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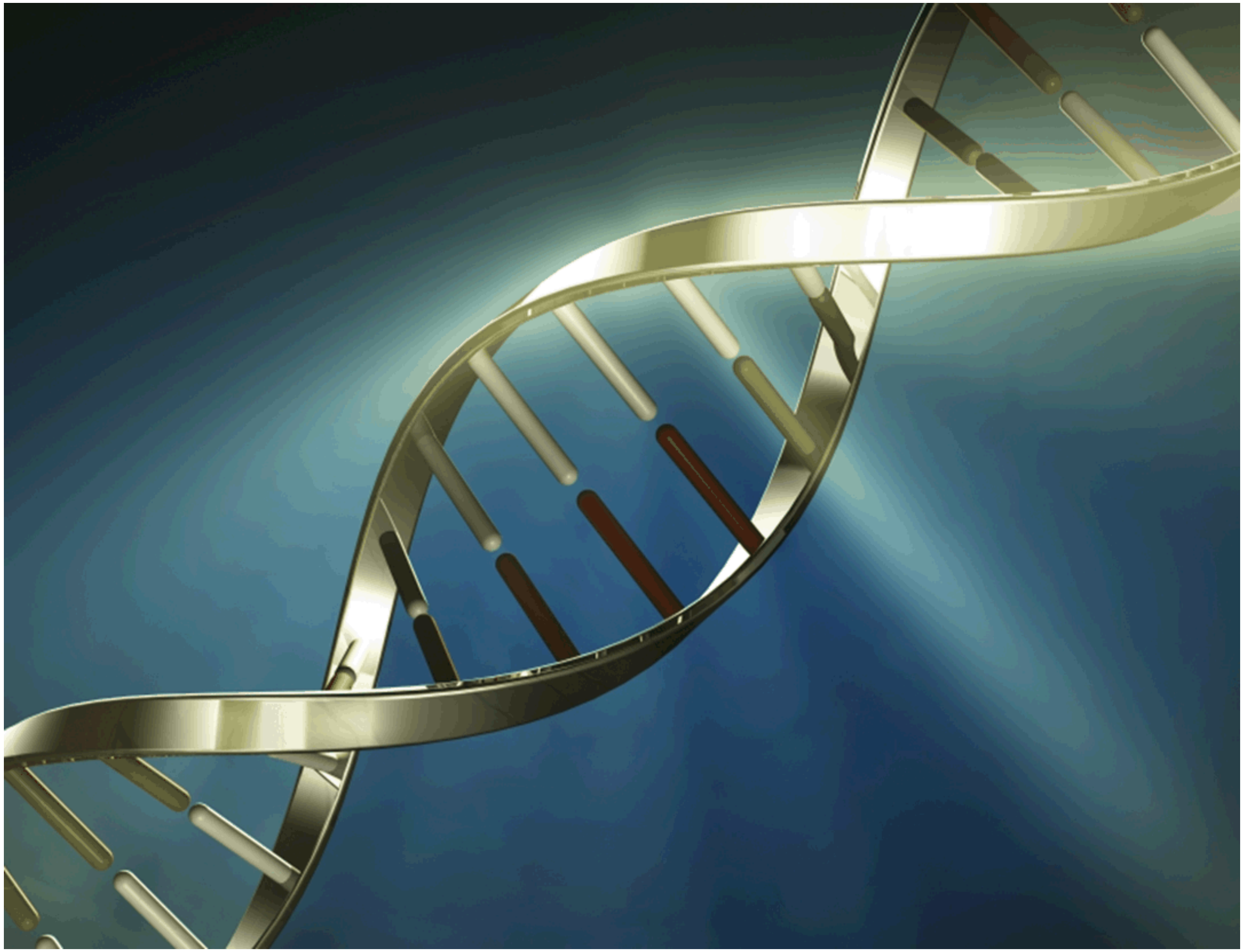
Cross-Asset Strategy

11 March 2020



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Answers to 10 common questions on COVID-19, Oil & US elections

Cross-asset outlook & strategy

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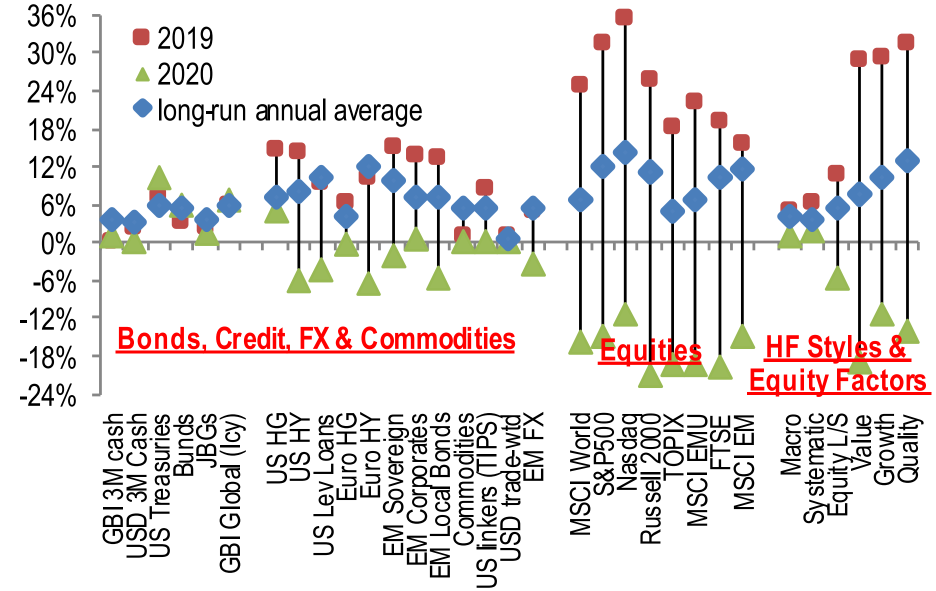
See the end pages of this presentation for analyst certification and important disclosures.

A pandemic intertwined with an oil price war and an election

- **The intersection of the world's worst-ever public health crisis** (COVID-19) **and a geopolitical conflict** (OPEC+/US shale price war) **has delivered another year of above-average returns on DM Bonds but losses on most other markets.** Returns on growth assets were always vulnerable to some mean reversion in 2020 given their high starting valuations at end-2019, but even the most imaginative thinkers never scripted this confluence for the year.
- **This presentation answers ten common questions** (summarized on slides 2 and 3) about how the primary issues of COVID-19 and the oil price collapse play out for the global economy and markets**.** US elections are a diminishing wildcard given Biden's surge in the primaries and the cheapening of US Equity & Credit markets, but the possibility of a Democratic sweep in November is still worth considering. The video on the cover provides a 9-minute summary.
- **The most important questions center on:**
  - **when the virus peaks** in US and Europe;
  - **whether containment triggers a record-brief technical recession** (two quarters) or a longer fundamental one (three or more quarters);
  - **the effectiveness of monetary and fiscal stimulus** in stabilizing markets absent an effective public health response;
  - what **macro scenario is discounted in market valuations** and **investor positioning**; and
  - what **long-term after effects** these crises will create to challenge policymakers and markets in 2021.
- Because a risk scenario has been to think of shocks as delivering a technical recession at worst, **portfolio recommendations** have kept a moderate overweight of Equities versus Fixed Income but attempted to reduce beta to the business cycle by funding Equities with Credit, by owning some duration (in EMs) and by owning USD and JPY versus other currencies. There is a case for averaging more into cyclicals on a view that risk premia are high and a multi-quarter growth/earnings contraction unlikely, but the patchy public health response in some countries argues for patience.

Mean reversion reasserts itself via a forgettable 2018, extraordinary 2019 and terrible 2020

2020 total returns versus 2019 and long-run average



Source: J.P. Morgan

- **There are three conditions for market stability in the next one to two months: (1)** a peak in the US/European daily infection rates and slowdown towards a single-digit pace, thus allowing investor to project the end of growth and earnings downgrades; **(2)** recession-like pricing in financial markets to accommodate grim newsflow; and **(3)** a reversal in investor positioning from January's widespread overweights to neutrals or underweights. The last two conditions have mostly been met but the first has not. In an environment of diminishing returns to DM central bank easing because rates are near the effective lower bound, fiscal easing would need to be considerable (maybe 1% of GDP) to allow markets to rally sustainably if infection rates are still accelerating

Answers to 10 common questions (part 1)

1. When will COVID-19 peak? **(slides 3-4)**	• A peak then slowdown in the **daily infection rate** to low single digits is more important for markets than a peak in the total number of infections, because the rate is what allows investors to project an end to the containment measures driving the growth/earnings downgrades. • **China's** infection rate fell to 1% about two months after the initial outbreak, but only after the **strictest lockdown** in modern history. **Other countries** have been slower to announce lockdown or have opted for either targeted or voluntary measures, which is why infection rates might not slow sufficiently until April/May.
2. Will the virus trigger a GDP and/or earnings recession? **(slides 5-6)**	• **Technical recessions** are just two consecutive quarters of negative GDP growth. One-quarter contractions are common due to epidemics, natural disasters and climate events. It is easy to envision a two-quarter contraction if containment measures put in place in Q1 must extend to Q2 in order to slow infection rates. **Earnings recessions** (2015) and earnings stagnation (2018) can occur without GDP recessions. • **The US** has never experienced a contraction of just two quarters. When the economy contracts, it does so for three to eight quarters due to underlying imbalances in the household and/or corporate sector that require much more time to correct. • The US economy doesn't exhibit such large **imbalance across the private sector** currently. Also, the nature of the primary shock (a respiratory virus) seems inherently more seasonal that previous shocks. So a technical recession is a reasonable scenario but a fundamental one that extends for several quarters is not.
3. Can monetary/fiscal easing prevent a recession? **(slide 8)**	• **Monetary and** sometimes **fiscal easing** have always been part of the **rebalancing process** for economies and **stabilization** for markets. But the first moves are rarely sufficient to turn growth, earnings and asset prices if underlying adjustment hasn't occurred in the economy, if **valuations** don't reflect a decent risk premium for recession and if investor **positions** haven't shifted from overweight to underweight cyclical assets. • **Every crisis is different** from previous ones in some ways. Since the current one intertwines a **public health** problem with an **overcapacity** issue in energy markets, monetary and fiscal easing will support growth eventually but aren't sufficient now. The public health response must be broad and strong enough to contain the outbreak within a short window (a few months) and thus allow activity to start normalizing this spring.
4. How low can Oil go, and shouldn't a price collapse stimulate growth and support cyclicals? **(slide 9)**	• A global oil market that is **oversupplied by 2mbd** can trigger a price drop of 60% yoy, implying risk of a dip to high $20s. • A lower oil price boosts **consumption** eventually by transferring income from a few countries (oil producers) to the rest of the world with a higher marginal propensity to spend. But as the 2014-16 OPEC price war illustrated, when the price decline is this large and this quick, it brings **more near-term harm than good** via lower US capex spending and corporate profits in the shale sector; worse fiscal and trade balances for a handful of large EM economies; higher downgrade and default risk for US High Grade and High Yield Credit (9% and 12%, respectively, of JPM's Credit indices); weaker EM currencies; and less EM central bank easing.

Source: J.P. Morgan

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Answers to 10 common questions (part 2)

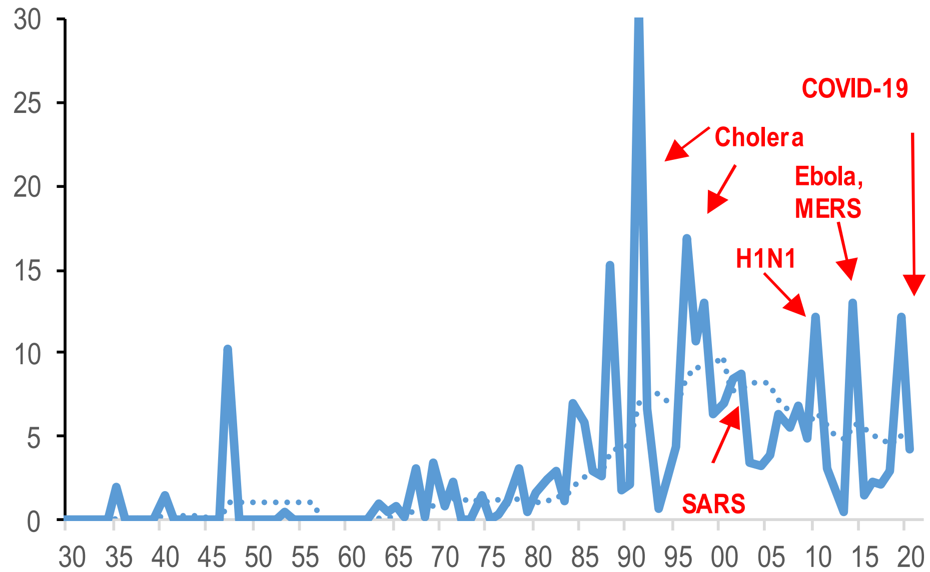
5. What macro scenario do current valuations discount? (slides 11-15)	• Despite differences in the causes of previous recessions and/or financial crises, there is reasonable consistency in the **behaviour of most asset classes during these episodes**. Based on either **peak-to-trough** moves (for bond yields, equity and commodity prices, equity multiples), **trough-to-peak** moves (for implied volatility and the trade-weighted dollar) or **absolute levels** (for credit spreads), markets price 60% to 100% odds of a typical recession, with equity vol and US 10Y rates pricing the highest odds (90-100%), and equity indices plus credit spreads somewhat less (50% to 70% odds). • A **weighted average** of these measures across Equities & FICC has risen to almost 70%, so near the **peak risk premia** generated by the Asian Crisis and EMU Crisis.
6. How much has low liquidity amplified market moves? (slide 16)	• Measures of market depth show **record-thin conditions in US Treasuries and Equities,** but more normal conditions in Credit and above-average depth in Oil. So Rate and Equity moves may be distorted, but others don't appear to be. • Because market depth have been declining for several years in US Equities and for the past year in USTs, the trend seems sufficiently **structural** to justify lower-than-average allocations even when macro conditions appear supportive.
7. How are investors positioned? (slides 17-18)	• **A daily proxy** for investor positioning based on ETF flows across Equities & FICC shows fairly **large underweights** (-0.5 sigmas below average). **A medium-term measure** combining futures data, mutual fund/hedge fund betas and JPM investor surveys has fallen to **neutral** on cyclical assets.
8. Where's the value? (slide 19)	• **All growth assets have cheapened, but no major Equity or FICC market exhibits extreme value**, defined as a forward P/E, credit spread, real bond yield, real exchange rate or real commodity price that's 1-2 sigmas from long-run avg.
9. Do US elections still matter for markets? (slides 20-24)	• **US elections have diminished as a market risk** because Biden has surged in the polls and equity markets have cheapened due to the virus and oil. • **Best outcome:** Biden Presidency with Republican Senate, which preserves tax regime but minimizes disruptions from foreign/trade policy; **Second-best outcome:** Trump re-election, which preserve tax/regulatory regime but revives geopolitical risk; **Worst outcome**: Democratic sweep even under Biden, given implications for corporate/capital gains taxes.
10. What are the long-term consequences of these crises that will impact investment strategy into 2021? (slide 25)	• When the COVID-19 crisis and OPEC+ price war end, investors should mull the following **questions**, which **range from the ordinary to the existential**: **(1) How will DM bond yields ever rise to reasonable levels** (2-3% on 10Y rates) unless central banks unwind 2019-20 insurance cuts; **(2)** If DM policy rates enter 2021 around 0%, what **capacity** will they have **to offset a future shock**, particularly if some governments are too divided politically to deploy fiscal policy quickly or in size; **(3)** Can **valuations** like equity P/Es and credit spreads return to early-2020 levels if low rates also imply an inability to backstop growth; **(4)** How much can **Value stocks rerate** if these crises have hastened the Japanization process in US Treasuries; **(5)** Would the advent of 0% cash rates in the US plus twin fiscal/current account deficits finally deliver a **USD crisis**; **(6)** Will two OPEC price wars in five years create a disruptive **oil supply cliff** in the medium term en route to long-term clean energy; and **(7)** If a **sick-swan event** like COVID-19 has almost triggered a global recession, how should policymakers and investors prepare for a **green swan event** (climate catastrophe).

