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Yield Curve Control – A Further Corruption of Capitalism?

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I have been interested in exploring approaches that expand the space for targeting interest rates in a more continuous fashion as an extension of our conventional policy space and in a way that reinforces forward guidance on the policy rate. In particular, ***there may be advantages to an approach that caps interest rates on Treasury securities at the short-to-medium range of the maturity spectrum—yield curve caps*** [emphasis added]—*in tandem with forward guidance that conditions liftoff from the ELB on employment and inflation outcomes. To be specific, once the policy rate declines to the ELB, this approach would smoothly move to capping interest rates on the short-to-medium segment of the yield curve. The yield curve ceilings would transmit additional accommodation through the longer rates that are relevant for households and businesses in a manner that is more continuous than quantitative asset purchases.*

—Fed Governor Lael Brainard, November 2019

The probability of a second wave of the current coronavirus pandemic taking place in the coming autumn is certainly a risk that the general public, investors, and policymakers should be preparing for. A number of Asian countries have already experienced such mini-waves, and history shows that in the past—e.g., the flu pandemic of 1918—the second wave can turn out to be far deadlier than the first. Today, the likelihood of avoiding a second wave seems low, given the estimated low percentage of the population that has had the virus and the lack of a vaccine or usable antibody testing—it seems to be more a question of its severity. A major recurrence would pose an even greater challenge for the already struggling economies and for the policymakers with regard to how to address it. **In this *Economics Weekly*, we discuss a further measure that monetary policymakers are already discussing, whether or not there is a second wave—the capping of interest rates.**

"War"-Time Response

This is a war, and we need to win this war, and we need to spend what it takes to win the war.

—Treasury Secretary Steven Mnuchin

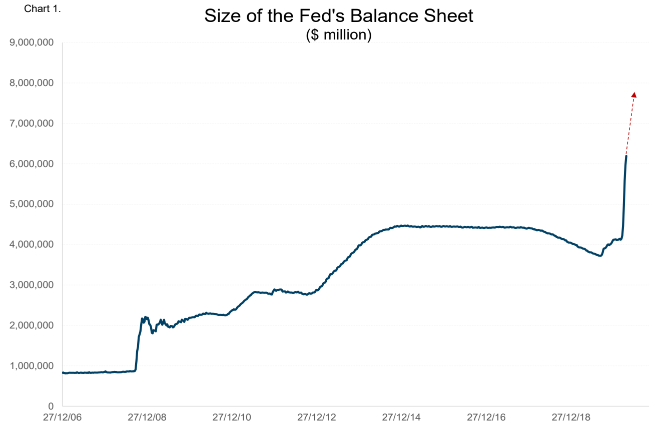
One of the many difficulties in dealing with this "invisible enemy" is just that, it's invisible. The fact that there is no tangible threat storming the barricades also makes it harder for some segments of the population to agree on the necessary policy response. The longer the shutdown continues, the more some are viewing the "carry on as normal" response as having been the best one under the circumstances. Unfortunately, we'll only know for sure with time.

Policymakers, however, have quite rightly been unified in treating this as a very real and very visible threat from the start and putting the economy on a warlike footing. As a result, policies that might not otherwise be tolerated during peacetime—specifically those that seemingly make a mockery of a capitalist system—easily pass the smell test today.

For monetary policymakers, this means purchasing/lending against distressed assets, corporate debt, ETFs, and more recently purchasing high-yield corporate bonds (something most FOMC members said was a clear no-go area when asked just weeks before).

How long this will last after the "war" is won is a key question. Given the difficulty the Fed has already had in trying to downsize its balance sheet, there isn't much room for optimism, particularly with a Fed balance sheet that is now expected to reach at least $8 trillion (chart 1).

Chart 1.



Source: Federal Reserve, William Blair Equity Research

One further step along this state capitalist road—and one that at least two members of the FOMC, Governor Lael Brainard and Vice Chair Richard Clarida, as well as former Fed Chairs Bernanke and Yellen have advocated as a possible policy option should one be needed—is the capping of interest rates, or what is being referred to as yield curve control (YCC).

While the goal of YCC is similar to that of quantitative easing (QE), rather than announcing the *quantity* of Treasurys the Fed intends to purchase and then hoping that it lowers interest rates by some unspecified amount, YCC targets a specific *price*/yield. The Fed will then purchase whatever amount of Treasurys may be needed to achieve that target interest rate.

The Fed's recent announcement for unlimited QE during the current crisis is another step toward YCC.

Why Yield Curve Control?

If interest rates are already low (i.e., at the effective lower bound) and are expected to stay low for a fairly long time—as is the case today, on the basis of the Fed's forward guidance already in place—what is the point in actually capping them?

There are two key reasons for pegging interest rates.

The first was highlighted by Fed Governor Lael Brainard (above), which is that YCC provides a double-lock, or a belt-and-braces approach, to reinforce forward guidance and QE.

Hence, in the event that there may be some upward pressure on interest rates as a result of increased Treasury issuance to "win the war," it gives the public a guaranty that the Fed will not allow benchmark interest rates to rise until it has reached its goals of maximum employment and 2% inflation.

If the public perceives this as credible, it should help to limit the expectations-dependent component of interest rates, limit spreads on other private sector debt instruments, and promote greater borrowing and spending, thereby boosting growth through the usual transmission channels into the real economy.

Furthermore, a number of Fed policymakers now believe that interest rates were increased too soon following the last financial crisis, and this would thus help prevent that mistake from reoccurring.

The second reason is to help limit the cost of debt to the Treasury through a policy that "must not be named"—financial repression.

With trillions of dollars currently being spent to fight the virus and its economic impact, both deficits and debt are set to soar.

As economist Carmen Reinhart has written about extensively in the years since the last financial crisis, there are effectively five ways to reduce a country's debt-to-GDP ratio: 1) economic growth; 2) fiscal adjustments, such as austerity, raising taxes, and cutting spending; 3) defaults and restructuring; 4) surprise bursts of inflation (reducing the real value of the debt); and 5) financial repression, which involves keeping interest rates lower than market forces might otherwise dictate and forcing lenders to lend at those rates. Various combinations of all of the above are often used, though options 4 and 5 are only viable for domestic currency debts.[1]

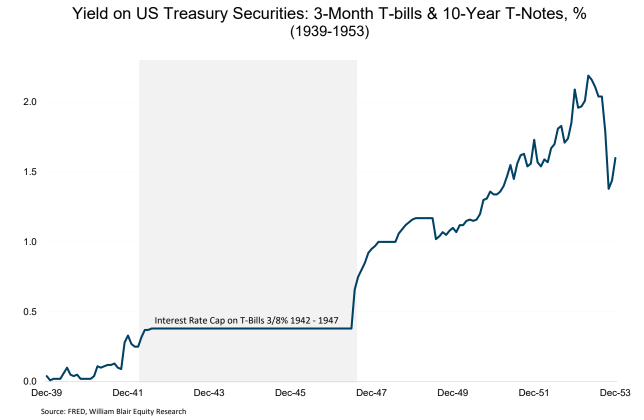
Lessons Learned From the Past

Japan has been conducting YCC/pegging interest rates since 2016. Its short-term interest rate has been set at -0.1%, while 10-year interest rates are targeted at 0%. The rest of the yield curve is then expected to fall in line.

