MORNING BRIEFING
July 26, 2022

How Much Rate Hiking Does QT2 Equal?

Check out the accompanying chart collection.

Executive Summary: The Fed may have 100bps less of rate hiking to do thanks to the tightening effects of the strong dollar and QT2, the Fed's balance-sheet-reduction plan. That means the Fed may be done raising the federal funds rate in September after just two more 75bps increases to 3.00%. … Indeed, the Treasury market appears to be discounting a 3.00% peak, sooner rather than later. … The mortgage market in particular must be discounting QT2, as the Fed's rate hiking alone can't account for how high mortgage rates have soared, depressing housing and weakening the economy.

YRI Webcast. Replays of Dr. Ed's Monday webcasts are available *here*.

The Fed I: Waiting For An Answer From Talking Fed Heads. Melissa and I have been wondering how much federal funds rate hiking does the current round of quantitative tightening (QT2) equal? Last week, in the July 20 *Morning Briefing*, we asked a similar question about the 10% increase in the US dollar index (DXY) since the start of this year.

Let's just say that each equates to a 50bps rate hike, so collectively they exert the equivalent of 100bps of rate hiking, at least. Now let's say that absent these two non-rate-related tightening sources, the Fed's current monetary tightening cycle would take the federal funds rate to a peak of 4.00% from 1.50% currently. Then with these two sources in place, the peak would be only 3.00%.

Fed officials have been remarkably silent on this question. They were much more talkative and informative about similar developments in the past when they were justifying their ultra-easy monetary policies:

(1) *William Dudley on QE2.* In my 2020 book *Fed Watching For Fun & Profit*, I wrote: "William Dudley, the president of the Federal Reserve Bank of New York, gave a *speech* on October 1, 2010 favoring another round of QE with specific numbers: '[S]ome simple calculations based on recent experience suggest that $500 billion of purchases would provide about as much stimulus as a reduction in the federal funds rate of between half a point and three quarters of a point.'" His basic argument was that despite the downside of additional QE, it was the only tool the Fed had left to meet its congressional mandate to

reduce the unemployment rate since the federal funds rate was at the "lower bound." (Back then in 2010, I argued that if the Fed's econometric model was calling for a negative official policy rate, then either there was something wrong with the model or the Fed was trying to fix economic problems that could not be fixed with monetary policy.)

(2) *Lael Brainard on the strong dollar.* As we noted in the July 20 Morning Briefing linked above, on September 12, 2016, Fed Governor Lael Brainard presented a *speech* titled "The 'New Normal' and What It Means for Monetary Policy," calling for "prudence in the removal of policy accommodation." She listed several reasons for this, including a very specific estimate of the impact of the strong dollar on the economy. She said, "In particular, estimates from the FRB/US model suggest that the nearly 20 percent appreciation of the dollar from June 2014 to January of this year could be having an effect on US economic activity roughly equivalent to a 200-basis-point increase in the federal funds rate."

In a December 1, 2015 *speech* titled "Normalizing Monetary Policy When the Neutral Interest Rate Is Low," Brainard stated, "According to the Board's FRB/US model, it would require lowering the path of the federal funds rate by roughly 1 percentage point over the medium term to insulate domestic employment from the 15 percent stronger exchange rate in inflation adjusted terms" that had occurred since June 2014. Again, she called for prudence in normalizing monetary policy: "In effect, this spillover from abroad implies some limitations on the extent to which U.S. monetary conditions can diverge from global conditions."

(3) *Bottom line.* We conclude that the peak in the federal funds rate during the current monetary tightening cycle will be lower than otherwise because the combination of QT2 and the strong dollar are equivalent to at least a 100bps increase in the federal funds rate. In addition, the extraordinary jump in both short-term and long-term interest rates in the fixed-income markets has already accomplished much of the tightening for the Fed. The markets have already discounted a peak federal funds rate of 3.00%-3.25%, which is where it will be assuming that the Fed hikes the rate by 75bps on Wednesday and 75bps again at the end of September, as widely expected.

