

Blue Chip Financial Forecasts®

**Top Analysts' Forecasts Of U.S. And Foreign Interest Rates, Currency Values
And The Factors That Influence Them**

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BLUE CHIP FINANCIAL FORECASTS®

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Moderate Economic Growth Expected; Fed on Hold; Other Rates Little Changed

COVID strong force around world. The main feature of the world economy at present remains the coronavirus. In a number of parts of the industrialized world, it seems that as soon as policymakers and business leaders begin to relax and reopen, cases of the disease begin to increase anew. And there's no way to measure some of the impact; for instance, how much GDP is lost because people who travel to and from certain destinations need to quarantine upon arrival or from self-imposed social distancing. Further, in this situation, it's hard for governments to use public policy tools to cushion the impact.

With these caveats, policymakers, business leaders, lenders and investors still need to plan. How do they see the roll-out of economic activity? Can the volume of activity support price increases or not? What if the monetary authority's key policy rate is already just above zero? What if actions involving fiscal policy are complicated by an impending election?

GDP expected to grow every quarter; mild prospect of double dip. The Blue Chip Financial Forecasts panel, in the survey conducted on September 24-25, does project GDP continuing to grow each quarter after its whipsaw of -31.4% in Q2 (SAAR) and +21.5% (panel estimate) in Q3. Succeeding quarters are seen with 4.6% in Q4 2020 and then moderating gradually to 3.4% by Q4 2021. It's still the case, as we have discussed before, that it will be a long time before real GDP surpasses its Q4 2019 peak; according to this month's Special Question (see page 14), it will be Q1 2022 before more than half of respondents see larger GDP. The panel gives a 29% probability to an intervening downturn.

In addition to the moderation of growth going forward, inflation is seen remaining low; in almost every quarter, CPI inflation is expected to be at or below 2%. The Fed actually targets the personal consumption expenditure price index, which, because chain weighting captures consumers' favoring less expensive goods and services, tends to be marginally lower than the CPI. But the Fed believes inflation should hover around 2%; this is, as they explained back in late August, genuinely meant as a symmetric target, with the PCE price index exceeding a 2% rate of increase for occasional periods as well as increasing more modestly at times. The 2% pace is a target. So if inflation is slower than 2% for extended periods, the Fed would want to encourage some acceleration of inflation to above 2%, a stance that could facilitate investment and growth in productivity.

Fed still relying on balance sheet for monetary policy support. But with the fed funds rate sitting just barely above zero, that is, at the "effective lower bound," the Fed must use other policy tools to make monetary conditions easier. So we have experienced growth in the Fed's balance sheet: buying Treasury securities in particular, but also other, private sector assets. Altogether, according to a Special Question, the Blue Chip Financial panel still looks for the Fed's total balance sheet to reach \$7.9 trillion at year-end, which would be up about \$800 billion from the latest September 23 amount. That's already up \$2.9 trillion since February 26, just before the extraordinary actions began in early March. For some spe-

cific assets, the Fed has not provided very much actual support, but their commitment to do so if necessary and their forward guidance on the path of the key fed funds rate has given markets confidence such that asset markets have been functioning in an orderly way.

Blue Chip panel sees funds rate moving in '23 or '24. At its September 15-16 meeting, the Federal Open Market Committee published the Fed's own projections of the basic economic variables upon which they base their general outlook. Board Members and Federal Reserve Bank presidents together look for GDP growth of -3.7% this year and 4.0% in 2021 on a fourth-quarter to fourth-quarter basis. They expect the PCE price index to be increasing 1.2% this year and 1.7% next year. The implication for the federal funds rate is that it would be unchanged through this year and following through 2023. The Blue Chip panel generally agrees, as can be seen in the Special Questions on page 14. About one-seventh of the panel looks for a change by the end of next year, with 52% more expecting an increase by the end of 2024. Note that this still leaves 33% not expecting any move before 2025.

More fiscal policy support seen needed. With monetary policy restrained by the Fed's preference not to push interest rates below zero, the substantive importance of fiscal policy increases. Despite the briefness of the period remaining before the Presidential election, Blue Chip panelists assume that Congress and the incumbent President will enact more fiscal support to people and the economy as a whole. Indeed, 68% of respondents include such aid in the background to their forecasts and they estimate that \$2.0 trillion is needed; their forecasts presume that only \$1.4 trillion will be enacted. See the Special Questions for the impact the absence of such aid would have on GDP and unemployment rates.

Slight climb in long-term rates. With the fed funds rate held steady just above zero through the Blue Chip forecast horizon, GDP growth just above 4% and inflation just below 2%, only modest movements are projected for other interest rates. The forecast panel does see an upward tendency in the 10-year Treasury note, so from its recent 0.66%, it would edge gradually to 1.10% by Q4 2021; the 30-year bond would move from its recent 1.45% to 1.80%. Aaa-rated corporate bonds are seen declining from their recent 2.58% to about 2.35% in the next couple of quarters and then turning modest upward across 2021. We would attribute the downward movement to the reduction in risk as the economy would start to behave in a more orderly way across the next few months, but then the firmer growth path might impart the upward tendency seen by the forecasters.

Historic lows in mortgage rates. Notably at this time, home mortgage rates are at historic lows. The rate on Freddie Mac 30-year fixed-rate mortgages was 2.90% last week; the outright low was 2.86% for the week of September 10. And the forecast panel projects this rate will hover in a tight range of 3.0%-3.1% over the next year. This is clearly a support to the housing market, with recoveries in new and existing home sales over the summer and higher home prices.

Carol Stone, CBE (Haver Analytics, New York, NY)

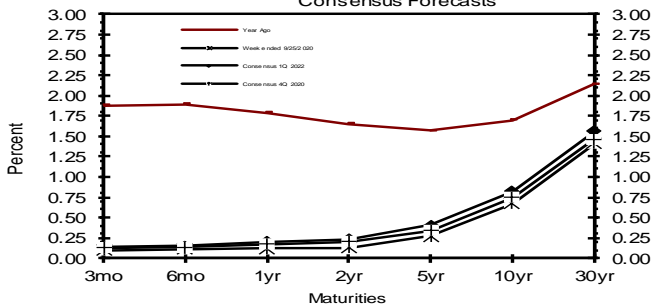
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

Interest Rates	History								Consensus Forecasts-Quarterly Avg.						
	Average For Week Ending				Average For Month				Latest Qtr	4Q	1Q	2Q	3Q	4Q	1Q
	Sep 25	Sep 18	Sep 11	Sep 4	Aug	Jul	Jun	3Q 2020*	2020	2021	2021	2021	2021	2021	2022
Federal Funds Rate	0.09	0.09	0.09	0.09	0.10	0.09	0.08	0.09	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.3	3.3	3.3	3.3	3.3	3.3	3.3
LIBOR, 3-mo.	0.22	0.23	0.25	0.25	0.25	0.27	0.31	0.26	0.3	0.3	0.3	0.3	0.3	0.4	0.4
Commercial Paper, 1-mo.	0.10	0.10	0.09	0.09	0.09	0.11	0.12	0.10	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Treasury bill, 3-mo.	0.10	0.11	0.12	0.11	0.10	0.13	0.16	0.12	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Treasury bill, 6-mo.	0.11	0.12	0.13	0.12	0.12	0.14	0.18	0.13	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Treasury bill, 1 yr.	0.12	0.13	0.14	0.12	0.13	0.15	0.18	0.14	0.2	0.2	0.2	0.2	0.2	0.3	0.3
Treasury note, 2 yr.	0.13	0.14	0.14	0.14	0.14	0.15	0.19	0.14	0.2	0.2	0.3	0.3	0.3	0.3	0.4
Treasury note, 5 yr.	0.27	0.28	0.27	0.27	0.27	0.28	0.34	0.27	0.3	0.4	0.5	0.5	0.6	0.6	0.7
Treasury note, 10 yr.	0.67	0.69	0.69	0.68	0.65	0.62	0.73	0.65	0.8	0.8	0.9	1.0	1.1	1.1	1.1
Treasury note, 30 yr.	1.41	1.44	1.43	1.42	1.36	1.31	1.49	1.36	1.5	1.6	1.6	1.7	1.8	1.8	1.9
Corporate Aaa bond	2.56	2.55	2.57	2.54	2.48	2.43	2.73	2.49	2.3	2.4	2.5	2.6	2.7	2.7	2.7
Corporate Baa bond	3.20	3.18	3.21	3.17	3.09	3.12	3.44	3.14	3.5	3.6	3.6	3.7	3.7	3.7	3.8
State & Local bonds	2.91	2.92	2.92	2.93	2.88	2.99	3.10	2.94	2.4	2.4	2.5	2.6	2.6	2.6	2.6
Home mortgage rate	2.90	2.87	2.86	2.93	2.94	3.02	3.16	2.95	3.0	3.0	3.1	3.1	3.2	3.2	3.2

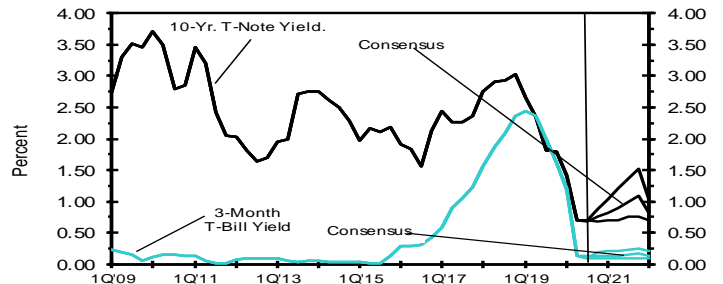
Key Assumptions	History								Consensus Forecasts-Quarterly					
	4Q				1Q				2Q		3Q		4Q	1Q
	2018	2019	2019	2019	2019	2020	2020	2020**	2020	2021	2021	2021	2021	2022
Fed's AFE \$ Index	109.4	109.4	110.3	110.5	110.3	111.2	112.4	107.2	107.2	107.1	106.9	106.3	106.2	106.5
Real GDP	1.3	2.9	1.5	2.6	2.4	-5.0	-31.7	21.5	4.6	4.3	4.0	3.8	3.4	3.1
GDP Price Index	1.8	1.2	2.5	1.5	1.4	1.4	-2.0	1.9	1.5	1.7	1.5	1.7	1.7	1.8
Consumer Price Index	1.3	0.9	3.0	1.8	2.4	1.2	-3.5	3.2	2.1	1.9	1.8	2.0	2.0	2.0

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; LIBOR quotes from Intercontinental Exchange. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Major Currency Index are from FRSR H.10. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS). *Interest rate data for 3Q 2020 based on historical data through the week ended September 23. **Data for 3Q 2020 for the Fed's AFE \$ Index based on data through the week ended September 25. Figures for 3Q 2020 Real GDP, GDP Chained Price Index and Consumer Price Index are consensus forecasts from the September 2020 survey.

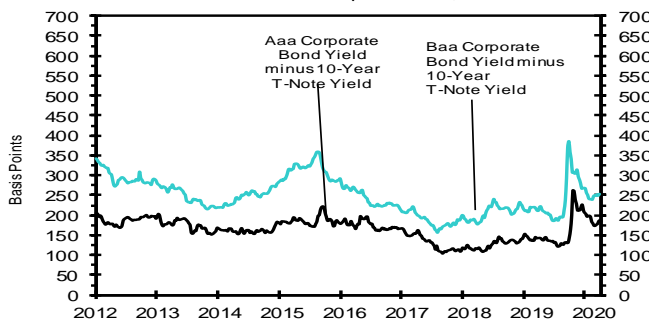
U.S. Treasury Yield Curve
Week ended September 25, 2020 & Year Ago vs. 4Q 2020 & 1Q 2022
Consensus Forecasts



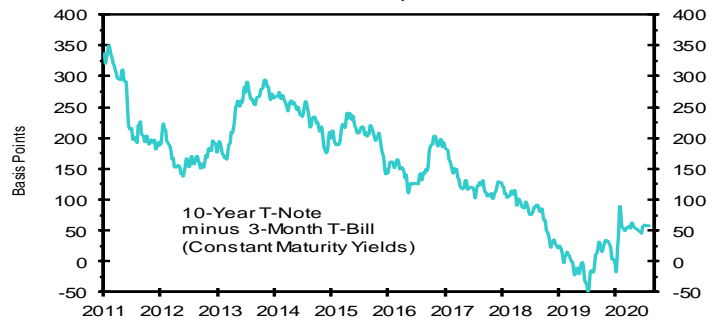
U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield
(Quarterly Average) Forecast



Corporate Bond Spreads
As of week ended September 25, 2020



U.S. Treasury Yield Curve
As of week ended September 25 2020



-----Policy Rates¹-----

	-----History-----			Consensus Forecasts		
	Month	Year	Months From Now:			
	Latest:	Ago:	3	6	12	
U.S.	0.13	0.13	1.88	0.12	0.12	0.12
Japan	-0.10	-0.10	-0.10	-0.08	-0.08	-0.08
U.K.	0.10	0.10	0.75	0.10	0.10	0.10
Switzerland	-0.75	-0.75	-0.75	-0.75	-0.75	-0.75
Canada	0.25	0.25	1.75	0.25	0.25	0.25
Australia	0.25	0.25	1.00	0.24	0.24	0.24
Euro area	0.00	0.00	0.00	0.00	0.00	0.00

-----10-Yr. Government Bond Yields²-----

	-----History-----			Consensus Forecasts		
	Month	Year	Months From Now:			
	Latest:	Ago:	3	6	12	
U.S.	0.70	0.64	1.74	0.73	0.83	1.07
Germany	-0.48	-0.51	-0.53	-0.41	-0.37	-0.26
Japan	0.02	0.04	-0.21	-0.01	-0.01	-0.01
U.K.	0.22	0.30	0.64	0.27	0.32	0.43
France	-0.22	-0.20	-0.22	-0.12	-0.09	0.05
Italy	0.96	1.01	0.93	1.11	1.23	1.48
Switzerland	-0.48	-0.50	-0.71	-0.52	-0.52	-0.50
Canada	0.58	0.54	1.39	0.67	0.78	0.98
Australia	0.94	0.88	1.01	0.91	0.92	0.97
Spain	0.26	0.28	0.23	0.37	0.43	0.64

-----Foreign Exchange Rates³-----

	-----History-----			Consensus Forecasts		
	Month	Year	Months From Now:			
	Latest:	Ago:	3	6	12	
U.S.	105.97	106.45	111.10	106.7	106.7	104.5
Japan	104.44	105.88	107.95	105.4	105.1	104.8
U.K.	1.30	1.31	1.25	1.29	1.29	1.34
Switzerland	0.91	0.91	0.99	0.91	0.91	0.91
Canada	1.32	1.32	1.33	1.33	1.33	1.32
Australia	0.73	0.72	0.68	0.71	0.72	0.73
Euro	1.19	1.18	1.10	1.19	1.19	1.21

	Consensus Policy Rates vs. US Rate			Consensus 10-Year Gov't Yields vs. U.S. Yield	
	Now	In 12 Mo.		Now	In 12 Mo.
Japan	-0.23	-0.21	Germany	-1.18	-1.33
U.K.	-0.03	-0.02	Japan	-0.68	-1.08
Switzerland	-0.88	-0.87	U.K.	-0.48	-0.64
Canada	0.13	0.13	France	-0.92	-1.02
Australia	0.13	0.12	Italy	0.26	0.41
Euro area	-0.13	-0.12	Switzerland	-1.18	-1.58
			Canada	-0.12	-0.09
			Australia	0.24	-0.10
			Spain	-0.44	-0.43

International. The COVID-19 pandemic is proving to be quite persistent with the number of new cases accelerating in parts of Europe and remaining stubbornly elevated in the US. The rebound in new cases have raised fears of renewed lockdowns. However, given the economic damage from the March/April lockdowns and perhaps a better understanding of how to balance safety and economic activity, governments now appear to be reluctant to impose another lockdown, at least one as severe as previously. Nonetheless, uncertainty has risen markedly. Even without more aggressive restrictions, self-imposed social distancing will curtail economic performance. Following the dramatic rebound in activity at the end of the second quarter and beginning of the third, the global economy has already lost some steam.