The Bank of Japan has been quite successful at keeping rates at these levels, and has done so with fewer bond purchases than made under QE. By credibly standing by its target, the BoJ has been able to defend those targets with much fewer debt purchases. It has not, however, had that much success in achieving its inflation target, which currently sits at just 0.4%.

The United States famously had caps in place from April 1942 until 1947 on short-term interest rates and until March 1951 on interest rates for 25-year Treasurys. Three-month T-bill rates were given a hard peg at 0.375%, while rates further along the curve were more roughly set up to the 25-year T-Bond, which was given a 2.5% ceiling rate (chart 2). To a more limited extent, the United States also had caps on bank deposit rates from 1933 to 1986—Regulation Q.

Chart 2.

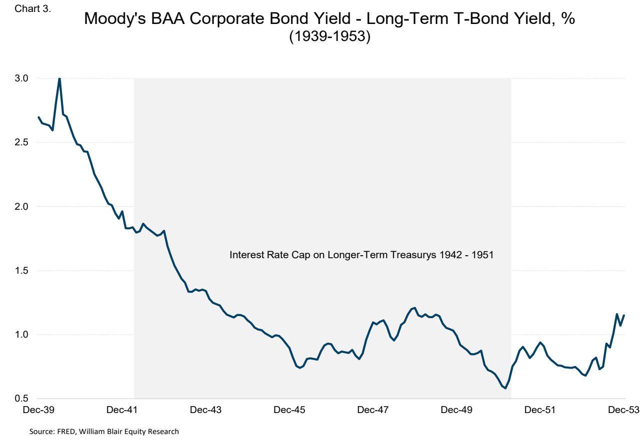


These caps, however, were primarily viewed as being for wartime financing rather than achieving monetary policy goals per se.

In the first few years these measures were largely considered a success. The long-term rate, for example, had a ceiling higher than rates that were prevailing in the market at the time for the first five years. This changed when inflation started to rise, increasing pressure on that ceiling, forcing more significant asset purchases by the Fed.[2]

They were also relatively successful in holding down corporate bond spreads, as shown in chart 3. Nevertheless, the postwar rise in inflation continued to put upward pressure on rates—as shown by the surge in short-term rates once the caps were lifted in 1947 (chart 2).

Chart 3.



As time progressed, this policy started to put the Fed (which wanted to control inflation) at odds with the Treasury (which was much more concerned about financing the debt than fighting inflation), setting them up for a very public battle—one that the Fed ultimately won with the Treasury Fed Accord of 1951.

A key lesson to be drawn from this is that if any controls are instituted, there necessarily needs to be a clear exit strategy in place.

It is notable that these interest rate caps did not result in a series of bank failures, as is often feared when any mention of YCC arises: "*These pronounced fluctuations in ex post real interest rates did not undermine the stability of financial institutions: there were only five bank suspensions between the end of 1945 and the middle of 1950*."[3] However, back then, the yield curve spread was set at roughly 200 basis points, a spread that would not be repeated today, given that a much flatter curve would be easier to control.

To the extent that the ceilings on rates were already above market-desired rates, the amount of Fed purchases and the adverse financial repression impact on the financial markets and their participants—specifically fixed income investments—would be relatively limited. As rates start to push against those ceilings and real rates turn more negative, the implications for fixed income investments are also negative, making them much less attractive assets relative to other less constrained asset classes, such as equities, commodities, and real estate.

Conclusion

The current war against the invisible enemy—the coronavirus—has once again forced the Fed to bring interest rates back down to the effective lower bound. As the Fed searches for new policy measures that it may need if the situation worsens, or in the face of a second wave of the pandemic, Japan is (once again) being viewed as leading the way with its 2016 adoption of capped interest rates, or yield curve control. A number of current and former FOMC members view YCC as a useful measure to take when rates hit the effective lower bound. The measure helps reinforce to market participants that the Fed truly intends to keep rates low for an extended period—effectively putting its money where its mouth is—and it also helps the Treasury to finance the increased debt burden it assumes to fight the war/pandemic through below-market interest rates and, effectively, financial repression.

Many currently fear that this would be just one further step away from a capitalist system and one more step closer to full outright debt monetization. They may not be wrong. However, history has shown that in the past, such as from 1941 to 1947 (but less so in the following years to 1951), this policy was successful in keeping rates low across both government and private sectors. To the extent that it actually results in financial repression, where market rates would otherwise be much higher than the pegged rates, it acts as a clear penalty on those bondholders, in particular those obliged to do so through regulation—e.g., banks, insurance companies, and government pension funds. And while these caps were eventually lifted, the process did not come without a fight between the Fed and the Treasury. The lesson learned from the early postwar episode was that if YCC were reinstituted today, a clearly defined exit plan would have to be put in place. As discussed by Brainard, such an exit strategy would be entirely contingent on achieving the Fed's mandated goals with regard to inflation and unemployment, rather than those of the Treasury—keeping financing costs low.

1. "The Liquidation of Government Debt," Carmen M. Reinhart and M. Belen Sbrancia, IMF Working Paper, January 2015

2. "Targeting the Yield Curve: The Experience of the Federal Reserve 1942-51," Vincent Reinhart, Dino Kos, FOMC Secretariat, June 18, 2003

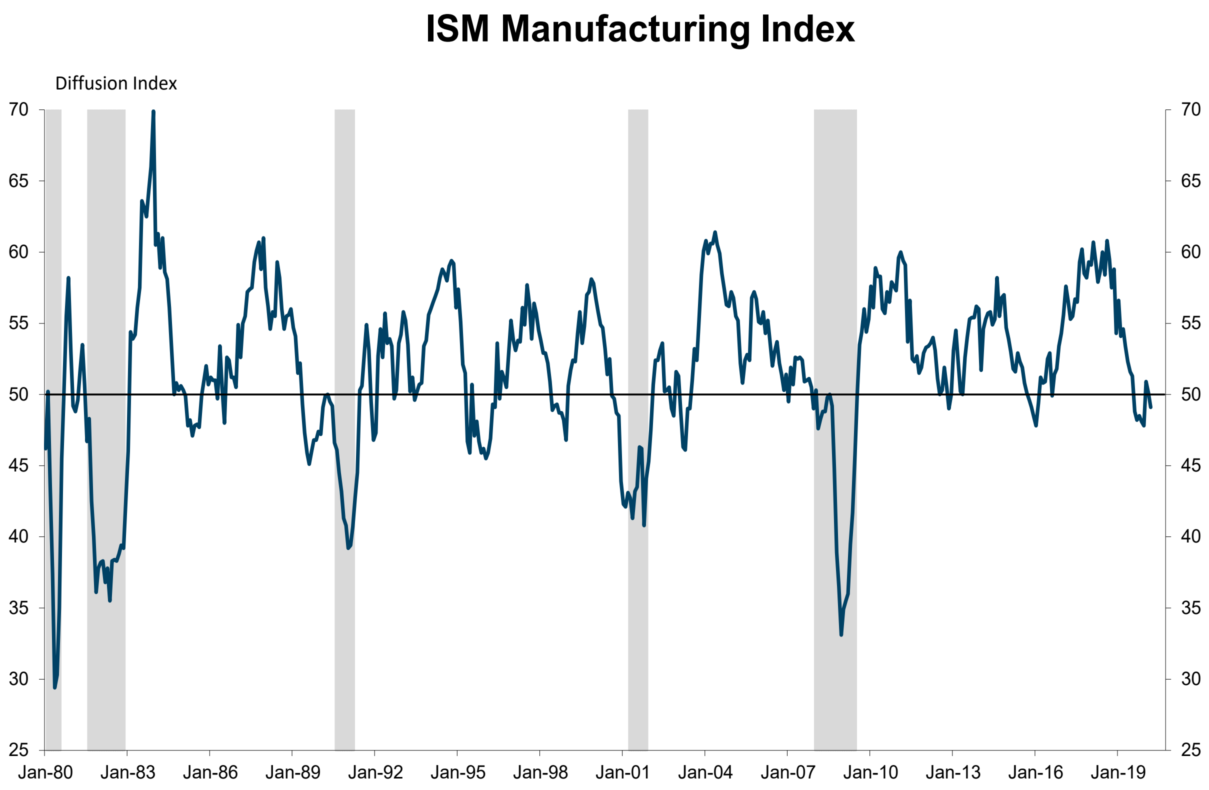
3. "Before the Accord: U.S. Monetary-Financial Policy, 1945-51," Barry Eichengreen, Peter M. Garber, *Financial Markets and Financial Crises,* University of Chicago Press, NBER, 1991

