GIOA Update

Summer 2014

NEWS *from the* GOVERNMENT INVESTMENT OFFICERS ASSOCIATION

An Update on Municipal Advisor Registration

SPENCER WRIGHT, STATE OF NEW MEXICO, GIOA BOARD

On July 1st — as we began a new fiscal year — government investors were affected by a new federal law which may change the way that many government investment officers manage municipal funds. The new law, adopted by the SEC as a part of the sweeping Dodd-Frank reforms, defines new requirements for those who provide advice to municipal entities.

While primarily aimed at the debt side of our balance sheets, the new Municipal Advisor rules also affects a portion of the assets which we invest.

While primarily aimed at the debt side of our balance sheets, the new Municipal Advisor rules also affects a portion of the assets which we invest. Generally, the rules provide for registration requirements for municipal advisors who advise on the issuance of debt. This requirement "follows the money" and extends the registration requirements for those who provide advice on the investment of bond proceeds.

Regulation Requirements

The regulations will provide oversight for those who advise municipal clients on the issuance of debt. In addition to the SEC action, the Municipal Securities Rulemaking Board will draft and adopt new regulations that will add additional clarity to the SEC rules.

Impact on Governmental Investors

Importantly, the new requirements only cover bond proceeds, or the monies related to the issuance and repayment of municipal bonds. To the extent that many government investors co-mingle or separately manage bond-related funds, it is important to recognize that the law

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only covers the investment of those funds. Of course, many state or county sponsored investment pools contain bond proceeds, so the new regulatory rules cover those funds as well.

Basically, an entity, including a broker-dealer, which provides specific advice with regard to the investment of bond-related funds would need to be registered as a municipal advisor. In a subsequent collection of answers to frequently asked questions (FAQ), the SEC provided additional clarity on what is meant by the word "advice." In section 1.1 of the FAQs (updated May 19, 2014), the SEC stated that "advice includes, without limitation, a 'recommendation' that is particularized to the specific needs, objectives, or circumstances of a municipal entity or obligated person with respect to municipal financial products or the issuance of securities, including with respect to structure, timing, terms, and other similar matters concerning such financial products or issues, based on all the facts and circumstances."

Unfortunately, in the absence of specific regulation by the MSRB, the SEC rule is subject to interpretation. Many firms that provide investment services to municipal entities have interpreted the term "advice" in different ways. The SEC rule places responsibility for compliance with the rule on the broker-dealers who provide the advice related to the issuance of debt or the investment of bond-related funds.

Broker-Dealer Letters

Many of us have received letters from our investment counterparties in connection with the effective date of the SEC rule. The letters have come in different forms, based on how the broker-dealer interprets the SEC rule. Many states have developed a blanket statement about the funds under management in which the State asserts the position that it is not seeking advice and will act in whatever way the State deems appropriate. This approach has been referred to by some as a 'no-advice' letter. This effort was spearheaded by the States of Georgia and Ohio and adopted by many other states in advance of the SEC rule's July 1 effective date.

Exemptions

There are several conditions which create exemptions from the terms of the SEC rule. The primary exceptions are a) if there is an Independent Registered Municipal Advisor (IRMA) retained by the municipal entity to specifically advise on the investment of bond proceeds or b) if the information to be provided by the prospective broker-dealer is under a formal Request for Proposal (RFP) process.

Having an IRMA as an investment advisor - regardless of whether the advice is followed – may be helpful to municipal entities, although it would likely come at a cost to the investing entity. In addition, creating and operating under new procedures related to the interaction of the IRMA and the timing of the investment of funds in fast-moving markets could make this a difficult and cumbersome option. The SEC has not fully defined how the IRMA is required to relate to the municipal entity's investments and what level of documentation is required to be retained.

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The RFP exemption was designed to allow advisory firms the ability to respond to a formal selection process for the issuance of debt. Many municipalities have interpreted the SEC's language to allow for "Mini-RFPs" which would be effective for a pre-defined period of time and allow broker-dealers to solicit ideas or offer advice to an investing municipal entity.

Of course, if bond-related monies are externally managed by a Registered Investment Advisor (RIA), they are not being managed by the municipal entity. The RIA is subject to a different regulatory regime, but the external management of funds comes at additional costs as well as a loss of control.

Next Steps by the MSRB

The MSRB is charged with writing the specific regulation for the SEC Rule. In January, the MSRB released draft rules which have received significant commentary from the investing public. In May, the MSRB Board suggested that they would be revising the draft rules and release new rules later this summer or into early fall. The MSRB regulations will be important to watch, as they will provide additional clarification on the adoption of the new SEC Rules.

In the interim, we will continue to work with brokers who are still willing to conduct business with our respective entities. As the unintended consequences of the new rules are becoming more apparent, hopefully the MSRB will release regulations which should provide clarity to all market participants.

Mr. Wright is expressing personal opinions and, as such, his comments do not purport to represent the official opinions of his employer.

Steps for Moving Forward

RYAN GRAF, SENIOR VICE PRESIDENT, MESIROW FINANCIAL

Forward rates. We sometimes joke about them ("The only thing you can be sure about them is that they're wrong"), but they are key to understanding how the curve might evolve as the day of the first Fed hike draws closer. Below we discuss how we can use forward rates to estimate how the curve might reshape in coming months. We then consider how callable step-ups can be used to help insulate a portfolio against such moves.

Using Forward Rates to Estimate the Curve

The idea of forward rates can be encompassed in a simple example. An investor should be indifferent between 1) buying a 2yr zero coupon bond or 2) buying a 1yr zero coupon bond and rolling the proceeds into another 1yr zero coupon at maturity, otherwise there is an arbitrage opportunity. For our purposes, the most important lesson here is that there is an expectation for the path of short term rates embedded in longer term Treasury securities.

The first step in using this lesson to evaluate how the curve might move is to project a likely path or paths for the Fed Funds target rate. One month bills tend to follow the Fed Funds target rate fairly closely so we can use our path(s) for the target rate to model the path of bill yields. Using the lesson of the forwards, we can then use these yields to estimate longer maturity zero coupon bond yields. Since the exact path the Fed will take is not known, our estimated curve should reflect an expected value of the different paths the Fed could take.

Let's consider two scenarios where the Fed moves in 25 bp increments to a terminal rate of 3.75% (as projected in the latest Summary of Economic Projections (SEP)). The aggressive scenario assumes rate hikes at every meeting while the cautious scenario assumes hikes at every other meeting. Below are the zero coupon curves just before the first hike that are consistent with these scenarios along with how the curve looked in 2004.[1]

Rather than use one curve or the other, a blend seems more appropriate given that the Fed's latest SEP projects 25 bp of tightening every 1.5 meetings in 2016, which is consistent with a 50/50 weighting of our two scenarios. But the Fed has consistently been overoptimistic about the recovery. If we look at the Euro-dollar futures market, it is pricing in hikes approximately every other meeting in 2016. Thus we think a 60/40 blend in favor of the cautious scenario is a more reasonable approximation of where the curve will be ahead of the first rate hike. This blended curve implies rate increases of 70-80 bp in 2-5yr maturities.[2]

Insulating Your Portfolio

How such a move would affect you is critically dependent on both the duration of your portfolio and when the first hike occurs. If it comes 6m after the end of asset purchases (i.e. at the April meeting if the latest minutes are to be taken at face value) your portfolio will

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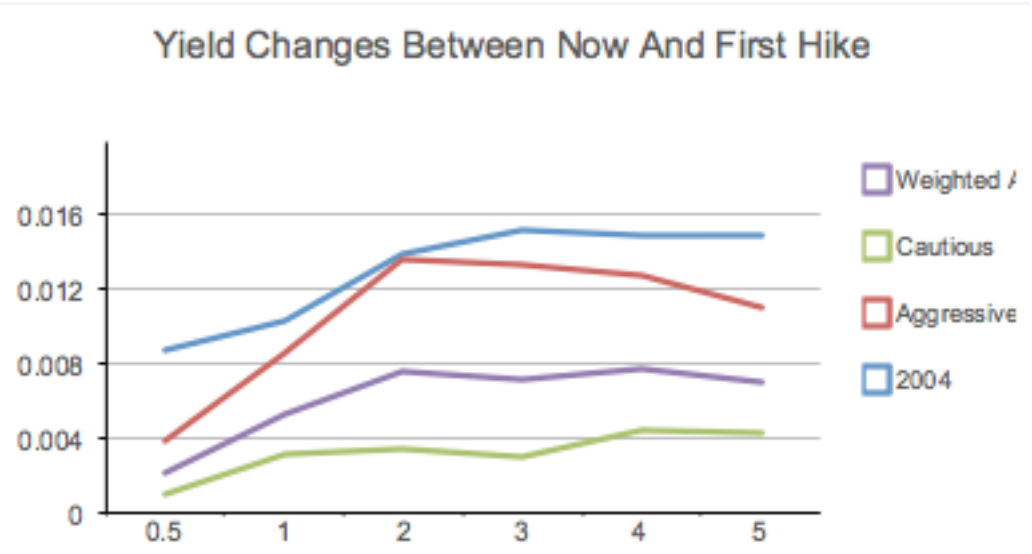

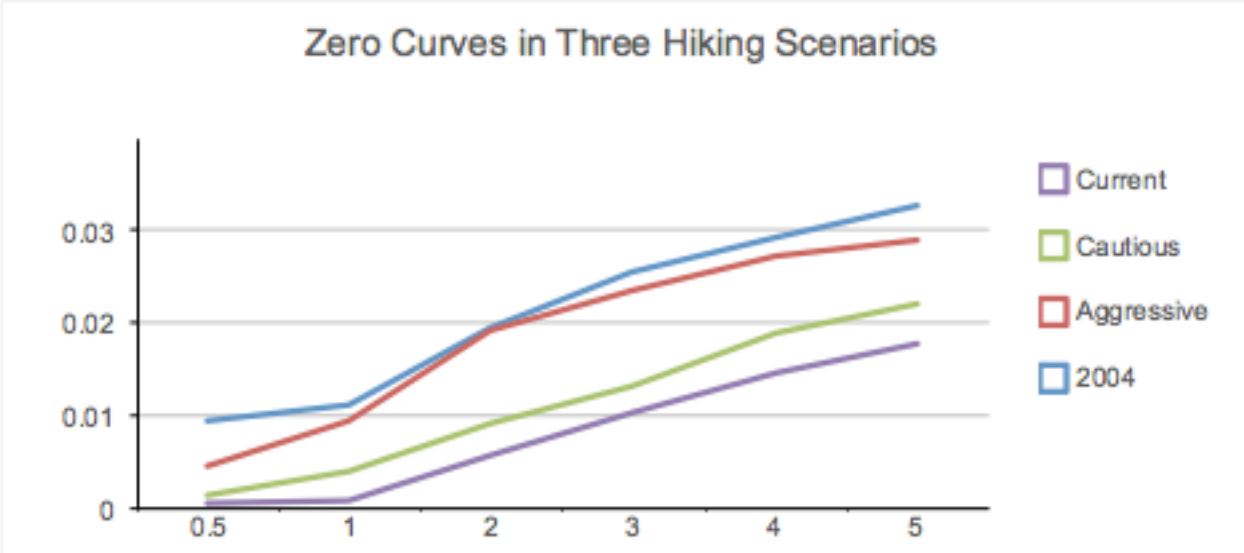

suffer quite a bit more than if it doesn't come for 2 years. Similarly, shorter duration portfolios will weather an early hike better than longer duration portfolios as seen below. While our view has been that the Fed will approach tightening cautiously leading to a long period of low rates, there is always the risk that the Fed moves sooner, resulting in a more rapid reshaping of the curve. In order to provide protection against this risk, we recommend working callable step-ups into your portfolio.

