ALM Insights

ACROPOLIS®
INVESTMENT MANAGEMENT
Registered Investment Advisor

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Timeless principles · Timely advice

KEY RATES ::

Fed Funds Target	0.25%
Discount Rate	0.75%
Prime Rate	3.25%
3-mo LIBOR	0.24%
2-yr Treasury	0.33%
3-yr Treasury	0.67%
5-yr Treasury	1.53%
10-yr Treasury	2.88%
2-yr Swap	0.43%
5-yr Swap	1.61%
10-yr Swap	2.93%
5-yr A Corp Yield	2.38%
5-yr A BQ Muni Yield*	2.84%

* Tax Equivalent Yield

ECONOMIC DATA ::

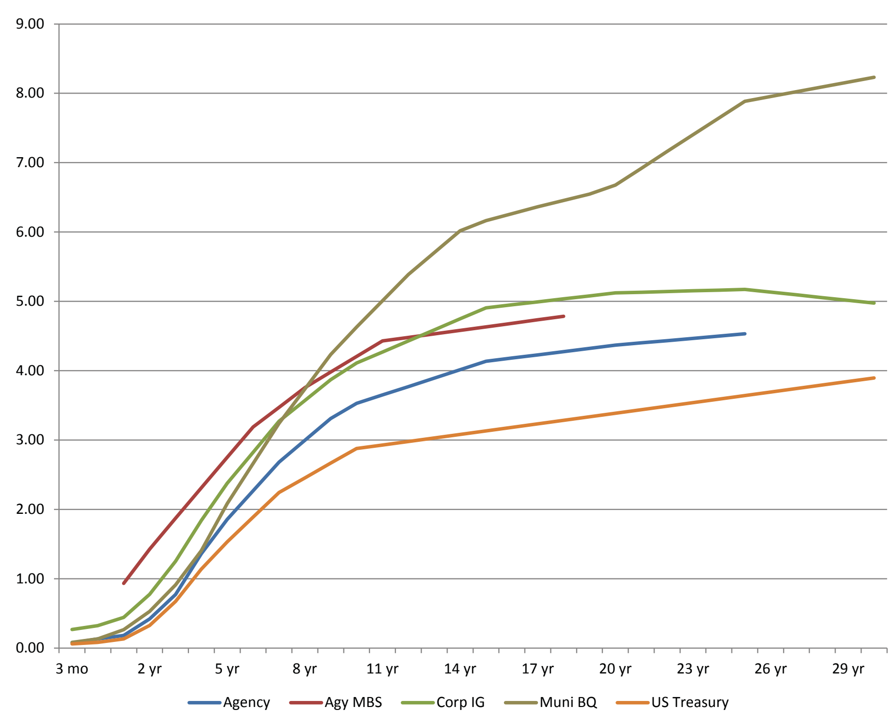
Q3 GDP Growth	3.6%
November CPI YoY	1.2%
Unemployment Rate	7.0%

UPCOMING EVENTS ::

December 18 - Next FOMC Meeting

In This Issue

Yield Curve



All data as of 12/16/2013

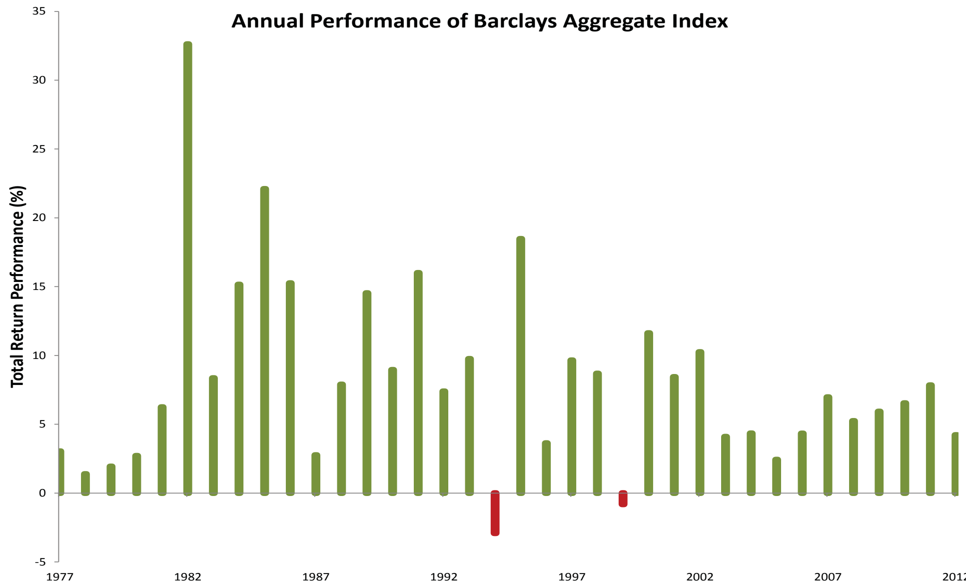
EDITORS ::
Cliff Reynolds, CFA
cr@acrinv.com
Ryan Craft, CFA
rc@acrinv.com

