# Tighter Dollar Liquidity Exacerbates Pressure on Risk-parity Thesis

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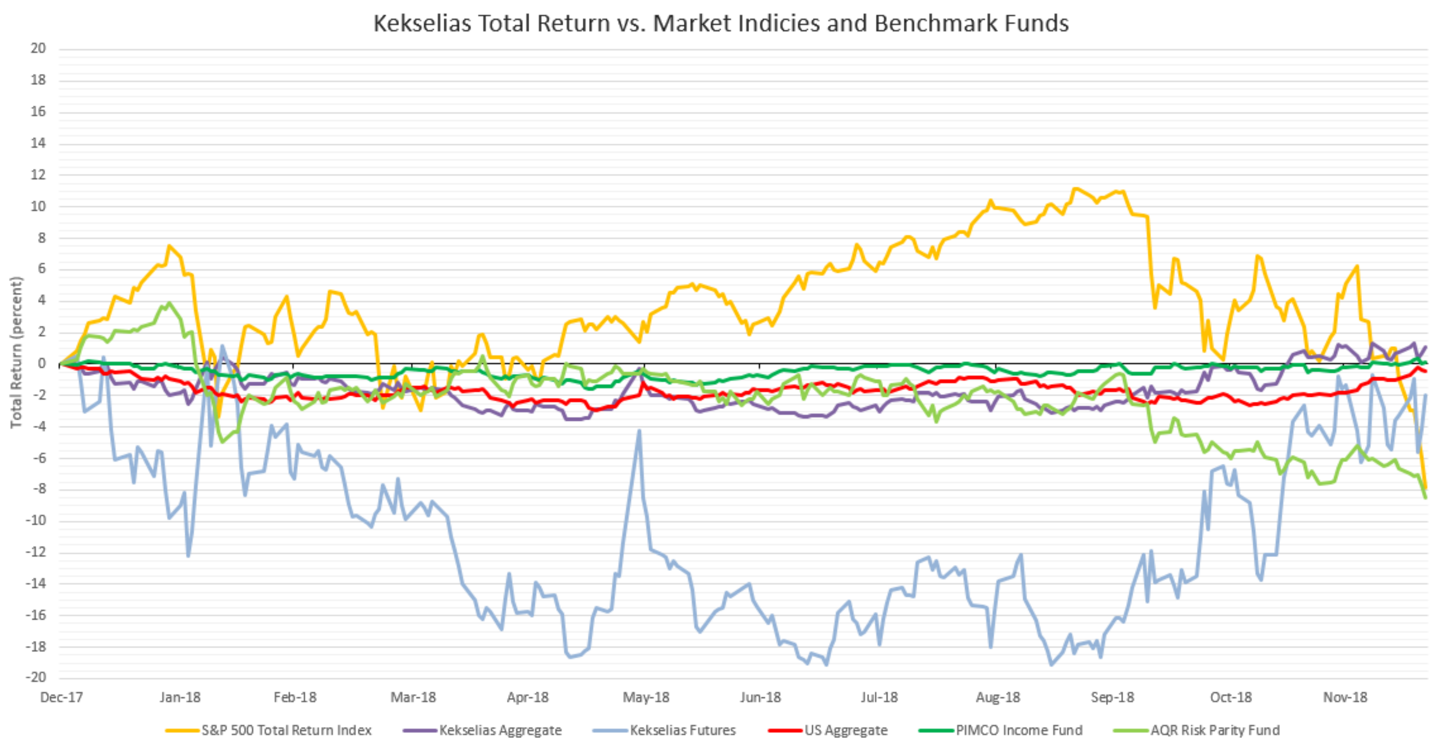
## Executive Summary

- Global monetary authorities remained steadfast in policy normalization to pare unconventional easing programs
- Federal Reserve's balance sheet run-off and China's BRI loans created a perfect storm in dollar liquidity tightening
- Risk-parity funds are in the grip of a pincer movement, with rising reflationary pressure from globalization's retreat and tighter dollar liquidity spur deleveraging flows and deny investors safe harbors from cross asset risk shedding
- Short-covering and flight-to-quality flows to long-maturity Treasuries increased vulnerability to risk parity unwind
- Some investors view tighter financial conditions as signs of "policy error" after past decade's policy easing, but BIS cautioned that FCIs' sensitivity to equities may induce policymakers to place excess weight on stock valuations, overstate easy financial conditions' benefits, and overlook the distributional effects of monetary accommodation