Source: J.P. Morgan

COVID-19: fastest and broadest pandemic in modern history

Pandemics: recurring scares, declining mortality

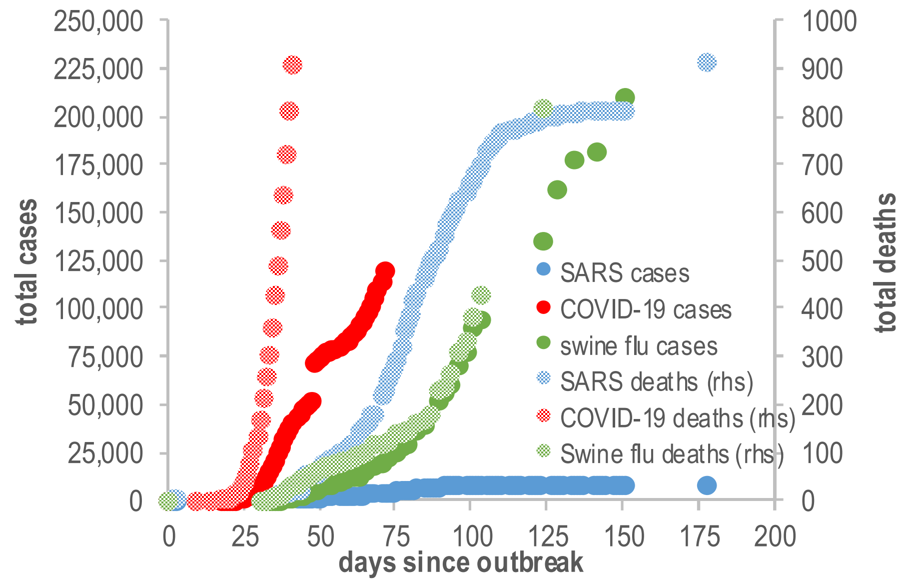
Annual deaths from epidemics in thousands. Dotted line shows ten-year moving average.



Source: J.P. Morgan

COVID-19's spread has outpaced SARS, though with a much lower mortality rates

Cumulative number of cases (left scale) and deaths (right scale) in days since first report of each epidemic



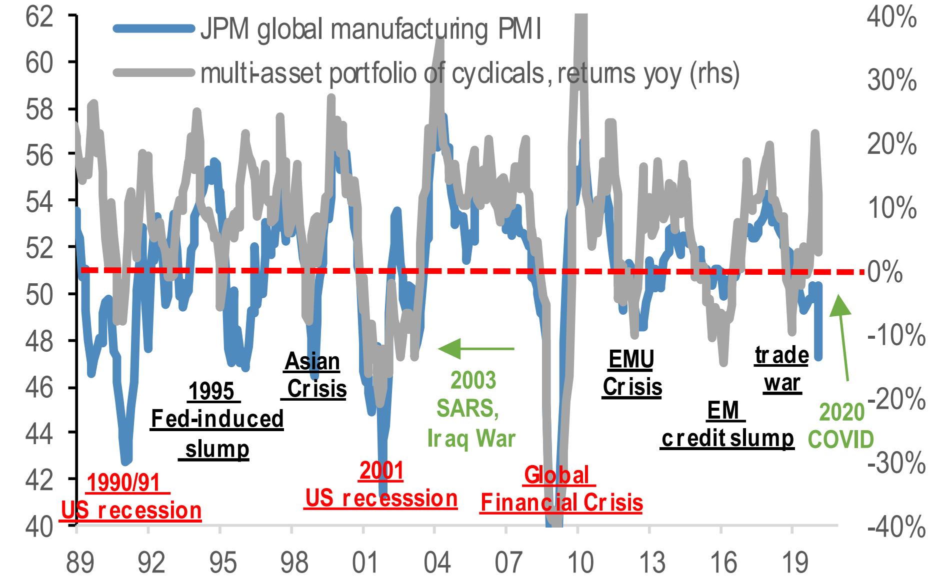
- **Epidemics/pandemics are recurring issues in the public health sphere, but they are rarely material for the global economy or markets, for two reasons: (1)** outbreaks have occurred less frequently in systemically-important countries than in smaller ones; and **(2)** until COVID-19, containment measures have never involved broad and such disruptive lockdowns as have occurred in China and Italy.

- **Ranking COVID-19 versus previous epidemics**: **(1)** a wider **geographic spread** (+100 countries) compared to SARS (26 countries), swine flu (20), MERS (27) and Ebola (8); **(2)** more **total infections** (+120k) than SARS (+8.5k), MERS (+2.5k) and Ebola (+28k) but fewer than swine flu (+250k cases); and **(3)** lower **mortality rate** (about 2%) than SARS (10%), MERS (30%) and Ebola (90%) but higher than swine flu (1%).

COVID-19: trigger for the world's first pandemic-induced recession?

Mandatory & voluntary containment measures drive recession-like collapse in output

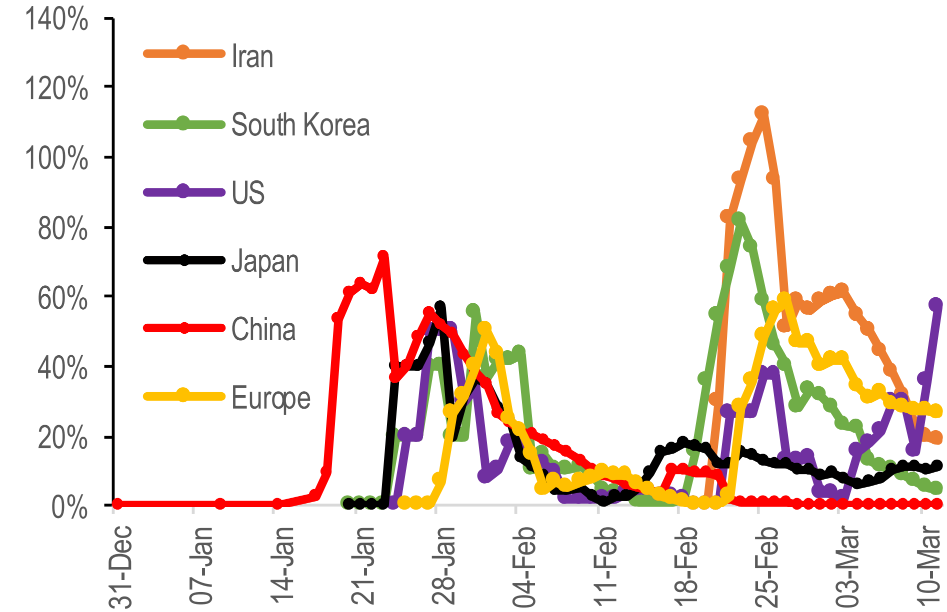
JPM global manufacturing PMI vs returns on multi-asset portfolio (60% DM/10% EM Equities, 20% HG Credit, 10% Commodities)



Source: J.P. Morgan

Flare, peak then flare again? Infection rates slowing, but twin peaks occur; US is surging

Daily growth rate of reported COIV-19 infections, 5-day mov avg

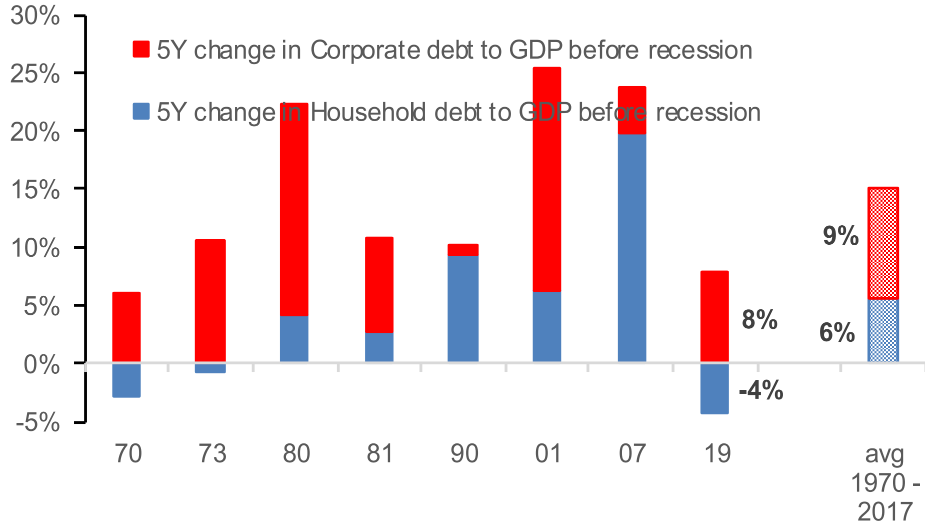


- **Containment measures in Asia and Italy are driving unprecedented collapses in monthly activity data and eventually a Q1 GDP contraction.** One-quarter GDP contractions are common due to epidemics (SARS 2003), natural disasters (Japan's Tohoku quake 2011) or even climate events (US polar vortex in 2014, South African drought 2018). These events proved transitory in that growth surged in the subsequent quarter and left the full-year trend unaffected. Hence the prevailing view that COVID's impact should follow a "v". **The infection rate is crucial for determining the shape of the business and profits cycle in 2020.** Forecasts for a sharp but short hit to output are based on a recognition that infection rates for respiratory diseases tend to peak and then decelerate to low single digits within two months, thus allowing economic activity to normalize within a quarter. But the more deferred the infection rate peak or the greater the succession of outbreaks to other major countries, the more likely a one-quarter contraction turns into a two-quarter one, **so technically a recession**.

A technical recession isn't the same as a balance sheet-driven one

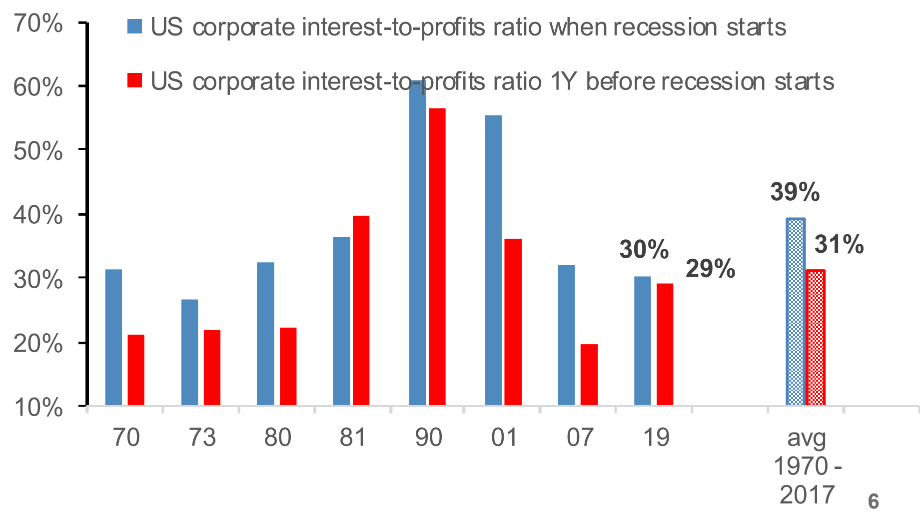
Private sector leverage build-up moderate

5Y change in US debt by sector as % of GDP



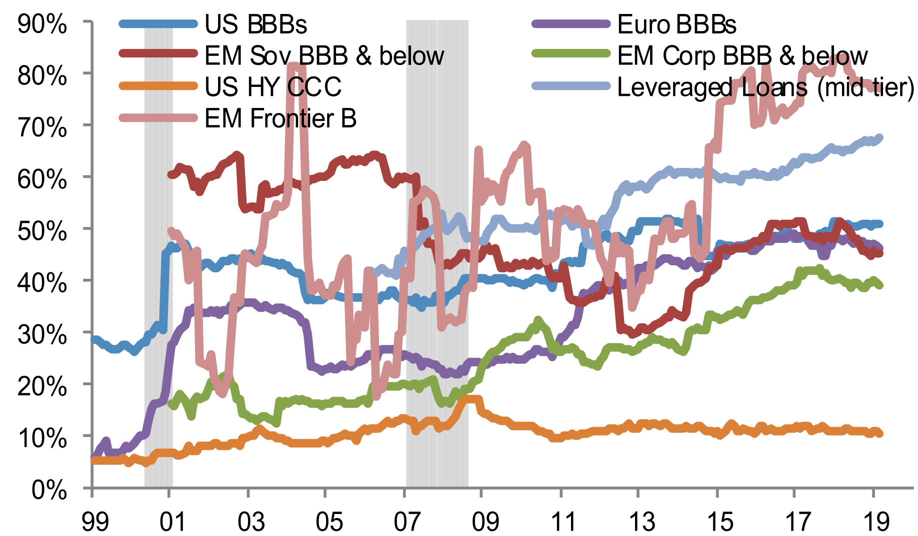
Interest expense average for start of recession

US corporate interest payments to profit ratio before recessions



But US corporate credit quality is record-low

% of lowest-rated credits in indices of US, Euro and EM Corporates & Sovereigns; % of middle-tier for US Lev Loans



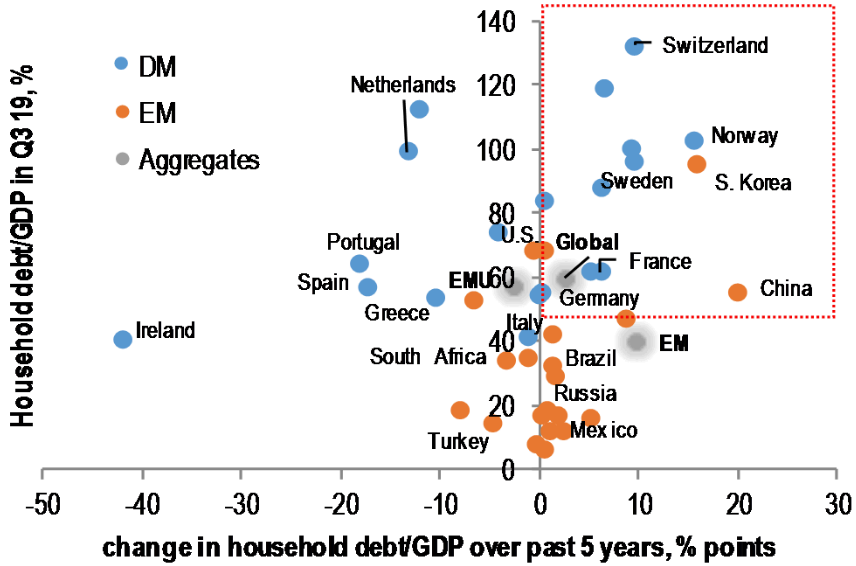
- **A technical recession may be a two-quarter contraction, but the US has never experienced such an episode.** The duration of its recessions has ranged from three to eight quarters because geopolitical shocks and/or restrictive Fed policy intersected with macro imbalances such as household/corporate **leverage**, weak corporate **profits**/falling **margins**, poor **credit quality**, high **asset valuations** and excessive **investor positioning** and/or investor leverage. The missing piece currently is an overleveraged private sector due to offsetting trends in household and corporate indebtedness.

