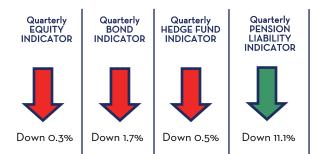


MARKET THOUGHTS

SECOND QUARTER 2015

VOLUME 38



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 TALE OF TWO BAILOUTS: GREECE AND CHINA

Introduction

Markets the world over sputtered as Greece and China—two economies dissimilar in every way—shared in the fallout from their individual and distinct debt drama that played out publicly across continents. US stocks ended the second quarter flat as optimism over the economy at home was tempered by concerns around the ongoing Greek debt crisis and a steep stock market sell-off in China; international equities were mixed as Europe posted its worst three months since 2012 while Japan continued its stellar run.



Greece's unsustainable debt level-currently 177% of GDP-served as a backdrop for drawn out and contentious negotiations with its creditors, which spanned the quarter and extended into July. Elsewhere, China's stock markets made headlines after plummeting over 30% within a span of weeks, pressured from ever increasing margin calls for levered investors. At the peak in mid-June, China's largest local stock exchanges, Shanghai and Shenzhen, had increased nearly 150% over a 12-month period, bolstered by copious amounts of margin debt used to finance the purchase of stocks (Exhibit 1). While the targeted responses to the fall in Chinese equities and Greece's unsustainable government debt load varied widely, in both instances the measures adopted by China and the Eurozone were bold and unique.

The possibility of Greece's exit from the Eurozone escalated during the quarter as it failed to make a €2 billion payment to the International Monetary Fund and instituted capital controls to slow a collapse of its banking system. Following Greece's hastily held national referendum rejecting the bailout terms offered by creditors, the response from Eurozone members was daring and unprecedented. Led by Germany, Eurozone members broke with a long-held doctrine and broached the notion of a nation leaving the euro. The Eurozone's terms for Greece to secure a €86 billion bailout were extraordinary: capitulate to nearly all demands from creditors or abandon the euro. Confronted with the collapse of the country and its banking system, Greek officials had little alternative but to accept the new bailout terms.

For investors in Europe, the risk of contagion and a domino of nations exiting the euro has been a lingering worry. That said, market anxiety over government debt levels and the economic competiveness of peripheral European economies has

largely waned despite the crisis in Greece (Exhibit 2). For nearly five years, the Eurozone has looked to address concerns around the stability of the euro and over the last several weeks a degree of ambiguity has been removed. Clear lines have been drawn regarding membership in the Eurozone: enact reforms to improve economic competitiveness or exit the currency union with a 25% smaller economy, a banking system in shambles, and a broad turnover in elected leaders. To be sure. risks remain, but the recent events should give investors greater confidence in the continued implementation of economic reforms in Italy, Spain and Portugal. Accordingly, we recommend an overweight exposure to developed market equities and suggest investors opportunistically exploit future volatility to add to the over-

Exhibit 2: Yield Spread to 10-Year German Government Bonds



weight. Signs of improvement are already visible in Europe as credit growth, consumer confidence and inflation tick up. In addition, the equity outlook in Europe appears favorable aided by an accommodative monetary policy from the European Central Bank and a rebound in earnings growth off cyclical lows. Not to be outdone, Japan appears to be experiencing a robust earnings recovery and an improved outlook for corporate profitability and growth as shareholder-friendly reforms take hold. The culmination of developments in Europe and Japan encourage us to favor developed market equities over US stocks. That said, we are aware of currency volatility and recommend a 50% hedge for developed market currency exposure.

In China, with trading suspended on over half the local equities, the government and central bank are taking extraordinary measures to address the decline from the mid-June highs. The central bank cut interest rates by 25 basis points and is providing liquidity support for a state-owned company (CSFC) that finances margin loans for brokerage houses. In addition, the government has banned major shareholders and executives from selling any stock holdings for six months, announced a suspension of IPOs, and encouraged local sovereign wealth and pension funds to purchase mainland equities. On the surface, the threat of global contagion from China's capital markets appears muted as its fixed-income and equity markets are largely inaccessible to foreign investors. Still, a 30% decline in equities is not to be taken lightly as a sell-off of that magnitude has the potential to filter into the general economy and impede economic growth. The government of China is clearly of a similar view and its aggressive response underscores these concerns.

