

Asset Values and Rising Interest Rates

What monetary tightening at the Fed means for stocks, bonds and housing

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At the onset of the 2008 financial crisis, the Federal Reserve dropped short-term interest rates to near-zero levels, in part to bolster the value of assets like stocks and housing and create a “wealth effect” that would help America dig out of the recession. The eight-year-long bull market, during which the S&P 500 index more than tripled, seemed to prove the success of the Fed’s strategy, as did a strong rebound in the U.S. real estate market.

With the economy on more solid footing, the Fed started slowly raising short-term interest rates in December 2015, and has accelerated tightening in recent months, announcing hikes of 25 basis points in December 2016 and again in March 2017. At least two additional increases are expected this year. It’s a new operating environment for many investors, business owners and homebuyers, who haven’t had to deal with rising interest rates in a long time.

So how will rising rates affect the value of U.S. assets going forward? To answer that question, OUTLOOK turned to W. Michael Cox, founding director of the O’Neil Center for Global Markets and Freedom for the Cox School of Business at Southern Methodist University and a former chief economist with the Federal Reserve Bank of Dallas. Cox, who is skeptical about the effectiveness of monetary stimulus, advises focusing less on rates themselves than what’s behind them. Our journey back to a “new normal” interest rate environment, he believes, must be accompanied by compelling evidence that businesses and consumers have regained fundamental confidence in economic growth. Cox spoke with OUTLOOK about his contrarian view of the impact of interest rates, what this new landscape means for asset prices, and why he believes that rates will remain below historical norms.

OUTLOOK: *How much credit do you give to the Fed for boosting asset values and supporting the economic recovery, which has been going on now since mid-2009?*

Michael Cox: The stock market and real estate values do tend to get a boost from lower interest rates, but I don’t believe cutting the Fed funds rate is an effective tool for stimulating economic demand. First, cutting the Fed funds rate doesn’t necessarily increase lending. People won’t necessarily be eager to borrow more if economic conditions aren’t favorable.

This Month's Expert



W. Michael Cox, Ph.D., is the founding director and executive-in-residence of the O'Neil Center for Global Markets and

Freedom at Southern Methodist's Cox School of Business. Previously, he spent 25 years at the Federal Reserve Bank of Dallas, where, as senior vice president and chief economist, he advised presidents on monetary and economic policy.

A passionate believer in free market capitalism, Cox has written for *The New York Times*, *The Wall Street Journal*, and other publications. He is a frequent guest on national radio and television and is the co-author, with Richard Alm, of the book *Myths of Rich and Poor: Why We're Better Off Than We Think*. Cox has taught at Virginia Tech and the University of Rochester in addition to SMU. He earned his bachelor's degree at Hendrix College in Arkansas, and his doctorate in economics from Tulane.

Second, when you cut the Fed funds rate, other rates, except for bank prime rates, do not tend to follow along. Business rates, such as the corporate bond rate, don't generally tend to follow, nor do many longer-term rates.

Third, falling interest rates may boost stock and real estate values, but you also *lower* interest income. People who believe that lowering rates boosts economic growth forget, or outright ignore, that many people, especially older ones, live off of fixed interest payments. Cutting interest rates thus lowers their income and lowers their ability to spend. This partially offsets what policymakers are trying to accomplish via the wealth effect.

OUTLOOK: Do you think higher rates will hurt the value of stocks?

MC: A few years ago I calculated 110 years of quarterly data on interest rates, taxes, median GDP growth and other factors. If all other factors are constant, each 1 percentage point increase in interest rates has been associated with a 10 percent reduction in the stock market. That suggests that if interest rates were to go up by 2 percentage points, we'd see the market drop by 20 percent. But that's only if there is no good economic story to accompany that rise.

I think the more likely scenario today is that rates rise in conjunction with corporate tax reform, general tax reform, and deregulation of businesses—all of which lead to a stronger economy and higher demand for loans. As earnings expectations rise, so would stock values, since the price of a stock is based on expectations of future after-tax earnings. In fact, the market is already factoring in the anticipation of high growth and better economic policies. If the economy booms and rates go up, the stock market will go up, not down.

OUTLOOK: But hasn't the strong bull market of the past eight years been largely fueled by historically low interest rates?

MC: It's true that the market has risen strongly since the Dow bottomed out in March 2009, at 6,547. But that's a misleading place to start. In October 2007, the Dow was at 14,280. So starting your calculations eight years ago means you're starting from a fall of more than 50 percent from that earlier value. This eight-year bull market really wasn't based on interest rates being held down as much as it was just a recovery back to the norms we'd had before.