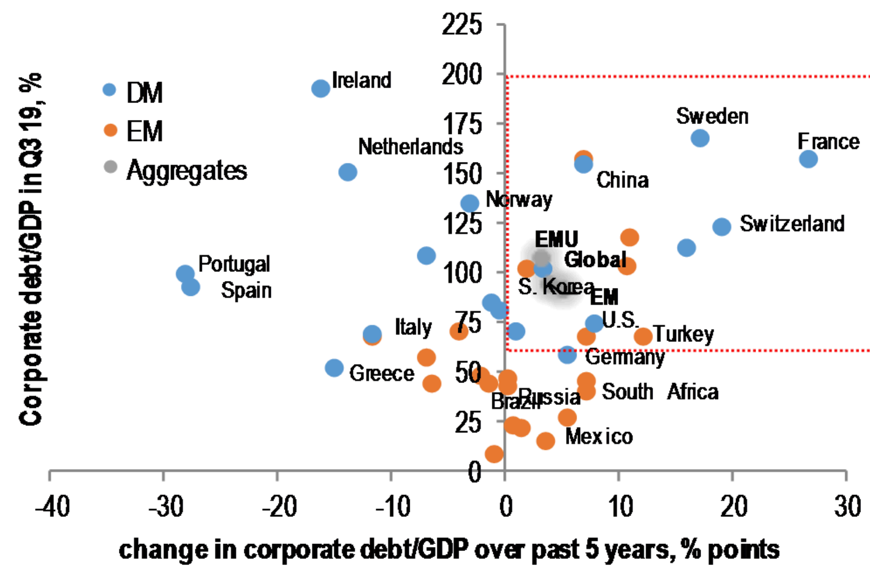
Source: J.P. Morgan

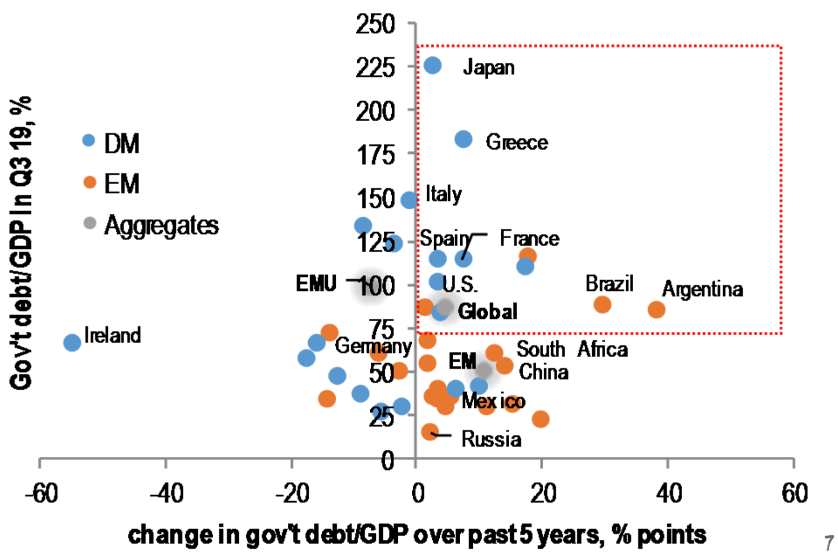
Outside the US, leverage problems vary by country and sector

Sectoral source of high indebtedness and rapid debt accumulation varies by country

Debt to GDP in sovereign, corporate and household sectors. Blue circles for DMs, orange for Ems.







Source: J.P. Morgan, IIF (latest value is Q2 2019)

- **Excess leverage,** measured by the multi-year change in indebtedness, **correlates reasonably well with market declines during recessions/financial crises** (see *How poor could returns be during the next crisis?* from Sep 2018).
- Over the past five years, countries that have delivered the **largest increase in sovereign debt** include Argentina and Brazil; for **household debt**, Australia, Scandinavia, China and Korea; and for **corporate debt**, China, US and Turkey.

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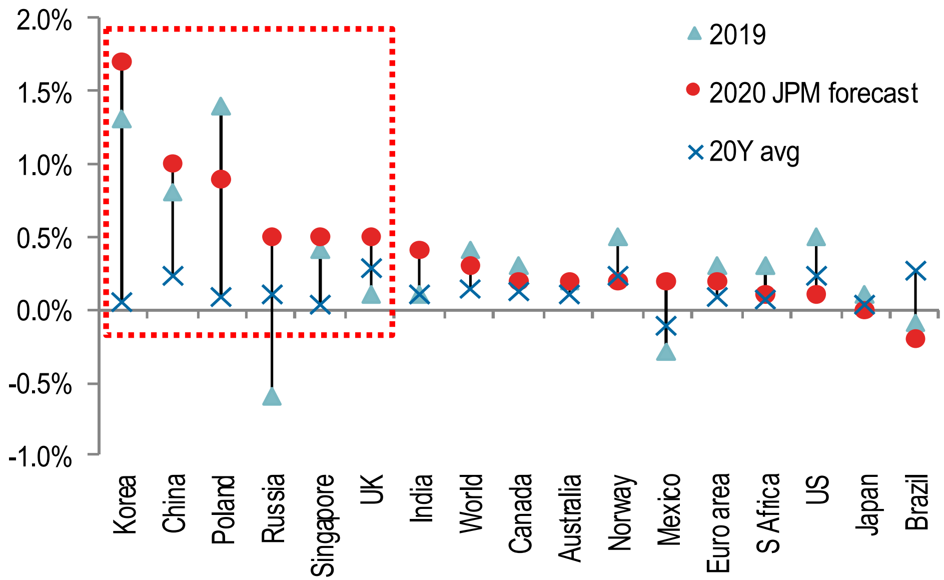
Three responses: Public health, monetary & fiscal

Fiscal stimulus more effective than monetary because it can be targeted

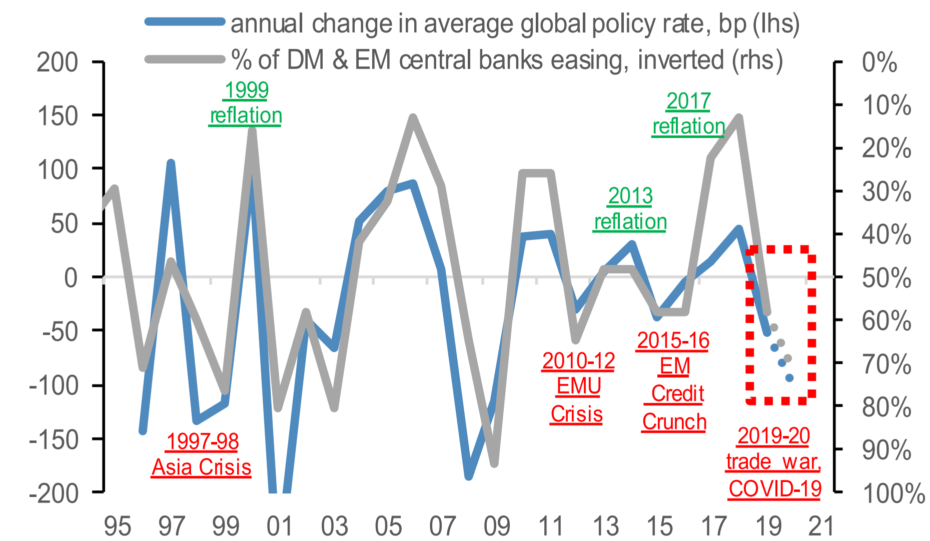
Thrust defined as %-point contribution to real GDP growth



Source: J.P. Morgan

2019-20 monetary easing is one of broadest and deepest outside of a recession

Annual change in average global policy rate vs % of DM & EM central banks easing each year



- **A unique crisis requires a unique policy response.** The necessary component is the **public health** one – testing, treatment, quarantine, contact tracing, social distancing, lockdown – because containment plus behavioral changes can cause infections to plateau in a few months. China and Korea highlight how infection rates can drop to single-digits within two months of an initial outbreak due to such measures, but at the cost of huge economic disruption. **Fiscal stimulus** is more effective than monetary since it can be targeted to the most impacted sectors (SMEs) or vulnerable individuals (those without health insurance, the self-employed, those without back-up childcare). Material fiscal easing (0.5% to 1% of thrust) is only coming in China and UK; US is constrained by a divided Congress, and Germany by ideology. **Monetary policy** isn't sufficient to address a **joint supply and demand shock** like COVID, but looser policy isn't useless. Rate cuts (Fed, EMs) and asset purchases (ECB in Credit, BoJ in ETFs) can partially offset the tightening of financial conditions that comes from Equity declines.

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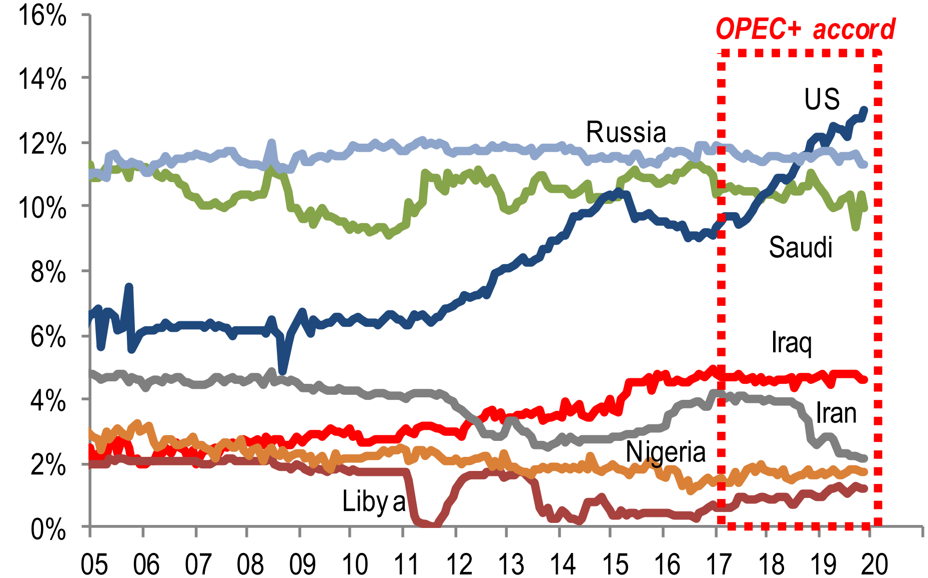
An oil price war this fierce creates casualties before lifting consumers

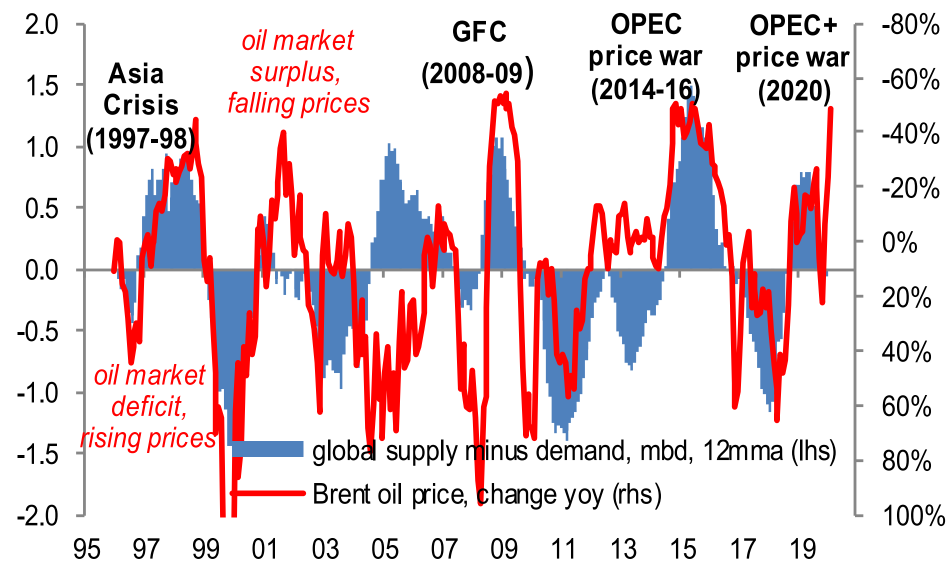
At some point, OPEC+ needed to respond to an unprecedented loss of market share to the US

Oil production by country as a percentage of global supply



A 1.5mbd surplus is worth 45% drop in price, a 2mbd surplus worth a 60% decline

Global oil balance vs Brent oil price (% change yoy)



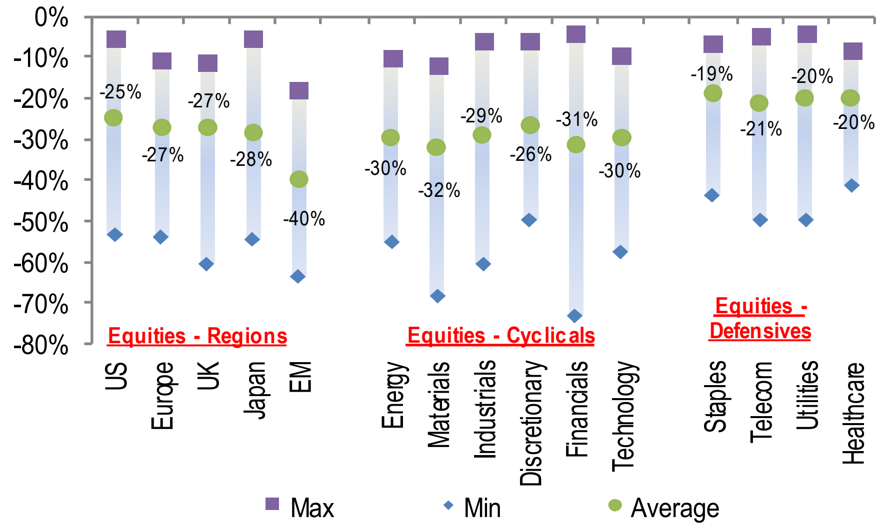
Source: J.P. Morgan

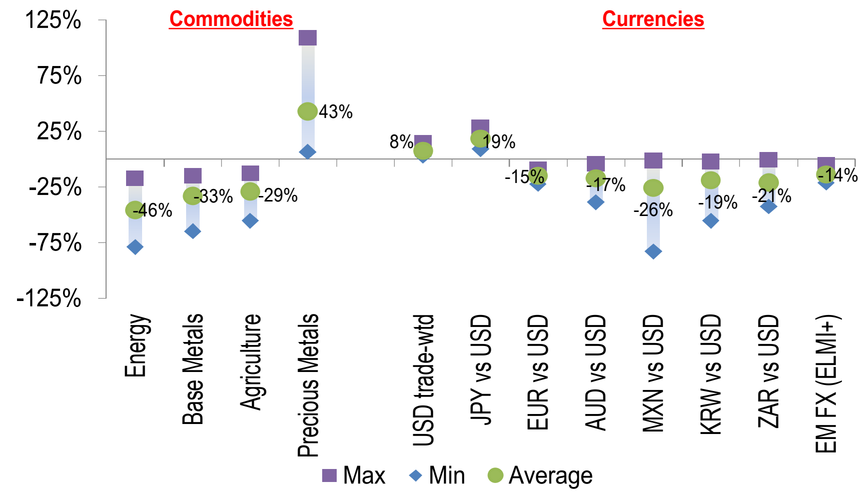
- **Normally one thinks of an oil supply surges as positive for the outlook given that the majority of the global economy is net energy importer.** But as a similar price war in 2015-16 highlighted, a decline this large and this quick brings more harm than good via several channels such as: lower US capex spending and corporate profits through the shale sector; worse fiscal and trade balances for a handful of large EM economies; higher downgrade and default risk for US High Grade and High Yield Credit (9% and 12%, respectively, of JPM’s Credit indices); and weaker EM currencies plus major commodity currencies. A high-vol USD rally vs EM FX can also undermine a year-long decline in EM local market rates by deterring EM central bank easing.
- **A return to normal OPEC+ production levels could create a surplus of 1.5 - 2mbd,** an imbalance typically associated with 45% to 60% price declines year-on-year (about $30/bbl on Brent). Balance will only be restored over many months through a decline in output from US shale and high-cost conventional producers.