Central banks continue to express a strong commitment to monetary accommodation. All of the major central banks met in September and while each promised to act if needed to relieve the adverse impact of the ongoing pandemic, none of them altered policy. Each continued to provide quite a bit of forward guidance on interest rates—on hold until inflation is near or at target (or in other words for the foreseeable future)—but none has provided any forward guidance on asset purchases, which have become the major policy instrument with policy interest rates negative or at effective lower bounds. What will it take in terms of economic performance for central banks to accelerate or to slow their pace of asset purchases? The market so far has been left to guess with little help from central banks.

Disturbingly, central banks generally have a rather dismal inflation outlook. In the Fed's latest forecast, inflation is seen rising to just 2%, its target, by 2023, and not moving above 2% as would be expected in the Fed's new inflation-targeting framework. Similarly, in their most recent forecasts, neither the European Central Bank nor the Bank of Japan expects to come anywhere near achieving its inflation objective through 2022. This disconnect between stated inflation objectives and forecasts has led some in the market to question whether even super-accommodative monetary policy can revive the global economy.

While central bank officials have persistently voiced a need for further fiscal policy support, the near-term course for fiscal policy is not very encouraging. After an initial blast of support at the beginning of the pandemic, fiscal policy action has cooled across the industrial world. Fiscal policy in the US is currently at a political standstill with any further action unlikely ahead of the November national election. Some support programs in Germany are beginning to expire and are not being replaced. The recently released draft German federal government budget showed sharp declines in the projected deficit in both 2021 and 2022, implying some negative fiscal thrust going forward. Also, the widely touted EC recovery fund, Next Generation EU, that was agreed to in July is still a work in progress and needs to be ratified by national parliaments of member states. Even with ratification, the first grants/loans are not scheduled to be made until early 2021 and so won't provide any near-term support. By contrast, the fiscal front is brighter in France. The government recently legislated a €100 billion fiscal stimulus package (a little more than 4% of French GDP).

Pandemic fiscal support schemes in the UK are also set to expire. The government recently announced a new job retention scheme that will begin in November and extend to next April to replace the one that expires at the end of October. But the new program is much smaller and other expiring programs have not been replaced. Japan has a new prime minister, Yoshihide Suga, though what that means for the near-term course of fiscal policy remains to be seen. PM Suga has stated that regulatory reform, rather than more conventional tax and spending programs, will be at the center of his administration's policy. Moreover, with the Japanese government deficit as a % of GDP being the largest in the industrial world, market expectations are quite low for any meaningful fiscal spending or tax policy changes.

Forecasts of panel members are on pages 10 and 11. Definitions of variables are as follows: ¹Monetary policy rates. ²Government bonds are yields to maturity. ³Foreign exchange rate forecasts for U.K., Australia and the Euro are U.S. dollars per currency unit. For the U.S. dollar, forecasts are of the U.S. Federal Reserve Board's AFE Dollar Index.

Fourth Quarter 2020

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	-----Percent Per Annum -- Average For Quarter-----																	Avg. For ---Qtr.---	------(Q-Q % Change)-----									
	-----Short-Term-----							---Intermediate-Term---			-----Long-Term-----								A. Fed's Adv Fgn Econ \$ Index	B. Real GDP	C. Price Index	D. Price Index						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15													
	Federal Funds Rate	Prime Bank Rate	LIBOR Rate 3-Mo.	Com. Paper 1-Mo.	Treas. Bills 3-Mo.	Treas. Bills 6-Mo.	Treas. Bills 1-Yr.	Treas. Notes 2-Yr.	Treas. Notes 5-Yr.	Treas. Notes 10-Yr.	Treas. Bond 30-Yr.	Aaa Corp. Bond	Baa Corp. Bond	State & Local Bonds	Home Mtg. Rate													
GLC Financial Economics	0.2	H	3.3	H	0.3	0.2	0.1	L	0.1	L	0.2	0.2	0.4	0.7	1.4	2.8	4.2	2.9	3.2	109.5	19.6	H	1.4	4.8	H			
Action Economics	0.1		3.3	H	0.4	0.1	L	0.2	0.2	H	0.2	0.3	0.5	H	0.8	1.6	2.4	3.4	2.8	3.1	107.2	6.5		2.6	2.9			
AIG	0.1		3.3	H	0.4	na	0.1	L	0.1	L	0.1	L	0.2	0.3	L	0.7	1.4	na	3.3	na	3.0	na	4.0	1.7	2.4			
Amherst Pierpont Securities	0.1		3.3	H	0.2	L	0.1	L	0.1	L	0.1	L	0.2	0.3	L	0.8	1.6	2.5	3.5	2.2	3.0	108.0	9.1	2.2	2.9			
Bank of America	0.1		na	0.3	na	na	na	na	na	na	na	0.2	0.3	L	1.0	1.9	H	na	na	na	na	na	3.0	1.4	2.4			
Barclays	0.1		3.3	H	na	na	na	na	na	na	0.2	0.3	L	0.8	1.6	na	na	na	na	na	na	na	2.5	1.9	1.3			
BMO Capital Markets	0.1		3.3	H	0.3	na	0.1	L	0.1	L	0.2	0.2	0.3	L	0.8	1.5	na	na	na	3.0	105.7	2.5	1.9	2.2				
BNP Paribas Americas	0.1		na	na	na	na	na	na	na	0.2	na	0.8	na	na	na	na	na	na	na	na	na	na	2.5	na	2.8			
Chan Economics	0.1		3.3	H	0.4	0.2	0.1	L	0.2	H	0.2	0.2	0.3	L	0.7	1.4	2.6	3.9	2.6	3.4	H	106.2	1.0	1.4	1.7			
Chmura Economics & Analytics	0.1		3.3	H	0.3	0.1	L	0.1	L	0.1	L	0.1	L	0.3	L	0.7	1.4	2.3	na	na	2.9	na	5.9	0.4	0.6	L		
Comerica Bank	0.1		3.2	0.3	na	na	0.1	L	0.1	L	0.2	0.2	0.3	L	0.7	1.5	na	na	na	3.0	na	na	5.0	1.9	1.9			
Daiwa Capital Markets America	0.1		3.3	H	0.2	L	0.1	L	0.1	L	0.1	L	0.2	0.3	L	0.7	1.4	2.4	3.4	na	2.9	107.0	6.8	2.0	2.3			
DePrince & Assoc.	0.1		3.2	0.4	0.2	0.1	L	0.1	L	0.2	0.2	0.3	L	0.7	1.5	2.5	3.6	2.3	2.9	106.2	6.1	1.4	1.7					
Economist Intelligence Unit	0.1		3.3	H	na	0.1	L	0.1	L	0.1	L	0.2	0.3	L	0.7	1.4	na	na	na	2.9	na	4.4	na	2.1				
Fannie Mae	0.1		3.3	H	na	na	0.1	L	0.1	L	0.1	L	0.2	0.3	L	0.7	1.4	na	na	na	2.9	na	6.2	1.1	1.7			
Georgia State University	0.1		3.3	H	na	na	0.1	L	0.2	H	0.2	0.2	0.5	H	0.9	1.4	2.0	3.3	na	3.1	na	0.7	1.6	1.5				
Goldman Sachs & Co.	0.1		na	0.5	H	na	0.4	H	na	na	na	0.3	0.4	1.1	H	1.8	na	na	na	na	na	na	3.0	0.8	2.4			
Grant Thornton/Diane Swonk	0.1		3.3	H	0.4	0.3	H	0.1	L	0.1	L	0.2	0.2	0.3	L	0.7	1.4	2.0	3.7	na	3.0	na	-0.8	1.1	1.7			
ING	0.1		na	0.3	na	na	na	na	na	0.2	0.4	0.8	1.6	na	na	na	na	na	na	na	na	na	5.7	na	na			
J.P. Morgan Chase	0.1		na	0.2	L	na	na	na	na	0.2	0.3	L	0.8	1.6	na	na	na	na	na	na	na	na	2.5	1.8	1.9			
Loomis, Sayles & Company	0.1		3.3	H	0.3	0.1	L	0.1	L	0.2	H	0.2	0.2	0.3	L	0.7	1.4	2.3	3.2	2.7	2.9	106.2	2.5	1.6	3.6			
MacroFin Analytics & Rutgers Bus School	0.1		3.3	H	0.3	0.1	L	0.1	L	0.1	L	0.1	L	0.2	0.3	L	0.7	1.4	2.5	3.2	2.9	3.0	105.5	3.0	1.4	1.7		
Mizuho Research Institute	0.1		na	na	na	na	na	na	na	na	na	na	na	na	0.7	na	na	na	na	na	na	na	na	na	na			
Moody's Analytics	0.1		3.3	H	0.4	0.1	L	0.2	0.2	H	0.3	H	0.4	H	0.4	0.7	1.4	2.2	3.4	2.1	3.0	na	2.9	1.9	2.0			
Moody's Capital Markets Group	0.1		3.3	H	0.3	0.1	L	0.2	0.2	H	0.2	0.2	0.4	0.7	1.4	2.3	3.3	3.0	3.0	3.0	106.5	5.0	1.5	2.2				
MUFG Union Bank	0.1		3.3	H	0.2	L	na	0.1	L	0.1	L	0.2	0.2	0.3	L	0.7	1.4	2.3	3.4	2.5	2.9	106.0	7.0	1.5	2.2			
Naroff Economic Advisors	0.1		3.3	H	0.3	0.2	0.1	L	0.1	L	0.2	0.2	0.3	L	0.7	1.4	2.2	4.1	2.4	3.2	108.3	4.3	1.2	1.7				
NatWest Markets	0.1		3.2	0.5	H	0.3	H	0.1	L	0.2	H	0.3	H	0.3	0.4	0.9	1.6	2.9	3.9	3.1	3.1	109.0	4.4	1.5	1.9			
Nomura Securities, Inc.	0.1		3.3	H	na	na	na	na	na	na	0.2	0.3	L	0.7	na	na	na	na	na	na	na	na	1.8	0.4	1.5			
Oxford Economics	0.1		3.3	H	0.3	na	0.1	L	0.1	L	0.1	L	0.2	0.4	0.8	1.4	1.5	L	na	na	3.0	107.0	4.5	1.8	1.3			
PNC Financial Services Corp.	0.1		3.3	H	0.2	L	na	0.1	L	0.1	L	0.1	L	0.3	L	0.7	1.5	na	3.3	0.9	L	2.9	na	5.0	2.3	1.3		
RDQ Economics	0.1		3.3	H	0.3	0.2	0.1	L	0.1	L	0.2	0.2	0.5	H	0.8	1.5	2.3	3.5	2.9	3.0	106.2	6.7	2.3	2.5				
Regions Financial Corporation	0.1		3.3	H	0.2	L	0.1	L	0.1	L	0.1	L	0.1	L	0.3	L	0.7	1.4	2.4	3.5	2.6	3.1	107.1	8.5	1.6	2.0		
S&P Global	0.1		3.3	H	0.3	na	0.1	L	0.1	L	0.2	0.2	0.4	0.8	1.5	na	na	na	na	3.0	na	na	3.5	3.2	H	2.4		
Scotiabank Group	0.1		na	na	na	na	0.1	L	na	na	na	0.2	0.4	0.7	1.4	na	na	na	na	na	na	na	na	5.0	0.9	3.7		
Societe Generale	0.1		na	na	na	na	0.1	L	0.1	L	na	0.2	0.3	L	0.7	1.4	na	na	na	na	na	na	na	4.6	1.2	1.5		
Swiss Re	0.1		3.3	H	0.4	0.3	H	0.2	0.2	H	0.3	H	0.3	0.5	H	0.9	1.6	3.3	H	5.2	H	na	2.6	na	3.3	0.2	L	1.1
The Northern Trust Company	0.1		3.3	H	0.4	0.1	L	0.2	0.2	H	0.2	0.2	0.3	L	0.7	1.3	2.4	3.4	3.2	H	3.0	106.0	4.9	1.8	1.6			
TS Lombard	0.1		3.2	0.4	0.2	0.2	0.2	H	0.2	0.1	L	0.3	L	0.5	L	1.2	L	1.9	2.9	L	1.1	2.5	L	115.0	H	6.0	2.0	2.0
Via Nova Investment Mgt.	0.1		3.3	H	0.3	0.1	L	0.1	L	0.2	H	0.2	0.2	0.3	L	0.6	1.4	2.3	3.1	1.3	3.0	106.0	5.0	1.5	1.7			
Wells Fargo	0.1		3.3	H	0.3	0.1	L	0.1	L	0.1	L	0.1	L	0.3	L	0.8	1.4	2.0	2.9	L	2.4	2.8	na	7.2	1.0	0.9		
ACIMA Private Wealth	0.0	L	3.1	L	0.2	L	0.3	H	0.1	L	0.1	L	0.1	L	0.3	L	0.7	1.4	2.4	4.0	1.6	2.9	105.0	L	-3.0	L	1.0	3.9
October Consensus	0.1	3.3	0.3	0.2	0.1	0.1	0.2	0.2	0.3	0.8	1.5	2.3	3.5	2.4	3.0	107.2	4.6	1.5	2.1									
Top 10 Avg.	0.1	3.3	0.4	0.2	0.2	0.2	0.2	0.3	0.4	0.9	1.6	2.6	4.0	2.9	3.1	108.5	8.4	2.2	3.2									
Bottom 10 Avg.	0.1	3.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.7	1.4	2.1	3.2	1.9	2.8	105.9	1.2	0.8	1.3									
September Consensus	0.1	3.3	0.4	0.2	0.1	0.2	0.2	0.2	0.4	0.8	1.5	2.4	3.6	2.4	3.1	107.7	5.7	1.3	1.8									
Number of Forecasts Changed From A Month Ago:																												
Down	3	0	9	2	3	9	6	7	12	8	11	9	11	7	14	8	26	7	5									
Same	36	31	22	19	29	21	22	31	24	25	17	9	9	10	13	7	5	13	9									
Up	3	3	2	1	3	3	4	3	4	9	11	7	5	3	4	4	10	18	25									
Diffusion Index	50%	54%	39%	48%	50%	41%	47%	45%	40%	51%	50%	46%	38%	40%	34%	39%	30%	64%	76%									