CONTACT US ::
P :: 888.882.0072
636.449.4900
E :: info@acrinv.com
W :: www.acrinv.com

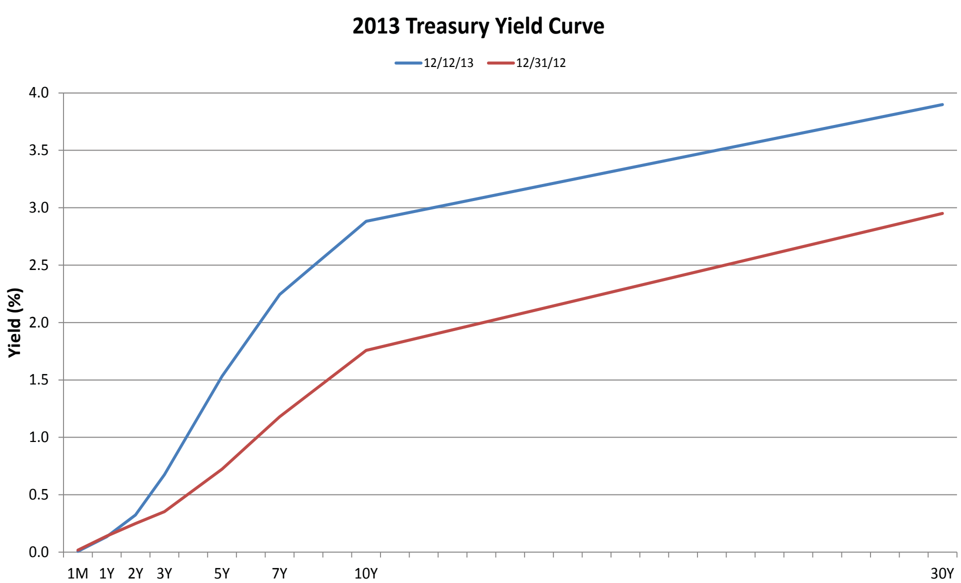
CENTRE FOR FIDUCIARY EXCELLENCE

2013 Bond Performance Review | Ryan Craft, CFA

Barring a dramatic change in the last couple weeks of the year, the bond market is poised to post a loss for 2013. The Barclays Aggregate Bond Index is a proxy for the broad investment grade bond market. Since its creation in 1976, it has only posted a negative total return two times prior; 1994 and 1999. 2013 is about to become the third time in history. Given that this has been a historically bad year for bonds, let's take a look at how bad it was and what this means going forward.



First, a brief sidebar. This analysis will cover the total return of the bond market. Total return includes the coupon income from the bond as well as the change in market value. One may ask, should banks care about total return? The short answer to that is… yes. Many banks may focus on book yield in their portfolio as they intend to hold every bond until maturity. However, total return remains important as it is the true current economic value of the portfolio. Over time, increasing economic value is going to grow the bank, even if it does not always create the optimal accounting situation. Additionally, total return should be a focus for banks due to liquidity. The FDIC has stated that it will be sensitive to banks with large unrealized losses in AFS portfolios. As the value of those holdings declines, the bank's ability to leverage those securities declines. This is a situation where the accounting can cover over the problem, but it is important to recognize the economics of the situation.