Consider a 5/1y (1x) step-up structured as a short term alternative that pays 0.50% for 1yr and then steps to 2.75%. The goal with this structure is to significantly beat 1yr alternatives while also having a very high probability of call. Indeed the front end coupon out yields 1yr discount notes by ~35 bp while the back-end is ~135 bp IN the money versus current 4yr bullets.[3] This high probability of call gives the structure a ~60 bp of cushion to be called versus our estimate of where the curve would be if the Fed were to move 1yr from now. In contrast, a new issue 5/1y (1x) would come around 1.75% and is only ~35 bp IN the money to be called versus current rates. If the Fed moves a year from now, the fixed rate callable would likely not be called given rising rates in anticipation of Fed hikes.

As a part of your portfolio, step-up structures can help augment your returns should the Fed move in mid-2015 instead of later. If the market moves to our estimated curve over the next 12 months, a simple, four bullet portfolio would produce an annualized total return of only ~35 bp. In contrast, the outlined step-up would likely produce a total return of 50 bp as it would be deep in the money to be called.[4] If the date of tightening is further out, then the step-up is even more likely to be called, and you would still have beaten short alternatives. If the Fed moves earlier than mid-2015, our example

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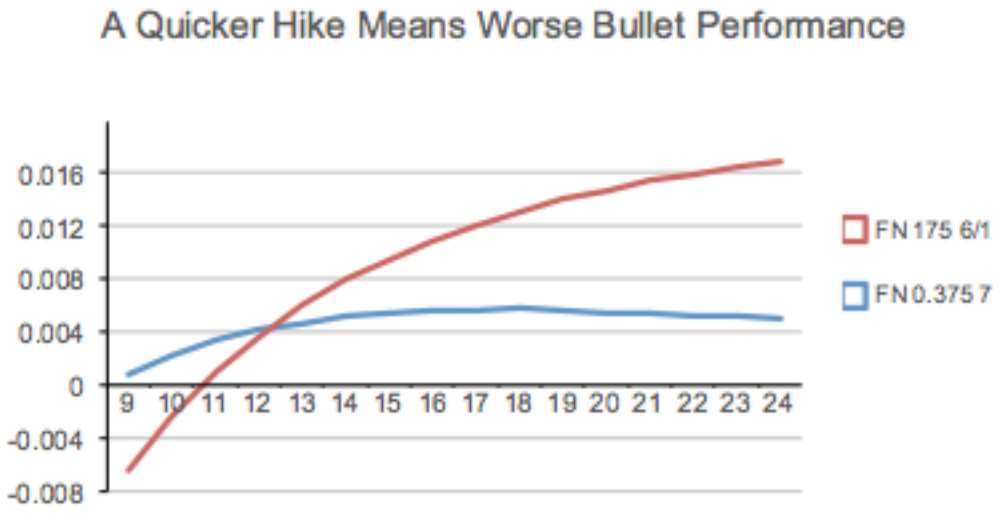

step-up will be quite cuspy but would still have a chance of being called. In this scenario though, any other short investments will be able to be replaced at much higher rates enhancing performance.

The bottom line for us is that step-ups provide good diversification to help boost your portfolio's returns even in the face of rising rates. As with anything in life, balance is the key. Thus, we do not recommend loading up the boat on step-ups. Rather, we think some carefully structured step-ups along with a mix of bullets and some fixed rate callables will best position your portfolio for success as we approach a new age of Fed policy.

[1] We have adjusted 2004's curve by lowering every point on the curve by the difference in the Fed Funds target rate between now and then.

[2] We have chosen to focus on 5yrs and in due to the myriad other factors that come into play in longer term rates.

[3] As of 7/11/14

[4] Run on BondEdge as of 7/11/14. Bullets used are FNMA 0.5 7/15, FNMA 0.375 7/16, FHLMC 1 7/17, and FNMA 1.75 6/20/19 and are equally weighted.

GIOA Board members from left to right:
Pam Jurgensen, Spencer Wright, Mary Christine Jackman, Rick Phillips, Tonya Dazzio, Laura Glenn, Maurine Day, and Ryan Bilsky (not pictured – Shawn Nydegger, Sheila Harding, Thomas Williams)

Munis — Green Pastures or Red Herrings?

LARRY M. WOOD/SVP–REGISTERED INVESTMENT ADVISOR, KEYSTATE ADVISORY, LLC / LAS VEGAS, NV

Municipal bonds as an asset class have definitely represented green pastures for public investment portfolios over the years. High yields, combined with strong cash flows, low default risks and adequate liquidity, have made munis a market worthy of allocation dollars in public investment portfolios. Going forward, this should continue to be the case, particularly for those portfolios that have a longer duration objective or utilize a barbelled management approach, where the longer end of the portfolio's barbell is heavily weighted with munis. For a significant number of investors, munis have been a primary contributor to outperformance, particularly when combined with a strong credit review program designed to catch problems before they enter the portfolio, such as in the pre-purchase review, or before they become widely known, such as when they are found during detailed ongoing monitoring of the portfolio as part of diligent oversight efforts.

Outside the credit scare of a couple years past, broadcast by well-known Wall Street portfolio manager Meredith Whitney, who proclaimed there were billions in losses from municipal bonds on the near-term horizon, the muni market is typically a quiet, $3.7 trillion total market selection of issuers ranging from cities, towns, counties and states to myriad special-purpose entities. Most of these have taxing authority and are designed to provide financing for anything from airports, hospitals and higher education entities to water control or fire protection districts, and many other purposes in between.

High yields and low default rates are the typical lure for muni investors seeking safe returns, but the market's deep-rooted structural issues can turn opportunity into a case where the investment seas can quickly get rough. Efforts can be taken to prevent green pastures from becoming a school of red herring in disguise. Analysis work designed to navigate market disclosure issues are an absolute must in order to generate and protect returns. Municipal structural issues such as non-standardized financial disclosure and the frequent use of accounting formats other than GAAP are only half the problem. The other half includes gaping holes in continuing disclosure (which make obtaining timely information a persistent issue), the absence of third-party independent audits and annual financials, and a lack of regulatory teeth needed to penalize issuers that don't live up to investor expectations. These two halves combine to create a framework that allows

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credit problems to lurk just beneath the surface, like an underwater mine waiting to attach to an unprepared muni investor.

Fortunately, though, investors who are prepared to deal with disclosure issues can navigate the rough seas and firmly claim green pastures. Implementing a consistent series of pre-purchase analyses directed at evaluating an issuer's capacity to pay, extent of leverage use, budgetary soundness and tax revenue stability, as well as evaluating the local/regional demographics and economy, will help ensure that bonds added to the portfolio will perform as expected. Pre-purchase reviews should also include efforts to stay at the top of the security waterfall, such as restricting investment to unlimited tax general obligation bonds or essential-service revenue bonds. Restricting investment to these bond types ensures seniority treatment in the event of credit problems. Assessing historical disclosure efforts, NRSRO ratings reports, financial trends, pension obligations and bankruptcy law eligibility rounds out pre-purchase analysis efforts. Monitoring these items annually, along with material-event notices coming through the "EMMA" muni market repository, will assist in identifying portfolio credit problems before they become too unwieldy.

Municipal market investors must circumnavigate the structural issues of consistently poor financial disclosure to ensure that returns stay in the green. Instituting a program of buying only muni issuers that use GAAP accounting, use independent, third-party auditors and have a proven track record of providing investors with timely and consistent annual disclosure will prove beneficial in protecting your portfolio. Cash-basis, fund-balance or non-GAAP regulatory accounting practices simply do not give investors the information they need. It's an issue found only in the municipal market, but it's one that can be avoided with proper screening techniques. Investing in issues that don't adhere to these disclosure standards could prove disastrous if credit issues arise, because investors won't have timely, detailed or standardized information to evaluate. Focusing on issuers that have achieved certificates of achievement for excellence in financial reporting by the Government Finance Officers Association will help in these efforts.

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Investors expect to participate in markets where supply and demand imbalances provide the basis for investment opportunity and risks can be controlled by access to timely, detailed information. Unfortunately, while those continue to be characteristics of most other developed securities markets, they are not true of today's municipal bond market. But, where there's risk (in this case, disclosure risk), there's reward, and efforts to avoid or manage disclosure risk can keep you in the green. For those muni investors unable to take advantage of disclosure-related imbalances, legislative changes are sorely needed. Current laws lack the teeth needed to force change.

Because of a growing muni investor backlash toward disclosure, the muni market's regulators, including the SEC and the MSRB, have recently focused long-overdue efforts on closing the disclosure gap, with the intent of bringing muni disclosure in line with that of the corporate market, for example, and with an eye toward protecting investors. The SEC's current disclosure amnesty program (called the Municipal Continuing Disclosure Cooperative, or MCDC), in which issuers self-report disclosure failures over the past five years, provides an opportunity for them to clear the slate. After September 10, 2014, however, disclosure failures will be deemed fraudulent and there will be no limit in terms of penalties and fines.

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Before beginning or continuing to invest in the muni market, public investment officers must understand not only the rewards that typically come from consistent investment in munis, but also that an inability to properly evaluate the credit risks—at purchase or throughout the life of the security—and financial disclosure issues specific to the muni market can leave unprepared investors awash in a sea of red, when they were expecting historically green pastures.

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Best Practices for Managing LGIPs

GWEN STONE, J.D, FITCH RATINGS

Adherence to industry best practices can help mitigate investment risk. Important principles for participants in local government investment pools (LGIPs) to consider are: how pool investment guidelines meet their needs, are the pool investment guidelines transparent and well understood, are the managers operations and risk management robust, is there good communication between pool participants and the manger so that cash needs are understood and planned for.

Pool management can vary considerably and may be a responsibility of the office of the treasurer, controller or finance director, while other pools are managed by dedicated traditional asset managers or by government officials who have outsourced specific advisory services to third-party advisors. Given the differences in pool management, pool participants should consider whether the manager meets high standards for investment management.

