Investment strategy insights

Balance sheet optimization

- In our view, households should focus on balance sheet allocation instead of myopic asset allocation
- We believe the current market environment presents an opportune time to refinance liabilities and optimize balance sheets
- Optimizing balance sheets is a custom decision that needs to be made within the context of the factors discussed below, including tax situation, time horizon, and asset allocation.
- We see the current tactical environment as a catalyst for the near-term opportunity, but liability optimization has the potential to significantly impact a household’s net worth at all times as the benefit is accrued and compounded over years and decades

Market Context
The main monetary policy response to the financial crisis of 2007-2008 was clear and direct in its intention to reduce interest rates by the dual mechanisms of lowering the Fed Funds rate and quantitative easing (QE). Such policy action appears to have been successful in the US as economically and financially the recovery continues to progress. Unemployment has declined below 6%, the Federal Reserve has ended QE, credit spreads have compressed significantly, and equity markets valuations have returned to pre-crisis levels.

In fact, the last remaining vestige of the financial crisis can be seen in the levels of prevailing interest rates. Short term Treasury rates remain near zero, long term rates are near historical lows, and yields on Treasury Inflation Protected Securities (TIPS) imply inflation will average only 1.7% for the next 10 years. From the asset perspective, the low rate environment highlights the problem of low bond portfolio returns and the risk of negative returns as rates normalize.

For the same reasons, we believe these conditions present an excellent opportunity on the liability side of the balance sheet to lock in low borrowing costs, express views on interest rates and inflation, and generally take action that will likely lead to higher net worth in the future relative to inaction. The benefits associated with optimizing liabilities can be staggering. According to a new NBER working paper, US households capable of refinancing their real estate debt have foregone savings totaling USD$5.4B

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Fig. 1: Interest rates continue to decline
Treasury rates, 1990-2014

Source: CIO WMR, As of 12/19/2014

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Debt as a tool
"Any rational chief financial officer in the private sector would see this is a moment to extend debt maturities and lock in low rates."

- Larry Summers, 2012

"You would think that people would be lining up now to get mortgages to buy a home. It’s a good way to go short the dollar, short interest rates. It is a no-brainer."

- Warren Buffett, 2014

Debt serves many purposes on a balance sheet. For some households debt is simply a resource for making large purposes (e.g. house, airplane, boat) that could otherwise not be afforded. Others use it for convenience, but not as a necessity, when making purchases. Those are common and straightforward ways of understanding debt usage, but certainly don’t apply to the Summers, Buffet, and Bernanke households.

Why might they advocate for debt usage? One reason is that debt can also be used to add leverage to a balance sheet – an action that would increase the net worth of the household when the return on investment assets is expected to exceed the cost of the debt. This is essentially the rationale that Larry Summers is alluding to from a firm’s perspective. It’s equally applicable to households.

Another reason, as Warren Buffett points out, is to express an investment view. Adding debt or refinancing into longer term debt obligations actually decreases the duration exposure of the overall balance sheet. If interest rates increase or inflation is higher than expected such an action can result in a higher overall balance sheet value than doing nothing.

Historical perspective
Borrowing costs are primarily driven by prevailing interest rates. Currently, short and long term interest rates are at or near historically low levels, particularly once inflation is included in the analysis. As of December 19th 2014, the current yield on the US 10-year Treasury Bond was 2.2%. Treasury yields have only been lower 8% of the time since 1990 (figure 1). Real bond yields are quite depressed as well. The current yield on the 10 year Treasury Inflation Protected Security is only 0.5% - meaning that investors are content with a real return of 0.5% annually for 10 years for holding these securities.

Market expectations for rates going forward are equally subdued – at least on the long end of the curve. Due to labor market pressure and a continued economic recovery, we believe the Federal Reserve will begin raising short-term interest rates in mid-2015. At the same time, longer-maturity yields should increase as well – albeit at a much slower pace (figure 2). The result is a flattening of the yield curve that drives up borrowing costs to more-normal levels.
Although borrowing costs are low from an absolute perspective, it’s the relationship between the cost of debt and the expected return on assets held on the asset side of the balance sheet that drives the decision between using debt and not using debt for most investors. A simple way of making this decision is to look at the expected return on a portfolio relative to the cost of the debt. During some time periods that spread is actually negative – implying that it wouldn’t make sense to use debt except out of necessity or for convenience.

