J.P.Morgan

North America Fixed Income Strategy
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Le déluge

Revisiting the impact of Treasury supply on long-end swap spreads

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- Since we first examined the impact of issuance on Bond spreads, the fiscal outlook has deteriorated significantly and the Treasury is now signaling a desire to extend their WAM; we now look for -60 bp by year-end.
- There are several sources of downside risk to this target, including the potential for weaker than expected revenues, weak pension demand (potentially outright net selling), and continued illiquidity at the long end (both in a historical context and relative to shorter tenors)
- The Fed remains the 6 trillion pound elephant in the room; though the Chair recently mentioned financial conditions as one benefit of their purchase program, tapering of activity suggests a continued focus on market functioning
- So long as impairment does not threaten financial stability, we believe the Fed has been and remains willing to tolerate low market depth for a prolonged period of time …
- … and the risk-free rate shock to truly threaten financial conditions and the flow of credit, particularly in light of the current suite of emergency faculties, is presumably quite large
- Gross issuance of privately-held coupon securities should turn positive this month and total nearly $2tn from now through year-end

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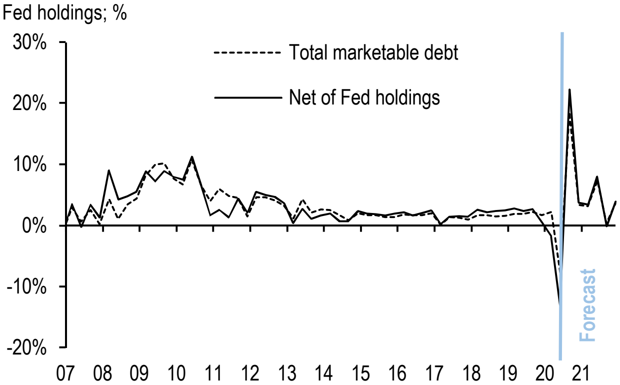
Le déluge: Treasury supply and long-end swap spreads

In early April, we emphasized that though Fed purchases and temporary regulatory relief had the potential to support short-term funding markets, swap spreads were more likely to be driven by the issuance outlook, and the growing imbalance between buyers and sellers of duration across securities and derivatives (see *What about Bonds?*, J. Younger et al., 4/3/20). At the time. we estimated that 30s should trade close to -60 bp the end of the year. Since that time, the impact of proposed revisions to SLR have not had much effect due in large part to a lack of FDIC and OCC application of similar changes to bank affiliates, and relatively little discussion of similar GSIB relief (ideally through multiple channels; see *What is GSIB rules are relaxed as well?*, J. Younger & H. St John, 4/7/20). More importantly, however, **the fiscal outlook has deteriorated further as Congress has passed additional economic stimulus, and we now expect the federal deficit to reach $4tn and $2.3tn in FY20 and FY21, respectively (see *United States*, M. Feroli, 5/1/20)**.

Exhibit 1: Though Fed purchases and massive Bill issuance has reduced WAM-weighted marketable Treasury debt held by the public by nearly 15%, recent projections suggest historic net issuance and WAM extension over the next few months

Quarterly percentage change in marketable Treasury debt outstanding and net of Fed holdings; %



Source: J.P. Morgan, U.S. Treasury

Exhibit 2: Bond spreads have only now caught up to levels implied by their drivers, and barring a significant acceleration in Fed purchases can narrow significantly further

10-year regression of 6-month changes in 30-year matched-maturity swap spreads versus drivers, through year-end 2020

			4/30 to year-end	
Factor	Coeff	T-stat	Level	Sprd impact
Intercept	-2.20	-9.5		
3M GC/OIS spreads	-0.29	-14.6	5	-1.4
10s/30s Tsy crv; bp	-0.417	-47.4	0	0.0
% chg WAM-wtd public Tsy debt; yrs * $bn	-0.32	-8.1	14.3	-4.6
VA hedging demand; $bn 20s	-0.121	-24.1	0	0.0
Fed custody hldgs; $bn	0.049	30.3	-120	-5.9
R-squared	72%			
Std. err	6.4			
6M change as of 4/30 and through YE	-7.7			-14.1
Actual as of 4/30 and YE projection	-46			-60

