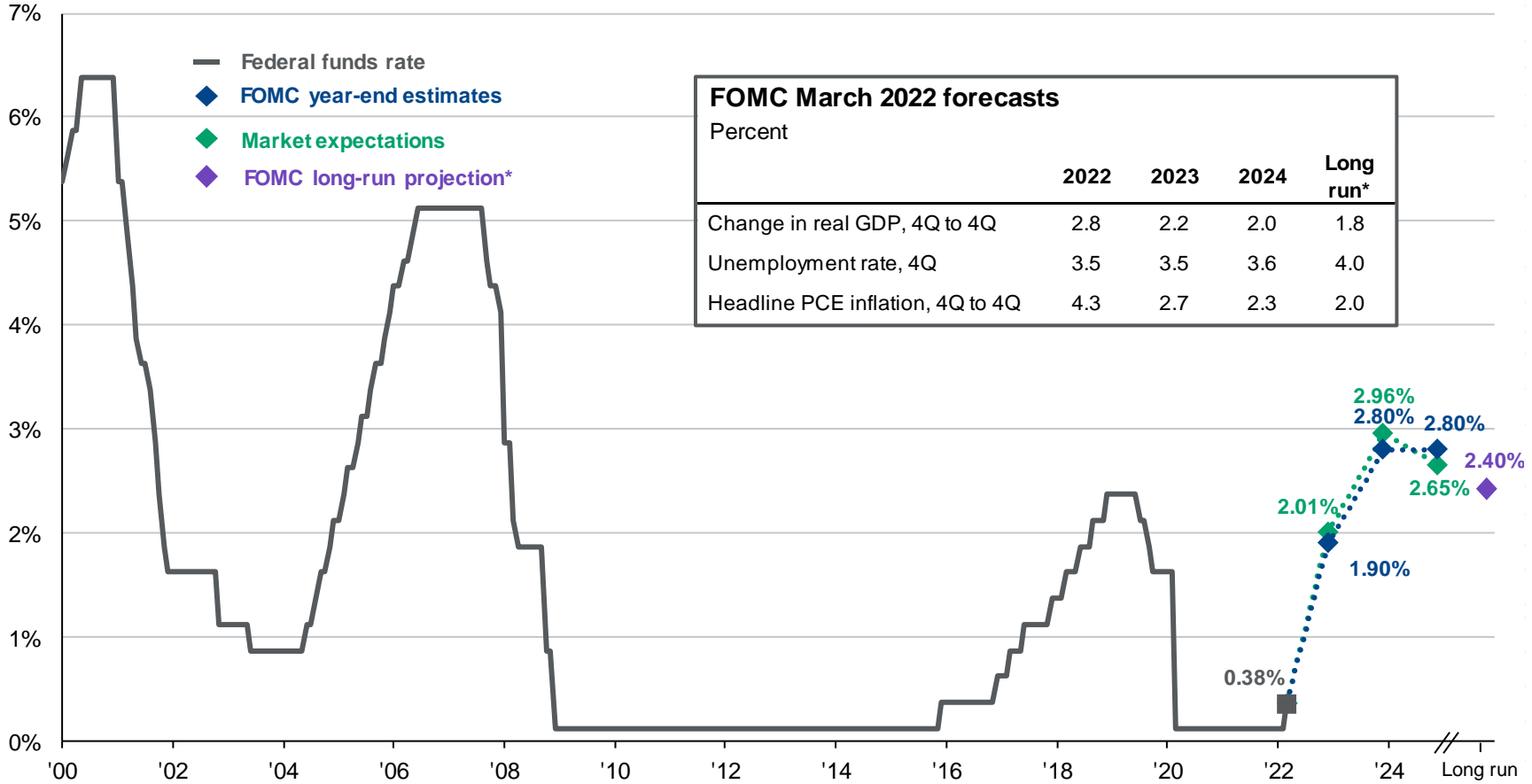


U.S.: The Fed and interest rates

Global Economy

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



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

Market expectations are based off of the USD Overnight Index Forward Swap rates. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. 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.

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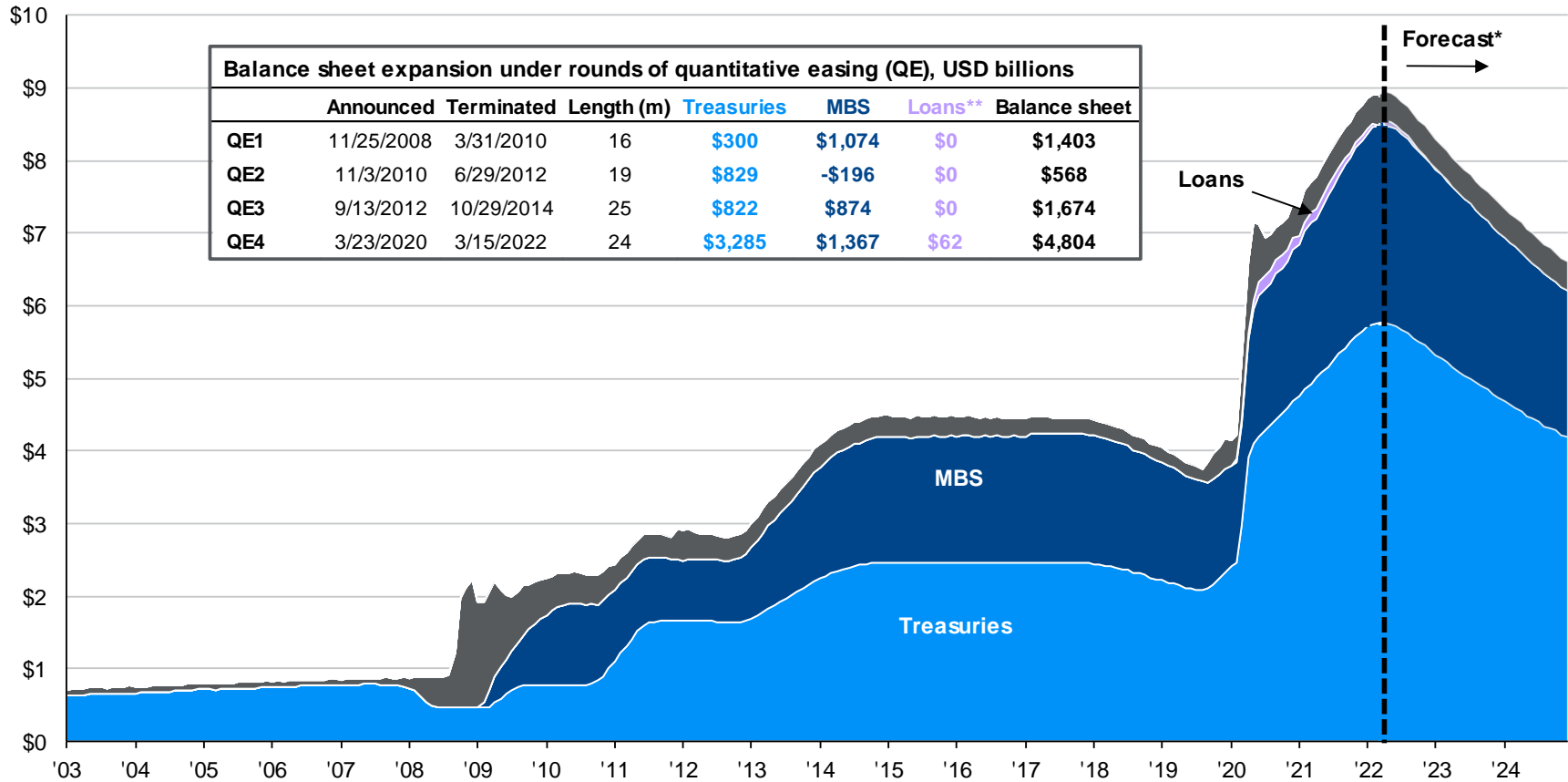


U.S.: The Federal Reserve balance sheet

Global Economy

The Federal Reserve balance sheet

USD trillions



Source: FactSet, Federal Reserve, J.P. Morgan Investment Bank, J.P. Morgan Asset Management.

At its peak, the balance sheet contained \$5.7tn in Treasuries and \$2.7tn in MBS. *The forecast assumes the Federal Reserve begins balance sheet runoff in mid-May and gradually increases the monthly cap on maturing Treasury and MBS securities per meeting until a max cap of \$100bn/month. The forecast does not include the active selling of securities from the committee. **Loans include liquidity and credit extended through corporate credit facilities established in March 2020. Other includes primary, secondary and seasonal loans, repurchase agreements, foreign currency reserves and maiden lane securities. 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.

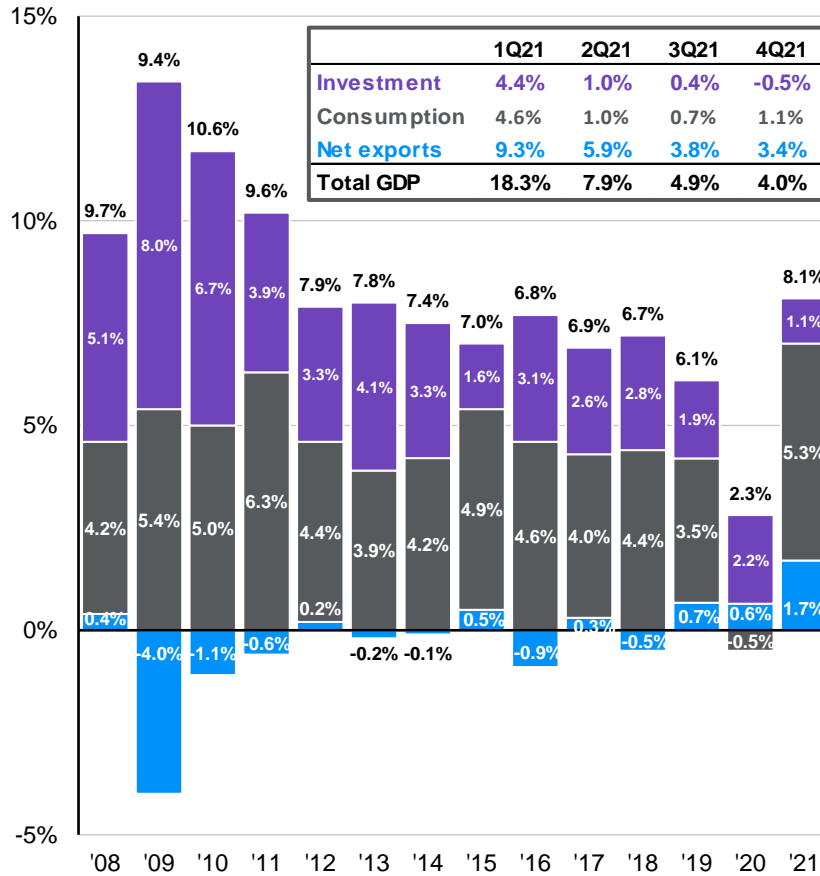
Guide to the Markets - Latin America. Data as of March 31, 2022.



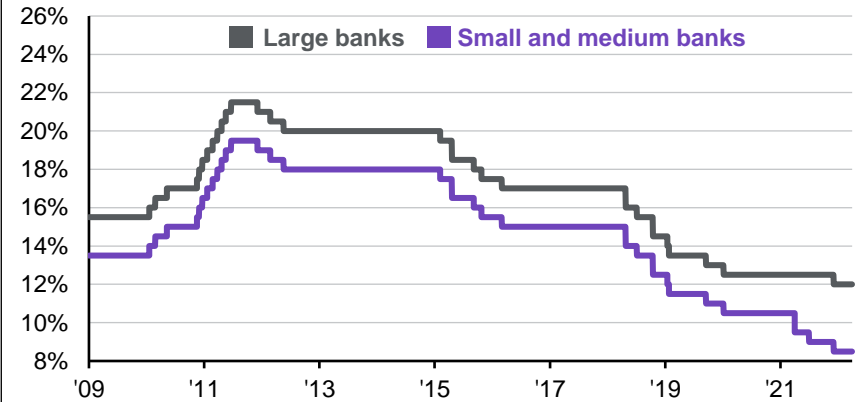
China: Economic growth

China real GDP contribution

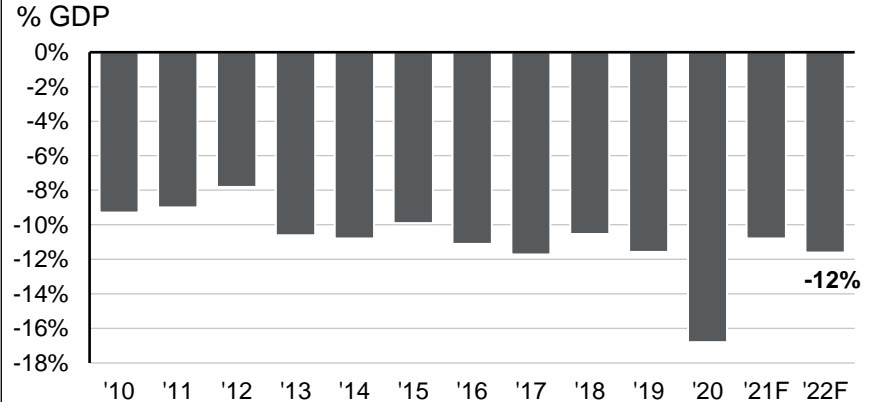
Year-over-year % change



Monetary stimulus: Reserve requirement ratio



Fiscal stimulus: Fiscal deficit*



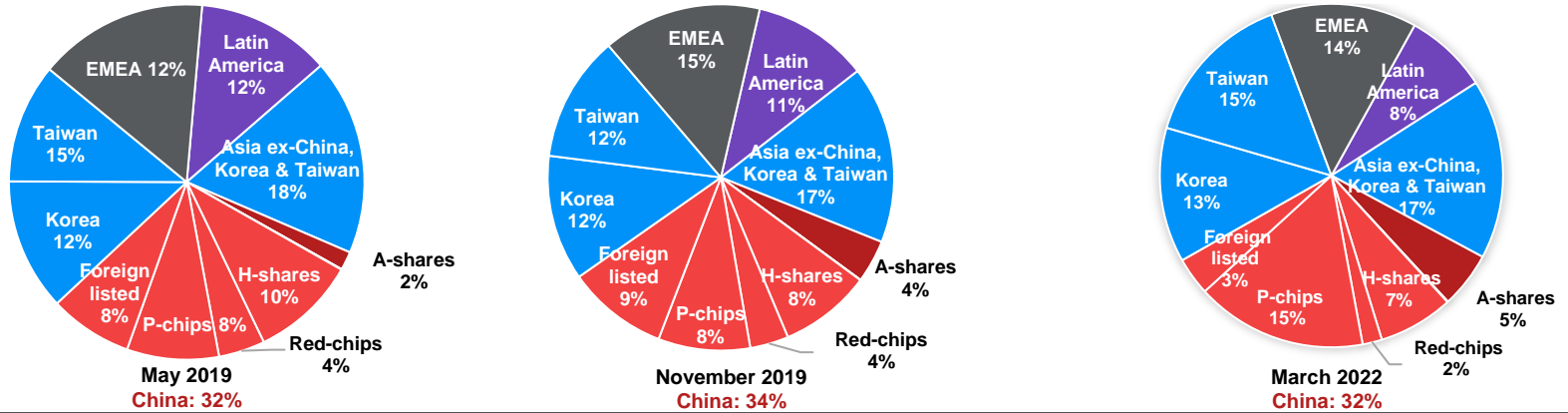
Source: FactSet, J.P. Morgan Asset Management; (Left) CEIC; (Top right) People's Bank of China; (Bottom right) China Agriculture Development Bank, China Development Bank, Ministry of Finance, People's Bank of China, Wind. *The fiscal deficit is a J.P. Morgan Global Economic Research estimate of the augmented fiscal deficit. It measures the aggregate resources controlled by the government and used to support economic growth. It consists of the official budgetary deficit of the central and local governments, and additional funding raised and spent by local governments through Local Government Financing Vehicles and various government-guided funds, whose activities are considered quasi-fiscal. Large banks are six major banks in China, including Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, China Construction Bank, Bank of Communications, Postal Savings Bank of China. The other banks are categorized as small and medium-sized banks. PBoC sets favorable required reserve ratio (RRR) for banks that have met specific criteria, such as loans to small and medium-sized enterprises and agricultural sectors. These measures have significantly brought down the actual RRR for banks. 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 statements, actual events, results or performance may differ materially from those reflected or contemplated.



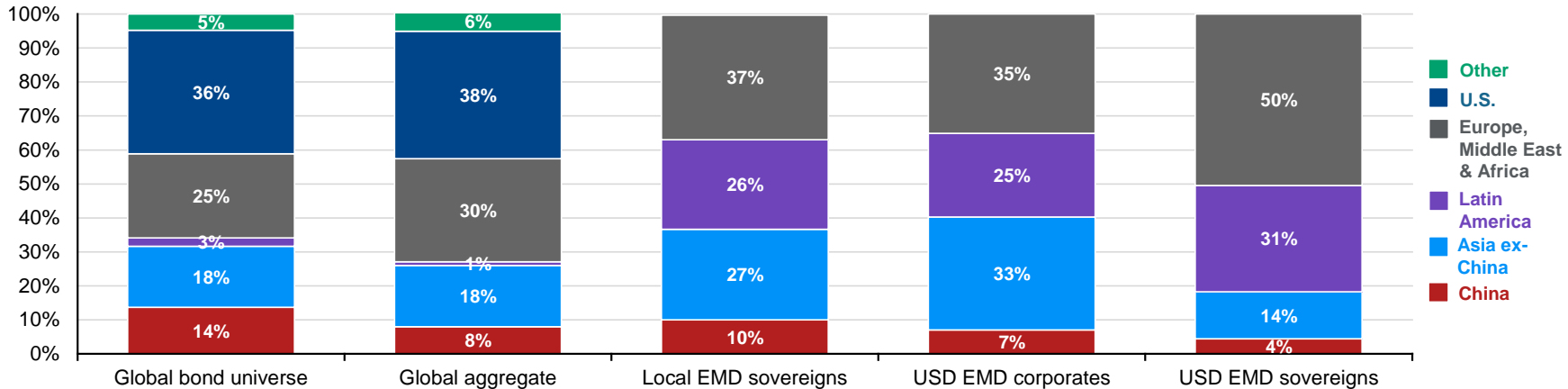
Chinese equity and fixed income markets

Global Economy

MSCI Emerging Markets Index: Inclusion of China A-shares



Weight of China in bond universe and bond indices



Source: Bloomberg, FactSet, J.P. Morgan Economic Research, MSCI, J.P. Morgan Asset Management, (Top) Foreign listed includes American Depository Receipts (ADRs); (Bottom) Based on J.P. Morgan CEMBI Broad Index (USD EMD corporates), J.P. Morgan EMBIG Broad Diversified Index (USD EMD sovereigns), J.P. Morgan GBI-EM Global Diversified Index (Local EMD sovereigns), Bloomberg Global Aggregate (Global Aggregate). This slide comes from our [Guide to China](#).
 Guide to the Markets – Latin America. Data are as of March 31, 2022.

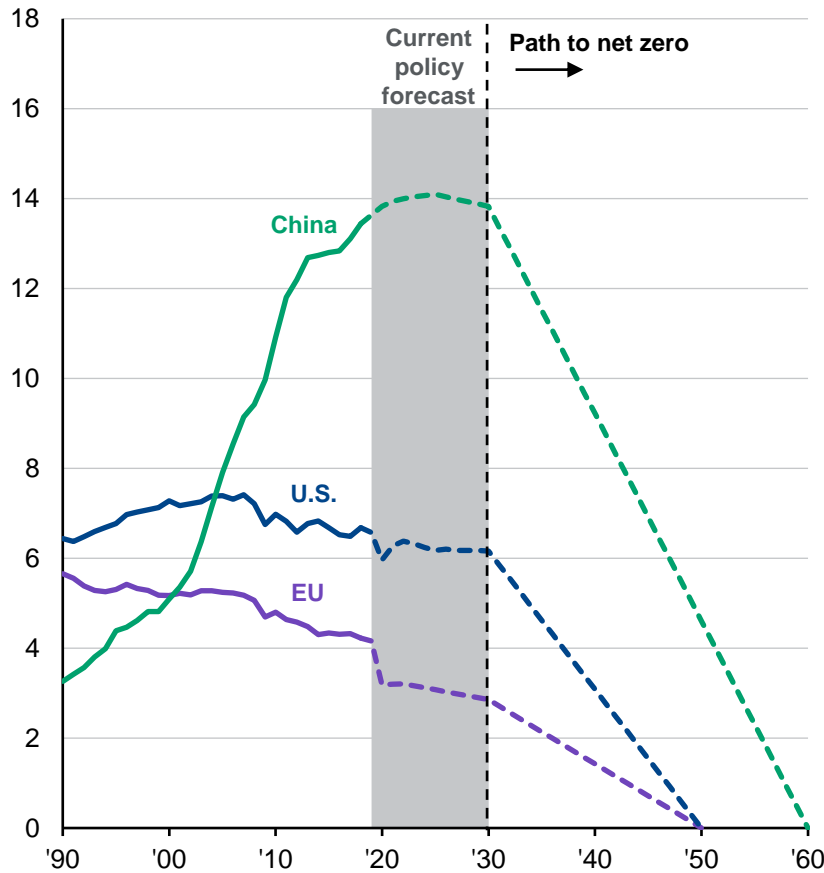


Emissions targets and global energy mix

Global Economy

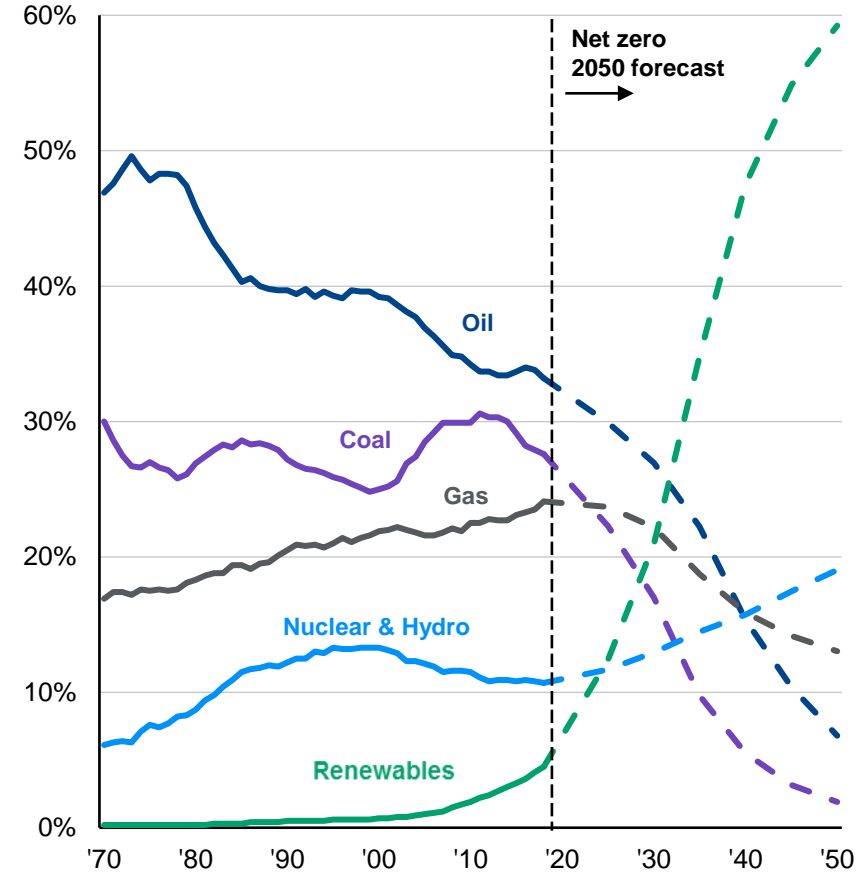
Greenhouse gas emissions targets

Billions of tons per year, CO2 equivalent



Global energy mix

% of primary energy consumption



Source: J.P. Morgan Asset Management; (Left) ClimateActionTracker, J.P. Morgan Asset Management. (Right) BP Energy Outlook 2022. Past performance is not a reliable indicator of current and future results. 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 statements, actual events, results or performance may differ materially from those reflected or contemplated. *Guide to the Markets - Latin America*. Data are as of March 31, 2022.