## A new bearish catalyst on risk-parity investments

Risk-parity and leveraged funds are facing a new threat in the form of global dollar liquidity shortage. This came at a time when leveraged multi-asset portfolios already experienced several waves of risk-parity unwind as global monetary authorities pared policy support. As a result of the year-end 2018 volatility spike, mounting losses and heavy redemption forced AQR to rebrand its risk-parity fund and removed its risk-parity namesake under pressure:




For risk-parity funds, leverage was initially celebrated as an equalizer to prevent risky assets from dominating portfolio returns. Bridgewater Associate's risk-parity white paper highlighted leveraged holdings of less volatile assets can dampen aggregate portfolio volatility, such as large leveraged bond holdings would offer better risk-adjusted returns than equities due to former's absence in imbedded leverage. Unfortunately, risk-parity funds came to popularity following the financial crisis, and they thrived during an era of suppressed volatility thanks to concurrent balance sheet expansions.

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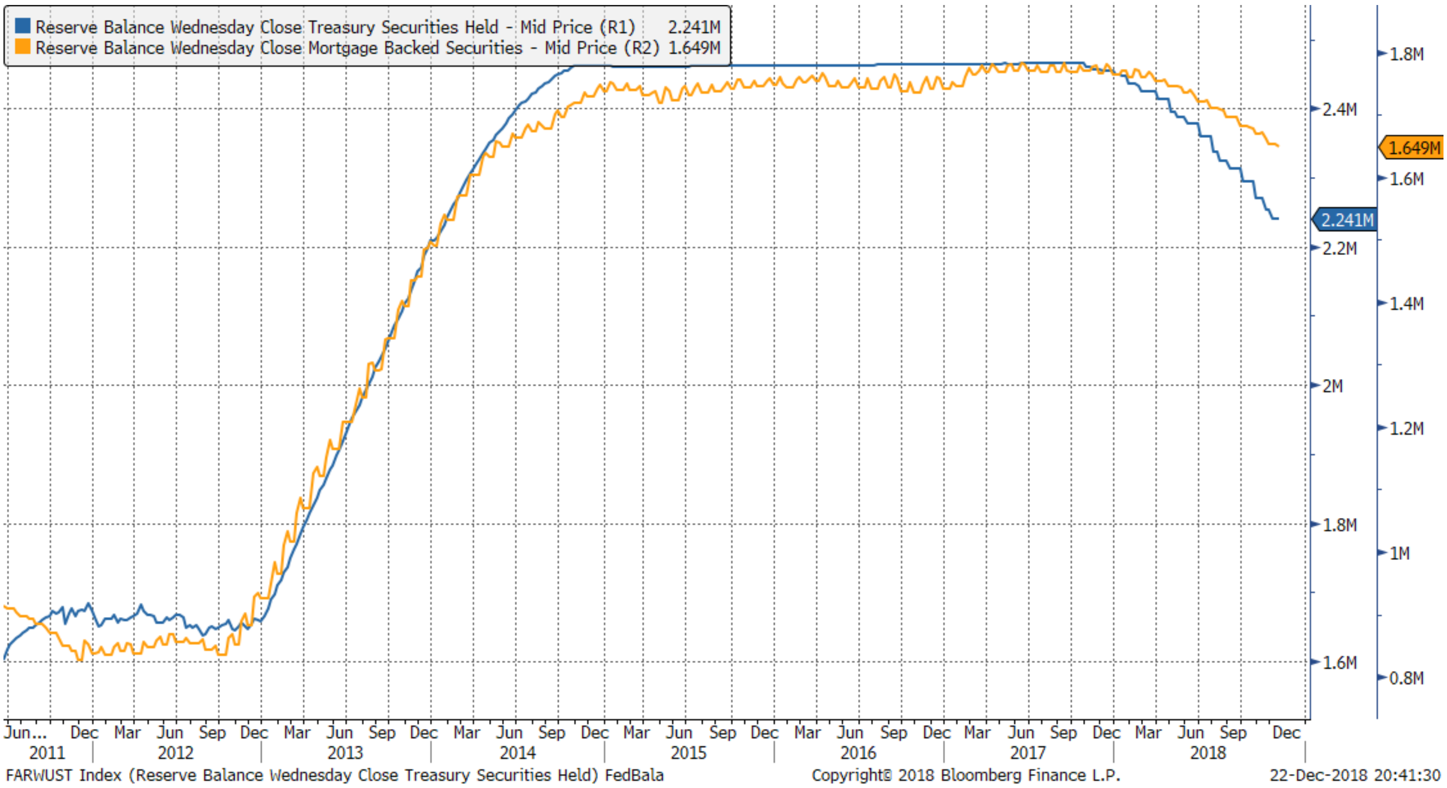
While the threat of reflation-induced volatility spike is well-known risk-parity funds and leveraged investors, this catalyst was absent during the year-end 2018 capitulation. Ordinarily, higher probability of lower inflation and lower growth would energize Treasuries (classic secular stagnation trade), but the 10-year Treasury yield only retreated to August levels at a time when SPX and credit spreads had erased more than a year of gains.