While the Chinese economy hit its GDP growth target of 7% in the second quarter, worries around growth linger as industrial production and fixed-asset investment growth continue to slow. The direct impact on global investors is less tangible but a slowdown in the world's second-largest economy has broad implications for many emerging market economies. Global commodity producers and regional exporters in Asia are likely to feel the effects of slowing demand from China, aggravating fiscal and balance of payment concerns. While a dramatic economic slowdown in China is not widely expected, the risk of further equity market declines harming economic growth cannot be ignored. Significant levels of margin debt from official and unofficial sources remain in its financial system and, coupled with the government's intervention in equity markets, volatility is likely to remain elevated. To this end, we recommend investors maintain a benchmark neutral weight in emerging market equities. In addition, we encourage the use of benchmark-agnostic investment strategies with a bias towards emerging market countries undertaking economic and political reforms.

Global Equities

Global equities had a modest second quarter on the heels of a strong first quarter. After clocking gains of 7.7% in April, emerging markets equities sold off significantly in May and June. Similarly, the MSCI EAFE Index posted robust returns in April but gave up gains in June. While the US is lagging the MSCI All Country World Index so far this year, the S&P 500 has not experienced the same level of volatility. Japanese equities continue to perform well with gains of 3%, while Indonesia was down a hefty 14%.

In the US, small cap stocks posted gains of 0.4% in the second quarter, according to the Russell 2000 Index. So far this year, smaller capitalization companies have trumped large-cap equities and growth has outpaced value across the capitalization spectrum.

Equity Index Returns as of 6/30/2015							
Global Equity	Quarter	1 Year	3 Yrs	5 Yrs			
MSCI World	-0.3%	-0.4%	12.0%	10.8%			
US Equity	Quarter	1 Year	3 Yrs	5 Yrs			
S&P 500	0.3%	7.4%	17.3%	17.3%			
Dow Jones Industrial Average	-0.9%	4.7%	11.0%	12.5%			
NASDAQ Composite	1.8%	13.1%	19.3%	18.8%			
Russell 1000 Growth	O.1%	10.6%	18.0%	18.6%			
Russell 1000 Value	0.1%	4.1%	17.3%	16.5%			
Russell 2000	0.4%	6.5%	17.8%	17.1%			
Russell 2000 Growth	2.0%	12.3%	20.1%	19.3%			
Russell 2000 Value	-1.2%	0.8%	15.5%	14.8%			
International Equity	Quarter	1 Year	3 Yrs	5 Yrs			
MSCI EAFE	0.6%	-4.2%	12.0%	9.5%			
MSCI Emerging Markets	0.7%	-5.1%	3.7%	3.7%			
MSCI Europe	0.4%	-7.7%	12.4%	10.0%			
MSCI UK	3.0%	-8.2%	9.1%	10.7%			
MSCI Japan	3.1%	8.3%	13.3%	8.8%			
MSCI Far East	3.2%	8.1%	13.1%	9.0%			

Global Fixed Income

Reversing course from a strong first quarter, most fixed-income securities were in the red for the three months ended June 30. Eurozone bonds gave back gains from the first quarter as Greece's debt crisis rattled investors. The Federal Reserve has hinted that barring any economic setbacks, the first rate increase will be slated for the later part of the year. Given this expected hike and a pickup in economic activity during the second quarter, the US yield curve experienced a bear-steepening, which occurs when longterm rates rise faster than short-term rates. The 30-year Treasury ended 57 basis points higher at 3.11% in the second quarter, while the two-year Treasury was up seven basis points to 0.63%; this dynamic typically occurs in anticipation of a more hawkish monetary policy to combat an expected increase in inflation.

