The Fed's Balance Sheet Strategy: What Now?

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Since the Fed's unconventional, emergency purchases of mortgage-backed securities and Treasuries at the height of the severe financial crisis in November 2008, the Fed's perception about a dramatically enlarged balance sheet has evolved towards believing that it is conventional and normal. The Fed's expanded scope of monetary policy has been supported by its over-estimation of the benefits of its QE asset purchases and its under-estimation of the economic and political risks of maintaining an outsized balance sheet. The Fed's exposure to Congress's dysfunctional budget and fiscal policy making in the face of mounting government debt and debt service costs is particularly concerning.

The Fed's emergency measures helped end the financial crisis and lift the economy from recession. After financial markets had normalized and economic growth had become self-sustaining, the Fed's QEs had a different purpose—to stimulate faster growth and improve labor markets.

While QEIII, the Fed's low policy rates, forward guidance and reinvestment policy clearly stimulated financial markets, and labor markets improved, there is scant evidence that economic growth was stimulated. Nevertheless, the Fed takes credit for the improved labor markets and now favors maintaining an oversized balance sheet.

So what began as an unprecedented response to the most severe financial crisis in generations has evolved into what is now perceived to be normal and conventional. But neither description is appropriate.

The Fed's current intention--to gradually reduce its Treasury and MBS holdings but indefinitely maintain an enlarged balance sheet, including MBS, with sizable excess reserves--involves new procedures for conducting monetary policy that are simply more complex than are needed for the Fed to achieve its mandate, and they extend the Fed's footprint in financial markets more than is necessary.

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The Fed should reset its strategy to rules-based guidelines for conducting monetary policy during extended normal times and move back towards its historic procedures that proved efficient in all but extreme circumstances, and also establish a framework that would allow emergency monetary policies during abnormal economic or financial stress. The Fed should fully unwind its MBS holdings and reduce its balance sheet consistent with modest amounts of excess reserves. This would allow the Fed to gradually unwind its ON RRP program and re-establish the historic "corridor system" of managing the Fed funds rate.

QE and the balance sheet expansion: purposes, effects and perspectives

In a speech on December 1, 2008, Fed Chairman Bernanke commented that the Fed's purchases of $600 billion of GSE debt and MBS initiated in November 2008 were extraordinary, unconventional steps, and stated that "To avoid inflation in the long run and to allow short-term interest rates ultimately to return to normal levels, the Fed balance sheet would eventually have to be brought back to a more sustainable level. The FOMC will ensure that this is done in a timely way." (Bernanke, 2008)

A month later, prior to the Fed's announced additional purchases of $750 billion agency debt and MBS plus $300 billion of Treasury securities in March 2009, Bernanke emphasized that the Fed's asset purchases involved emergency "credit easing" that "focuses on the mix of loans and securities that it holds and on how this composition of assets affects credit conditions for households and businesses." (Bernanke, 2009). He set out an exit strategy: "A significant shrinking of the balance sheet can be accomplished relatively quickly" such that "the Federal Reserve will be able to return to its traditional means of making monetary policy—namely, by setting a target for the federal funds rate."

From crisis management to stimulating labor markets. The Fed and Bernanke ignored his crisis-related instructions. Following the QEII purchases of $600 billion of Treasuries and maturity extensions through Operation Twist, at the Jackson Hole Symposium in August 2012 Bernanke outlined the rationale of the Fed's forthcoming QEIII and forward guidance, concluding that "the Federal Reserve will provide additional policy accommodation as needed to promote a stronger economic recovery and sustained improvement in labor market conditions." (Bernanke, 2012).

Bernanke cited research suggesting that the Fed's QEI and QEII asset purchases lowered 10-year Treasury bond yields by an estimated 80-120 basis points and that "a study using the Board's FRB/US model of the economy found that, as of 2012, the first two rounds of LSAPs may have raised the level of

output by almost 3 percent and increase private payroll employment by more than 2 million jobs, relative to what otherwise would have occurred."

While the Fed's estimates of the benefits of QEI in stabilizing financial markets and lifting employment from what would have occurred otherwise seem valid, it over-estimated the effectiveness of QEII. QEI was a successful response to financial crisis and had a much larger interest rate impact than QEII. Estimates of the impacts of QEI and QEII should be unbundled. **Importantly, *the Fed board staff's estimates of the impacts of the QEs on GDP and employment that Bernanke cited were based on simulations of the FRB/US model that significantly over-estimated actual growth over the period, which resulted in over-estimates of job gains.*** It is noteworthy that the Fed's forecasting track record during 2010-2016 was notably poorer than during pre-crisis periods (Levy, 2018).