So, what happened in 2013? In May, the Fed began to openly discuss the idea of tapering, or decreasing the amount of bonds they are currently purchasing. This caused the bond market to convulse, with interest rates spiking upwards over a short period of time. However, not all rates were effected the same. The nearby chart shows the Treasury yield curve at the beginning of the year and as of December 12th. The Fed remains committed to keeping short term rates low, so short maturity bonds have remained relatively unchanged throughout the year. However, bonds with longer maturities have increased by roughly 100 basis points. This is known as a steepening of the yield curve.

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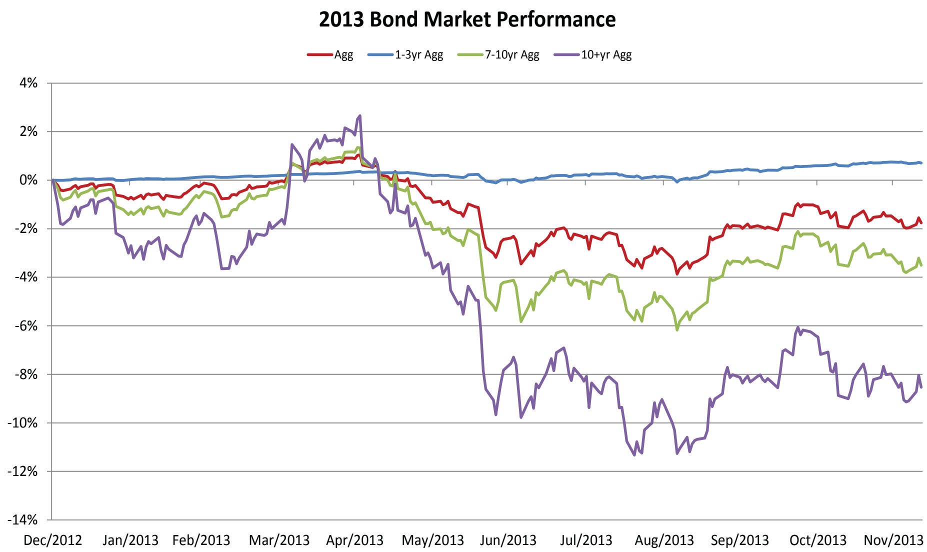
Due to different maturities experiencing different changes in rates, portfolios of different durations have had very different results throughout 2013. The Barclays Aggregate is one of the broadest measures in the US for bond performance. It holds bonds across the investment grade universe and across the entire spectrum of maturities. As a whole, it currently has an average duration of about 5 years. As you can see in the chart to the right (red line), it has lost about 1.75% so far this year. Because yields rose, the value of bonds fell more than the income that they produced.



It is interesting to look at how more focused sections of the bond market reacted. The same chart also tracks the performance of the Barclays Aggregate segregated by maturity. Bonds with shorter maturities actually posted a positive return for the year. This is because those yields were unchanged. Longer bonds, especially very long bonds (10-30yr maturities) were hit the hardest. The long portion of the Barclays Aggregate has lost over 8% year to date. This is also the sector of the market with the highest yields and the area on which the financial media usually focuses. So, those investors who have chased yield by buying longer bonds have suffered greatly this year, where investors focused on the shorter end of the curve have remained unscathed.

Now for the good news… yields are higher. This means that investors can expect to earn more on their fixed income investments going forward. The best measure of expected return on a bond is its yield to maturity. Now that yields have increased on many bonds, investors can expect higher returns going forward as yields on reinvested income and new investments will be higher.

Another positive aspect that comes with higher yields is the prospect for better total return in the future. The main reason that total return was negative for the market this year is that the yield was so very low to begin with. This provides very little income to protect against declining market values. There have been many other instances where rates rose more than they did this year, but the market still posted a positive total return because the yield was high enough to offset the loss in market value. The yield on the market began the year at just 1.74%, leaving little cushion for rising rates. Now, the yield on the market stands at 2.40%.