Highlights in the Week Ahead

Date	Time (EDT)	Indicator	Last	Consensus	WB Estimate	Actual
28 Apr	10:00 a.m.	Consumer Confidence (Apr)	120.0	90.0	84.0	
29 Apr	8:30 a.m.	GDP (Q1)	2.1%	-3.0%	-3.3%	
29 Apr	2:00 p.m.	FOMC Meeting	0.25%	0.25%	0.25%	
30 Apr	8:30 a.m.	Personal Income (Mar)	0.6%	-1.2%	-2.1%	
		Personal Spending	0.2%	-3.3%	-3.9%	
30 Apr	8:30 a.m.	Initial Jobless Claims (Apr 25)	4,427	NA	NA	
30 Apr	8:30 a.m.	Employment Cost Index (Q1)	0.7%	0.7%	0.7%	
1 May	10:00 a.m.	ISM Manufacturing Index (Apr)	49.1	39.0	30.0	

Sources: Bloomberg, William Blair Equity Research

Indicator of the Week: ISM Index



Source: Institute for Supply Management; William Blair Intl. Ltd., Shaded Area = Recessions

Economic Scorecard

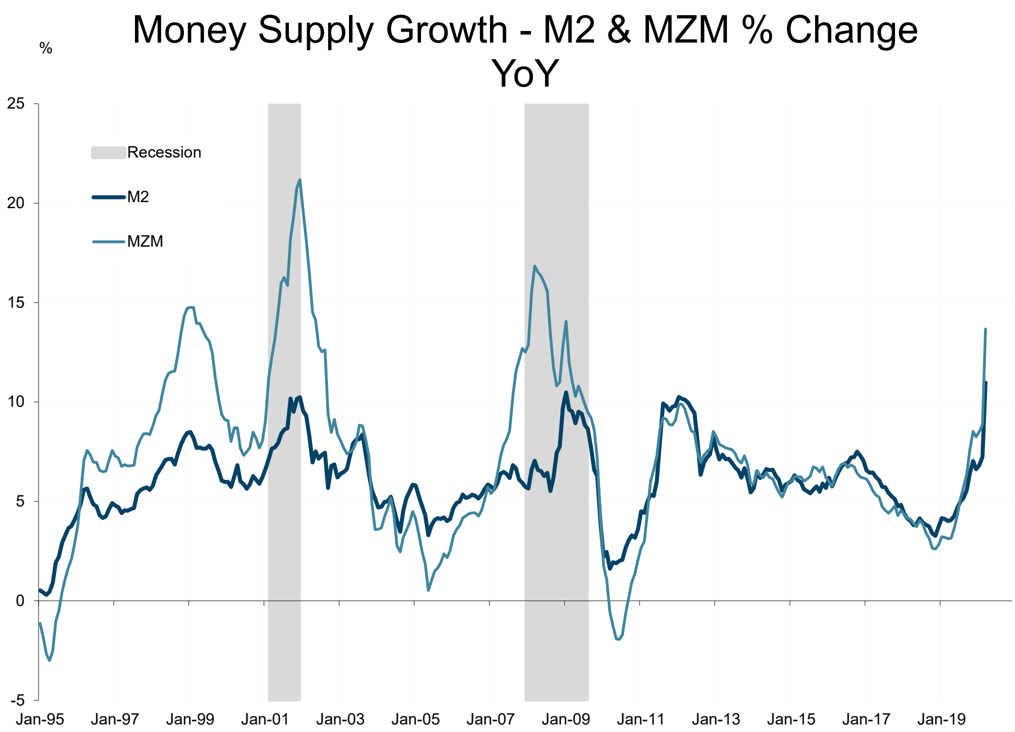
Rolling monthly heat map, % Change on Year Ago (unless otherwise noted)