First Quarter 2021

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter															Avg. For ---Qtr.---	----(Q-Q % Change)----										
	-----Short-Term-----					---Intermediate-Term---					-----Long-Term-----						----- (SAAR) -----										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		A.	B.	C.	D.							
	Federal Funds Rate	Prime Bank Rate	LIBOR Rate 3-Mo.	Com. Paper 1-Mo.	Treas. Bills 3-Mo.	Treas. Bills 6-Mo.	Treas. Bills 1-Yr.	Treas. Notes 2-Yr.	Treas. Notes 5-Yr.	Treas. Notes 10-Yr.	Treas. Bond 30-Yr.	Aaa Corp. Bond	Baa Corp. Bond	State & Local Bonds	Home Mtg. Rate		Fed's Adv Fgn Econ \$ Index	Real GDP	GDP Price Index	Cons. Price Index							
Action Economics	0.1	H	3.3	H	0.6	H	0.1	0.2	0.2	0.3	0.4	0.6	0.8	1.5	2.4	3.4	2.9	3.1	106.2	5.0	2.4	2.7					
AIG	0.1	H	3.3	H	0.3	na	0.1	L	0.1	L	0.2	0.2	0.4	0.8	1.5	na	3.2	na	3.0	na	5.0	1.6	3.0				
Amherst Pierpont Securities	0.1	H	3.3	H	0.2	L	0.1	0.1	L	0.1	L	0.2	0.2	0.5	1.1	1.9	2.8	3.8	2.4	3.3	108.5	5.7	2.4	2.7			
Bank of America	0.1	H	na	0.2	L	na	na	na	na	na	0.2	0.3	1.3	H	2.2	H	na	na	na	na	5.0	1.2	1.7				
Barclays	0.1	H	3.3	H	na	na	na	na	na	na	0.2	0.3	0.8	1.7	na	na	na	na	na	na	3.5	1.6	1.3				
BMO Capital Markets	0.1	H	3.3	H	0.3	na	0.1	L	0.1	L	0.2	0.2	0.4	0.8	1.5	na	na	na	3.1	105.3	5.8	1.6	1.9				
BNP Paribas Americas	0.1	H	na	na	na	na	na	na	na	0.2	na	0.9	na	na	na	na	na	na	na	na	4.5	na	1.6				
Chan Economics	0.1	H	3.3	H	0.4	0.2	0.1	L	0.2	0.2	0.2	0.3	0.7	1.4	2.6	3.9	2.6	3.4	106.0	5.0	1.6	2.0					
Chmura Economics & Analytics	0.1	H	3.3	H	0.4	0.2	0.1	L	0.1	L	0.1	L	0.2	0.3	0.7	1.5	2.4	na	na	3.0	na	5.3	0.6	0.8			
Comerica Bank	0.1	H	3.2	0.4	na	0.1	L	0.2	0.2	0.2	0.3	0.4	0.8	1.5	na	na	na	na	3.0	na	4.1	2.1	2.2				
Daiwa Capital Markets America	0.1	H	3.3	H	0.3	0.1	0.1	L	0.1	L	0.1	L	0.2	0.3	0.7	1.4	2.4	3.4	na	2.9	108.0	3.8	1.8	2.1			
DePrince & Assoc.	0.1	H	3.2	0.5	0.4	H	0.2	0.2	0.2	0.2	0.2	0.4	0.8	1.6	2.7	3.8	2.4	2.9	106.4	5.3	1.7	1.8					
Economist Intelligence Unit	0.1	H	3.3	H	na	0.1	0.1	L	0.1	L	0.2	0.2	0.3	0.7	1.4	na	na	na	2.9	na	3.2	na	2.1				
Fannie Mae	0.1	H	3.3	H	na	na	0.1	L	0.1	L	0.1	L	0.2	0.3	0.7	1.4	na	na	na	2.8	na	3.9	1.6	3.0			
Georgia State University	0.1	H	3.3	H	na	na	0.1	L	0.1	L	0.2	0.3	0.5	0.9	1.5	2.1	3.5	na	3.2	na	1.1	L	2.8	H	3.4	H	
GLC Financial Economics	0.1	H	3.3	H	0.3	0.2	0.1	L	0.1	L	0.2	0.3	0.5	0.8	1.4	2.9	4.2	2.8	3.6	H	108.4	6.4	2.1	2.3			
Goldman Sachs & Co.	0.1	H	na	0.5	na	0.3	H	na	na	na	0.3	0.4	1.2	1.9	na	na	na	na	na	na	7.0	0.9	1.4				
Grant Thornton/Diane Swonk	0.1	H	3.3	H	0.3	0.3	0.1	L	0.1	L	0.3	0.3	0.4	0.7	1.6	2.1	3.4	na	3.0	na	1.8	1.4	2.8				
ING	0.1	H	na	0.3	na	na	na	na	na	0.3	0.6	1.0	2.0	na	na	na	na	na	na	na	3.8	na	na				
J.P. Morgan Chase	0.1	H	na	0.2	L	na	na	na	na	0.2	0.3	0.8	1.7	na	na	na	na	na	na	na	2.0	1.5	1.7				
Loomis, Sayles & Company	0.1	H	3.3	H	0.3	0.1	0.1	L	0.2	0.2	0.2	0.3	0.8	1.5	2.3	3.2	2.2	2.7	106.0	3.5	1.7	1.5					
MacroFin Analytics & Rutgers Bus School	0.1	H	3.3	H	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.7	1.5	2.6	3.3	2.9	3.0	106.0	1.9	1.5	2.1					
Mizuho Research Institute	0.1	H	na	na	na	na	na	na	na	na	na	0.8	na	na	na	na	na	na	na	na	na	na	na	na			
Moody's Analytics	0.1	H	3.3	H	0.6	H	0.1	0.2	0.3	H	0.5	H	0.7	H	0.8	1.7	2.4	3.7	2.3	3.1	na	3.6	1.5	1.3			
Moody's Capital Markets Group	0.1	H	3.3	H	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.7	1.4	2.3	3.4	3.0	2.9	106.7	5.3	1.6	1.4					
MUFG Union Bank	0.1	H	3.3	H	0.2	L	na	0.1	L	0.1	L	0.2	0.2	0.3	0.7	1.4	2.4	3.5	2.5	2.9	107.0	5.0	1.5	2.3			
Naroff Economic Advisors	0.1	H	3.3	H	0.3	0.2	0.1	L	0.2	0.2	0.3	0.4	0.7	1.5	2.3	4.0	2.5	3.3	109.0	3.3	1.4	1.9					
NatWest Markets	0.1	H	3.2	0.4	0.2	0.1	L	0.2	0.3	0.3	0.4	0.9	1.8	2.7	3.7	3.0	2.9	107.0	4.8	2.4	2.6						
Nomura Securities, Inc.	0.1	H	3.3	H	na	na	na	na	na	0.2	0.3	0.7	na	na	na	na	na	na	na	na	1.8	0.2	L	0.7	L		
Oxford Economics	0.1	H	3.3	H	0.3	na	0.2	0.2	0.2	0.2	0.5	0.9	1.5	1.8	L	na	na	3.0	107.5	2.4	1.8	1.6					
PNC Financial Services Corp.	0.1	H	3.3	H	0.2	L	na	0.1	L	0.1	L	0.2	0.4	0.8	1.5	na	3.3	1.0	L	2.8	na	4.8	2.1	1.0			
RDQ Economics	0.1	H	3.3	H	0.3	0.2	0.1	L	0.1	L	0.2	0.2	0.7	H	1.1	1.9	2.6	3.7	3.4	H	3.2	105.3	5.6	2.6	2.5		
Regions Financial Corporation	0.1	H	3.3	H	0.3	0.2	0.1	L	0.1	L	0.1	L	0.3	0.7	1.5	2.4	3.6	2.6	3.2	107.5	1.4	1.2	1.8				
S&P Global	0.1	H	3.3	H	0.3	na	0.2	0.2	0.2	0.3	0.6	0.9	1.5	na	na	na	na	2.9	na	na	4.0	2.4	1.6				
Scotiabank Group	0.1	H	na	na	na	na	0.1	L	na	na	0.3	0.5	0.9	1.6	na	na	na	na	na	na	6.0	2.3	3.0				
Societe Generale	0.1	H	na	na	na	na	0.1	L	0.1	L	na	0.2	0.4	0.8	1.4	na	na	na	na	na	3.2	1.2	1.5				
Swiss Re	0.1	H	3.3	H	0.4	0.3	0.2	0.2	0.3	0.3	0.6	1.0	1.6	3.3	H	4.8	H	na	2.7	na	3.3	2.0	1.8				
The Northern Trust Company	0.1	H	3.3	H	0.4	0.1	0.2	0.2	0.2	0.2	0.3	0.7	1.3	L	2.5	3.5	3.3	2.8	104.0	L	4.5	1.7	1.7				
TS Lombard	0.1	H	3.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	L	0.6	L	1.3	L	2.0	2.8	L	1.2	2.6	L	118.0	H	4.0	1.5	1.5
Via Nova Investment Mgt.	0.1	H	3.3	H	0.3	0.0	L	0.1	L	0.2	0.3	0.3	0.5	0.7	1.4	2.5	3.2	1.7	3.1	106.0	5.0	1.5	1.8				
Wells Fargo	0.1	H	3.3	H	0.3	0.1	0.1	L	0.1	L	0.1	L	0.2	0.3	0.9	1.5	2.0	2.9	2.5	2.8	na	8.9	H	1.7	1.0		
ACIMA Private Wealth	-0.1	L	3.0	L	0.2	L	0.3	0.1	L	0.1	L	0.1	L	0.3	0.7	1.4	2.6	4.3	1.6	2.9	104.0	L	6.5	1.0	2.7		
October Consensus	0.1	3.3	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.4	0.8	1.6	2.4	3.6	2.4	3.0	107.1	4.3	1.7	1.9							
Top 10 Avg.	0.1	3.3	0.5	0.3	0.2	0.2	0.3	0.3	0.6	1.0	1.8	2.7	4.0	2.9	3.3	108.8	6.3	2.4	2.8								
Bottom 10 Avg.	0.1	3.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.7	1.4	2.2	3.2	2.0	2.8	105.5	2.2	1.1	1.2								
September Consensus	0.1	3.3	0.4	0.2	0.2	0.2	0.2	0.2	0.4	0.8	1.6	2.5	3.7	2.5	3.1	107.5	5.0	1.5	1.9								
Number of Forecasts Changed From A Month Ago:																											
Down	3	0	6	5	5	7	6	7	15	12	11	8	10	8	14	5	21	9	9								
Same	37	31	25	16	28	24	22	28	21	24	18	10	11	8	11	9	11	19	14								
Up	2	3	2	1	2	2	4	5	3	6	9	7	4	4	6	5	9	10	16								
Diffusion Index	49%	54%	44%	41%	46%	42%	47%	48%	35%	43%	47%	48%	38%	40%	37%	50%	35%	51%	59%								