The combination of momentum risk-off and relatively muted strength in dollar-denominated interest rate instruments can be best explained by a global dollar liquidity shortage. There are two factors fueling this liquidity crunch, with the first being Federal Reserve's balance sheet unwind, which is draining the supply of dollar liquidity as designed:




The second source of dollar liquidity shortage is China's Belt and Road Initiative (BRI), which increased global demand for dollar. By year-end 2016, China's three biggest state-owned banks had provided a total of $225 billion in credit for the BRI projects, and the country's two policy banks have also extended $200 billion in loans (these amounts would have risen since); due to countries' cool reception to renminbi funding, large amount of BRI loans were denominated in dollar terms.

In order to fund BRI loans, Chinese banks were seen sourcing dollar deposits from domestic channels; once the loans were made, foreign countries would have to acquire dollar to service the debt. On-going tightening by the Fed would impose the following hurdles:

- Chinese banks would face greater challenge to facilitate dollar lending as domestic dollar availability declined
- Foreign borrowers would need to acquire dollar to service BRI loans, and large dollar liabilities would create challenges for local central banks, for easier local monetary policy would make dollar debt more costly to service

As a result of the aforementioned dynamics, tighter liquidity supply and greater demand would strengthen the dollar, and a 2017 BIS working paper highlighted dollar valuation's impact on shadow cost of bank balance sheet capacity:

- A weaker dollar would flatters the balance sheet of dollar borrowers, whose liabilities fall relative to assets, and the stronger credit position of borrowers would reduce tail risks in the creditor's portfolio and create spare capacity for additional credit extension despite constraints