Latin America fixed income: Returns

Fixed Income

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 YTD	2012-2021	
												Cum.	Ann.
Venezuela	47.0%	19.0%	19.1%	26.6%	53.2%	15.7%	0.8%	20.8%	12.8%	0.3%	56.6%	67.8%	5.3%
USD EMD	17.4%	-5.3%	13.3%	16.9%	20.6%	13.2%	-1.6%	19.4%	9.2%	-1.8%	-2.5%	67.2%	5.3%
Peru	17.0%	-6.6%	10.9%	1.2%	15.4%	11.9%	-2.7%	18.7%	9.0%	-3.5%	-3.0%	59.9%	4.8%
Latin America	16.0%	-7.1%	10.5%	-2.0%	13.5%	11.5%	-2.8%	16.4%	8.8%	-3.8%	-4.3%	58.6%	4.7%
Brazil	12.5%	-7.7%	10.5%	-2.8%	13.1%	11.4%	-4.3%	15.0%	7.3%	-4.3%	-5.7%	56.9%	4.6%
Colombia	12.3%	-8.8%	8.5%	-3.5%	10.5%	11.1%	-5.8%	14.7%	5.3%	-6.0%	-6.2%	53.7%	4.4%
Mexico	11.7%	-11.1%	8.1%	-5.5%	10.4%	10.3%	-6.3%	14.1%	3.3%	-8.6%	-7.0%	42.4%	3.6%
Chile	8.7%	-11.2%	7.4%	-7.0%	10.2%	9.6%	-20.3%	-23.6%	-23.8%	-14.7%	-8.2%	7.2%	0.7%
Argentina	8.2%	-12.3%	-28.7%	-13.4%	6.9%	-34.4%	-22.2%	-55.1%	-31.6%	-23.6%	-10.0%	-79.8%	-14.8%

Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.
 All returns represent EMBI Global Diversified regional and country subindices, which are USD-denominated sovereign bond indices.
 All returns are unhedged and shown in USD. Past performance is not indicative of future returns.
Guide to the Markets – Latin America. Data are as of March 31, 2022.

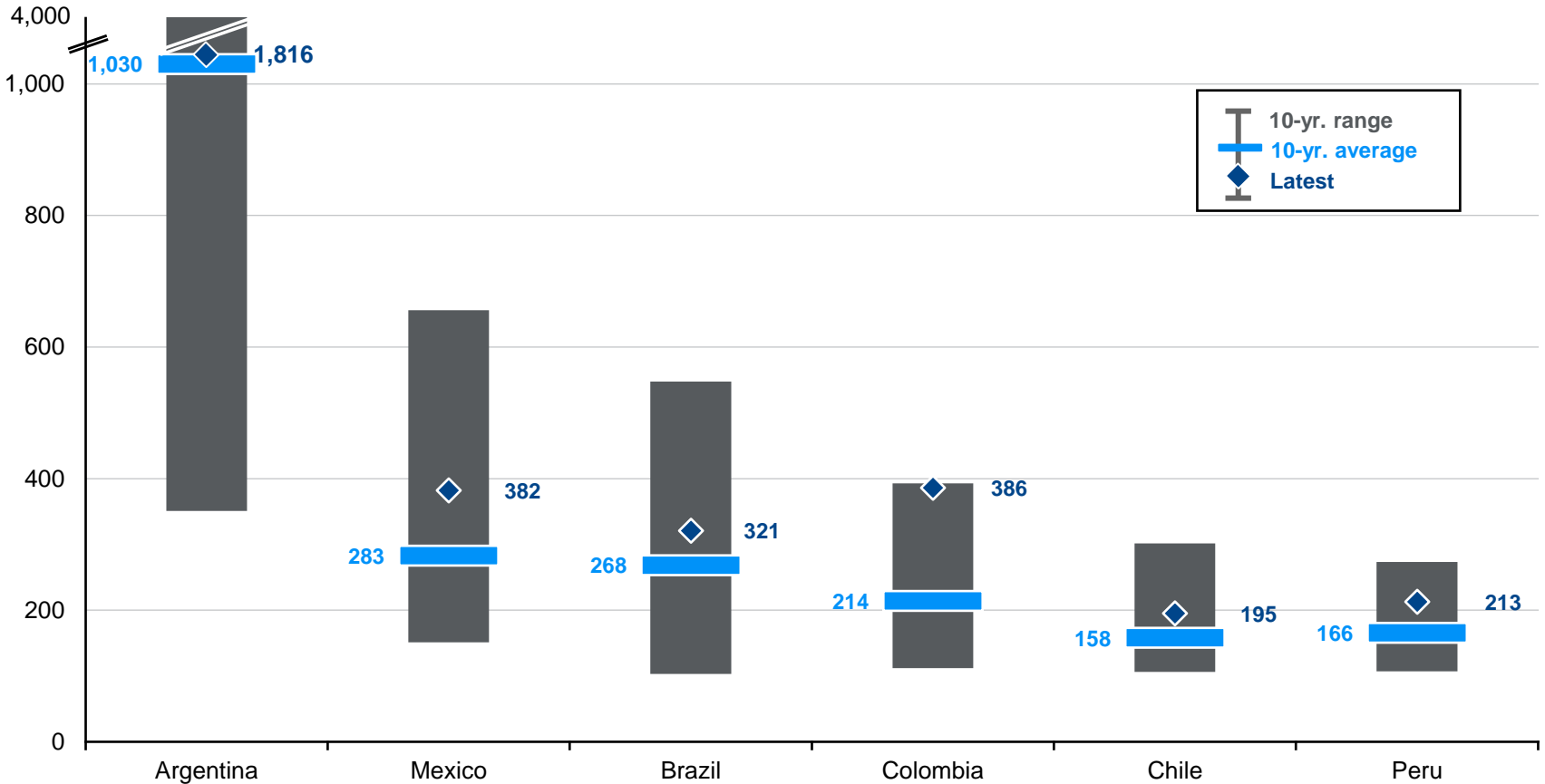


Latin America fixed income: Valuations

Fixed Income

EMD spreads by country

USD-denominated sovereign debt, spread-to-worst



Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management. All spreads represent EMBI Global Diversified country subindices, which are USD-denominated sovereign bond indices. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.

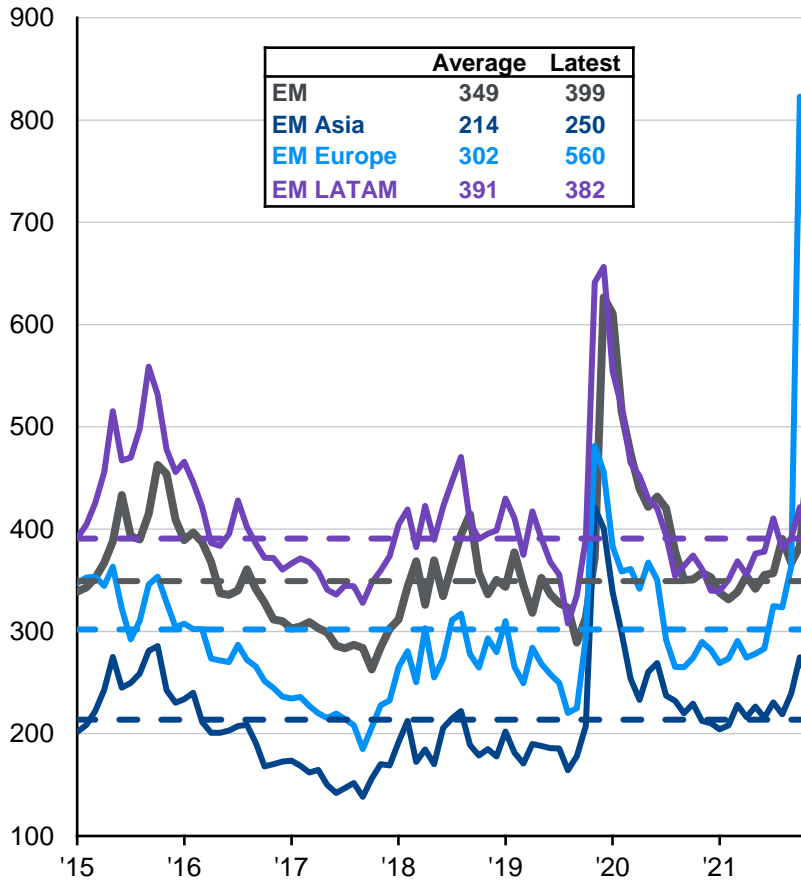


Emerging market debt

Fixed Income

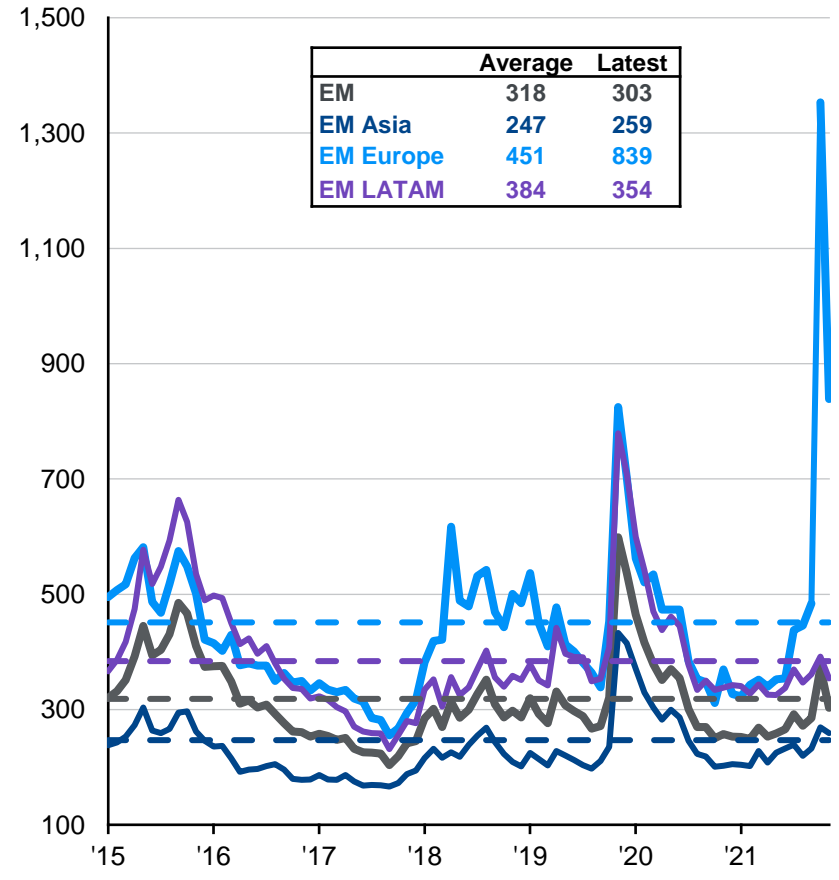
Regional EMD spreads: Sovereigns

USD-denominated sovereign debt, basis points over Treasuries



Regional EMD spreads: Corporates

USD-denominated corporate debt, basis points over Treasuries



Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management. EM sovereigns represent the Emerging Market Bond Index Global Diversified (EMBI Global Diversified) Index and subindices and EM corporates represent the Corporate Emerging Market Bond (CEMBI Broad Diversified) Index and subindices. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.

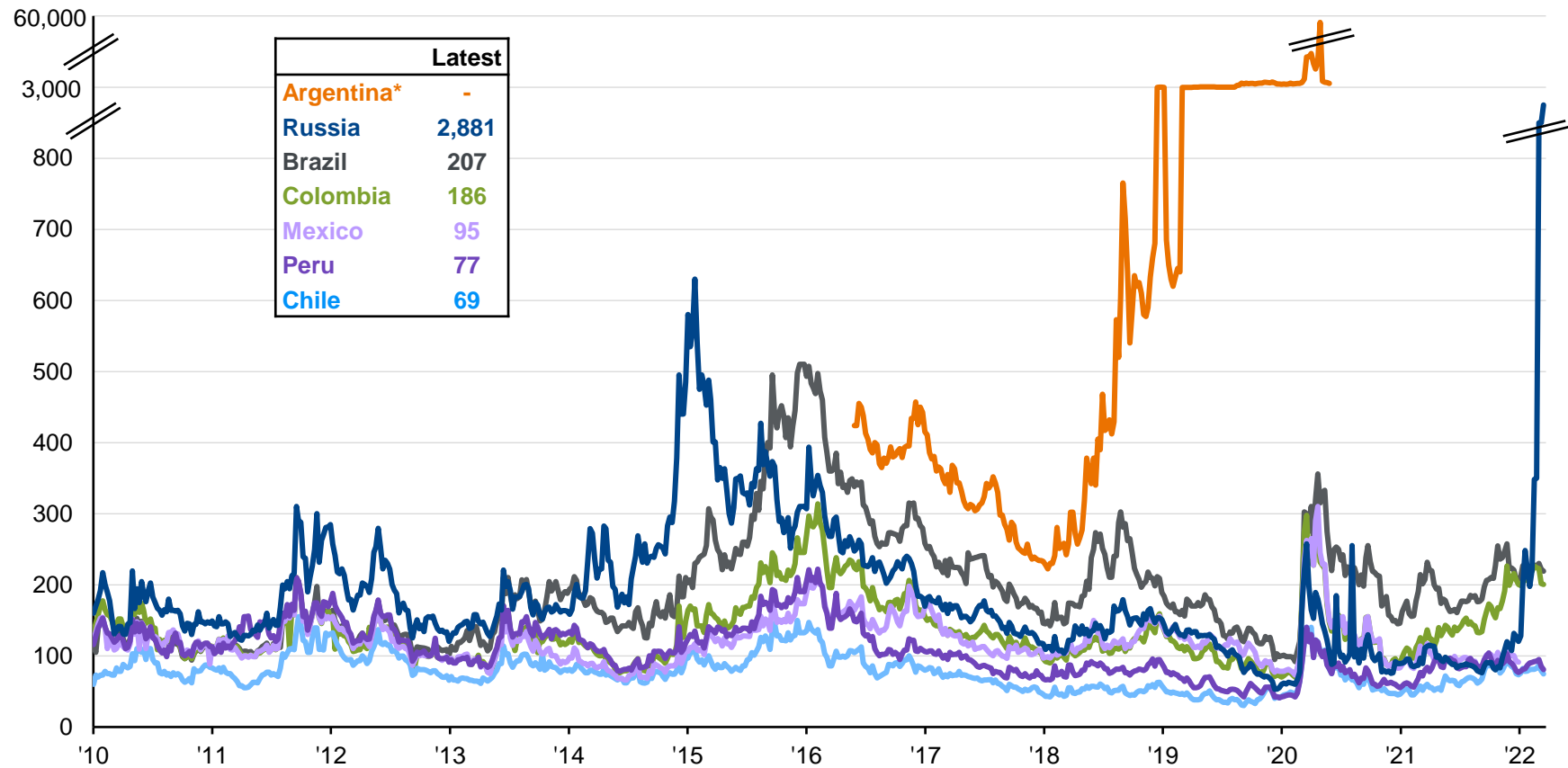


Default protection prices

Fixed Income

Credit default swap spreads

Yield, basis points, 5-yr. senior corporate credit, USD



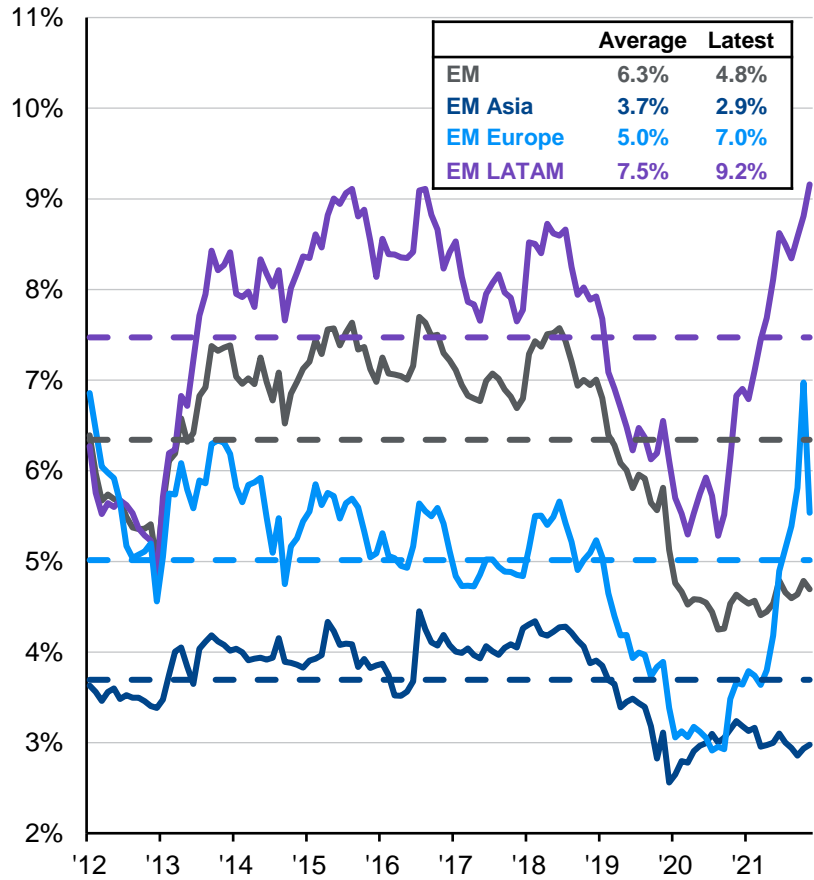
Source: Bloomberg Finance L.P., J.P. Morgan Asset Management.
 *Argentina is only shown between May 2016 and May 2020 due to its default in 2014 and in 2020.
 Guide to the Markets – Latin America. Data are as of March 31, 2022.



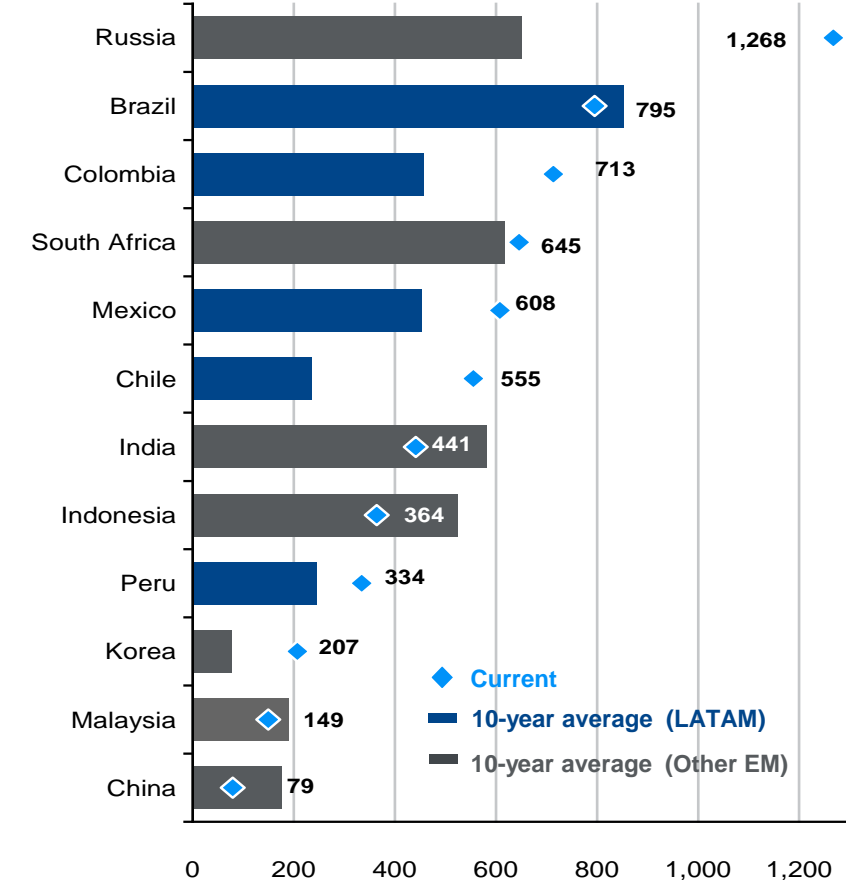
Attractiveness of Latin American local rates

Fixed Income

Regional EMD yields Local currency sovereign debt



Global – U.S. Treasuries 5-year spread Basis points, local currency debt, as of March 2022



Source: J.P. Morgan Asset Management; (Left) J.P. Morgan Global Economic Research; (Right) Bloomberg Finance L.P.
 EM local currency debt is represented by GBI-EM index and regional subindices. Global spreads are calculated from the mid-yield to maturity for the generic 5-year government bond, as provided by Bloomberg, except for Brazil and South Africa, which are the spot yield-to-maturity provided by FactSet.
 Guide to the Markets – Latin America. Data are as of March 31, 2022.