QEIII was an open-ended commitment by the Fed to purchase $40 billion per month of agency MBS until the labor markets improved "substantially." In December 2012, the Fed raised its total monthly purchases under QEIII to $85 billion with additional monthly purchases of $45 billion of longer-dated Treasuries that would be continued after Operation Twist concluded.

Financial markets thrived during QEIII but the economic responses were muted. Stock markets (and real estate values) rose sharply, bond yields stayed low and risky assets appreciated. But nominal and real GDP did ***not*** accelerate during the four years after QEIII began as the Fed expanded its balance sheet to $4.5 trillion and reinvested maturing assets to maintain that level. Nominal and real GDP growth averaged 3.6 percent and 2.1 percent, respectively. Most strikingly, business investment did not respond as expected to the lower real costs of capital. The economic impacts of QEIII and subsequent reinvestment policy were significantly overstated and raise a lot of questions.

During this period, the Fed Board's staff and the FOMC significantly over-estimated real GDP growth (Table 1 and Chart 1). Actual real GDP growth in 2013 matched the Fed's forecasts but fell decidedly below the Board staff's and FOMC's forecasts (SEPs) in 2014 and 2015. Actual growth also fell below the FOMC's forecast in 2016.

The disconnect between the economy and the Fed's unprecedented monetary ease deserves closer scrutiny, and more research on the factors that inhibited growth would clarify issues. Financial regulations and sustained low rates have been identified as sources that have constrained bank lending and harmed the monetary transmission channels (Calomiris, 2017). Low business confidence, driven in

part by the growing web of burdensome government regulations in an array of non-financial sectors likely explains some constraint on growth, but more research is needed (Levy, 2018).

The Fed's typical rationale for its QEs has relied on three themes: 1) if it had not taken the steps that it did, the financial crisis and economic contraction would have been magnitudes worse, 2) normalizing monetary policy any quicker risked throwing the economy back into recession and 3) with inflation generally below 2 percent, the Fed was appropriately pursuing its dual mandate. The first rationale makes sense for QEI, but it is frequently used inappropriately to rationalize QEIII and the Fed's subsequent reinvestment policy. The Fed's excessive worries about rising rates ignore history that shows clearly that once economic expansions unfold following accommodative countercyclical monetary policy, normalizing interest rates and higher bond yields do not harm economic activity.

My assessment is that 1) if the Fed had not undertaken QEIII, economic and labor market performance would have been very similar to what actually occurred and 2) if QEIII had actually stimulated the economy as the Fed had forecast, inflation and interest rates would have risen significantly faster. Of course, the Fed's view of history is different, but its assessment should receive close scrutiny in light of the persistent gap between the Fed's FRB-US model's forecasts and actual outcomes. A deeper and more reliable understanding of how unconventional monetary policy affects economic performance when the economy and financial markets are functioning normally would be very instructive.

The Fed's fears of jarring financial markets. Concerns that the economy was fragile and the Fed's excessive fears of jarring financial markets clearly drove monetary policy. These fears were accentuated by the Taper Tantrum, a surprising 100 basis point rise in bond yields triggered when Bernanke suggested in May 2013 that the Fed would eventually need to reduce its asset purchases. The Fed responded with its strategy of extending reinvestment of all maturing assets until well after it began increasing interest rates. As several Fed members noted in 2014, not reinvesting maturing assets would "send the wrong signal to markets."

It is noteworthy that the unanticipated sharp rise in bond yields during the Taper Tantrum had a negligible impact on GDP growth--temporarily weaker housing activity was offset by strength in other domestic purchases--and bond yields actually receded when the Fed tapered QEIII between late 2013 and September 2014. These observations suggest that the actual Fed balance sheet flows were less important to markets than earlier fears, and that the economic impact of changes in interest rates depends crucially on the thrust of monetary policy, which remained easy during this period. They also

suggest that the economic implications of "announcement effect" studies must be considered in context, and the Fed's excessive concerns about market reactions to what it does and says are excessive.