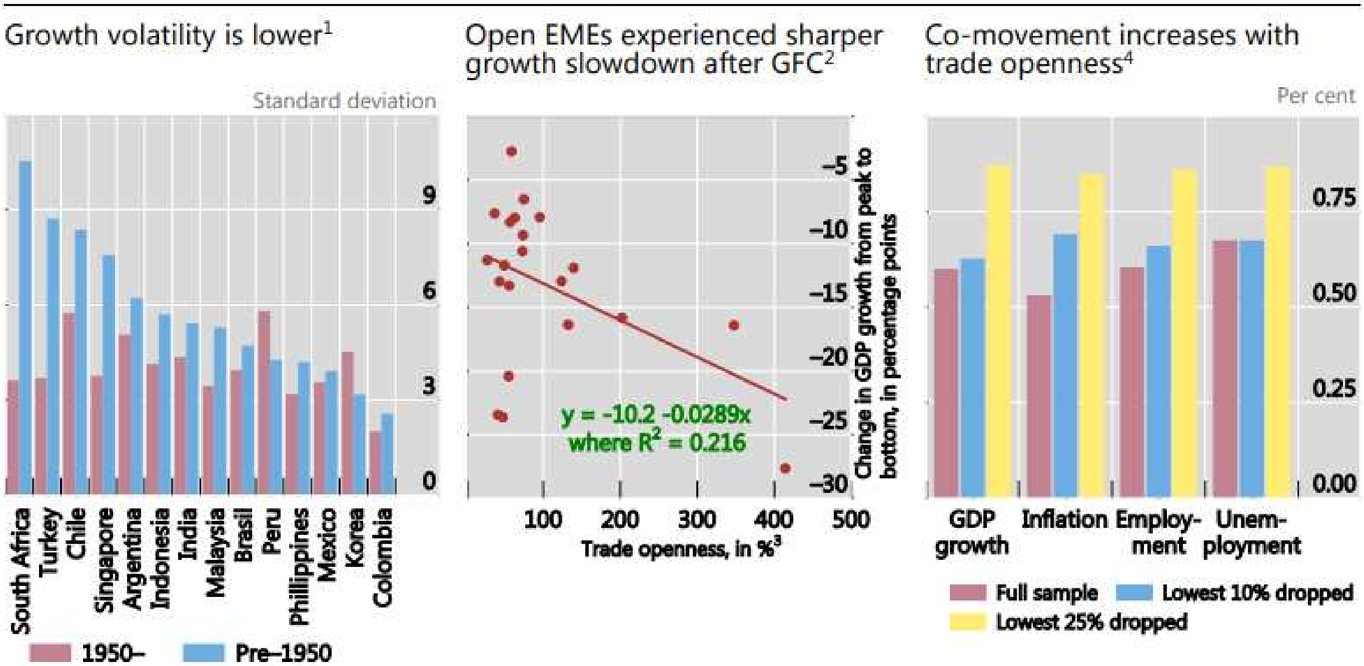
- A stronger dollar increases the shadow cost of bank balance sheet capacity, reduces the supply of dollar credit and increases CIP deviations (downward pressure on cross currency basis, or higher premium of using non-dollar currency to fund dollar borrowing), and reflect higher price of bank leverage as a result of a stronger dollar

Under this framework, BRI-related dollar demand and further Fed balance sheet normalization would lead to higher cost of leverage and reduce hedge funds' ability to take risk. As a result, dollar-denominated leveraged investments would weaken to trigger risk-parity unwinds. This would exert greater impact on Treasuries and corporate bonds because they are beneficiaries of leverage in order to match risk characteristics of equities despite latter's smaller notional value.

## Tariff-induced reflation risks persist

In addition to dollar liquidity shortage as a risk factor, leveraged investments and risk-parity positions continue to face risks of reflationary pressure. Latest BIS research highlighted that [studies on globalization and price trends suggest cross-border trade exerts downward pressure on inflation](). Furthermore, countries under the study saw increased co-movement of national economic data as trade partnerships aided the rise of global value chains (GVCs). This implies that individual central banks have been partly reacting to global trends rather than idiosyncratic developments in respective economies:

Growth volatility is lower and co-movement higher in the globalisation era — Graph 2




EME countries: AE = United Arab Emirates; AR = Argentina; BR = Brazil; CL = Chile; CN = China; CO = Colombia; CZ = Czech Republic; HK = Hong Kong SAR; HU = Hungary; ID = Indonesia; IN = India; KR = Korea; MX = Mexico; MY = Malaysia; PE = Peru; PH = Philippines; PL = Poland; RU = Russia; SA = Saudi Arabia; SG = Singapore; TH = Thailand; TR = Turkey; ZA = South Africa.

[1] Standard deviation computed from the time series of growth rates for each country in the two samples (pre- and post-1950). Some countries are not included due to insufficient data prior to 1950. [2] GDP growth differences between peak and bottom levels before and after the GFC. The regression line is significant at the 5% level. [3] Trade openness is defined as exports plus imports to GDP in per cent. [4] From the full sample the 10% (25%) of observations with the lowest trade openness (imports plus exports to GDP) are dropped. The graph shows the share of co-movement explained by the first two principal components.

Sources: OECD; World Bank; United Nations Conference on Trade and Development (UNCTAD); Angus Maddison Data; Datastream; BIS calculations.

