US ECONOMIC UPDATE NOVEMBER 2021

FED MONETARY POLICY UPDATE



NAB Group Economics

An acceleration in wage growth, a broadening out of inflation pressures and the ongoing faster than expected fall in the unemployment rate keep the focus on Fed policy. We still expect inflation will ease from its current elevated level, but it is set to remain above 2%. This means how, and when, the Fed assesses maximum employment has been achieved will determine the timing of federal funds rate increases. We expect to see the first rate hike in Q3 2022 (previously Q1 2023), with risks either side of this depending on how the economy evolves and how the Fed interprets its lift-off criteria.

In our October update, we noted several things to look out for in relation to the inflation outlook and the risk of earlier Fed rate increases. These were:

- A broadening of inflation pressures.
- An acceleration in wages growth particularly as measured by the Employment Cost Index (ECI).
- Unemployment rate continuing to fall at its recent rapid rate.
- Further increases in inflation expectations.

In the event, subsequent data strongly reinforced the first three points. Indicators around the trajectory of inflation expectations remain mixed. However, our assessment is that, while they have risen, they remain broadly consistent with the Fed's inflation target.

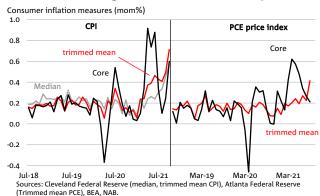
The broadening of inflationary pressures was evident in trimmed mean measures of inflation. The trimmed mean CPI has been growing at an accelerated level since April, but for PCE inflation (the Fed's preferred inflation measure) the pick-up in the trimmed measure had been more modest. However, in September it increased 0.4% m/m, a monthly growth rate not seen since the 1980s.

Similarly, the rise in the Employment Cost Index (ECI) in Q3 2021 was striking, as well as broad-based across industries. Total compensation for civilian workers increased by 1.3% q/q – far above anything seen in recent years.

At the same time, some of the 'transitory factors' that have contributed to elevated inflation this year refuse to go away. The easing (from high) levels in car (and rental) prices has proved to be short-lived, and rising auction prices signal further increases ahead. Air fares also fell during the Delta wave and may rebound now that it has passed. In addition, housing

rental cost growth – which has a large weight – has risen. Strong house price growth, asking rent indicators and recent falls in vacancy rates, point to this trend persisting, at least for a while.

Trimmed mean signals broader inflation pressures



Wage growth spike in Q3



In short, we expect to see some further elevated inflation readings in the near term. However, we still expect inflation to moderate over time as supply constraints ease, although there is considerable uncertainty around when this will occur. While

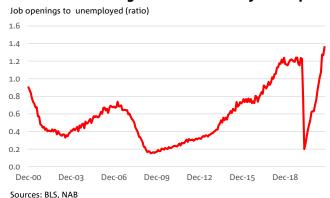
business survey indicators of supply chains constraints broadly appear to have plateaued they remain elevated. That said, global shipping costs have started to decline and auto production also appears to have turned the corner.

The strength in wages growth comes despite non-farm employment being 4.2 million below its pre-COVID level in October. Similarly, the unemployment rate, at 4.6%, remained above its pre-pandemic level of 3.5%. Nevertheless, employment growth strengthened in October and the unemployment rate fell 0.2ppts. The unemployment rate has declined by 0.8ppts in the last three months alone, exceeding our expectations.

In part this reflects the stalled recovery in workforce participation. The labour force participation rate fell by a bit over 3ppts in the first half of 2020. About half of this was recovered by September 2020, but there has been little improvement since then. By age, workforce participation has recovered most in the youngest age group (16-24), but there has been little recovery in 55+group – possibly due to early retirement, with 25-54 year olds somewhere in between. Disruptions to schools and childcare, as well as temporary boosts to employment benefits may be holding participation back but these drags have started to unwind but with little impact so far.

While employment and the unemployment rate have yet to fully recover, demand for labour is strong. Vacancies are at a high level, including relative to the number of people who are unemployed. As a result, further material employment gains can be expected. Moreover, early activity data for Q4 2021 — particularly in relation to retail sales and industrial production — has been strong. This is consistent with our expectation of strong GDP growth for the quarter (around 5% annualised) which should further increase labour demand.

