

NEPC is an independent, full service investment consulting firm, providing asset allocation, traditional and alternative asset manager search, performance evaluation and investment policy services to institutional investment programs. We offer our market letters to provide insight into recent market conditions, and to assist your interpretation of investment results. We encourage your comments and feedback, as well as any inquiries you may have about our firm or our consulting services.

## A Heavyweight Championship Bout

### Introduction

Welcome to the round-by-round live commentary of an epic boxing match. In one corner stands heavyweight Economic Crisis, unrepentant and relentless. His opponent, the Central Banker, is a pugilistic superpower and crowd favorite. The stakes are high in this rough and tumble sport: with the winner taking control of the global economy. One will plunge it into darkness and roil markets. The other seeks to pull it back from the precipice of economic ruin.

The match so far:

**1Q12:** The Central Banker, enjoying the momentum of Europe’s Long-Term Recovery Operation (LTRO) in late 2011, awards a bloody nose to the Economic Crisis. The winning punch fuels markets and promotes economic stability while sending the Crisis reeling backward. The Banker, shoulders hunched, braces for a retaliatory move.

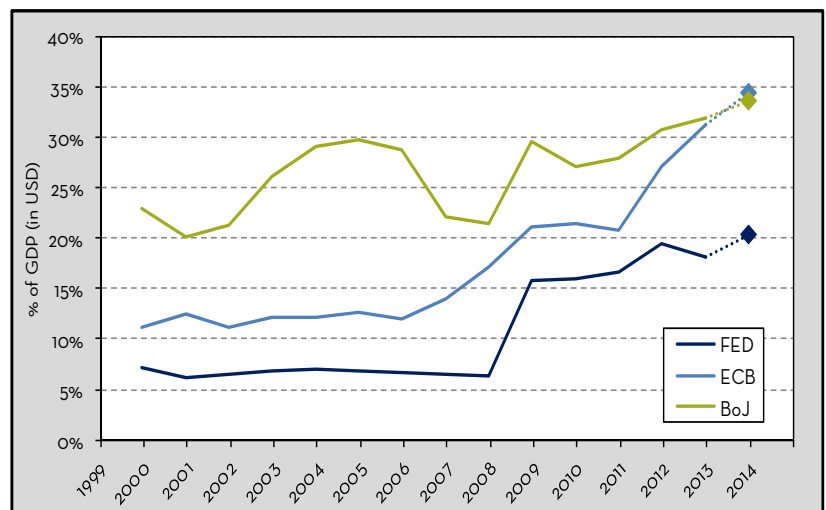
**2Q12:** Determined to avenge his humiliating retreat, the Crisis knocks the Banker off his feet with a left hook packed with election uncertainty in Greece, socialist victory in France, a faulty banking system in Spain, and slowing global growth, most notably in China. Only a flurry of last minute maneuvers coordinated by central banks prevents a complete rout.

**3Q12:** The Banker, bruised but still standing, responds with a rousing body blow amid cheers from the crowd. The Crisis falters as the European Central Bank commits to “do whatever it takes” to support the Euro, and the Federal Reserve first extends Operation Twist through the end of the year and then launches a third round of “open-ended” quantitative easing, a move dubbed QE3. In addition, the Fed says short rates will stay low until mid-2015. The Bank of China also steps up, funneling nearly \$60 billion into its banking system.

Markets cheer as the Banker proves, yet again, he has the heft to lift stocks. However, the ebullience may be premature. The title is still up for grabs and with it the fate of the global economy hangs in balance. As the fourth and final round of 2012 (but certainly not the end of this battle) gets underway, the weary crowd is left with more questions than answers. Does the weakened Banker have enough firepower left to stimulate the deeply troubled economies and prevent the Euro from crumbling? Or, will the unrelenting Crisis, aided perhaps by dithering politicians, deliver a punishing blow in the guise of an economic depression fueled either by a deleveraging hysteria or inflation stemming from extravagant money printing?