Note: Absolute rather than % changes unless otherwise specified. We assume the Fed purchases a representative sample of 2020 issuance. Yield curve changes through year-end based on J.P. Morgan forecasts. We assume incremental further narrowing in term GC/OIS on the back of Fed purchases and other liquidity support, but not including explicit regulatory relief. Fed custody holdings are assumed to decline incrementally further to total ~$200bn for 2020.

Source: J.P. Morgan, NYFRB, U.S. Treasury

Perhaps more notable for swap spread pricing than simply the widening deficit is how the Treasury is planning to fund it. This week's announcement of larger than expect auction sizes in 10s and 30s, as well as a much larger initial 20-year auction than market consensus, clearly signal an intent to reduce reliance on T-Bills and extend the WAM of the debt from current levels. Taken together, we now expect nearly $4.7tn net issuance this year, split roughly 2:1 between Bills and coupon securities. We expect the Fed to continue sizeable purchases over the next couple of months, but not nearly enough to offset the remaining supply for the year. **Though we refer the reader to our colleagues in Treasuries for a more detailed discussion (see *Supersize me*, J. Barry et al., 5/6/20), suffice it to say that duration markets are likely in for quite a whipsaw—a material reduction in the**

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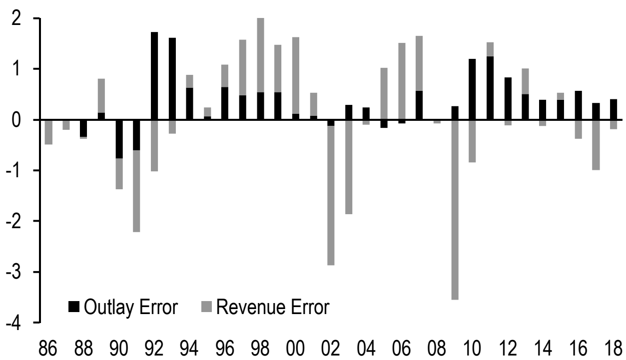
WAM-weighted stock of Treasury debt followed by a historic quarterly increase (Exhibit 1).

Given this backdrop, we return to Bond spreads. In our prior work we relied on a longer-run model to estimate targets, plugging in our new supply forecasts and considering the trajectory of other drivers, **we expect 30-year matched-maturity spreads to trade around -60 bp by the end of the year (relative to around -57 bp in our prior forecast; Exhibit 2)**.

Having established a target, we examine the risks around it. Because our view is driven primarily by the fiscal outlook, it is worth noting that there is a significant risk that deficit widens further. By the CBO's own retrospective analysis[1], their forecasts tend to systematically under-predict shortfalls in the lead-up to recessions, by 3-4% of GDP in 2001 and 2008 (**Exhibit 3**). **This is driven primarily by an underestimate of the extent to which revenues are likely to slump**. If this were to repeat, the Treasury would be facing an additional $600-800bn funding gap over the medium-term. Then of course there is the risk of additional stimulus, which is already being discussed in Congress. This is particularly important in the context of a clear desire on the part of the Treasury to extend the WAM of their debt, which suggests the potential duration supply shock associated with such an undercounting would be larger still.