The Fed's peak balance sheet grew to $4.5 trillion, comprising the world's largest holdings of US Treasury securities (various maturities) and MBS (mostly long-dated) financed largely by short-dated borrowings from commercial banks. This seemed to serve little economic purpose, other than satisfying the Fed's fears of jarring financial markets. The Fed's holdings contributed to low bond yields and mortgage rates, and elevated the prices of stocks and real estate. The low interest rates encouraged reliance on debt and also encouraged risk-taking. But economic growth continued to disappoint through 2016.

Confidence jumped beginning in early 2017 and the economy gained momentum, even as the Fed gradually raised rates and announced and began its gradual balance sheet unwind. Bond yields have risen modestly since December 2017, but that likely reflects the strengthening economy rather than the minor amount of non-reinvestment by the Fed.

The Fed's current unwinding strategy and political economy risks

The Fed's official "Addendum to the Policy Normalization Principles and Plans" issued June 14, 2017 established a schedule for passive runoffs of Treasury securities and MBS and stated its intention is to maintain a balance sheet "larger than before the crisis", but the Fed has left unclear its ultimate balance sheet strategy. Projections of the Fed's holdings based on the schedule in the Fed's Addendum are shown in Charts 2-3. Note that the Fed's MBS holdings are projected to rise as a share of its total portfolio (Chart 4).

Around the same time, Fed Governor Jerome Powell commented following a speech to the Economic Club of New York that "It's hard to see the balance sheet getting below a range of $2.5-$3 trillion." (Powell, 2017). With $1.5 trillion of currency, this would imply $1 trillion of excess reserves. Powell's statements favoring the current "floor system" of managing the Fed's policy rate rather than the market-based "corridor" procedure used before the financial crisis reveal his preference to maintain ample excess reserves in the banking system and pay interest on excess reserves (IOER). Based on the Fed's schedule, the Fed's balance sheet would fall to $2.5 trillion in early 2021; at that time, the Fed would hold approximately $1 trillion of MBS.

My assessment is that the potential risks to the Fed's credibility and independence overwhelm any possible benefits of maintaining an enlarged balance sheet as contingency planning for infrequent financial emergencies.

The Fed's MBS holdings: they should be fully unwound. There is no justification for the Fed's sustained holding of MBS, and the Fed should adjust its strategy to move toward an all-Treasury portfolio. The Fed should not be involved in credit allocation that favors housing over other sectors years after the mortgage market has fully repaired. Policies affecting credit allocation should be left to fiscal policy and regulators, and the Fed should stay away from the politics of housing policy and credit subsidies.

At some point in the future, natural amortization of principle and expected pay downs of the Fed's MBS portfolio may rise to and exceed the unwind caps (amortization and pay down models are required to make such estimates). If that happens, in order to limit the runoff in its MBS portfolio to its established schedule, the Fed may need to increase its MBS purchases. This makes little sense.

The Fed's reticence to unwind its MBS holdings is likely driven by concerns about mortgage rates. Estimates suggest that fully unwinding its MBS holdings may widen the MBS-Treasury yield spread by roughly 50 basis points. Although estimates involve uncertainties, such increases from current mortgage rates would not unhinge improvement in the housing market, and would reduce the policy-induced distortions in credit allocation.

The costs and benefits of an enlarged balance sheet and changed operating procedures. An indefinitely enlarged balance sheet has been identified as a tool for enhancing financial stability and offering safe, liquid assets (Greenwood, Hanson and Stein, 2016), and to facilitate the Fed's role as lender of last resort during financial crises. These arguments stem from the trauma of 2008-2009, and are geared toward a discretionary monetary policy framework that would provide flexibility to respond to rare bouts of financial instability.

Instead, it would be much more efficient to establish rules-based guidelines for the conduct of monetary policy consistent with the Fed's mandate during extended spans of normal economic and financial conditions, and also establish rules and triggers for infrequent emergencies, with sufficient flexibility for the Fed to provide liquidity and serve as lender of last resort. This would reduce the potential risks of maintaining an enlarged balance sheet during normal periods.

Significantly more research is needed. The Fed needs to better understand how maintaining an enlarged large balance sheet affects economic performance and its interaction with interest rate policy, and how the balance sheet fits into the Fed's task of achieving its mandate. This issue may become pressing if future Fed rate increases result in a flatter or even inverted yield curve, which based on history would raise concerns about recession. In this situation my assessment is that economic performance would be better served by more aggressive balance sheet reduction than by more aggressive rate increases.

The Fed has already expressed concern about establishing sufficient flexibility to ease monetary policy in response to the next inevitable downturn. A smaller balance sheet with fewer excess reserves would be a better basis for providing such flexibility and effectiveness under adverse conditions.