	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20
Growth																			
US Leading Indicators	5.2	4.9	4.0	3.4	2.9	2.7	2.4	2.4	1.7	1.5	1.0	0.3	0.2	0.2	0.3	0.7	0.4	-6.5	
US Coincident Indicators	2.3	2.2	2.2	2.4	2.2	2.2	1.8	1.8	1.7	1.5	1.5	1.6	1.4	1.5	1.2	1.1	1.4	0.3	
US Lagging Indicators	2.8	3.0	2.9	2.9	3.1	3.2	2.9	2.4	2.8	3.5	2.9	2.8	2.6	2.5	2.2	1.6	1.6	2.6	
Consumer																			
Total Retail Sales	4.8	4.1	1.6	2.4	2.2	3.8	3.8	3	3.3	3.5	4.4	4	3.1	3.3	5.4	5	4.3	-6.2	
Personal Income	5.1	4.7	5	4.5	4.7	4.7	4.8	4.7	4.6	4.1	4.1	4.3	4.1	4.4	3.7	4	4		
Real Disposable Personal Income	3.8	3.7	4.2	3.2	3.4	3.3	3.1	3	2.9	2.5	2.6	3	2.6	2.9	1.8	2.2	2.2		
Real Personal Consumption	3.2	3	1.7	2.4	2.3	2.8	2.7	2.6	2.6	2.6	2.5	2.7	2.3	2.3	3.3	2.8	3		
Personal Saving Rate (%)	7.3	7.2	8.8	8.3	8.8	8.4	8	7.8	7.8	7.4	7.7	7.8	7.6	7.7	7.5	7.9	8.2		
Consumer Confidence (Conference Board)**	137.9	136.4	126.6	121.7	131.4	124.2	129.2	131.3	124.3	135.8	134.2	126.3	126.1	126.8	128.2	130.4	132.6	120	
Employment																			
Employment Growth	1.6	1.5	1.6	1.7	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.4	1.3	1.4	1.4	1.4	1.6	1.0	
ASA Temporary Staffing Index	3.7	1.1	-12.7	-0.6	-1.3	-1.9	-3.0	-2.4	-1.7	-4.6	-4.7	-5.1	-6.5	1.4	-6.9	-6.2	-6.8	-24.4	
ISM Employment Index Manufacturing*	56.6	57.8	56.2	55.2	53.2	57.1	52.4	53.1	54.3	51.3	47.6	46.5	47.9	46.8	45.2	46.6	46.9	43.8	
ISM Employment Index Services*	58.4	57.8	56.2	56.4	55.6	55.9	54.5	57.1	55.2	55.7	53.7	51.7	53.9	54.9	54.8	53.1	55.6	47	
Unemployment Rate, %	3.8	3.7	3.9	4	3.8	3.8	3.6	3.6	3.7	3.7	3.7	3.5	3.6	3.5	3.5	3.6	3.5	4.4	
Average Hourly Earnings	3.3	3.4	3.4	3.3	3.5	3.4	3.3	3.3	3.4	3.5	3.5	3.1	3.2	3.3	3	3.1	3	3.1	
Initial Jobless Claims (avg. wkly. chg. '000s)	216	226	217	220	225	217	216	217	221	214	217	213	215	216	226	210	214	2667	
Jop Openings	13.4	21.0	17.1	13.2	7.2	7.3	4.3	3.9	-1.3	-1.2	-1.1	-3.2	1.0	-9.5	-10.3	-6.8	-2.4	-6.5	
Layoff Announcements	153.6	51.5	35.3	18.7	117.2	0.4	10.9	85.9	12.8	43.2	39	-24.8	-33.5	-16	-25.2	27.8	-26.3	266.9	
Housing Market																			
Housing Starts	-4.3	-7.8	-5.6	-3.2	-10.9	-9.6	0.2	-5.1	4.5	1.7	7.5	2.4	10.7	14.9	40.2	25.4	36.1	1.4	
New Home Sales	-11.7	-14	-14	2.5	3.9	6	4.3	-8	18	8.4	17.2	19.4	26.9	13.8	28.2	20.7	10.8	-9.5	
Existing Home Sales	-5.0	-8.2	-10.1	-8.6	-2.5	-5.6	-3.7	-1.1	-2.0	0.8	2.5	3.2	4.2	3.1	10.4	8.8	7.1	0.8	
Median House Price (Existing Homes)	2.8	-10.2	-4	-7.3	-2	-7.4	7.8	-1.3	0.4	-5.9	1.7	-3.8	-1.8	6.3	-0.1	7.7	2.9	3.5	
Existing Homes Inventory (Mths' supply)	4.1	4.1	4.3	4.3	3.9	3.9	4	4	4	3.9	3.8	3.9	3.9	3.9	3.6	3.5	3.2	3.6	
New Homes Inventory (Mths' supply)	7.2	6.5	7.4	6.5	6.1	5.8	6.1	6.7	5.4	6	5.5	5.3	5.4	5.5	5.4	5	5.2	6.4	
NAHB Homebuilder Sentiment*	68	60	56	58	62	62	63	66	64	65	67	68	71	71	76	75	74	72	30
Inflation																			
Consumer Price Index	2.5	2.2	1.9	1.6	1.5	1.9	2	1.8	1.6	1.8	1.7	1.7	1.8	2.1	2.3	2.5	2.3	1.5	
CPI Less-food & energy	2.1	2.2	2.2	2.2	2.1	2	2.1	2	2.1	2.2	2.4	2.4	2.3	2.3	2.3	2.3	2.4	2.1	
Producer Price Index	3.1	2.6	2.6	1.9	1.9	2	2.4	2.1	1.6	1.6	1.9	1.5	1	1	1.3	2.1	1.3	0.7	
PPI Less-food & energy	2.7	2.7	2.9	2.6	2.5	2.3	2.5	2.4	2.2	2.2	2.3	2	1.6	1.2	1.1	1.7	1.4	1.4	
PCE Price Index	2	1.9	1.8	1.4	1.3	1.4	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.6	1.8	1.8	1.8	
PCE Prices Less-food & energy	1.9	2.0	2.0	1.8	1.6	1.5	1.6	1.5	1.6	1.6	1.8	1.7	1.6	1.5	1.6	1.7	1.8	1.8	
Business Activity - US																			
Industrial Production	4.1	4.1	3.8	3.6	2.7	2.3	0.7	1.7	1.0	0.4	0.3	-0.2	-0.8	-0.4	-0.9	-0.9	0.0	-5.5	
New Cap Gds Orders less-aircraft & parts	5.7	6.4	2.2	3.5	2.3	2.2	2.4	0.7	-0.5	0.7	-1.9	0.2	-0.5	-1.5	1.8	1.5	1.5		
Business Inventories	5.2	4.7	2.2	5.3	4.9	5	5.3	5.3	5.2	4.8	4.2	3.7	3	2.8	2.2	1.1	0		
ISM Manufacturing PMI*	58.5	58.8	55	55.5	54.1	54.6	53.4	52.3	51.6	51.3	48.8	48.2	48.5	48.1	47.8	50.9	50.1	49.1	
Markit US Manufacturing PMI*	55.7	55.3	53.8	54.9	53	52.4	52.6	50.5	50.6	50.4	50.3	51.1	51.3	52.6	52.4	51.9	50.7	48.5	
ISM Non-Manufacturing Index*	60.3	60.2	58	56	58.5	56.3	55.7	56.3	55.4	54.8	56	53.5	54.4	53.9	54.9	55.5	57.3	52.5	
Markit US Services PMI*	54.8	54.7	54.4	54.2	56	55.3	53	50.9	51.5	53	50.7	50.9	50.6	51.6	52.8	53.4	49.4	39.8	
Business Activity - International																			
Germany Manufacturing PMI Markit/BME*	52.2	51.8	51.5	49.7	47.6	44.1	44.4	44.3	45	43.2	43.5	41.7	42.1	44.1	43.7	45.3	48	45.4	
Japan Manufacturing PMI Jibun Bank*	52.9	52.2	52.6	50.3	48.9	49.2	50.2	49.8	49.3	49.4	49.3	48.9	48.4	48.9	48.4	48.8	47.8	44.8	
Caixin China Manufacturing PMI*	50.1	50.2	49.7	48.3	49.9	50.8	50.2	50.2	49.4	49.9	50.4	51.4	51.7	51.8	51.5	51.1	40.3	50.1	
China Manufacturing PMI*	50.2	50	49.4	49.5	49.2	50.5	50.1	49.4	49.4	49.7	49.5	49.8	49.3	50.2	50.2	50	35.7	52	
UK Manufacturing PMI Markit/CIPS*	51.1	53.3	54.3	52.8	52.1	55.1	53.1	49.4	48	48	47.4	48.3	49.6	48.9	47.5	50	51.7	47.8	
France Manufacturing PMI Markit*	51.2	50.8	49.7	51.2	51.5	49.7	50	50.6	51.9	49.7	51.1	50.1	50.7	51.7	50.4	51.1	49.8	43.2	
Currencies*																			
Euro (EUR/USD)	-2.9	-4.9	-4.5	-7.8	-6.7	-9.0	-7.1	-4.5	-2.7	-5.3	-5.3	-6.1	-1.4	-2.6	-2.2	-3.1	-3.0	-1.7	
Renmimbi (USD/CNY)	5.1	5.3	5.7	6.5	5.7	7.0	6.4	7.7	3.7	0.9	4.8	4.1	0.9	1.0	1.2	3.2	4.5	5.5	
Yen (USD/Yen)	-0.6	0.9	-2.7	-0.3	4.4	4.3	1.9	-0.5	-2.6	-2.8	-4.3	-4.9	-4.3	-3.6	-1.0	-0.5	-3.1	-3.0	
Sterling (GBP/USD)	-3.9	-5.7	-5.6	-7.6	-3.6	-7.0	-5.3	-5.0	-3.9	-7.4	-6.2	-5.7	1.4	1.4	3.9	0.7	-3.3	-4.7	
Canadian $ (USD/CAD)	2.1	3.1	8.5	6.6	2.7	3.5	4.2	4.3	-0.3	1.4	2.1	2.6	0.1	-0.1	-4.7	0.9	1.8	5.3	
Mexican Peso (USD/MXN)	6.2	9.3	0.0	2.7	2.4	6.9	1.2	-1.5	-3.4	2.7	5.1	5.4	-5.4	-4.1	-3.7	-1.4	1.9	21.8	
US Equities																			
S&P 500	5.3	4.3	-6.2	-4.2	2.6	7.3	11.2	1.7	8.2	5.8	0.9	2.2	12.0	13.8	28.9	19.3	6.1	-8.8	
S&P 400 Midcap	-0.5	-1.1	-12.5	-6.1	2.5	0.9	5.2	-7.0	-0.3	-0.9	-8.0	-4.2	7.1	7.0	24.1	9.4	-5.0	-23.9	
S&P 600 Smallcap	4.2	2.1	-9.8	-2.6	5.7	0.1	2.9	-11.8	-6.3	-8.1	-16.4	-10.8	1.6	3.2	20.9	4.9	-9.1	-27.1	
Russell 2000	0.6	-0.7	-12.2	-4.8	4.2	0.7	3.2	-10.3	-4.7	-5.8	-14.1	-10.2	3.4	6.0	23.7	7.6	-6.3	-25.1	