Valuing markets vs a 2020 recession scare: Comparing drawdowns

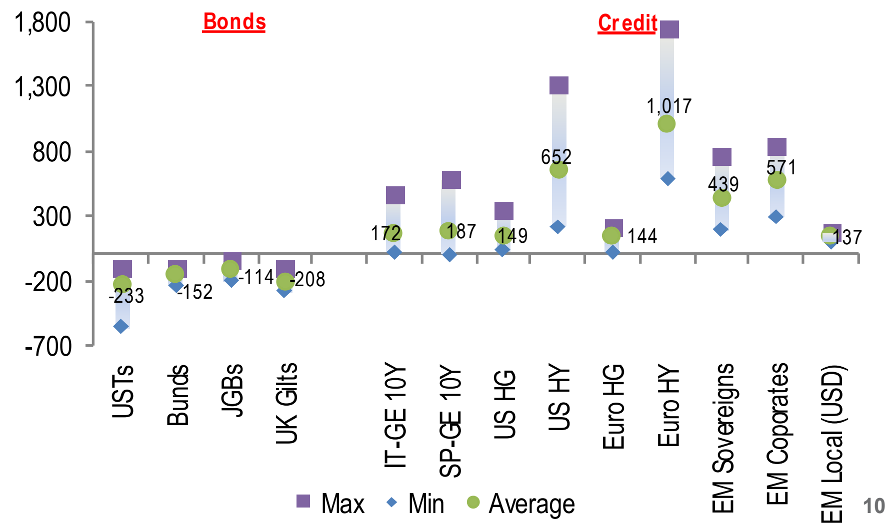
Drawdown across markets during recessions and financial crises

Average, maximum and minimum drawdown by market for last six US recessions (1973, 1980, 1981, 1990, 2001, 2008) and three financial crises (ERM 1992, EM Asia 1998, EMU 2010). Equity index, Bond yield and Commodity moves are peak to trough; Credit spread moves are trough to peak; USD and JPY moves are trough to peak; all other currencies are peak to trough.





Source: J.P. Morgan, *How poor could returns be in the next crisis?* by Normand and Manicardi from September 2018

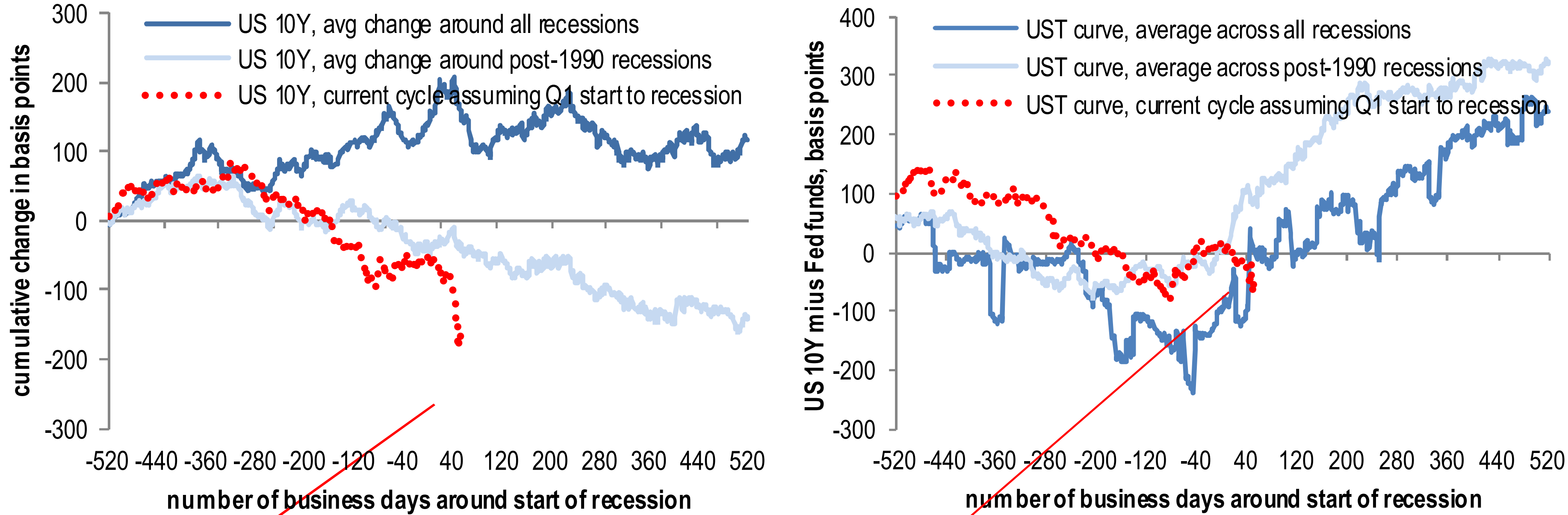


- Except for the trade-weighted USD, the direction of **market moves in recessions** is very consistent, even if magnitude vary considerably depending on starting valuations and leverage before the event. **Average moves** during US recessions (admittedly skewed by the GFC) include**:** US 10Y rates -250bp peak-to-trough; US Equities -30% peak-to-trough; US HG and HY Credit spreads +250bp and +800bp trough-to-peak; Commodities -30% peak-to-trough; Equity implied volatility (VIX) +30 percentage points; and Currency implied volatility +9 percentage points.

Bond yields and curve: Recession fully priced into yield levels

Bond market behaviour before and after start of recessions

Change in US 10Y yields and level of US 10Y/Fed funds spread in two years before and after start of US recessions. Average is based on past six recessions since 1970s. Current cycle assumes recession begins Q1 2020.



Source: J.P. Morgan

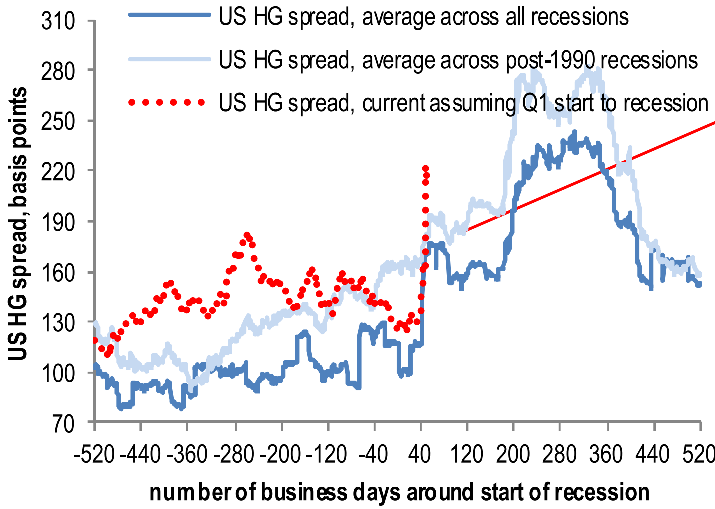
US 10Y rate typically drop 200 to 250bp from peak during recessions. The past year's rally has already been large enough to suggest recession is fully priced.

The US curve (10Y minus Fed funds) typically steepens to about +250bp between the 10Y and cash during a recession as the Fed eases. But since the curve never inverted as much as it typically does pre-recession, meeting this steepening threshold seems impossible. More importantly, curve shape has long lost its connection to business cycle fundamentals given distortions from global QE.

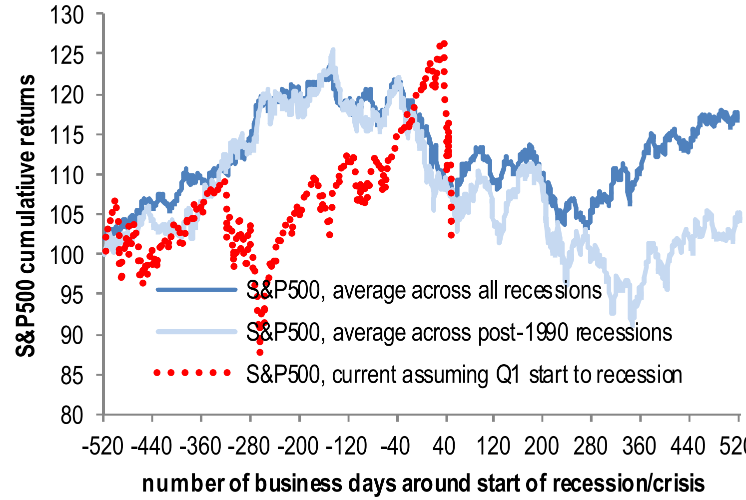
Credit & Equities: Recession at least 60% priced

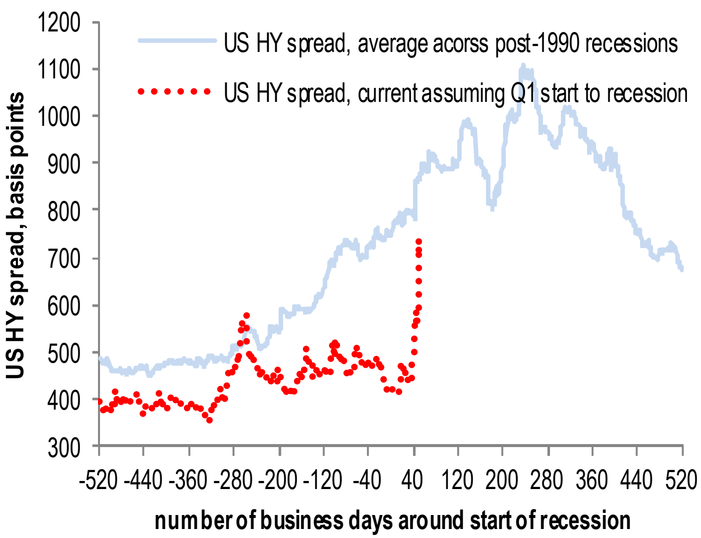
Credit and Equity behaviour before and after start of recessions

For Credit, basis point change in spreads two years before and after start of US recessions (HG sample 1973 to 2007, HY sample 1990 to 2007). For Equities, level of S&P500 and 1Y forward P/E. Current cycle assumes recession begins Q1 2020.

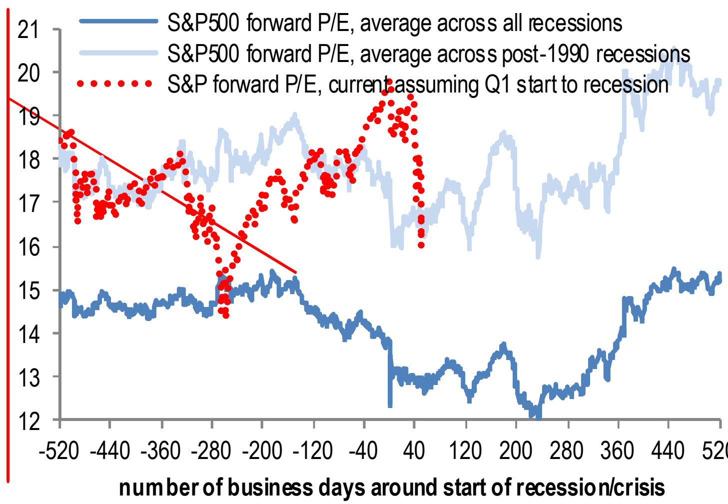


US HG and HY spreads have peaked around 250bp and 1200bp, respectively in recessions. Current levels imply 60-70% of recession





Equities drop about 30% from peak and de-rate by about four points on forward multiples. Current levels imply at least 60% odds of recession.