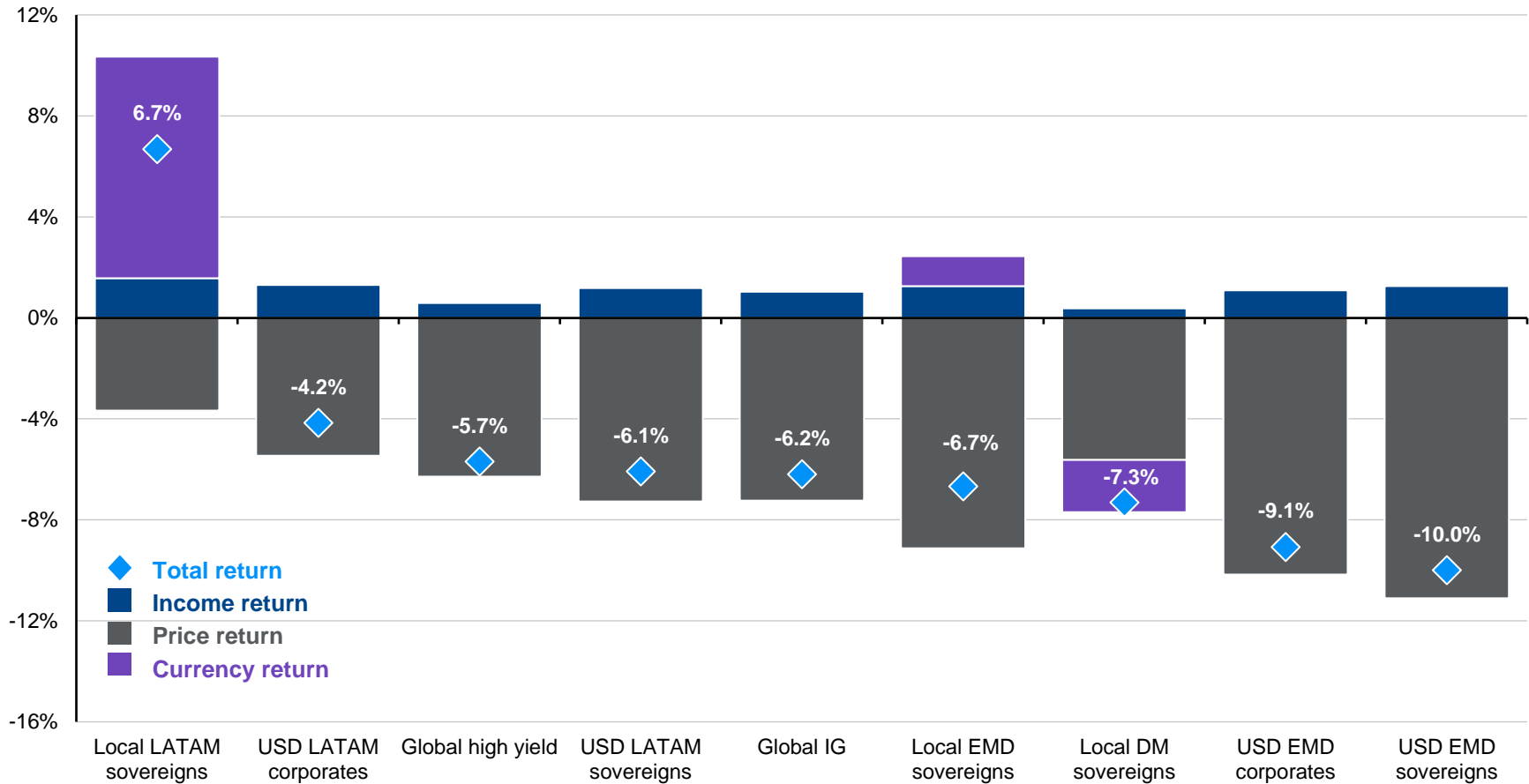


Global fixed income: Return composition

Fixed Income

Fixed income return composition

YTD, total return, USD



Source: J.P. Morgan Economic Research, J.P. Morgan Asset Management.
 Based on J.P. Morgan CEMBI Broad Index (USD EMD corporates), J.P. Morgan EMBIG Broad Diversified Index (USD EMD), J.P. Morgan Domestic High Yield Index (U.S. high yield), J.P. Morgan GBI-EM Global Diversified Index (Local EMD), J.P. Morgan GBI-DM Diversified Index (Local DM sovereigns), J.P. Morgan CEMBI Broad Diversified Latin America Index (Latin America corporates), J.P. Morgan EMBIG Diversified Latin America Index (USD Latin America sovereigns), J.P. Morgan GBI-EM Global Diversified Latin Region Index (Local Latin America sovereigns), Bloomberg Global High Yield (Global high yield) and Bloomberg Global Credit – Corporate – Investment Grade (Global IG). Past performance is not indicative of future returns.
 Guide to the Markets – Latin America. Data are as of March 31, 2022.

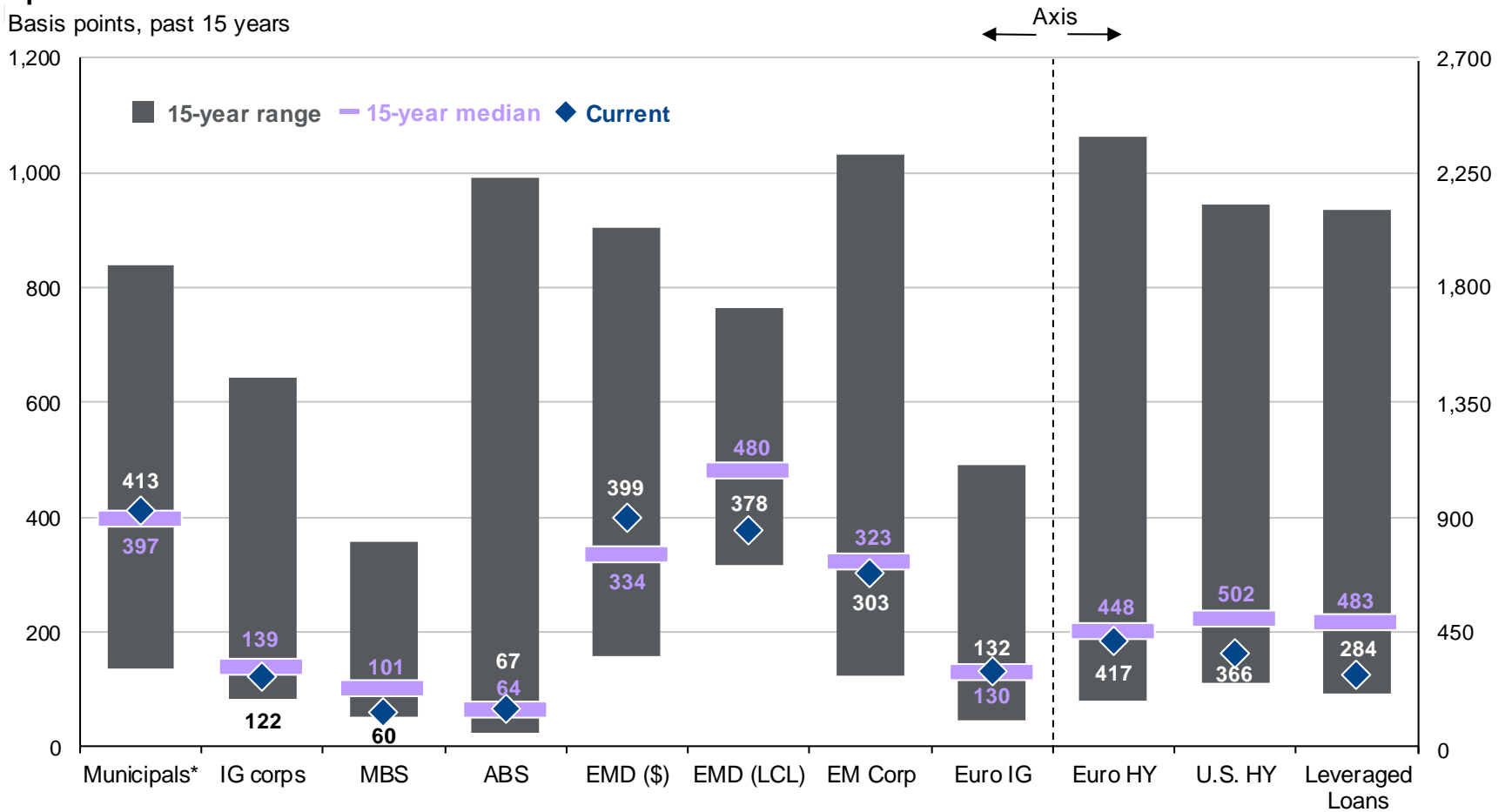


Global fixed income: Valuations

Fixed Income

Spread-to-worst across fixed income sectors

Basis points, past 15 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 (\$): 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. Spread-to-worst indicated is the difference between the yield-to-worst of a bond and yield-to-worst of a U.S. Treasury security with a similar duration. All sectors shown are spread-to-worst except for Treasuries and Municipals, which are based on yield-to-worst, and Leveraged loans, which are based on spread to 3Y takeout. EM (LCL) spread-to-worst is calculated using the index yield less the YTM on the 5-year U.S. Treasury bellwether index. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.

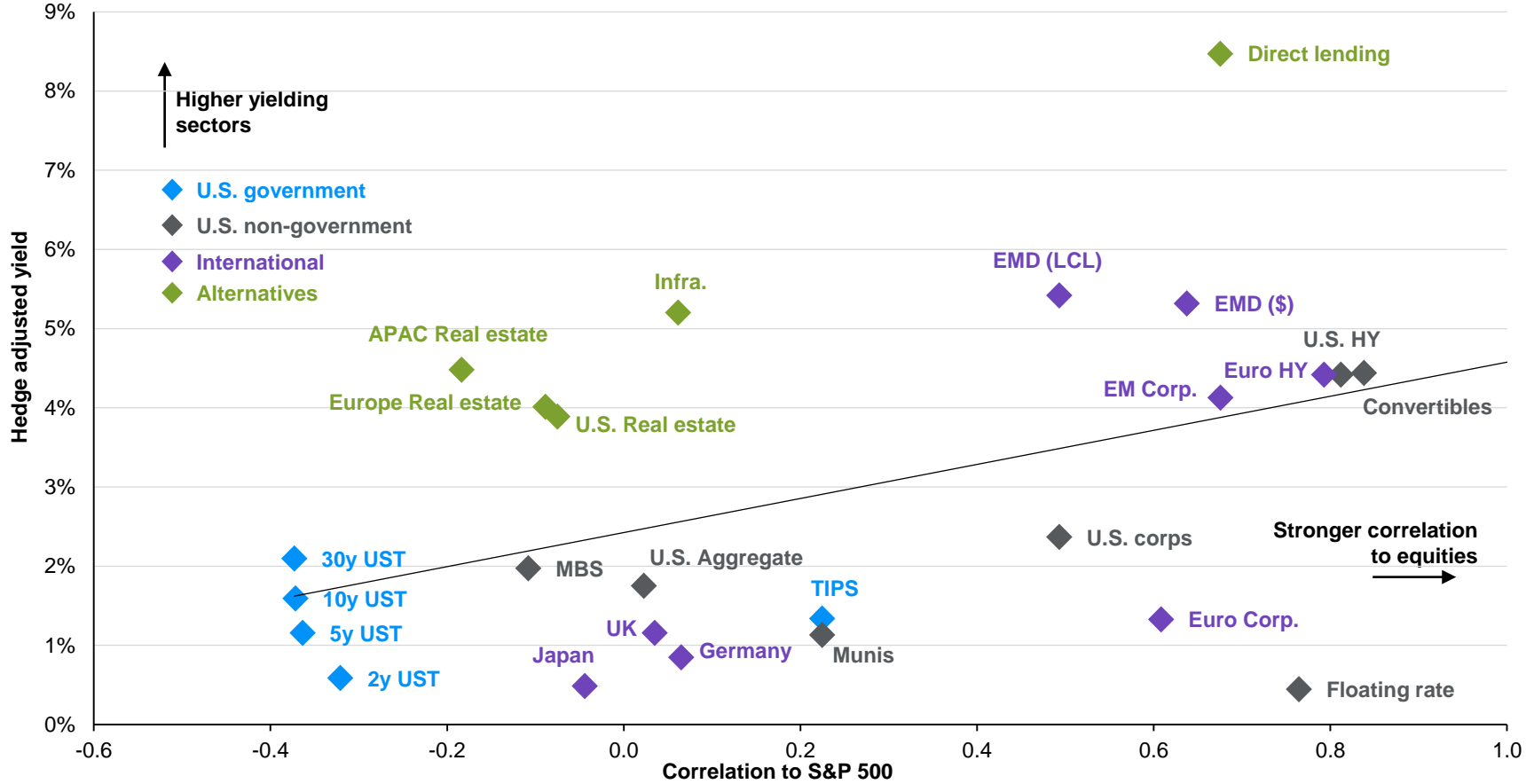


Global fixed income: Yields and correlation to equities

Fixed Income

Equity market correlations and yields

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



Source: Bloomberg, FactSet, ICE, MSCI, NCREIF, J.P. Morgan Asset Management. Fixed income shown above are represented by Bloomberg indices except for EMD and ABS – U.S. Aggregate; MBS: U.S. Aggregate Securitized – MBS; U.S. corps: U.S. Corporates; Munis: Muni Bond 10-year; 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 GBI EM 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. Correlations are based on quarterly return over the past 10 years through 12/31/2021, except Infra., Direct Lending, Europe and APAC Real Estate, which are through 6/30/2021 and U.S. Real Estate, which is through 9/30/2021. International fixed income sector correlations are in hedged U.S. dollar returns except EMD local index. Yields for all indices are hedged using three-month LIBOR rates between the U.S. and international LIBOR and are a 12-month average. Alts yields are through 6/30/2021 except Direct Lending, which is through 9/30/2021. U.S. Real Estate yield is calculated using the MSCI Global Property Fund Index – North America. Guide to the Markets – Latin America. Data are as of March 31, 2022.

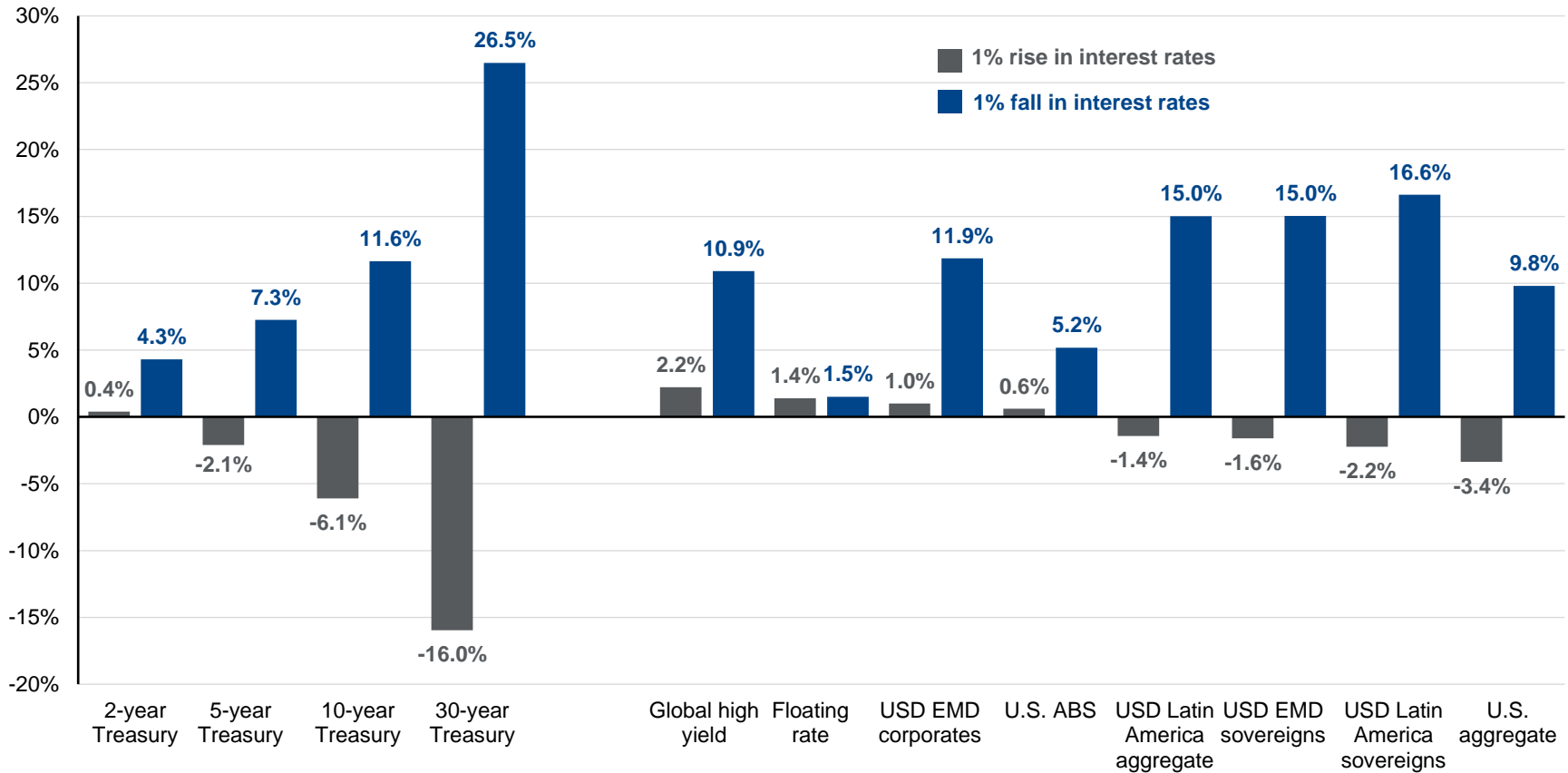


Global fixed income: Interest rate risk

Fixed Income

Impact of a 1% rise or fall in interest rates

Total return, assumes a parallel shift in the yield curve and spreads are maintained



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

Returns shown are total returns. 2-30 year Treasury, Global high yield, Floating rate (BBB), USD EMD corporates, USD Latin America aggregate, USD Latin America sovereigns, USD EMD sovereigns and U.S. aggregate are based on Bloomberg U.S. Treasury indices, Bloomberg Global High Yield, Bloomberg U.S. Floating Rate Notes (BBB), Bloomberg Emerging Markets USD Aggregate – Corporate, Bloomberg Emerging Markets USD Aggregate – Latin America, Bloomberg Emerging Markets USD Sovereigns – Latin America, Bloomberg U.S. Aggregate Securitized – ABS, Bloomberg Emerging Markets USD Aggregate – Sovereign and Bloomberg U.S. Aggregate, respectively. For illustrative purposes only. Change in bond price is calculated using both duration and convexity.

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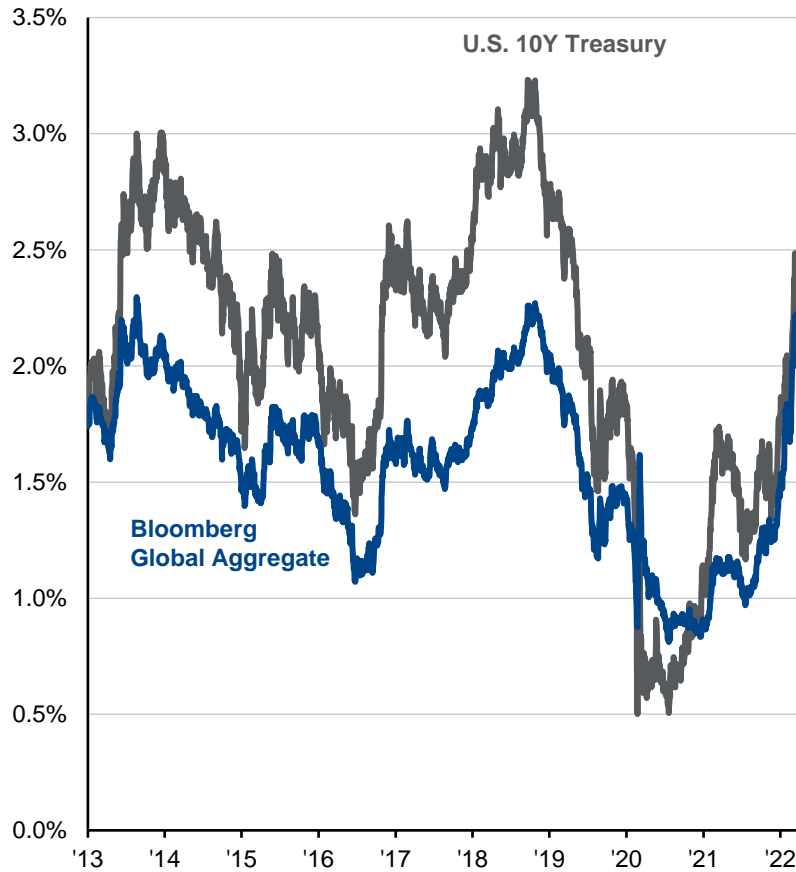


U.S. interest rates

Fixed Income

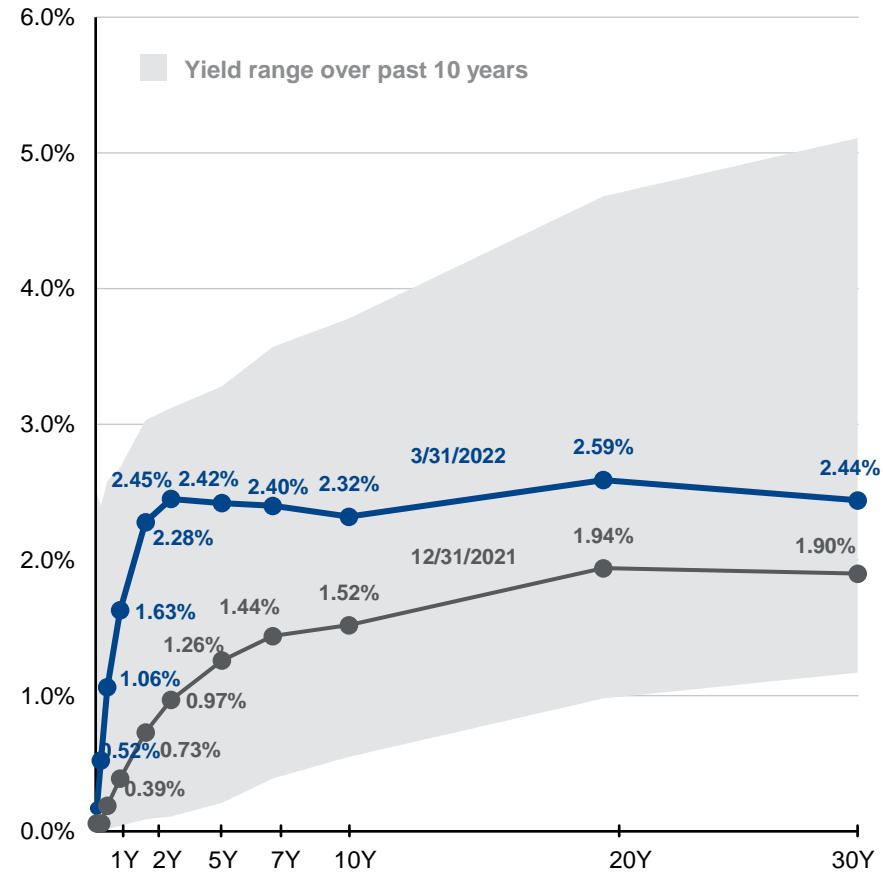
U.S. and global bond yields

Yield to maturity



U.S. Treasury yield curve

Yield to maturity



Source: FactSet, Federal Reserve, J.P. Morgan Asset Management. Guide to the Markets – Latin America. Data are as of March 31, 2022.

