UBS on
Aftershocks

Strategies for rebuilding wealth in an uncertain world
Summary

The global Financial crisis and its aftershocks fundamentally altered the investment landscape, and investors will need to cope with the results for years to come. We expect that investors who are in the midst of repairing their personal balance sheets and net worth positions will do so against a backdrop of more moderate economic growth and investment returns, heightened risk aversion, and concern that other low-probability, high-impact events will inevitably surface.

There is no simple solution to each of these challenges. Instead, an approach that incorporates a mix of both traditional and non-traditional strategies is required to help rebuild balance sheets and restore wealth. In this report, we focus on increasing cash flow, deploying cash balances more actively, diversifying outside of traditional assets, hedging against extreme events and enhancing debt management.

Mike Ryan, CFA
Head, WMR-Americas
July 2010

This report has been prepared by UBS Financial Services, Inc.
Aftershocks
Strategies for rebuilding wealth in an uncertain world

On shaky ground
Although nearly a year and a half has passed since the darkest hour of the global financial crisis, the aftershocks are still reverberating throughout the economy, asset classes, market sectors and investor groups (see Fig. 1).

- We expect continued deleveraging of household balance sheets and reregulation of key industries will keep economic activity muted and unemployment rates structurally higher than the period that preceded the financial crisis (see the March 2009 edition of the UBS research focus entitled “The financial crisis and its aftermath”). This is apt to pressure investment returns across a range of traditional assets, especially in countries like the US where the housing collapse was particularly acute.

- A heightened sense of anxiety is clearly reflected in both above-normal cash balances in investor accounts and the continued high level of market volatility. While general uncertainty about the macroeconomic and policy outlook contribute to this anxiety, it is the financial crisis and the dot-com bubble burst – two bear markets in the course of a decade – that created a structural behavioral shift that is likely to shape asset allocation preferences and reduce risk tolerance for some time to come.

- Even after what is perhaps the most impressive rally for risk assets in the postwar era, investors are still left with large portfolio losses and high consumer debt and mortgage balances. This portends an extended period of personal balance sheet repair during which investors focus on steadily building up the asset side of the ledger while also paring back their liabilities.

- Meanwhile, the uncertainties and tensions associated with a crowded regulatory reform agenda, government spending measures and rising debt loads, heightened protectionist sentiment, geopolitical hot spots, and a weak housing market will likely keep attention focused on the potential for “tail risks,” or the proverbial “bolts out of the blue,” and their potential to destabilize financial markets anew.

---

Fig. 1: Aftershocks and rebuilding wealth

<table>
<thead>
<tr>
<th>Aftershocks</th>
<th>Personal balance sheet repair</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial crisis and its aftermath</strong></td>
<td></td>
</tr>
<tr>
<td>Diminished economic growth and financial market return expectations</td>
<td>Increase current cash flows</td>
</tr>
<tr>
<td></td>
<td>More aggressively deploy cash balances</td>
</tr>
<tr>
<td>Lingering risk aversion and structurally lower risk tolerance</td>
<td>Diversify outside of traditional assets</td>
</tr>
<tr>
<td>Reduced net worth</td>
<td>Enhance debt management</td>
</tr>
<tr>
<td>Heightened attention on “tail risk,” such as geopolitical shocks</td>
<td>Hedge against extreme events</td>
</tr>
</tbody>
</table>

Source: UBS WMR
Investors are still left with large portfolio losses and high consumer debt and mortgage balances.

**Personal balance sheet repair**
Individuals are just now beginning the process of repairing personal balance sheets in the aftermath of the crisis – but they need to do so in a way that doesn’t require massive re-risking of portfolios, drastic increases in leverage or material depletions in liquidity. While traditional assets will continue to play a critical role in this process, it has become increasingly clear that investors will also need to consider a few less traditional approaches as well. In our view, this “rebuilding process” includes two essential elements that relate directly to the challenges we highlighted above: 1) repositioning of assets in a manner so that the success of the effort is not entirely reliant on market performance; and 2) incorporating the liability side of the balance sheet as a more effective way of rebuilding wealth.