In the 25 years from 1982 to 2007, the market went up 1,750 percent. That bull market was driven in large part by declining interest rates—from a high of about 14 percent for the Fed funds rate down to about 2 percent—but also by a cut in the overall income tax rate and strong economic growth. And if you start from the market's high in 2007, the rise in just under 10 years has been only 46 percent. So while the bull market coincides with the low interest rate environment, there's also a bit of cherry-picking going on.



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OUTLOOK: Housing prices in the 20 largest U.S. cities are up about 35 percent since 2009 and have almost reached their pre-recession peak. How much of that recovery would you attribute to low mortgage interest rates, versus overall economic growth?

MC: I have no way of sorting out scientifically how much of the housing recovery owes itself to each. However, it is generally true that house prices have risen the most in the parts of the country that have had the strongest growth. Interest rates are the same everywhere, of course, but economic growth is not.

But another part of the housing price recovery is the normal cycle of recovery from a bust. Leading to the financial crisis, a huge excess supply of houses was put onto the market, facilitated by HUD's demands that Fannie and Freddie push subprime loans into the mortgage market. That bubble eventually had to burst. And, when it did, prices fell a lot—more than they really needed to fall if given more time to adjust.

Suppose you have a house that, given a normal amount of time on the market—say three to four months—you could sell for \$500,000. Now, suppose you have to sell it in a day. How much could you get for it? Maybe \$300,000 if you're lucky. However, the person who buys it can then put it on the market and, given time, get the \$500,000 it's worth. Part of the housing recovery has been just that—normal recovery in house prices from a time in which so many houses were put into the market at once that supply overwhelmed demand temporarily. Prices were destined to go back up, even apart from growth and interest rates.

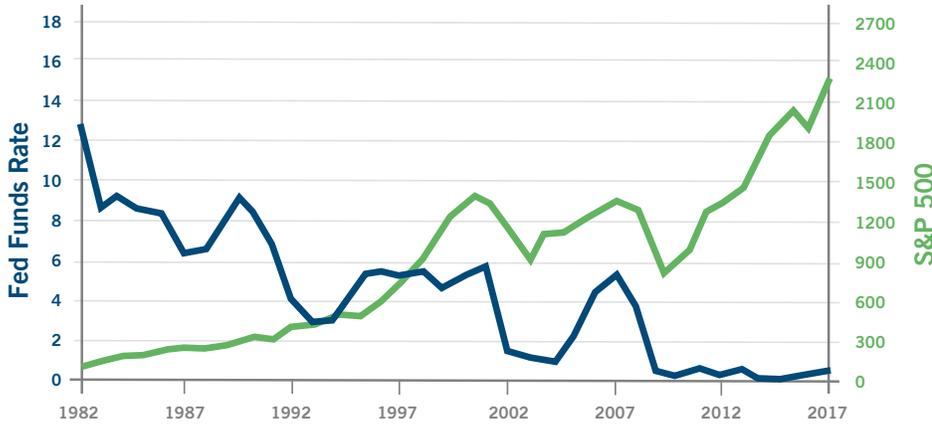
OUTLOOK: If mortgage rates rise, will that reduce demand for real estate and hurt prices?

MC: Here you have the chicken or egg problem. Are mortgage rates rising because mortgage loan demand is going up, because the economy is strong again and people are willing and able to go out and borrow? Or are mortgage rates rising because of inflation?

If mortgage rates start to go up now, the most likely factors behind that will be a strong economy and slightly higher inflation. It wouldn't be because of a rising Fed funds rate, which has much more of a direct impact on the prime rate and the short-term interest rates tied to the prime rate. Rates on mortgages, like the rates on long-term bonds, are more likely to be affected by other factors, including consumer and investor demand.

I expect the rates on long-term mortgages to remain fairly low. That's where a lot of the global savings glut will ultimately wind up, in the longer-term debt markets.

FED FUNDS RATE VS. S&P 500 (1982 - PRESENT)



Source: St. Louis Federal Reserve; Yahoo Finance

OUTLOOK: From an investor’s standpoint, in what ways have near-zero interest rates affected the bond market over the past few years?

MC: Zero interest rates are not the cause; they are the effect. They are the effect of the global savings glut and other factors that are making interest rates low across the globe—low inflation, low loan demand, high supply of loanable funds, etc. The effect of these conditions is extremely low interest rates. Negative rates happen on certain kinds

of investments—such as government bonds in some European nations—because investors see them as virtually riskless. That is, their principal is seen as virtually guaranteed by the government.

Why would anyone pay to lend money when they can just hold cash and pay nothing? Because cash is itself risky to hold in very large quantities.