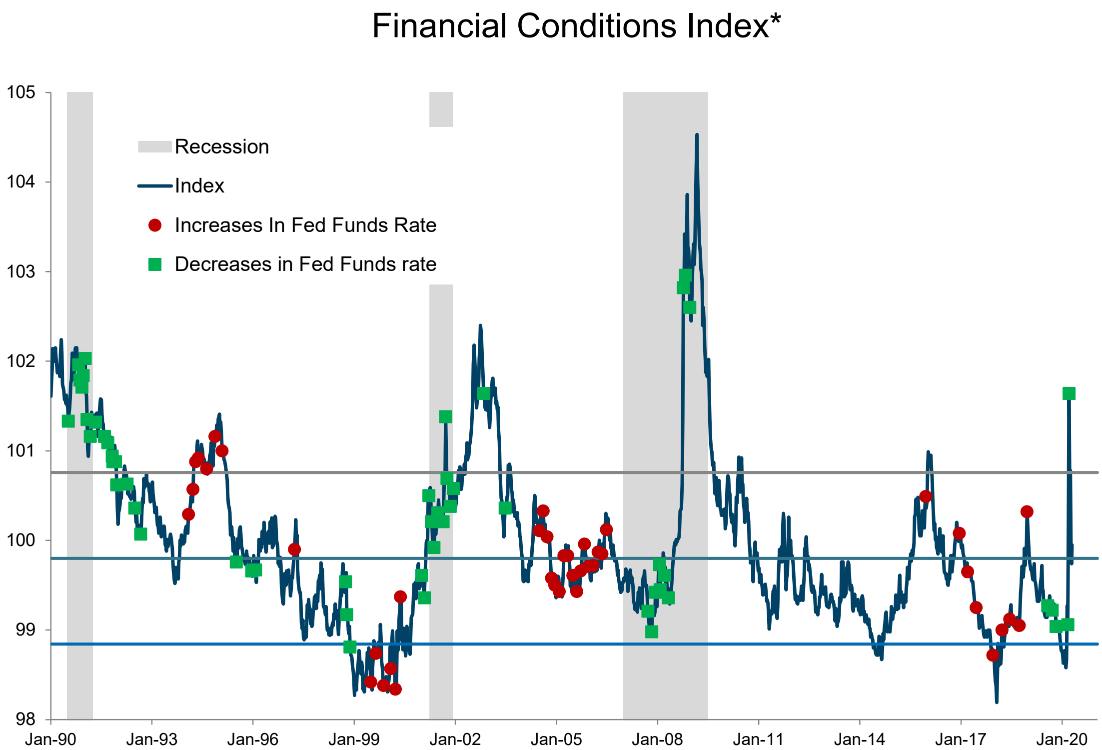
* Diffusion Index, **1985=100, ***Currencies - green/red = strengthening/weakening foreign currency vs dollar

Source: ISM, Federal Reserve, Census Bureau, Bureau of Labor Statistics, Conference Board, Bloomberg, William Blair