Labour market is 'tight' even if recovery incomplete



Reflecting these developments, we have lifted our inflation forecasts (particularly in the short-term) and also see a somewhat quicker recovery in the labour market (reflected in a lower track for the unemployment rate).

Monetary policy implications

The Fed's criteria for lifting the fed funds rate is that maximum employment has been achieved and that inflation has risen to 2% and is on track to moderately exceed 2% for some time.

In our view, the inflation criteria have already been met and this will remain the case. It is worth noting that the Fed Chair indicated that the FOMC will assess the inflation criteria at the time they consider that maximum employment has been reached. This raises the possibility that, were inflation to be tracking below 2% at the time the Fed assesses maximum employment has been reached, they could delay rate hikes. If some of the prices that have spiked – such as for autos and household furnishings – were to unwind rapidly and in unison then some weak inflation prints could result even though these too would be 'transitory'.

While noting this possibility, we think that the factor that will determine when the first fed funds rate move occurs will be the labour market and Fed's assessment of maximum employment.

The Fed has stated that what constitutes maximum employment is not directly measurable. As a result, it has stated that it will consider a wide range of indicators in assessing what constitutes maximum employment. These include the level of employment, the unemployment rate, workforce participation, wages, the number of people quitting jobs, job openings and gross labour market flows. Fed officials have also listed some indicators which do not directly relate to employment such as productivity and pricecost mark-ups.

The latter is a reflection that ultimately, however assessed, maximum employment must be consistent with the Fed's inflation goal, as noted by the Fed Chair in his November meeting press conference.

This opens the possibility that the Fed could seek to keep rates unchanged until they see inflationary pressures emerging, at which point they will know maximum employment has been reached. This would tie in with the Fed's view that a robust job market can be sustained without causing an inflation break out, and that there are large social and equity benefits from having a labour market as strong as possible.

As the Fed Chair noted in August 2020 when talking about the current framework "...going forward, employment can run at or above real-time estimates of its maximum level without causing concern, unless accompanied by signs of unwanted increases in inflation or the emergence of other risks that could impede the attainment of our goals."

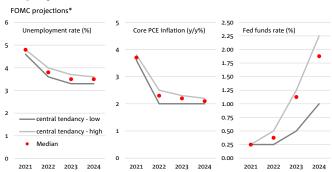
Of course, we are currently in an environment of inflationary (and wage) pressure but the Fed's view (and ours) is that this (largely) won't persist and inflation will fall back to around 2%.

The other approach would be for the Fed to start adjusting rates when it assesses maximum employment has been reached. In his November 2021 press conference, the Fed Chair stated that when maximum employment has been reached the Fed will then assess whether the inflation test has been met.

This is more an ex ante approach — i.e. the Fed will make a judgement of what constitutes maximum employment rather than wait for inflation (price or wage) evidence. Similarly, Vice-Chair Clarida earlier this month indicated that when the Fed judges labour market indicators are "broadly consistent with its maximum-employment mandate, it will be data on inflation itself that policy will react to, but, going forward, policy will not tighten solely because the unemployment rate has fallen below any particular econometric estimate of its long-run natural level."

He went on to say that once the criteria for rate hikes have been met that the policy rule approach that he will use as a guide will be "...an inertial Taylor-type rule with a coefficient of zero on the unemployment gap, a coefficient of 1.5 on the gap between core PCE inflation and the 2 percent longer-run goal, and a neutral real policy rate equal to my SEP projection of long-run r*." In practice, what this means is that, once the lift-off criteria have been met, he would look to raise rates gradually back to their neutral level (or above it if inflation remains above target). In this setting inflation can be stable and the Fed would continue raising rates (to a point).

Fed projections a guide to assessing lift-off criteria



* September 2021 meeting projections. When the number of projections is even, the median is the average of the two middle projections. Fed funds rate adjusted to represent top-of-the band.