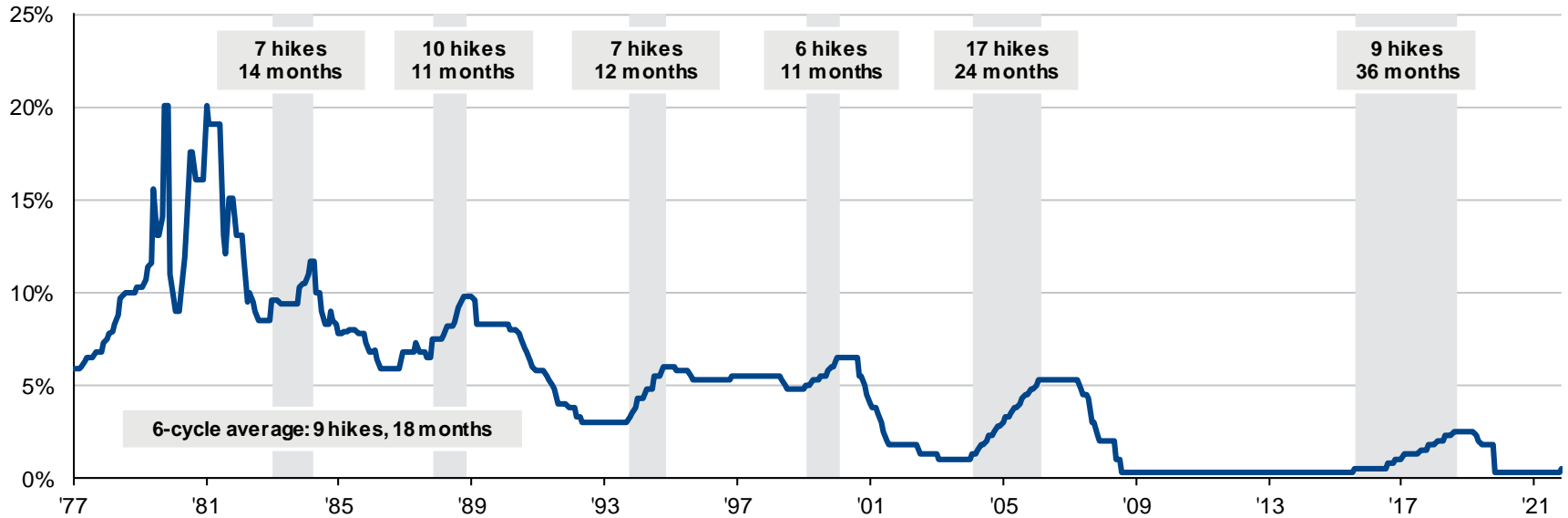


Historical impact of Fed tightening

Fixed Income

Federal funds rate

Target rate*, shaded areas denote periods of rate hikes



Market reaction during previous rate hiking cycles

	May 1983 – Jul. 1984	Mar. 1988 – Feb. 1989	Feb. 1994 – Feb. 1995	Jun. 1999 – May 2000	Jun. 2004 – Jun. 2006	Dec. 2015 – Dec. 2018	Mar. 2022 – Present	Avg. of past 6 rate hiking cycles
Yield change (bps)								
Federal funds rate	313	325	300	175	425	200	25	290
2-year Treasury	311	227	305	121	238	165	43	228
10-year Treasury	274	91	185	50	52	49	17	117
S&P 500 return	-9.6%	6.8%	-2.1%	8.5%	12.0%	19.0%	6.3%	5.8%
U.S. dollar	10.4%	1.7%	-4.7%	3.4%	-5.8%	-1.4%	-0.6%	0.6%

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

S&P 500 returns are price returns and do not include reinvestment of dividends. Averages do not include the current cycle. Current cycle begins on March 16, 2022. *Between 1979 and 1982, the FOMC changed its approach to monetary policy, focusing on the money supply, rather than the federal funds rate. In the fall of 1982, however, the Federal Reserve shifted back to its approach of targeting the “price” rather than the “quantity” of money. Thus, because the federal funds rate was not the FOMC’s key policy tool, we exclude increases in the federal funds rate between 1979 to 1982 in our analysis of rate hike cycles.

Guide to the Markets – Latin America. Data are as of March 31, 2022.



U.S. high yield bonds

Fixed Income

Default rate and spread-to-worst

Percent



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

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 December 2021. 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 – Latin America*. Data are as of March 31, 2022.



Latin America equity returns

Equities

											2012-2021	
2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 YTD	Ann.	Vol.
Colombia 35.9%	Argentina 66.2%	Argentina 19.2%	Argentina -0.4%	Brazil 66.7%	Argentina 73.6%	Peru 1.6%	Colombia 31.2%	EM Asia 28.8%	Mexico 22.9%	Brazil 36.0%	EM Asia 8.4%	Argentina 42.3%
Mexico 29.1%	EM Asia 2.3%	Peru 10.5%	EM Asia -9.5%	Peru 55.6%	Chile 43.6%	Brazil -0.1%	Brazil 26.7%	EM Equity 18.7%	Argentina 20.9%	Peru 34.9%	EM Equity 5.9%	Peru 25.0%
EM Asia 21.2%	Mexico 0.2%	EM Asia 5.3%	Mexico -14.2%	Latin America 31.5%	EM Asia 43.3%	Latin America -6.2%	EM Asia 19.7%	Argentina 12.7%	EM Equity -2.2%	Colombia 33.9%	Mexico 2.0%	Brazil 23.1%
Peru 20.2%	EM Equity -2.3%	EM Equity -1.8%	EM Equity -14.6%	Colombia 26.5%	Peru 38.4%	Colombia -11.4%	EM Equity 18.9%	Mexico -1.6%	EM Asia -4.8%	Chile 29.9%	Argentina 1.9%	Chile 22.5%
EM Equity 18.6%	Latin America -13.2%	Mexico -9.2%	Chile -16.8%	Chile 16.8%	EM Equity 37.8%	EM Equity -14.2%	Latin America 17.9%	Chile -4.1%	Latin America -7.7%	Latin America 27.3%	Peru 1.1%	Colombia 21.8%
Latin America 8.9%	Brazil -15.8%	Latin America -12.0%	Latin America -30.8%	EM Equity 11.6%	Brazil 24.5%	EM Asia -15.2%	Mexico 11.8%	Peru -4.7%	Colombia -13.7%	Argentina 18.8%	Latin America -1.9%	Latin America 17.9%
Chile 8.3%	Colombia -21.1%	Chile -12.2%	Peru -31.7%	EM Asia 6.5%	Latin America 24.2%	Mexico -15.3%	Peru 4.8%	Latin America -13.5%	Chile -15.1%	Mexico 8.7%	Brazil -2.8%	EM Equity 17.4%
Brazil 0.3%	Chile -21.4%	Brazil -13.7%	Brazil -41.2%	Argentina 5.1%	Colombia 16.3%	Chile -18.9%	Chile -16.0%	Colombia -18.5%	Brazil -17.2%	EM Equity -6.9%	Colombia -5.0%	EM Asia 14.3%
Argentina -37.1%	Peru -29.8%	Colombia -19.8%	Colombia -41.8%	Mexico -9.0%	Mexico 16.3%	Argentina -50.7%	Argentina -20.7%	Brazil -18.9%	Peru -19.9%	EM Asia -8.6%	Chile -5.3%	Mexico 12.9%

Source: FactSet, MSCI, J.P. Morgan Asset Management.
 All returns are total return, unhedged and shown in USD. Past performance is not indicative of future returns.
 Guide to the Markets – Latin America. Data are as of March 31, 2022.

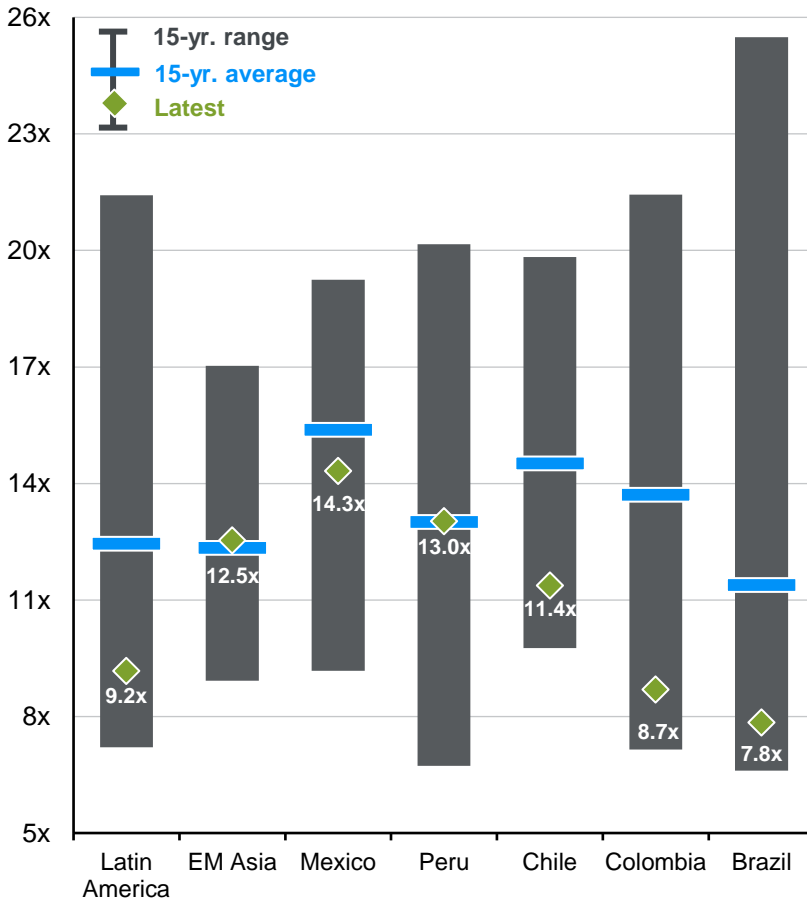


Latin America valuations and earnings by country

Equities

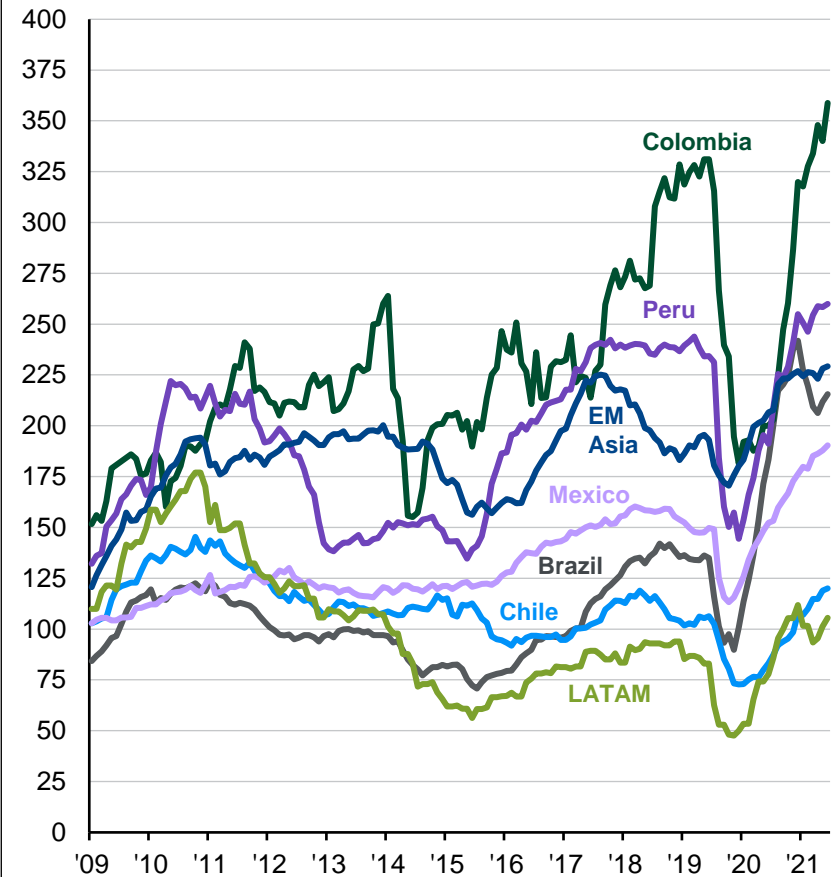
Latin America valuations

Price-to-earnings ratio, NTMA



Latin America earnings

EPS, local currency, NTMA, Dec. 2008 = 100

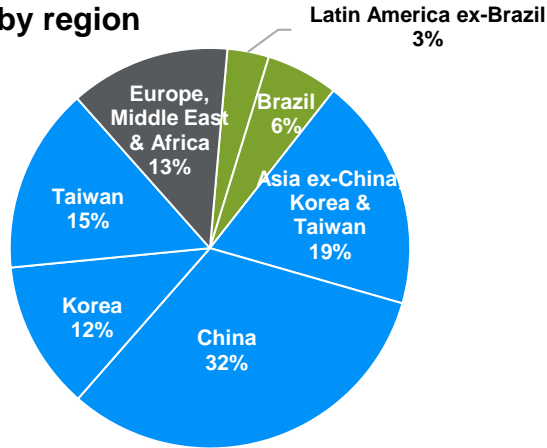


Source: FactSet, MSCI, J.P. Morgan Asset Management. Guide to the Markets – Latin America. Data are as of March 31, 2022.

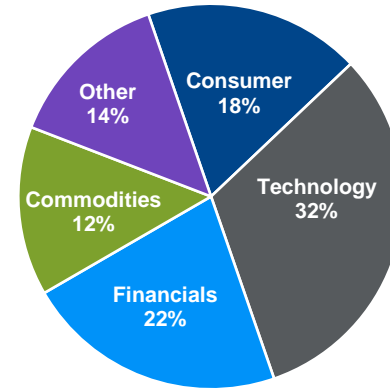


Emerging market equity indices

MSCI EM index by region

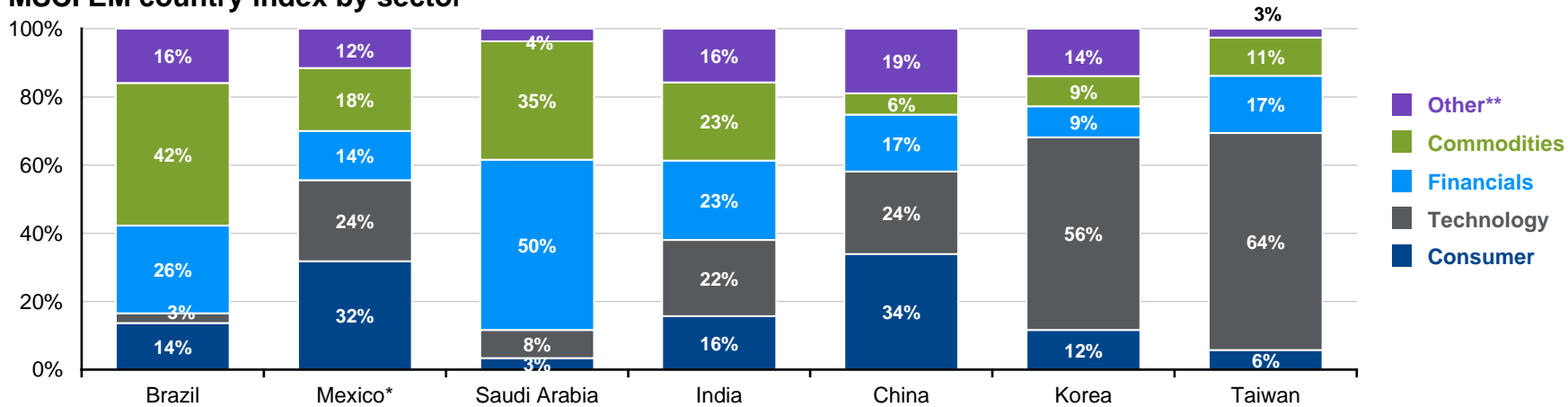


MSCI EM index by sector



Equities

MSCI EM country index by sector



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

MSCI EM index region and sector components are market value percentages.*Mexico Communication Services sector accounts for 24% of the country's market capitalization. **"Other" is comprised of Health Care, Industrials, Real Estate and Utilities sectors. Values may not sum to 100% due to rounding.

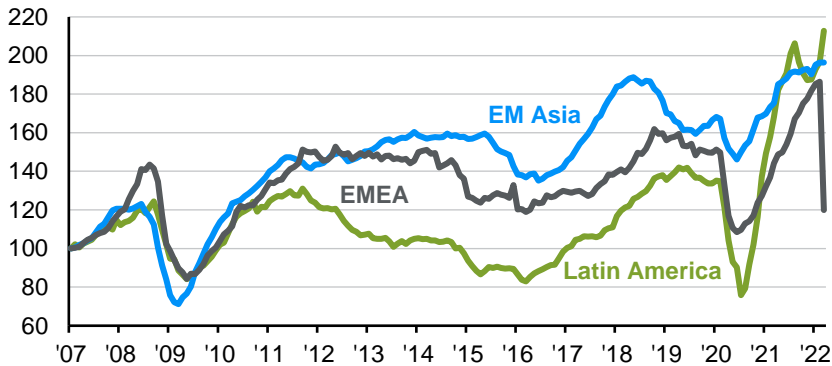
Guide to the Markets – Latin America. Data are as of March 31, 2022.



Emerging market equities

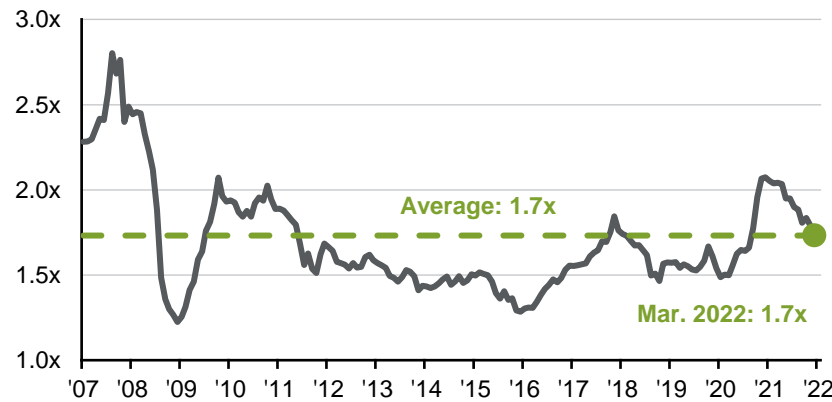
EM earnings by region

EPS for next 12-month consensus, local currency, Jan. 2007 = 100



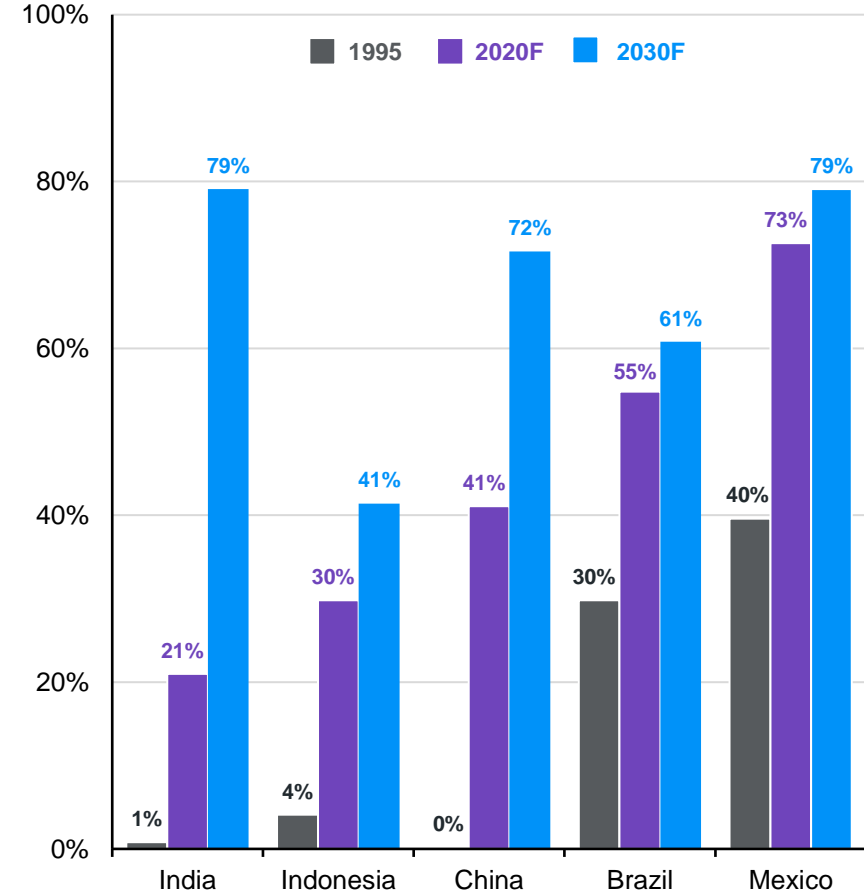
EM price-to-book ratio

Last 12 months actual



Growth of the middle class

Percent of total population



Equities

Source: J.P. Morgan Asset Management; (Top and bottom left) FactSet, MSCI; (Right) Brookings Institute.

Middle class is defined as households with per capita incomes between \$11 and \$110 per person per day in 2011 PPP terms. Historical and forecast figures come from the Brookings Development, Aid and Governance Indicators. 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.

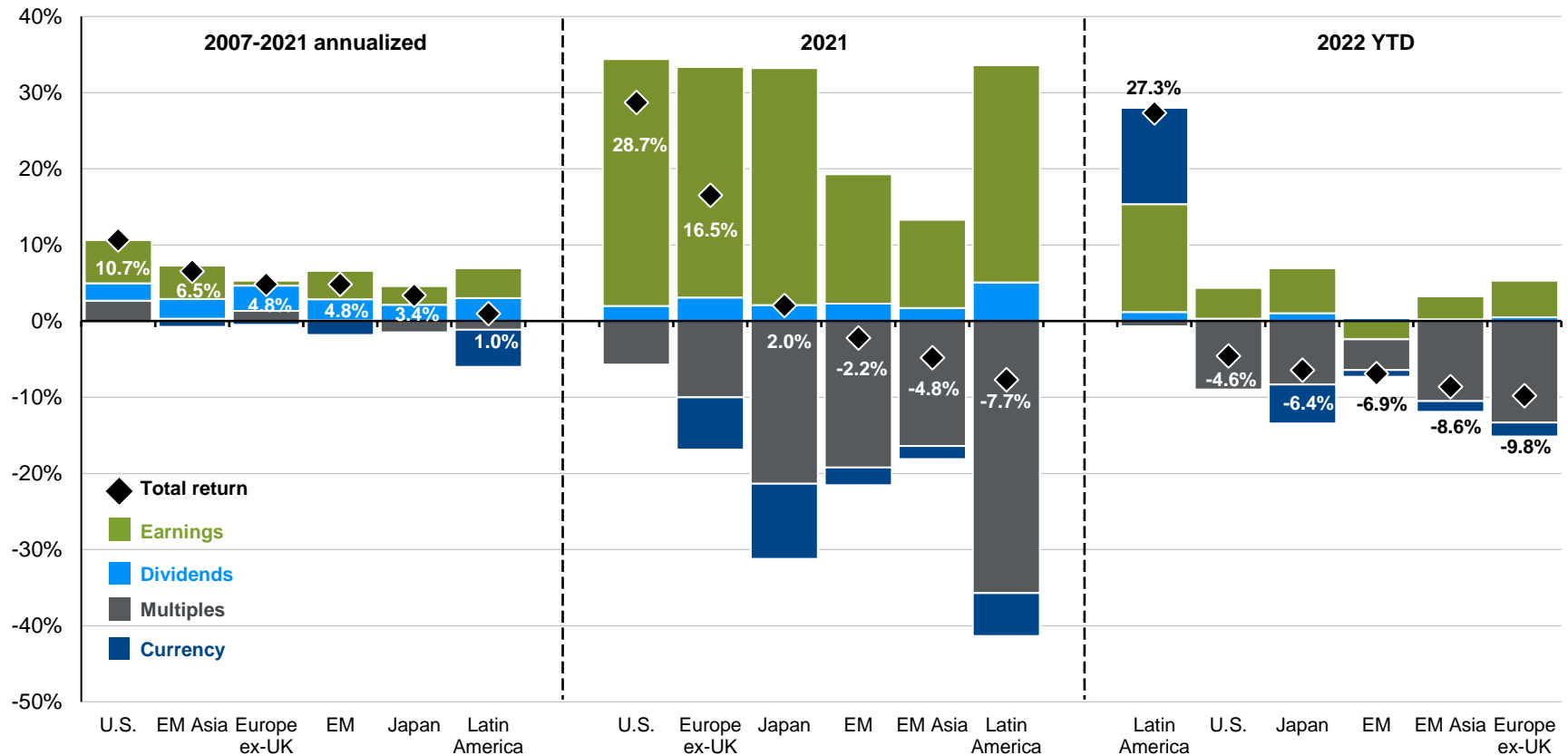
Guide to the Markets – Latin America. Data are as of March 31, 2022.



Global equity markets

Sources of global equity returns*

Total return, USD



Equities

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

All return values are MSCI Gross Index (official) data, except the U.S., which is the S&P 500. *Multiple expansion is based on the forward P/E ratio and EPS growth outlook is based on NTMA earnings estimates. Chart is for illustrative purposes only. Past performance is not indicative of future results.