The blurred boundaries between monetary and fiscal policies. The Fed has been far from transparent about the sensitivity of budget outcomes and fiscal policies to monetary policy, the economic and financial risks of its enlarged balance sheet and how it encourages bad budget practices. The Fed's enlarged balance sheet and the sizable profits it remits to the Treasury are simply too tempting to Congress's fiscal policymakers who now perceive of the Fed as a source of risk-free money. ***The Fed should steer monetary policy clear of fiscal policy—and the most effective way of doing so is to shrink its balance sheet.***

During fiscal years 2015-2017, the Fed remitted an average of $98 billion per year to the Treasury, and along with low interest rates and bond yields, it significantly reduced the government's cash flow deficits. But these gains are likely temporary, and can quickly turn to losses. In 2017, the Congressional Budget Office estimated that a 1 percentage point increase in interest rates would add $1.6 trillion to budget deficits during 2018-2027 (CBO, 2017). Year-to-date in 2018, both short-term interest rates and 10-year bond yields have averaged above the CBO's projections for all of 2018. The risks described by Marvin Goodfriend in "Monetary Policy as a Carry Trade" are becoming a reality (Goodfriend, 2014).

The CBO's latest budget projections of persistent government deficits, rising debt and even faster increases in net interest outlays are striking (CBO, 2018). The CBO's baseline projections of persistently high budget deficits increase publicly-held debt from 78 percent of GDP in Fiscal Year 2017 to 96 percent in 2028 (up from 35 percent in 2007) and far higher in later years. (The Fed's holdings of Treasuries are counted as publicly-held debt because the Federal Reserve District Banks, which hold the Fed's assets, are capitalized by commercial banks in their districts.) Over the next 10 years, net interest costs are

projected to rise from $263 billion to $915 billion, nearly doubling as a percent of total Federal outlays (from 6.6 percent in 2017 to 13 percent in 2028.)

The potential risks facing the Fed were impressed upon me at a recent Congressional hearing held by the House Financial Services Committee on the interaction between monetary and fiscal policies when Congressman Brad Sherman (D-CA) heaped praise on the Feds' outsized remittances to the Treasury and all of the additional spending they had financed, and then asked the expert witnesses "What would the Fed have to do to double (to $200 billion) the amount it remits to the Treasury?" (US Congress House Financial Services Committee, July 2017). This question may seem amusing to monetary economists, but the Fed should not take it lightly. The Congress has used the Fed's balance sheet twice to help finance spending legislation—the FAST Act in December 2015 and the Bipartisan Budget Act of 2018—and more intrusions seem likely. As Charles Plosser, former President of the Federal Reserve Bank of Philadelphia, has emphasized, the Fed has no defense against Congressional misuse of its balance sheet (Plosser, 2017).

The Fed's exposure to Congress's fiscal policy deliberations entangles it in Washington pressure politics in unpredictable ways. If things go wrong, the Fed may be blamed. And some of the Fed's operating procedures that it sees as important may draw heavy criticism from Congress that puts its narrow perceptions above sound economics. The Fed's policy of paying IOER is a good example: while the Fed correctly argues paying IOER is a wash on the Treasury's balances, Congress's perception may be driven by other considerations.

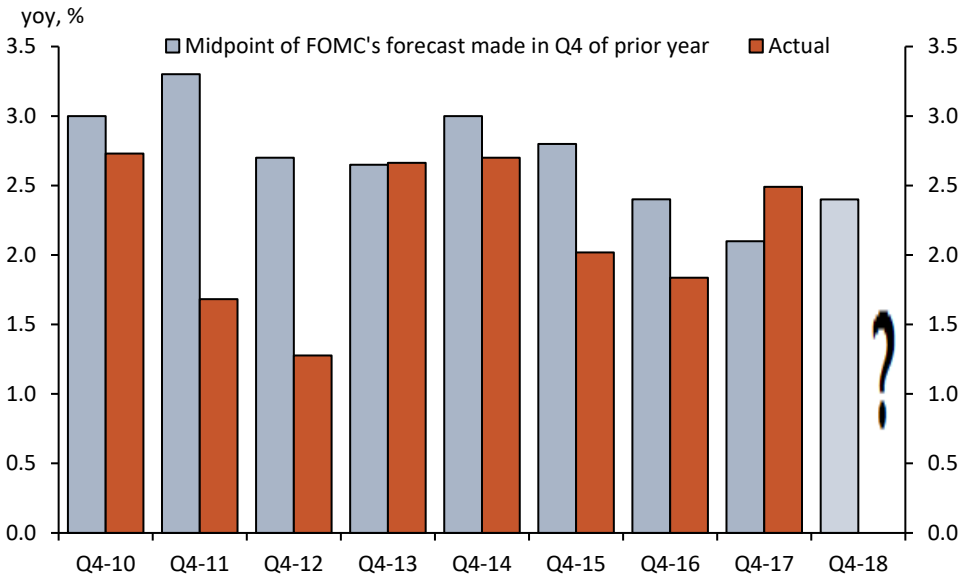
In light of all the uncertainties about how an enlarged balance sheet affects economic performance and how it interacts with interest rate policy, and political risks posed by dysfunctional fiscal policy and the mounting debt and debt service costs, the Fed should be more circumspect about the potential risks, and move toward normalizing its balance sheet and operating procedures back to pre-crisis norms.