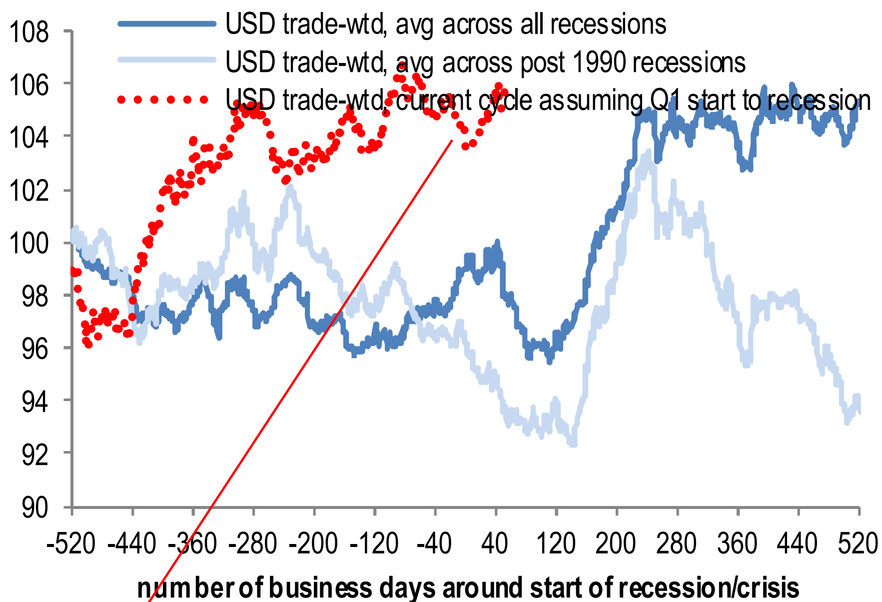


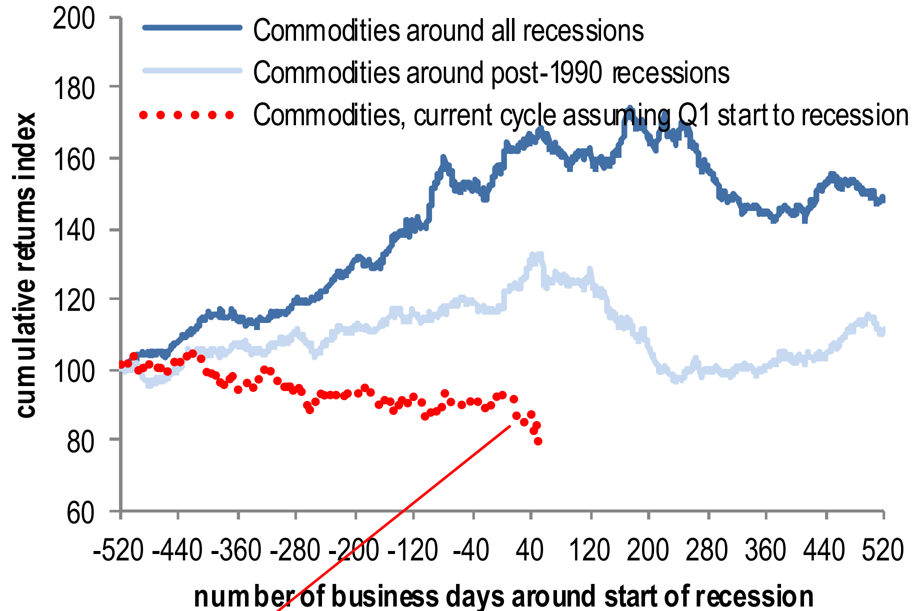
Source: J.P. Morgan

Currencies and Commodities: Recession about 60% priced

Currencies and Commodities before and after the start of recessions

For Currencies, cumulative return on USD nominal effective index (JBDNUSD) two years before and after start of US recessions. For Commodities, cumulative returns on BCOM Index two years before and after start of recessions. Current cycle assumes recession begins Q1 2020.





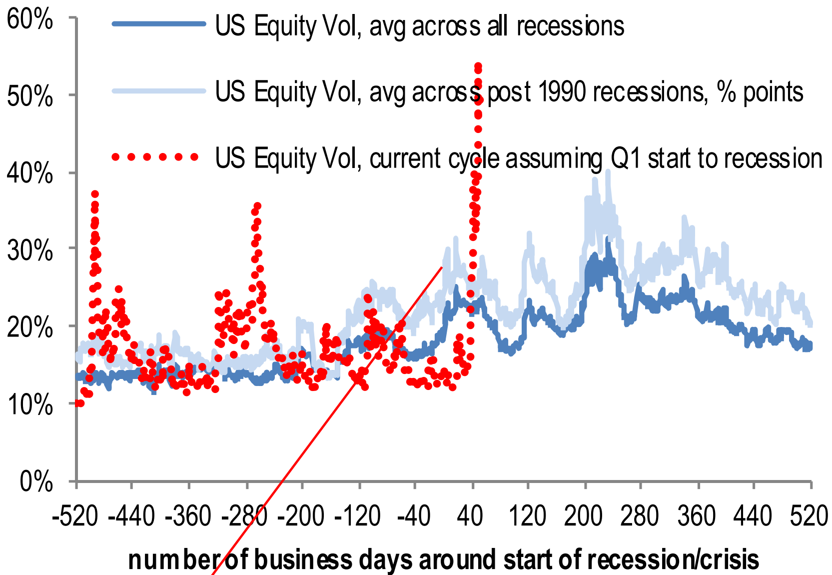
Source: J.P. Morgan

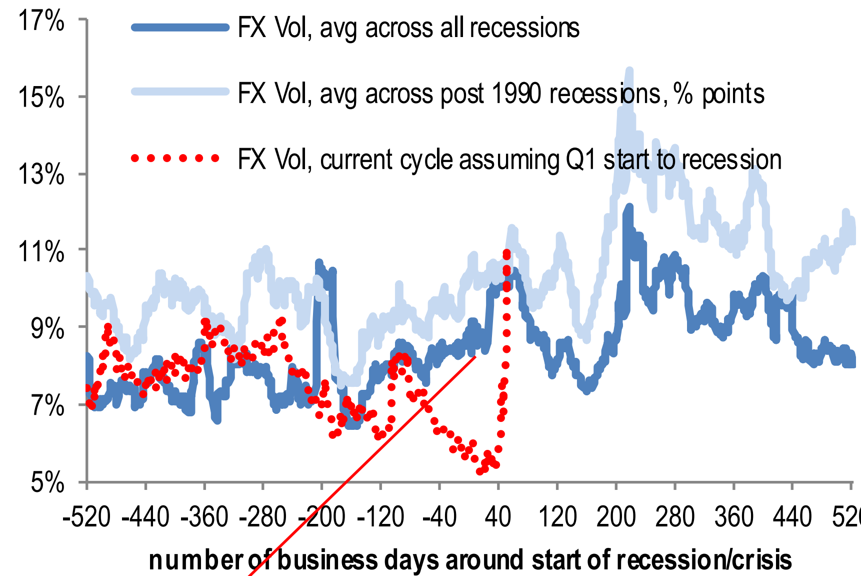
Given that the trade-wtd USD index includes both cyclicals (EM) and defensives (JPY, CHF, sometimes EUR), the broad USD exhibits less consistent patterns in recessions than do individual pairs. There is nonetheless a tendency for the index to appreciate.

Although Commodities sometimes rally just ahead of recession if oil supply stress/shocks trigger the growth downturn, prices of cyclical sectors succumb eventually to weaker demand. Average peak-to-trough moves are about 30%, implying about 60% odds of 2020 recession based on this year's decline.

Volatility: Recession fully priced in Equity vol, 75% priced in FX vol

Implied volatility in Equities and Currencies before and after the start of recessions
Level of implied S&P500 (VIX) and Global FX (JPM VXY) volatility two years before and after start of US recessions. Current cycle assumes recession begins spring 2020.





Source: J.P. Morgan

Equity implied vols typically rally 35 percentage points in recession. That threshold has already been surpassed, suggesting full pricing of a 2020 recession.

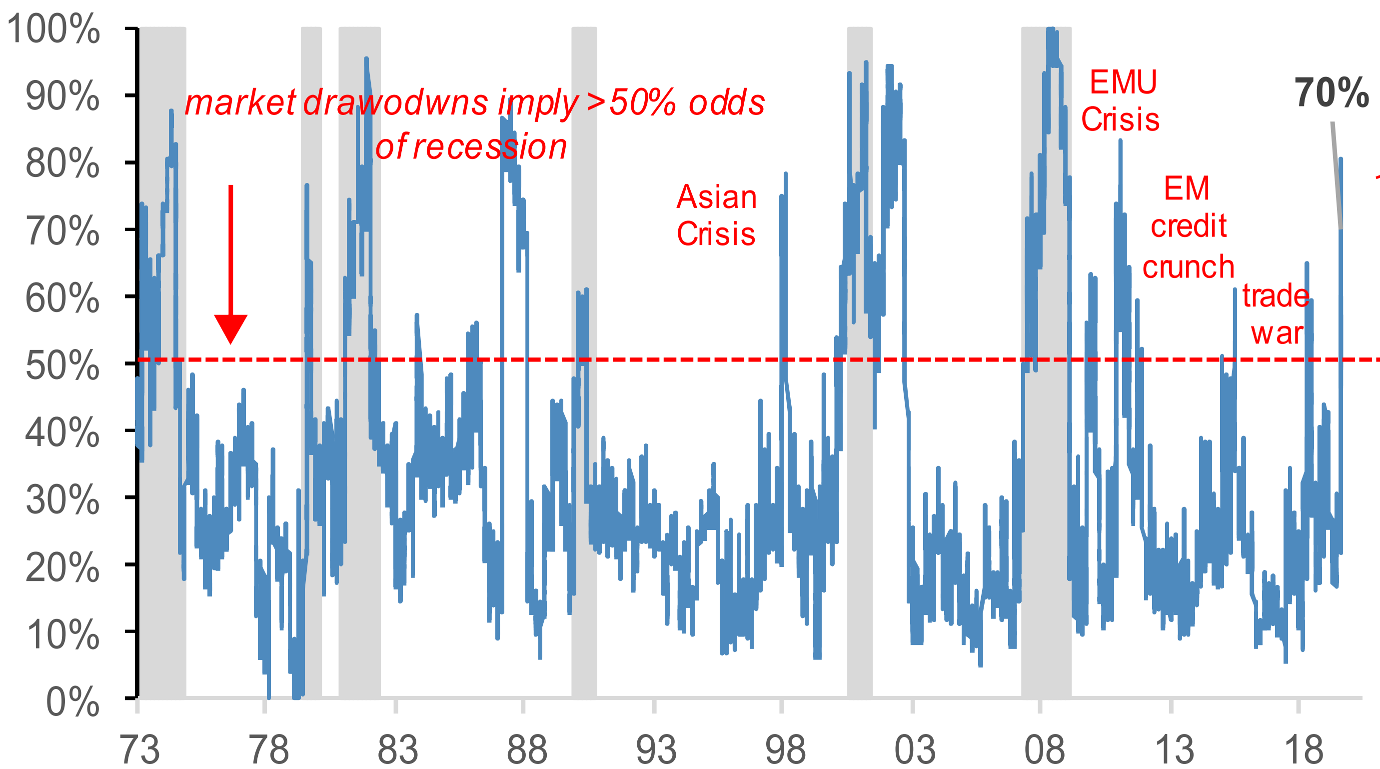
FX implieds have rallied in every recession but the 2001 one, by about 9 percentage points on average. This year's vol spike to 11% implies about 75% odds of recession.

J.P.Morgan

A cross-asset measure of implied recession probability

Cross-asset implied probability of recession

Calculated as weighted average (60% for Equity indicators and 40% for FICC indicators) of recession probabilities implied in six markets by comparing 12M drawdown to typical drawdowns during all recessions from 1970 to 2009. Grey bars highlight actual US recessions. Implied probability sometimes less than 100% during actual recessions if market moves in that episodes are less than average moves during recessions.



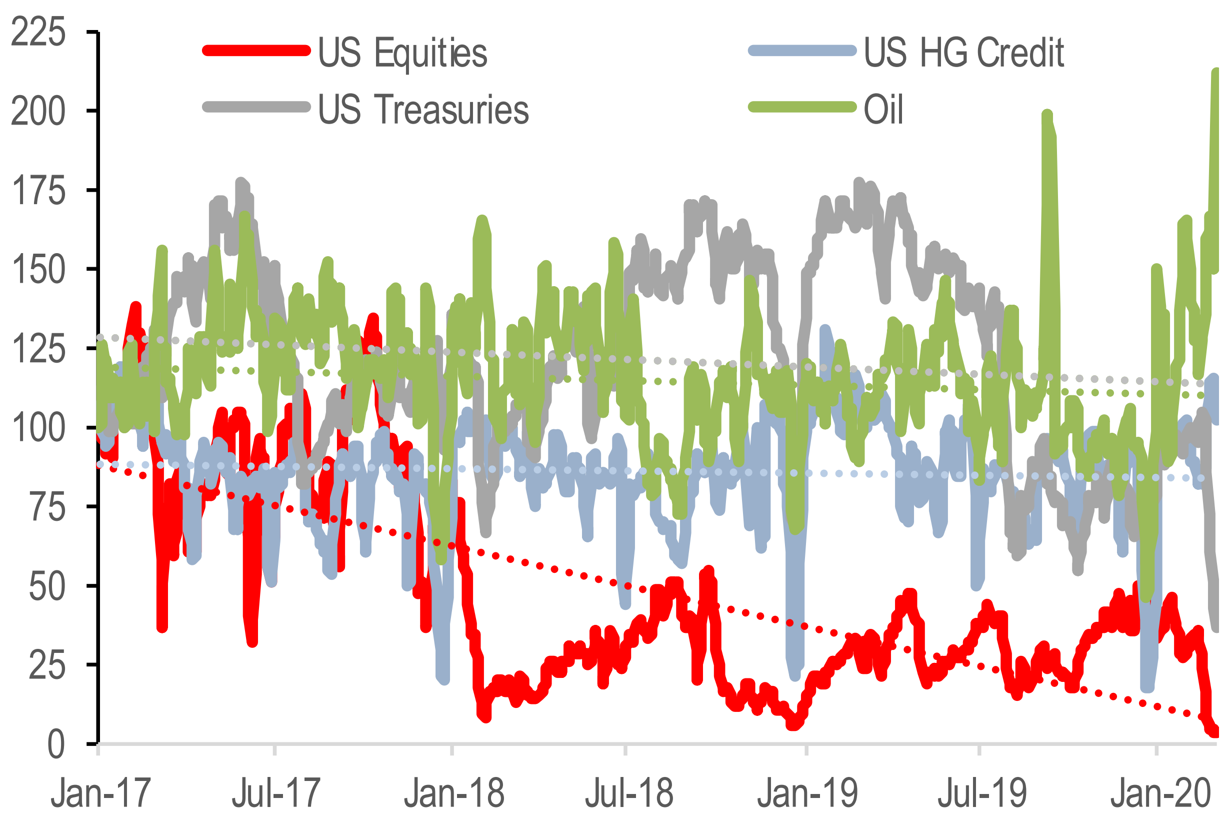
A weighted average of the recession probabilities from the previous slides has reached 70%, so risk premia are comparable to other crises like Asia (1997-98) and EMU (2010-12) which did not trigger a US/global recession.

Source: J.P. Morgan

Low market depth/liquidity as an amplifier of fundamentals

Over the past three years markets depth has deteriorated more in US Equities and Treasuries than in other asset classes

Proxies for liquidity in US Equities (average number of contracts on the bid/offer in ES1), US HG Credit (Trace daily value as % of market outstandings), US Treasuries (average of top 3 bids and offers on Brokertec) and Oil (Brent and WTI front contract volume as % of daily physical production). Series indexed to 100 in January 2017.