Exhibit 3: The CBO's own retrospective analysis suggests that deficit forecast errors have been ~3-4% of GDP the last two recessions, driven primarily by lower than expected receipts

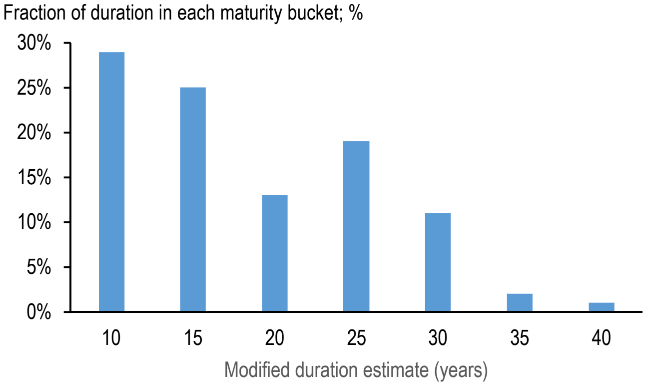
Deficit forecast error by year, split into outlays and revenues; % of GDP



Source: J.P. Morgan, CBO

Exhibit 4: An empirical analysis suggest that a majority of private defined benefit pension plans have liability durations of 10-20 years

Fraction of duration in each maturity bucket; %



Note: We estimate a top down proxy of modified duration by using the monthly pension liability data regressed on changes in Treasury yields and credit spreads, taking the beta from the former. We then estimate pension-level durations based on the change in FY19 vs FY18 liabilities relative to the change in Treasury yields over the same period, once controlling for the effect of credit spreads, and map the top down duration to pension-level estimates based on linear regressions.

Source: J.P. Morgan, Milliman

The introduction of a large 20-year issue adds some downside (narrowing) risk to this spread target as well. In addition to overall duration delivery, this sector has the potential to cannibalize demand for 30s, particularly from private defined benefit pensions. Not only is duration risk appetite in Treasuries likely much less in the wake of the rally (even potential net selling for some plans, consistent with recent reconstitution activity in STRIPS; see also *Pension re-risking and long-end swap spreads*, J. Younger & H. St John, 4/2/20), but **we estimate that the vast majority of plans have liabilities that behave like 10 to 20 year instruments (Exhibit 4)**.

[1] See *An Evaluation of CBO's Past Deficit and Debt Projections*.

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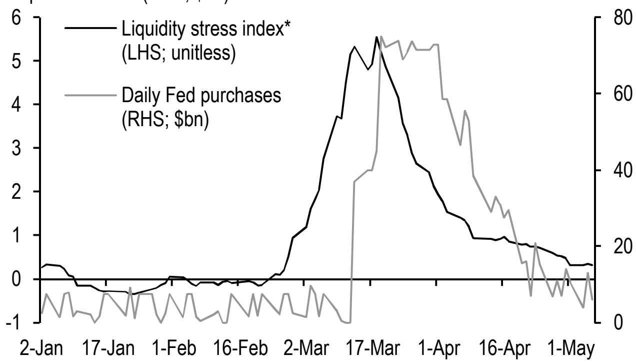
This suggests a somewhat shorter maturity point could cannibalize some end-user demand for 30s, consistent with survey results recently published by our colleagues in Treasuries (see *Survey says?*, J. Barry et al., 4/24/20. In the meantime, we would not expect derivative activity to be materially affected by cash market dynamics, which suggests the 10s/20s/30s swap curve is likely to remain relatively stable through this supply shock with most of the price action in 20-year spreads on the cash side.

Another key risk is continued poor liquidity at the long end. Though conditions have certainly improved across the curve, in 30s a number of indicators remain stretched on a historical basis (**Exhibit 4**). This was also highlighted in the TBAC charge question and meeting minutes. HFT participation remains most notably below recent averages at the very long-end, and in turn, we have seen elevated price impact and volatility even as the worst of the liquidity shock has faded. **This suggests the upcoming supply shock could have an outsized impact in 30s, which would be a narrower as illiquidity risk premia gets priced into yields**.