The Fed II: The Markets Have An Answer. The financial markets are currently signaling that the peak in the federal funds rate is likely to be 3.00%, according to the 2-year US Treasury yield, which tends to lead the federal funds rate by about six to 12 months (*Fig. 1* and *Fig. 2*). The 2-year yield peaked at 3.45% on June 14. It was down to 3.04% yesterday. In addition, the yield-curve spread between the 10-year and 2-year Treasury notes turned negative last week, falling to -20bps on Friday (*Fig. 3*). That signals that bond investors

believe that the Fed's monetary tightening cycle will end sooner rather than later, as the economy slows.

While the Fed has raised the federal funds rate by only 150bps so far during the current monetary policy tightening cycle, the credit markets seem to have discounted the full tightening cycle. In other words, if the Fed proceeds with a 75bps rate hike right after Wednesday's meeting of the FOMC and follows up with another 75bps at the September meeting of the FOMC, yields might not follow suit since they've already anticipated these moves, as noted in the previous section.

In addition, the credit markets seem to have discounted QT2, especially the mortgage market. Consider the following:

(1) *Mortgage rates go vertical.* Mortgage rates have soared much faster and much higher than can be explained by the actual and expected hikes in the federal funds rate since the start of this year, in our opinion. Soaring mortgage rates combined with record-high home prices have depressed housing, accounting for much of the recent weakness of the economy.

The 30-year fixed-rate mortgage yield jumped from 3.29% at the start of this year to 5.73% on Friday (*Fig. 4*). Its spread with the 10-year Treasury yield soared from 177bps at the start of the year to 296bps on Friday (*Fig. 5*). This spread tends to hover between 150bps and 200bps during normal times.

(2) *Feddie shutting down mortgage business.* The jump in the mortgage yield spread is reminiscent of similar ascents in this yield during the Great Financial Crisis (GFC) and the Great Virus Crisis (GVC). The obvious explanation for this year's extravaganza is that the December 2021 *minutes* of the FOMC, released on January 5 of this year, indicated that the Fed was getting closer to ending QE4 and starting QT2. In addition, the minutes signaled that "Feddie" (the distant cousin of Fannie Mae and Freddie Mac since the GFC through the GVC) was getting out of the mortgage financing business:

"Consistent with the previous normalization principles, some participants expressed a preference for the Federal Reserve's asset holdings to consist primarily of Treasury securities in the longer run. To achieve such a composition, some participants favored reinvesting principal from agency MBS into Treasury securities relatively soon or letting agency MBS run off the balance sheet faster than Treasury securities."

(3) *QT2 unveiled.* Following the May 3-4 meeting of the FOMC, the Fed issued a *press release* titled "Plans for Reducing the Size of the Federal Reserve's Balance Sheet." During June through August, the Fed will reduce its balance sheet by running off maturing securities, which will drop its holdings of Treasury securities by $30.0 billion per month and its holdings of agency debt and mortgage-backed securities (MBS) by $17.5 billion per month. So that's a decline of $142.5 billion over those first three months of QT2.

Starting in September, the runoff will be set at $60 billion for Treasury holdings and $35 billion for agency debt and MBS. That's $95 billion per month. There's no amount set or termination date specified for QT2. The press release simply states that "the Committee intends to slow and then stop the decline in the size of the balance sheet when reserve balances are somewhat above the level it judges to be consistent with ample reserves."

Assuming that QT2 is terminated at the end of 2024, the Fed's holdings of securities would decline by $2.7 trillion, to $5.8 trillion from $8.5 trillion in May. Its holdings of Treasuries and MBS would decline by $1.7 trillion and 1.0 trillion, respectively, by the end of 2024 (*Fig. 6*, *Fig. 7*, and *Fig. 8*).

In our opinion, the extraordinary jump in mortgage rates and in the mortgage yield spread since the start of this year can be largely explained by the market's anticipation of QT2 in addition to the Fed's rate hiking (*Fig. 9* and *Fig. 10*).