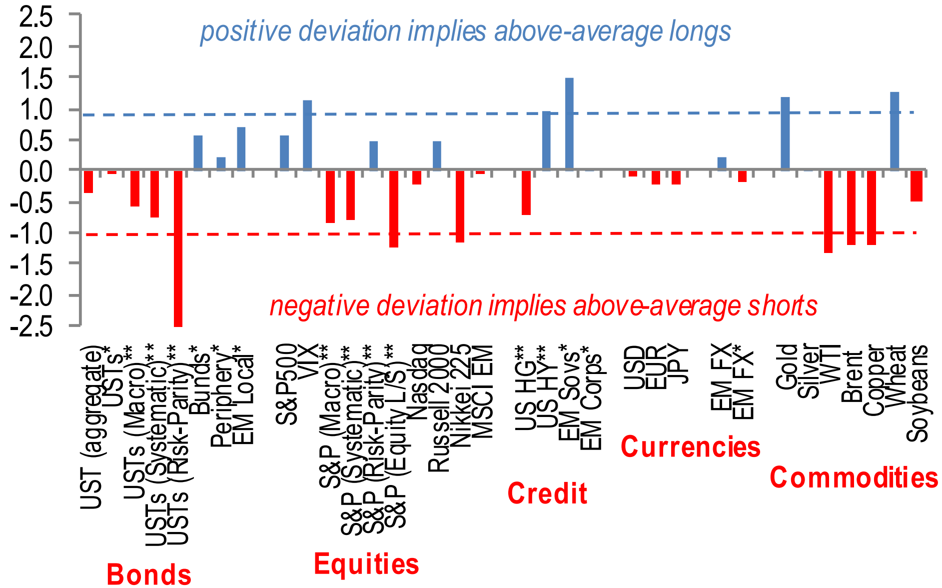
Source: J.P. Morgan

- **Market liquidity** is an amplifier rather than a catalyst. No single measure capture all dimensions of this issue, but for conciseness, we focus on one preferred measure for each major asset class (see chart).
- Although liquidity across asset classes tends to drop during growth slumps or exogenous shocks, trend deterioration has been most obvious in US Equities since 2017 and in US Treasuries since mid-2019.
- **During the COVID-19 crisis and oil's collapse**, liquidity dropped to **record-low levels** in USTs and US Equities, but was **normal** in US Credit and **deeper-than-average** in Oil.
- Insofar as thinner liquidity is **structural**, this condition argues for holding **lower-than-average allocations** even when macro conditions appear supportive, because poor liquidity continues to turn moderate macro events into massive financial ones.

Fear & complacency indicators (1): Investor positioning (medium-term)

Positioning across asset classes, measures and investor types

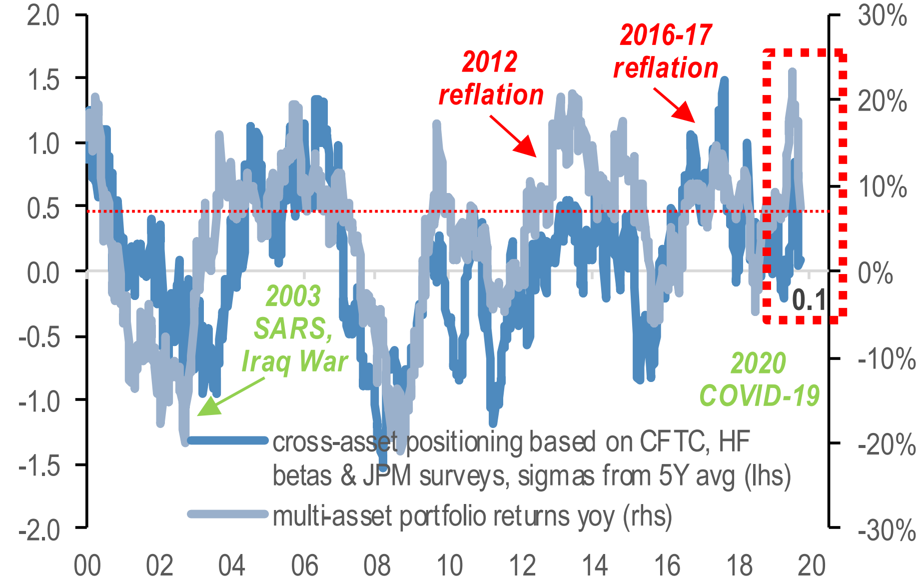
Expressed as sigmas from 5Y average based on futures (no asterisk), JPM surveys (*) and hedge/mutual fund betas (**).



Source: J.P. Morgan, HFR

Cross-asset positioning versus returns on multi-asset portfolio

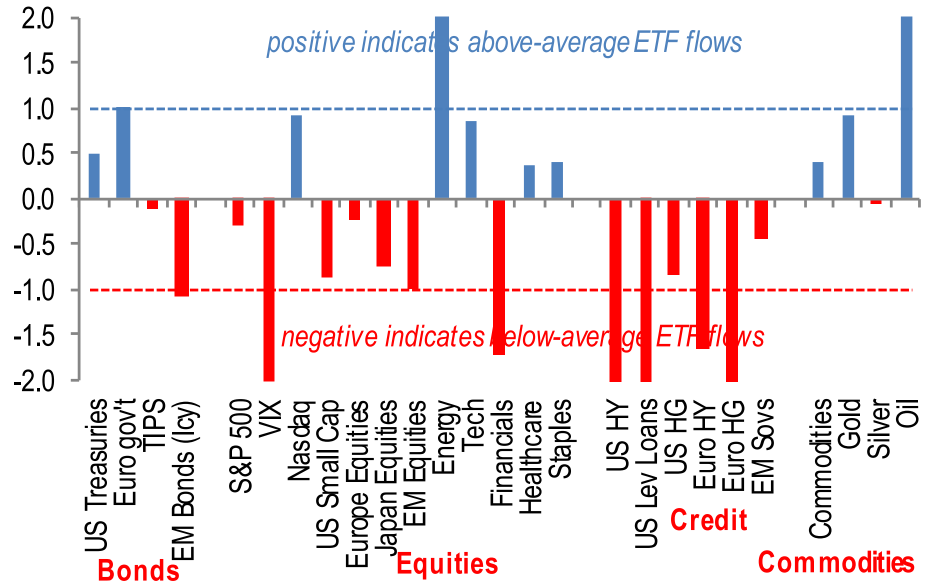
Weighted average of positioning metrics in left-hand chart versus year-on-year returns of multi-asset Equity/FICC portfolio



- **Cross-asset positioning across markets and investor types:**
  - **By asset class:** Based on futures data, mutual fund/hedge fund return betas and JPM surveys, positioning varies considerably across markets. Investors are short duration in DMs but long in EM; short US HG Credit but long HY and EM Sovereigns; overweight US Equities if CTAs but underweight if Macro, Systematic or Long/Short funds; close to flat in Currencies; and very long defensive Commodities (Gold) but short cyclicals (Oil, Copper, some Ags).
  - **In aggregate:** Based on Equities &FICC measures weighted roughly 60%/40%, positioning has fallen to almost neutral (0.1 sigmas), so still above the -0.5 to -1-sigma range that has preceded previous market reversals this cycle.

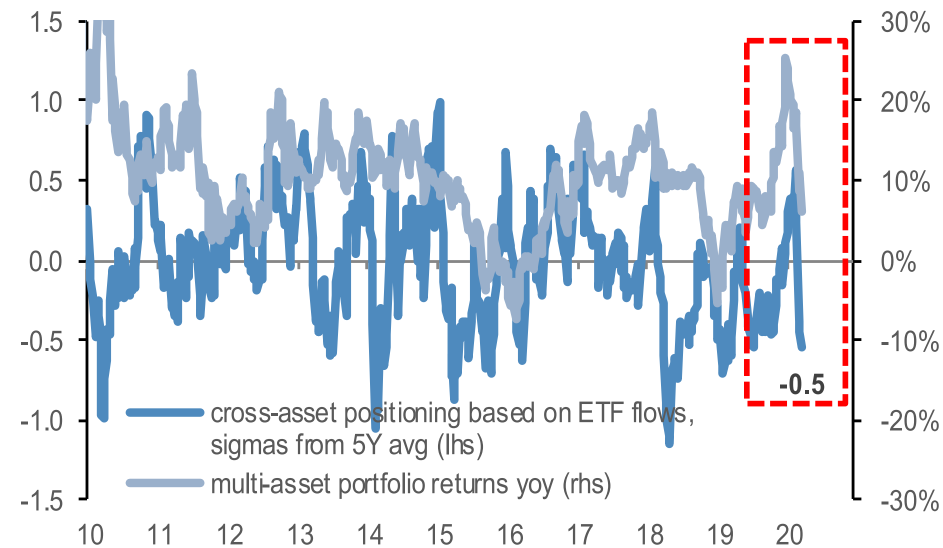
Fear & complacency indicators (2): daily ETF flows (short term)

ETF flows across asset classes and sectors
Net ETF purchases over past 3M as percentage of ETF market cap, then expressed as sigmas from 5Y average.



Source: J.P. Morgan

Cross-asset positioning (ETF-based) versus returns on multi-asset portfolio
Weighted average of positioning metrics in left-hand chart versus year-on-year returns of multi-asset Equity/FICC portfolio

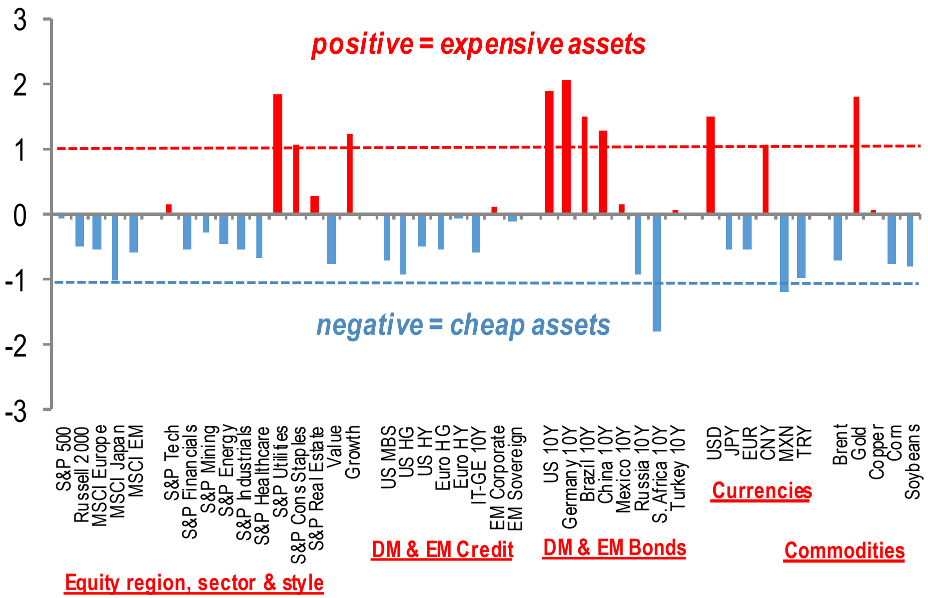


- **Extraordinary ETF flow momentum** (measured as 3M net purchases as a percentage of ETF market cap, then standardized versus a 5Y average) serves as a daily proxy for investor positioning.
    - **By asset class:** Outflows from cyclical assets (S&P500, Russell 2000, non-US Equities, Financials, DM/EM Credit) have been above average over the past three months, at 1 to 2-sigmas below their means. Flows into defensives (DM Bonds, Healthcare, Staples, Gold) have been slightly above average (0.5 to 1-sigma).
    - **In aggregate:** Based on Equities & FICC flows weighted roughly 60%/40%, positioning has become quite underweight at 0.5 sigmas below average. Prior to previous rebounds this cycle, aggregate positioning was about 1-sigma below average.

Opportunities for the patient: long-term valuation measures

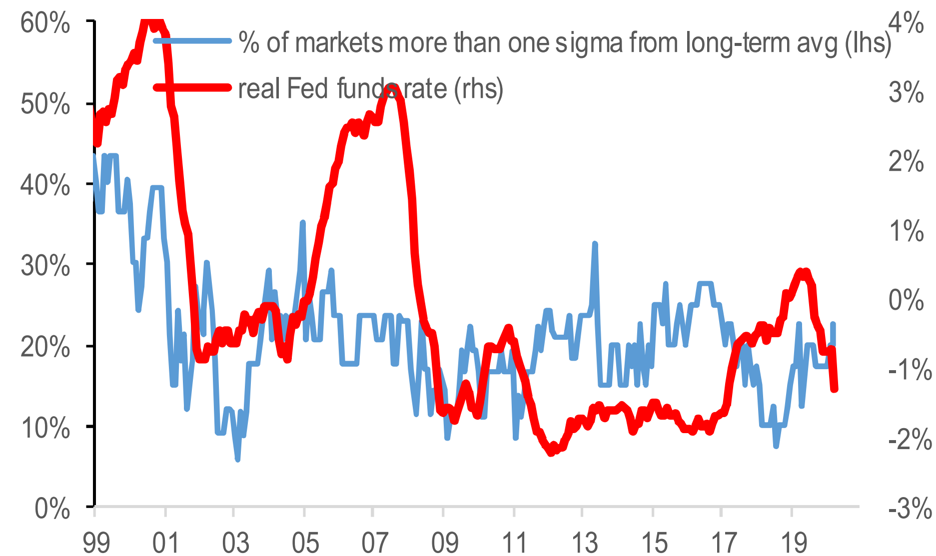
Long-term valuations by asset class

Deviation from long-term average for forward P/Es, credit spreads, real bond yields, real commodity prices & real FX rates



Long-term valuations in aggregate

Percentage of markets from left chart with valuations more than one sigma from long-term mean vs real Fed funds rate. Value based on forward P/Es, credit spreads, real bond yields, real commodity prices and real FX rates.



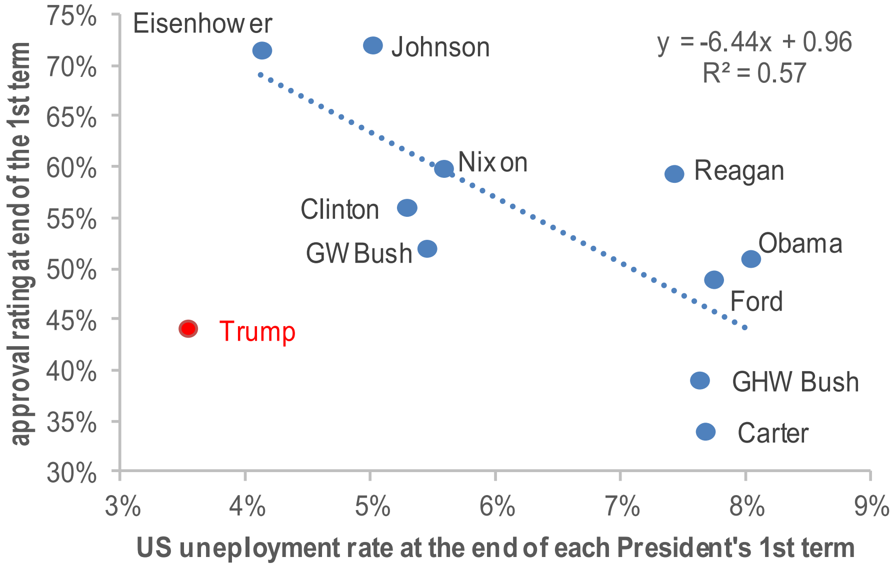
Source: J.P. Morgan

- **Long-term valuation measures** (forward P/Es, credit spreads, real bond yields, real commodity prices & real FX) highlight **extreme richness** only on defensive assets such as DM Bonds, Gold, the trade-weighted dollar, high-dividend Equities and Growth stocks. **Cheap assets** are still Equities in Europe, Japan and EM; cyclical sectors like Financials and Industrial plus Energy; EM local currency bonds in Russia and South Africa; the trade-weighted JPY, EUR, MXN and TRY; and Oil plus Ags. Note that no major market is more than one-sigma cheap, however.
- **Across Equities and FICC, only 20% of markets trade at valuations more than one sigma above their long-run average**, compared to a 45% share during the dot-come era and about 30% before the GFC. Almost all expensive markets are defensives.