One of the unfortunate effects of this is that savers have been “punished” for all their good behavior. Financially responsible people, who worked their whole lives and saved so they could live off of the interest earnings on their savings, now have very little interest on which to live. Instead they have to consume their principal in order to pay the bills.

OUTLOOK: Rising rates typically push down bond prices, but what other factors also affect bonds’ performance?

MC: One factor is an older population and its quest for safety. That group’s demand for bonds helps keep prices up and interest rates down. But the longer the term of a bond, the riskier it is. Something could happen over a 30-year period—such as a sustained increase in inflation—that couldn’t happen in a one- to two-month period. So long-term bonds tend to pay higher rates, even if inflation is flat. And long-term bonds are notorious for being hit by changes in what people perceive to be the permanent rate of inflation.

I don’t expect the Fed to let inflation get out of control. But if it did, that’s when you would see long-term rates go up.



If you could hold everything else constant and just have interest rates go up, that would decrease the demand for loans with which to buy land, and decrease prices for agricultural land. But in the real world, you can never isolate just one factor.”

OUTLOOK: What about the impact of all of this on the value of agricultural commodities and land?

MC: If you could hold everything else constant and just have interest rates go up, then of course that would decrease the demand for loans with which to buy land, and it would decrease prices for agricultural land. But in the real world, you can never isolate just one factor. Usually, higher interest rates are accompanied by higher inflation or stronger demand for loans, and it really makes a difference to figure out what pressure is coming from which factor.

Suppose that the Trump economy materializes, and we have deregulation and corporate tax reform, which makes it easier and more attractive to do business in America than it has been in a long time. That's going to strengthen the U.S. economy, which will be reflected in higher interest rates and slightly higher inflation. But the driving force will be an economy in which people are doing business again and investing again.

In an environment of rising rates, rising inflation and strong demand, you could perfectly well see commodity prices and land prices continue to rise, especially in parts of America that are growing rapidly.

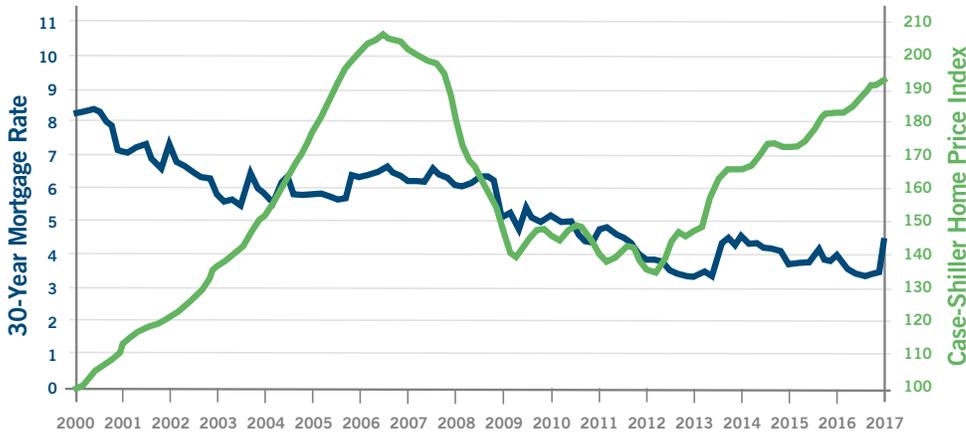
OUTLOOK: Where do you expect interest rates to go in the near future?

MC: During the next couple of years, interest rates should rise somewhat, but not as much as they have in the past, and short-term rates will go up more than long-term rates. The prime rate will move in lockstep with the Fed funds rate, and a reasonable guess is that each of those rates will rise by two percentage points or a little less from today's levels.

OUTLOOK: Are there other factors that could lead to a larger rate increases?

MC: If the Trump administration follows through on its campaign promise to cut the corporate income tax rate, a lot of the \$2.6 trillion that American companies have parked outside the country could come back to the U.S. That money would be reinvested in infrastructure and jobs, the economy would grow faster, and businesses looking to expand would increase the demand for loans. That would drive up interest rates.

30-YEAR FIXED-RATE MORTGAGE VS. CASE-SHILLER HOME PRICE INDEX



Source: St. Louis Federal Reserve

OUTLOOK: *Some economists have argued that inflation targets are too low. Could inflation pick up slightly without the Fed stepping in to raise interest rates further?*

MC: I think the Federal Reserve wants higher inflation than we have now. From 1913, when the Fed was formed, through 2007 and the Great Recession, inflation averaged 3.8 percent. I was among those in the late 1990s and the early 2000s who thought: Wouldn't it be great if we had

a world with no inflation? But it turns out it's not great. If inflation is zero, and interest rates are very low, people just hold cash. There's not much incentive to invest in anything.