Pool participants should regularly review cash needs with the manager and ensure that the investment strategy is in line with their goals.

Investments Reflect Participant Needs

Participants in LGIPs can have different cash management needs, leading to differences in the way pools are managed. Pool participants should regularly review cash needs with the manager and ensure that the investment strategy is in line with their goals.

There are two general types of pools: operating pools — short-term cash needed for current operating needs; and those that manage excess cash — longer-term cash needed for future projects. LGIPs should have clear investment practices and investment guidelines that describe the investment strategy and set parameters for portfolio holdings.

For example, constant NAV pools that provide daily liquidity are geared to investors favoring high liquidity who do not wish to experience price volatility. Conversely, pools that manage

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longer-term cash for municipalities have an additional investment objective of maximizing return. These pools typically introduce market risk to the investor through a fluctuating NAV. They may invest in securities with longer maturities and/or in securities with higher credit risk.

Other differences include the procedures for depositing and withdrawing money. Some pools have certain dates during the month when contributions and redemptions are honored, while others allow for them on demand. Many pools require advance written notice and approval for funds outside a certain dollar amount if the withdrawal is not scheduled.

Clear and Transparent Investment Guidelines

LGIPs typically provide information about how they operate to aid in participants' investment decisions. Many pools disclose investment policies, and other relevant documents on their websites. Pools have an oversight structure that may include representation of pool participants on the investment committee and/or oversight board.

Best practices include a detailed investment policy outlining the strategy of the LGIP, the nature of the members on the investment committee, as well as the committee roles and responsibilities and processes and procedures for handling conflicts of interest. Additionally, the policy should contain a comprehensive listing of authorized and prohibited investments, diversification, rating and maturity limitations for those investments. Many policies go into detail regarding the nature of the participants, and any guidelines for contributions and withdrawals.

Finally, the policy should include a discussion of compliance reporting requirements and internal controls. Pool's investment objectives and universe of investable securities must be in line with applicable state statutes and be approved by the appropriate governmental oversight authority.

Best practices begin with active investment oversight, as well as implementation of robust risk management policies and processes.

Risk and Portfolio Management

Best practices begin with active investment oversight, as well as implementation of robust risk management policies and processes. Industry standard compliance and trading systems ought to be implemented for the portfolios. Timely, accurate and transparent surveillance and pool governance in accordance with applicable state statutes are also deemed necessary for every pool. In an effort to remain responsive to the dynamic market, management should regularly review compliance policies and investment guidelines (industry leaders perform such reviews on an annual basis).

Liquidity Management and Cash Flow Analysis

Liquidity needs can vary depending on the makeup of pool participants. LGIP participants include cities, counties, school districts, as well as other special districts or public entities and are typically divided into two categories — captive and voluntary. Captive participants are required by statute to invest in a pool, while those entities that can choose where to place their money are considered voluntary. In an effort to mitigate potential large redemptions from voluntary participants, many pools require advance notice and approval prior to withdrawing.

In an effort to both adhere to stated investment policy guidelines and to mitigate potential redemption risk, pools should seek to remain sufficiently liquid to enable them to meet all reasonably anticipated cash needs of participants. One effective way of doing so is to perform rigorous ongoing cash flow analysis. In an effort to fully understand cash needs, pools may meet with participants on a regular basis to discuss revenues

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and expenditures and adjust their forecasting models accordingly. With this information, many pools ladder investments to match fund participants' cash needs. Additionally, many pools maintain overnight or short-term liquidity in excess of actual forecast needs in an effort to mitigate any risks of unanticipated withdrawal requests.

Liquidity is especially important for pools that offer stable NAV and same day liquidity. These pools hold higher levels overnight liquid securities, should market dynamics change such that redemption pressures rise. LGIPS may hold lower amounts of average daily and weekly liquid assets in comparison to regulated money market funds that are required to hold 10% daily liquid assets and 30% weekly liquid assets. The reason for the difference can mostly be attributed to the captive nature of the participants in LGIPs, lending to stability and cash flow predictability.

Key Factors When Assessing LGIPs

Assess Operational Ability and Risk. Assessing an LGIP involves an in-depth analysis of a manager's investment and operational platform, focusing on five core pillars — company, controls, investments, operations and technology. Participants should seek to establish that the manager is suitably qualified, competent and capable of managing the assets of the pool. Some of the characteristics examined include: experience and track record in portfolio management; quality and stability of credit selection and monitoring processes; and the extent and quality of internal controls, operating policies, systems and risk management guidelines.

Study the Investment Guidelines. Examine the pool's investment policy to determine the parameters within which the portfolio must be invested. The investment policy should give limits to credit and market risk and restrict investment to certain asset classes.

Evaluate Liquidity. Another factor of great importance is liquidity. Evaluate the pool management's capabilities in projecting cash inflows and outflows, which enables a cash flow-matching investment policy and reduces liquidity risk. Additionally, consider the nature of the pool's investments and its depositors. A highly stable or captive nature of depositors serves as a mitigating factor in reducing the pool's liquidity and reinvestment risks.

Regular Communication. Ongoing review of the pool compared to the understood investment objectives and regular communication with the manager are important. Investment guidelines and strategies can change and portfolios due to changing market conditions. Pool participants should be aware of such changes and make sure that the pool still conforms to their investment needs.

An Aging Population's Impact on the Economy

CRAIG DISMUKE, CHIEF ECONOMIST, VINING SPARKS

The U.S. economy continues to progress at a slow rate of growth; and, this may well be as good as it gets. The U.S. economy managed an average growth rate of 3.6% during the 60 years leading up to the Great Recession. Over-leveraged consumers, a real-estate bubble, and inadequately capitalized financial institutions all contributed to the magnitude of the recession, among other factors. In the aftermath, all three issues have corrected to more-sustainable levels.

In the course of a typical economic cycle, such corrections would inevitably lead to a period of faster-than-trend growth. This time, however, it has been different. Gross domestic product has grown at a paltry rate of just 2.2% since the Great Recession ended, despite massive intervention from fiscal and monetary policymakers. While the stars are lining up to produce better results in the short-term, there remain significant challenges for long-term growth coming from many directions. One such challenge is the aging of the U.S. population. As such, the halcyon days of 3.0%-plus GDP may be a thing of the past.

Key among the factors lining up for growth in the short term is a better consumer. Household net worth is up almost $27 trillion from the nadir of the cycle and over $12 trillion from the previous peak. Household debt as a percentage of net worth has dropped from 24.7% in 2009 to 16.2% in the most recent Federal Reserve report. Even better, monthly debt payments have dropped as consumers have refinanced debt into lower interest rates. As an example, the average outstanding mortgage rate has fallen from 5.5% in 2007 to 3.9% currently, cutting $292 billion in annual mortgage expenses for homeowners. But, while the balance sheet of the consumer has been improving, income growth has been a stubborn laggard. However, with a tighter labor market, that trend is likely to reverse this year. Job growth has been stable at a net pace of near 200k per month for 18 months. Even more impressive, the BLS reports that there are now over 4.1 million job openings, consistent with a frothy labor market and – consequentially - wage gains. Businesses increasingly report that it is difficult to find qualified applicants for their existing job openings, another leading indicator for wage gains. Unfortunately, even if consumers do begin to see some income growth, it is unlikely to be sustained at too brisk of a pace given the weaker long-term growth prognosis. With help from an improving consumer, the economy is likely to pull out a good year or two of growth. Longer-term, however, there remain big challenges on the horizon.

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While no forecaster can claim much accuracy in long-run forecasts, it is telling that both the Congressional Budget Office (the non-partisan Washington group tasked with modeling the economic and budgetary impact of policy for lawmakers) and the Federal Open Market Committee (the monetary policy-making arm of the Federal Reserve) have both issued weak long-term growth forecasts. The CBO has projected "potential" GDP to average just 2.1% over the next decade. Meanwhile, the FOMC members have cumulatively forecast a longer-run growth rate of just 2.2% to 2.3%. One significant factor that is likely contributing to such weak growth forecasts is the aging of the population. Specifically, as the Baby Boomers move out of the work force and shift consumption habits, economic growth is likely to be depressed by both accounts.

From an output standpoint, fewer laborers implicitly means less output. If a factory with one hundred laborers making widgets loses ten laborers, they should be able to produce 10% fewer widgets.

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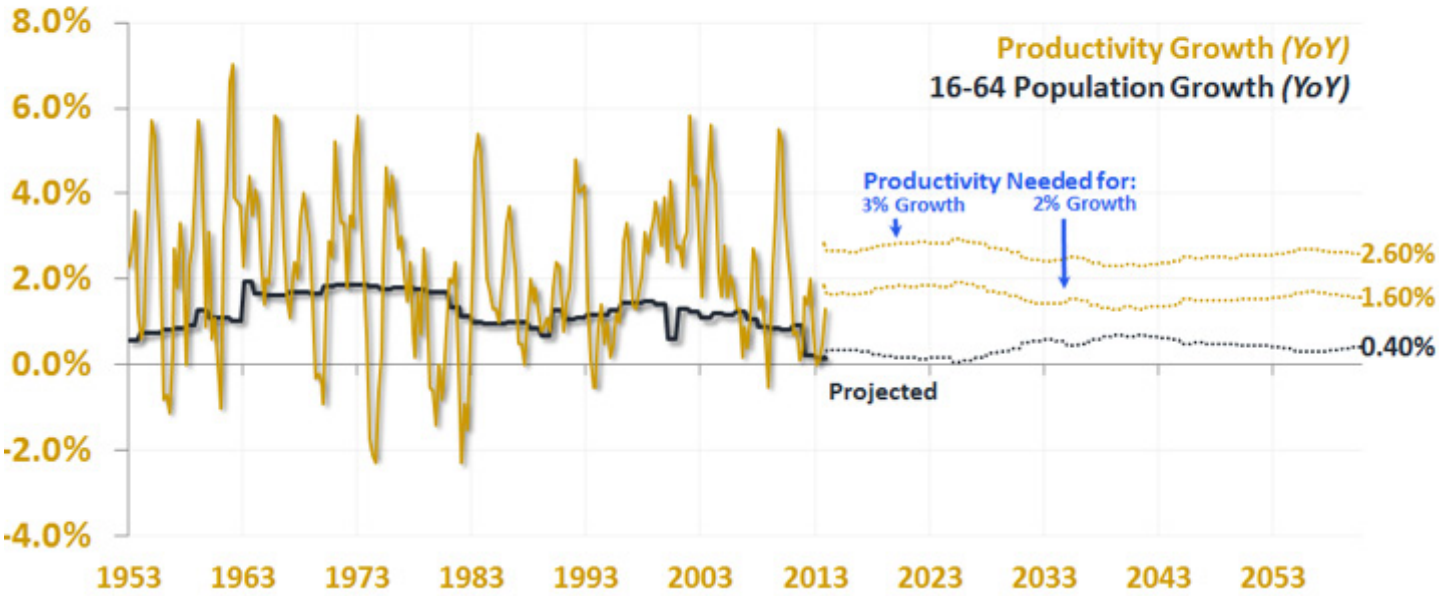
Changes in the supply of laborers can, to a certain extent, be offset by changes in productivity. For example, if the 90 laborers are able to become 11% more productive, they could then replicate the same output as the original 100 laborers. This combination of labor force growth and productivity growth has historically been a positive underlying force for economic growth. Since 1950, the average rate of growth of the 16-65 population has been 1.2% annually. Productivity growth has averaged an annual rate of 2.1% during the same timeframe. Combined, the two factors have helped produce an average rate of growth in the economy of 3.6%. However, through 2040, labor-aged population gains are projected to average just 0.4% with the next decade seeing almost no gains. Assuming there are only limited changes in how many seniors work or an immigration policy which brings millions of laborers into the economy, smaller gains in the working age population necessarily means that GDP growth will be limited to the gains realized in productivity. Historically, it has been difficult to achieve gains in productivity over 2.5% for any sustained period. Currently, nonfarm productivity is growing at an annual rate of 1.4%, also the average rate of growth since the beginning of 2010. As such, from an output standpoint, the aging of the U.S. population is likely to drag on growth for decades.