Wildcard: Another historic US Presidential election

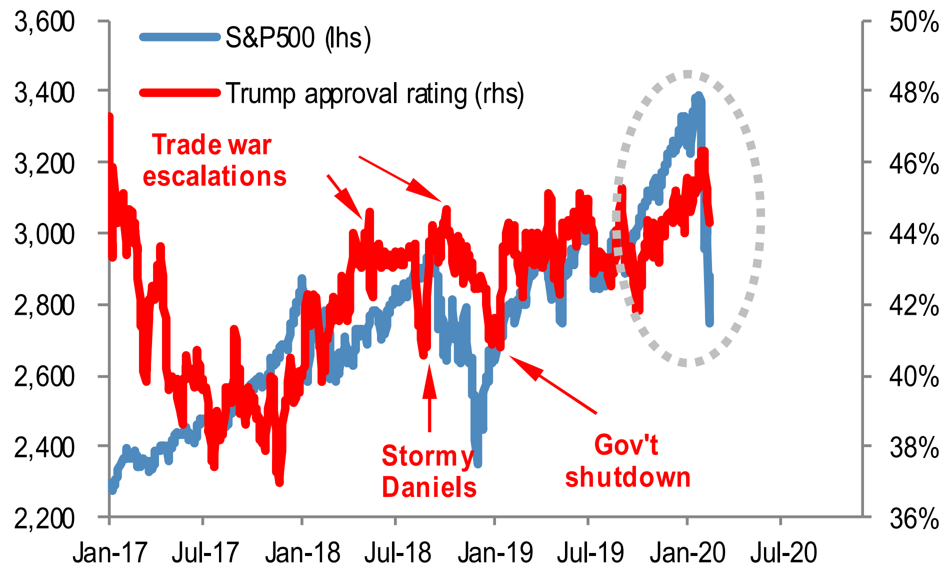
Trump's approval rating is uniquely low given low unemployment and strong stock market

Approval rating vs unemployment rate at end of 1st term



The correlation of Trump's approval rating with the stock market is unhelpful for re-election

Average Trump approval rating across polls versus S&P500

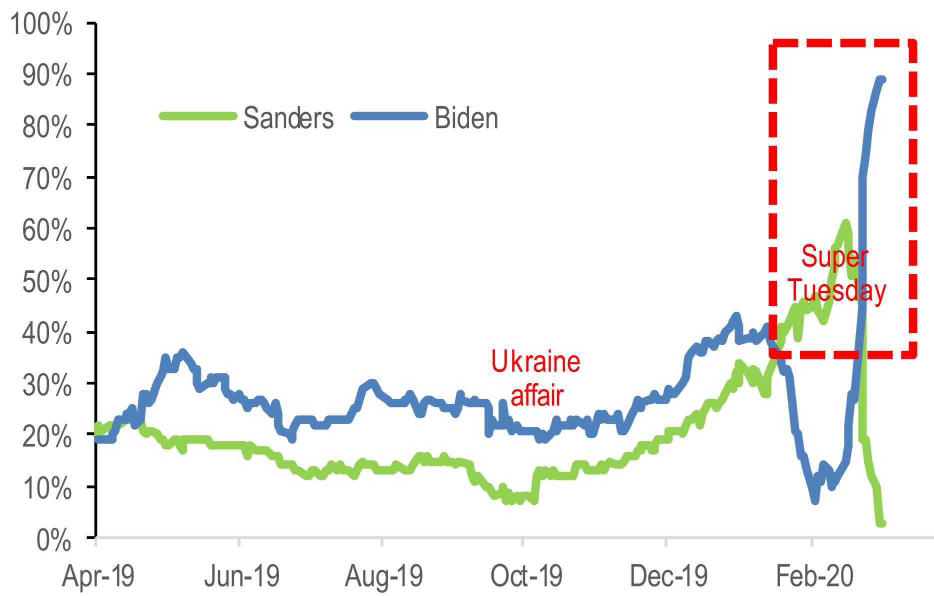


Source: J.P. Morgan, Gallup, PredictWise, RealClearPolitics

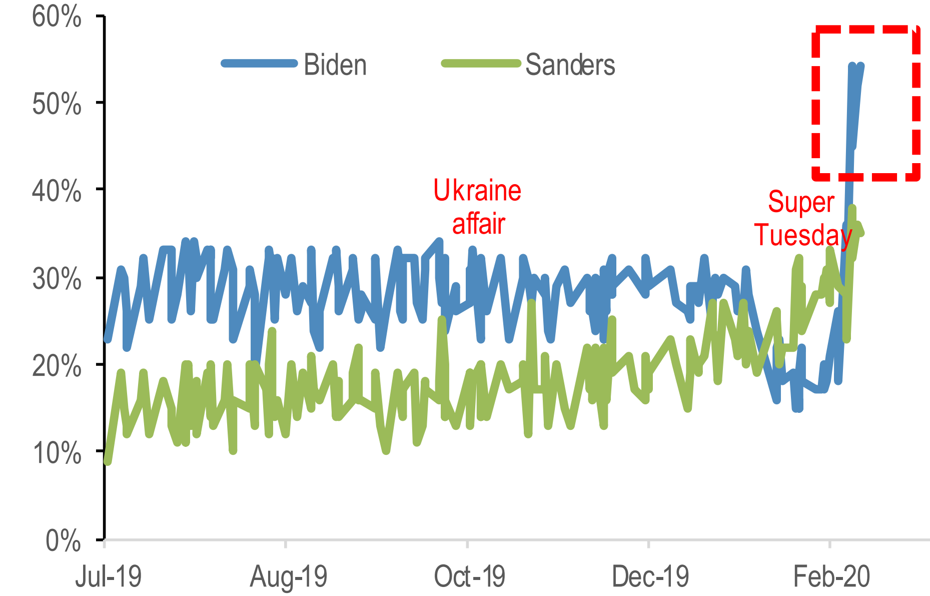
- US elections in 2016 (Trump vs Clinton) were historic in that the Presidential contest featured the two most unpopular candidates in history. **The 2020 contest is unique in three ways**:
  - **(1)** no incumbent has ever suffered from such a **low approval rating when the US unemployment rate is so low**, which highlights risks to Trump's re-election. Trump's handling of **COVID-19 crisis** further jeopardizes his standing in the same way that the Iran hostage affair scuttled Carter's re-election bid.
  - **(2)** no election year has ever included an **impeachment**, which raises questions about **Senate seat vulnerability**.
  - **(2)** modern US Presidential politics has never pitted a **populist** President from one side (Trump) versus so many populists from the opposing party, which potentially drags the Democratic center to the left regardless of nominee.

The Democratic nomination: Polls, betting markets rushed to Biden

Odds on Democratic nominee
Implied probability from PredictIt betting quotes on 2020 US Democratic nomination



Polls on Democratic nomination
% of respondents in favour; avg of national, state & local polls



Source: J.P. Morgan, PredictIt, RealClearPolitics

- **Opinion polls and prediction markets both carry biases**, and neither method has consistently outperformed the other in calling elections and referenda across countries and sample periods. But following Biden's delegate hauls on Super Tuesday and in March 10th primaries, he will likely secure the nomination.
- The **best outcome for markets** would be a Biden Presidency with a Republican Senate, which would preserve the Trump tax regime but minimize randomly-timed disruptions from foreign/trade policy. The **second-best outcome** is a Trump re-election, which preserves the tax and regulatory regime but revives geopolitical risk. The **worst** for markets would be a Democratic sweep even under Biden, given implications for corporate and capital gains taxes.

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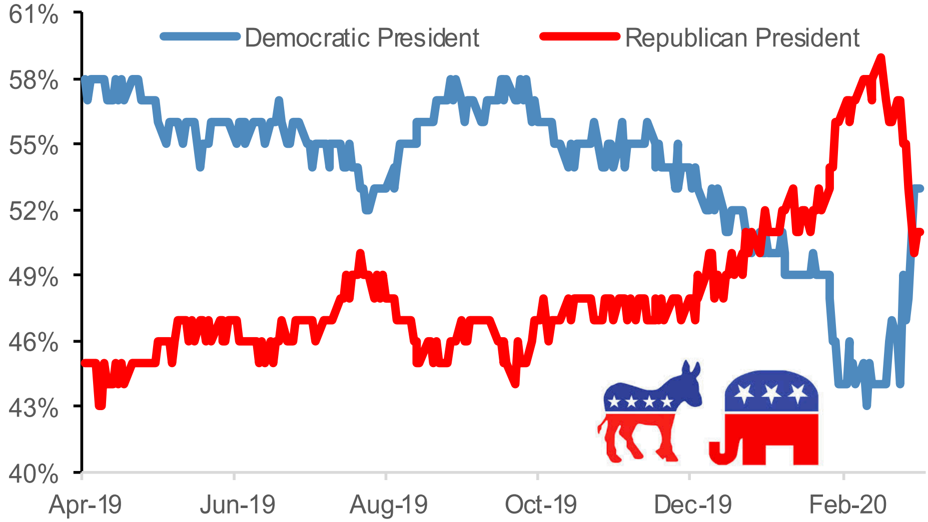
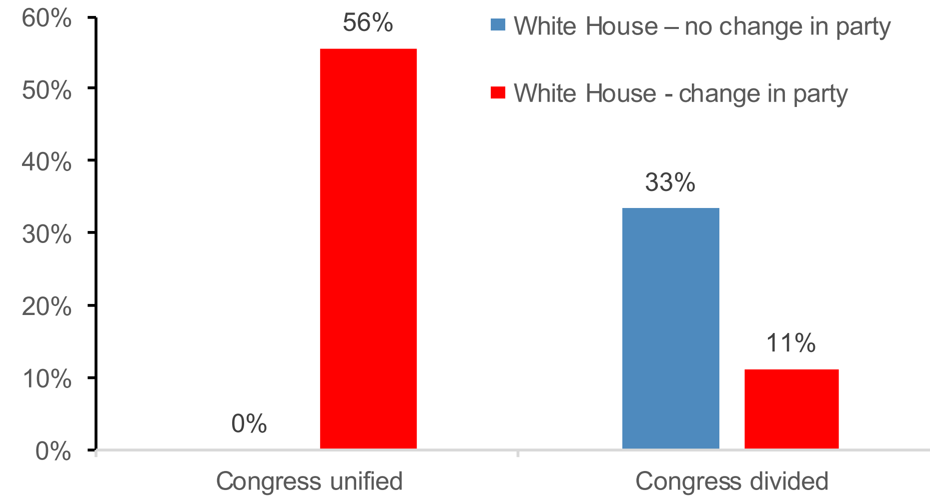
White House and Congress: possibly a Democratic sweep

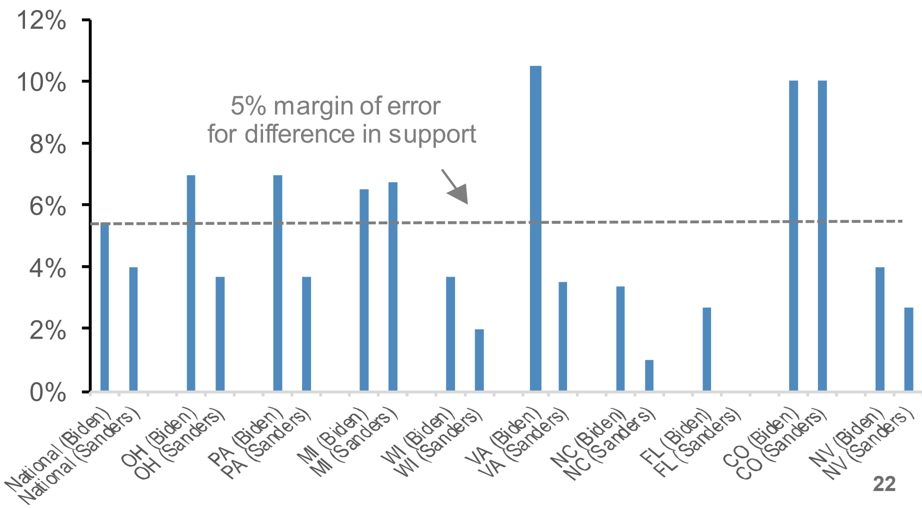
Betting market odds on Trump's re-election
Implied probability from PredictIt betting quotes



Change in White House, change in Congress?
Congressional outcomes from Presidential elections held under a divided Congress. Sample of nine elections since 1850



Many swing states within margin of error
Difference in voting intentions vs Trump in swing state polls



- For the **Presidential election**, **prediction markets** give ~50% odds to Trump. **Polls in swing states** favor Biden, but most are within the statistical margin of error which renders the Presidential race too close to call. In key **Senate** races (Maine, Georgia, Arizona, Colorado), half lean right and half left. History suggests a tendency for a divided Congress to turn unified with the new President's party if White House control changes. Hence the risk of a **Democratic sweep** that can drive changes in tax policy via the budget reconciliation process, even if a Democratic majority in the Senate is slim.