Enter the commentators from NEPC, offering the tale of the tape between the two heavyweights. One, the Central Banker possesses the strength to move markets. But each move weakens his capacity for future intervention as balance sheets balloon relative to respective GDPs (Exhibit 1). Two, stock markets may have more room to advance given valuations aren’t fully stretched (although slowing earnings growth may be a likely damper). Markets outside the US, particularly in Europe and select developing economies, appear more attractive, but they

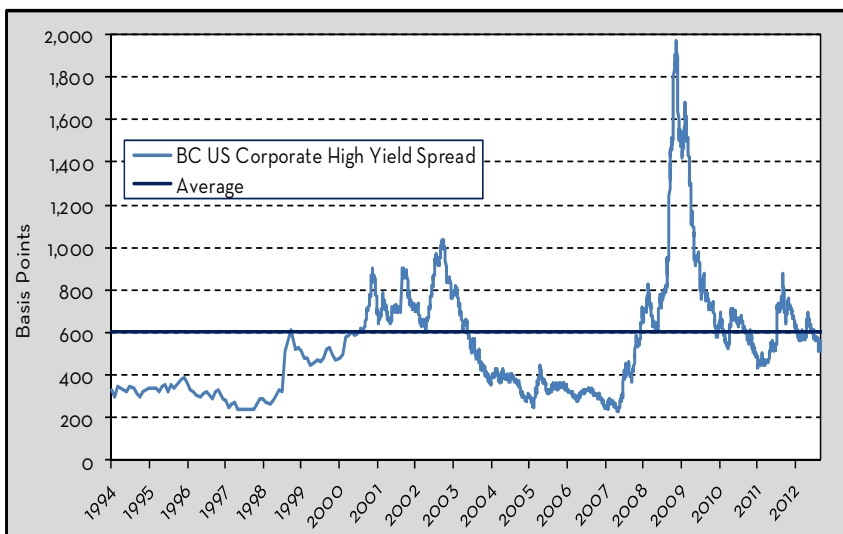
Exhibit 1: Central Bank Assets vs. GDP



\*Dotted lines indicate projected pace based on recent announcements.

Source: Bloomberg

Exhibit 2: High Yield Corporate Bond Spreads



Source: Bloomberg

carry significant risk from crisis-related headlines. Three, rock bottom government bond rates have spurred yield hungry investors to bid up the prices of corporate debt from lucrative levels at the start of the year to at least fair value (Exhibit 2: High-yield spreads have tightened 250 basis points in the last 12 months). Finally, in a testament to healthy risk-taking behavior, investors who can afford to lock-up capital should look for potential investment opportunities through more complex and arcane segments of credit markets. These include investments in non-agency mortgage-backed securities, other asset-backed securities, and direct lending. With few moments remaining before the weary rivals resume their savage dance, we momentarily step out of the arena to take stock.

### Global Equities

Stocks got a leg-up in the third-quarter thanks to collective monetary easing by central banks in the US and Europe. International markets posted returns of 6.9% during this period, according to the MSCI EAFE Index. This compares to losses of 7.3% in the second quarter. Returns were positive across all sectors. The financial sector led the pack and the information technology sector trailed behind with flat to modest returns during the quarter. Among countries, Japan was the only region in the red.

For the third quarter emerging markets outperformed developed markets, including the US, in local currency terms. But they lagged behind the US in dollar terms. Emerging markets rose 7.7% with gains in the following sectors: health care, information technology, energy and consumer discretionary. The utilities sector posted negative returns of -0.4%. Within countries, India was among the strongest performers, aided by word of economic reforms designed to allow foreign investors to put money directly into retail and distribution.

In the US, the S&P 500 Index posted gains of 6.4% in the third quarter, compared to losses of 2.8% in the second quarter. Value investing generally outperformed growth strategies. Large cap equity outperformed mid cap stocks and small cap stocks.

### Global Fixed Income

Fixed income investors ratcheted up risk taking in the third quarter on the heels of monetary easing by central banks in the US and Europe. All sectors were in the black, with debt issued by emerging markets and high-yield companies leading the way. Spreads on high yield debt continued to tighten to end the quarter hovering near record lows. High yield bonds returned 4.5% in the third quarter, compared to 1.8% in the prior quarter. Spreads over Treasuries ended at 551 basis points, This compares to 615 basis points in the prior quarter and 807 basis points a year earlier.