This shape of the curve also presents an attractive investing environment. The curve is now very steep, which creates a more dramatic rolldown effect – for example, when a 5 year bond a year from now becomes a 4 year bond, and so on. As the bond becomes shorter over time, its market yield will decline too (assuming static rates), which raises the prospect of price appreciation in a flat rate environment. This phenomenon exists anytime the curve is positively sloped, but it is more dramatic as the curve grows very steep like it is today.

What should investors expect for 2014? Despite what is heard in the media, research shows that interest rate changes are highly unpredictable. Over time, interest rates follow a random walk with very little correlation to past performance. The best gauge of future expected return on a bond is its current yield to maturity. Given that yields

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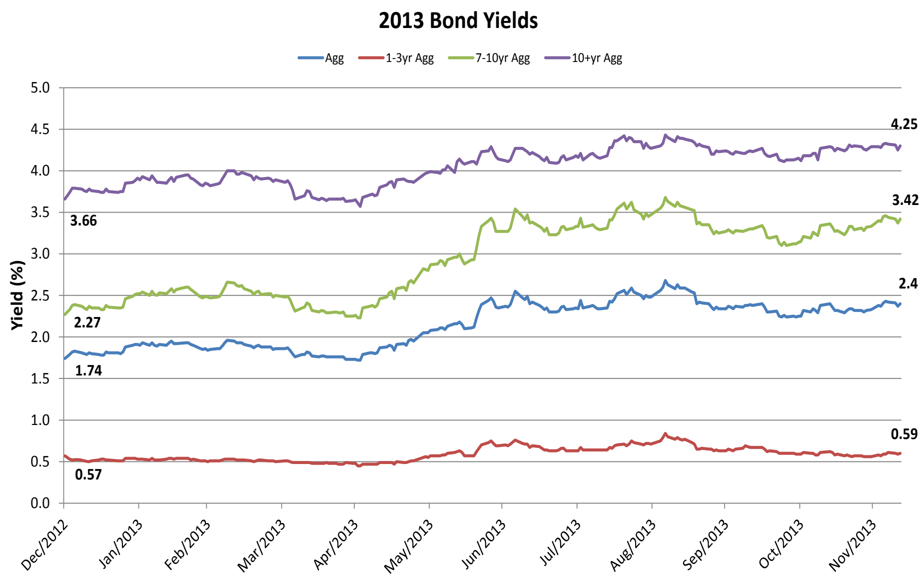

are now higher, we would anticipate 2014 to offer more potential than 2013.

Additionally, there are conditions present in today's market that could push rates higher or lower, making it dangerous to gamble too highly on one outcome over the other. For example, the Fed may end its Quantitative Easing program in 2014, leading to higher rates across the curve. This is one of the most widely held views for next year and is a continuation of the story for this past year.

However, what if they continue buying bonds or become more aggressive? Some on the FOMC have expressed the need for an inflation floor of around 2%. Core inflation, the Fed's preferred measure, is currently at 1% and has been on a declining trend. There is the potential that the Fed becomes more aggressive in the markets in an attempt to re-inflate the economy.

Maybe the Fed does taper as the market expects. One could argue that this is already priced into the market, so it would have little effect on market yields. Or, yields may rise due to tapering. Those higher yields could have a dramatic effect on the broad economy, which then triggers a flight to quality back into bonds with rates ultimately grinding lower. The US economy is more leveraged than ever – Total Debt-to-GDP stands at roughly 350% versus less than 250% in the last rising rate environment of 2003-2004. It is reasonable to expect changes in interest rates to have a greater effect than in prior tightening cycles.

These scenarios are not to make a prediction, but instead to illustrate the dynamic nature of interest rates and the difficulty in making a call. Investors are better served investing where expected risk-adjusted returns are highest in the current environment. Today, that would be in the 3-7 year part of the curve. It would also be in bonds that offer spread, namely investment grade corporates, municipals, and short MBS pools.