Another outworking of an aging population is a change in consumption habits. This effect is difficult to quantify. However, one trend that is easily observable is that consumers hit their peak spending years between 35 and 54. During those peak spending years, spending rises to almost 1.2x median consumption for all consumers, according to the BLS' annual Consumer Expenditure Survey. It then falls to 0.9x for consumers aged 65-74 and 0.7x for those aged 75+. For the decade ending 2020, there are projected by the Census Bureau statistics to be another 14.5 million people aged 65+, the lower spenders, and 2.7 million fewer people between the ages of 35-55, the highest spenders. All told, the shift in consumption habits of an aging population is likely to cut in half historical consumption growth inherent to the growing U.S. population. In this regard, the aging of the population will also have a negative impact on growth from a consumption standpoint.

While it is difficult to forecast economic growth years in advance, the headwinds that lie ahead are clear. Specifically, an aging population is likely to have an impact on total output and consumption habits. Because of these reasons, it appears reasonable for groups like the CBO and FOMC to expect below-trend growth for many years to come.

DEMOGRAPHICS: IMPACT ON OUTPUT



Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Census Bureau, Vining Sparks

Agency Debt Issuance under GSE Reform

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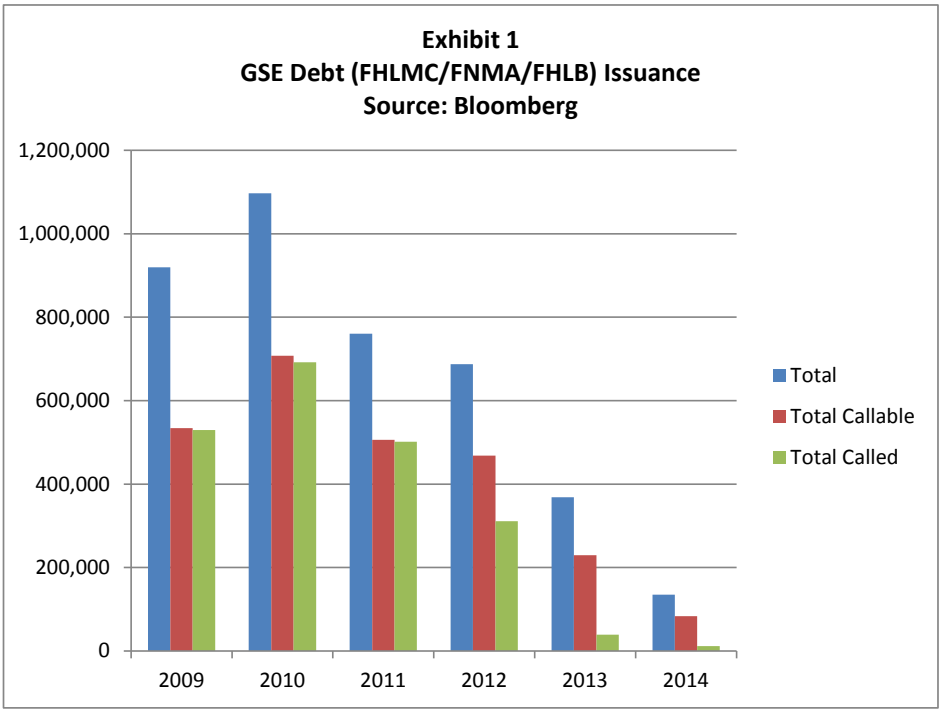
The topic of GSE reform has been discussed in detail in the financial press. While the debate on privatization of the GSEs along with the associated ramifications for the housing market has certainly been lively, none of the proposals for such reform have gained significant traction.[2] While the effect of privatization on the structure and liquidity of GSE mortgage-backed securities (MBS) has certainly been part of the discussion, similar effects on the nature and composition of GSE debt has not been discussed extensively. Implicit in our analysis is the assumption that any GSE reform will adopt a hybrid model, where private capital provides credit insurance for mortgages with catastrophe coverage provided by the government as opposed to either a completely private or public model.

As part of being placed in conservatorship in 2008, both FHLMC and FNMA agreed to shrink the retained portfolios to $250 billion by 2022, a timeline that was brought forward to 2018. The combined gross mortgage portfolios were roughly $1.5 trillion in 2006-07 and are now below $1 trillion. Therefore, it is not surprising that GSE debt issuance has continued to shrink as noted in Exhibit 1. The effect of this reduction has been most pronounced in the funding bucket that was used to fund portfolio purchases of loans and MBS. This trend is likely to continue as FHLMC and FNMA portfolios continue to shrink and higher interest rates lead to reduced mortgage production. Our expectation is that the vast majority of FNMA and FHLMC debt issued in the foreseeable future is likely to be short-term in tenor with the current trend of reduced issuance in longer term maturities likely to continue.

Given this trend towards reduced issuance, as GSE reform becomes a reality, there are several implications for the holders of FNMA and FHLMC debt securities. Despite the fact that most market observers do not believe that GSE reform is imminent, it is instructive to discuss the effect of privatization on GSE debt. Given that GSE debt has been viewed as a treasury alternative and is held by many domestic and international public agencies and foreign governments, it is highly likely that privatization will be accompanied by a grand-fathering of existing agency debt. This may include explicit governmental guarantees or collateralization of the debt in a governmental entity. Alternatively, the back-stop governmental guarantor may assume this debt, although substitution of the debt issued over a variety of interest rate regimes with a multitude of coupons, call schedules, structures and maturities may prove challenging. The privatization of FNMA and FHLMC involves a gradual removal of government support, and short-term debt is likely to benefit at the expense of longer-term debt. Under either of these proposals, as privatization of the entities become a reality, liquidity of these securities may also



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suffer depending upon the extent of ongoing issuance and existing float in the markets at the time of privatization.

With respect to the FHLB system, current issuance serves to match fund system assets, which are mainly advances to FHLB members. Within the aggregate constraint, issuance may be opportunistic to take advantage of favorable market conditions. While we foresee reduced issuance of FHLMC and FNMA debt, we project increased issuance of FHLB debt for a variety of reasons. First, as the economy continues to improve, aggregate lending by bank members is likely to expand, resulting in the need to borrow more from the FHLB, leading to increased FHLB issuance. In the face of reduced issuance by FNMA and FHLMC, it is also likely that borrowing by the FHLB could be accomplished at favorable terms, providing an added incentive for member banks to borrow using advances. Secondly, the other major reason for our prediction of FHLB borrowing is based upon our visualization of an important role for the FHLB system in the face of any GSE reform. One of the issues in current GSE reform discussions is that such proposals should provide provisions for secondary market access to originated loans for smaller community banks, including the wherewithal to retain the servicing on such loans. While none of the GSE reform proposals envision a defined role for the FHLB system, with over 7,000 community bank members, our contention is that as such proposals become reality, an important role for the FHLB system will emerge as a catalyst for secondary market access for smaller institutions. A recent example of this type of activity is a program between Redwood Trust, a real estate investment trust, and the Federal Home Loan Bank of Chicago, under which Redwood Trust will purchase high balance mortgages from other member institutions. In a related move, Redwood Trust also was granted membership in the FHLB, joining other REITs (Annaly Capital Management Inc., Invesco Mortgage Capital Inc. and Two Harbors Investment Corporation) who are also members through the entities' insurance units.[3] While a temporary moratorium on such membership has been placed by the FHFA, any involvement by the FHLB system, either directly or indirectly as a facilitator of secondary mortgage market activity is likely to result in additional debt issuance in the future to meet the liquidity, loanable funds and mortgage purchase requirements of the FHLB membership.

As GSE reform becomes a reality and FNMA and FHLMC are replaced by a private capital, existing debt of the agencies, mainly short-term in tenor is likely to be provided some form of governmental guarantee to placate domestic and international public entities. Additionally, in this regime of private mortgage insurance, the role of the FHLB is likely to expand as an aggregator and facilitator of mortgage origination for smaller community banks resulting in increased FHLB issuance, particularly in buckets traditionally used to match fund mortgage loans.

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[2] The most recent of these proposals Johnson-Crapo bill, sponsored by Chairman Tim Johnson, D-S.D., and Sen. Mike Crapo, R-Idaho, of the Senate Committee on Banking, Housing, and Urban Affairs. A summary of the bill is available at the following link. http://www.banking.senate.gov/public/_files/SummaryoftheBipartisanHousingFinanceReformDraft_update.pdf

[3] A discussion of the partnership between Redwood Trust and the Federal Home Loan Bank of Chicago is available at the following link. http://online.wsj.com/article/PR-CO-20140612-910555.html

The Fed: Decisions, Decisions, Decisions

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The Fed appears to be getting closer to agreeing on its medium term monetary policy framework. However, even though there appears to have been an emerging consensus at the June FOMC meeting there still remains a number of key outstanding issues to resolve. From a policy perspective, the decisions on the monetary policy landscape will be important in determining how the Fed handles the imperative of achieving its policy objective of tightening monetary policy without creating unnecessary financial market disruptions, or inadvertently distorting the financial intermediation incentives. Here we take a look at some of the key issues that the Fed will be considering over the next few months, and provide some thoughts on the direction we believe that the FOMC will take and highlight some key implications for the markets.