There are, of course, any number of ways for individuals to engage in this balance sheet repair process. However, in this report we focus on five critical action steps that need to be taken to effectively address the challenges related to both asset and liability realignment in the current less certain environment:

1) Increase current cash flows
2) Deploy cash balances more aggressively
3) Diversify outside of traditional assets
4) Hedge against extreme events
5) Employ enhanced debt management

Consider how each of these steps can enhance the process of reducing downside risk exposure, increasing cash flows, lowering funding costs and rebuilding wealth.

**1) Increase current cash flows**
With policymakers unlikely to lift the target federal funds rate anytime soon, both money market and bond yields are likely to remain low for an extended period. At the same time, sluggish growth prospects suggest that the capital gains opportunities within the equity markets will also remain limited over the near term. Given more limited return prospects across the traditional mix of financial assets, investors need to consider strategies aimed at shifting the return profile of portfolios by exploiting income-generating strategies. These would include focusing upon dividend growth stocks, options-based strategies, Master Limited Partnerships (MLPs), more novel fixed-income alternatives (such as “step-up” bonds) and annuities. Consider the advantages of each of these income-enhancing strategies:

- **Dividend growth stocks**: While the dividend yield for the S&P 500 in absolute terms is somewhat low relative to history, the “yield” on stocks is now very close to the yield on government bonds (see Fig. 2). Over the past 40 years, the S&P 500 dividend yield has averaged less than half the yield of the 10-year Treasury note yield. Today, that ratio stands at 70% (S&P 500 dividend yield of 2.1% versus 10-year Treasury note yield of 4.3%)

---

**Fig. 2: Dividend yield closes the gap to Treasury yields**

![Diagram showing dividend yield comparison to 10-year Treasury note yield](source: Thomson Reuters)
Treasury note yield of 2.9%) or nearly two standard deviations above its historical average. Stocks on our WMR Dividend Ruler Stock List (stocks which have historically have increased dividend payments to shareholders “as straight as a ruler”), appear particularly well positioned in the current market environment for three reasons. First, the average yield of 3.6% is even more attractive than alternatives. Second, the majority of the stocks on the list are in the less cyclical economic sectors (e.g. Consumer Staples, Utilities, Healthcare and Telecom). And third, the strong historical and prospective dividend growth for these stocks provides investors with an added layer of yield enhancement over time.

- **Covered call writing**: Covered call writing is one of the most basic and frequently used of all options strategies. With a buy-write strategy, the investor simultaneously buys the underlying shares and writes a call option with a strike price that is typically higher than the current stock price – in options terminology, “out-of-the-money.” The call writer receives cash today for selling the calls in exchange for the obligation to deliver the shares at the strike or exercise price in the future. The stock owner also remains entitled to any dividend payments from the underlying shares as long as the shares are held. Those investors who currently own stocks – but believe the market has limited short-term upside potential – may want to consider this strategy. In a volatile market when options premiums are high, such as the current environment, the strategy can be thought of as a yield enhancement vehicle to supplement dividend income.

- **Selective use of “step-up” bonds**: Callable step-up notes are a type of fixed-income security which features a coupon that adjusts to predetermined levels at fixed dates (see Fig. 3). A call provision is embedded in the bond, which allows the issuer to call, or redeem, the investor’s principal after a certain date. For investors concerned about the low yields currently offered by fixed-income products, as well as the prospects for rising interest rates, callable step-ups offer two main benefits. First, issuers of callable step-up notes reward investors with above-market coupon rates in the initial years in exchange for the right to call the security at some point in the future. This allows investors to achieve a somewhat higher rate of return relative to fixed rate notes of similar maturities in the near term. In addition, as the coupon of the security steps up over time, investors are rewarded with higher income in future years if the bonds are not called.

Like all corporate bonds, callable step-up notes have certain risks, including credit risk and call risk. For more information about the benefits and risks of callable step-ups, we recommend that clients review...
Investors need to consider shifting the return profile of portfolios by exploiting income-generating strategies.


- **Incorporating annuities.** For investors with a longer time horizon – or those looking to repair retirement assets – an allocation of a portion of savings into a deferred variable annuity with a living benefit feature can help ensure future income. A variable annuity provides the ability to remain invested in the markets by choosing among available underlying investments while, under certain living benefit features, the insurance company promises a minimum future income stream. If the value of the underlying investments rises, the amount of the future income stream may also rise. For those investors more concerned with current income, immediate annuities can offer a stream of income for as long as they and/or their spouses live. An allocation of a portion of savings to an immediate annuity (enough to cover basic expenses) with the balance in a well-diversified portfolio of more traditional assets may provide an optional balance between protection and growth potential. (See the WMR report entitled “Retirement Investing and Spending,” from April 28, 2010.)