Table 1: Real GDP Growth (yr/yr % chg) - actual, and Fed Staff's and FOMC's forecasts*

		2010	2011	2012	2013	2014	2015	2016	2017
Actual		**2.7**	**1.7**	**1.3**	**2.7**	**2.7**	**2.0**	**1.8**	**2.6**
Forecasts									
Q4-09									
	Fed Staff	3.6	4.5	4.7	4.7	3.2			
	FOMC midpoint	3.0	4.0	4.2					
Q4-10									
	Fed Staff		3.7	4.4	4.7	4.7	3.5		
	FOMC midpoint		3.3	4.1	4.1				
Q4-11									
	Fed Staff			2.3	2.5	3.4	4.2	3.7	
	FOMC midpoint			2.7	3.3	3.5			
Q4-12									
	Fed Staff				2.5	3.2	3.6	3.2	2.5
	FOMC midpoint				2.7	3.3	3.4		

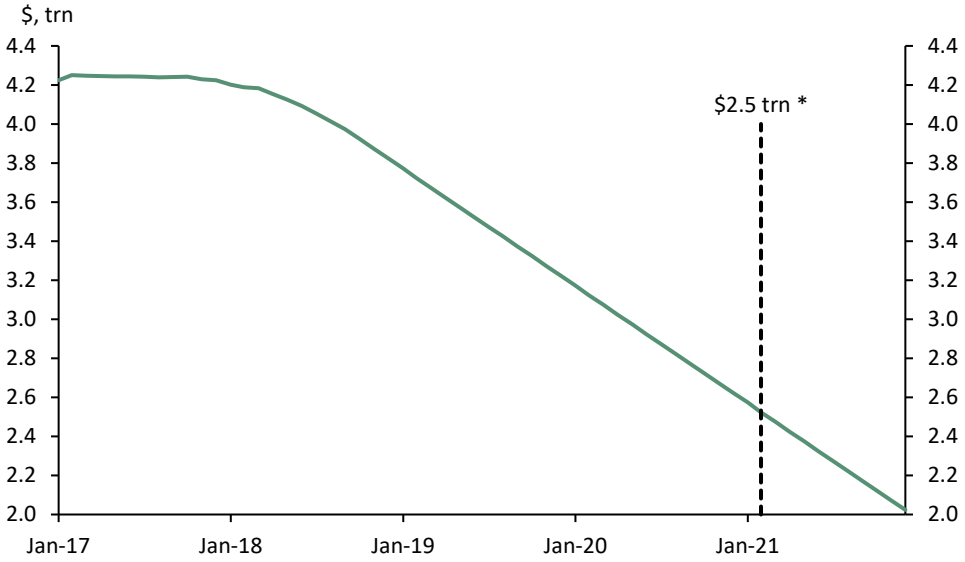
Sources: *The Staff of the Federal Reserve Board's forecasts are from the Greenbook (2009) and the Tealbook (2010-2012). FOMC's forecasts are based on the Federal Reserve's quarterly Summary of Economic Projections. Real GDP growth forecasts are percent changes from Q4 to Q4.