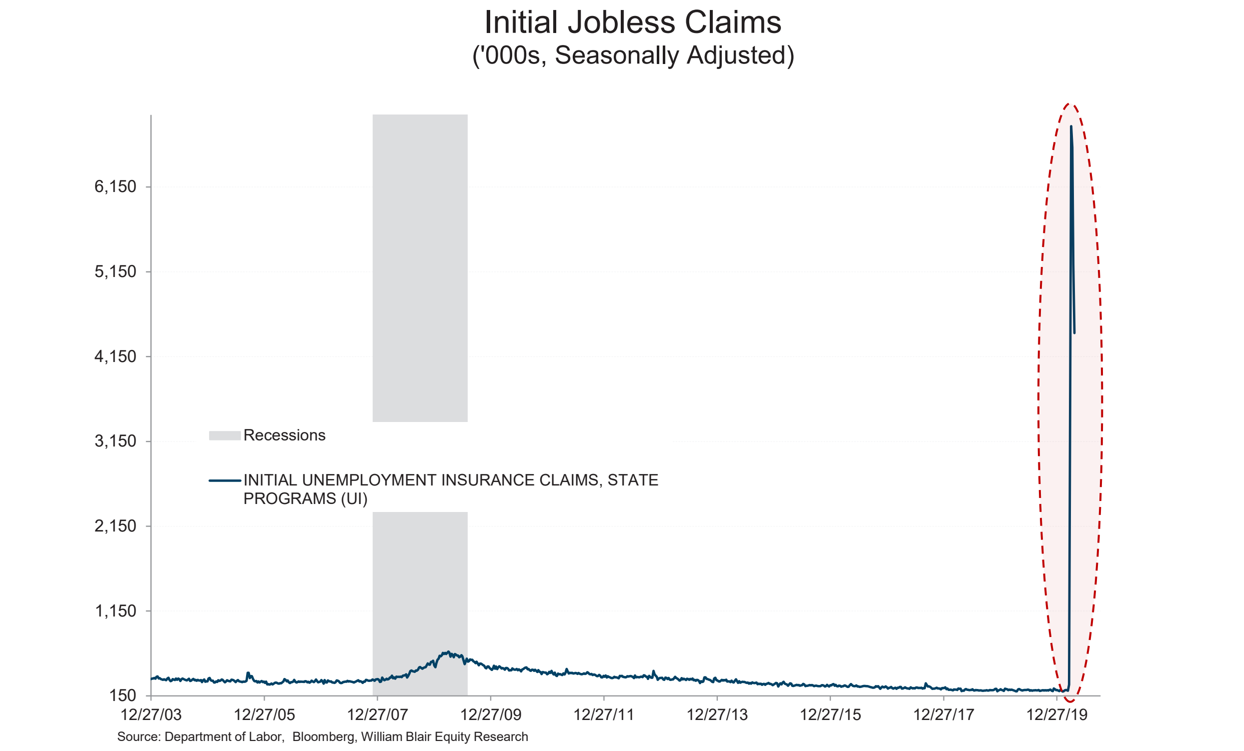
Other Economic Indicators

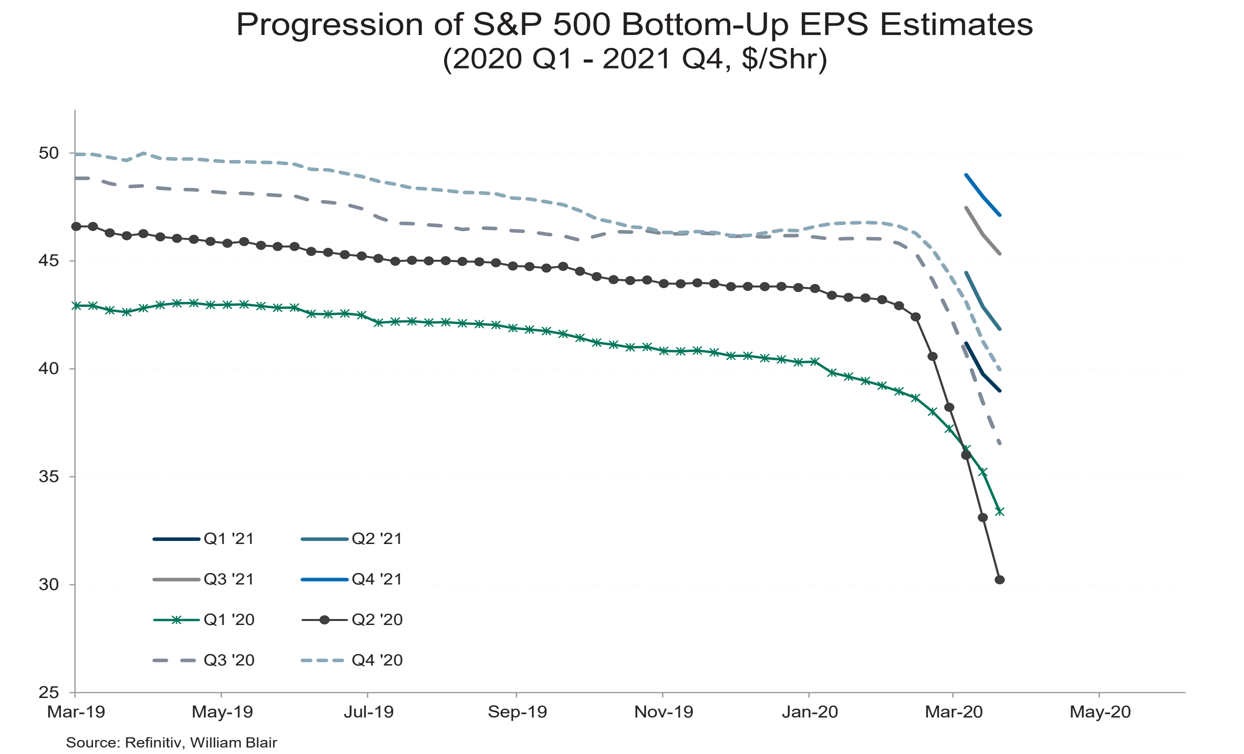


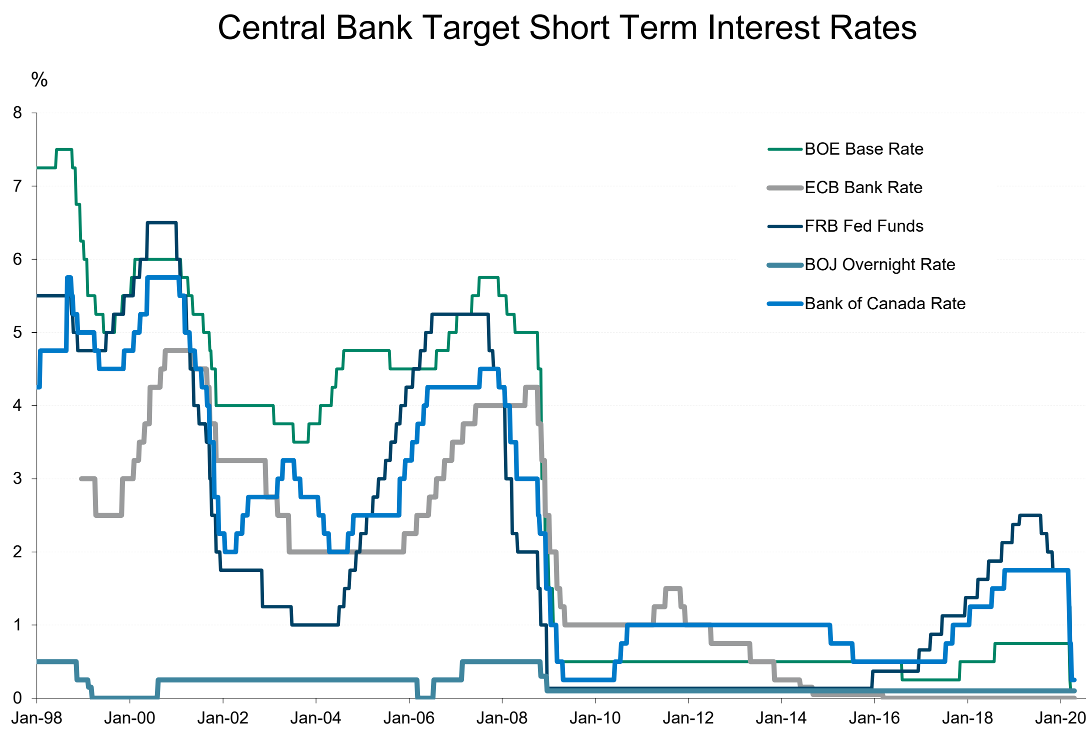
Source: Federal Reserve, William Blair



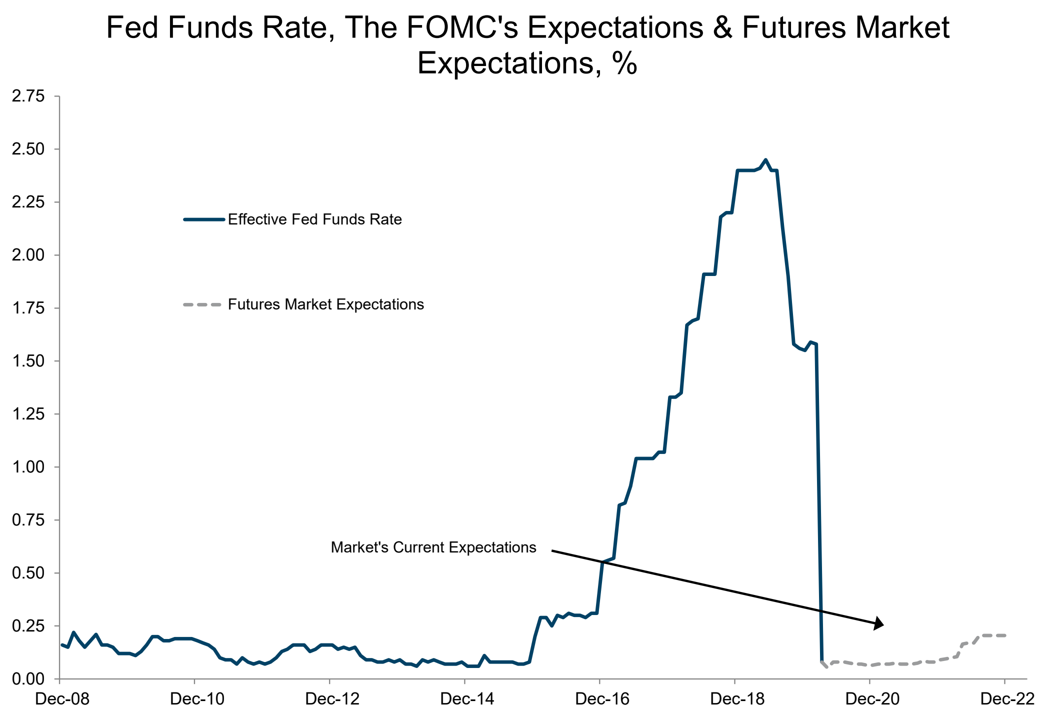
*The Goldman Sachs FCI is a weighted sum of a short-term bond yield, a long-term corporate yield, the exchange rate, and a stock market variable. Since 2005, the long-term corporate yield has been measured as a sum of the 10-year swap rate and the 10-year credit default swap spread.
Source: Bloomberg, William Blair


Initial Jobless Claims
('000s, Seasonally Adjusted)
6,150
5,150
4,150
3,150
2,150
1,150
150
Recessions
INITIAL UNEMPLOYMENT INSURANCE CLAIMS, STATE PROGRAMS (UI)
12/27/03
12/27/05
12/27/07
12/27/09
12/27/11
12/27/13
12/27/15
12/27/17
12/27/19
Source: Department of Labor, Bloomberg, William Blair Equity Research


Progression of S&P 500 Bottom-Up EPS Estimates
(2020 Q1 - 2021 Q4, $/Shr)
50
45
40
35
30
25
Q1 '21
Q2 '21
Q3 '21
Q4 '21
Q1 '20
Q2 '20
Q3 '20
Q4 '20
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Source: Refinitiv, William Blair



Source: Bloomberg, William Blair



Source: Bloomberg, Federal Reserve, William Blair

S&P 500 Sector Performance

Global Industry Classification System	Current Weight* 23-Apr-20	Week Ago 16-Apr-20	Month Ago 23-Mar-20	Qtr-to-Date 31-Mar-20	Year-to-Date 31-Dec-19
S&P 500 Index	**100.00**	**-0.06**	**25.05**	**8.25**	**-13.40**
S&P400 MidCap Index		**1.55**	**25.48**	**5.93**	**-25.88**
S&P600 SmallCap Index		**2.32**	**18.77**	**3.31**	**-30.72**
Dow Jones Industrials		**-0.10**	**26.48**	**7.29**	**-17.60**
Nasdaq Composite		**-0.44**	**23.82**	**10.32**	**-5.33**
Communication Services	**11.05**	**0.32**	**18.26**	**8.35**	**-10.31**
Advertising	0.07	-1.56	9.03	-7.24	-36.42
Alternate Carriers	0.05	1.94	14.38	5.08	-24.75
Broadcasting	0.14	-1.14	22.92	7.02	-46.39
Cable & Satellite	1.19	-2.77	12.90	7.99	-14.29
Integrated Telecommunication Services	1.85	-1.11	12.40	4.26	-15.89
Interactive Home Entertainment	0.40	-2.95	17.26	11.05	7.96
Interactive Media & Services	5.31	2.53	22.07	10.15	-6.83
Movies & Entertainment	1.56	-1.80	17.90	8.55	-9.20
Publishing & Printing	0.02	2.49	6.10	-3.00	-38.79
Wireless Telecommunication Svcs	0.46	0.08	19.34	7.68	15.21