So a little bit of inflation is probably good for the economy. One of the Fed's chief mandates is to keep inflation in check, and it does that by increasing the Fed funds target rate when accelerating economic growth seems likely to lead to higher consumer prices. But now, I think the unspoken consensus is that the Fed wants more inflation. The official target is 2 percent, but the people at the Fed would probably let it go to 3 percent. Above that, they'll start to complain.

OUTLOOK: *Interest rates have been low for so long that many younger people have never seen higher rates. Are they in for a big surprise?*

MC: I think it's older people who are going to be surprised that we don't have yesterday's interest rates. We have a different interest rate world, coming from deeper questions such as how much China is saving and the aging of the U.S. population. Those are among the factors that will keep demand for bonds strong, which will help keep bond prices relatively high. That, in turn, translates into lower interest rates than we've seen in the past, because bond issuers won't have to offer higher rates to attract investors.

Again, interest rates move up or down because of an interplay of complex economic forces, and this environment of lower rates won't, by itself, be a sign of economic weakness or economic strength. People are going to be surprised at how the United States can go through quite a long period of low interest rates while the economy continues to grow without excessive inflation. ■

Interest Rates and Economic Indicators

The interest rate and economic data on this page were updated as of 2/28/17. They are intended to provide rate or cost indications only and are for notional amounts in excess of \$5 million except for forward fixed rates.

KEY ECONOMIC INDICATORS

Gross Domestic Product (GDP) measures the change in total output of the U.S. economy. The Consumer Price Index (CPI) is a measure of consumer inflation. The federal funds rate is the rate charged by banks to one another on overnight funds. The target federal funds rate is set by the Federal Reserve as one of the tools of monetary policy. The interest rate on the 10-year U.S. Treasury Note is considered a reflection of the market's view of longer-term macroeconomic performance; the 2-year projection provides a view of more near-term economic performance.

ECONOMIC AND INTEREST RATE PROJECTIONS

Forecasts courtesy of Bloomberg and Blue Chip Economic Indicators

				US Treasury Securities	
2017	GDP	CPI	Funds	2-year	10-year
Q1	2.20%	2.50%	0.76%	1.24%	2.47%
Q2	2.30%	2.30%	0.96%	1.39%	2.58%
Q3	2.40%	2.40%	1.09%	1.53%	2.69%
Q4	2.40%	2.40%	1.26%	1.68%	2.78%
2018	GDP	CPI	Funds	2-year	10-year
Q1	2.40%	2.30%	1.37%	1.84%	2.87%

PROJECTIONS OF FUTURE INTEREST RATES

The table below reflects current market expectations about interest rates at given points in the future. Implied forward rates are the most commonly used measure of the outlook for interest rates. The forward rates listed are derived from the current interest rate curve using a mathematical formula to project future interest rate levels.

IMPLIED FORWARD SWAP RATES

Years Forward	3-month LIBOR	1-year Swap	3-year Swap	5-year Swap	7-year Swap	10-year Swap
Today	1.12%	1.39%	1.87%	2.14%	2.31%	2.47%
0.25	1.31%	1.56%	1.98%	2.22%	2.37%	2.50%
0.50	1.47%	1.64%	2.08%	2.29%	2.43%	2.57%
0.75	1.62%	1.82%	2.16%	2.35%	2.48%	2.61%
1.00	1.78%	1.94%	2.25%	2.41%	2.52%	2.64%
1.50	1.97%	2.12%	2.37%	2.50%	2.60%	2.71%
2.00	2.16%	2.31%	2.38%	2.50%	2.67%	2.76%
2.50	2.28%	2.41%	2.50%	2.60%	2.72%	2.80%
3.00	2.41%	2.50%	2.61%	2.70%	2.76%	2.83%
4.00	2.55%	2.62%	2.72%	2.78%	2.76%	2.85%
5.00	2.67%	2.72%	2.72%	2.85%	2.87%	2.89%

HEDGING THE COST OF FUTURE LOANS

A forward fixed rate is a fixed loan rate on a specified balance that can be drawn on or before a predetermined future date. The table below lists the additional cost incurred today to fix a loan at a future date.