In search of an alternative policy instrument:
It is unlikely to be business as usual when the time comes to withdraw monetary stimulus. With bloated excess reserves holdings and little incentive on the part of US banks to participate in the overnight Fed funds market, the fed funds target (FFR) is likely to become an ineffective tool for the Fed to transmit its monetary policy stance to the economy. And as the overnight market becomes awash with vast amounts of liquidity, the Fed has begun experimenting and adding various new instruments to its toolkit that it hopes will provide the requisite control over short-term interest rates when it begins tightening policy. Among these have been the term deposit facility (TDF), interest on excess reserves (IOER), and the overnight fixed rate reverse repo program (ON RRP). All three facilities, along with the (fed funds rate) FFR are likely to form part of the monetary policy apparatus when the Fed begins to normalize policy.

A key question, however, will be whether the Fed uses these alternative policy instruments to complement or supplant the FFR as the primary tool for monetary policy transmission. We expect the Fed to adopt a new policy instrument. In our view, in an environment where the FFR will exert limited control on short-term interest rates, the Fed is likely to adopt a dual policy instrument approach in which both the ON RRP (to drain reserves from the open market) and the IOER (to lock up excess reserves) are used as the two main instruments to exert control over short-term rates, while at the same time locking up the abundance of excess reserve on its balance sheet. These two policy instruments are likely to be augmented by the TDF, which could also be used to mop up additional liquidity in both the Fed funds and money markets for longer periods. As we approach the end of the testing period for the ON RRP January 2015, we expect the Fed to eventually expand the size of the program in the coming months, though they are unlikely to go to full allotment.

Floor versus corridor system:
Another important consideration

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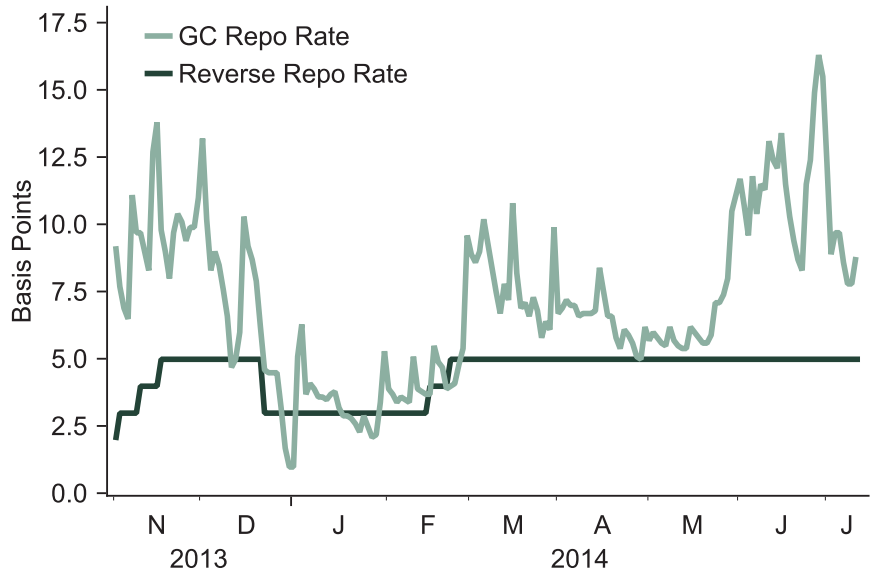
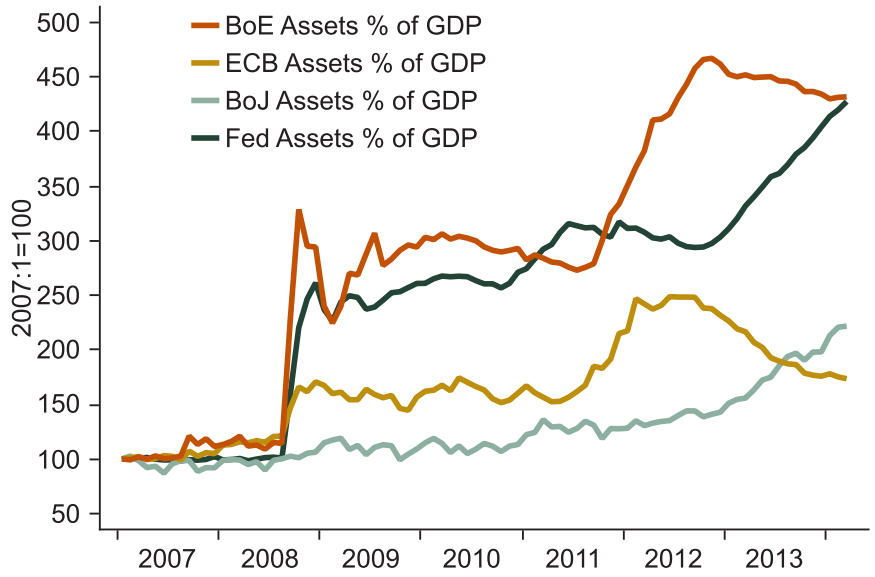
ON-FR Reverse Repo Rate Provides Effective Floor on Short Term Rates



Source: Macrobond, TD Securities

Fed's Balance Sheet Likely to Remain Elevated During Policy Tightening



Source: Macrobond, TD Securities

for the Fed will be whether the structure of the policy regime reverts back to the traditional corridor system or maintains the current floor system. In the latter case, the ON RRP will form the basis through which the Fed's interest rate signals are transmitted through the rest of the term structure. The key difference being that under the corridor system the IOER will be set as the floor below the FFR, while the discount rate sets the ceiling. In a floor system both rates (IOER and ON RRP) could conceivably be equalized, with the ON RRP setting the floor. A number of Fed officials (including NY President Dudley) have expressed a preference for a floor system. We also see this as the most feasible framework as it will permit the Fed to tighten policy even in the presence of large reserves in the system. In doing so, it will effectively reduce the burden on the Fed to normalize its bloated balance sheet to achieve its goal of policy tightening.

For all practical purposes, we expect the Fed to set the ON RRP rate as the floor in the short-term rates market, with the IOER rate set at a positive spread above the ON RRP.

Balance sheet normalization: The adoption of a floor system will obviate the need for the Fed to whittle down its balance sheet to effect a tightening in policy. In effect, it will give the Fed full flexibility in maintaining its bloated balance sheet, while at the same time effecting a tightening in monetary policy conditions in an environment of an abundance of liquidity in the banking system. The prospect of the Fed continuing to maintain an elevated balance sheet under a floor system will have important ramifications for the Treasury market. At the very least, it will minimize the need for the Fed to sell its securities, while at the same time permit it to continue the reinvestment of all proceeds for as long as it needs to keep the easing bias. This will invariably ease some of the upward pressure on yields that would

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otherwise take place if the Fed reverts to the traditional corridor system.

However, other considerations about the impact on financial intermediation from the Fed becoming a dominant player in the repo market could potentially arise. As noted in the June FOMC minutes, the potential for the Fed becoming the dominant market maker in the short-term market could "crowd out" key private sector players. This distortion could be magnified during periods of stress as the ON RRP facility could become a safe-haven repository, further exacerbating any liquidity squeeze that may ensue. However, on the plus side, the facility could be instrumental in alleviating any collateral shortage that may arise during a crisis—though this function could also be accomplished by a reinstatement of some to the various facilities that were used during the 2008/2009 credit crunch.

Bottom line: The Fed's deliberation on the future monetary policy framework is ongoing, and no definitive decision is likely to be taken until the September/October FOMC meeting. Ultimately, we expect the Fed to use the IOER rate as the primary monetary policy instrument to conduct its monetary policy goals and adopt a floor system framework underpinned by the ON RRP rate.

GASB 31 Revisited

FELICIA LANDERMAN, PALM BEACH COUNTY, FLORIDA

Introduction

Governmental Accounting Standards Board 31 (GASB 31) requires a public fund to record investment holdings at fair value for financial reporting purposes. A public fund is required to write up (paper gain) or write down (paper loss) the change in portfolio value from the beginning of the fiscal year to the end, taking into account purchases, sales, and redemptions.

The purpose of this article is to heighten the reader's awareness of the negative political and economic consequences of GASB 31. For practitioners charged with public fund investing, successful stewardship lies in providing bondholders with reliable financial reports without penalizing the taxpayer through too restrictive and conservative investment practices.

Taxpayer Vs. Bondholder

From a public fund portfolio management perspective, GASB 31 may result in sacrificing the needs of the taxpayer for the peace of mind of bondholders. Since its implementation, it has consistently put public fund managers on the defensive by having to justify why a paper loss is not a real loss of principal and why a paper gain should not be used to fund budgetary needs.

A public fund's investment policy states in no uncertain terms that principal preservation is the primary objective.

When real gains and losses are not distinguished from paper gains and losses, politicians, citizens and accountants may become alarmed when bond prices fall, placing undo pressure and restrictions on the investment steward. This may lead to investment decision-making that is crafted to appease a reporting standard, versus prudent investing that optimizes portfolio earnings to the benefit of the tax payer.

Illustration

The following illustration will highlight how financial statements may be misinterpreted:

Let us assume that a bank approves a $1,000,000 mortgage for an

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individual. At the same time, a public fund approves a loan to a GSE in the form of purchasing a $1,000,000 U. S. Agency bond. Shortly thereafter, interest rates rise (bond prices fall). The bond, originating at par (100.00), now has a book value of 99.00 or $990,000. GASB 31 requires the public fund to treat this change in fair value, even though temporary, as if it were permanent. For reporting purposes, it is considered to be an actual realized loss. On the other hand, if the mortgagee continues to make timely payments of principal and interest and is not in default, the bank will continue to value the loan at cost, recognizing no such loss. Do you see the disparity? If the public fund has satisfied its liquidity needs, has its financial condition weakened? The answer is no.

The GSE bond, which is synonymous with the borrower in the bank's case, is performing - i.e., the issuer is not in default, just as the borrower continues to make timely payments. This governmental accounting standard wreaks havoc because it suggests that the public fund has failed in its fiduciary role of protecting the taxpayer's money.

A public fund's investment policy states in no uncertain terms that principal preservation is the primary objective. The most visible and politically divisive consequence after the implementation of GASB 31 is to leave the impression that the public fund has failed to protect principal. Furthermore, just as disconcerting, is the perception that fair value increases are real and may be used to supplement the budget.

Supporters of GASB 31 make the case that paper gains or losses have little impact on the operations of public funds and that the reporting standard does not materially impact a public fund's budget, fiduciary standing or investment strategy.

This viewpoint is naive and completely ignores the "politics." Anytime an accounting standard places a public fund in the position of having to explain or rationalize a paper loss, it impacts not only its fiduciary credibility but also places huge political pressure to adjust investment strategy in such a manner as to avoid future paper losses. The long-term impact is shorter and more conservative investment strategies. This may unduly punish the public in terms of the opportunity cost of lost investment income.

Worse yet, public funds that treat paper gains as if they are real, and then commit these dollars to fund the budget, are due for a wake-up call if markets reverse and the paper gains are taken away after the money is spent.