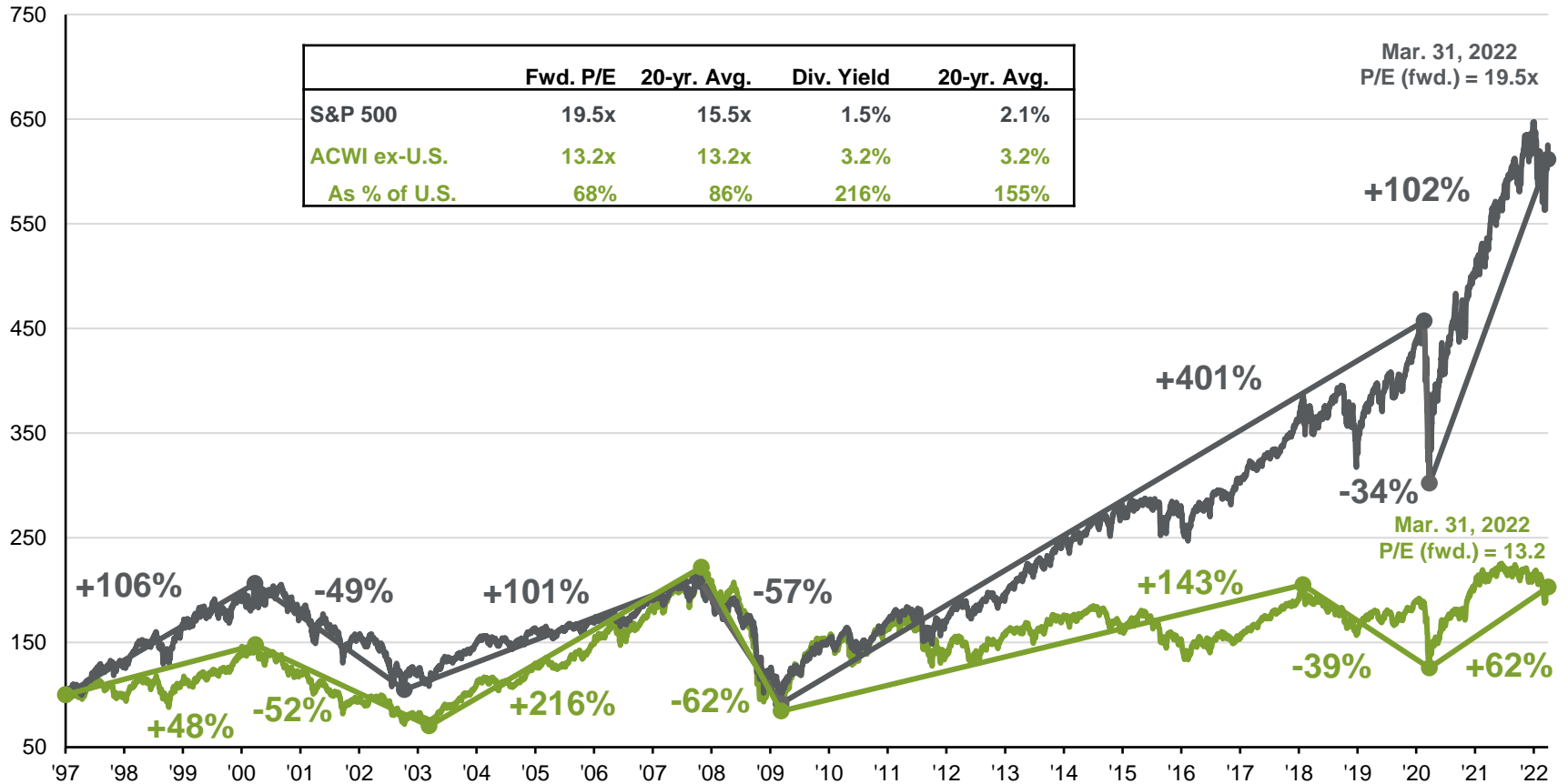
Guide to the Markets – Latin America. Data are as of March 31, 2022.



U.S. and international equities at inflection points

MSCI All Country World ex-U.S. and S&P 500 Indices

Dec. 1996 = 100, U.S. dollar, price return



Equities

Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
 Forward price-to-earnings ratio 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. Returns are cumulative and based on price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by FactSet Market Aggregates.
 Guide to the Markets – Latin America. Data are as of March 31, 2022.

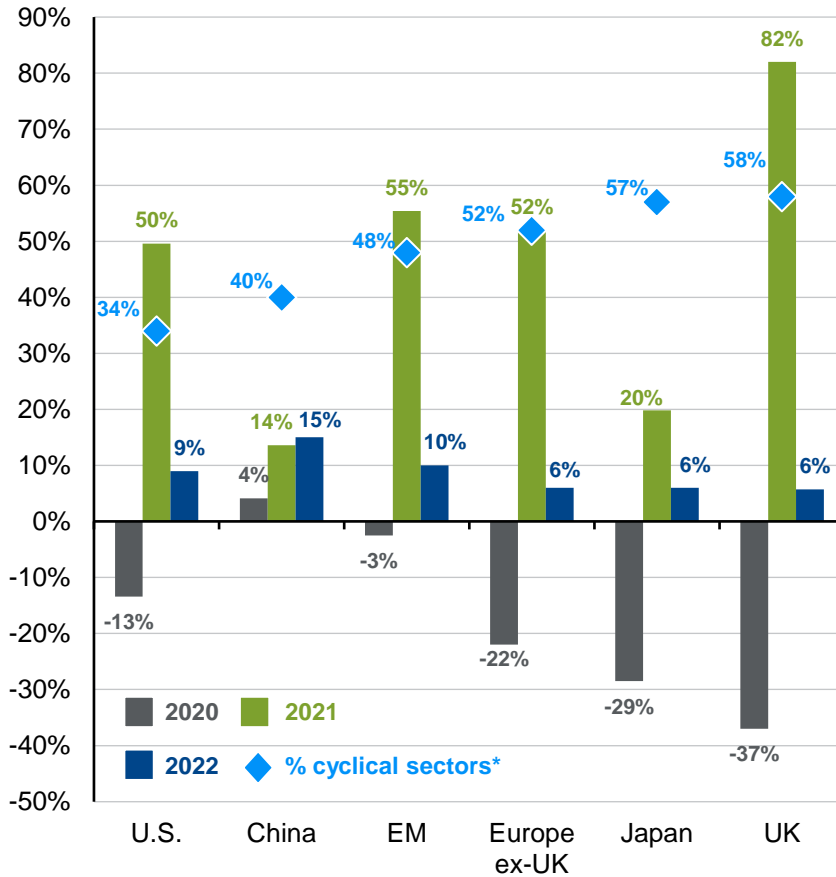


International equity earnings and valuations

Equities

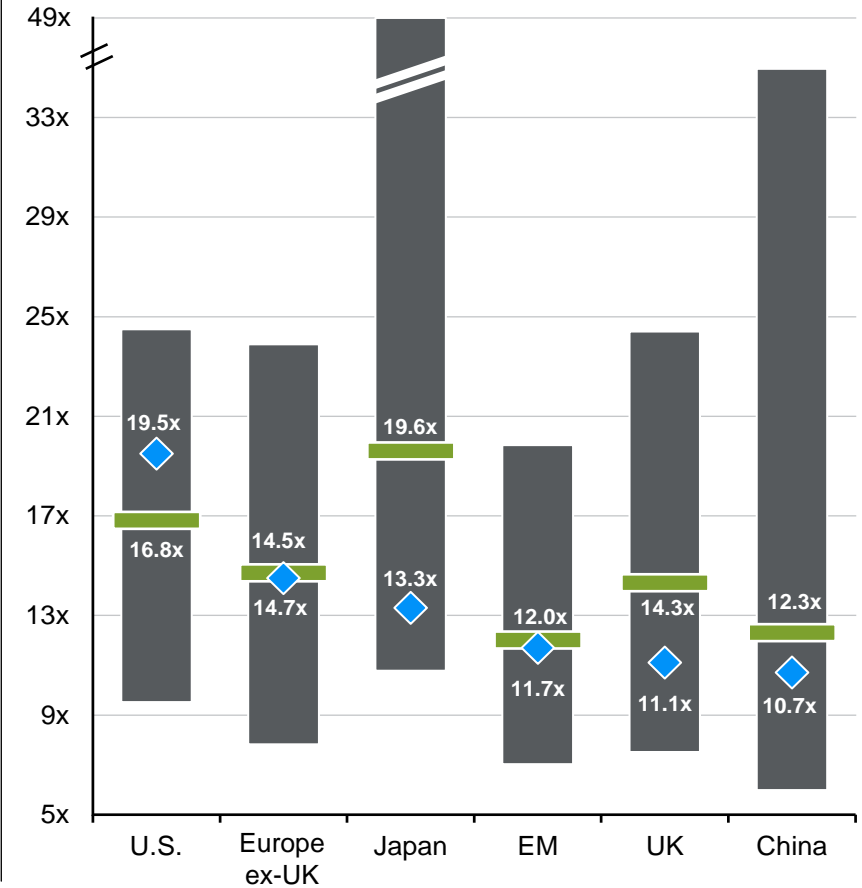
Global earnings growth

Calendar year consensus estimates



Global valuations

Price-to-earnings ratios, next 12 months



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

*Cyclical sectors include consumer discretionary, financials, industrials, energy and materials. The Internet and direct marketing subsector has been removed from the cyclicals calculation. In our judgement, companies in this space do not yet fit into the cyclical category, as they are still in a transitional growth phase and are not being directly impacted by the business cycle. Valuation and earnings charts use MSCI indices for all regions/countries, except for the U.S., which is the S&P 500. All indices use IBES aggregate earnings estimates, which may differ from earnings estimates used elsewhere in the book. MSCI Europe ex-UK includes Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.

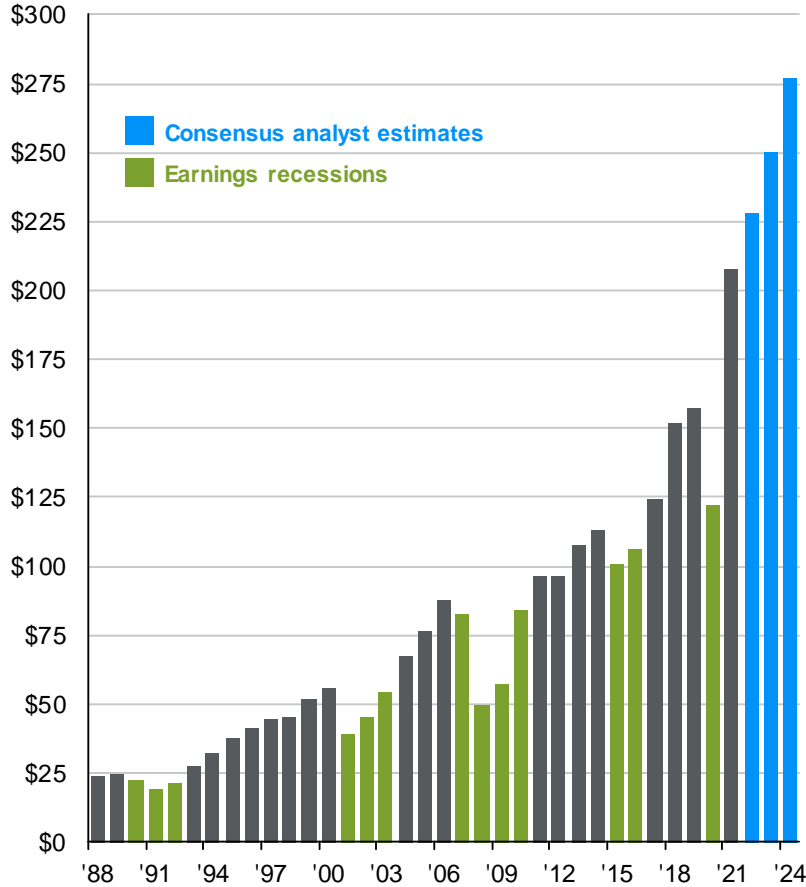


U.S.: Corporate profits and sources of total return

Equities

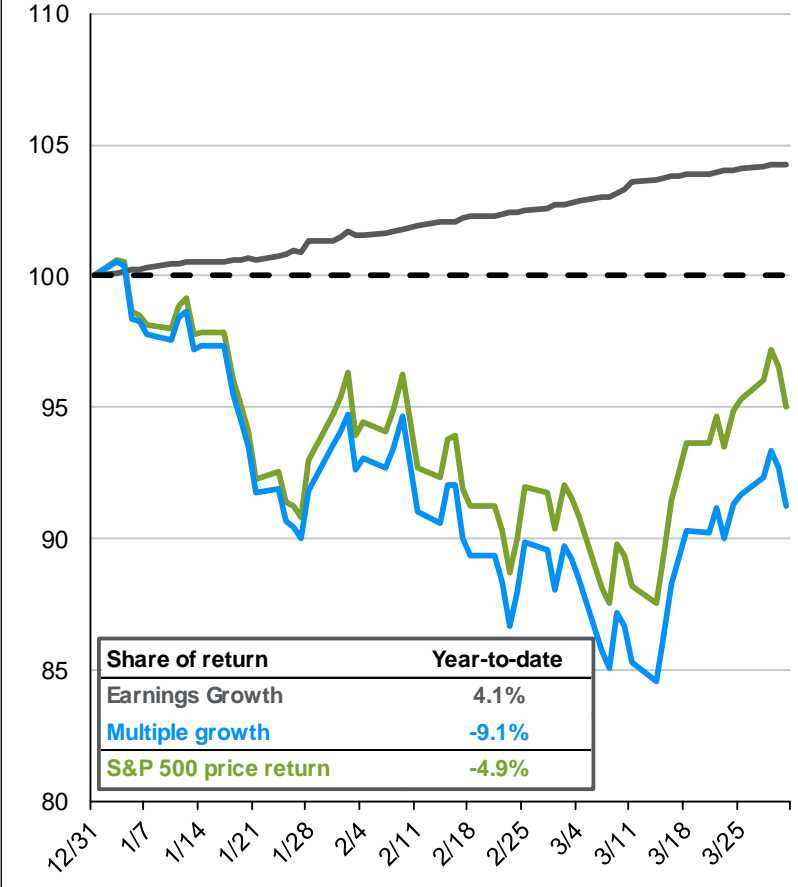
S&P 500 earnings per share

Index annual operating earnings



Percent change in S&P 500, earnings and valuations*

Year-to-date, indexed to 100



Source: FactSet, Compustat, Standard & Poor's, J.P. Morgan Asset Management. Historical EPS levels are based on annual operating earnings per share. Earnings estimates are based on estimates from Standard & Poor's and FactSet Market Aggregates. Past performance is not indicative of future returns. Guide to the Markets – Latin America. Data are as of March 31, 2022.



U.S.: Profit margins and input costs

Equities

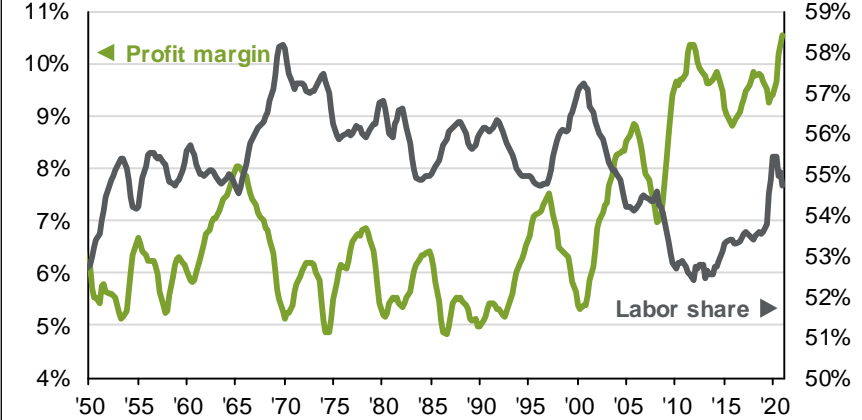
S&P 500 profit margins

Quarterly operating earnings/sales



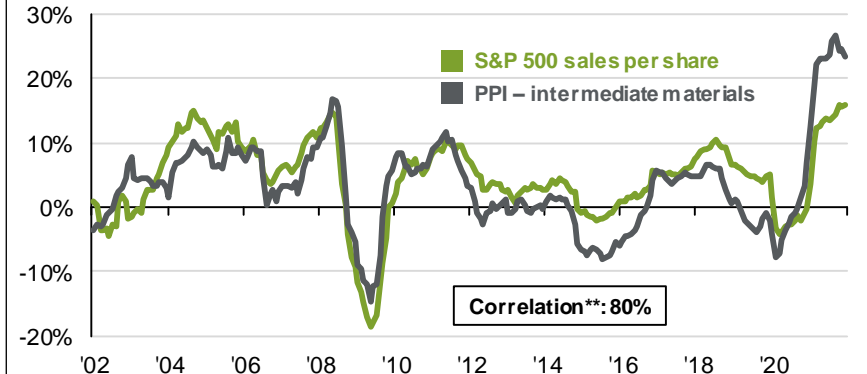
Labor share of income and profit margins*

Compensation and adjusted after-tax corporate profits as % of GDP



S&P 500 sales per share and PPI for intermediate materials

Year-over-year % change, monthly, last 20 years



Source: BEA, Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management. Past performance is not indicative of future returns. *Labor share of income and profit margins are shown on a 4-quarter moving average basis. Guide to the Markets – Latin America. Data are as of March 31, 2022.

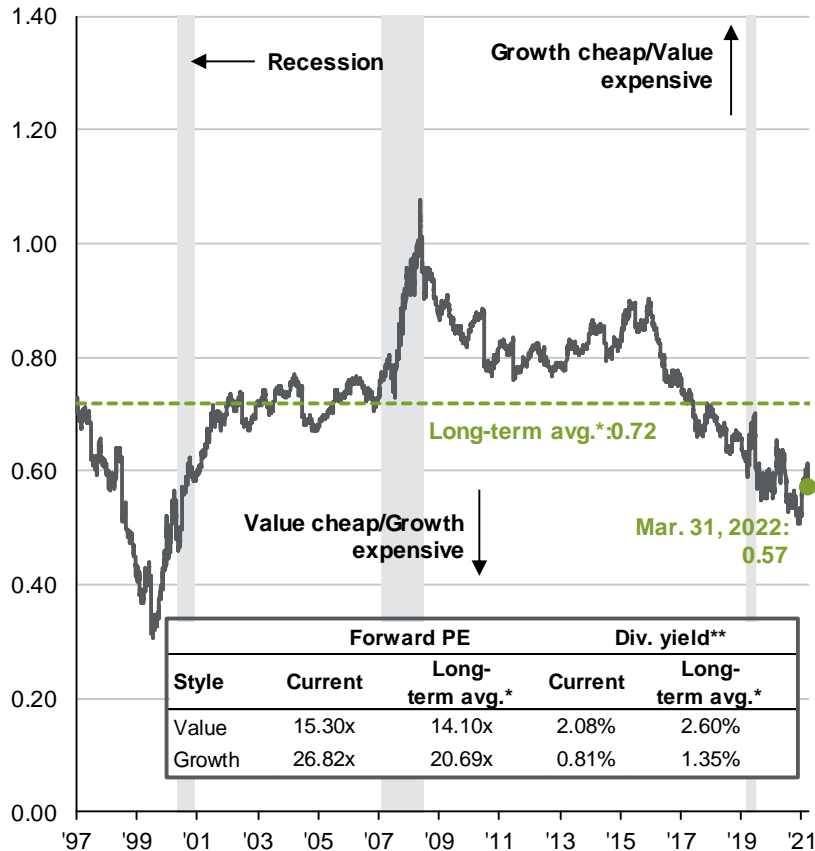


U.S.: Value vs. Growth

Equities

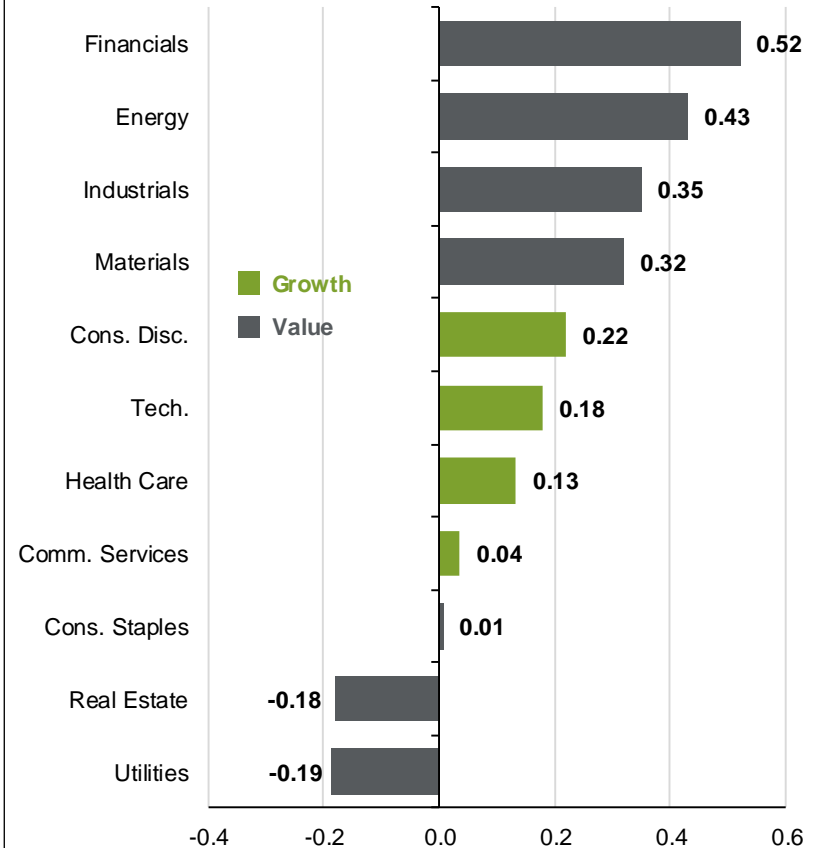
Value vs. Growth relative valuations

Rel. fwd. P/E ratio of Value vs. Growth, 1997 - present



S&P 500 sector correlations to U.S. 10-yr. Treasury yield

10-year correlations, monthly moves in yield vs. monthly price returns



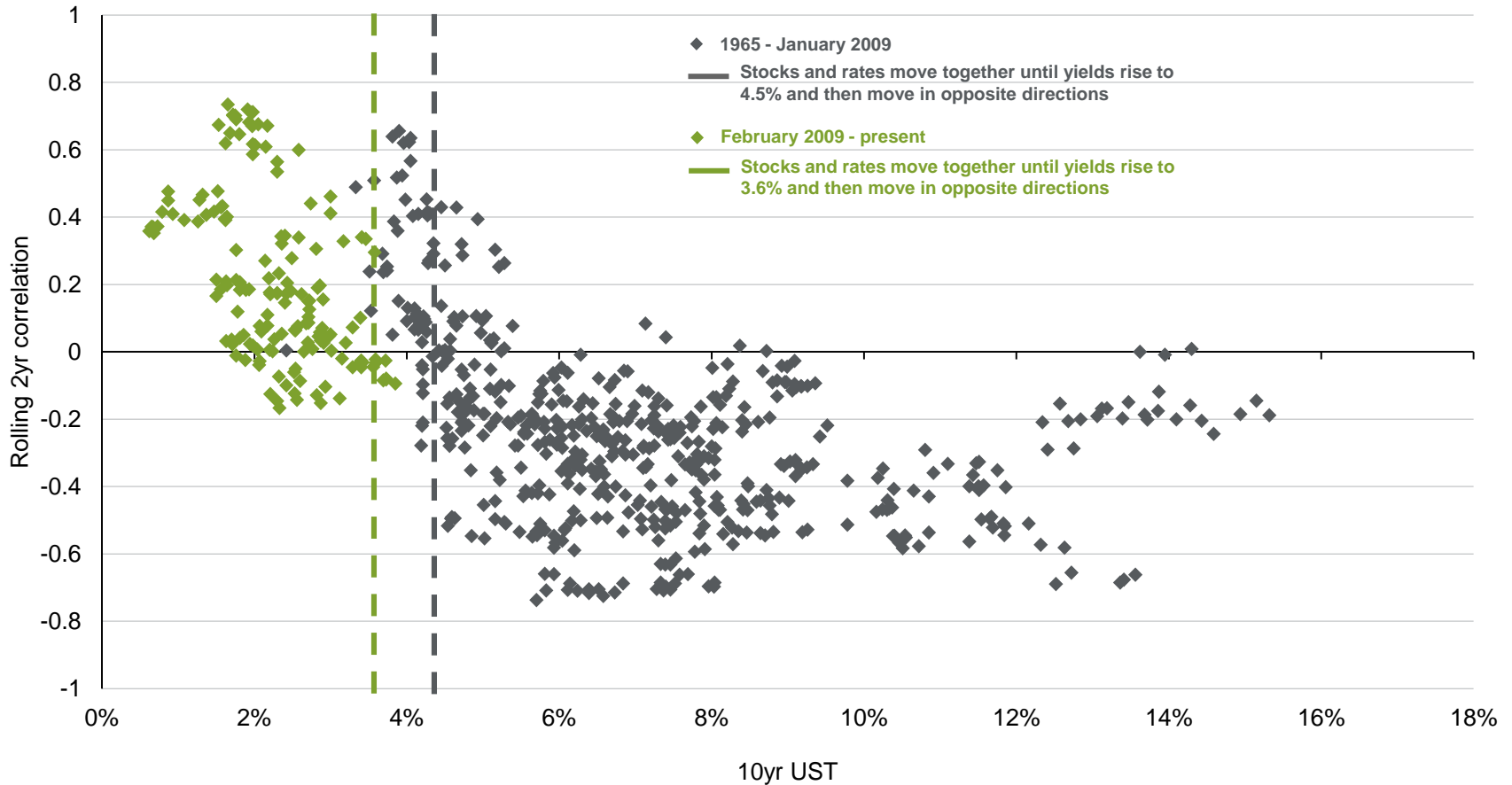
Source: FactSet, FTSE Russell, NBER, J.P. Morgan Asset Management.