In line with investors' demand for yield, debt issued by emerging markets rallied. Dollar-denominated issues got a boost as investors sought solace in the emerging market's higher returns and healthier economic fundamentals relative to their developed market counterparts. Dollar-denominated debt returned 6.9% in the quarter, compared to 2.5% in the prior quarter. Local currency sovereign bonds earned 4.8%, compared to -1.2% in the prior quarter.

The clamor for risk and higher returns took the shine off safer but lower yielding assets such as Treasuries and agency debt, which ended the quarter flat. Within investment grade sectors, corporate bonds returned 3.5%, agency mortgage-backed securities (MBS) gained 1.1% and commercial MBS posted returns of 3.8%. The Barclays Capital Aggregate Index,

Equity Index Returns as of 9/30/2012					
Global Equity	Quarter	YTD	1 Year	3 Yrs	5 Yrs
MSCI World	6.1%	10.9%	18.8%	5.5%	-3.9%
US Equity	Quarter	YTD	1 Year	3 Yrs	5 Yrs
S&P 500	6.4%	16.4%	30.2%	13.2%	1.1%
Dow Jones Industrial Average	4.3%	10.0%	23.1%	12.8%	-0.7%
NASDAQ Composite	6.2%	19.6%	29.0%	15.6%	3.1%
Russell 1000 Growth	6.1%	16.8%	29.2%	14.7%	3.2%
Russell 1000 Value	6.5%	15.7%	30.9%	11.8%	-0.9%
Russell 2000	5.3%	14.2%	31.9%	13.0%	2.2%
Russell 2000 Growth	4.8%	14.1%	31.2%	14.2%	3.0%
Russell 2000 Value	5.7%	14.4%	32.6%	11.7%	1.3%
International Equity	Quarter	YTD	1 Year	3 Yrs	5 Yrs
MSCI EAFE	6.9%	10.1%	13.8%	2.1%	-5.2%
MSCI Emerging Markets	7.7%	12.0%	16.9%	5.6%	-1.3%
MSCI Europe	8.7%	11.3%	17.3%	2.0%	-5.7%
MSCI UK	6.0%	7.1%	15.9%	4.1%	-6.1%
MSCI Japan	-0.8%	2.3%	-1.7%	-0.6%	-6.5%
MSCI Far East	0.5%	3.5%	0.5%	-1.1%	-6.3%

Source: Bloomberg

the benchmark for US fixed income debt, gained 1.6% in the third quarter. Financials, the best performing sector in fixed-income, returned 5.0% for the quarter. Despite the Federal Reserve's QE3 announcement, the Treasury yield curve, with the exception of 30-year-maturities, shifted lower in the quarter. Yields fell at the 2-year (to 0.23% from 0.33%) and 10-year (to 1.65% from 1.67%) points on the curve. At the long end, yield on 30-year bonds increased 6 basis points to 2.82% during the quarter.

### Currency Markets

Currencies weakened in the third quarter as central bankers used monetary stimulation to fight off slower growth and deleveraging. As a result, initially cautious but now emboldened investors sought out risky assets. The increased risk-taking weakened the US dollar most of all as it depreciated against the euro (-1.5%), the British sterling (-2.8%) and the Japanese yen (-2.4%). Commodity currencies appreciated modestly against the dollar as well. Currencies in emerging economies benefited from announcements of monetary stimulation too. They were mostly flat against developed currencies for the better part of the quarter but rallied in the last few weeks of September. In particular, the Indian rupee appreciated 5% against the US dollar. One exception was the Brazilian real, which weakened about 1% against the dollar. Capital controls to deter foreign investors have taken the shine off the Brazilian real, which has lost over 20% of its value against the dollar since its peak in July 2011.