Source: J.P. Morgan, PredictIt, RealClearPolitics

Socialism, nationalism and regimes in between

Policy proposals of Democratic candidates vs President Trump's current policies

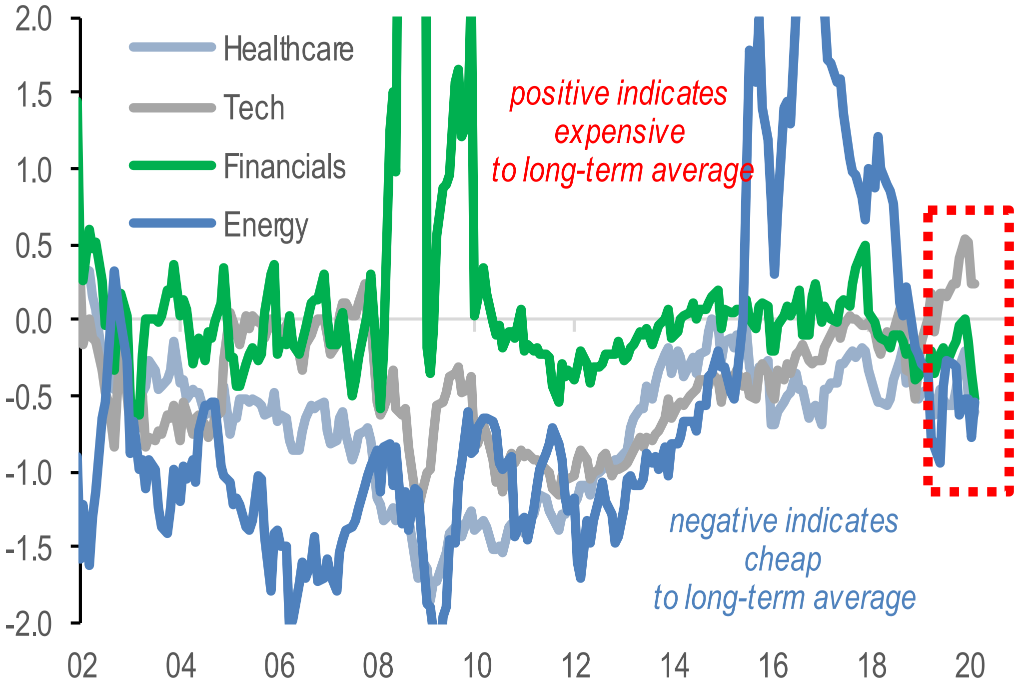
Red indicates policies that could be changed by executive order or Presidential direction of agency priorities

	Sanders	Biden	Trump
Corporate taxes	**Raise corporate rate** to 35%; transition to ecnomic depreciation for investments	**Raise corporate rate** to 28%; create minimum tax rate of 15% on book income	**Corp tax rate lowered** from 35% to 21%
Personal income taxes	Add four additional tax brackets with **top rate of 52**%; **raise capital gains tax** to ordinary rate for those earning >$250k; **wealth tax** of 1% on net worth aboive $16mn, rising to 8% for wealthier households	Restore **top rate to 39.6%; raise capital gains tax** to ordinary rate for those earning >$1mn; **wealth tax** (details unspecified)	**Lowered federal rates** from 10% to 39.6% brackets to 10% to 37%
Trade	**Opposition to free trade deals**; support 'fair trade'; rewrite all trade deals to prevent outsourcing of jobs and include labour, environmental and human rights standards	Enlist US allies to challenge China on trade; advocates enforcing existing trade laws while writing new rules that protect workers, the environment and labour standards;	**America First** policy involving withdrawal from TPP, renegotiation of NAFTA, trade/tech/investment war against China and early-stage trade war with EU
Healthcare	**Medicare for All** (universal coverage, no private insurance, funded via taxes); **patent breaking** for drugs	**Improve Affordable Care Act** (ObamaCare) by adding public insurance option; Medicare to **negotiate drug prices;** link domestic to **int'l prices**	**Failed attempt to repeal Obamacare** in 2017
Energy	**Ban fracking nationwide**; **end existing drilling** offshore and on federal lands; supports **Green New Deal**; supports **carbon tax;** end **fossil fuel subsidies; 100% clean energy** by 2030	**Ban new leases** for drilling offshore and on federal land; partially supports **Green New Deal** end fossil fuel subsidies; supports **carbon tax**; **end fossil fuel subsidies; 100% clean energy** by 2050	**Opened** more federal land to drilling **Reduced** Iran/Venezuela output through sanctions
Tech & Comms	**Big Tech break-up**	Supports using **anti-trust legislation** to investigate anti-competitive practices	**No significant** sector-specific policies, though DoJ, FTC & FCC investigations ongoing
Finance	Re-instate **Glass-Steagall**; break-up too-big-to-fail banks; cap consumer loans and credit card rates at 15%; **financial transactions tax** of 0.1%	Support a **financial transactions tax**	**No signature legislation**, but more lenient interpretation of Dodd-Frank
Infrastructure	**$1trn** plan to rebuild infrastructure	**$1.3trn** plan, including green proposals	**No signature legislation**
Immigration	Pause all deportations; protect and expand **DACA**; create pathway to citizenship, decriminalize crossing the border; end family separation policy; **break up ICE** and the border patrol	End family separation; protect **DACA**; create a pathway to citizenship; give more resources to better leadership/training within ICE; don't decriminalize crossing the border	Border wall; record contraction in legal immigration through **visa limits**
Monetary policy	Supporter of **Modern Monetary Theory**	no public comments	Favors lower rates and **replacing Powell** Two open Board seats to fill
Other	**College** for All; **Housing** for All; free uiversal **childcare** and pre-K education; increase in **Social Security** benefits; **Raise minimum wage** to $15/hr	**Raise minimum wage** to $15/hr	**Federal minimum wage unchanged** at $7.25/hr

Source: J.P. Morgan, campaign websites and public statements

Sectoral disruption under a Democratic President/Congress

Of the sectors most exposed to disruptive policies under a Democratic President, only Tech is still expensive
1Y forward P/Es, deviation from long-run average



Source: J.P. Morgan

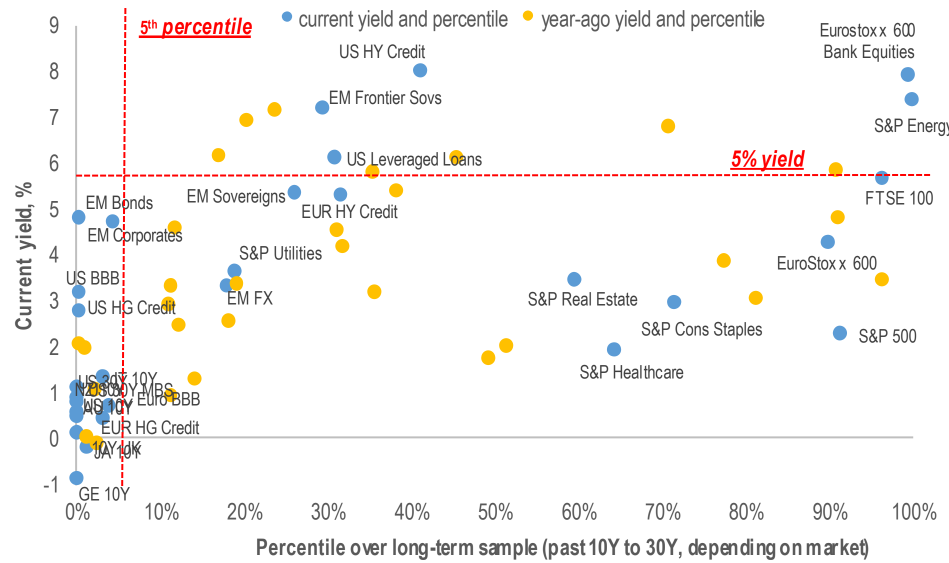
- **Every Democrat's platform has included policy proposals that would disrupt at least one of these sectors – Healthcare, Tech, Communications, Financials and Energy.** Proposals vary by degree, and by feasibility of implementing via **executive order or White House direction of federal agencies.**Sectors vary by the **risk premium** they carry entering elections.
  - **Energy:** easiest for White House to disrupt via limits on drilling offshore and on federal land, even if complete ban on fracking unlikely due to court challenges. But this sector is also the cheapest.
  - **Tech/Communications:** easy to challenge under existing anti-trust statutes, though with DoJ/FTC investigations currently running, this risk persists regardless of White House control; Tech is expensive, Comms less so.
  - **Healthcare**: difficult to achieve anything transformational (single payer system, price caps) without Senate control; sector already trades at discount to long-term average.
  - **Financials**: most disruptive policies (Glass-Steagall 2.0, financial transactions tax) also require Senate control; risk premium high.

Big questions for the aftermath

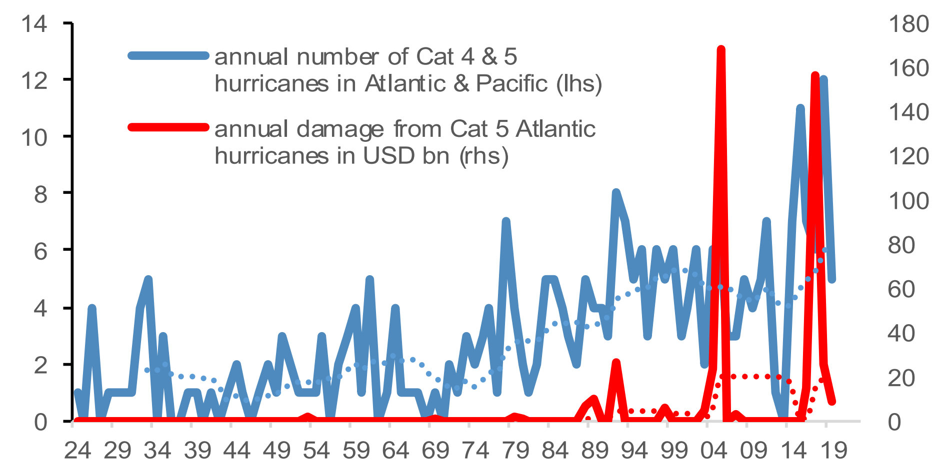
- When the COVID-19 crisis and OPEC+ price war end, investors should mull the following **questions**, which **range from the ordinary to the existential**:
- **(1) How will DM bond yields ever rise to reasonable levels** (2-3% on 10Y rates) unless central banks unwind 2019-20 insurance cuts;
- **(2)** If DM policy rates enter 2021 around 0%, what **capacity** will they have **to offset a future shock**, particularly if some governments are too divided politically to deploy fiscal policy quickly or in size;
- **(3)** Can **valuation** like equity P/Es and credit spreads return to early-2020 levels if low cash rates also imply an inability of central banks (the first-responders) to backstop growth;
- **(4)** How much can **Value stocks rerate** if these crises have hastened the Japanization process in US Treasuries;
- **(5)** Would the advent of 0% cash rates in the US plus twin fiscal/current account deficits finally deliver a **USD crisis**;
- **(6)** Will two OPEC price wars in five years create a disruptive **oil supply cliff** in the medium term en route to long-term clean energy; and
- **(7)** If a **sick-swan event** like COVID-19 has almost triggered a global recession, how should policymakers and investors prepare for a **green swan event** (climate catastrophe).

Only six markets offered +5% yields

Yields (%) and percentile rank over long term sample



Climate catastrophes: frequency & intensity up



Global markets forecasts

Rates	Current	Mar-20	Jun-20	Sep-20	Dec-20
US (Fed funds)	1.09	0.00	0.00	0.00	0.00
10-year yields	0.73	0.45	0.55	0.75	1.00
Euro area (Refi)	0.00	0.00	0.00	0.00	0.00
10-year yields	-0.75	-0.70	-0.65	-0.55	-0.40
Italy - Germany 10Y (bp)	200	160	140	120	110
Spain - Germany 10Y (bp)	107	75	65	55	55
United Kingdom (repo)	0.75	0.25	0.25	0.25	0.25
10-year yields	0.29	0.20	0.25	0.35	0.45
Japan (overnight call rate)	-0.10	-0.10	-0.10	-0.10	-0.10
10-year yields	-0.07	-0.15	-0.10	-0.05	-0.05
EM Local (GBI-EM yield)	4.88				4.56
Currencies	**Current**	**Jun-20**	**Sep-20**	**Dec-20**	**Mar-21**
JPM USD Index	124	125	126	126	127
EUR/USD	1.13	1.11	1.10	1.09	1.08
USD/JPY	105	107	108	109	110
GBP/USD	1.29	1.26	1.27	1.28	1.27
AUD/USD	0.65	0.64	0.62	0.6	0.6
USD/CNY	6.95	6.95	6.95	6.99	6.99
USD/KRW	1194	1170	1175	1185	1190
USD/MXN	20.94	21.50	21.75	21.75	21.75
USD/BRL	4.64	4.55	4.50	4.50	4.55
USD/TRY	6.17	6.25	6.50	6.65	6.85
USD/ZAR	16.05	15.00	15.25	15.50	15.75
Commodities	**Current**	**Mar-20**	**Jun-20**	**Sep-20**	**Dec-20**
Brent ($/bbl, qtr end.)	37	61	58	63	59
WTI ($/bbl, qtr end.)	34	56	53	59	55
Gold ($/oz, qtr avg.)	1,660	1,500	1,550	1,475	1,450
Copper ($/ton, qtr avg.)	5,575	5,800	6,200	6,000	5,800
Aluminum ($/ton, qtr avg.)	1,681	1,750	1,790	1,750	1,700
Iron ore (US$/dt, qtr avg.)	89	85	82	80	75
Wheat ($/bu, qtr avg.)	5.3	5.3	5.3	5.2	5.4
Soybeans ($/bu, qtr avg.)	8.8	9.3	9.4	9.4	9.6

Credit		Current	Dec-20
US High Grade (bp over UST)	JPM JULI	213	125
Euro High Grade (bp over Bunds)	iBoxx HG	169	130
US High Yield (bp vs. UST)	JPM HY	713	425
US Lev Loans (bp vs. 3Y Index)	JPM Lev Loans	624	475
Euro High Yield (bp over Bunds)	iBoxx HY	561	475
EM Sovereigns (bp vs. UST)	JPM EMBIGD ex-Venezuela	452	325
EM Corporates (bp vs. UST)	JPM CEMBI	356	250
Equities		**Current**	**Dec-20**
S&P 500		2,882	3,400
MSCI Europe		1,366	1,780
MSCI Eurozone		186	255
FTSE 100		6,041	7,720
TOPIX		1,385	1,650
MSCI EM ($)		965	1,200
MSCI China		82	92
MSCI Korea		628	780
MSCI Taiwan		418	485
MSCI India		1,192	1,460
Brazil (Ibovespa)		92,215	126,000
Mexico (MEXBOL)		39,565	46,900
MSCI South Africa		1,201	1,510

Source: *The J.P. Morgan View* published each Friday

Recommendations by market: technical recession at worst

	Strategic (6M to 2Y trades)	Tactical (1M to 6M trades)
Asset allocation	Moderate (6%) OW DM Equities Cash/Bonds/HG Credit; small OW of EM complex (OW Equities & Duration, but neutral FX, Sovereigns & Corporates)	Increased Equity overweight from 5% to 6% in March edition of *Global Asset Allocation*
Equities	**Country**: OW Brazil, China, Indonesia, Russia, Korea; UW S Africa, Mexico, Chile, Malaysia **Sector**: OW Industrials, Communications, Healthcare & Energy; UW Staples, Utilities, REITs **Style**: OW Value, UW Momentum & Low-Vol	**Country:** OW Euro area, Japan & EM vs US & UK
Bonds	**DM Duration**: Neutral **US MBS**: OW **EM duration:** OW China, Malaysia, Russia, South Africa & Indonesia; long India (3Y); UW Chile, Peru	**DM Duration:** long in AU (3Y) **DM Inflation:** long in US (1Yx1Y), Japan, Australia; short UK (10Yx10Y and 5Yx5Y) **DM Spread**: OW Spain, Austria (10Y) vs France and Greece (13Y) vs Germany; OW AU (10Y), NZ (2Yx2Y) vs US
Credit	**US HG:** OW Utilities, Consumer, Telecoms, REITs; UW Tech, non-food Retail, Manufacturing, Insurance **US HY**: OW Energy & Healthcare, UW Tech **Euro HG**: OW Bank Sub, Real Estate, Aerospace; UW Media, Metals/Mining, Oil/Gas **Euro HY**: OW Bank Senior & Sub, Insurance, Paper/Packaging; UW Autos, Metals/Mining	**Euro HG:** short March straddles on iTraxx Main; OW Financials vs non-Financials. **EM Sovereigns & Corporates**: Neutral **Euro:** HY vs HG decompression (conditional on wider spreads)
Currencies	No strategic trades; all currency positions are tactical	Long USD vs AUD, NZD, CAD, THB & TWD; long CHF vs EUR, JPY & GBP; **UW** CLP, PLN, HUF & RON in GBI-EM; short USD vs MXN.
Commodities	**long** JPMCCI Agricultural sub-index	

Red indicates higher-conviction recommendations

Source: J.P. Morgan flagship weekly and monthly strategy publications available on www.jpmm.com

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