Third Quarter 2021

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	Percent Per Annum -- Average For Quarter--																Avg. For																
	Short-Term											---Intermediate-Term---			Long-Term			---Qtr.---	------(Q-Q % Change)-----														
	1	2		3		4		5		6		7		8		9		10		11		12		13		14		15		A.	B.	C.	D.
	Federal Funds Rate	Prime Bank Rate	LIBOR Rate	Com. Paper 3-Mo.	Com. Paper 1-Mo.	Treas. Bills 3-Mo.	Treas. Bills 6-Mo.	Treas. Bills 1-Yr.	Treas. Notes 2-Yr.	Treas. Notes 5-Yr.	Treas. Notes 10-Yr.	Treas. Bonds 30-Yr.	Aaa Corp. Bond	Baa Corp. Bond	State & Local Bonds	Home Mtg. Rate	Fed's Adv Fgn Econ \$ Index	Real GDP	Price Index	Price Index	Cons.	Cons.	Cons.	Cons.									
Action Economics	0.1	H	3.3	H	0.6	0.1	0.2	0.2	0.4	0.5	0.7	0.9	1.6	2.2	3.2	3.0	3.1	105.8	na	na	2.2												
AIG	0.1	H	3.3	H	0.3	na	0.1	L	0.1	L	0.2	0.3	0.5	0.9	1.7	na	3.4	na	3.0	na	4.0	1.3	2.1										
Amherst Pierpont Securities	0.1	H	3.3	H	0.3	0.2	0.2	0.2	0.3	0.4	1.0	H	1.7	H	2.6	H	3.5	H	4.5	2.9	3.8	H	109.5	4.3	2.4	2.8							
Bank of America	0.1	H	na	na	0.2	L	na	na	na	na	0.2	0.3	L	1.4	2.3	na	na	na	na	na	na	na	na	na	3.0	1.1	2.0						
Barclays	0.1	H	3.3	H	na	na	na	na	na	na	0.2	0.4	0.9	1.9	na	na	na	na	na	na	na	na	na	na	4.0	2.1	2.3						
BMO Capital Markets	0.1	H	3.3	H	0.3	na	0.1	L	0.1	L	0.2	0.2	0.5	0.9	1.6	na	na	na	na	3.1	104.7	4.1	2.0	2.3									
BNP Paribas Americas	0.1	H	na	na	na	na	na	na	na	0.3	na	1.1	na	na	na	na	na	na	na	na	na	na	na	na	6.5	na	1.6						
Chan Economics	0.1	H	3.3	H	0.4	0.2	0.2	0.3	H	0.3	0.3	0.4	0.8	1.5	2.7	4.0	2.7	3.5	105.7	3.5	1.7	1.8											
Chmura Economics & Analytics	0.1	H	3.3	H	0.5	0.2	0.1	L	0.2	0.2	0.2	0.4	0.8	1.5	2.4	na	na	3.0	na	4.9	1.5	1.7											
Comerica Bank	0.1	H	3.2	0.4	na	0.1	L	0.2	0.3	0.3	0.5	0.8	1.5	na	na	na	2.9	na	4.6	2.0	2.0												
Daiwa Capital Markets America	0.1	H	3.3	H	0.3	0.1	0.1	L	0.2	0.2	0.2	0.3	L	0.8	1.5	2.4	3.4	na	3.0	108.0	3.2	2.0	2.2										
DePrince & Assoc.	0.1	H	3.2	0.5	0.3	0.2	0.2	0.2	0.2	0.3	0.5	1.0	1.7	3.0	4.1	2.6	3.0	106.8	3.7	1.7	1.9												
Economist Intelligence Unit	0.1	H	3.3	H	na	0.1	0.2	0.2	0.2	0.2	0.3	L	0.8	1.5	na	na	na	3.1	na	8.2	na	2.7											
Fannie Mae	0.1	H	3.3	H	na	na	0.1	L	0.2	0.2	0.2	0.4	0.8	1.5	na	na	na	2.8	na	3.4	1.7	2.8											
Georgia State University	0.1	H	3.3	H	na	na	0.1	L	0.2	0.2	0.4	0.8	1.3	2.0	2.6	4.1	na	3.5	na	1.6	L	1.4	2.6										
GLC Financial Economics	0.1	H	3.3	H	0.4	0.2	0.1	L	0.1	L	0.2	0.3	0.5	0.8	1.2	L	2.5	3.8	2.6	3.6	107.2	3.9	1.5	1.9									
Goldman Sachs & Co.	0.1	H	na	na	0.5	na	0.3	H	na	na	na	na	1.4	na	na	na	na	na	na	na	4.5	1.2	1.4										
Grant Thornton/Diane Swonk	0.1	H	3.3	H	0.3	0.3	0.1	L	0.1	L	0.3	0.3	0.4	0.9	1.8	2.2	3.5	na	3.0	na	3.0	1.4	2.4										
ING	0.1	H	na	na	0.3	na	na	na	na	0.3	0.6	1.0	2.0	na	na	na	na	na	na	na	3.5	na	na										
J.P. Morgan Chase	0.1	H	na	na	0.2	L	na	na	na	na	0.2	0.4	0.9	1.8	na	na	na	na	na	na	1.8	1.7	1.7										
Loomis, Sayles & Company	0.1	H	3.3	H	0.3	0.2	0.2	0.2	0.2	0.3	0.5	1.1	1.9	2.3	3.1	2.1	2.8	105.5	3.5	1.6	1.7												
MacroFin Analytics & Rutgers Bus School	0.1	H	3.3	H	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.8	1.6	2.6	3.3	3.0	3.1	107.5	1.7	1.9	2.0												
Mizuho Research Institute	0.1	H	na	na	na	na	na	na	na	na	na	0.9	na	na	na	na	na	na	na	na	na	na	na										
Moody's Analytics	0.1	H	3.3	H	0.7	H	0.1	0.3	H	0.3	H	0.6	H	0.7	H	0.9	1.1	2.3	2.5	3.7	2.4	3.2	na	4.4	1.8	2.2							
Moody's Capital Markets Group	0.1	H	3.3	H	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.8	1.5	2.4	3.4	3.1	3.0	106.5	4.0	1.6	2.0												
MUFG Union Bank	0.1	H	3.3	H	0.2	L	na	0.1	L	0.2	0.2	0.2	0.4	0.7	1.4	2.5	3.8	2.7	3.0	104.0	2.5	1.5	2.3										
Naroff Economic Advisors	0.1	H	3.3	H	0.3	0.2	0.2	0.2	0.3	0.4	0.6	1.0	1.8	2.6	4.1	2.8	3.6	109.0	2.1	1.8	2.1												
NatWest Markets	0.1	H	3.2	0.3	0.2	0.1	L	0.2	0.3	0.4	0.5	1.2	2.0	2.9	3.9	2.8	3.0	105.0	3.3	1.9	2.3												
Nomura Securities, Inc.	0.1	H	3.3	H	na	na	na	na	na	0.3	0.5	0.8	na	na	na	na	na	na	na	na	8.5	H	0.3	L	0.6	L							
Oxford Economics	0.1	H	3.3	H	0.3	na	0.2	0.2	0.2	0.3	0.7	1.2	1.8	2.1	L	na	na	3.1	107.7	3.0	2.8	1.7											
PNC Financial Services Corp.	0.1	H	3.3	H	0.2	L	na	0.1	L	0.1	L	0.1	L	0.2	0.5	0.8	1.6	na	3.3	1.0	L	2.7	L	na	3.8	2.2	1.9						
RDQ Economics	0.1	H	3.3	H	0.3	0.2	0.1	L	0.1	L	0.2	0.2	0.9	1.6	2.5	3.0	4.1	4.0	H	3.6	106.0	3.9	2.9	H	2.6								
Regions Financial Corporation	0.1	H	3.3	H	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.9	1.6	2.6	3.7	2.7	3.3	106.9	2.1	1.7	2.1												
S&P Global	0.1	H	3.3	H	0.3	na	0.2	0.2	0.3	0.4	0.8	1.3	2.0	na	na	na	3.0	na	3.6	2.6	1.2												
Scotiabank Group	0.1	H	na	na	na	0.1	L	na	na	0.5	1.0	H	1.3	1.9	na	na	na	na	na	na	4.1	2.5	4.3	H									
Societe Generale	0.1	H	na	na	na	0.1	L	0.1	L	na	0.3	0.6	1.0	1.7	na	na	na	na	na	na	3.2	1.4	1.6										
Swiss Re	0.1	H	3.3	H	0.4	0.3	0.2	0.2	0.3	0.3	0.6	1.0	1.6	3.1	4.4	na	2.7	L	na	5.6	0.4	2.5											
The Northern Trust Company	0.1	H	3.3	H	0.4	0.1	0.2	0.2	0.2	0.3	0.5	0.9	1.5	2.7	3.7	3.5	2.9	101.0	4.9	1.9	1.8												
TS Lombard	0.1	H	3.2	0.4	0.2	0.2	0.2	0.2	0.3	0.4	0.8	1.5	2.2	3.0	L	1.4	2.8	115.0	H	2.0	1.0	1.0											
Via Nova Investment Mgt.	0.1	H	3.3	H	0.3	0.0	L	0.1	L	0.2	0.3	0.3	0.5	0.7	1.4	2.5	3.2	1.7	3.1	105.0	3.0	1.7	2.0										
Wells Fargo	0.1	H	3.3	H	0.3	0.1	0.2	0.2	0.2	0.2	0.5	1.2	1.9	2.3	3.2	2.8	3.3	na	2.9	1.7	1.6												
ACIMA Private Wealth	-0.1	L	3.0	L	0.3	0.4	H	0.1	L	0.1	L	0.1	L	0.3	L	0.6	L	1.3	3.0	4.8	H	1.7	2.8	100.0	L	3.0	0.9	1.0					
October Consensus	0.1	3.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	1.0	1.7	2.6	3.7	2.6	3.1	106.3	3.8	1.7	2.0														
Top 10 Avg.	0.1	3.3	0.5	0.3	0.2	0.2	0.3	0.4	0.8	1.4	2.2	2.9	4.2	3.1	3.5	108.4	5.6	2.4	2.7														
Bottom 10 Avg.	0.1	3.2	0.3	0.1	0.1	0.1	0.2	0.2	0.4	0.8	1.4	2.3	3.3	2.1	2.8	104.3	2.3	1.0	1.3														
September Consensus	0.1	3.3	0.5	0.2	0.2	0.2	0.3	0.3	0.6	1.0	1.7	2.7	3.8	2.6	3.2	107.0	3.8	1.6	2.0														
Number of Forecasts Changed From A Month Ago:																																	
Down	4	1	8	3	4	6	7	10	10	10	10	6	7	5	10	8	16	10	6														
Same	36	30	21	18	29	23	22	20	22	21	15	12	11	10	11	8	13	14	16														
Up	2	3	2	1	2	4	3	6	4	7	10	7	7	5	10	3	11	13	17														
Diffusion Index	48%	53%	40%	45%	47%	47%	44%	44%	42%	46%	50%	52%	50%	50%	50%	37%	44%	54%	64%														

Fourth Quarter 2021

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	-----Percent Per Annum -- Average For Quarter-----															----- (Q-Q % Change) -----														
	-----Short-Term-----					-----Intermediate-Term-----					-----Long-Term-----					Avg. For ---Qtr.---	----- (SAAR) -----													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	A.	B.	C.	D.											
	Federal Funds Rate	Prime Bank Rate	LIBOR Rate 3-Mo.	Com. Paper 1-Mo.	Treas. Bills 3-Mo.	Treas. Bills 6-Mo.	Treas. Bills 1-Yr.	Treas. Notes 2-Yr.	Treas. Notes 5-Yr.	Treas. Notes 10-Yr.	Treas. Bond 30-Yr.	Aaa Corp. Bond	Baa Corp. Bond	State & Local Bonds	Home Mtg. Rate	Fed's Adv Fgn Econ \$ Index	Real GDP	GDP Price Index	Cons. Price Index											
Amherst Pierpont Securities	0.2	H	3.3	H	0.5	0.2	0.4	H	0.5	H	0.6	0.7	1.3	H	2.0	H	2.9	H	3.8	H	4.8	H	3.2	4.0	H	110.0	H	3.9	2.4	2.8
Regions Financial Corporation	0.2	H	3.3	H	0.4	0.3	0.2	0.2	0.2	0.4	0.3	0.5	0.9	1.7	2.6	3.8	2.8	3.3	106.8	2.1	1.5	1.9								
Action Economics	0.1	3.3	H	0.6	0.1	0.2	0.2	0.4	0.5	0.7	0.9	1.6	2.2	3.2	3.0	3.1	105.6	na	na	na										
AIG	0.1	3.3	H	0.4	na	0.1	L	0.1	L	0.2	0.3	0.5	1.0	1.8	na	3.4	na	3.1	na	3.0	2.3	3.5								
Bank of America	0.1	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	3.0	1.0	1.4								
Barclays	0.1	3.3	H	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	3.5	2.0	2.0								
BMO Capital Markets	0.1	3.3	H	0.3	na	0.1	L	0.1	L	0.2	0.3	0.5	1.0	1.7	na	na	na	3.2	104.4	3.2	1.9	2.1								
BNP Paribas Americas	0.1	na	na	na	na	na	na	na	0.3	na	1.2	na	na	na	na	na	na	na	na	4.0	na	1.3								
Chan Economics	0.1	3.3	H	0.4	0.2	0.2	0.3	0.3	0.3	0.4	0.8	1.5	2.7	4.0	2.7	3.5	105.3	3.0	1.8	1.9										
Chmura Economics & Analytics	0.1	3.3	H	0.5	0.2	0.1	L	0.2	0.2	0.2	0.4	0.8	1.5	2.5	na	na	3.1	na	4.1	2.0	2.1									
Comerica Bank	0.1	3.2	0.4	na	0.1	L	0.2	0.3	0.4	0.5	0.9	1.5	na	na	na	2.9	na	na	3.2	2.0	2.0									
Daiwa Capital Markets America	0.1	3.3	H	0.4	0.1	0.1	L	0.2	0.2	0.2	0.4	0.8	1.5	2.4	3.4	na	3.0	110.0	H	2.7	2.1	2.3								
DePrince & Assoc.	0.1	3.2	0.5	0.4	H	0.2	0.2	0.2	0.4	0.6	1.1	1.8	3.1	4.2	2.7	3.1	107.0	3.8	1.7	1.9										
Economist Intelligence Unit	0.1	3.3	H	na	0.2	0.2	0.2	0.2	0.2	0.4	1.0	1.6	na	na	na	3.2	na	8.5	H	na	2.8									
Fannie Mae	0.1	3.3	H	na	na	0.2	0.2	0.2	0.2	0.4	0.8	1.5	na	na	na	2.8	na	3.6	1.8	2.8										
Georgia State University	0.1	3.3	H	na	na	0.1	L	0.2	0.2	0.4	0.9	1.4	2.1	2.6	4.1	na	3.6	na	4.7	1.3	2.7									
GLC Financial Economics	0.1	3.3	H	0.4	0.2	0.1	L	0.1	L	0.2	0.3	0.5	0.7	1.0	L	2.1	L	3.3	2.4	3.5	107.0	3.2	1.7	2.1						
Goldman Sachs & Co.	0.1	na	0.5	na	0.3	na	na	na	na	na	1.5	na	na	na	na	na	na	na	3.5	1.2	1.4									
Grant Thornton/Diane Swonk	0.1	3.3	H	0.3	0.3	0.1	L	0.1	L	0.3	0.4	0.5	1.0	1.9	2.3	3.5	na	3.0	na	2.2	1.5	2.3								
ING	0.1	na	0.3	na	na	na	na	na	0.4	0.9	1.3	2.2	na	na	na	na	na	na	na	3.0	na	na								
J.P. Morgan Chase	0.1	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	1.5	L	2.0	1.8								
Loomis, Sayles & Company	0.1	3.3	H	0.3	0.2	0.2	0.2	0.2	0.3	0.5	1.1	2.0	2.2	3.0	L	2.0	2.8	105.2	3.4	1.7	1.7									
MacroFin Analytics & Rutgers Bus School	0.1	3.3	H	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.8	1.6	2.7	3.4	3.0	3.1	108.0	1.7	2.1	2.0										
Mizuho Research Institute	0.1	na	na	na	na	na	na	na	na	0.9	na	na	na	na	na	na	na	na	na	na	na	na								
Moody's Analytics	0.1	3.3	H	0.7	H	0.1	0.3	0.4	0.7	H	0.8	H	1.1	1.4	2.5	2.9	4.1	2.7	3.4	na	6.0	2.3	2.8							
Moody's Capital Markets Group	0.1	3.3	H	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.9	1.5	2.4	3.4	3.1	3.0	106.3	3.0	1.8	1.9										
MUFG Union Bank	0.1	3.3	H	0.2	L	na	0.1	L	0.2	0.2	0.4	0.7	1.4	2.5	3.9	2.6	3.1	104.0	2.3	1.5	2.3									
Naroff Economic Advisors	0.1	3.3	H	0.4	0.2	0.3	0.3	0.5	0.5	0.7	1.1	1.8	2.6	4.1	2.8	3.6	109.0	2.3	1.9	2.2										
NatWest Markets	0.1	3.2	0.3	0.2	0.1	L	0.2	0.3	0.4	0.6	1.2	2.1	2.9	3.8	2.7	3.0	105.0	3.2	0.5	1.6										
Nomura Securities, Inc.	0.1	3.3	H	na	na	na	na	na	0.3	0.7	1.0	na	na	na	na	na	na	na	8.0	0.2	0.7	L								
Oxford Economics	0.1	3.3	H	0.3	na	0.2	0.2	0.3	0.4	0.9	1.3	2.0	2.3	na	na	3.2	107.7	3.2	2.3	1.7										
PNC Financial Services Corp.	0.1	3.3	H	0.2	L	na	0.1	L	0.1	L	0.1	L	0.2	0.5	0.9	1.6	na	3.3	1.1	L	2.7	L	na	3.7	2.2	2.0				
RDQ Economics	0.1	3.3	H	0.3	0.2	0.1	L	0.1	L	0.2	0.2	1.1	1.9	2.8	3.3	4.4	4.2	H	3.9	106.0	3.6	3.1	H	2.6						
S&P Global	0.1	3.3	H	0.3	na	0.2	0.2	0.3	0.4	1.0	1.5	2.1	na	na	na	3.2	na	1.8	2.0	1.3										
Scotiabank Group	0.1	na	na	na	0.1	L	na	na	0.6	1.1	1.6	2.0	na	na	na	na	na	na	3.5	2.3	4.0	H								
Societe Generale	0.1	na	na	na	0.1	L	0.1	L	na	0.4	0.7	1.2	2.0	na	na	na	na	na	2.7	1.8	1.7									
Swiss Re	0.1	3.3	H	0.4	0.3	0.2	0.2	0.3	0.3	0.6	1.0	1.6	3.1	4.4	na	2.7	L	na	4.8	-0.2	L	0.8								
The Northern Trust Company	0.1	3.3	H	0.4	0.1	0.2	0.2	0.3	0.3	0.7	1.1	1.7	2.9	3.9	3.7	3.1	101.0	4.6	1.9	1.9										
TS Lombard	0.1	3.2	0.4	0.2	0.2	0.2	0.3	0.4	0.5	1.0	1.7	2.5	3.3	1.6	3.0	110.0	H	2.5	1.5	1.5										
Via Nova Investment Mgt.	0.1	3.3	H	0.3	0.0	L	0.1	L	0.2	0.3	0.3	0.5	0.7	1.4	2.5	3.2	1.7	3.1	105.0	2.5	1.8	2.0								
Wells Fargo	0.1	3.3	H	0.3	0.1	0.2	0.2	0.2	0.2	0.6	1.3	2.1	2.4	3.3	2.9	3.3	na	2.3	1.8	1.9										
ACIMA Private Wealth	-0.1	L	3.0	L	0.3	0.4	H	0.1	L	0.1	L	0.1	L	0.3	L	0.6	L	1.2	3.0	4.5	1.8	2.9	100.0	L	2.0	0.8	1.0			
October Consensus	0.1	3.3	0.4	0.2	0.2	0.2	0.3	0.3	0.6	1.1	1.8	2.7	3.7	2.6	3.2	106.2	3.4	1.7	2.0											
Top 10 Avg.	0.1	3.3	0.5	0.3	0.3	0.3	0.4	0.5	1.0	1.5	2.3	3.0	4.3	3.1	3.5	108.2	5.2	2.3	2.9											
Bottom 10 Avg.	0.1	3.2	0.3	0.1	0.1	0.1	0.2	0.2	0.4	0.8	1.4	2.3	3.3	2.1	2.9	104.2	2.1	0.9	1.3											
September Consensus	0.1	3.3	0.5	0.3	0.2	0.2	0.3	0.4	0.7	1.1	1.8	2.8	3.8	2.6	3.2	106.8	3.5	1.6	2.0											
Number of Forecasts Changed From A Month Ago:																														
Down	6	3	8	5	6	7	8	13	12	11	9	10	10	9	12	7	14	7	9											
Same	34	28	21	16	27	23	20	18	19	23	19	12	9	8	14	7	9	14	16											
Up	2	3	2	1	2	3	4	5	5	4	7	3	6	3	5	5	17	16	14											
Diffusion Index	45%	50%	40%	41%	44%	44%	44%	39%	40%	41%	47%	36%	42%	35%	39%	45%	54%	62%	56%											