### Commodity Markets

Higher commodity prices in the third quarter helped erase the bulk of losses from the first half of the year. During the quarter commodities recorded strong gains with returns of 9.7%, according to the DJ-UBS index, compared to losses of 4.6% in the second quarter. Agricultural and natural gas markets suffered in July and August as higher temperatures threatened corn and soy bean crops. Colder weather late in the quarter sparked a higher demand for natural gas, pushing prices up nearly 18% over the quarter. In the industrials metals market, lead and silver were ahead, aided by central bank stimulus, which lifted markets with a sharp rally in September.

### Pension Liability

Pension discount rates fell since the second quarter and seasawed through the third quarter. Roughly flat rates across most of the Treasury yield curve were only part of the story as tightening of corporate spreads during the quarter led discount rates lower. The Barclays Capital Long Credit Index dropped to 152 basis points over the 30-year Treasury yield from 193 basis points.

Flat Treasury yields and tighter credit spreads spurred a 19 basis points drop in the Citigroup Pension Liability Index (CPLI) in the third quarter to 3.94%, down from 4.13% in the second quarter. This marked the first time the index fell below 4%. The lower interest rates affected the liabilities of our clients' pension plans. Liabilities increased 4.8% for the quarter and 12.9% so far this year, according to Citigroup estimates. Clients who have implemented Liability Driven Investing (LDI) strategies likely saw gains during the quarter from their long duration assets. Clients who are yet to implement an initial LDI strategy may want to discuss the topic with their NEPC investment consultant, given laws allowing higher discount rates for the next three-to-four years and the continued decline in interest rates. Depending on a client's goals, LDI may be a useful hedging tool. Conversely, clients with an existing interest rate hedge in their portfolio may want to make sure the investment strategy remains in line with the targeted volatility reduction. In either case, NEPC consultants can review the LDI strategies and implementation options.

### Hedge Funds

Hedge funds posted modest gains through the three months ended September 30, as caution fueled relatively low net exposure. Risk taking increased following easing monetary policy announcements in September, but retreated toward the end of the month in line with expectations of weaker earnings. The Dow Jones Credit Suisse Hedge Fund Composite rose 3.3% in the third quarter, bringing gains so far this year to 5.6%. This compares to losses of 1.8% in the second quarter. Risk weighted assets were the best performing strategies as equity and high yield indices soared. Emerging markets strategies led the pack with returns of 4.1%, while dedicated short bias strategies trailed last with losses of 8.3%. Long-short equity and event driven-distressed strategies, poor performers in the second quarter, made a comeback with gains of 3.7% each, as risky assets benefited from central bank policies. Fixed income, with returns of 3.9%, got a boost from rallying mortgage-backed securities. Credit spreads tightened spurring appetite for riskier assets in both fixed income and event driven strategies. Managed futures continued to struggle as managers following medium- and longer-term trends seasawed between caution and risk taking in a quickly changing economic environment.

Fixed Income Index Returns as of 9/30/2012					
Global Fixed Income	Quarter	YTD	1 Year	3 Yrs	5 Yrs
Citi WGBI	3.0%	3.4%	3.3%	4.3%	6.5%
JPM EMBI Plus	6.9%	14.3%	20.3%	13.8%	12.6%
Domestic Fixed Income	Quarter	YTD	1 Year	3 Yrs	5 Yrs
BC Aggregate	1.6%	4.0%	5.2%	6.2%	6.5%
BC US Agg. Treasury	0.6%	2.1%	3.0%	5.4%	6.2%
BC US Credit	3.5%	8.2%	10.1%	8.7%	7.9%
BC Mortgage Backed	1.1%	2.8%	3.7%	5.0%	6.4%
BC Interm. Gov't/Credit	1.4%	3.5%	4.4%	5.2%	5.7%
BC 1-10 Yr TIPS	1.7%	4.6%	6.3%	7.0%	6.6%
BC High Yield	4.5%	12.1%	19.4%	12.9%	9.3%
S&P LSTA Lev. Loan	3.4%	8.1%	11.2%	7.8%	5.4%
3 Month T-Bills	0.0%	0.1%	0.1%	0.1%	0.7%
10-Year Bond Yields	Sep-12	Jun-12	Mar-12	Dec-11	Sep-11
US	1.6%	1.6%	2.2%	1.9%	1.9%
Germany	1.4%	1.6%	1.8%	1.8%	1.9%
UK	1.7%	1.7%	2.2%	2.0%	2.4%
Japan	0.8%	0.8%	1.0%	1.0%	1.0%

Source: Bloomberg

Separate from the momentum following changes in monetary policy, there are increasing signs of individual manager security selection. This is creating greater dispersion in returns, especially in the long-short equity space. We remain confident in the security selection and portfolio construction capabilities of our preferred managers. That said, dynamically adjusting portfolio risk will be challenging for a while.