(4) *Demand destruction in the housing market.* The Fed's goal is to slow demand relative to supply to bring down inflation. It is doing so in the housing market and in the market for housing-related goods and services. The mortgage index for purchasing homes dropped 22.4% since the start of the year through the July 15 week (*Fig. 11*). The sum of new plus existing single-family home sales dropped 16.5% during the past four months through May. Housing-related retail sales have weakened in recent months, especially on an inflation-adjusted basis (*Fig. 12*).

The Fed III: A Fed Study Has An Answer. Last but not least, we found a recent *study* titled "How Many Rate Hikes Does Quantitative Tightening Equal?" It is by Bin Wei, a research economist and adviser in the Research Department at the Federal Reserve Bank of Atlanta. He summarized his findings as follows: "In this article, I examine the question of how to quantify the equivalence between interest rate hikes and quantitative tightening (QT). Using a simple 'preferred habit' model I estimate that a $2.2 trillion passive roll-off of nominal Treasury securities from the Federal Reserve's balance sheet over three years is equivalent to an increase of 29 basis points in the current federal funds rate at normal

times, but 74 basis points during turbulent periods." (Hat tip to Doug Vogt for sharing that study.)

Calendars

US: Tues: Consumer Confidence 97.3; Richmond Fed Manufacturing Index -17; New Home Sales 664k; S&P/CS HPI Composite 1.5%m/m/20.8%y/y; API Weekly Crude Oil Inventories. **Wed:** Durable Goods Orders Total, Core, Ex Defense, and Nondefense Capital Goods Ex Autos -0.3%/0.3%/-0.5%/0.2%; Wholesale & Retail Inventories; Goods Trade Balance; Pending Home Sales -1.5%; MBA Mortgage Applications; Crude Oil Inventories; Gasoline Production; Fed Interest Rate Decision 2.50%; FOMC Statement. (Bloomberg estimates)

Global: Tues: Spain CPI; Japan CPI; Australia CPI 1.9%q/q/6.3%y/y; China Industrial Profits. **Wed:** Germany Gfk Consumer Climate -29; France Consumer Confidence 80; Italy Consumer & Business Confidence 96/108; Japan Leading & Coincident Indicators. (Bloomberg estimates)

Strategy Indicators

S&P 500/400/600 Forward Earnings (*link*): Forward earnings dropped for a second straight week for LargeCap and MidCap, but SmallCap's rose for the first time in three weeks. However, none of these three indexes had forward earnings at a record high for a fourth straight week. LargeCap's has fallen in five of the past 12 weeks and is now 0.2% below its record high at the end of June. MidCap's has dropped in five of the past six weeks and is 0.9% below its record high in early June. SmallCap's rose 0.2% w/w to 2.5% below its record high in mid-June. In what was an extraordinary V-shaped recovery, LargeCap's forward earnings has risen during 104 of the past 113 weeks, with the other down weeks due to Tesla's addition to the index in December 2020, Amazon's earnings misses for Q1-2022 and Q2-2021, Walmart's Q1-2022 miss, and index changes last September and December. MidCap's forward earnings is up in 103 of the past 111 weeks, and SmallCap's posted 100 gains in the past 112 weeks. SmallCap had been steadily making new highs each week until mid-December. Forward earnings for these indexes had been on an