(Left) Growth is represented by the Russell 1000 Growth Index and Value is represented by the Russell 1000 Value Index. *Long-term averages are calculated monthly since December 1997. **Dividend yield is calculated as the next 12-month consensus dividend divided by most recent price. (Right) *Communication services correlation is since 3Q13 and based on backtested data by JPMAM. **Financials correlation is since 4Q19. Guide to the Markets – Latin America. Data are as of March 31, 2022.



U.S.: Interest rates and equities

Stock returns and interest rate movements before and after the Global Financial Crisis Monthly S&P 500 returns, 10yr US Treasury, rolling 2yr correlations, 1965 – present



Equities

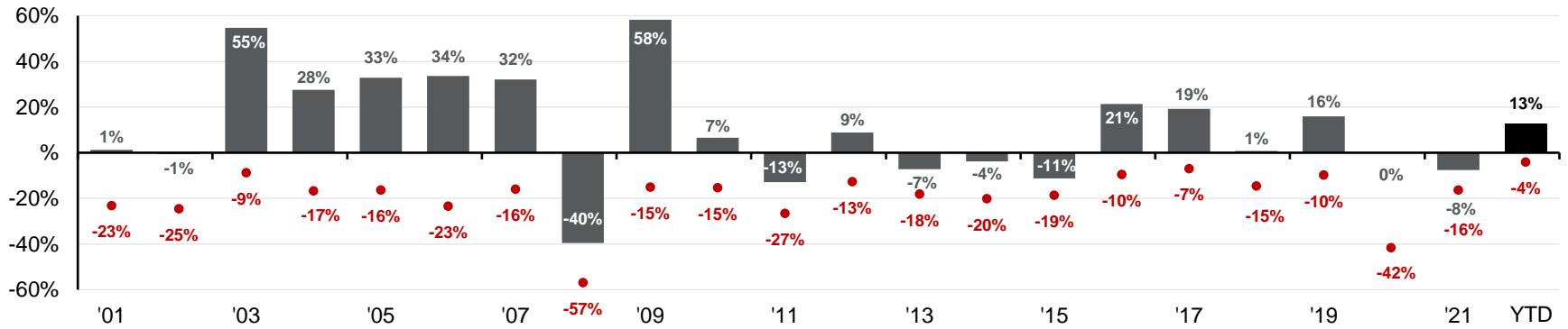
Source: FactSet, J.P. Morgan Asset Management. X-intercept for each data set is calculated using a quadratic regression where interest rates are the independent variable and the rolling 2-year correlation of stock returns and interest rate movements is the dependent variable. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



Annual returns and intra-year declines

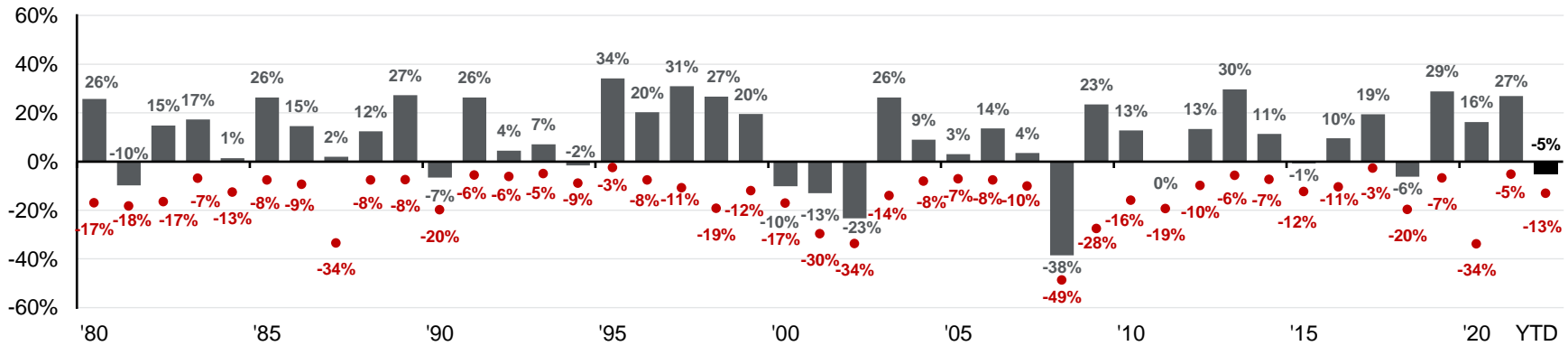
MSCI Latin America intra-year declines vs. calendar year returns

Local currency, average intra-year drops of 19.6% (median -16.4%) and annual returns positive in 13 of 21 years



S&P 500 intra-year declines vs. calendar year returns

Local currency, average intra-year drops of 14.0% (median -10.3%) and annual returns positive in 32 of 42 years



Source: FactSet, MSCI, 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 are calendar year returns from 1980 to 2021 for the S&P 500 and 2001 to 2021 for the MSCI Latin America.

Guide to the Markets – Latin America. Data are as of March 31, 2022.



S&P 500 around geopolitical events

S&P 500 selloffs around geopolitical events

Event	Start of sell off	Duration of sell off (trading days)	Size of sell-off (%)	Duration to recover to prior level (trading days)
Israel Arab war / oil embargo	10/29/1973	27	-17.1%	1,475
Shah of Iran exiled	1/26/1979	9	-4.6%	34
Iranian hostage crisis	10/5/1979	24	-10.2%	51
Soviet invasion of Afghanistan	12/17/1979	12	-3.8%	6
Libya bombing	4/21/1986	20	-4.9%	7
First Gulf War	1/1/1991	6	-5.7%	8
Kosovo bombing	3/18/1999	4	-4.1%	9
9/11 attacks	9/10/2001	6	-11.6%	15
Iraq war	3/21/2003	7	-5.3%	16
Arab spring (Egypt)	1/27/2011	2	-1.8%	3
Ukraine conflict	3/7/2014	6	-2.0%	13
Intervention in Syria	3/7/2014	21	-7.4%	12
Russia/Ukraine War	2/11/2022	17	-7.2%	11
Average	(1973-2022)	9	-5.3%	12

Equities

Source: Deutsche Bank, Refinitiv Datastream, Standard & Poor's, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Latin America. Data are as of March 31, 2022.

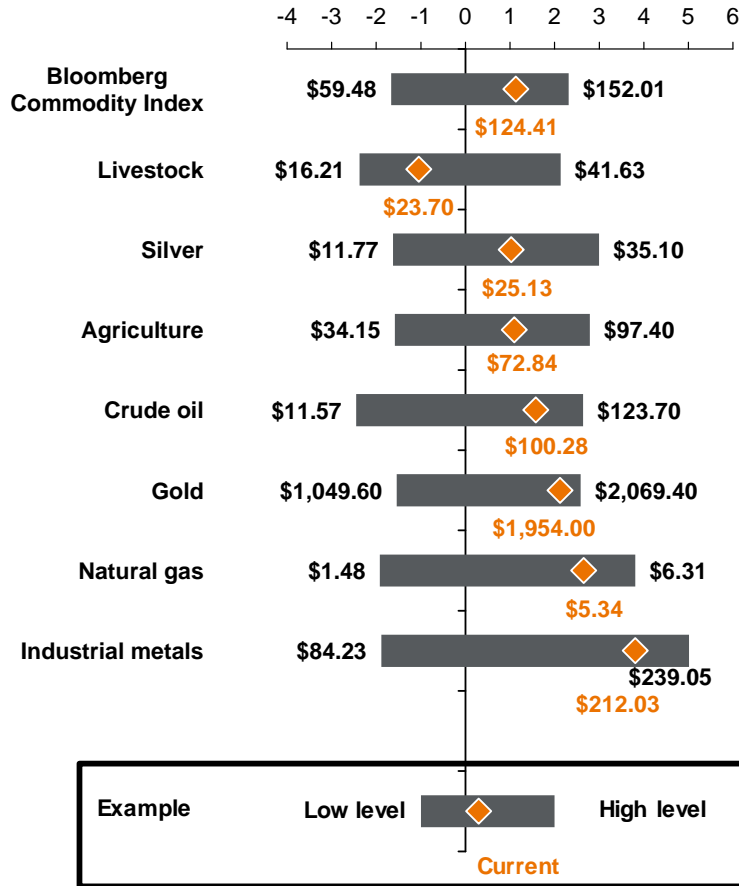


Global commodities

Other Asset Classes

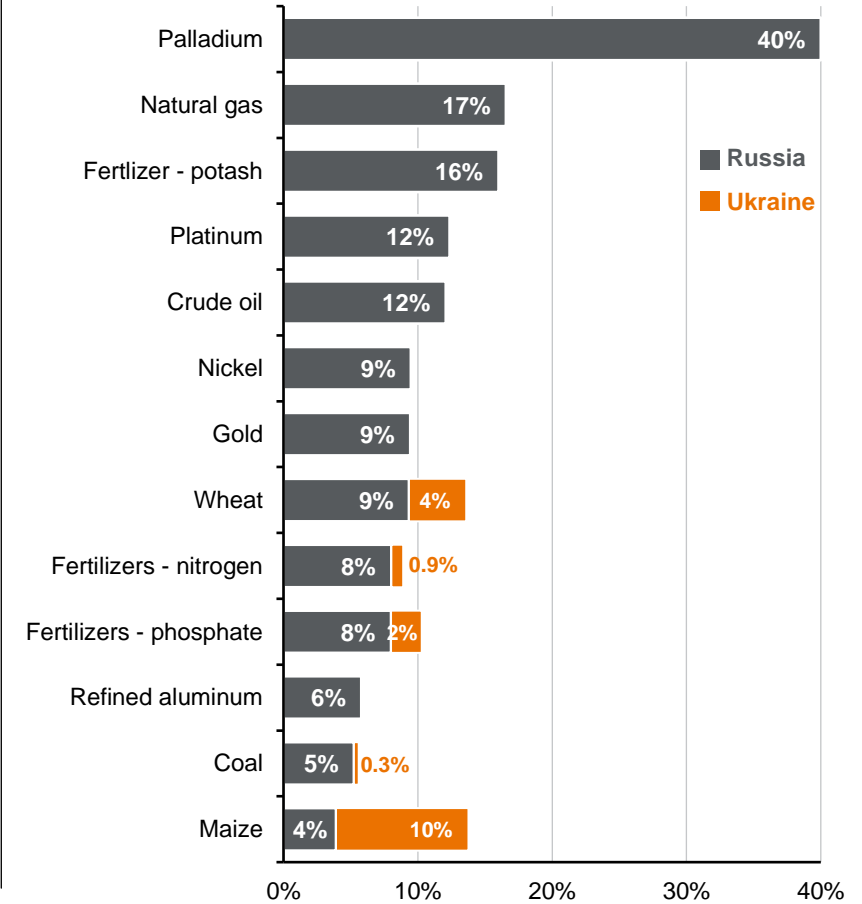
Commodity prices

Commodity price z-scores



Contribution to global production of commodities

% of global production, latest



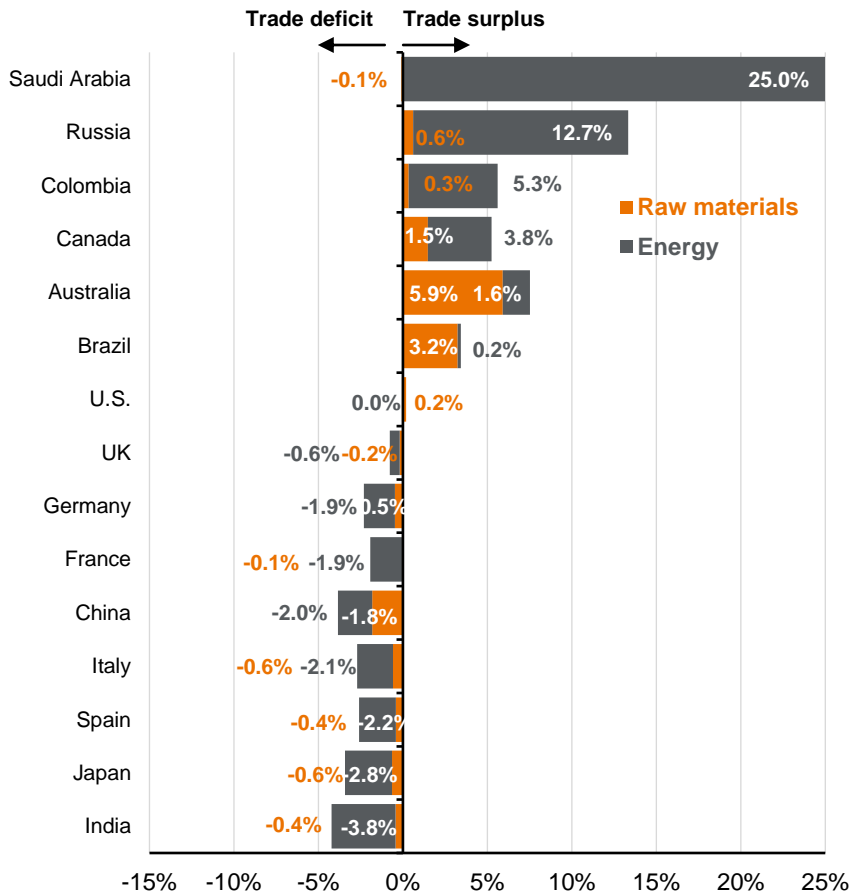
Source: FactSet, J.P. Morgan Asset Management; (Left) Bloomberg, CME; (Right) EuroStat, HSBC. Commodity prices are represented by the appropriate Bloomberg Commodity sub-index. Crude oil shown is WTI. Other commodity prices are represented by futures contracts. Z-scores are calculated using daily prices over the past 20 years. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



Commodity tailwinds and headwinds

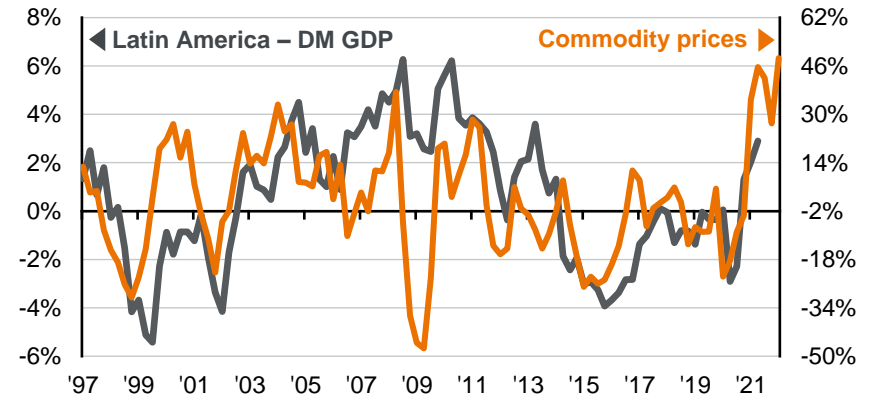
Commodity trade balance

% of GDP



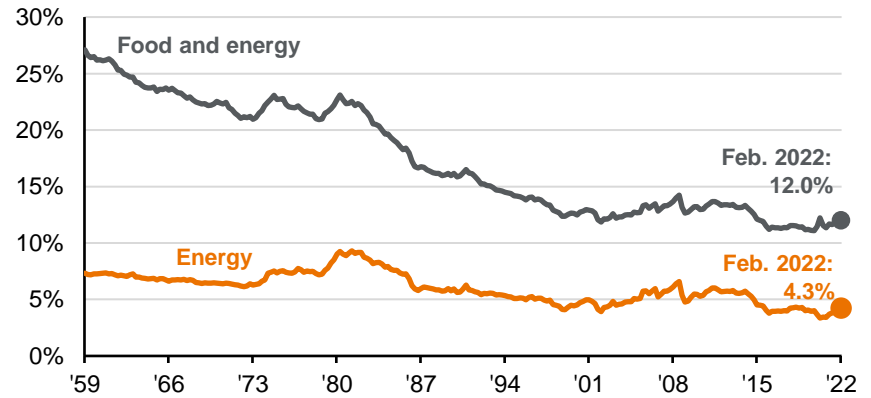
Commodity prices and Latin America economic growth

Latin America – DM GDP growth*, quarterly, % year-over-year change



U.S. consumer spending on energy and food

% share of energy goods and services and food in PCE, SAAR



Source: BEA, Bloomberg Finance L.P., EuroStat, FactSet, HBSC J.P. Morgan Asset Management; JP. Morgan Global Economic Research Guide to the Markets – Latin America. Data are as of March 31, 2022.



Oil markets

Change in production and consumption of liquid fuels

Production, consumption and inventories, millions of barrels per day

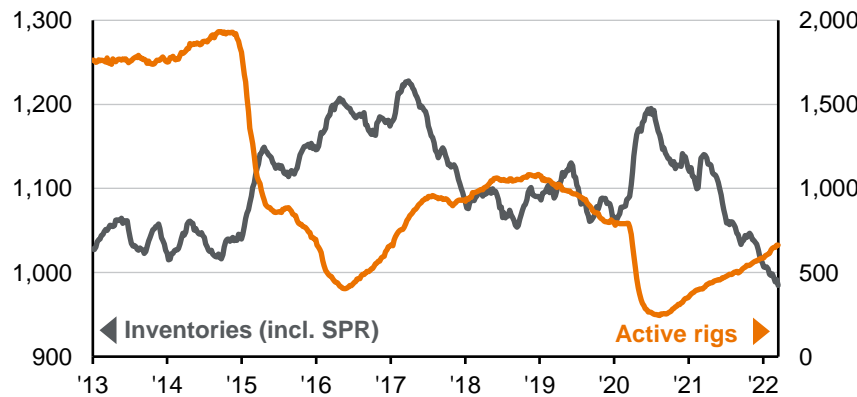
Production	2019	2020	2021	2022*	2023*	Growth since '19
U.S.	19.5	18.6	18.9	20.4	21.6	10.8%
OPEC	34.7	30.8	31.7	34.4	34.7	-0.1%
Russia	11.5	10.5	10.8	10.8	10.8	-5.8%
Global	100.3	93.9	95.6	101.0	103.0	2.6%

Consumption	2019	2020	2021	2022*	2023*	Growth since '19
U.S.	20.5	18.2	19.8	20.7	20.8	1.5%
China	14.0	14.4	15.3	15.7	16.2	15.8%
Global	100.7	92.0	97.5	100.6	102.6	1.9%

Inventory Change	2019	2020	2021	2022*	2023*
	-0.3	1.9	-1.9	0.4	0.4

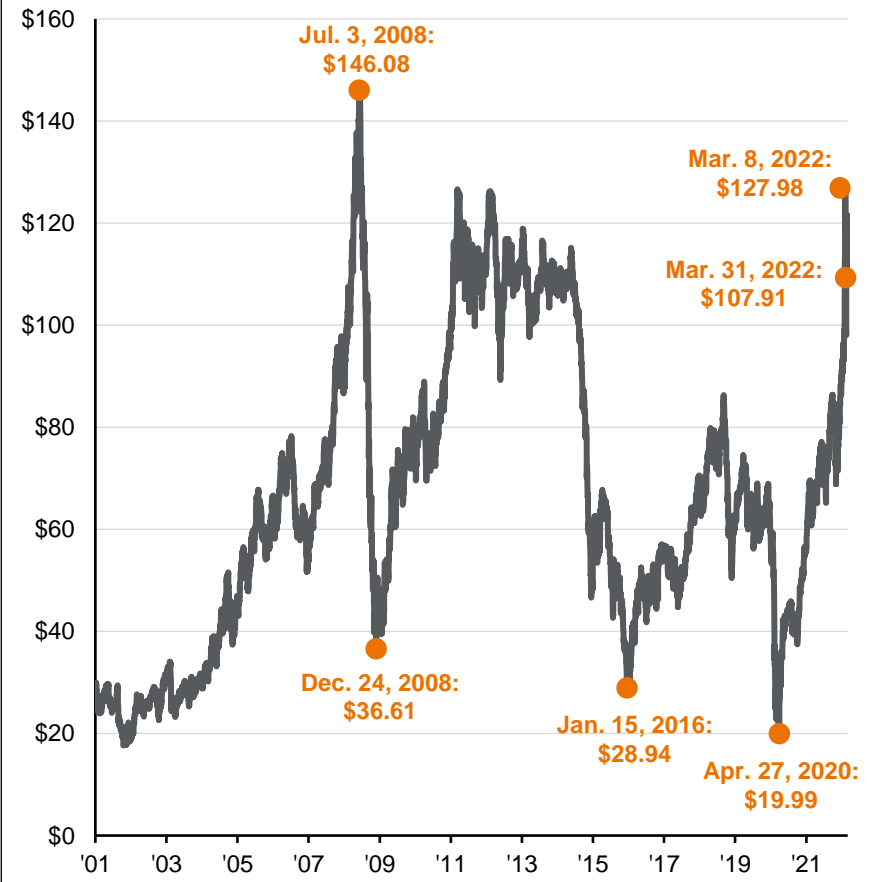
U.S. crude oil inventories and rig count**

Million barrels, number of active rigs



Price of oil

Brent crude, nominal prices, USD/barrel



Other Asset Classes

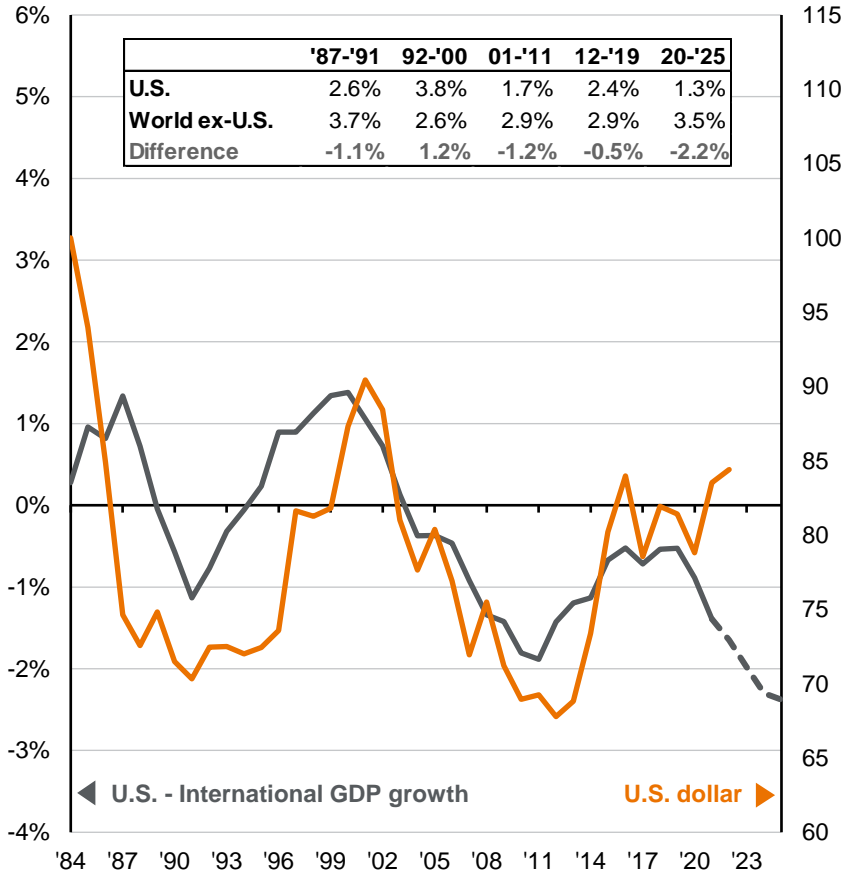
Source: J.P. Morgan Asset Management; (Top and bottom left) EIA; (Right) FactSet; (Bottom left) Baker Hughes.