First Quarter 2022

Interest Rate Forecasts

Key Assumptions

Blue Chip Financial Forecasts Panel Members	-----Percent Per Annum -- Average For Quarter-----															Avg. For ---Qtr.---	----- (Q-Q % Change) -----																				
	-----Short-Term-----					---Intermediate-Term---					-----Long-Term-----						A. Fed's Adv Fgn Econ \$ Index	B. Real GDP	C. GDP Price Index	D. Cons. Price Index																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15																						
	Federal Funds Rate	Prime Bank Rate	LIBOR Rate 3-Mo.	Com. Paper 1-Mo.	Treas. Bills 3-Mo.	Treas. Bills 6-Mo.	Treas. Bills 1-Yr.	Treas. Notes 2-Yr.	Treas. Notes 5-Yr.	Treas. Notes 10-Yr.	Treas. Bonds 30-Yr.	Aaa Corp. Bond	Baa Corp. Bond	State & Local Bonds	Home Mtg. Rate																						
Amherst Pierpont Securities	0.4	H	3.6	H	0.8	H	0.5	H	0.7	H	0.8	H	0.9	H	1.0	H	1.5	H	2.2	H	3.1	H	4.0	H	5.1	H	3.4	H	4.2	H	111.0	3.5	2.5	H	2.8	H	
DePrince & Assoc.	0.2		3.3		0.6		0.5	H	0.3		0.3		0.3		0.5		0.7		1.2		1.9		3.3		4.0		2.7		3.1		107.3	3.7	1.7		2.1		
Regions Financial Corporation	0.2		3.3		0.4		0.3		0.2		0.3		0.3		0.3		0.5		1.0		1.8		2.7		3.9		2.9		3.4		106.9	2.3	1.7		2.0		
Action Economics	0.1		3.3		0.6		0.1		0.2		0.2		0.4		0.5		0.7		0.9		1.6		2.2	L	3.2		3.0		3.1		105.4	na	na		na		
AIG	0.1		3.3		0.3		na		0.1	L	0.1	L	0.2		0.3		0.6		1.1		1.9		na		3.4		na		3.1		na	2.8	1.7		2.0		
BMO Capital Markets	0.1		3.3		0.3		na		0.1	L	0.1	L	0.2		0.3		0.6		1.1		1.7		na		na		na		3.2		104.2	2.6	1.8		2.0		
BNP Paribas Americas	0.1		na		na		na		na		na		na		na		na		na		na		na		na		na		na		na	na	na	na	na	na	
Chan Economics	0.1		3.3		0.5		0.3		0.2		0.3		0.3		0.3		0.4		0.9		1.6		2.8		4.1		2.8		3.6		105.3	3.5	1.9		1.9		
Chimura Economics & Analytics	0.1		3.3		0.5		0.2		0.2		0.2		0.2		0.2		0.4		0.8		1.5		2.5		na		na		3.1		na	4.4	1.8		2.2		
Comerica Bank	0.1		3.2		0.4		na		0.1	L	0.2		0.3		0.4		0.5		0.9		1.5		na		na		na		2.9		na	3.0	1.9		2.0		
Daiwa Capital Markets America	0.1		3.3		0.4		0.1		0.1	L	0.2		0.2		0.2		0.4		0.8		1.6		2.4		3.4		na		3.0		110.0	2.5	2.1		2.4		
Economist Intelligence Unit	0.1		3.3		na		0.2		0.2		0.2		0.2		0.2		0.4		1.1		1.7		na		na		na		3.2		na	0.5	L	na	1.5		
Georgia State University	0.1		3.3		na		na		0.1	L	0.2		0.3		0.5		1.0		1.6		2.3		2.7		4.2		na		3.7		na	5.1	1.0		2.0		
GLC Financial Economics	0.1		3.3		0.4		0.2		0.1	L	0.1	L	0.2		0.3		0.5		0.8		1.0	L	2.2	L	3.4		2.5		3.6		106.7	4.2	1.9		2.4		
Goldman Sachs & Co.	0.1		na		0.5		na		0.3		na		na		na		na		1.5		na		na		na		na		na		na	3.0	1.7		1.8		
Grant Thornton/Diane Swonk	0.1		3.3		0.3		0.3		0.1	L	0.2		0.3		0.4		0.6		1.0		2.0		2.4		3.6		na		3.1		na	3.3	1.2		1.5		
ING	0.1		na		0.3		na		na		na		na		0.4		0.9		1.3		2.2		na		na		na		na		na	2.9	na		na		
Loomis, Sayles & Company	0.1		3.3		0.3		0.2		0.2		0.2		0.2		0.3		0.6		1.1		2.0		2.2	L	3.0	L	2.0		2.8		105.2	3.4	1.7		1.7		
MacroFin Analytics & Rutgers Bus School	0.1		3.3		0.3		0.2		0.3		0.3		0.3		0.3		0.4		0.9		1.6		2.7		3.4		3.0		3.2		108.5	1.6	2.1		2.2		
Mizuho Research Institute	0.1		na		na		na		na		na		na		na		na		0.9		na		na		na		na		na		na	na	na		na		
Moody's Analytics	0.1		3.3		0.7		0.1		0.3		0.4		0.8		1.0	H	1.4		1.7		2.8		3.0		4.1		2.7		3.6		na	5.5	2.4		2.7		
Moody's Capital Markets Group	0.1		3.3		0.3		0.2		0.2		0.2		0.3		0.3		0.7		1.0		1.6		2.4		3.4		3.0		3.0		106.5	2.6	1.8		2.0		
MUFG Union Bank	0.1		3.3		0.2	L	na		0.1	L	0.2		0.2		0.2		0.4		0.7		1.4		2.5		3.9		2.5		3.1		103.0	2.0	1.5		2.3		
Naroff Economic Advisors	0.1		3.3		0.4		0.2		0.3		0.4		0.5		0.7		0.9		1.2		1.9		2.8		4.2		2.9		3.8		108.5	2.3	2.0		2.4		
Nomura Securities, Inc.	0.1		3.3		na		na		na		na		na		0.4		1.0		1.1		na		na		na		na		na		na	8.2	H	0.2	L	1.4	
Oxford Economics	0.1		3.3		0.3		na		0.2		0.2		0.3		0.4		0.9		1.4		2.1		2.4		na		na		3.3		107.6	2.9	2.3		1.9		
PNC Financial Services Corp.	0.1		3.3		0.2	L	na		0.1	L	0.1	L	0.1	L	0.2		0.5		0.9		1.7		na		3.3		1.1	L	2.7	L	na	2.9	2.4		2.3		
S&P Global	0.1		3.3		0.3		na		0.2		0.2		0.3		0.4		1.0		1.6		2.2		na		na		na		3.3		na	1.6	1.6		1.2	L	
Societe Generale	0.1		na		na		na		0.1	L	0.1	L	na		0.4		0.7		1.3		2.1		na		na		na		na		na	2.0	1.9		2.1		
The Northern Trust Company	0.1		3.3		0.4		0.1		0.2		0.2		0.3		0.4		0.8		1.3		1.9		3.1		4.1		3.9	H	3.3		101.0	4.2	2.0		2.0		
TS Lombard	0.1		3.2		0.4		0.2		0.2		0.2		0.4		0.6		0.7		1.3		2.0		2.7		3.6		1.9		3.3		115.0	H	3.0	2.0		2.0	
Via Nova Investment Mgt.	0.1		3.1		0.3		0.0	L	0.1	L	0.2		0.3		0.4		0.8		0.9		1.7		3.2		4.2		1.9		2.9		105.0	2.5	1.8		2.0		
Wells Fargo	0.1		3.3		0.3		0.1		0.2		0.2		0.2		0.3		0.6		1.3		2.1		2.4		3.4		3.0		3.3		na	2.7	1.8		2.0		
ACIMA Private Wealth	-0.1	L	3.0	L	0.3		0.4		0.1	L	0.1	L	0.1	L	0.1	L	0.3	L	0.5	L	1.2		3.0		4.5		1.8		3.0		100.0	L	2.5	1.0		1.2	L
October Consensus	0.1		3.3		0.4		0.2		0.2		0.3		0.4		0.7		1.1		1.9		2.7		3.8		2.6		3.2		106.5	3.1	1.8		2.0				
Top 10 Avg.	0.2		3.3		0.5		0.3		0.3		0.3		0.5		0.6		1.0		1.5		2.3		3.1		4.2		3.1		3.6		108.8	4.6	2.2		2.4		
Bottom 10 Avg.	0.1		3.2		0.3		0.1		0.1		0.1		0.2		0.2		0.4		0.8		1.5		2.4		3.4		2.2		3.0		104.2	2.0	1.3		1.6		
September Consensus	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na		na	na	na		na		
Number of Forecasts Changed From A Month Ago:																																					
Down	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na		na	na	na		na		
Same	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na		na	na	na		na		
Up	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na		na	na	na		na		
Diffusion Index	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na		na	na	na		na		