Conclusion

In short, because of the volatility of fixed income markets, paper gains and losses are completely unsuitable for budgetary purposes. When a public fund attempts to budget these, investment decision making may ultimately not be in the best interest of the taxpayers.

FUN FACT$

- Legendary investor Warren Buffett bought a 40-acre farm at age 14 with $1,200 in savings from delivering newspapers.
- Bill Gates told his Harvard University professors that he would be a millionaire by age 30. He became a billionaire at age 31.
- By the end of the Civil War, between one-third and one-half of all U.S. paper currency in circulation was counterfeit.
- The United States generates more than 20% of the world's GDP with about 4% of the world's population.
- The history of Wall Street dates back to the 1600s, when New York was called the New Amsterdam settlement. Back then, before the bells and exchanges, it was merely a pathway that ran alongside a wall protecting the settlement from Native American attacks. In a moment of creativity, the citizens named the corridor "Wall Street."

WHO KNEW?

Value in the Mortgage Market in the Five-Year Part of the Curve

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MBS investors are faced with many challenges in the current environment, not the least of which are low rates and tight spreads. The market is seemingly not providing much value, but look a little further. Here are some ways that investors can take what the market is giving.

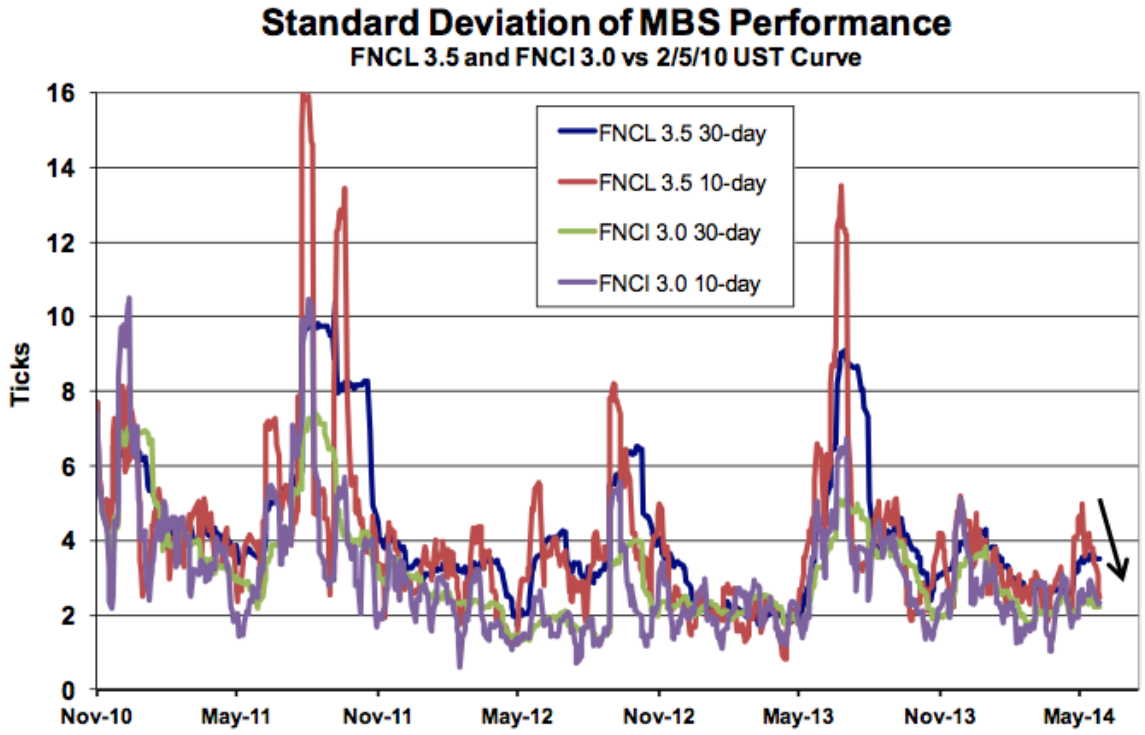
There are three basic ways that fixed income investors can earn additional yield in the market:

1. Sell options/take on negative convexity.
2. Take on additional credit risk.
3. Extend duration.

In the current environment, only one of these propositions is adding much value: extend duration. And most investors would recognize that even that seems quite counter-intuitive with rates very near historic lows. Below, we break down each of these aspects of fixed income investing.

If one is going to sell options to make additional yield/carry, one would prefer to do that during periods of high volatility when there is good compensation for doing so. Unfortunately, the current period is one of very low volatility and low corresponding MBS spreads.

Figure 1 – Fed Policies and Low Supply Have Caused Trading Vol to Plummet



Source: FTN Financial and TradeWeb

The data in the graph above represents the 10-day and 30-day standard deviation (ie, volatility) of daily trading performance of the most liquid 30yr and 15yr MBS coupons. After a small recent bout of volatility, the trend is returning to the very low levels that have existed for most of 2014. This has had a predictable effect on static MBS spreads, which is highlighted below.

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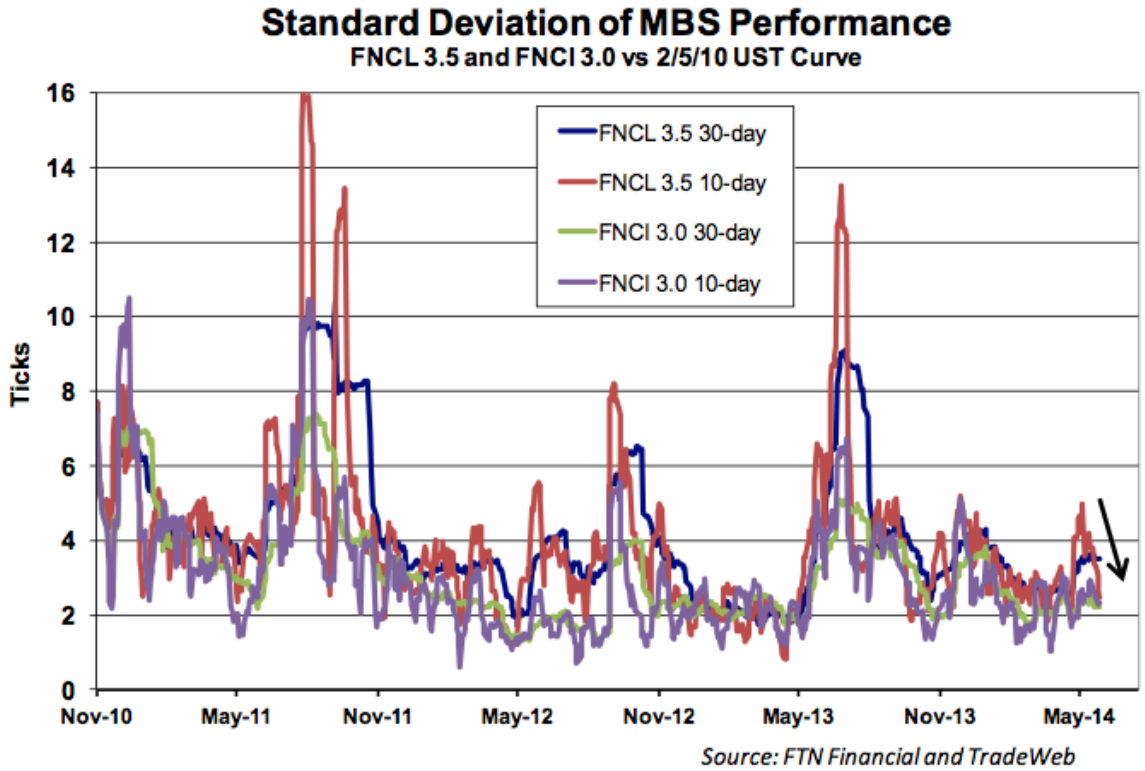
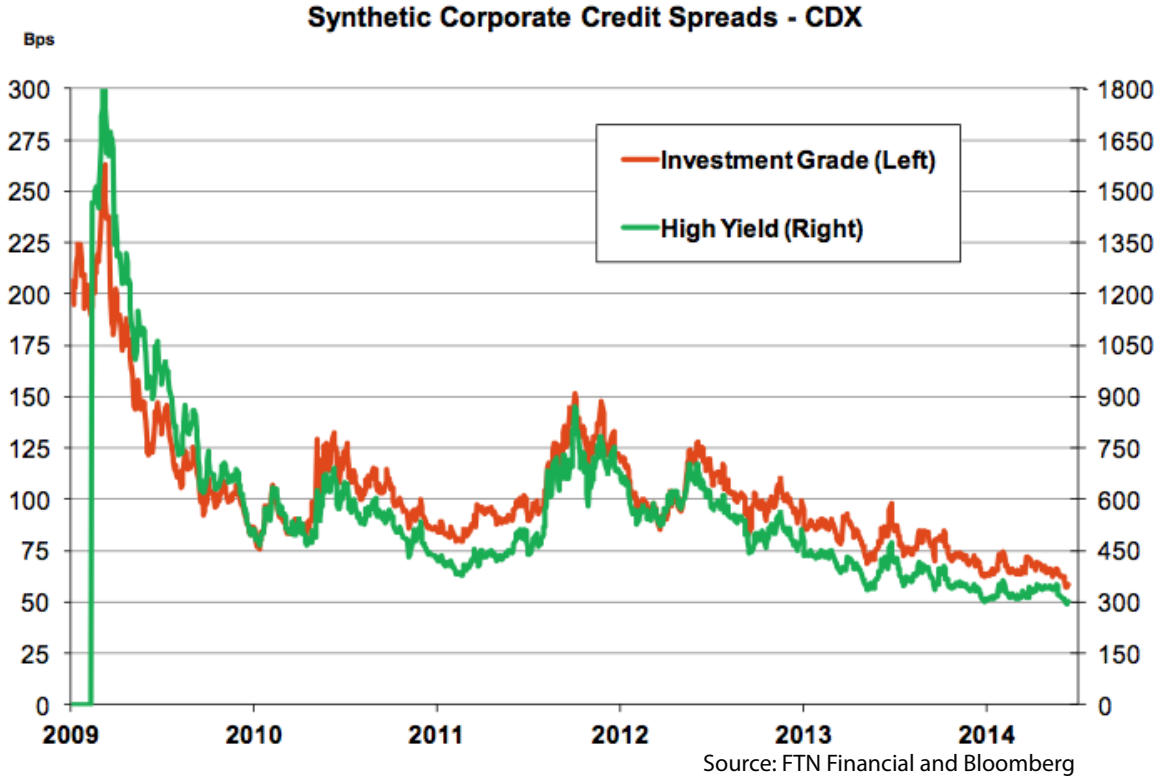
Figure 2 – Static MBS Spreads



With the price of options being so low, investors next turn their attention to credit. However, general indicators of credit spreads do not display generous value. This is summarized – admittedly in a very generalized form – in Figure 3 below.