*Forecasts are from the February 2022 EIA Short-Term Energy Outlook and start in 2022. **U.S. crude oil inventories include the Strategic Petroleum Reserve (SPR). Active rig count includes both natural gas and oil rigs. Brent crude prices are continuous contract NYM prices in USD. Guide to the Markets – Latin America. Data are as of March 31, 2022.



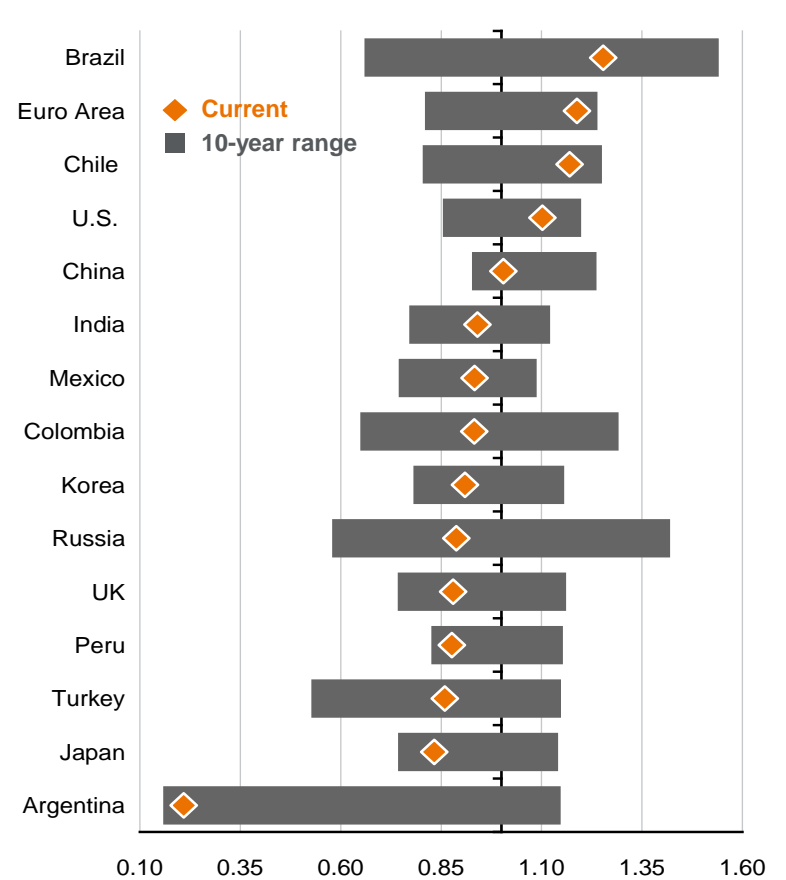
U.S. dollar in historical perspective

Index level, real broad dollar index, Jan. 2006 = 100



Currency valuations

Currencies* adjusted for relative inflation changes vs. 10-year average



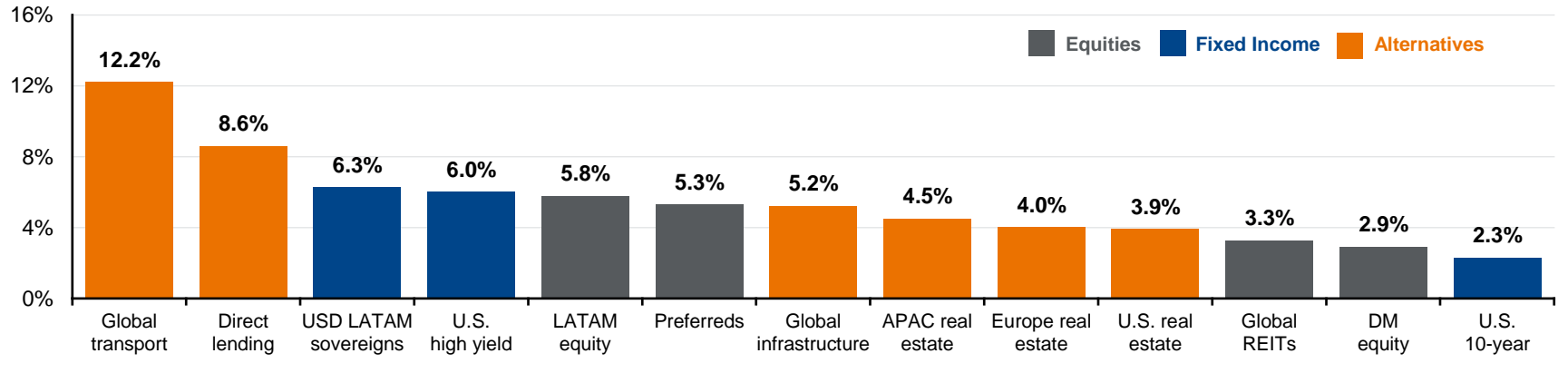
Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management; (Left) IMF. Global GDP growth is based on GDP at market exchange rates as weights. U.S. dollar is the J.P. Morgan Global Economic Research real broad effective exchange rate (CPI), calculated as year-end moves versus the prior year-end. Past performance is not a reliable indicator of current and future results.*Currencies are the real effective exchange rates (REERs), which compare the value of a currency to a weighted basket of several foreign currencies. They are deflated using a producer price index. 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 – Latin America. Data are as of March 31, 2022.



Global alternatives

Asset class yields



Alternatives correlations

2008 - 2021		Global Bonds	Global Equities	U.S. Core RE	Europe Core RE*	APAC Core RE	Global Core Infra	Transport	Timber	Direct Lending	Venture Capital	Private Equity	Equity Long/Short	Relative Value	Macro	Bitcoin
Fin. assets	Global Bonds	1.0														
	Global Equities	0.3	1.0													
	U.S. Core RE	-0.2	0.1	1.0												
Global RE	Europe Core RE*	-0.2	0.3	0.8	1.0											
	APAC Core RE	-0.1	0.1	0.8	0.7	1.0										
	Global Core Infra	-0.1	-0.1	0.3	0.1	0.2	1.0									
Real Assets	Transport	-0.2	0.0	0.6	0.6	0.6	0.0	1.0								
	Timber	-0.2	-0.1	0.2	0.1	0.1	0.1	0.0	1.0							
Private Mkts.	Direct Lending	0.0	0.7	0.3	0.4	0.3	0.2	0.2	-0.1	1.0						
	Venture Capital	0.0	0.6	0.3	0.6	0.2	0.1	0.4	0.1	0.5	1.0					
	Private Equity	0.2	0.9	0.3	0.5	0.4	0.0	0.3	-0.1	0.8	0.8	1.0				
Hedge funds	Equity Long/Short	0.2	1.0	0.0	0.2	0.0	0.0	0.3	-0.1	0.7	0.7	0.9	1.0			
	Relative Value	0.2	0.9	0.0	0.2	0.0	0.0	0.0	-0.2	0.9	0.5	0.8	0.9	1.0		
	Macro	0.3	0.4	-0.1	0.0	-0.1	0.0	0.0	0.0	0.2	0.4	0.3	0.5	0.4	1.0	
Crypto	Bitcoin	0.1	0.1	0.3	-0.2	0.1	0.5	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.0	1.0

Other Asset Classes

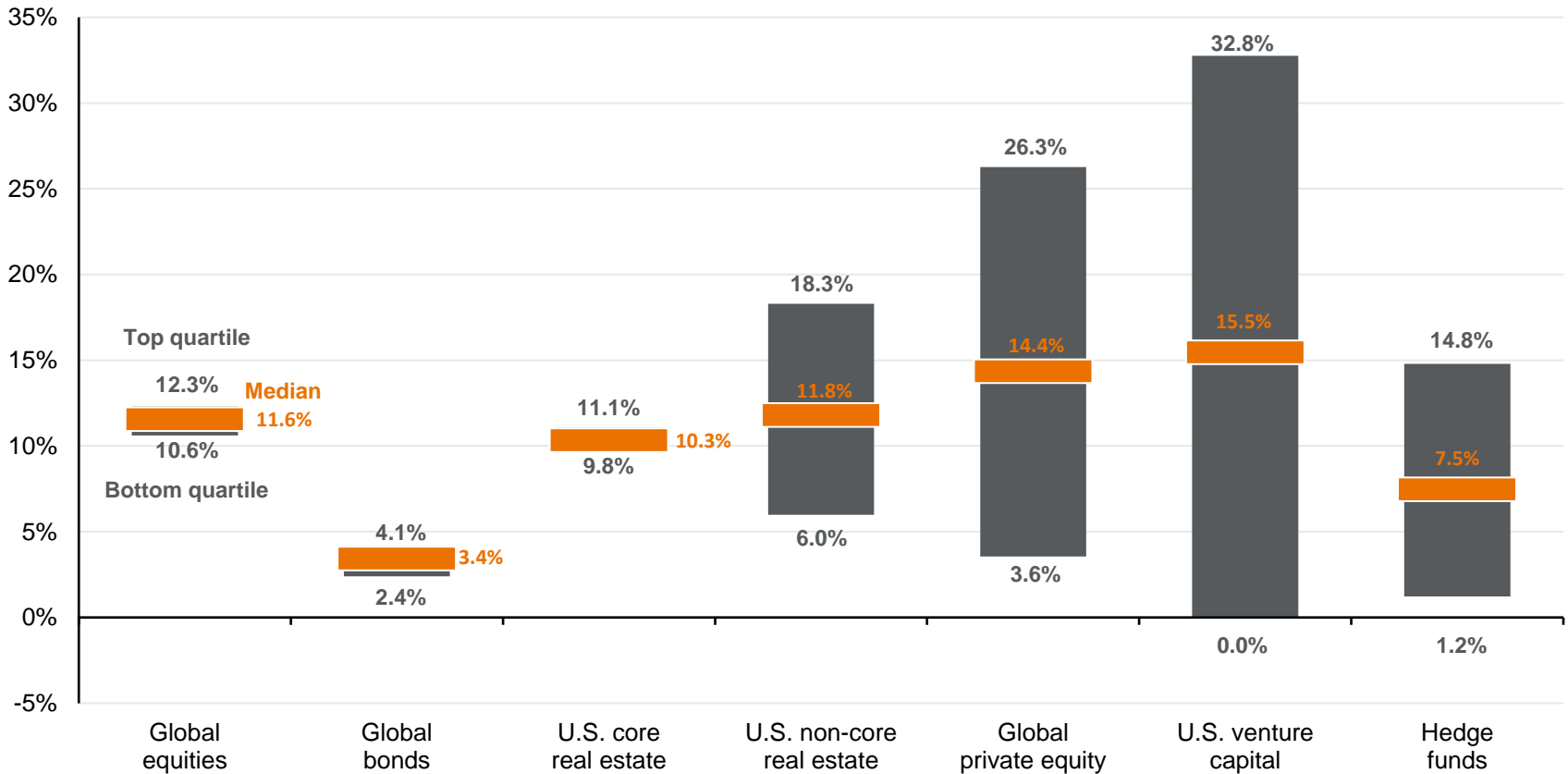
Source: Bloomberg, Burgiss, Cliffwater, HFRI, MSCI, NCREIF, J.P. Morgan Asset Management. RE – real estate. Global equities: MSCI AC World Index. Global Bonds: Bloomberg Global Aggregate Index. U.S. Core Real Estate: NCREIF Property Index – Open End Diversified Core Equity component. Europe Core Real Estate: MSCI Global Property Fund Index – Continental Europe. Asia Pacific (APAC) Core Real Estate: MSCI Global Property Fund Index – Asia-Pacific. Global Infrastructure (Infra): MSCI Global Quarterly Infrastructure Asset Index (equal-weighted blend). U.S. Direct Lending: Cliffwater Direct Lending Index. Global Private Equity: Cambridge Associates Global Private Equity Index. U.S. Venture Capital: Cambridge Associates U.S. Venture Capital Index. Hedge fund indices include equity long/short, relative value and global macro and are all from HFRI. All correlation coefficients are calculated based on quarterly total return data for the period 6/30/2008 – 12/31/2021, except correlations with Bitcoin which are calculated over the period 12/31/2010 – 12/31/2021. Returns are denominated in USD. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



Alternatives and manager selection

Private and public manager dispersion

Based on returns over a 10-year window*



Other Asset Classes

Source: Lipper, NCREIF, Cambridge Associates, HFRI, J.P. Morgan Asset Management. Global equities (large cap) and global bonds dispersion are based on the world large stock and world bond categories, respectively. *Manager dispersion is based on the annual returns for global equities, global bonds, U.S. core real estate and hedge fund returns over a 10-year period ending 4Q 2021. U.S. non-core real estate, global private equity and U.S. venture capital are represented by the 10-year horizon internal rate of return (IRR) ending 3Q 2021.

Guide to the Markets – Latin America. Data are as of March 31, 2022.



Asset class returns

2007-2021																	
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 YTD	Cum.	Ann.
LATAM equity 50.7%	Cash 1.8%	LATAM equity 104.2%	EM Asia equity 19.4%	USD LATAM sov. 12.3%	EM Asia equity 21.2%	DM equity 27.4%	USD LATAM sov. 8.1%	USD EMD sov. 1.2%	LATAM equity 31.5%	EM Asia equity 43.3%	Cash 1.8%	DM equity 28.4%	EM Asia equity 28.8%	DM equity 22.3%	LATAM equity 27.3%	DM equity 218.5%	DM equity 8.0%
EM Asia equity 41.6%	LCL LATAM sov. -10.6%	EM Asia equity 74.2%	LCL LATAM sov. 18.7%	USD EMD sov. 7.3%	Global high yield 19.6%	Global high yield 7.3%	USD EMD sov. 7.4%	Cash 0.0%	LCL LATAM sov. 17.1%	LATAM equity 24.2%	LCL LATAM sov. -2.9%	EM Asia equity 19.7%	DM equity 16.5%	Global high yield 1.0%	LCL LATAM sov. 6.7%	Global high yield 161.9%	Global high yield 6.6%
LCL LATAM sov. 17.4%	Global IG -11.2%	Global high yield 59.4%	Asset alloc. 15.0%	Global IG 4.0%	USD EMD sov. 17.4%	EM Asia equity 2.3%	DM equity 5.5%	DM equity -0.3%	Asset alloc. 15.0%	DM equity 23.1%	Global IG -3.5%	LATAM equity 17.9%	Global IG 10.1%	Cash 0.0%	Asset alloc. 2.5%	EM Asia equity 158.6%	EM Asia equity 6.5%
Asset alloc. 16.6%	USD EMD sov. -12.0%	Asset alloc. 41.9%	LATAM equity 14.9%	Global high yield 0.03122	LCL LATAM sov. 17.3%	Global IG 1.8%	EM Asia equity 5.3%	USD LATAM sov. -2.0%	Global high yield 14.3%	Asset alloc. 14.8%	Global high yield -4.1%	USD EMD sov. 15.0%	Global high yield 7.0%	USD EMD sov. -1.8%	Cash 0.0%	USD EMD sov. 144.2%	USD EMD sov. 6.1%
DM equity 9.6%	USD LATAM sov. -13.5%	LCL LATAM sov. 34.3%	Global high yield 14.8%	LCL LATAM sov. 1.6%	DM equity 16.5%	Cash 0.0%	Global IG 2.5%	Global high yield -2.7%	USD LATAM sov. 13.5%	LCL LATAM sov. 13.2%	USD EMD sov. -4.3%	USD LATAM sov. 14.1%	USD EMD sov. 5.3%	Global IG -2.1%	DM equity -5.7%	USD LATAM sov. 123.4%	USD LATAM sov. 5.5%
USD EMD sov. 6.2%	Asset alloc. -19.8%	DM equity 30.8%	USD LATAM sov. 13.3%	Asset alloc. 0.4%	USD LATAM sov. 16.0%	Asset alloc. -3.7%	Cash 0.0%	Global IG -3.8%	USD EMD sov. 10.2%	USD LATAM sov. 11.4%	Asset alloc. -4.5%	Asset alloc. 14.1%	USD LATAM sov. 3.3%	USD LATAM sov. -3.7%	Global high yield -5.7%	Global IG 97.3%	Global IG 4.6%
Global IG 6.1%	Global high yield -26.9%	USD EMD sov. 29.8%	DM equity 12.3%	Cash 0.1%	Asset alloc. 15.6%	USD EMD sov. -5.3%	Global high yield 0.0%	EM Asia equity -9.5%	DM equity 8.2%	Global high yield 10.4%	USD LATAM sov. -5.8%	LCL LATAM sov. 12.7%	Asset alloc. 3.0%	EM Asia equity -4.8%	USD LATAM sov. -5.7%	Asset alloc. 96.4%	Asset alloc. 4.6%
USD LATAM sov. 4.9%	DM equity -40.3%	USD LATAM sov. 25.8%	USD EMD sov. 12.2%	DM equity -5.0%	Global IG 12.5%	USD LATAM sov. -7.7%	Asset alloc. -0.6%	Asset alloc. -12.9%	EM Asia equity 6.5%	USD EMD sov. 10.3%	LATAM equity -6.2%	Global high yield 12.6%	Cash 0.5%	Asset alloc. -6.3%	Global IG -6.2%	LCL LATAM sov. 71.3%	LCL LATAM sov. 3.7%
Cash 4.8%	LATAM equity -51.3%	Global IG 23.7%	Global IG 7.0%	EM Asia equity -17.2%	LATAM equity 8.9%	LCL LATAM sov. -8.2%	LCL LATAM sov. -4.2%	LCL LATAM sov. -21.7%	Global IG 6.0%	Global IG 9.3%	DM equity -8.2%	Global IG 11.8%	LCL LATAM sov. 0.3%	LATAM equity -7.7%	EM Asia equity -8.6%	LATAM equity 15.4%	LATAM equity 1.0%
Global high yield 3.2%	EM Asia equity -52.8%	Cash 0.1%	Cash 0.1%	LATAM equity -19.1%	Cash 0.1%	LATAM equity -13.2%	LATAM equity -12.0%	LATAM equity -30.8%	Cash 0.3%	Cash 0.8%	EM Asia equity -15.2%	Cash 2.2%	LATAM equity -13.5%	LCL LATAM sov. -14.4%	USD EMD sov. -10.0%	Cash 13.4%	Cash 0.8%

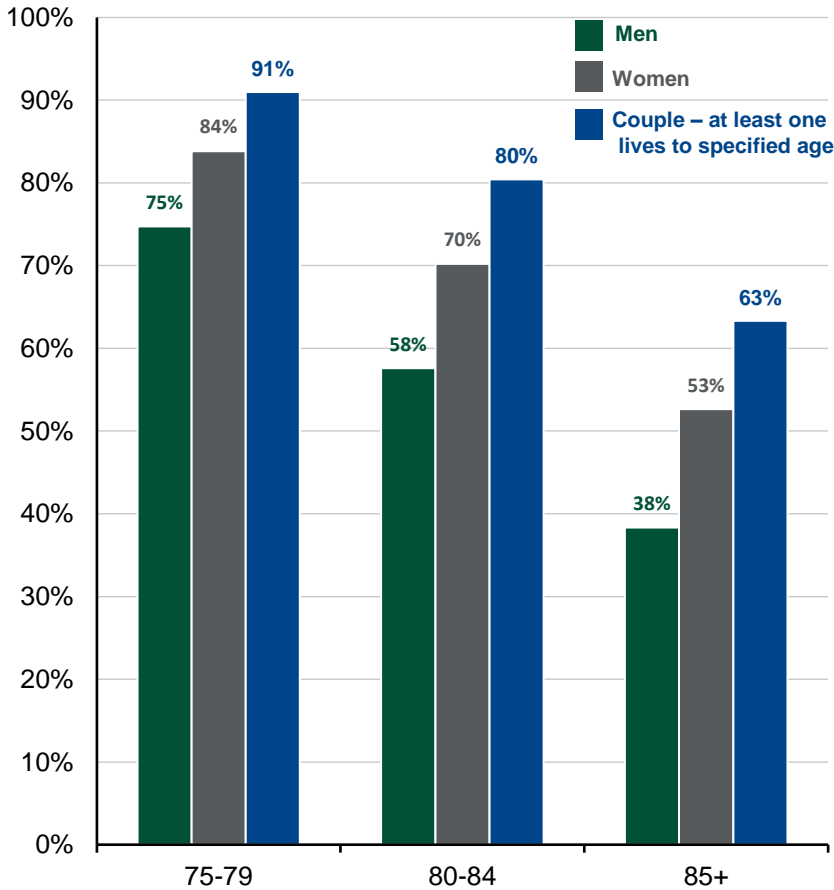
Source: Bloomberg, FactSet, J.P. Morgan Global Economic Research, MSCI, J.P. Morgan Asset Management. LATAM equity, EM Asia equity, DM equity, Global high yield, Global IG (investment grade), LCL LATAM sov. (sovereigns), USD LATAM sov., USD EMD sov. and cash are MSCI Latin America, MSCI EM Asia, MSCI The World, Bloomberg Global High Yield, Bloomberg Global Credit – Corporate – Investment Grade, GBI-EM Global Diversified Latin Region subindex (US\$), EMBIG Diversified Latin Region subindex, EMBIG Diversified index and Bloomberg 1-3m Treasury, respectively. The “Asset Allocation” portfolio assumes the following weights: 10% in LATAM equity, 5% in EM Asia equity, 5% in DM equity, 10% in global high yield, 5% in global investment grade, 40% in LCL LATAM sovereigns, 15% in USD LATAM sovereigns, 5% in USD EMD sovereigns and 5% cash. All asset class returns are unhedged and shown in USD.