Economic Analysis - Taper Time | Cliff Reynolds, CFA

In my economic article from September's issue of ALM Insights I brought up the idea that the market was obsessed with the Fed's playbook – meticulously picking apart every word in the FOMC's statement looking for clues detailing the Fed's next move. We didn't get the expected "Septaper" announcement and the market threw a fit. Rates quickly moved lower toward where they were before the idea of taper dominated the bond market.

Since September, rates have moved back up, but this time it has been a little different. The first "taper tantrum" earlier this year was a selloff across the entire yield curve. However, as the expectation of taper built consensus in the market more recently, most of the yield changes have been concentrated in the 5-10 year area of the curve. Expectations of a slowdown in open market purchases by the Fed have picked back up with the latest economic data but the shorter end of the curve has yet to really participate in the latest selloff. There is no clear reason why the market is pricing a potential taper differently this time, but as you look closer at what is driving the recent conversation, it's easy to see this time is different.

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Economic Data Improved, but Internals Look Shaky

The most recent GDP data showed the US economy grew at a 3.6% annualized rate in the third quarter, revised upward from the 2.8% initial release, with the largest portion of the growth coming from an inventory build-up. The calculation for GDP is a bit strange in that it counts a positive change in private inventories as part of private investment. We would much rather see the economy growing like this with better final demand from consumers to support growing inventory numbers, but despite that there were still differing views on the latest release.

Lack of sustained growth is being sighted by most economists viewing this latest data as weak. With the government shutdown from October likely to weigh on the Q4 numbers it's almost too easy to dismiss the Q3 data as a one-time event not to be followed by more strong data. However, since then we have gotten retail sales data from early Q4 and they have surprised the market to the upside. More data like that may help to alleviate the worry that future production will need to slowdown in order to expunge excess inventories.

The headline jobs number that showed that payrolls grew by 203,000 in November in addition to positive 8,000 in revisions to the payroll figures from the last two months, and a drop in the unemployment rate from 7.2% to 7.0% was supported by internal figures that also showed some positive developments in the job market. Both average weekly hours and average hourly earnings continued a nice trend that dates back to the middle of this year.

The Bureau of Labor Statistics admitted that the prior month's establishment survey, which is used to calculate the unemployment rate, was very distorted by the government shutdown. Because of the distortions many in the market dismissed the dramatic drop in the size labor force in October, waiting for November's figures that were expected to be free of government shutdown noise. Their expectations were met as the November release showed a snapback from blips in the data from October. One disturbing trend in the internals of the jobs data, the labor force participation rate, continues to disappoint. I will touch a little more on that phenomenon later.

Whether you are talking about GDP growth or the labor market, sustainability will most definitely be a major focus of both the market and the Fed. Without it, the Fed is going to be less concerned about adverse effects from aggressive monetary policy and is more likely to keep such policy in place.

From the Horse's Mouth

Over the last couple weeks I had the pleasure of listening to James Bullard, President of the Federal Reserve Bank of St. Louis, speak twice on monetary policy. The first talk was given at the Missouri Bankers Association Executive Management Conference and the second was at a lunch hosted by the CFA Society of St. Louis. There were very few differences between the two speeches, but it was helpful to listen in person twice. My head is thick, so absorbing information in a live setting can be difficult sometimes.

President Bullard's past views within the FOMC are important to consider in order to put what he said recently in the proper perspective. First off he is a self-proclaimed inflation hawk. I'm not sure if I would quite describe any of the current voting members of the committee as inflation hawks, but Bullard has certainly concentrated heavily on inflation when voicing his opinions publically. Bullard was a dissenting vote back in June, when the Fed's statement was adjusted to say that the downside risks to the economy had diminished, with the belief that the Fed should signal more strongly its willingness to defend its inflation goal in the light of recent low inflation readings. (This particular meeting statement from June marked the beginning of the first taper expectations achieving consensus in the market.)