International Interest Rate And Foreign Exchange Rate Forecasts

Blue Chip Forecasters	Fed Fund Target Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.13	0.13	--
BMO Capital Markets	0.13	0.13	0.13
IHSMarkit	--	--	--
ING Financial Markets	0.13	0.13	0.13
Mizuho Research Institute	--	--	--
Moody's Analytics	0.13	0.13	0.13
Moody's Capital Markets	0.13	0.13	0.13
Northern Trust	0.08	0.08	0.08
Oxford Economics	0.13	0.13	0.13
S&P Global	0.12	0.12	0.12
Scotiabank	0.13	0.13	0.13
TS Lombard	0.13	0.13	0.13
Wells Fargo	0.13	0.13	0.13
October Consensus	0.12	0.12	0.12
High	0.13	0.13	0.13
Low	0.08	0.08	0.08
Last Months Avg.	0.14	0.14	0.14

Blue Chip Forecasters	Policy-Rate Balance Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	-0.10	-0.10	--
BMO Capital Markets	-0.05	-0.05	-0.05
IHSMarkit	--	--	--
ING Financial Markets	-0.10	-0.10	-0.10
Mizuho Research Institute	-0.10	-0.10	-0.10
Moody's Analytics	-0.10	-0.10	-0.10
Moody's Capital Markets	-0.10	-0.10	-0.10
Northern Trust	-0.10	-0.10	-0.10
Oxford Economics	-0.05	-0.05	-0.05
S&P Global	-0.05	-0.05	-0.05
Scotiabank	-0.10	-0.10	-0.10
TS Lombard	-0.06	-0.06	-0.06
Wells Fargo	-0.10	-0.10	-0.10
October Consensus	-0.08	-0.08	-0.08
High	-0.05	-0.05	-0.05
Low	-0.10	-0.10	-0.10
Last Months Avg.	-0.08	-0.08	-0.08

Blue Chip Forecasters	Official Bank Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.10	0.10	--
BMO Capital Markets	0.10	0.10	0.10
IHSMarkit	--	--	--
ING Financial Markets	0.10	0.10	0.10
Moody's Analytics	0.10	0.10	0.10
Moody's Capital Markets	0.10	0.10	0.10
Northern Trust	0.10	0.10	0.10
Oxford Economics	0.10	0.10	0.10
S&P Global	0.10	0.10	0.10
Scotiabank	0.10	0.10	0.10
TS Lombard	0.10	0.10	0.10
Wells Fargo	0.10	0.10	0.10
October Consensus	0.10	0.10	0.10
High	0.10	0.10	0.10
Low	0.10	0.10	0.10
Last Months Avg.	0.10	0.10	0.10

Blue Chip Forecasters	SNB Policy Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	-0.75	-0.75	--
IHSMarkit	--	--	--
ING Financial Markets	-0.75	-0.75	-0.75
Moody's Analytics	-0.75	-0.75	-0.75
Moody's Capital Markets	-0.75	-0.75	-0.75
Northern Trust	-0.75	-0.75	-0.75
Oxford Economics	-0.75	-0.75	-0.75
S&P Global	-0.75	-0.75	-0.75
Scotiabank	--	--	--
TS Lombard	-0.75	-0.75	-0.75
Wells Fargo	--	--	--
October Consensus	-0.75	-0.75	-0.75
High	-0.75	-0.75	-0.75
Low	-0.75	-0.75	-0.75
Last Months Avg.	-0.75	-0.75	-0.75

Blue Chip Forecasters	O/N MMkt Financing Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.25	0.25	--
BMO Capital Markets	0.25	0.25	0.25
IHSMarkit	--	--	--
ING Financial Markets	0.25	0.25	0.25
Moody's Analytics	0.25	0.25	0.25
Moody's Capital Markets	0.25	0.25	0.25
Northern Trust	0.25	0.25	0.25
Oxford Economics	0.25	0.25	0.25
S&P Global	0.25	0.25	0.25
Scotiabank	0.25	0.25	0.25
TS Lombard	0.25	0.25	0.25
Wells Fargo	0.25	0.25	0.25
October Consensus	0.25	0.25	0.25
High	0.25	0.25	0.25
Low	0.25	0.25	0.25
Last Months Avg.	0.25	0.25	0.25

United States			
10 Yr. Gov't Bond Yield %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
0.80	0.85	--	
0.75	0.80	0.95	
0.72	0.77	0.93	
0.75	1.00	1.00	
0.70	0.75	0.85	
0.69	0.77	1.14	
0.70	0.78	0.99	
0.70	0.70	0.90	
0.83	0.98	1.27	
0.80	0.93	1.32	
0.70	0.85	1.30	
0.45	0.55	1.00	
0.85	1.00	1.20	
0.73	0.83	1.07	
0.85	1.00	1.32	
0.45	0.55	0.85	
0.70	0.78	0.99	

Japan			
10 Yr. Gov't Bond Yield %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
0.05	0.05	--	
-0.05	-0.05	0.00	
--	--	--	
0.00	0.00	0.00	
0.00	0.00	0.00	
-0.19	-0.20	-0.15	
0.02	0.02	0.03	
-0.05	-0.05	-0.10	
0.00	0.00	0.00	
0.01	-0.01	0.01	
--	--	--	
0.00	0.00	0.00	
0.10	0.10	0.15	
-0.19	-0.20	-0.15	
-0.02	-0.02	-0.02	

United Kingdom			
10 Yr. Gilt Yields %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
0.20	0.25	--	
0.25	0.30	0.40	
--	--	--	
0.30	0.40	0.60	
0.28	0.31	0.45	
0.21	0.23	0.30	
0.20	0.30	0.40	
0.29	0.29	0.36	
0.37	0.40	0.46	
--	--	--	
0.19	0.25	0.30	
0.40	0.50	0.60	
0.27	0.32	0.43	
0.40	0.50	0.60	
0.19	0.23	0.30	
0.22	0.29	0.42	

Switzerland			
10 Yr. Gov't Bond Yield %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
--	--	--	
--	--	--	
-0.40	-0.30	-0.30	
-0.84	-0.99	-1.09	
-0.50	-0.45	-0.35	
-0.50	-0.50	-0.50	
-0.48	-0.47	-0.40	
-0.44	-0.40	-0.39	
--	--	--	
-0.50	-0.50	-0.50	
--	--	--	
-0.52	-0.52	-0.50	
-0.40	-0.30	-0.30	
-0.84	-0.99	-1.09	
-0.52	-0.53	-0.52	

Canada			
10 Yr. Gov't Bond Yield %			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
--	--	--	
0.65	0.70	0.85	
--	--	--	
0.75	1.00	1.00	
0.62	0.75	1.09	
0.59	0.64	0.74	
0.50	0.60	0.70	
0.79	0.95	1.29	
0.84	1.11	1.38	
0.60	0.75	1.20	
0.53	0.43	0.50	
0.80	0.90	1.05	
0.67	0.78	0.98	
0.84	1.11	1.38	
0.50	0.43	0.50	
0.61	0.73	0.94	

Fed's AFE \$ Index			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
--	--	--	
105.5	105.2	104.6	
--	--	--	
102.1	101.6	99.6	
--	--	--	
106.5	106.7	106.3	
106.0	104.0	101.0	
107.0	107.5	107.7	
--	--	--	
--	--	--	
115.0	118.0	110.0	
104.8	103.8	102.5	
106.7	106.7	104.5	
115.0	118.0	110.0	
102.1	101.6	99.6	
107.5	106.7	106.1	

Yen per US\$			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
103.0	104.0	--	
105.0	106.0	107.0	
105.9	105.7	105.1	
102.0	102.0	102.0	
107.0	107.0	108.0	
107.3	107.0	106.6	
106.7	107.0	107.2	
106.0	104.0	102.0	
106.0	106.0	106.0	
105.0	104.8	104.0	
105.0	104.0	102.0	
106.0	103.0	100.0	
105.5	106.0	108.0	
105.4	105.1	104.8	
107.3	107.0	108.0	
102.0	102.0	100.0	
106.7	106.3	106.4	

US\$ per Pound Sterling			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
1.30	1.30	--	
1.29	1.30	1.32	
1.24	1.28	1.29	
1.33	1.33	1.40	
1.35	1.38	1.61	
1.28	1.27	1.27	
1.26	1.27	1.29	
1.32	1.32	1.33	
1.27	1.25	1.31	
1.29	1.30	1.32	
1.25	1.20	1.24	
1.28	1.29	1.31	
1.29	1.29	1.34	
1.35	1.38	1.61	
1.24	1.20	1.24	
1.31	1.31	1.33	

CHF per US\$			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
0.90	0.92	--	
0.89	0.91	0.93	
0.90	0.90	0.87	
0.88	0.87	0.81	
0.93	0.93	0.93	
0.93	0.90	0.89	
0.92	0.93	0.94	
0.91	0.91	0.93	
0.92	0.91	0.91	
0.97	0.97	0.97	
0.91	0.91	0.91	
0.91	0.91	0.91	
0.97	0.97	0.97	
0.88	0.87	0.81	
0.92	0.91	0.91	

C\$ per US\$			
In 3 Mo.	In 6 Mo.	In 12 Mo.	
1.31	1.30	--	
1.32	1.32	1.31	
1.33	1.32	1.30	
1.28	1.26	1.25	
1.33	1.35	1.32	
1.34	1.33	1.32	
1.34	1.31	1.29	
1.37	1.39	1.39	
1.35	1.38	1.39	
1.32	1.30	1.28	
1.38	1.38	1.38	
1.30	1.28	1.25	
1.33	1.33	1.32	
1.38	1.39	1.39	
1.28	1.26	1.25	
1.34	1.33	1.32	

International Interest Rate And Foreign Exchange Rate Forecasts

Blue Chip Forecasters	Official Cash Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	0.25	0.25	--
IHSMarkit	--	--	--
ING Financial Markets	0.25	0.25	0.25
Moody's Analytics	0.25	0.25	0.25
Moody's Capital Markets	0.25	0.25	0.25
Northern Trust	0.25	0.25	0.25
Oxford Economics	0.14	0.14	0.18
S&P Global	0.25	0.25	0.25
Scotiabank	0.25	0.25	0.25
TS Lombard	0.25	0.25	0.25
Wells Fargo	--	--	--
October Consensus	0.24	0.24	0.24
High	0.25	0.25	0.25
Low	0.14	0.14	0.18
Last Months Avg.	0.24	0.24	0.24

Australia			
10 Yr. Gov't Bond Yield %			
	In 3 Mo.	In 6 Mo.	In 12 Mo.
--	--	--	--
--	--	--	--
0.90	0.90	1.10	1.10
0.83	0.86	1.10	1.10
0.83	0.87	0.92	0.92
0.80	0.90	1.00	1.00
1.01	1.02	1.03	1.03
1.07	1.11	0.92	0.92
--	--	--	--
0.90	0.80	0.70	0.70
--	--	--	--
0.91	0.92	0.97	0.97
1.07	1.11	1.10	1.10
0.80	0.80	0.70	0.70
0.86	0.87	0.94	0.94

US\$ per A\$			
	In 3 Mo.	In 6 Mo.	In 12 Mo.
0.72	0.71	--	--
0.72	0.71	0.69	0.69
0.73	0.75	0.74	0.74
0.68	0.68	0.71	0.71
0.70	0.71	0.72	0.72
0.70	0.74	0.76	0.76
0.74	0.73	0.73	0.73
0.72	0.72	0.72	0.72
0.71	0.73	0.75	0.75
0.66	0.66	0.66	0.66
0.75	0.77	0.80	0.80
0.71	0.72	0.73	0.73
0.75	0.77	0.80	0.80
0.66	0.66	0.66	0.66
0.70	0.71	0.73	0.73

Blue Chip Forecasters	Main Refinancing Rate		
	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	--	--	--
BMO Capital Markets	0.00	0.00	0.00
IHSMarkit	--	--	--
ING Financial Markets	0.00	0.00	0.00
Moody's Analytics	0.00	0.00	0.00
Moody's Capital Markets	0.00	0.00	0.00
Northern Trust	0.00	0.00	0.00
Oxford Economics	0.00	0.00	0.00
S&P Global	0.00	0.00	0.00
Scotiabank	0.00	0.00	0.00
TS Lombard	0.00	0.00	0.00
Wells Fargo	0.00	0.00	0.00
October Consensus	0.00	0.00	0.00
High	0.00	0.00	0.00
Low	0.00	0.00	0.00
Last Months Avg.	0.00	0.00	0.00

Euro area

US\$ per Euro			
	In 3 Mo.	In 6 Mo.	In 12 Mo.
1.18	1.16	--	--
1.20	1.21	1.22	1.22
1.22	1.21	1.18	1.18
1.20	1.20	1.23	1.23
1.22	1.23	1.32	1.32
1.16	1.16	1.15	1.15
1.16	1.18	1.23	1.23
1.18	1.18	1.19	1.19
1.19	1.20	1.20	1.20
1.18	1.20	1.21	1.21
1.15	1.12	1.20	1.20
1.20	1.21	1.23	1.23
1.19	1.19	1.21	1.21
1.22	1.23	1.32	1.32
1.15	1.12	1.15	1.15
1.19	1.20	1.21	1.21

Blue Chip Forecasters	10 Yr. Gov't Bond Yields %											
	Germany			France			Italy			Spain		
	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.	In 3 Mo.	In 6 Mo.	In 12 Mo.
Barclays	-0.35	-0.35	--	--	--	--	--	--	--	--	--	--
BMO Capital Markets	-0.40	-0.35	-0.20	--	--	--	--	--	--	--	--	--
ING Financial Markets	-0.30	-0.25	-0.20	-0.05	0.00	0.10	1.00	1.00	1.30	0.45	0.45	0.60
Mizuho Research Institute	-0.40	-0.35	-0.35	--	--	--	--	--	--	--	--	--
Moody's Analytics	-0.37	-0.37	-0.26	-0.08	-0.09	0.00	1.15	1.74	2.24	0.19	0.29	0.78
Moody's Capital Markets	-0.50	-0.45	-0.42	-0.20	-0.20	-0.10	1.00	1.05	1.10	0.30	0.40	0.51
Northern Trust	-0.50	-0.40	-0.40	-0.15	-0.10	0.00	1.00	1.10	1.20	0.30	0.40	0.50
Oxford Economics	-0.44	-0.43	-0.35	-0.13	-0.11	-0.02	1.10	1.13	1.39	0.43	0.47	0.60
S&P Global	-0.53	-0.49	-0.44	-0.24	-0.20	-0.13	1.04	1.07	1.11	0.31	0.34	0.39
TS Lombard	-0.50	-0.45	0.00	0.00	0.05	0.50	1.50	1.55	2.00	0.60	0.65	1.10
Wells Fargo	-0.25	-0.15	0.05	--	--	--	--	--	--	--	--	--
October Consensus	-0.41	-0.37	-0.26	-0.12	-0.09	0.05	1.11	1.23	1.48	0.37	0.43	0.64
High	-0.25	-0.15	0.05	0.00	0.05	0.50	1.50	1.74	2.24	0.60	0.65	1.10
Low	-0.53	-0.49	-0.44	-0.24	-0.20	-0.13	1.00	1.00	1.10	0.19	0.29	0.39
Last Months Avg.	-0.43	-0.38	-0.34	-0.12	-0.11	-0.05	1.15	1.21	1.41	0.41	0.46	0.55

	Consensus Forecasts			
	10-year Bond Yields vs U.S. Yield			
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-0.68	-0.74	-0.84	-1.08
United Kingdom	-0.48	-0.46	-0.50	-0.64
Switzerland	-1.18	-1.25	-1.34	-1.58
Canada	-0.12	-0.06	-0.04	-0.09
Australia	0.24	0.18	0.10	-0.10
Germany	-1.18	-1.14	-1.19	-1.33
France	-0.92	-0.85	-0.92	-1.02
Italy	0.26	0.38	0.41	0.41
Spain	-0.44	-0.36	-0.40	-0.43

	Consensus Forecasts			
	Policy Rates vs U.S. Target Rate			
	Current	In 3 Mo.	In 6 Mo.	In 12 Mo.
Japan	-0.23	-0.21	-0.04	-0.21
United Kingdom	-0.03	-0.02	-0.02	-0.02
Switzerland	-0.88	-0.87	-0.87	-0.87
Canada	0.13	0.13	0.13	0.13
Australia	0.13	0.11	0.11	0.12
Euro area	-0.13	-0.12	-0.12	-0.12

Viewpoints:

**A Sampling of Views on the Economy, Financial Markets and Government Policy
Excerpted from Recent Reports Issued by our Blue Chip Panel Members and Others**

A Recipe for Higher Inflation?