Under this backdrop, rising protectionism can be seen as a reflationary catalyst, which is negative to leverage investments expecting muted volatility and easy financial conditions (risk-parity trade). Thus, risk-parity funds are in the grip of a pincer movement from global dollar liquidity shortage and retreat in globalization.

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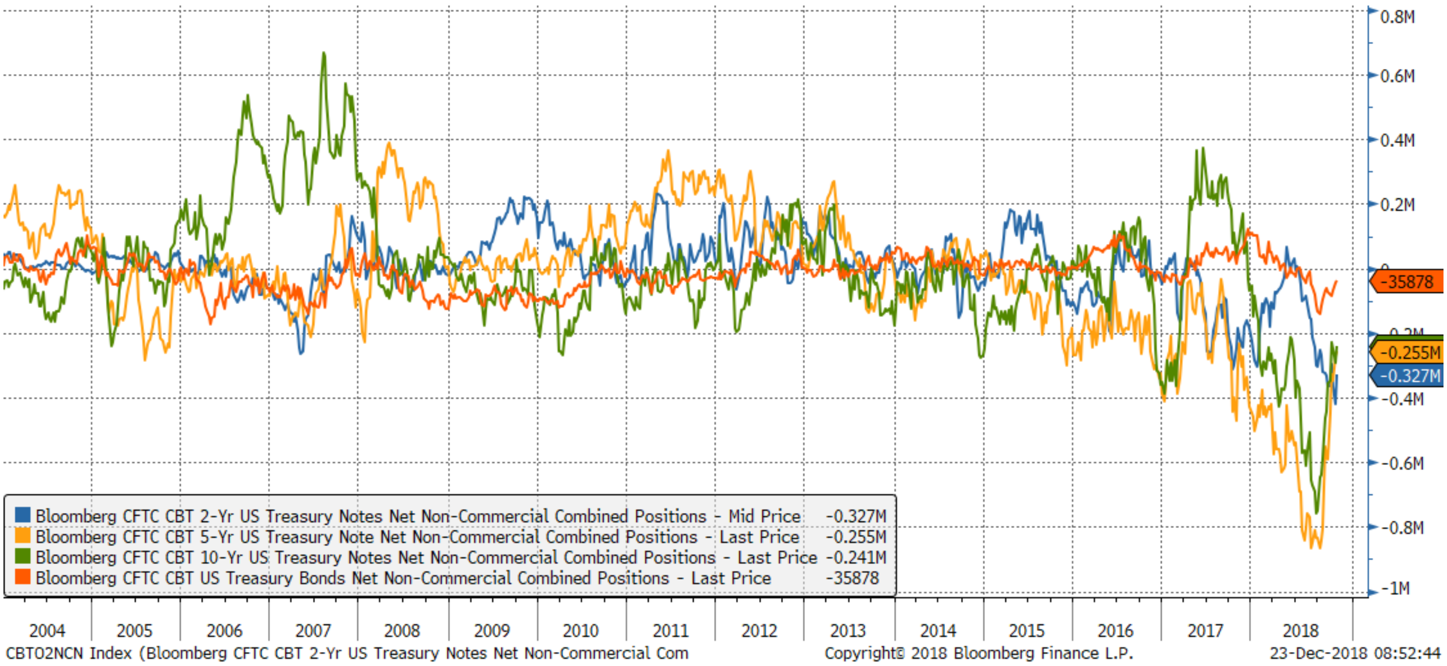
## Safe haven assets struggle to hedge against risk-off

As a result of flight-to-quality flows and market participants capitulating from their reflationary thesis, Treasury positions are more balanced following several waves of short-covering. Positioning data suggest investors have largely pivoted away from reflation trades in light of heightened volatility:




Nevertheless, it is worth putting the magnitude of short-covering into context. If unwinding more than half of the accumulated short positions in 10-year Treasuries following a 17.5% decline in SPX would result in only 43 bps of rally, then one can argue Treasuries would act as a less effective risk hedge at a time when many investors are already long (more potential for renewed duration shedding on rising cost of leverage and higher inflation).