However, the opposite is true today. Many investors that hold balanced or growth portfolios will find that the spread is likely fairly sizable and an opportune time to utilize borrowing from an investment standpoint. Figure 3 provides an estimate of those spreads, comparing current rates (as of 12/6/2014) for 30-year mortgages, 7/1 adjustable rate mortgages, and securities backed lending (SBL) priced at LIBOR + 275 basis points.

The mortgage rates are based on Bankrate Index data and the portfolio return estimates are based on UBS Capital Market Assumptions.

**Balance sheet optimization**

Investors frequently discuss asset allocation and the optimization of their investment portfolio. However, balance sheet optimization, essentially determining the optimal structure for assets and liabilities, is much more impactful for the typical household. It’s the only way a household can fully maximize return relative to an appropriate amount of risk.

In addition to risk and return estimates for investment assets, determining the optimal structure for the overall balance sheet requires determining access, needs, and costs for various financing options. To the extent that borrowing is asset-based, time horizons for holding those assets are important as well.

For example, suppose a couple in their early 50s is planning to purchase a $500,000 home and has the option of utilizing a mortgage (for 80% of the purchase price) or paying cash. For this example, we are assuming that the couple holds a moderate portfolio with an estimated return on 6.0% per year. Applicable mortgage pricing is 4.0% for the 30 year fixed rate mortgage and 3.08% for the 7/1 ARM. We also assume that the assets not utilized to purchase the property are otherwise held in their investment portfolio.

Interest rate forecasts are important in this analysis because the cost of one of the mortgages, the 7/1 ARM, will potentially fluctuate after 7 years. This particular household will likely have the ability to either refinance or pay off the loan at that point, but understanding the breakeven between a fixed rate and variable rate solution can be helpful for decision-making. Figure 4 provides an illustration of the interest rate estimates used for this analysis. The Index Rate is based on 1 year LIBOR futures as of 12/31/2014. The Variable Rate is based on that Index Rate but modified using rate caps and adjustment periods typical to a variable rate mortgage.

Because the estimated return on the asset side of the balance sheet exceeds the cost of borrowing at the present time, both the 30 year and 7/1 ARM mortgages have positive returns associated with adding them to the balance sheet. However, the benefits of each of these

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**Fig. 3: Borrowing costs are low relative to estimated portfolio returns**

Estimated portfolio return minus current hypothetical cost of borrowing

<table>
<thead>
<tr>
<th></th>
<th>SBL</th>
<th>7/1 ARM</th>
<th>30 Year Fixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservative</td>
<td>1.40%</td>
<td>0.81%</td>
<td>0.15%</td>
</tr>
<tr>
<td>Moderately Conservative</td>
<td>2.00%</td>
<td>1.41%</td>
<td>0.75%</td>
</tr>
<tr>
<td>Moderate</td>
<td>2.60%</td>
<td>2.01%</td>
<td>1.35%</td>
</tr>
<tr>
<td>Moderately Aggressive</td>
<td>3.20%</td>
<td>2.61%</td>
<td>1.95%</td>
</tr>
<tr>
<td>Aggressive</td>
<td>3.70%</td>
<td>3.11%</td>
<td>2.45%</td>
</tr>
<tr>
<td>Equity</td>
<td>4.90%</td>
<td>4.31%</td>
<td>3.65%</td>
</tr>
</tbody>
</table>

Source: Bloomberg, CIO WMR, SBL borrowing cost is estimated as LIBOR + 275 basis points, As of 12/30/2014

**Fig. 4: Interest rate forecast**

Market forwards imply rates will gradually rise

Source: Bloomberg, CIO WMR, As of 12/30/2014
strategies are accrued at different times. Figure 5 shows the expected excess return to the households balance sheet from utilizing each of the mortgage options versus paying for the property out of the investment portfolio.