uptrend from November 2019 until February 2020, before tumbling to a bottom by June 2020 due to the Covid-19 economic shutdown. LargeCap's forward earnings has risen 69.9% from its lowest level since August 2017; MidCap's is now up 139.5% from its lowest level since May 2015; and SmallCap's has soared 196.4% from its lowest point since August 2013. In the latest week, the rate of change in LargeCap's forward earnings fell to a 16-month low of 16.4% y/y from 17.3%; that's down from a record-high 42.2% at the end of July 2021 and up from -19.3% in May 2020, which was the lowest since October 2009. The yearly rate of change in MidCap's forward earnings dropped w/w to a 16-month low of 27.9% y/y from 29.1%. That's down from a record high of 78.8% at the end of May and compares to a record low of -32.7% in May 2020. SmallCap's rate fell to a 16-month low of 27.3% y/y from 27.5%. It's down from a record high of 124.2% in June 2021 and up from a record low of -41.5% in June 2020. Companies have been beating consensus estimates quite handily since the Q2-2020 earnings season, causing analysts' consensus earnings forecasts for 2021 to 2023 to improve instead of decline as is typical, but their forecasts are likely to head lower now. Here are the latest consensus earnings growth rates for 2022 and 2023: LargeCap (9.7%, 8.8%), MidCap (13.8, 6.0), and SmallCap (11.1, 10.4).

S&P 500/400/600 Valuation (*link*): Valuations rose last week for all three of these indexes to their highest levels since early June. LargeCap's forward P/E rose 0.4pts to 16.5 from 16.1 a week earlier, which compares to a 26-month low of 15.3 in mid-June and a six-month high of 21.5 in early November. LargeCap's forward P/E also compares to an 11-year low of 11.1 during March 2020. MidCap's rose 0.4pt to 12.0 from 11.6, and is up from a 27-month low of 11.1 in mid-June. That's down from a 13-week high of 17.1 in early November. It had been at a record high of 22.9 in June 2020 and an 11-year low of 10.7 in March 2020. SmallCap's gained 0.5pts, to 11.9 from 11.4 a week earlier. Its mid-June reading of 10.7 was the lowest since it bottomed at a record low of 10.2 in November 2009 during the Great Financial Crisis. That compares to a 13-week high of 16.1 in early November and its record high of 26.7 in early June 2020 when forward earnings was depressed. LargeCap's forward P/E in February 2020—before Covid-19 decimated forward earnings—was 18.9, the highest level since June 2002. Of course, that high was still well below the tech-bubble record high of 25.7 in July 1999. Last week's level compares to the post-Lehman-meltdown P/E of 9.3 in October 2008. MidCap's P/E was below LargeCap's P/E yet again last week, as it has been for most of the time since August 2018. In contrast, it was last solidly above LargeCap's from April 2009 to August 2017; MidCap's current 27% discount to LargeCap is near its biggest since September 2000. SmallCap's P/E was below LargeCap's for a 101st straight week. That's the longest stretch at a discount since 1999-2002; SmallCap's current 28% reading is near its biggest discount since February 2001. SmallCap's P/E had been mostly above LargeCap's since 2003. Looking at SmallCap's P/E relative to MidCap's, it was at a

discount for a 58th straight week; the current 2% discount is up from a 9% discount in December but remains near its lows during 2000-01.

S&P 500 Sectors Quarterly Earnings Outlook (*link*): Since the Q3-2020 earnings season, analysts as a whole have been raising their consensus forecasts for future quarters instead of lowering them as is the norm through the earnings warnings seasons. That six-quarter streak of positive revisions throughout the quarter officially ended with Q1-2022. In the latest week, the Q2-2022 earnings-per-share forecast rose 64 cents w/w to $55.75, and is now down 0.3% from its $55.92 forecast at the start of the quarter. Analysts expect S&P 500 earnings growth to weaken substantially to 5.7% y/y on a frozen actual basis and 6.2% on a pro forma basis. That's down from Q1-2022's 11.6% y/y on a frozen actual basis and an 11.4% y/y gain on a pro forma basis. Double-digit growth is expected for just three sectors in Q2-2022, and five are expected to record a y/y decline. That compares to Q1-2022's count of seven sectors with double-digit growth, one with a single-digit gain, and three with a y/y decline. Here are the S&P 500 sectors' latest earnings growth rates for Q2-2022 versus their Q1-2022 growth rates: Energy (259.6% in Q2-2022 versus 269.5% in Q1-2022), Industrials (26.0, 40.5), Materials (16.9, 46.3), S&P 500 (6.2, 11.4), Real Estate (3.9, 25.5), Health Care (3.4, 18.3), Information Technology (2.4, 14.6), Consumer Staples (0.2, 7.9), Consumer Discretionary (-5.8, -27.9), Utilities (-11.4, 24.6), Communication Services (-14.8, -2.8), and Financials (-22.1, -17.1).