Finally, the Japanese yen has been exhibiting a bearish bias as Fed balance sheet unwind hastened its pace. The currency subsequently became more sensitive to risk-on rallies and less reactive to flight-to-quality flows:

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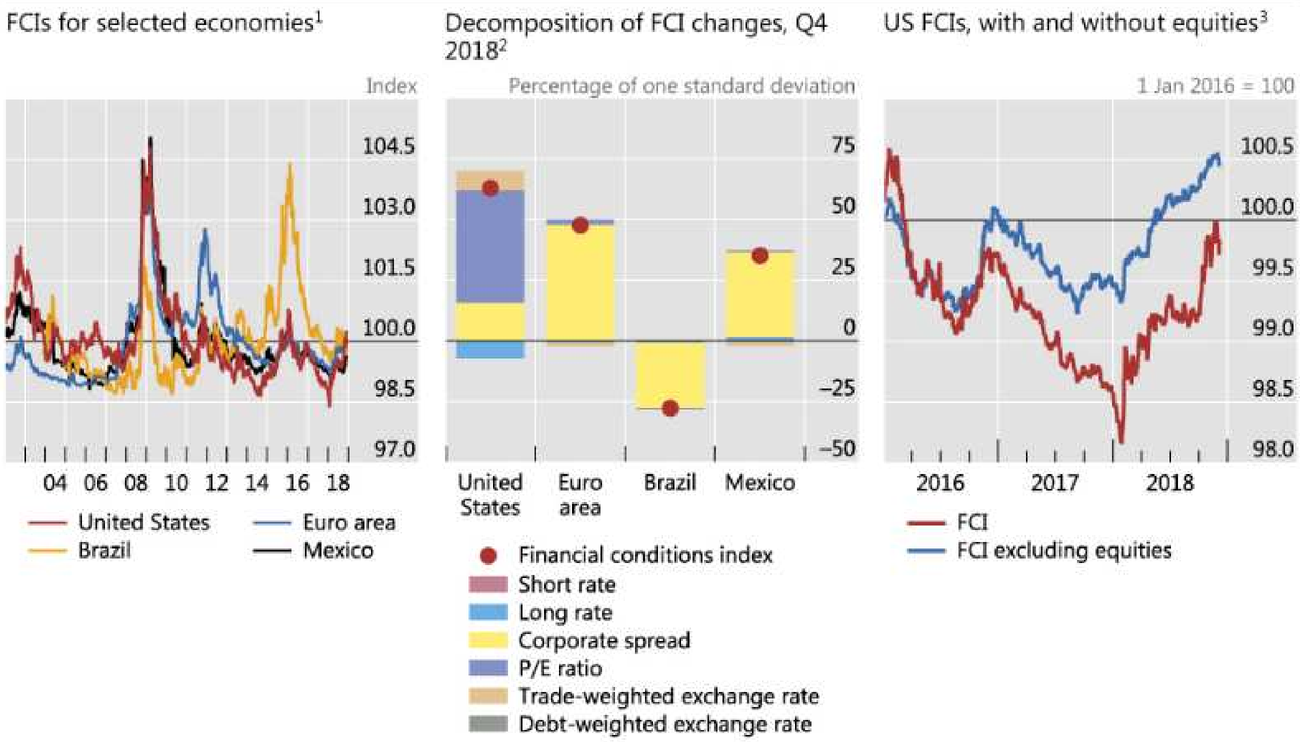
## Logic trap and laments over "policy error"

Investors conditioned by past decade's policy-driven volatility suppression were caught unprepared by the momentum sell-off; rather than crediting balance sheet expansion and policymakers' "whatever it takes" pledge for the longest bull market in history, some in the investment community instead attributed the relentless rally to "economic fundamentals" and investors' "rigorous bottom-up analysis." While illogical, this nevertheless makes sense, for crediting central banks for past performances would dent the mystique of "fundamental investing" and question the merit of fostering relationships to enhance access to corporate leadership.