Life expectancy and pension shortfall

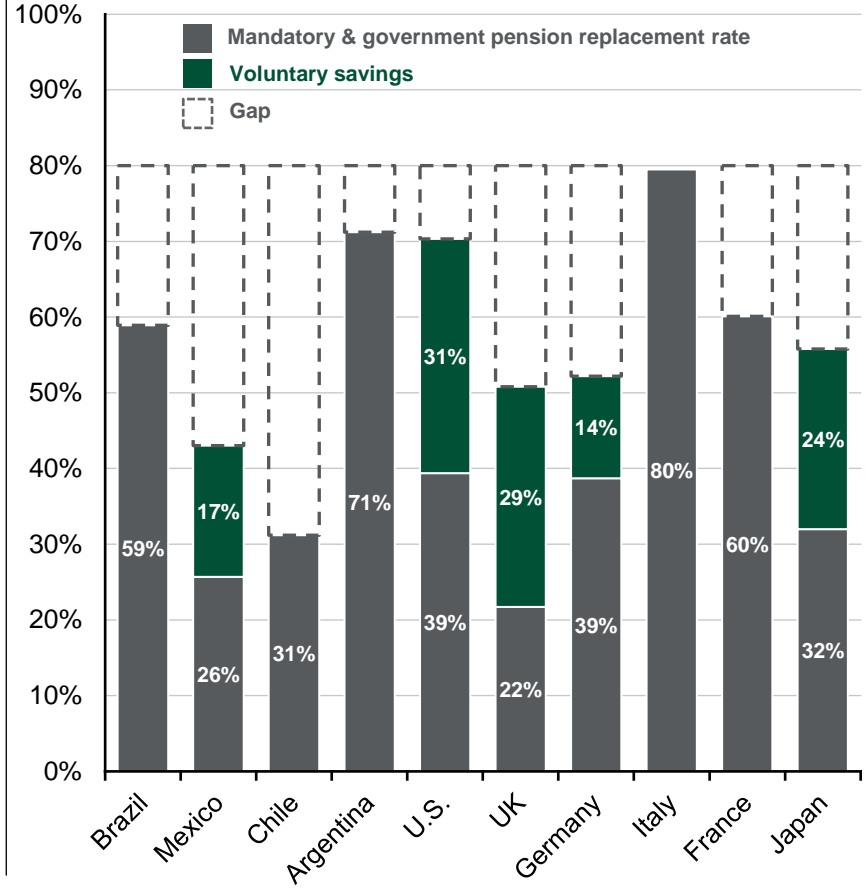
Probability of reaching certain ages

Persons aged 65-69, by gender, and combined couple



Mandatory and voluntary savings by country

Contribution to pre-retirement income replacement goal of 80%



Source: J.P. Morgan Asset Management; (Left) WHO Global Health Observatory data, life expectancy tables (2019); (Right) OECD Pensions at a Glance 2019. Life expectancy rates are based on Brazilian life expectancy tables. Mandatory and government pension replacement rate is the total public pension or forced savings in defined contribution plans; Voluntary savings is defined contribution savings by employers and employees; Gap is the savings shortfall assuming a desired pre-retirement income replacement rate of 80%. Pre-retirement income is calculated for the average earning worker who is assumed to have worked a full career, defined as entering the labor market at age 20 and working until the normal pension age within each country.

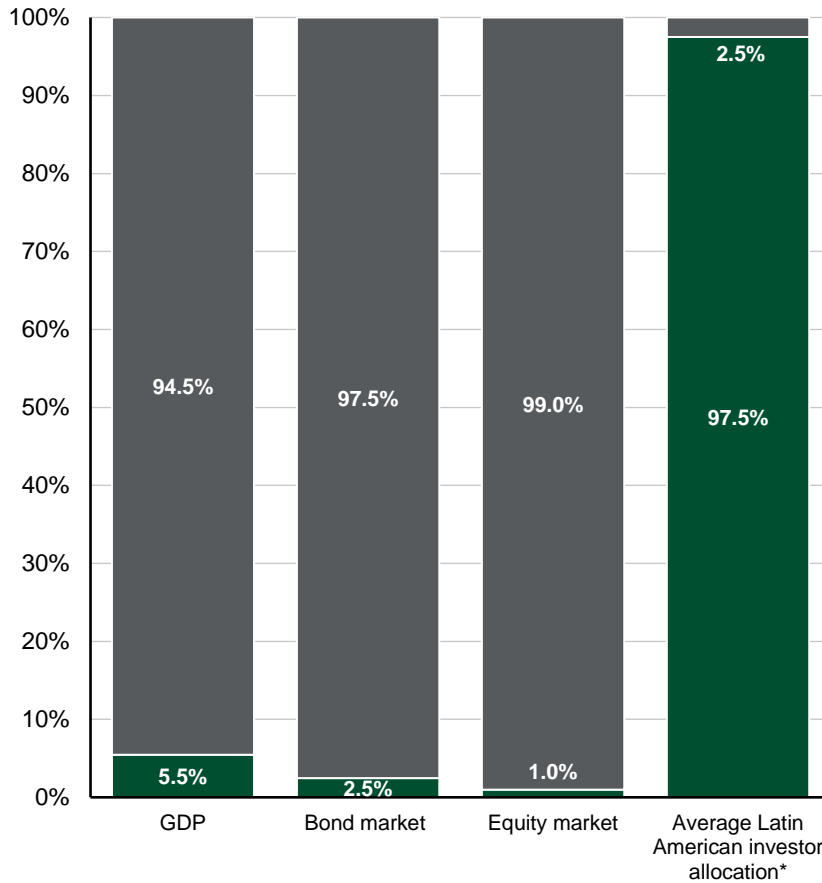
Guide to the Markets – Latin America. Data are as of March 31, 2022.



Local investing and global opportunities

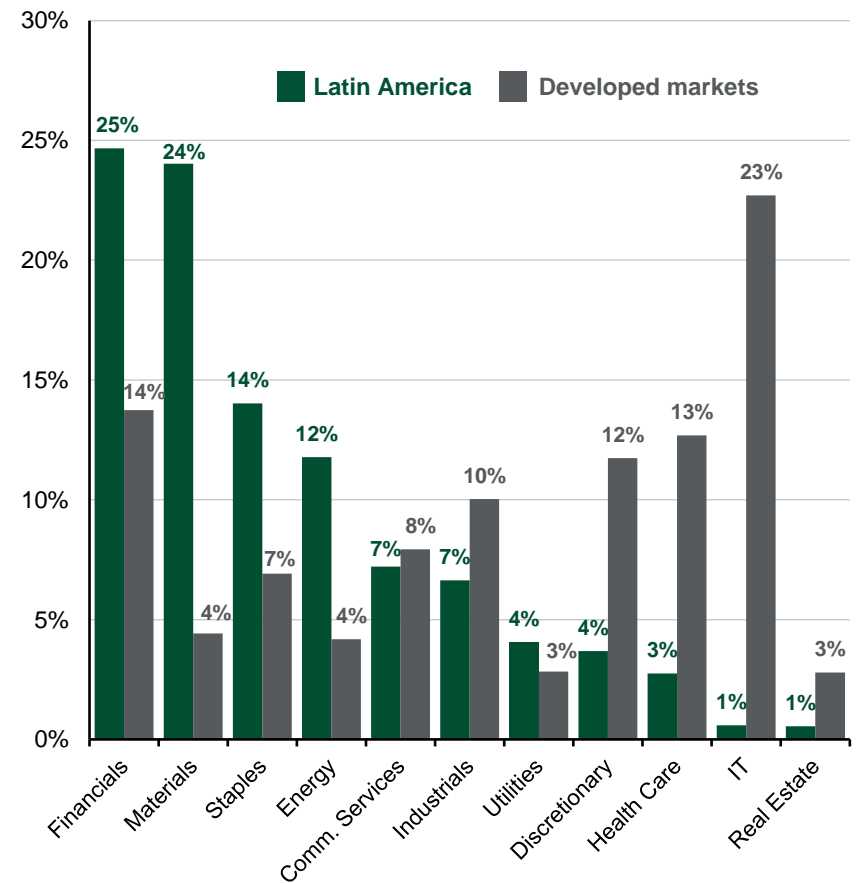
Investment universe & Latin American investors

Percentage of total net assets



Sector exposure

% of MSCI The World Index and MSCI Latin America



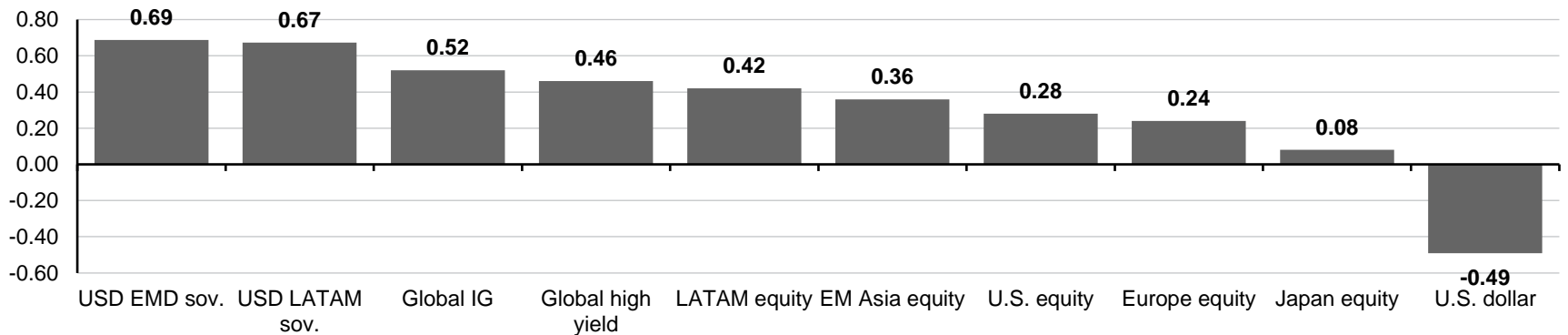
Source: MSCI, J.P. Morgan Asset Management; (Left) BIS, Cerulli Associates, IMF. Latin American figures include Brazil, Chile, Colombia, Mexico and Peru. Share of global GDP is based on purchasing power parity (PPP) as calculated by the IMF for 2021. Share of global market capitalization is based on float-adjusted MSCI data in U.S. dollar terms. Share of global bond market is based on BIS individual country total debt outstanding in U.S. dollar terms and is as of 1Q21. *Average investor allocation is an AUM weighted average of mutual fund international exposure in each country found in Cerulli Associate's 2014 report "Latin American Distribution Dynamics 2014: Entry Points to Emergent Economies." Percentages may not sum to 100% due to rounding. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



Correlations and beta

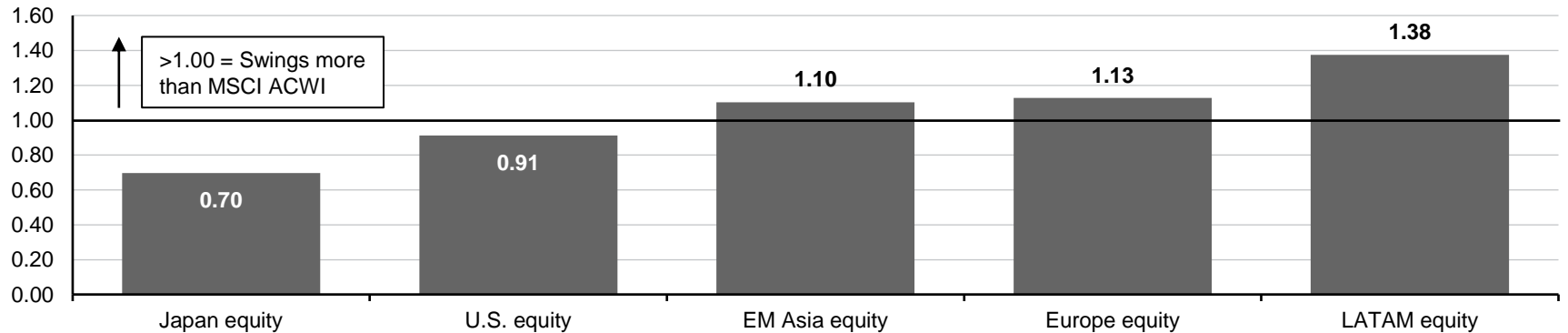
Correlation between Latin America local sovereign bonds vs. other asset classes

Local currency, monthly total returns



Beta of regional equities to global equities (MSCI ACWI)

U.S. dollars, monthly price returns



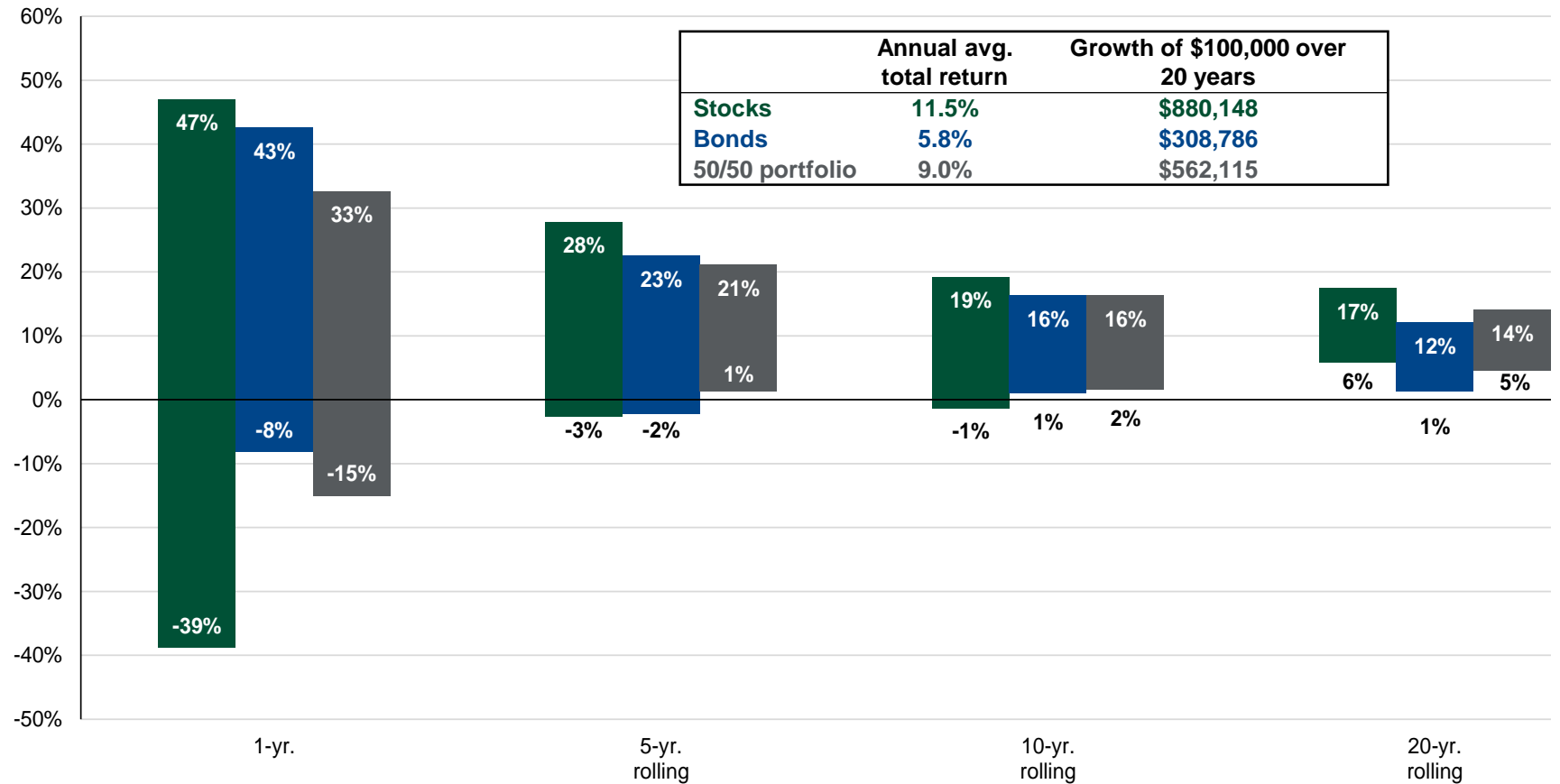
Source: Bloomberg, FactSet, J.P. Morgan Global Economic Research, MSCI, Standard & Poor's, J.P. Morgan Asset Management. LCL LATAM sov. (sovereigns), USD LATAM sov., USD EMD sov., LATAM equity, EM Asia equity, U.S. equity, Europe equity, Japan equity, Global high yield, Global IG (investment grade) and U.S. dollar are: GBI-EM Global Diversified Latin Region subindex, EMBIG Diversified Latin Region subindex, EMBIG Diversified index, MSCI Latin America, MSCI EM Asia, S&P 500, MSCI Europe, MSCI Japan, Bloomberg Global High Yield, Bloomberg Global Credit – Corporate – Investment Grade and J.P. Morgan Emerging Market Currency index, respectively. Correlations are based on monthly total return data in local currency terms for the period 2/28/2002– 3/31/2022. Beta calculations are based on monthly price returns in U.S. dollars for the period 2/28/2002– 3/31/2022. *Guide to the Markets – Latin America*. Data are as of March 31, 2022.



Time, diversification and the volatility of returns

Range of stock, bond and blended total returns

Annual total returns, 1950 – 2020



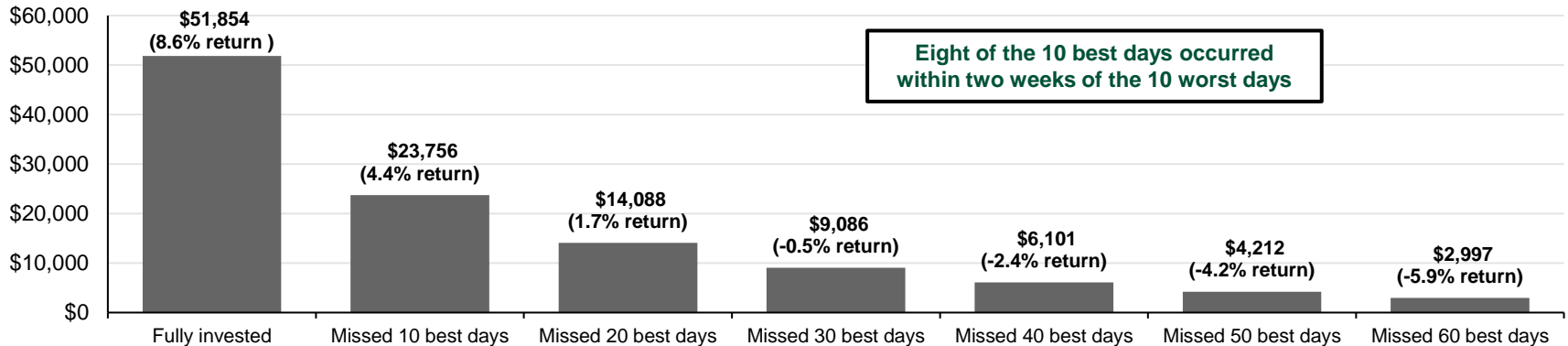
Source: Bloomberg, FactSet, Federal Reserve, Robert Shiller, Strategas/Ibbotson, J.P. Morgan Asset Management. Returns shown are based on calendar year returns from 1950 to 2021. Stocks represent the S&P 500 Shiller Composite and Bonds represent Strategas/Ibbotson for periods from 1950 to 2010 and Bloomberg Aggregate thereafter. Growth of \$100,000 is based on annual average total returns from 1950 to 2021.
 Guide to the Markets – Latin America. Data are as of March 31, 2022.



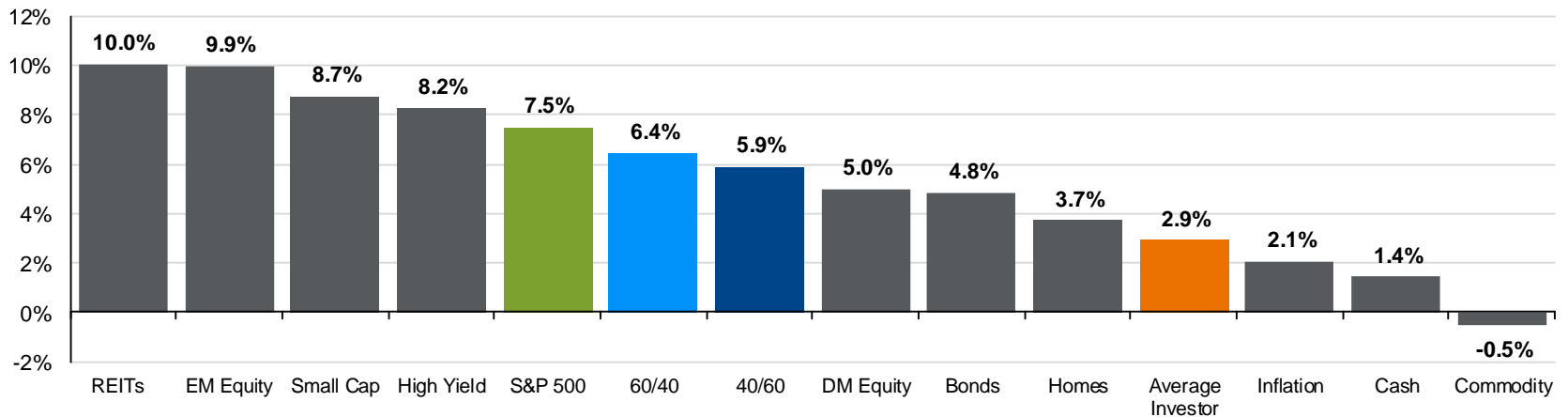
Market timing, diversification and the average investor

Returns of S&P 500

Performance of \$10,000 between January 1, 2001 and December 31, 2021, annualized total returns



20-year annualized returns by U.S. asset class (2001-2020)



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management; (Bottom) Bloomberg, Dalbar Inc, MSCI, NAREIT, Russell. Indices used are as follows: REITs: NAREIT Equity REIT Index, Small Cap: Russell 2000, EM Equity: MSCI EM, DM Equity: MSCI EAFE, Commodity: Bloomberg Commodity Index, High Yield: Bloomberg Global HY Index, Bonds: Bloomberg U.S. Aggregate Index, Homes: median sale price of existing single-family homes, Cash: Bloomberg 1-3m Treasury, Inflation: CPI. 60/40: A balanced portfolio with 60% invested in S&P 500 Index and 40% invested in high-quality U.S. fixed income, represented by the Bloomberg U.S. Aggregate Index. The portfolio is rebalanced annually. Average asset allocation investor return is based on an analysis by Dalbar Inc., which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. *Guide to the Markets - Latin America*. Data are as of March 31, 2022.



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.



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

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Unless otherwise stated, all data are as of March 31, 2022 or most recently available.

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