Given the possible different takeaways from Fed officials description of their policy approach, what is the best way to assess future Fed action? One way to do this is to use the latest Fed member projections to obtain a guide at least to their current intentions.

In the Fed members' September 2021 projections, the committee was evenly split on whether there should be a rate hike by the end of 2022 with a median unemployment rate forecast of 3.8%. By 2023, with unemployment falling to 3.5% (median forecast) and with inflation further moderating (but still a little above 2%), the median view saw further increases in rates. This is entirely consistent with the Fed making

a judgement about what constitutes maximum employment rather than keeping rates unchanged until it sees evidence inflation is accelerating due to a too tight labour market.

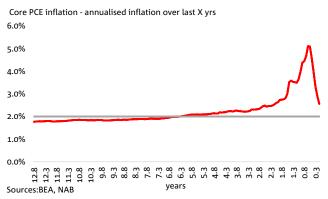
It also suggests that an unemployment rate of 3.8% or, more probably, a little below, is a suitable (if rough) benchmark for when the Fed might start to lift rates. As already discussed, it will likely not be as simple as that as the Fed will look at a range of indicators. If, for example, the participation rate remains low but the Fed still believes that many people are likely to return to the labour force, then a lower unemployment rate before lift-off may be needed. Alternatively, if wage growth is strong (without a lift in productivity) then the unemployment rate may be higher at lift-off.

The advantage with using the unemployment rate as a benchmark for our rate call is that it better adjusts for some of the shifts in the economy that can occur than do other possible benchmarks such as the level of employment. For example, projections of employment based on pre-COVID trends do not (automatically) take into account the shift down in population growth that has occurred.

In our projections, the unemployment rate moves below 3.8% in Q3 2022 and lower again in Q4 2022. This suggests that the Fed will either start increasing rates in Q3 (probably the September meeting) or Q4 2022.

It could be earlier if, for example, the labour market continues to improve at a faster than expected pace. Against this is the possibility that if, as expected, inflation eases, then the Fed could be more relaxed about underlying inflation dynamics and look for an even stronger labour market before declaring maximum employment has been reached. This would be in line with the importance Fed communications have placed on improving labour market conditions for all segments of society.

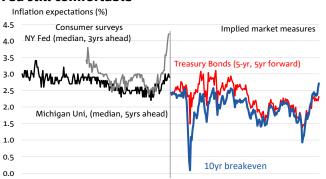
2% average inflation achieved?



It also needs to be recognised that the Fed's reason for wanting inflation moderately above 2% inflation was to get the average level of inflation up given past shortfalls from target. However, inflation has now averaged 2% over the last six years (and this window is set to grow in coming months). While the Fed has not articulated a set period over which it will calculate the average, this is around the benchmark some Fed members have mentioned (which lie between 4 to 8 years).

If these timeframes are what most Fed officials have at the back of their mind, then the Fed will be in a position where inflation has, on average, been above target. This will not necessarily be a major concern if inflation expectations remain at a level consistent with 2% inflation. While expectations have risen by varying degrees depending on the measure used, at this stage the Fed appears comfortable with where they are at. At the very least the pre-COVID concerns that expectations might be too low have been assuaged, although how they move if inflation does move down from current levels will be important to watch. Nevertheless, at the margin, risk management considerations argue against the Fed taking an aggressive approach to defining maximum employment when they are in a position where inflation has, on average, exceeded the target.

Inflation expectations – measures vary but broadly Fed still comfortable

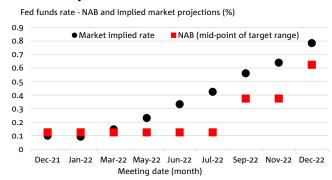


2007 2009 2011 2013 2015 2017 2019 2021 2008 2010 2012 2014 2016 2018 2020 cources: Bloomberg, New York Fed.Reserve, Thomson Reuters/Michigan Uni.