Exhibit 5: The Fed has tapered their purchase as Treasury market conditions have improved …

Treasury market liquidity stress index* (LHS; unitless) and daily Fed purchases of coupon securities (RHS; $bn)

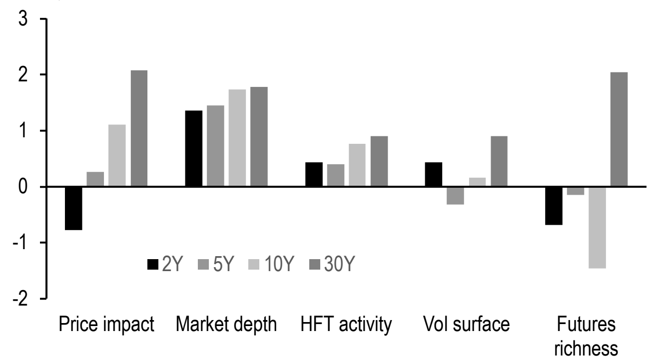


* For details, see *Almost back to "normal"*, J. Younger & H. St John, 4/14/20.

Source: J.P. Morgan, BrokerTec, NYFRB

Exhibit 6: … but the long end still looks stressed in absolute and relative terms across a range of metrics

5-year Z-score of various liquidity indicators* as of 5/6/20, positive means poor liquidity; unitless



* For details, see *Almost back to "normal"*, J. Younger & H. St John, 4/14/20..

Source: J.P. Morgan, BrokerTec

What about the 6 trillion (soon to be 7...or 8?) pound elephant in the room: the Fed? The FOMC has repeatedly emphasized that their purchase program is driven by market functioning rather than monetary policy. They have been largely successful in this respect, and have tapered consistent with a mix of quantitative measures of Treasury market conditions (**Exhibit 5**). At this point the Markets Desk appears to be mostly comfortable with current levels of stress in Treasury markets. Even so, the long end still looks stressed by several measures, both relative to medium-term historical trends and other tenors (**Exhibit 6**). That suggests upcoming issuance could have an exaggerated price impact, including spreads.

Though it may be tempting to assume the Fed will simply come to the rescue that is far from a foregone conclusion in our view. The Committee has of course been quite willing to tolerate very low depth and high volatility during prior episodes so long as financial stability is not threatened (as was the case a few weeks ago; see *Why we should all care about the Treasury futures basis*, J. Younger et al., 3/12/20). Admittedly, the Chair raised easing financial conditions as another rationale for continued purchases. However, given a range of emergency lending facilities targeting short-term, high-grade, high yield, and real economy lending, **the risk-free rate shock required to plausibly threaten the flow of credit is presumably quite**

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large. This suggests a high bar to upsizing purchases under both a market functioning and financial conditions-focused reaction function, and we expect the Fed to continue slowly tapering their purchases over the next couple of months. **Though gross issuance of privately-held coupon securities was sharply negative in March and April, it should turn positive this month and we expect nearly $2tn net of Fed purchases from now to the end of the calendar year (see *Supersize me*, J. Barry et al., 5/6/20)**.

To summarize, since we last considered long-end swap spread pricing in detail the fiscal outlook has deteriorated significantly. An apparent shift in Treasury's debt management strategy likely compounds the impact on swap spreads, and **we look for 30s to reach -60 bp by the end of the year**. **There are several sources of downside (narrowing) risk to that forecast**: the potential for deficits to widen more than currently forecast; weak pension demand in the 30-year sector specifically, reflecting both less duration risk appetite and a preference for shorter maturities; and poor liquidity conditions at the long end, both in absolute terms and relative to shorter tenors. Finally, though the Fed may step in at some point, their focus on market functioning and financial conditions suggest a relatively high threshold relative to potential moves in swap spreads. While many of the themes that are likely to drive spreads narrower should impart a gradual impact; ongoing primary market supply, convexity hedging flows, pension re-allocations, impaired market depth may well act as a catalyst for a faster adjustment. Moreover, to the extent that dealers may well need to absorb residual supply amidst this backdrop of this imbalance, the looming issue of sunset provisions in the SLR carve-outs is likely to continue to weigh on spreads over the medium term.

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