Executive Summary. In response to the economic fallout from COVID, the Fed cut rates and ramped up asset purchases, which expanded the monetary base like it did after the Great Recession. However, thus far the fiscal response has overwhelmed compared to 2008-2009, as the CARES Act put trillions of dollars directly into the hands of households and businesses, and the money supply has skyrocketed as a result. While a large portion of that money continues to sit idly, another sizable round of fiscal stimulus followed by a faster-than-expected end to the pandemic, should it occur, could create the dry tinder and spark needed for a jump in inflation. The pandemic has contributed to higher inflation expectations—an underappreciated driver of inflation compared to the ink spilled over slack in the economy. The belief among businesses and households that inflation will be higher has the ability to become self-fulfilling. At the same time, the FOMC has indicated it will be slower to respond to higher inflation under its new policy framework, which—as the FOMC intends—could cement higher inflation expectations. This mix of policy and public health outcomes could just be the recipe that would finally yield materially higher inflation. But, while we see the potential for much higher inflation to take hold, the prospect still appears to be a tail risk. It would likely take the confluence of the dam opening on fiscal stimulus, medical breakthroughs, higher inflation expectations and the FOMC’s new framework actually being tested to usher inflation out of its sub-2% era.

Is COVID Just the Thing to Whip Up Inflation? The COVID-19 pandemic has generated a unique shock to the economy, disrupting both supply and demand. Most supply constraints have proved relatively short as economies have reopened and businesses have adjusted to better suit life under COVID. The depressing effect on demand, however, has lingered, leading most to consider the pandemic to be a disinflationary event. For example, since last December, the FOMC reduced its projections for PCE inflation, while the Blue Chip consensus for 2020 CPI inflation sank from 2.1% to 1.1%. Prices have rebounded strongly in recent months, but the pickup has largely been characterized as payback for the unprecedented decline in prices for things like hotels, airfare and apparel, rather than as a sign that inflation is on the cusp of taking off.

Forecasters, including ourselves, are hesitant about calling for a breakout of inflation. Expectations that 2% inflation is just a few years away proved wrong time and again over the record-long expansion of the past decade. Despite quantitative easing, late-cycle stimulus, a trade war, and the lowest unemployment rate in half a century, core PCE inflation only briefly brushed the Fed’s target during the past expansion. Staring at a sizeable amount of slack in the economy and no end in sight to the pandemic, it is therefore hard to see inflation finally taking off. But, that assumes that the inflation backdrop is the same today as it was after the past crisis. The COVID economy has been wholly unique across a number of dimensions, whether in the composition of job losses and spending, or the size and speed of policy support. Could the current inflation environment be different enough to where we finally have a recipe for higher inflation?

Step 1: Scale Up the Ingredients. Milton Friedman famously claimed that “inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output.” When think-

ing about the prospects for higher inflation, it may make the most sense to start with the money supply. More often than not, this is where financial market participants’ concerns about higher inflation often begin. Are the Federal Reserve and Congress “printing too much money” such that too much money is chasing too few goods? We focus on two widely followed measures of money, specifically M2 and the monetary base (MB). M2 consists of currency held by the public, checking accounts, savings accounts, small-denomination time deposits and retail money market mutual fund shares. The MB consists of currency in circulation and reserve balances held by banks at the Federal Reserve. The MB is sometimes called “high-powered money” because it is the base off of which banks can make loans and expand the money supply. Since the banking system operates off of a fractional reserve system, banks can use their cash and reserve balances to make loans that, among other things, increase the money supply.

The MB exploded during the Great Recession as the Federal Reserve pumped liquidity into the financial system. This caused some analysts to worry that the Federal Reserve’s actions would lead to undesirably high inflation. With so much high-powered money sloshing around the system, the potential existed for rapid money creation and thus high inflation lurked ominously. But despite the explosion in the MB, this did not translate into robust growth in M2. The money supply as measured by M2 decelerated sharply in 2009-2010, re-accelerated the following year, and then resumed a fairly normal pace of growth. There are numerous reasons M2 growth lagged MB growth in the last cycle, such as the Fed’s introduction of interest on excess reserves held by banks, the sluggish economic recovery and changes to bank regulations. But at a more fundamental level, the explosion in the MB simply did not lead to surging loan growth. In fact, U.S. households spent much of the 2010s deleveraging, which weighed on loan creation, and, by extension, M2 growth.

More recently, the Federal Reserve has once again embarked upon significant liquidity injections and sizable asset purchases. Yet so far, the growth in the monetary base is slower than what occurred from 2008-2009, although some of this is due to the low base in 2007. In sharp contrast, however, M2 money growth has exploded in 2020, up 23.2% year-over-year in August and well above anything that occurred during or after the financial crisis. This growth in M2 has occurred even though households deleveraged significantly in Q2-2020, with the household debt-to-disposable income ratio hitting levels not seen since the mid-1990s. Why is this happening, and should we be worried? The key difference lies in the fiscal response during the pandemic compared to the Great Recession. Congress’ designed numerous fiscal measures to put cash directly into the hands of households, leading to robust personal income growth and much higher M2. Yet even though M2 has exploded, inflation as measured by the PCE deflator was just 1.0% in July. If there is weak inflation, a contracting economy and exploding money growth, where has all that money gone? In layman’s terms, it is just sitting idly. More formally, the velocity of money, or the frequency with which a dollar is used to purchase goods and services over a period of time, has collapsed. The drop in the velocity of money follows both a longer-term decline as well as behavioral and policy changes that have kept some aspects of economic life in America muted. But what if circumstances were to change, and the velocity of money were to reverse course and/or money growth

were to be sustained at these record levels? Imagine the following: over the next several months, the economy continues to improve faster than expected, as has been the case over the past few months. Congress manages to thread the needle on a sizable (>\$1.25 trillion) fiscal stimulus package, and shortly thereafter an unexpected medical breakthrough helps life return to “normal” faster than expected. Under this scenario, diminished labor market slack, a return to “normal” life, highly accommodative monetary policy and rapid money growth could generate a jump in inflation as the dry tinder is lit. And if the acceleration in prices was fast enough, could it shake inflation expectations out of their long slumber, making the pickup more than just a flash in the pan?

Step 2: Read the Recipe Beforehand, Since Expectations Matter. One element too frequently glossed over when discussing inflation dynamics is the role of expectations. Excess slack in the economy gets much of the attention but is insufficient in explaining inflation and has become less important in recent decades (the so-called flattening of the Phillips Curve). Instead, inflation expectations have taken on greater importance and bear significantly more weight in driving actual inflation. Expectations of future inflation influence businesses’ pricing decisions as well as workers’ wage negotiations.

Inflation expectations are informed by the price experiences of households and businesses. Weak inflation helped entrench low expectations in recent years even as the jobs market was tight. But the pandemic has reshaped what consumers buy and therefore the prices they see in everyday life. Prices have cratered most for items bought less regularly these days, like gasoline, plane tickets and hotels. Meanwhile, inflation is picking up for things consumers are purchasing in greater quantity and greater frequency. For example, households are buying more groceries as they eat out less, and grocery prices are up 8.2% annualized since February. The frequency of grocery buys, as compared to say, a new car or TV, makes food prices particularly influential in shaping inflation expectations. The pandemic shopping basket may therefore go a long way in explaining why inflation expectations have actually moved higher this year despite official measures of inflation slowing. What’s more, consumers don’t see a pickup in inflation as temporary. Expectations for inflation 5-10 years out have broken out of a multi-year slump. The belief that inflation is set to run higher from here could become self-fulfilling and make what would otherwise be a temporary increase in inflation more durable.

Step 3: Increase the Cook Time. What would otherwise be viewed as a temporary spike in inflation may also turn out to be longer lasting thanks to the Fed’s new policy strategy. The potential take off of inflation comes just as the Fed has prepared to let it fly (at least more so than it has in the past). Under its new Longer-Run Goals and Monetary Policy Strategy, the FOMC has stated its aim for inflation to average 2% over time. In other words, after periods of sub-2% inflation—like the past decade—the Fed will now allow inflation to run above 2% for a time. Any signs of 2%+ inflation on the horizon won’t be stomped out with the speed of prior eras.

This contrasts with the previous cycle, where policymakers felt the need to repeatedly reiterate that new policy tools like QE would not lead to high inflation. In hindsight, the need to reassure everyone that these tools would not spark high inflation may have dampened some of the upward pressure on inflation expectations that emanated from this accommodation. Markets certainly seem to perceive the Fed as less hawkish at the beginning of this recovery compared to the previous one. The 5Y Overnight Index Swap rate, a proxy of market expectations for the average fed funds rate, is just 0.14% at present. On September 25, 2009 the rate stood at 2.47%, a sign that

the market expected much tighter policy in the early 2010s than proved to be the case. The current expectation for easy policy in the years ahead comes despite lower unemployment (8.4% today compared to 9.8% in September 2009) and higher inflation (1.3% core PCE inflation today versus 1.0% core PCE inflation in September 2009) than was the case in the immediate aftermath of the Great Recession. On its own, the delayed effort to combat rising inflation has the potential to alter inflation expectations. Consistent monetary policy has been key to keeping inflation expectations well anchored. Looking ahead, businesses and consumers may be less inclined to view a period of higher inflation as temporary since it remains to be seen how the FOMC would respond. Thus the Fed’s new policy has the potential to create a feedback loop that results in both higher inflation and inflation expectations that support a sustained upward shift in inflation in the post-COVID environment.

Conclusion: Sticking with the Old Recipe, For Now at Least. The mix of robust fiscal stimulus, higher inflation expectations and a more relaxed Fed may be just the recipe for a new era of higher inflation. Even as we are cognizant not to let the recent past unduly affect our outlook, however, our base case remains that inflation will struggle to reach 2% the next couple of years, let alone run higher. For starters, inflation tends to move only slowly around its underlying trend, making recent inflation a good predictor of future inflation. Meanwhile, the fiscal support that has underpinned the impressive rebound in spending has begun to peter out. Household savings remain historically high, but it will likely be drawn down as the pandemic drags on and Congress seems further than ever from additional fiscal stimulus.

In addition, while the Phillips Curve has weakened, it is not completely dead. The labor market is unlikely to make a full recovery before the end of 2022, in our view. With fading fiscal stimulus and ongoing weakness in the labor market, the velocity of money will likely remain low and M2 growth will likely slow significantly. Indeed, the month-over-month growth in M2 in August was the slowest it has been since the pandemic began. That may not matter much if inflation expectations are higher. But even with the recent pop, long-term expectations remain historically low and show signs of plateauing. The easing of food-related bottlenecks in particular point to expectations drifting lower in the near term. At the same time, many of the disinflationary forces that prevailed over the past decade have not fallen by the wayside. Technology is still reducing the cost to produce goods and provide services, while also allowing consumers to more easily compare prices. The battle for market share in an age of “network effects” is also likely to continue to hold down prices in some industries. Global growth is expected to remain rather run-of-the-mill, which unlike the 2000s, does not lend well to a commodities boom. One exception to these ongoing disinflationary pressures may be a reversal of globalization, but with services accounting for two-thirds of spending, a retreat would need to be substantial to tip the scales. The Fed’s new policy strategy adds an interesting element to the inflation outlook. But the Fed saying it will allow inflation to run above 2% for some time is not the same as getting it there. Besides jawboning inflation expectations higher with the announcement of its framework, the Fed has not outlined any new tools to spark inflation. Although we believe the FOMC may up its asset purchases to support the economy as soon as December, further monetary accommodation likely would have a more discernable effect on asset prices than consumer prices. As a result, we remain cautious in our outlook for inflation, but can see a situation in which the Fed may be much closer to testing its new tolerance for inflation than many realize.