US Economic Indicators

Regional M-PMIs (*link*): Three Fed districts (New York, Philadelphia, and Dallas) have reported on manufacturing activity for July and show the manufacturing sector fell deeper into contractionary territory. The composite index contracted for the third month, from 14.4 in April to -7.9 this month, the lowest since May 2020 at the height of the pandemic. Activity in the New York (to 11.1 from -1.2) region swung from negative to positive this month, while activity in both the Philadelphia (-12.3 from -3.3) and Dallas (-22.6 from -17.7) factories dropped further into contractionary territory. Orders (-9.3 from -4.8) in July fell at a sharper rate, as billings in the Philadelphia (to -24.8 from -12.4) region contracted at double June's rate, while Dallas' (-9.2 from -7.3) was slightly more negative; New York (6.2 from 5.3) activity held at a steady pace. Employment (18.4 from 20.8) slowed a bit but continued its strong readings, with a solid pace of hirings by factories in the Philadelphia (19.4 from 28.1), New York (18.0 from 19.0), and Dallas (17.9 from 15.2) regions. Turning to prices, the prices-paid measure in the New York region slowed to 64.3, the lowest since last February,

down from April's record-high 86.4, while Philadelphia's gauge eased for the third month to an 18-month low of 52.2 from April's cyclical high of 84.6—which wasn't far from its record high of 91.1 in the mid-1970s. Dallas saw its prices-paid measure sink to a 20-month low of 38.4 this month, slowing sharply from November's record-high 83.3. Meanwhile, prices-received in the New York area eased for the fourth month, from a record-high 56.1 in March to a 16-month low of 31.3, while Philadelphia's is at 30.3, down from October's cyclical high of 62.9. Dallas' eased to a 17-month low of 29.3 from its record-high 50.9 in October.

Global Economic Indicators

Germany Ifo Business Climate Index (*link*): "Recession is knocking on the door. That can no longer be ruled out," said Ifo surveys head Klaus Wohlrabe. High energy prices and looming gas shortages are the reason Germany is in this predicament. The business climate index sank to 88.6, the lowest since mid-2020; it was as high as 101.3 in June 2021. Current conditions remain in close proximity to recent highs, dipping from 99.4 to 97.7 this month, not far from last August's 101.9—which was the highest level since May 2019. Meanwhile, expectations continue to plummet, dropping 5.2 points this month and 22.5 points since its recent peak of 102.8 in June 2021 to a 27-month low of 80.3. The manufacturing sector, which accounts for roughly a fifth of Germany's economy, saw its business climate index (-7.0) drop back into contractionary territory after a brief moment above. Current conditions continued to drift lower, though remained at a relatively high level of 20.2, while the expectations component held deep in negative territory, deteriorating to -31.0 this month. Meanwhile, the service sector saw its business climate measure deteriorate to 0.9 after improving the prior four months from 1.0 in March to 10.9 in June, as expectations continued to collapse. Expectations plunged 14.5 points this month to -24.3 and 47.5 points from its June 2021 peak of 23.2, while current conditions dipped 4.1 points this month to 29.7 from last month's recent peak of 33.8. Trade continued to deteriorate, sinking to a 26-month low of -21.6 this month and dropping sharply from its June 2021 peak of 17.8—as the expectations measure plummeted 53.4 points over the 13-month period to -48.0. The business climate index in the construction sector remains entrenched in negative territory at -17.0, with expectations at -41.4. Current conditions have been in a freefall the past five months, sinking from 33.7 in February to 11.1 this month.

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