Chart 1: Real GDP - Actual and FOMC Forecasts



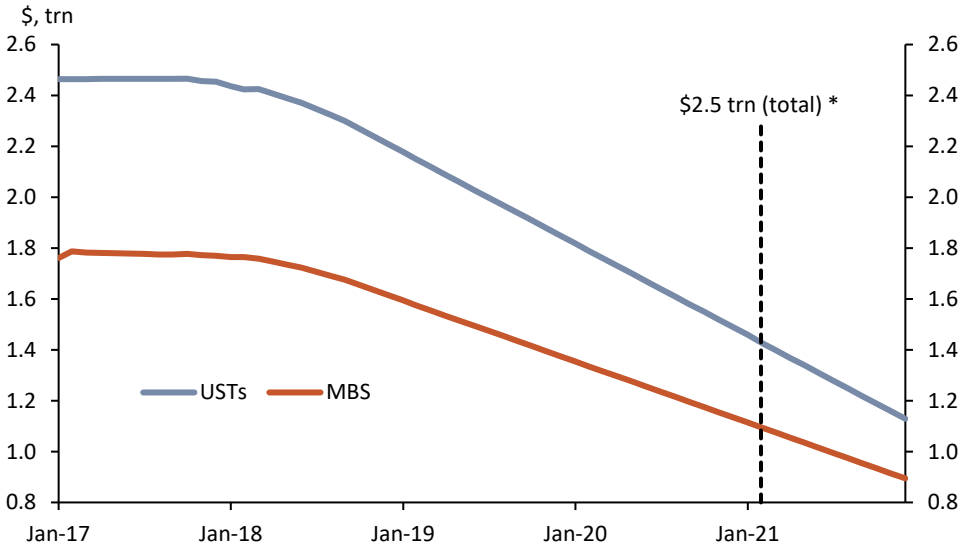
Sources: Federal Reserve Board, Bureau of Economic Analysis, Mickey Levy, "The Fed's Economic Forecasts, Uncertainties and Monetary Policy", Shadow Open Market Committee, March 9, 2018.

Chart 2: Projection of the Fed's Total Securities Holdings Based on the Fed's Addendum to the Policy Normalization Principles and Plans of June 14, 2017



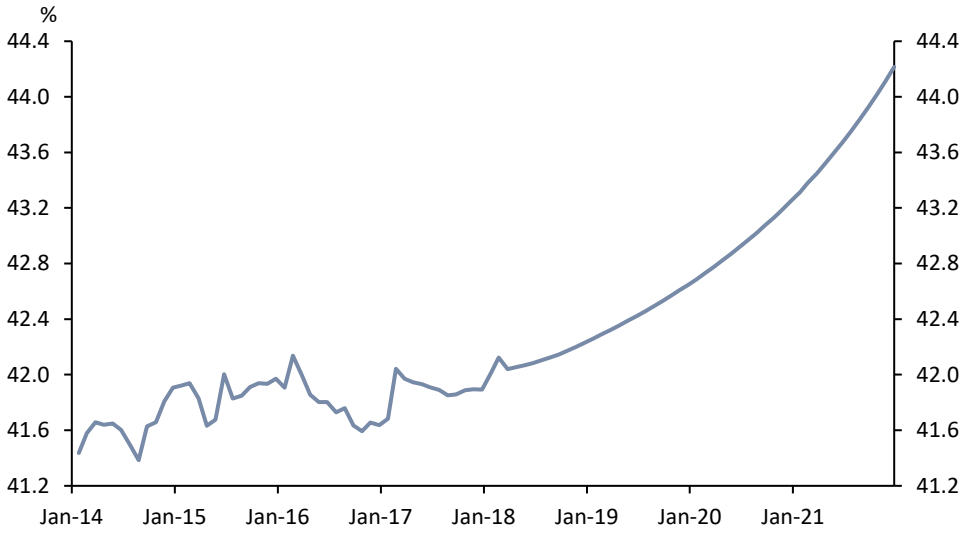
*Note: Fed's and Powell's indication of low in balance sheet. Sources: Federal Reserve Board and Powell, Jerome, "Thoughts on the Normalization of Monetary Policy", Economic Club of New York, June 1, 2017.

Chart 3: Projection of the Fed's UST and MBS Holdings Based on the Fed's Addendum to the Policy Normalization Principles and Plans of June 14, 2017



*Note: Fed's and Powell's indication of low in balance sheet. Sources: Federal Reserve Board and Powell, Jerome, "Thoughts on the Normalization of Monetary Policy", Economic Club of New York, June 1, 2017.

Chart 4: Projection of the Fed's MBS Holdings as a Share of Total Based on the Fed's Addendum to the Policy Normalization Principles and Plans of June 14, 2017



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