Consumer Discretionary	**10.92**	**0.38**	**27.35**	**14.62**	**-7.83**
Apparel Retail	0.37	-3.25	26.18	-4.58	-28.03
Apparel & Accessories & Luxury Goods	0.17	-1.09	17.31	3.16	-50.05
Auto Parts & Equipment	0.09	2.31	29.36	19.34	-36.73
Automobile Manufacturers	0.21	1.37	22.13	2.61	-43.93
Automobile Retail	0.29	2.92	41.29	21.90	-18.43
Casinos & Gaming	0.21	1.23	20.11	14.22	-44.37
Computer & Electronics Retail	0.07	7.11	37.31	22.11	-20.73
Consumer Electronics	0.06	0.81	24.63	5.79	-18.72
Department Stores	0.02	-4.18	23.78	18.40	-63.40
Distributors	0.07	0.81	46.05	5.13	-35.95
Footwear	0.45	1.22	39.09	5.57	-13.78
General Merchandise Stores	0.47	-4.14	12.29	12.00	-9.17
Home Furnishings	0.04	5.35	24.82	4.31	-43.30
Home Improvement Retail	1.19	1.59	28.08	8.83	-11.08
Homebuilding	0.17	0.36	33.45	9.81	-28.56
Hotels, Resorts & Cruise Lines	0.26	2.46	15.21	6.28	-56.29
Household Appliances	0.03	5.81	59.22	19.17	-30.69
Housewares & Specialties	0.02	-0.12	19.38	-5.16	-34.47
Internet Retail	5.33	-0.40	26.05	21.68	21.80
Leisure Products	0.04	-0.34	40.27	1.70	-31.10
Motorcycle Manufacturers	0.01	1.03	20.86	-2.06	-50.15
Restaurants	1.17	3.17	36.14	14.54	-11.26
Specialized Consumer Services	0.01	4.17	15.11	1.22	-39.31
Specialty Stores	0.16	1.32	21.10	8.76	-7.37
Consumer Staples	**8.42**	**-2.82**	**18.90**	**6.30**	**-7.94**
Agricultural Products	0.08	0.22	21.94	1.59	-22.89
Brewers	0.03	-3.01	21.15	7.33	-22.32
Distillers & Vintners	0.18	-4.92	40.09	7.40	-16.89
Drug Retail	0.16	0.62	-0.25	-4.92	-26.22
Food Distributors	0.10	8.77	37.17	9.03	-41.84
Food Retail	0.11	2.91	5.79	9.16	13.42
Household Products	1.84	-1.69	21.02	8.63	-1.33
Hypermarkets & Supercentres	2.06	-3.80	10.06	10.49	6.31
Packaged Foods & Meats	1.25	-2.61	22.79	6.57	-7.10
Personal Products	0.17	0.69	12.83	2.67	-22.96
Soft Drinks	1.68	-4.10	21.62	5.18	-11.69
Tobacco	0.76	-4.80	20.78	-1.21	-18.67
Energy	**2.78**	**12.04**	**45.81**	**18.16**	**-42.17**
Integrated Oil & Gas	1.48	9.94	47.54	17.00	-35.64
Oil & Gas Drilling	0.01	20.35	36.87	23.59	-57.43
Oil & Gas Equipment & Services	0.20	16.57	36.50	24.69	-57.72
Oil & Gas Exploration & Production	0.54	19.01	44.13	24.34	-47.05
Oil & Gas Refining & Marketing & Transportation	0.29	15.30	51.37	12.49	-48.66
Oil & Gas Storage & Transportation	0.27	4.09	41.47	14.43	-39.78