### Private Markets

New private equity deals declined in the third quarter amid the “bad mouthing” the sector endured in the US Presidential campaign and economic turmoil in Europe. New commitments, at \$55.2 billion, fell 14% from the second quarter and 4% compared to a year ago. Still, at year-to-date commitments of \$187.1 billion, the 2012 year is on track to set a record for volume of new commitments since 2008. For the year, buyouts, at 40%, comprise the bulk of all new commitments, followed by venture capital at 16%. The pace of mergers and acquisitions and initial public offerings is expected to remain sluggish through 2012. This slowdown comes even as cash rich buyout firms sit atop around \$200 billion of 2006/2007 commitments yet to be invested. In the near-term this capital overhang, in addition to higher equity levels banks require on new deals and relatively high transaction multiples, could hinder investment returns in buyout funds that are \$1 billion or larger. In this environment, NEPC favors investments in funds of less than \$1 billion that tend to be less dependent on debt to generate financial returns. Another option: going with prudent larger managers with a track record of disciplined acquisitions and industry/operational knowledge to drive value creation within their portfolios. Global private equity posted returns of -1.3% in the second quarter (the most recent period for which data are available), according to the Burgiss Group, as modest gains in the US and Asia failed to offset losses in Europe. This marks negative returns for the second time in the past 13 quarters. Buyout funds posted losses of 1.9% for the second quarter, while venture capital funds generated a 0.5% return. In the 10-years through the second quarter of this year, global private equity posted gains of 11.5%, with buyout funds returning 13.2% and venture capital funds gaining 4.2%.

In real estate, NEPC remains positive about the opportunity in the non-core market in the US and Europe. In this segment properties are undervalued and significant capital structure distress remains. Still, financing for assets is more expensive or harder to obtain than in the core market, which comprises open-end funds that invest in income-producing, fully-developed and operating properties. In addition, hefty near-term maturities may present additional challenges for current owners. In this area there are broadly two attractive strategies: recapitalization (loan-to-loan) and control (loan-to-own). In Europe, particularly, there is a large volume of distressed assets, limited financing, significant macroeconomic and structural uncertainty and unwinding of debt. We believe the opportunity within European non-core real estate is still in the infancy stages. Prospects in Europe are poorer with low core real estate yields and a weak outlook for long-term growth and demand. NEPC is neutral on the core US market, advising clients to maintain target strategic allocations.

### Final Thoughts

As fists fly and punches roll in the continuing fight between dark economic forces and those struggling to contain them, we begin the process of tuning our assumptions for annual asset allocation. We start with an assessment of key market drivers, including current Treasury yields, credit spreads, expectations of economic growth and inflation, and stock market dividend yield and valuation. A quick comparison of these factors with the end of 2011 reveals:

- Treasury yields 10-25 basis points lower (depending on the point on the yield curve);
- Credit spreads significantly tighter – over 90 basis points for investment-grade bonds and 250 basis points for high-yield debt from 2011 highs;
- Economic growth and inflation expectations muted; and
- Equity valuations modestly higher after the market run-up so far this year.

Given these observations, and if little else changes through the end of the year, our updated assumptions on five-to-seven-year returns for the major equity and bond markets will be modestly lower. With Treasury yields lower and corporate credit spreads tighter than a year ago, the expected return differential for stocks relative to bonds will likely remain near the high end of its historical range. This trend is expected to remain in place even with a forecast for low absolute returns in equities.