The balance sheet benefits accrue more quickly from the adjustable rate mortgage. Seven year out, we’d estimate that the balance sheet would be about USD$100K larger than not utilizing the mortgage at all. However, at that point the interests rate would increase (based on the interest rate estimates shown earlier) and the benefit of the fixed rate mortgage would gradually catch up until it exceeds the variable rate option in 2027 (12 years). This crossover date is important because it represents the break-even between using a 7/1 ARM and a 30-year fixed based on the assumptions for this household. Either strategy provides an overall balance sheet benefit, but the time horizon that the couple expects to remain in the house (or hold the mortgage) can guide the decision between the two options.

Similar analysis can be utilized for deciding when to utilize securities backed lending (SBL), which is non-purpose in nature and typically carry variable interest rates. Although an SBL does not help a household extend the duration of their liabilities, it can still be useful for accessing low borrowing costs for the foreseeable future.

Expressing a market view with debt

Asset allocations are frequently used to express market views. Investors overweight US equities when they expect them to outperform. If they expect interest rates to rise (a widely held view since the financial crisis), they shorten bond portfolio duration. If they expect inflation to be higher than expected, they buy Treasury Inflation Protected Securities (TIPS) and perhaps commodities.

However, interest rate and inflation views are somewhat difficult to execute within investment portfolios. Shortening duration requires the investor to be correct about timing since they earn less on short duration fixed income than market-duration fixed income. This is known as a negative-carry trade, meaning that every day it is held in a portfolio the portfolio will underperform until the expected price change (due to interest rates) occurs. Timing is very important since the drag from the negative carry effectively accumulates until even the expected price move wouldn’t be sufficient to result in a positive return on the trade. Such is the case with the low-duration trade. For instance, a municipal bond portfolio that had shifted from market duration to low duration has lagged by -20% cumulatively since 2010. Even a meaningful move in interest rates might not be sufficient to result in a positive return on the position.

Hedging inflation has its own challenges as well. Equities are thought to hedge inflation over long periods, but the year-by-year correlation between unexpected inflation and equity returns is near zero. TIPS offer inflation protection in regards to the income paid, but upward movements in interest rates due to inflation would have a negative price impact on TIPS just like any other fixed income.

On the other hand, increasing the duration of the liabilities on a balance sheet enables a household to express a view on rate and inflation. This is analogous to Larry Summers’ quote above that businesses should take advantage of the current environment to issue
debt. For instance, current borrowing rates have an implied rate of inflation priced in. Based on bond market pricing, that might only be 1.6% annually. To the extent that inflation ends up higher than expected, the real cost of borrowing would drop even further, making the household better off than had it not taken action.

The structure of debt available to households is attractive as well. Most mortgages and SBLs can be closed by the borrower without penalty. This makes them similar to issuing callable debt. If the rates increase the borrowing can be held to maturity, but if interest rates decline further the household can simply "call" the mortgage and refinance again.

Risks
Of course, there are risks to adding liabilities to a balance sheet. Portfolio performance that falls below the cost of borrowing would shrink the balance sheet relative to an unleveraged approach. One implication of this is that more-conservative investors with lower forward-looking return expectations will less investment utility from maintaining liabilities than moderate or more-aggressive investors.

Security backed lending must also be monitored appropriately to ensure a de minimis risk of breaching maintenance levels, which would require selling securities to pay down the loan. In order to do this, care must be taken in regards to the amount borrowed as well as the investment of the collateral assets.

Finally, adding debt of any type increases the volatility of the household’s balance sheet. One prudent response is to reduce the volatility of the asset allocation accordingly. By optimizing their overall balance sheet instead of viewing the asset allocation in a vacuum, many households will find that they can achieve their financial goals and objectives while also taking less risk in their investment portfolio.

Footnotes:

1 http://www.nber.org/papers/w20401

2 Unlike other lending vehicles, SBLs are secured by the borrower’s current investments. An investor can use an existing portfolio as collateral for the loan.