Financials	**9.86**	**0.84**	**21.26**	**2.87**	**-30.39**
Asset Management & Custody Banks	0.77	-0.27	28.95	3.85	-23.50
Consumer Finance	0.46	4.20	22.02	-1.34	-44.05
Diversified Banks	2.93	2.22	14.73	-0.84	-41.11
Financial Exchanges & Data	1.22	-0.45	37.51	10.47	-1.52
Insurance Brokers	0.51	-5.83	19.04	4.23	-16.38
Investment Banking & Brokerage	0.75	-0.37	29.36	9.47	-25.03
Life & Health Insurance	0.41	1.89	35.74	2.47	-39.61
Multi-line Insurance	0.16	-2.38	15.79	-3.27	-47.92
Multi-Sector Holdings	1.06	-1.24	14.49	1.53	-18.05
Property & Casualty Insurance	0.76	-1.97	18.70	2.00	-19.39
Reinsurance	0.03	-5.37	2.99	-7.96	-36.03
Regional Banks	0.78	10.82	25.33	7.49	-39.87
Health Care	**15.44**	**0.15**	**32.24**	**11.51**	**-3.06**
Biotechnology	2.40	-0.06	21.98	9.26	5.63
Health Care Distributors	0.26	-0.79	18.72	1.04	-4.13
Health Care Equipment	3.62	1.07	38.13	12.58	-5.58
Health Care Facilities	0.18	-2.68	34.70	12.95	-29.21
Health Care Services	0.77	-1.45	28.10	6.30	-12.53
Health Care Supplies	0.16	0.48	25.76	5.01	-24.74
Health Care Technology	0.09	3.66	30.07	12.96	-3.05
Life Sciences Tools & Services	1.07	-0.71	27.11	11.82	-6.68
Managed Health Care	1.76	-4.19	49.90	14.98	-3.29
Pharmaceuticals	5.14	1.68	30.72	12.11	-0.50
Industrials	**7.83**	**1.32**	**25.28**	**3.43**	**-24.92**
Aerospace & Defense	1.86	0.01	30.52	5.88	-30.11
Agricultural & Farm Machinery	0.18	5.51	23.36	-0.76	-20.86
Air Freight & Logistics	0.51	-1.61	9.98	4.62	-15.47
Airlines	0.19	-3.12	-2.79	-16.80	-58.87
Building Products	0.35	1.82	18.36	1.31	-27.51
Construction & Engineering	0.06	1.29	30.44	1.96	-13.42
Construction Machinery & Heavy Trucks	0.48	0.52	28.15	1.90	-22.32
Diversified Support Svcs	0.15	2.23	22.27	7.93	-25.17
Electrical Components & Equipment	0.42	5.70	36.42	6.69	-23.08
Environmental & Facilities Services	0.32	-0.33	13.04	4.46	-12.43
Human Resource & Employment Services	0.02	8.37	28.13	15.97	-30.67
Industrial Conglomerates	1.11	1.59	21.20	-2.55	-25.78
Industrial Machinery	0.77	3.04	31.98	5.34	-24.57
Railroads	0.84	3.23	31.64	7.14	-16.42
Research & Consulting Svcs	0.40	1.25	28.34	7.20	-10.54
Trading Companies & Distributors	0.17	-2.10	27.65	7.13	-19.38
Trucking	0.11	1.10	24.93	8.29	0.24
Information Technology	**24.98**	**-1.51**	**23.15**	**7.92**	**-5.27**
Application Software	2.07	-1.48	15.97	8.01	-1.02
Communications Equipment	0.97	0.60	21.64	7.54	-11.33
Data Processing & Outsourced Services	4.10	2.63	25.19	5.68	-12.30
Electronic Components	0.17	2.73	18.16	7.75	-26.02
Electronic Equipment & Instruments	0.14	1.46	20.05	13.80	-15.03
Electronic Manufacturing Services	0.12	6.03	21.33	7.78	-27.62
Internet Software & Services	0.17	0.34	30.88	15.40	13.78
IT Consulting & Services	1.13	4.11	25.28	8.34	-15.49
Semiconductor Equipment	0.45	-1.57	32.39	10.67	-12.96
Semiconductors	3.92	-2.28	22.90	9.81	-5.46
Systems Software	6.42	-3.04	24.88	8.31	7.73
Technology Distributors	0.06	-3.25	17.82	8.14	-29.39
Technology Hardware, Storage & Peripherals	5.26	-4.00	21.99	7.10	-8.52
Materials	**2.40**	**1.58**	**27.73**	**8.99**	**-20.00**
Commodity Chemicals	0.17	1.86	22.31	6.96	-43.21
Construction Materials	0.10	-4.93	23.36	-6.23	-32.93
Copper	0.05	3.03	44.88	15.70	-40.47
Diversified Chemicals	0.03	7.22	45.87	20.22	-29.35
Fertilizers & Agricultural Chemicals	0.17	2.66	23.14	6.45	-23.94
Gold	0.21	4.24	49.88	37.89	43.70
Industrial Gases	0.59	-0.92	20.44	5.13	-13.36
Metal & Glass Containers	0.09	-4.28	24.95	0.37	0.36
Paper Packaging	0.22	-0.08	21.09	1.79	-27.19
Specialty Chemicals	0.73	4.48	32.43	12.33	-21.74
Steel	0.05	6.23	32.73	4.72	-32.98

Real Estate	**2.86**	**-1.55**	**28.92**	**6.15**	**-14.91**
Health Care REITs	0.17	-5.83	10.84	-0.90	-44.25
Hotel & Resort REITs	0.03	-1.72	1.22	-2.07	-41.72
Industrial REITs	0.32	-1.65	35.28	7.17	-2.78
Office REITs	0.18	-4.67	21.17	3.24	-29.60
Real Estate Service	0.06	-5.99	34.06	6.05	-34.75
Residential REITs	0.37	-2.22	27.35	4.36	-22.67
Retail REITs	0.20	-1.05	6.59	-3.87	-52.16
Specialized REITs	1.55	-0.42	35.61	9.24	6.41
Utilities	**3.32**	**-1.19**	**29.27**	**4.49**	**-10.34**
Electric Utilities	2.23	-0.74	29.64	3.70	-9.50
Gas Utilities	0.05	-3.57	25.88	2.12	-9.41
Independent Power Producers & Energy Traders	0.03	4.35	6.91	-6.70	-36.40
Water Utilities	0.09	-5.00	28.44	4.28	1.49
Multi-Utilities	1.06	-1.78	29.70	6.67	-11.28

*Current Weight is market cap based, based on calculations by William Blair Intl. Ltd.

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DOW JONES: 23515.30
S&P 500: 2797.80
NASDAQ: 8494.75

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Outperform (Buy)	71	Outperform (Buy)	20
Market Perform (Hold)	28	Market Perform (Hold)	8
Underperform (Sell)	1	Underperform (Sell)	0

*Percentage of companies in each rating category that are investment banking clients, defined as companies for which William Blair has received compensation for investment banking services within the past 12 months.

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