As market sentiments fell, some market participants shifted to regard the on-going normalization as "policy error." It is ironic to credit "strong fundamentals" for the bull market, but market rout would be the fault of monetary policy despite passive balance sheet unwind was communicated well ahead of sentiment shifts. In other words, there were plenty of opportunities for markets to de-risk and react to policy guidance, but many instead mistook the symptom of policy easing as "economic fundamentals" and remained steadfast in "yield-seeking" to move up the risk ladder.

The "policy error" thesis is also rooted in the view that equity valuation plays a key role in the transmission of monetary policy to the real economy, with the transmission mechanism also known as financial conditions. In the latest BIS quarterly report, researcher Zabai highlighted financial conditions indices' sensitivity to equity valuations:

Despite small weights, equities have recently played a large role in driving FCIs — Graph A




[1] Each financial conditions index (FCI) is constructed as the z-score of the weighted average of the underlying components, centred around 100 (that is, the weighted average minus its long-term mean over its long-term standard deviation, plus 100). Therefore, an index value of 101 indicates that financial conditions are one standard deviation above their long-term mean (set equal to 100). [2] Contribution of each component to the index change between 1 October and 4 December 2018, expressed as a percentage of one standard deviation of the index. The index components are short-term and long-term interest rates, corporate spreads, equities and the trade-weighted exchange rate for AEs. For EMEs, the FCIs include the same five components plus a debt-weighted exchange rate to capture FX mismatches. Short rates are policy rate for AEs and three-month government bond yield for EMEs. [3] The ex-equities FCI is computed by excluding equities and redistributing the corresponding weight to the remaining four components of the index. The redistribution maintains the same proportionality between the weights of the included variables as in the main index.

Sources: Bloomberg; Datastream; Dealogic; Euroclear; ICE BofAML indices; JPMorgan Chase; Goldman Sachs; Thomson Reuters; Xtrakter Ltd; BIS locational banking statistics; national data; BIS calculations.

At the same time, Zabai expressed concern that officials may risk overstating economic boost signaled by easy financial conditions and overlook distributional effects, for equity ownership are concentrated in affluent households with lower marginal propensity to consume:

> "The high sensitivity of FCIs to equity valuations under this methodology points to the importance of appropriately setting the corresponding weights. Some degree of reliance on market-based finance in funding economic activity, as well as the tendency of corporations to look to the equity market as a signal in their investment decisions, calls for equities to be included in FCIs. Against this, the short-term macroeconomic relevance of equity market developments could be overstated if distributional considerations do not inform the choice of weights. Equity holdings are concentrated among households at the top end of the income and wealth distributions, which tend to have a relatively low marginal propensity to consume. As a result, an index constructed without accounting for these differences may place too high a weight on equity valuations, thereby possibly overstating the boost in activity foreshadowed by a loosening of financial conditions."

Consistent with the thesis that widening inequality as a result of prolonged unconventional easing would generate support toward political insurgents (and induce anti-establishment policy shifts such as retreat from global trade), "policy error" is not tighter policy but the scenario noted in Zabai's thesis: policymakers overstate economic benefits of buoyant risk sentiment despite distributional effects. Overlooking this factor would induce officials to cater to investors' anti-volatility bias by prolonging highly distributional policies. This was already seen in quantitative easing programs' immediate effect in boosting asset prices (benefiting affluent households and business entities with access to the capital market), while households with less asset ownership would await "trickle-down" benefits over policy's "long and variable lags," such as tighter labor market conditions overtime.

This roundabout dynamic from stimulative monetary policy to the rise of populist insurgents cornered some investors in a logic trap: they prefer a return to the post-Crisis monetary policy status-quo ("policy error" avoided), yet it was precisely such status-quo that gave rise to the present political vitriol and seething discontent from "left behind America" and anger from the "Yellow Vests." It was the growth of wealth inequality that led to calls for "People's QE" or "Helicopter Money," which would demand monetary authorities to permanently cede policy control to fiscal authorities.

While it is tempting for some to attribute anti-establishment support to insufficient education or workers' "reluctance to re-tool," one would have to face political and economic consequences no matter whose "fault" it is. In other words, the path to avoid "policy mistake" means more "Yellow Vests" and "Tariff Man" in the days to come, for accommodative monetary policies (and the desire to avoid "policy error") are far from costless.

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