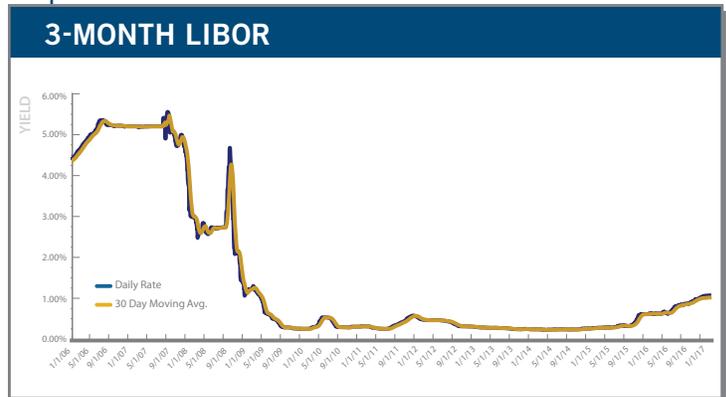
FORWARD FIXED RATES

Cost of Forward Funds				
Forward Period (Days)	Average Life of Loan			
	2-yr	3-yr	5-yr	10-yr
30	6	6	5	5
90	12	13	12	9
180	16	21	19	16
365	42	42	39	31

Costs are stated in basis points per year.

SHORT-TERM INTEREST RATES

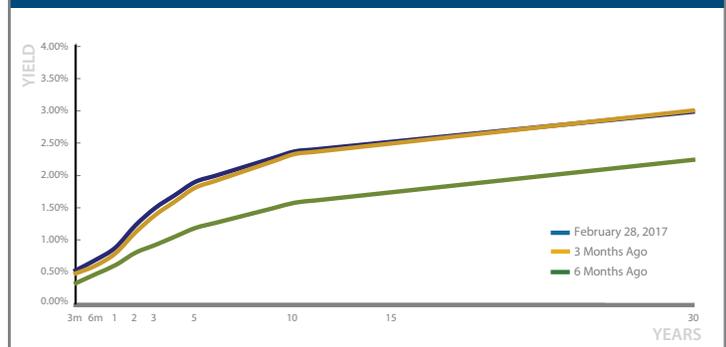
This graph depicts the recent history of the cost to fund floating rate loans. Three-month LIBOR is the most commonly used index for short-term financing.



RELATION OF INTEREST RATE TO MATURITY

The yield curve is the relation between the cost of borrowing and the time to maturity of debt for a given borrower in a given currency. Typically, interest rates on long-term securities are higher than rates on short-term securities. Long-term securities generally require a risk premium for inflation uncertainty, for liquidity, and for potential default risk.

TREASURY YIELD CURVE



About CoBank

CoBank is a \$126 billion cooperative bank serving vital industries across rural America. The bank provides loans, leases, export financing and other financial services to agribusinesses and rural power, water and communications providers in all 50 states. The bank also provides wholesale loans and other financial services to affiliated Farm Credit associations serving farmers, ranchers and other rural borrowers in 23 states around the country.

CoBank is a member of the Farm Credit System, a nationwide network of banks and retail lending associations chartered to support the borrowing needs of U.S. agriculture, rural infrastructure and rural communities. Headquartered outside Denver, Colorado, CoBank serves customers from regional banking centers across the U.S. and also maintains an international representative office in Singapore.

For more information about CoBank, visit the bank's web site at www.cobank.com.

COBANK UPDATE

CoBank Announces Wildfire Relief Efforts in Four States

In the wake of wildfires that ravaged parts of Colorado, Kansas, Oklahoma and Texas in March, CoBank announced a \$200,000 charitable fund to support relief efforts throughout the four states. The donated funds have been used to provide assistance to those affected by the wildfires.

The fires impacted farming and ranching communities, burning hundreds of thousands of acres, destroying property and killing livestock. In Kansas, an estimated 700,000 acres burned throughout more than 20 counties in the state's southwest and central regions. In Oklahoma, the Forestry Service estimated that approximately 400,000 acres had burned and a state of emergency was declared in 22 counties. An estimated 325,000 acres burned throughout the Texas panhandle, and in Colorado, more than 30,000 acres were burned.



Tom Halverson

"These wildfires have had a devastating impact," said Tom Halverson, CoBank's president and chief executive officer. "CoBank is committed to working hand-in-hand with our customers, other Farm Credit organizations and local relief agencies to support farmers, ranchers and other victims of these fires in impacted communities."

All five Farm Credit associations in the state of Kansas took advantage of the fund to support relief efforts in that state. American AgCredit, Farm Credit of Ness City, Farm Credit of Western Kansas, Frontier Farm Credit, and High Plains Farm Credit pledged \$80,000 to the Kansas Livestock Foundation, which was entirely matched by CoBank. The Colorado and Oklahoma Farm Credit associations have also made contributions, as well as several CoBank customers who donated to local fire departments, cattlemen's associations and other organizations providing relief efforts. ■