Hedge Fund Industry Performance Overview as of 9/30/2012					
Composite	Quarter	YTD	1 Year	3 Yrs	5 Yrs
DJCS Hedge Fund Composite	3.3%	5.6%	6.4%	5.6%	2.3%
Relative Value	Quarter	YTD	1 Year	3 Yrs	5 Yrs
DJCS Convertible Arbitrage	1.7%	5.9%	7.1%	7.7%	3.7%
DJCS Fixed Income Arbitrage	3.9%	8.8%	9.9%	10.2%	3.3%
DJCS Equity Market Neutral	1.4%	0.0%	2.4%	0.8%	-8.0%
DJCS Multi-Strategy	3.5%	8.2%	9.6%	7.5%	3.1%
Event Driven	Quarter	YTD	1 Year	3 Yrs	5 Yrs
DJCS Event Driven	3.6%	7.2%	7.9%	4.8%	2.0%
DJCS Event Driven - Distressed	3.7%	8.3%	9.1%	6.4%	2.0%
DJCS Event Driven - Risk Arbitrage	0.4%	1.0%	2.3%	2.2%	2.8%
DJCS Event Driven - Multi-Strategy	3.6%	6.7%	7.4%	4.0%	2.0%
Equity Hedge	Quarter	YTD	1 Year	3 Yrs	5 Yrs
DJCS Long-Short Equity	3.7%	6.0%	8.1%	3.2%	1.0%
DJCS Emerging Markets	4.1%	6.2%	6.4%	4.8%	0.9%
DJCS Dedicated Short Bias	-8.3%	-17.6%	-24.4%	-13.6%	-9.3%
Tactical	Quarter	YTD	1 Year	3 Yrs	5 Yrs
DJCS Global Macro	3.1%	3.3%	3.9%	8.4%	6.7%
DJCS Managed Futures	1.6%	0.1%	-4.0%	1.6%	4.2%
Traditional Markets	Quarter	YTD	1 Year	3 Yrs	5 Yrs
Barclays Aggregate Bond	1.6%	4.0%	5.2%	6.2%	6.5%
S&P 500	6.4%	16.4%	30.2%	13.2%	1.1%

Source: Bloomberg

In the near-term significant uncertainties loom. The US Fiscal Cliff will not be addressed until after the November elections. Policy makers in Europe have a window to build a stronger framework to contain the Euro debt crisis. New leadership in China will likely want to reinforce its strong economic standing and has plentiful resources to spur near-term growth. Turmoil in the Middle East, be it from a strike on Iranian nuclear facilities or the spread of the civil war in Syria, remains a potential source of volatility. Given the on going struggle to ward off another economic abyss, we continue to recommend a risk balanced approach to asset allocation. We believe broad asset diversification, in conjunction with a long-term investment horizon, is the best approach to weather downside risks. Allocations to asset categories, such as, nominal sovereign bonds or inflation-linked securities, remain vital for their ability to withstand market downturns fueled by deflationary or inflationary shocks. Among risky assets, non-US stocks, including emerging markets, appear attractive. But they may be vulnerable to the potential fallout from the Euro-debt crisis and negative headlines from China.

NEPC has been devoting significant resources to evaluating opportunities in the Asian region, including multiple research trips in recent months. Our initial impressions are that China has already “landed” and it is a soft touch down. We are finding interesting opportunities in the region, particularly in the credit sectors and consistent with our overall views. Indeed, we believe that investors who can afford to lock-up capital can seek attractive returns from the more complex and, perhaps, less liquid segments of the global credit markets. As key events unfold through the rest of the year and in 2013, we remain focused on providing proactive investment advice and responsive service to help our clients meet and exceed their investment goals.

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As we seek to communicate with our clients in a more timely, easily accessible and environmentally friendly way, we are initiating a new approach to distributing our Market Thoughts. Beginning this quarter, we will not be mailing hard copies of NEPC’s Quarterly Market Thoughts. Instead we will send an e-mail to our normal distribution list with a link to this publication via [www.nepc.com](http://www.nepc.com). As usual we will also include a link to our Market Thoughts in our monthly client e-mail. We hope you find this to be an improved manner to receive timely insights from NEPC. As always, please let us know if you have additional comments or suggestions.