Figure 3 - Credit Spreads are Well Through Previous Post-Crisis Tights



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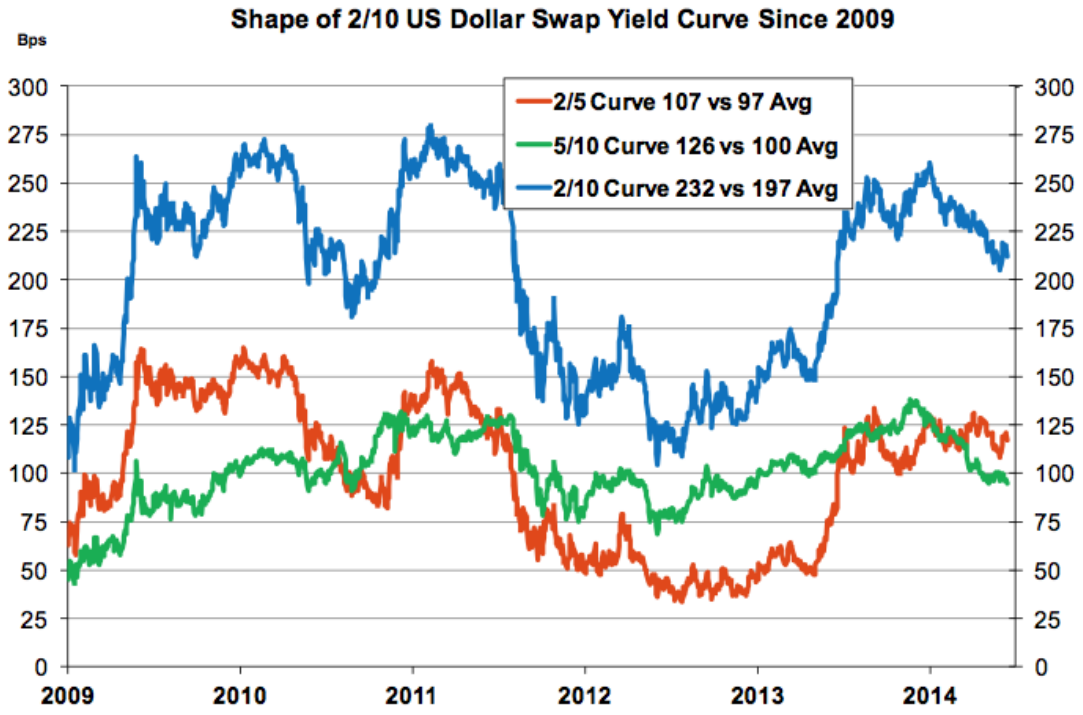
This leaves investors with just one last option to earn additional yield/carry: extend further out the curve. Even though rates are at historic lows, the shape of the yield curve – especially in the 2yr/5yr area – is still quite steep. The shape of the post-crisis yield curve in 2/5, 5/10 and 2/10 space is displayed in Figure 4 below.

Figure 4 – The 2/5 Yield Curve Remains Very Generous



Source: FTN Financial and Bloomberg

The extension of duration during a period of very low rates can seem daunting. And since there is a natural floor on rates of zero (in the United States, at least), any duration extension must be done with great care and with a specific purpose. The specific purpose we advocate is to find the "sweet spot" of the yield curve and add assets that roll down from there.

After all, Total Return is more than simply the yield booked. It also addresses future price performance. It is true that spreads in certain sectors can tighten more, and for the foreseeable future they likely will in high-grade Corporates and MBS. But the simple fact is that at current levels most of the LARGE spread moves are done. It is time now to focus on other sources of Total Return, such as rolldown.

Regular readers of these pages will recognize the chart in Figure 5 – it is our Swap Curve Rolldown chart. It identifies the place on the curve out to 10 years to execute the BEST MARGINAL extension. Currently, that single point is the FIVE YEAR tenor.

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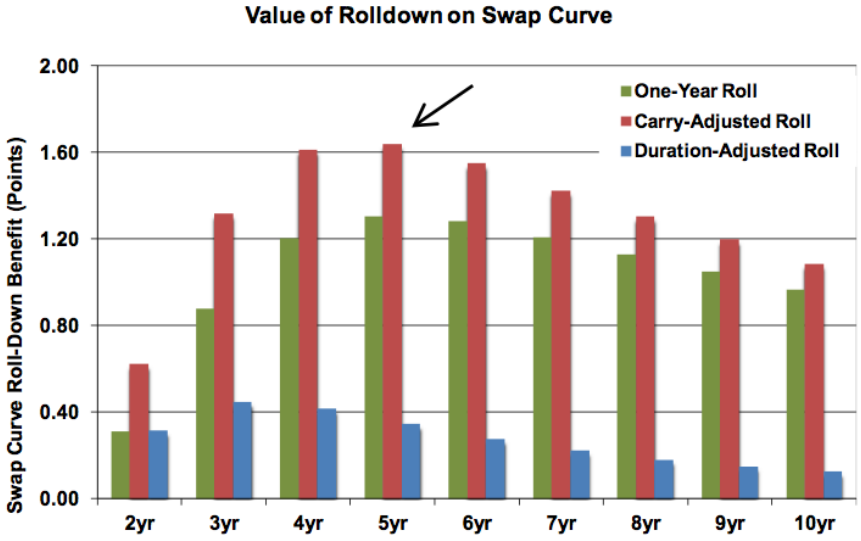
Figure 5 – The Five Year Tenor is Still the "Sweet Spot"



Source: FTN Financial and Bloomberg

Therefore, we propose three trades that all involve shorting MBS at tight spreads and moving into alternatives in the FIVE YEAR part of the curve. These trades will generally involve IMPROVING CONVEXITY and providing for greater ROLLDOWN.

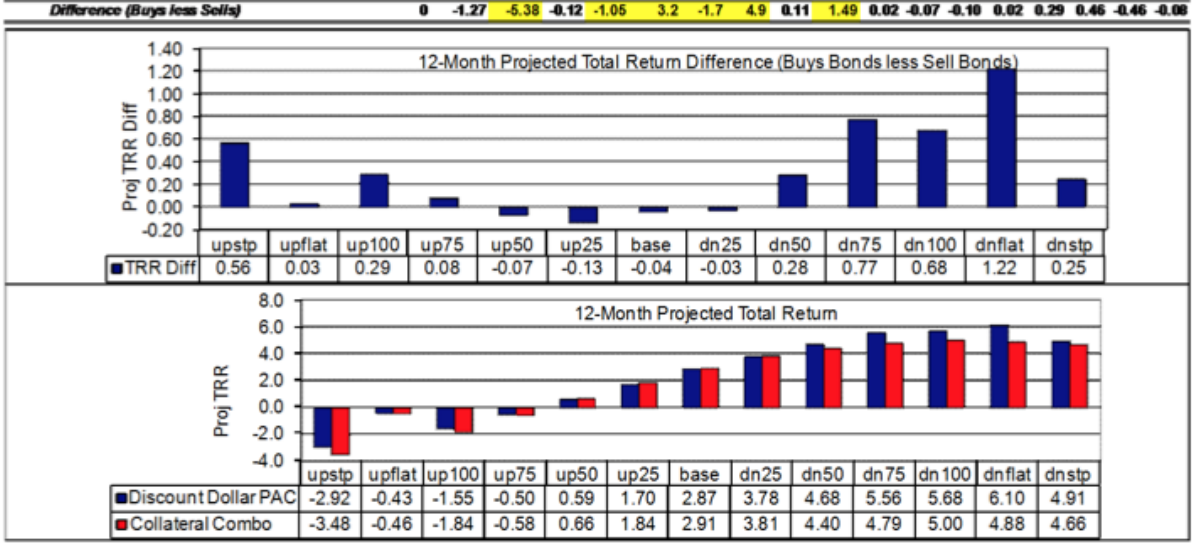
The first example highlights the value in a 5-year discount dollar PAC with a short window (11 years in the base case) off low-GWAC collateral that is not particularly susceptible to a fast/slow prepayment vector. We ran this bond vs a combination of 15yr 2.5s and 30yr 4.0s. At first, this may seem like a curious combination against which to judge the value in the PAC. In fact, these two were chosen, because they are the closest 30yr and 15yr coupons to a 5-year effective duration.

Figure 6 – Discount Dollar Five Year PAC Excels vs Collateral Alternatives

Total Return Comparison

as of 6/13/2014

Buy / Sell	Security	Description	Par Amount	Coupon	Price	YTM	WAL	Libor Z-sprd	Opt Cost	Libor OAS	Eff Dura	Eff Convx	Partial Durations 1yr	2yr	3yr	5yr	7yr	10yr	20yr	30yr
Buy	**Total Buy Bonds**	**Discount Dollar PAC**	**20,000**	**2.00**	**97.80**	**2.50**	**4.64**	**32.7**	**24.7**	**8.0**	**5.21**	**-0.51**	**0.07**	**0.18**	**0.40**	**0.79**	**1.26**	**2.11**	**0.41**	**0.02**
	FNR 2013-59 PA	Discount Dollar PAC	20,000	2.00	97.80	2.50	4.64	32.7	24.7	8.0	5.21	-0.51	0.07	0.18	0.40	0.79	1.26	2.11	0.41	0.02
Sell	**Total Sell Bonds**	**Collateral Combo**	**20,000**	**3.27**	**103.18**	**2.62**	**5.69**	**29.5**	**26.4**	**3.1**	**5.10**	**-2.00**	**0.05**	**0.25**	**0.50**	**0.77**	**0.97**	**1.65**	**0.87**	**0.09**
	FNCI 2.5	TBA 15yr 2.5	10,000	2.50	101.16	2.24	5.33	2.2	8.9	-6.7	4.83	-0.33	0.02	0.22	0.54	0.87	1.18	1.83	0.19	-0.04
	FNCL 4	TBA 30yr 4.0	10,000	4.00	105.13	2.99	6.04	55.8	43.3	12.5	5.36	-3.61	0.09	0.27	0.46	0.67	0.77	1.47	1.53	0.22
	Difference (Buys less Sells)		**0**	**-1.27**	**-5.38**	**-0.12**	**-1.05**	**3.2**	**-1.7**	**4.9**	**0.11**	**1.49**	**0.02**	**-0.07**	**-0.10**	**0.02**	**0.29**	**0.46**	**-0.46**	**-0.08**



Source: FTN Financial and YieldBook

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The basic strategy behind this trade is to hold serve vs collateral in the base case and to produce outsized returns in the stressed environments, and that is exactly what it does through the significant improvement in convexity. Furthermore, there is a slight rolldown aspect to the trade in that the nominal base case TRR give is less than the yield give. This trade is ideal for investors who want to maintain an exposure to MBS but are unsure whether to have a 15yr or 30yr overweight. The answer would be to underweight both slightly and put stable PAC cash flows in the portfolio.