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Over the last 2-years, members the Federal Reserve have spoken openly about an explicit inflation target of 2%. Our central bank is not alone in this policy, in fact it was one of only a few major central banks in the world to not target an explicit rate of inflation when it officially made the announcement in January 2012 and the current consensus within the inner circle of global monetary policy folks is that monetary policy can control inflation. However, since June, Core PCE, the Federal Reserve's desired measure of inflation, has continued its downward trend – falling from 2% in early 2012 to nearly 1%. Despite this trend, President Bullard seemed to be more on the side of supporting a small taper at the next meeting, scheduled to conclude on December 18. I'll highlight a couple of the topics he concentrated on that make me think he may support a taper so soon.

First off, most people, including myself have been viewing taper as the beginning of the countdown to the end of QE. There was never any true indication that this was the case, but most projections of bond buying in a post taper environment have assumed another 12 months or so of buying with the monthly amount slightly decreasing at every subsequent Fed meeting. In his recent speeches, President Bullard mentioned a possible scenario where the Fed begins to taper to recognize the progress the labor market has made up until now, but leaves all further adjustments dependent on future data. A possibility like this makes taper more likely since the FOMC won't need to see a full recovery underway in order to take the first step. It also makes the announcement of the first small taper a much less important event than what we expected to happen last September.

Second, the worsening labor force participation rate has been the weakest part of the recent jobs data and has been the single greatest contributor to the improvements in the unemployment rate this year. A unemployment rate of 6.5% has been explicitly stated by the Fed to be the level where they may begin to begin to raise their fed funds target. This has been part of their forward guidance policy tool – their answer to the problem of not being able to lower interest rates below zero. The unemployment rate is currently 7.0% and at the current pace of change on track to hit that 6.5% by the end of 2014. Surely they would stop influencing longer-term interest rates before they started raising fed funds… right?

The Q&A portion of both presentations included questions on the poor labor participation rate contributing heavily to the improving unemployment rate. Bullard acknowledged the data, but admitted that he isn't too concerned with the trend – sighting research on demographic trends in the US. His belief is that an aging population in the US is the culprit. I'm not a demographic expert so I can't say too much about the validity of his opinion, but I can say that if he is reading this research, others on the FOMC are reading it too. I'm not sure how much impact the weakening labor force participation rate is going to have on the committee's decision.

There are also some factors keeping a taper announcement on the 18th from being a sure thing. Inflation remains well below target and no one at the Fed can really explain why. There are theories being used to explain away the low inflation conundrum, such as weakening global demand for commodities and excess liquidity finding its way into financial assets instead of economic inputs, but I think the Fed's deflation concerns remain. They see Japan's experience with deflation and seem determined to avoid anything resembling their long-term economic malaise at any cost. This will also be Bernanke's final meeting as Chairman of the Federal Reserve and it may just be easier for the committee to wait and have taper be Janet Yellen's first act instead of Ben Bernanke's swan song.

The market has a large part of taper priced into the market. The most telling sign of Fed intervention was negative real interest rates – not just in overnight rates, but much farther out the curve. Considering how low inflation has been as of late, the real yield on the ten-year is just short of 2% if you subtract realized inflation from the current 2.85% nominal yield. If you consider inflation expectations measured by TIPS breakevens you end up with a real yield of about .7% - low, but much higher than the low set in late 2012 of -.92%.

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You also can't ignore the wild card that is the budget negotiations and possibility of another government shutdown. It would be a difficult decision for the FOMC to begin to slowdown purchases in the face of another fiscal crisis since they have used that as a reason for both weakness in the economic data and the need for continued monetary stimulus. Expectations are pretty evenly split on whether they taper or not, with the false positive back in September adding to the market's uncertainty. However, following the recent comments from President Bullard, the only voting member of the committee in protest of the Fed's initial indication of taper back in June, I believe the case for a small taper in 2013 will be made in this week's meeting.

ALM Model Year End Checkup | Ryan Craft, CFA

On October 8th, 2013, the FDIC issued a letter reemphasizing the importance of prudent interest rate risk management with an eye towards rising interest rates (FIL-46-2013). This letter is a follow up of prior letters issued in both 2012 and 2010. It appears that the FDIC wants to make the message clear that banks should do all they can to be prepared for a rising rate environment.