Balancing these considerations, as well as some recent hawkish comments from a couple of Fed Governors (Waller and Clarida), we have pulled forward our expectation of when the Fed will start lifting rates to Q3 2022 (previously Q1 2023) — most likely in the September meeting. We also expect that the majority of Fed members in their December meeting projections will have rate hikes starting in 2022. Given that we don't see a material acceleration in inflation from this point (but for it to remain a bit above 2%) this will allow for a gradual return of the fed funds rate towards neutral, and so we still only expect one 25bp fed funds rate increase a quarter.

Even with our changed call, market pricing implies an earlier start to fed funds rate increases. This could reflect factors such as: a more optimistic take on how quickly the labour market will reach full employment; a different take on the Fed's reaction function; or the possibility that inflation expectations become too high for comfort, leading the Fed to increase rates even before maximum employment has been reached.

Markets expect an earlier start to Fed hikes



Source: Refinitiv, NAB

QE tapering

At its November meeting the Fed announced that it would reduce the size of its monthly asset purchases (QE). The Fed has been purchasing around \$80 billion of Treasury securities and \$40 billion of agency mortgage-backed securities (MBS) each month. However, the Fed plans to reduce these purchases by \$10 billion for Treasury securities and \$5 billion for MBS each month, which will see QE end by mid-2022.

However, it left open the option of adjusting the speed of the taper. The same factors that have led us to bring forward our expectations of when the Fed will start to lift the fed funds rate could, therefore could lead to a faster taper pace.

Further, if Fed officials perceive risks around inflation biased to the upside, they may also consider a faster taper. The Fed has indicated that they would prefer not to be raising rates while still purchasing assets, so a faster taper would not only represent a slightly tightening in the policy stance but also clear the decks for an earlier increase in rate hikes if those inflation risks were realised.

Recent comments by some Fed Governors (Waller and Clarida) suggest that the option of a faster taper will be discussed at the December meeting. While we think there will be a high bar for changing the taper pace, and so expect no change in December, clearly it can't be ruled out.

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U.S. ECONOMIC & FINANCIAL FORECASTS

	Quarterly Chng %																
						2021				2022				2023			
	2019	2020	2021	2022	2023	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
US GDP and Components	Year Average Chng %																
Household consumption	2.2	-3.8	7.9	3.2	2.1	2.7	2.9	0.4	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4
Private fixed investment	3.2	-2.7	8.1	5.0	4.1	3.1	0.8	-0.2	1.8	1.6	1.3	1.1	1.1	1.0	0.9	0.9	0.8
Government spending	2.2	2.5	0.8	1.7	1.8	1.0	-0.5	0.2	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4
Inventories*	0.1	-0.6	-0.2	0.9	-0.1	-0.9	-0.4	0.5	0.5	0.4	0.1	0.0	0.0	-0.1	0.0	0.0	0.0
Net exports*	-0.2	-0.2	-1.8	-0.4	-0.1	-0.5	-0.1	-0.3	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Real GDP	2.3	-3.4	5.5	3.8	2.2	1.5	1.6	0.5	1.2	1.1	0.9	0.7	0.6	0.4	0.5	0.5	0.5
Note: GDP (annualised rate)						6.3	6.7	2.0	4.9	4.4	3.5	2.8	2.3	1.8	1.9	1.9	1.9
US Other Key Indicators																	
PCE deflator-headline	Dec/Dec % change																
Headline	1.5	1.2	5.1	2.1	2.0	0.9	1.6	1.3	1.2	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Core	1.6	1.4	4.4	2.4	2.2	0.7	1.5	1.1	1.1	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.6
		End of p	eriod														
Unemployment rate - qtly average (%)	3.6	6.7	4.5	3.5	3.3	6.2	5.9	5.1	4.5	4.1	3.9	3.7	3.5	3.4	3.3	3.3	3.3
US Key Interest Rates	End of period																
End funds rate (top of target range)	1 75	0.2E	0 2E	0.7E	1 75	0.2E	0.25	0.25	0.25	0.25	0.25	0.50	0 7E	1 00	1 25	1 FA	1 75

Fed funds rate (top of target range)
Source: NAB Group Economics
*Contribution to real GDP growth

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