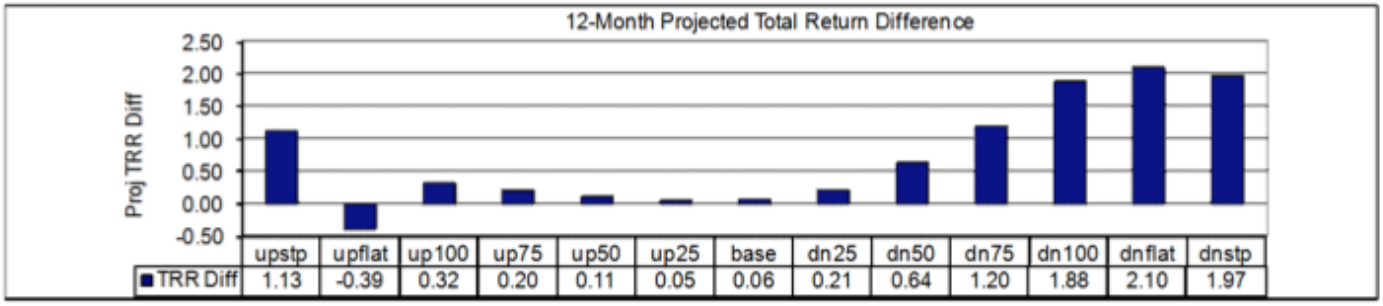
Another way to achieve CONVEXITY and ROLLDOWN is through the CMBS market. The example shown here utilizes Agency CMBS, but the same objective can be achieved – with wider spreads – in the private label CMBS market. The trade involves buying a 5-year against shorting 15yr 3.0s.

Figure 7 – ACMBS Has Value vs Dwarfs

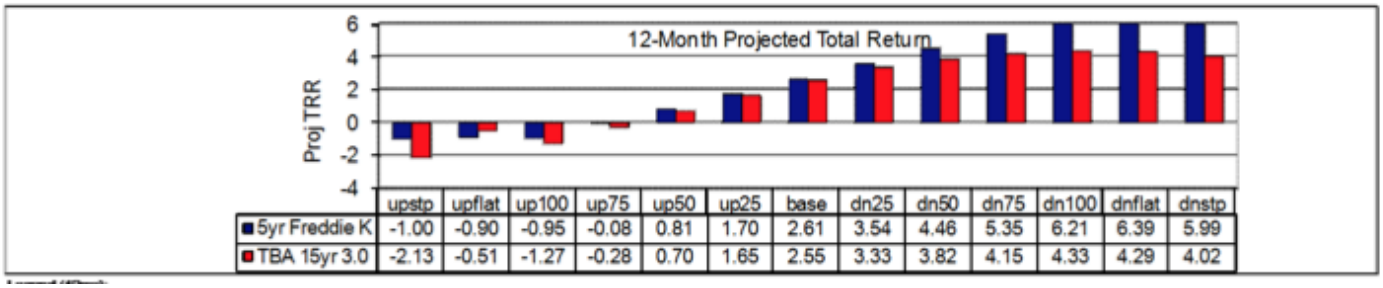
Total Return Comparison

as of June 13, 2014

Buy / Sell	Security	Description	Coupon	Price	YTM	WAL	Libor Z-sprd	Opt Cost	Libor OAS	Eff Dura	Eff Convx	Partial Durations 1yr	2yr	3yr	5yr	7yr	10yr	20yr	30yr
Buy	FHMS K032 A1	5yr Freddie K	3.02	104.44	2.02	4.91	NA	NA	26.5	4.55	0.29	0.09	0.21	0.59	1.19	1.96	0.51	0.00	0.00
Sell	FNCI 3	TBA 15yr 3.0	3.00	103.50	2.23	5.13	4.5	13.2	-8.7	4.40	-1.30	0.05	0.25	0.56	0.74	0.98	1.79	0.11	-0.06
	Difference		**0.02**	**0.94**	**-0.21**	**-0.22**	**NA**	**NA**	**35.2**	**0.15**	**1.59**	**0.04**	**-0.04**	**0.03**	**0.45**	**0.97**	**-1.28**	**-0.11**	**0.06**



	upstp	upflat	up100	up75	up50	up25	base	dn25	dn50	dn75	dn100	dnflat	dnstp
TRR Diff	1.13	-0.39	0.32	0.20	0.11	0.05	0.06	0.21	0.64	1.20	1.88	2.10	1.97



	upstp	upflat	up100	up75	up50	up25	base	dn25	dn50	dn75	dn100	dnflat	dnstp
5yr Freddie K	-1.00	-0.90	-0.95	-0.08	0.81	1.70	2.61	3.54	4.46	5.35	6.21	6.39	5.99
TBA 15yr 3.0	-2.13	-0.51	-1.27	-0.28	0.70	1.65	2.55	3.33	3.82	4.15	4.33	4.29	4.02

Source: FTN Financial and YieldBook

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Once again, the convexity benefits are evident. Even though the yield give in the trade is 21 bps, the rolldown effect is quite evident in the fact that the ACMBS outperforms collateral in the base over a 12 month horizon.

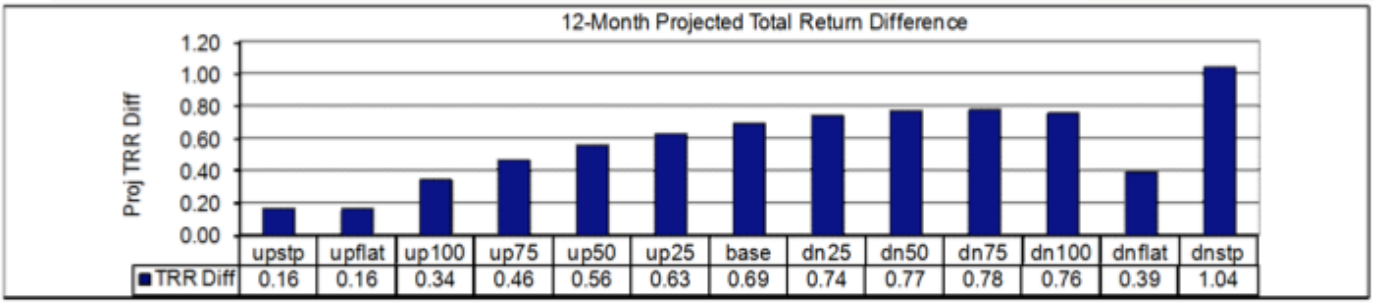
The third trade is one that has become increasingly attractive over the past two months and likely will not remain so as more investors begin to pay attention to it. Namely, new issue 7X1 Hybrid ARMs are trading very close to dwarf collateral of the same coupon. But 7X1s are shorter than similar coupon dwarfs, so we ran a new issue vs the closest duration comparison below. The results are a little different than the previous two trades and in some ways they are even more compelling.

Figure 8 – New Issue 7X1 vs Similar Duration Dwarf

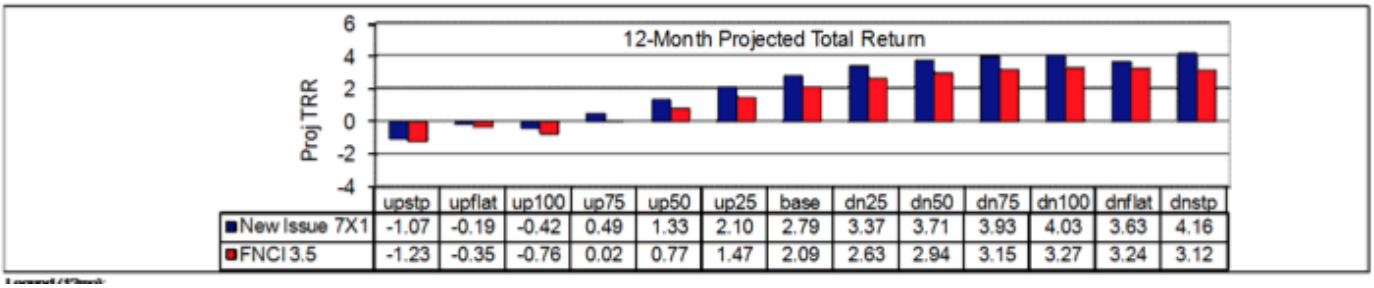
Total Return Comparison

as of June 13, 2014

Buy / Sell	Security	Description	Coupon	Price	YTM	WAL	Libor Z-sprd	Opt Cost	Libor OAS	Eff Dura	Eff Convx	Partial Durations 1yr	2yr	3yr	5yr	7yr	10yr	20yr	30yr
Buy	FN AL5268	New Issue 7X1	2.86	103.13	2.00	5.45	41.3	17.9	23.4	3.80	-1.54	0.06	0.26	0.52	0.85	1.69	0.57	0.00	-0.13
Sell	FNCI 3.5	FNCI 3.5	3.50	105.70	1.99	4.16	5.3	12.5	-7.2	3.50	-1.47	0.11	0.29	0.56	0.58	0.77	1.36	-0.10	-0.06
	Difference		**-0.64**	**-2.58**	**0.01**	**1.29**	**36.0**	**5.4**	**30.6**	**0.30**	**-0.07**	**-0.06**	**-0.03**	**-0.04**	**0.27**	**0.93**	**-0.79**	**0.10**	**-0.07**



	upstp	upflat	up100	up75	up50	up25	base	dn25	dn50	dn75	dn100	dnflat	dnstp
TRR Diff	0.16	0.16	0.34	0.46	0.56	0.63	0.69	0.74	0.77	0.78	0.76	0.39	1.04



	upstp	upflat	up100	up75	up50	up25	base	dn25	dn50	dn75	dn100	dnflat	dnstp
New Issue 7X1	-1.07	-0.19	-0.42	0.49	1.33	2.10	2.79	3.37	3.71	3.93	4.03	3.63	4.16
FNCI 3.5	-1.23	-0.35	-0.76	0.02	0.77	1.47	2.09	2.63	2.94	3.15	3.27	3.24	3.12

Source: FTN Financial and YieldBook

This trade is even from a YTM standpoint, but due to the rolldown profile of the hybrid ARM (it essentially rolls to the 7-year reset), it outperforms dwarfs handily in the base case. It also does much better in the stressed scenarios due to the combination of a lower dollar price and reset profile. In many ways, this is the most straightforward of the three strategies to implement.

The idea of extending with rates at historic lows may seem counter-intuitive. But we are talking about a MODEST extension for most investors into the STEEPEST part of the yield curve – namely the 5-year. Once there, it is imperative to choose good convexity alternatives to MBS collateral to provide good rolldown benefits and insulation from any future adverse spread movements. These three alternatives – a discount PAC, Agency CMBS and new issue 7X1 Hybrid ARMs – are among our favorites in the current environment.