Through these letters, the FDIC has stressed the importance that **ALL** financial institutions develop a comprehensive method for quantitatively measuring interest rate risk. It has stated that management should look at multiple measurements of IRR, such as gap analysis, earnings simulations, and economic value of equity (EVE). These measurements should include multiple time horizons and large rate shocks of up to 400 basis points.

If used properly, Asset-Liability modeling can become an effective management tool in addition to filling a regulatory requirement. The crux of any model is the quality of input data and assumptions. As the old saying goes; "Garbage in, Garbage out". Regardless of the quality of the model, the results can still be tainted by poor quality data or misleading assumptions. The data problem is typically easy to fix as most ALM software can interface with the bank's internal systems to pull account level data. This can still be labor intensive, but quality data is attainable in most circumstances.

Assumptions are another matter. This is where modeling becomes part science and part art. Assumptions are used in the model to account for how customers and rates will react in the future to changing market conditions. Since the future is unknown, assumptions will inevitably be wrong almost all of the time. However, this exercise is still fruitful as it is never intended to be predictive and exact.

Instead, the proper use of a model is informative, in that it will show where potential risks lie in the balance sheet. It gives management a way to quantify how the bank will react if certain isolated variables are changed. By running multiple scenarios and situations, management can also develop contingency plans based on various potential outcomes. The key is to focus on trends and directions, not necessarily the hard numbers.

Consider two areas where assumptions can have a large impact on the model: Interest Rate forecasts and Non-Maturity Deposits (NMD). Interest rate changes are unpredictable, so a prudent bank will manage for all scenarios. Regulators expect to see a minimum of parallel interest rate shocks up to 400 bps. Parallel shifts are a great place to start due to simplicity, but they suffer from shortcomings that can understate risk as they ignore basis risk.

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Basis risk is the risk that spreads between benchmarks can change. For example, a bank may have 1yr loans based off of Prime and match fund those with 1yr CD's that are priced off the swap curve. In a parallel shift, there would appear to be no interest rate risk as they move up and down in perfectly opposite directions. What happens if the market anticipates higher interest rates in the future, but the Fed holds short term rates steady? Prime will remain unchanged, but the 1yr swap rate would likely increase, leaving the bank exposed to lower NIM holding all else constant. This is basis risk. This is why it is important to incorporate non-parallel rate shifts into the model. Managers should be careful to not try to predict rates, but to use a variety of future rate paths to see the effect on the balance sheet and income statement. This way they can see where potential risks lie and make a decision about whether to hedge or change behavior if needed.

Non-Maturity Deposit assumptions are likely to be a hot topic with regulators going forward. Interest rates are at unprecedented levels with never seen before actions from the Federal Reserve. This would lead one to imagine that the reversal of this cycle may be unlike past tightening cycles. This may be especially true with NMD's. With so much cash being pumped into the system, heightened levels of risk aversion, and low opportunity costs for remaining in cash, many banks remain swollen with short term cash deposits. How those react when interest rates rise and more attractive investment rates appear is impossible to know.

This is where assumptions are part science and part art. The science aspect involves lots of historical data (preferably at least one entire interest rate cycle) where the bank can perform regression analysis to get a historical marker for the behavior of their customer base. This is the best place to start and, in the past, was where many banks finished.

Given the issues outlined above with the current rate environment, it is prudent to test the effects on the bank if NMD's act different in the next cycle. Just like rate shocks, the bank can adjust up and down the beta's and decay rates for NMD's to gauge the bank's potential exposure. This is mentioned by the FDIC in the recent FIL. Banks need to make reasonable assumptions on NMD's, but regulators are likely to want banks to err on the conservative side given the current environment. Therefore, while it may still be most appropriate to run with historical data as the base case, banks should also run scenarios where NMD's are all viewed as short term and make sure that it can live with the results just in case.

The point of all this is not to come up with an accurate forecast or prediction. It is a tool to uncover hidden risk in the balance sheet. By pushing and pulling the levers, a bank can stress the model until it breaks. This will help to shed light on potential areas of concern for the bank to examine. It can also give management confidence to take a particular course of action.