- **Master Limited Partnerships (MLPs):** MLPs are limited partnerships that issue investment units which are listed on public exchanges. As a group, MLPs can offer investors significant income, capital appreciation potential and tax-deferral advantages. In addition, MLPs typically feature compelling cash distribution yields to investors, most commonly ranging between 6% and 8%. In order to enjoy the tax benefits of a limited partnership, MLPs may only engage in certain types of business; most are in energy-related fields. Midstream energy transportation, often pipelines carrying natural resources such as oil and gas, are highly regulated industries that dominate the MLP space. Since MLPs typically engage in activities that generate significant cash flow and are structured as partnerships, they generally pay a large portion of their returns in the form of quarterly distributions. Taxation of MLPs is unique – as a rule of thumb, more than 70% of distributions are tax-deferred until the sale of the partnership units, though all distributions are taxed as ordinary income regardless of when that income is realized. Investors who are willing to accept equity-like volatility should consider selective exposure to MLPs in order to enhance their portfolios with tax-advantaged income.

**Fig. 5: Still plenty of cash on the sidelines**
Money market assets as a share of S&P 500 market capitalization, in %

**Fig. 6: Incremental return from extending maturities**
Boost in returns from investing 50% of liquidity balances in Treasuries or CDs, in bps

Source: Bloomberg, Thomson Reuters, UBS WMR
2) Deploy cash balances more actively
While the need for liquidity has become more apparent following the crisis, the response of investors may have been too extreme. As Fig. 5 illustrates, cash balances are currently running well above their long-term historical average. But this may actually understate total cash holdings, since this excludes short-term certificates of deposit. With the yield on cash instruments at historically low levels – which are likely to remain that way for the near term – the opportunity cost of maintaining large liquidity balances remains high. The use of high-quality short-term marketable debt and deposit instruments presents an opportunity to significantly improve the returns on liquid assets without substantial changes in liquidity and safety.

Perhaps the most straightforward way to redeploy liquidity balances without materially altering the risk profile of the portfolio would entail laddering some portion of the cash holdings into high-quality instruments over some predefined investment horizon. This strikes a balance between maintaining a high level of liquidity and safety, while allowing for higher returns. A simple approach entails dividing a portfolio into a portion composed of a liquidity pool and a portion in marketable, high-quality debt. Fig. 6 illustrates the potential impact on portfolio returns of retaining 50% of the liquidity pool in a money market fund and redeploying the balance into a laddered portfolio of Treasury debt instruments with maturities ranging from 6 months to 2 years. Although the absolute yield levels are admittedly low, the “pick up” of approximately 30 basis points on the portion invested in the ladder is still significant. With money market funds yielding approximately 10 to 15 basis points, the incremental pick up is two to three times higher on the laddered portfolio of Treasury securities. If an investor were willing to sacrifice some marketability by purchasing insured certificates of deposit instead of Treasury instruments, the yield on the laddered portion of the portfolio increases by approximately 70 to 75 basis points.

A more complex approach would apportion cash balances among three baskets. Investors with well-defined liquidity needs or those who only require immediate liquidity and are willing to tolerate some degree of volatility in net asset value (NAV) may consider this approach. The first basket (Level I) comprises cash or cash equivalents offering immediate liquidity and a stable USD 1 per share NAV. The second basket (Level II) comprises “beyond cash” investments that offer high liquidity, minimal price (NAV) volatility and high credit quality. In exchange for the somewhat greater degree of risk, investments in this basket offer slightly higher yields. Finally, the third basket (Level III) consists of investments offering liquidity, price (NAV) volatility and investment-grade credit quality. This basket contains investment strategies that cover a broad range of securities, and while offering more competitive yields, typically introduce the greatest degree of price volatility and potential for price depreciation relative to other levels.

Fig. 7: High correlations across asset classes is not new
Correlation of S&P 500 total return index to hedge fund returns, 12 month rolling
Note: Calculated using Hedge Fund Research Fund of Funds Composite Index (HFR). Source: Bloomberg, HFR, UBS WMR

Fig. 8: Little correlation between commodities and equities
Correlation of the S&P 500 index with Reuters/Jefferies CRB Index, 12-month rolling
Source: Bloomberg and UBS WMR
A mix of both traditional and non-traditional strategies is required to help rebuild balance sheets and restore wealth.