Sarah House & Michael Pugliese (Wells Fargo Securities)

Special Questions:

1. When do you think the Fed will raise the Federal Funds rate?
 2021 3% 2022 11% 2023 19% 2024 33% 2025 14% 2026 8% Later 11%
2. How large do you estimate the Fed's balance sheet at year-end 2020 \$7.9 tril 2021 \$8.8 tril 2022 \$9.2 tril
3. a. Do your current GDP and unemployment forecasts for 2020 and 2021 assume additional fiscal support beyond that provided in the CARES Act? Yes 68% No 32%
- b. If so, what is your baseline assumption for the total amount of additional fiscal support (regardless of the composition)? \$1.4 tril
- c. If no additional fiscal support is forthcoming, what would be the change in your baseline forecast for real GDP growth in:
 Q4 2020 -1.1 ppt saar Q4 2021/Q4 2020 -0.6 ppt
- d. If no additional fiscal support is forthcoming, what would be the change in your baseline forecast for the unemployment rate in:
 Q4 2020 0.5% Q4 2021 0.7%
- e. How much more COVID-related federal aid is needed for meaningful support for the economy? \$2.0 tril
4. How does the expiration of the extra \$600 per week in unemployment benefits affect your GDP forecast in:
 Q3 2020 -0.5 ppt Q4 2020 -1.0 ppt 2021 -0.6 ppt
5. What might the probability be of a double dip in the following economies?
 US 29%
 UK 39%
 Euro area 34%
6. In what quarter will GDP surpass its real levels in Q4 2019 for the following economies?
- | | <u>Q1-2021</u> | <u>Q2-2021</u> | <u>Q3-2021</u> | <u>Q4-2021</u> | <u>Q1-2022</u> | <u>Q2-2022</u> | <u>Q3-2022</u> | <u>Q4-2022</u> | <u>Q1-2023</u> | <u>Q2-2023</u> | <u>Later</u> |
|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|
| U.S. | 3% | 6% | 3% | 29% | 18% | 15% | 12% | 6% | 3% | 0% | 6% |
| Euro area | 0% | 0% | 14% | 0% | 0% | 29% | 36% | 14% | 0% | 7% | 0% |
| U.K. | 0% | 0% | 7% | 7% | 7% | 13% | 20% | 13% | 27% | 0% | 7% |
| Japan | 0% | 0% | 13% | 0% | 13% | 20% | 13% | 7% | 7% | 0% | 27% |
7. a. What probability do you attach to a hard Brexit outcome for the UK economy? 44%
- b. If there were a hard Brexit what impact would this have on your 2021 GDP forecast for the UK?
 Raised by more than half a % point 0%
 Raised by between 0 and half a % point 6%
 No change 0%
 Lowered by more than half a % point 76%
 Lowered by between 0 and half a % point 18%
- c. If there were a hard Brexit what impact would this have on your 2021 GDP forecast for the Euro area?
 Raised by more than half a % point 0%
 Raised by between 0 and half a % point 6%
 No change 12%
 Lowered by more than half a % point 29%
 Lowered by between 0 and half a % point 53%
8. Would the outcome of the Presidential election have a noticeable impact on the U.S. economy in 2021?
 Yes 60% No 40%

2020 Historical Data

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	0.8	-0.4	-8.2	-14.7	18.3	8.6	0.9	0.6	....	....	....	....
Auto & Light Truck Sales (b)	16.87	16.77	11.42	8.74	12.14	13.02	14.63	15.19	....	....	....	....
Personal Income (a, current \$)	0.9	0.8	-1.8	12.2	-4.2	-1.0	0.4	....	....	....	....	....
Personal Consumption (a, current \$)	0.6	0.0	-6.7	-12.9	8.6	6.2	1.9	....	....	....	....	....
Consumer Credit (e)	3.0	5.8	-5.8	-18.8	-4.2	3.3	3.6	....	....	....	....	....
Consumer Sentiment (U. of Mich.)	99.8	101.0	89.1	71.8	72.3	78.1	72.5	74.1	78.9	....	....	....
Household Employment (c)	-89	45	-2987	-22369	3839	4940	1350	3756	....	....	....	....
Nonfarm Payroll Employment (c)	214	251	-1373	-20787	2725	4781	1734	1371	....	....	....	....
Unemployment Rate (%)	3.6	3.5	4.4	14.7	13.3	11.1	10.2	8.4	....	....	....	....
Average Hourly Earnings (All, cur. \$)	28.43	28.52	28.69	30.03	29.70	29.32	29.36	29.47	....	....	....	....
Average Workweek (All, hrs.)	34.3	34.4	34.1	34.2	34.7	34.6	34.5	34.6	....	....	....	....
Industrial Production (d)	-0.8	-0.2	-4.7	-16.5	-15.9	-10.7	-7.4	-7.7	....	....	....	....
Capacity Utilization (%)	76.9	76.9	73.6	64.1	64.7	68.7	71.1	71.4	....	....	....	....
ISM Manufacturing Index (g)	50.9	50.1	49.1	41.5	43.1	52.6	54.2	56.0	....	....	....	....
ISM Nonmanufacturing Index (g)	55.5	57.3	52.5	41.8	45.4	57.1	58.1	56.9	....	....	....	....
Housing Starts (b)	1.617	1.567	1.269	0.934	1.038	1.265	1.492	1.416	....	....	....	....
Housing Permits (b)	1.536	1.438	1.356	1.066	1.216	1.258	1.483	1.476	....	....	....	....
New Home Sales (1-family) (h)	774	716	612	570	698	841	965	1011	....	....	....	....
Construction Expenditures (a)	1.9	0.2	-0.3	-3.4	-1.3	-0.5	0.1	....	....	....	....	....
Consumer Price Index (nsa, d)	2.5	2.3	1.5	0.3	0.1	0.6	1.0	1.3	....	....	....	....
CPI ex. Food and Energy (nsa, d)	2.3	2.4	2.1	1.4	1.2	1.2	1.6	1.7	....	....	....	....
Producer Price Index (nsa, d)	2.0	1.1	0.3	-1.5	-0.8	-0.8	-0.4	-0.2	....	....	....	....
Durable Goods Orders (a)	-0.2	2.0	-16.7	-18.3	15.0	7.7	11.7	0.4	....	....	....	....
Leading Economic Indicators (a)	0.5	-0.2	-7.4	-6.3	3.1	3.1	2.0	1.2	....	....	....	....
Balance of Trade & Services (f)	-43.4	-37.0	-46.1	-53.6	-57.9	-53.5	-63.6	....	....	....	....	....
Federal Funds Rate (%)	1.55	1.58	0.65	0.05	0.05	0.08	0.09	0.10	....	....	....	....
3-Mo. Treasury Bill Rate (%)	1.55	1.54	0.30	0.14	0.13	0.16	0.13	0.10	....	....	....	....
10-Year Treasury Note Yield (%)	1.76	1.50	0.87	0.66	0.67	0.73	0.62	0.65	....	....	....	....

2019 Historical Data

Monthly Indicator	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Retail and Food Service Sales (a)	1.5	-0.1	1.6	0.5	0.4	0.3	0.7	0.4	-0.3	0.5	0.0	0.1
Auto & Light Truck Sales (b)	16.77	16.60	17.30	16.59	17.31	17.21	16.97	17.07	17.08	16.76	16.97	16.81
Personal Income (a, current \$)	0.2	0.4	0.3	0.2	0.1	0.2	0.1	0.5	0.2	0.3	0.5	0.1
Personal Consumption (a, current \$)	0.7	0.1	0.9	0.5	0.3	0.4	0.4	0.3	0.2	0.4	0.2	0.3
Consumer Credit (e)	5.2	4.9	3.7	5.2	4.4	3.5	6.8	4.5	3.2	3.9	2.1	6.2
Consumer Sentiment (U. of Mich.)	91.2	93.8	98.4	97.2	100.0	98.2	98.4	89.8	93.2	95.5	96.8	99.3
Household Employment (h)	-198	239	-125	-45	148	304	198	549	403	246	-8	267
Nonfarm Payroll Employment (c)	269	1	147	210	85	182	194	207	208	185	261	184
Unemployment Rate (%)	4.0	3.8	3.8	3.6	3.6	3.7	3.7	3.7	3.5	3.6	3.5	3.5
Average Hourly Earnings (All, cur. \$)	27.58	27.69	27.76	27.81	27.87	27.96	28.05	28.16	28.16	28.24	28.34	28.37
Average Workweek (All, hrs.)	34.5	34.4	34.5	34.4	34.4	34.4	34.3	34.4	34.4	34.4	34.3	34.3
Industrial Production (d)	3.6	2.7	2.3	0.7	1.7	1.0	0.4	0.3	-0.2	-0.8	-0.4	-0.8
Capacity Utilization (%)	79.0	78.5	78.4	77.8	77.8	77.7	77.4	77.8	77.4	77.0	77.6	77.2
ISM Manufacturing Index (g)	55.5	54.1	54.6	53.4	52.3	51.6	51.3	48.8	48.2	48.5	48.1	47.8
ISM Nonmanufacturing Index (g)	56.0	58.5	56.3	55.7	56.3	55.4	54.8	56.0	53.5	54.4	53.9	54.9
Housing Starts (b)	1.272	1.137	1.203	1.267	1.268	1.235	1.212	1.377	1.274	1.340	1.371	1.587
Housing Permits (b)	1.316	1.305	1.327	1.330	1.338	1.273	1.366	1.471	1.437	1.503	1.510	1.457
New Home Sales (1-family) (h)	637	665	700	664	600	726	661	706	726	706	696	731
Construction Expenditures (a)	1.9	0.7	1.0	1.4	-0.2	0.1	0.9	0.9	1.0	-0.5	1.3	0.3
Consumer Price Index (nsa, d)	1.6	1.5	1.9	2.0	1.8	1.6	1.8	1.7	1.7	1.8	2.1	2.3
CPI ex. Food and Energy (nsa, d)	2.2	2.1	2.0	2.1	2.0	2.1	2.2	2.4	2.4	2.3	2.3	2.3
Producer Price Index (nsa, d)	1.9	1.9	2.0	2.4	2.1	1.6	1.6	1.9	1.5	1.0	1.0	1.4
Durable Goods Orders (a)	0.2	-3.3	4.0	-4.7	-1.5	0.1	2.5	0.5	-0.9	-0.1	-2.6	2.8
Leading Economic Indicators (a)	0.0	0.2	0.2	0.1	0.0	0.0	0.4	-0.2	-0.2	-0.2	0.2	-0.2
Balance of Trade & Services (f)	-49.0	-47.3	-48.9	-49.2	-51.3	-51.7	-51.0	-50.8	-47.8	-43.0	-41.1	-45.7
Federal Funds Rate (%)	2.40	2.40	2.41	2.42	2.39	2.38	2.40	2.13	2.04	1.83	1.55	1.55
3-Mo. Treasury Bill Rate (%)	2.42	2.44	2.45	2.43	2.40	2.22	2.15	1.99	1.93	1.68	1.57	1.57
10-Year Treasury Note Yield (%)	2.71	2.68	2.57	2.53	2.40	2.07	2.06	1.63	1.70	1.71	1.81	1.86

(a) month-over-month % change; (b) millions, saar; (c) month-over-month change, thousands; (d) year-over-year % change; (e) annualized % change; (f) \$ billions; (g) level; (h) thousands. Most series are subject to frequent government revisions. Use with care.

Calendar of Upcoming Economic Data Releases

Monday	Tuesday	Wednesday	Thursday	Friday
October 5 ISM Services PMI (Sep) IHS Markit Services PMI(Sep) NABE Outlook (Q3)	6 Intl Trade/Supplement (Aug) JOLTS (Aug) Public Debt (Sep)	7 Consumer Credit (Aug) Kansas City Fed Labor Market Conditions Indicators (Sep) Treasury Auction Allotments (Sep) EIA Crude Oil Stocks Mortgage Applications	8 Weekly Jobless Claims Weekly Money Supply	9 Wholesale Trade (Aug) Kansas City Financial Stress Index (Sep)
12 <i>Monthly Treasury (Sep) is expected the week of Oct 12</i>	13 CPI (Sep) Cleveland Fed MedianCPI(Sep) NFIB (Sep)	14 Producer Prices (Sep)	15 Import & Export Prices (Sep) Transportation Services Index (Aug) Philadelphia Fed Mfg Business Outlook Survey (Oct) Empire State Mfg Survey (Oct) EIA Crude Oil Stocks Mortgage Applications Weekly Jobless Claims Weekly Money Supply	16 Advance Retail Sales (Sep) Industrial Production (Sep) MTIS (Aug) Consumer Sentiment (Oct, Preliminary) Business Leaders Survey (Oct) TIC Data (Aug)
19 Home Builders (Oct)	20 New Residential Construction (Sep) Philadelphia Fed Nonmanufacturing Business Outlook Survey (Oct)	21 EIA Crude Oil Stocks Mortgage Applications	22 Existing Home Sales (Sep) Kansas City Fed Manufacturing Survey (Oct) Composite Indexes (Sep) Weekly Jobless Claims Weekly Money Supply	23 FRB Philadelphia Coincident Economic Activity Index (Sep) Alternate Measures of Labor Underutilization (Q3)
26 New Residential Sales (Sep) Final Building Permits (Sep) NABE Business Conditions Survey (Q3) Chicago Fed National Activity Index (Sep) Texas Mfg Outlook (Oct)	27 Adv Durable Goods (Sep) FHFA HPI (Aug) Case Shiller HPI (Aug) Consumer Confidence (Oct) Housing Vacancies (Q3) Richmond Fed Mfg & Service Sector Surveys (Oct) Texas Service Sector Outlook Survey (Oct)	28 Advance Trade & Inventories (Sep) Business Employment Dynamics (Q1) EIA Crude Oil Stocks Mortgage Applications	29 GDP (Q3, Advance) Weekly Jobless Claims Weekly Money Supply	30 Personal Income (Sep) Employment Cost Index (Q3) Consumer Sentiment (Oct, Final) Dallas Fed Trimmed-Mean PCE (Sep) Underlying NIPA Tables (Q3, Advance) Chicago PMI (Oct)
November 2 Construction (Sep) ISM Manufacturing (Oct) IHS Markit Mfg PMI (Oct)	3 Manufacturers' Shipments, Inventories & Orders (Sep)	4 ADP Employment Report (Oct) International Trade (Sep) ISM Services PMI (Oct) IHS Markit Services PMI(Oct) EIA Crude Oil Stocks Mortgage Applications	5 Productivity & Costs (Q3) FOMC Policy Rate Announcement (Nov) Public Debt (Oct) Challenger Employment Report (Oct) Weekly Jobless Claims Weekly Money Supply	6 Employment Situation (Oct) Wholesale Trade (Sep) Consumer Credit (Sep)
9 Treasury Auction Allotments (Oct) Senior Loan Officer Survey (Q4)	10 JOLTS (Sep) NFIB (Oct) Kansas City Financial Stress Index (Oct)	11	12 CPI (Oct) Transportation Services (Sep) Cleveland Fed Med CPI (Oct) Kansas City Fed Labor Market Conditions Indicators (Oct) EIA Crude Oil Stocks Mortgage Applications Weekly Jobless Claims Weekly Money Supply	13 Producer Prices (Oct) Consumer Sentiment (Nov, Preliminary)

BLUE CHIP FORECASTERS

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