3) Diversify into alternative investments
The tendency for different risk assets to move in tandem during the financial crisis has served to undermine one of the core principles of modern portfolio theory – diversification. But as Fig. 7 illustrates, this trend toward higher return correlations across different market sectors and asset classes is nothing new. The ability of capital to move seamlessly across both geographic borders and asset class categories has been helping to drive a convergence in performance across markets. Investors are therefore left scrambling for new ways to position portfolios in order to mitigate this risk. While alternative investments (AI) also suffered losses during the global financial crisis, the tendency for hedge funds to perform better than the overall market suggests there are still diversification benefits that can be gained from positioning within AI. What’s more, with individuals increasingly focused on absolute rather than relative returns, certain hedge fund strategies appear to be a better fit in the post-crisis world.

Keep in mind, of course, that AI is not a homogeneous asset class – in fact there isn’t even agreement over exactly what constitutes an “alternative investment.” The performance characteristics therefore differ markedly across the different vehicles, as does the secondary market liquidity. While investments such as hedge funds and private equity may not be appropriate for all investors, their performance profile and low historical correlations to more traditional asset classes make them appealing diversification candidates. Consider the advantages of using different AI strategies to supplement a more traditional asset mix:

- **Commodities**: Most assets in the traditional portfolio are financial assets, which are claims on real assets. Commodities on the other hand are real assets which are consumed in the production process and have tangible qualities. Financial assets are driven largely by long-run expectations of cash flows, whereas commodity prices are impacted more by short-term supply and demand imbalances. While the absolute volatility of commodities is high, commodities can benefit the overall asset allocation process by being positively correlated with inflation while being negatively correlated with the two largest components of the traditional portfolio – stocks and bonds (see Fig. 8). Investors should keep in mind that commodity returns do not simply arise from changes in spot prices. Financial investments in commodities are usually accomplished through commodity futures contracts, which requires regularly selling contracts that are close to expiration and rolling positions into longer-dated contracts. When, as is often the case, longer-dated contracts have a higher price than shorter-dated ones (contango situation), rolling these contracts is a negative source of returns (negative roll yield) that can reduce the performance arising from spot price changes.

- **Hedge funds**: There are several key elements that distinguish hedge funds from mutual funds. Hedge funds are private investments that have increased flexibility in going both long and short securities, allow for derivative strategies, can invest in nonpublic securities and enhance/reduce their fund returns with the use of leverage. On the downside, hedge funds tend to be less liquid and offer less transparency than mutual funds. Overall, however, including hedge funds in portfolios can offer broader diversification, reduced volatility and return enhancements.

- **Private equity**: The private equity world can essentially be boiled down to different types of strategies: buyout funds and venture capital. Buyout funds typically target mature companies with prospects for solid cash flow generation and are highly leveraged with debt in order to complete the buyout and magnify their returns. Given the amount of financial leverage needed in a buyout fund strategy, both returns on the upside and downside are magnified. Venture capital on the other hand focuses on companies in their early stage of development and companies with strong product development prospects. Venture capital funds target a high return on investment as dealing with relatively new business concepts means many businesses will not come to fruition.
The tendency for markets to experience extreme outcomes poses one of the most significant challenges for investors.

4) Hedge against extreme events
In his groundbreaking book, *The Black Swan*, Nassim Taleb explored the extreme impact that seemingly rare and difficult-to-predict events can have on the world at large (see Fig. 9). The tendency for markets to experience extreme outcomes – and at a rate that is far in excess of what modern portfolio theory would have projected – poses one of the most significant challenges for investors. This is especially true in the aftermath of the financial crisis, given the heightened risk of geopolitical shocks, which, by definition, are rarely identifiable with any sort of foresight (see the June 2010 edition of the UBS research focus, entitled “Geopolitics: the blind side”).

This combination – higher incidence of tail risk, material impact upon financial assets and the inability to forecast events beforehand – suggests that more robust hedging strategies are critical. While more traditional approaches such as straight put options can help hedge portfolio holdings to some degree, structured solutions often offer strategies that align more closely with the underlying risks of the assets within the portfolio – and therefore offer greater protection.

Structured solutions are designed to be alternatives to traditional investment classes and have developed means of dealing with “Black Swan” events. For example, a principal guarantee can be created to ensure return of an investor’s principal as long as it is held to maturity. Structured solutions can also reduce the overall volatility within a portfolio as well as enhance total returns. Structured offerings can be linked to an array of different assets including equity indexes, commodities, foreign currencies and interest rate indexes.

5) Employ enhanced debt management
As Fig. 10 illustrates, debt burdens within the private sector surged during the period of 2000 to 2007. Stagnant personal income growth, a near complete collapse in lending standards and historically low interest rates contributed to the greatest “leveraging up” of personal balance sheets in history. With these burdens having now reached levels that most consider to be unsustainable, the process of unwinding this debt has begun in earnest. While deleveraging of balance sheets may seem fairly straightforward, there are several critical steps that individuals need to take to ensure that debt consolidation is accomplished in an efficient and comprehensive manner.

- The first step in this process is to identify the current capacity for debt reduction. This entails an assessment of the resources available for paying down or reducing outstanding debt balances. This debt consolidation must not be approached in a way that negatively impacts either investment performance or minimum required liquidity levels.

- The second step is to prioritize debt consolidation according to funding costs rather than the nature...
of the funding. Highest-cost debt should typically be reduced first – although the after-tax impact of debt reduction also needs to be incorporated into the process.

The final step is to reduce funding costs for the remaining debt balance through a combination of opportunistic refinancing and use of assets to lower borrowing rates. This can include refinancing of existing mortgage balances or corporate loans for small business owners, as well as using securities holdings to reduce funding costs on outstanding credit card or other high-interest obligations. Leveraging securities holdings can also improve cash now as these lines are typically not amortizing and interest may be capitalized.

While much of these deleveraging efforts will clearly center on debt reduction, cutting debt servicing costs can also have a material impact on the balance sheet repair process. Mortgage rates – for both 15- and 30-year loans – have fallen to their lowest levels ever (see Fig. 11). Shifting from an existing conventional 30-year loan to a 15-year loan would both allow for deleveraging through accelerated principal repayments as well as lower the total interest expense due on the outstanding debt balance. Meanwhile, the shift from high-cost unsecured borrowing or corporate receivable revolvers to lower cost-secured liability funding with the use of securities-backed lending can reduce interest expenses by as much as 3% annually depending on the size of the loan.

**Conclusion**

The events of the past several years cannot simply be undone – nor can or should the experiences be easily purged from the collective consciousness. As a result, individuals have become far more keenly attuned to a whole host of threats ranging from liquidity shortfalls and credit meltdowns to asset liability mismatches and tail risks. While some remain in a state of inaction due to the sheer ferocity of events, others are looking to move beyond the initial shock in order to map out strategies for rebuilding wealth. These strategies need to move beyond the traditional asset class alternatives to include somewhat less conventional approaches to increasing cash now, improving diversification and limiting tail risk. But these efforts should not be targeted solely to the asset side of the balance sheet. Because as the “great reflation” increasingly gives way to the “great deleveraging,” consolidating debt and reducing funding costs will be just as critical to restoring long-term financial stability.

The following contributed to this report:

- **Stephen Freedman, PhD, CFA**
  Strategist

- **Kurt Reiman**
  Strategist

- **Jeremy Zirin, CFA**
  Strategist

- **Anne Briglia, CFA**
  Strategist

- **Mike Tagliaferro, CFA**
  Strategist

- **Joe Sawe**
  Strategist

- **Kevin Ruth**
  Head, Retirement Income & Fund Services

- **Andrea Fisher**
  Investment Strategy Analyst

- **Tony Roth**
  Head, Wealth Planning & Investment Strategies

**Fig. 11: Mortgage rates have fallen to new lows**

Fannie Mae 15-year and 30-year fixed-rate mortgage rates, in %

<table>
<thead>
<tr>
<th>Year</th>
<th>15-Year Fixed</th>
<th>30-Year Fixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>12.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>1992</td>
<td>10.0%</td>
<td>8.0%</td>
</tr>
<tr>
<td>1997</td>
<td>8.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>2002</td>
<td>4.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>2007</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>2012</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

Source: Bloomberg, UBS WMR