Higher-yielding and shorter-duration securi-

ties were able to hold on to and, in some instances, even add to their gains from the first quarter. The Barclays 1-3 year Government/ Credit Index returned 0.1% and US high-yield bonds were flat. Meanwhile, long Treasuries fell 8.3% and investment-grade corporate debt lost 2.9%. Despite strong earnings and credit fundamentals, the overall performance of US high-grade corporate bonds was hindered by record new issuance, which contributed to 16 basis points of spread widening in the quarter. Issuance has totaled almost \$650 billion year-to-date (with a record issuance of \$155 billion in May). This issuance is over 20% higher than in the first half of 2014. High-yield spreads tightened by five basis points to 535 basis points. New issue volume for high-yield bonds is up 3% from the first half of 2014 with \$185 billion in issuance so far this year.

Moving to emerging markets, external and local currency debt lost ground in the second quarter as yields increased globally. Emerging market currencies—in particular, the Mexican peso, Thai baht and Turkish lira—weakened against the US dollar. US dollar-denominated debt, as measured by the JP Morgan EMBI Index, fell 34 basis points; local currency debt fell 96

Fixed Income Index Returns as of 6/30/2015								
Global Fixed Income	Quarter	1 Year	3 Yrs	5 Yrs				
Citi WGBI	-1.6%	-9.0%	-2.5%	1.1%				
JPM EMBI Plus	-0.9%	-2.1%	2.8%	6.2%				
Domestic Fixed Income	Quarter	1 Year	3 Yrs	5 Yrs				
BC Aggregate Bond	-1.7%	1.9%	1.8%	3.4%				
BC US Agg. Treasury	-1.6%	2.3%	0.9%	2.7%				
BC US Credit	-2.9%	0.9%	3.0%	4.9%				
BC Mortgage Backed	-0.7%	2.3%	1.9%	2.9%				
BC Interm. Gov't/Credit	-0.6%	1.7%	1.6%	2.8%				
BC 1-10 Yr TIPS	-0.2%	-2.0%	-0.5%	2.4%				
BC High Yield	0.0%	-0.4%	6.8%	8.6%				
S&P LSTA Lev. Loan	0.7%	1.8%	4.9%	5.5%				
3 Month T-Bills	0.0%	0.0%	O.1%	O.1%				
10-Year Bond Yields	Jun-15	Mar-15	Jun-14	Jun-14				
US	2.4%	1.9%	2.5%	2.5%				
Germany	0.8%	0.2%	1.2%	1.7%				
UK	2.0%	1.6%	2.7%	2.4%				
Japan	0.5%	0.4%	0.6%	0.9%				

basis points, according to the JP Morgan GBI-EM Index.

Currency Markets

Core currency market trends reversed briefly in the second quarter, stalling a rally that began in mid-2014 in the US dollar relative to the euro, UK pound and the Japanese yen. Muted economic data in the US and signs that the ECB's monetary easing may be taking hold led to the euro appreciating. The rally was shortived as speculators took profits and markets whifted attention back to a potential rate hike by the Fed in 2015. In addition, volatility renained elevated in the latter half of the quarer as risk-taking declined amid the Greek debt alks and falling commodity prices.

Commodity Markets

he Bloomberg Commodity Index rebounded .7% in the second quarter, outperforming US arge cap equities, bonds and the US dollar. Energy and agriculture led the way, while industrial metals, precious metals and livestock declined. The Bloomberg WTI Crude Oil Index gained 17.5% for the quarter amid continued declines in rig counts and announced project deferrals, expectations of demand rebounding and lower US output. The agriculture sector gained 8.3% as warm, wet weather in the Midwest, coupled with dry weather elsewhere, adversely affected corn and soybean planting, creating concerns around yield production. Industrial metals traded down 5.3% on the back of slowing growth in China and ongoing economic woes. Precious metals lost 2.6%, hurt by a strengthening US dollar and a potential rate hike by the Fed.

Pension Liability

The Citigroup Pension Liability Index (CPLI) rose to 4.44% on June 30 from 3.75% in the first quarter with Treasury rates rising 57 basis points on the long end of the curve. As a result, pension liabilities dropped by an estimated 11.1% in the second quarter, according to the CPLI, bringing the decrease in pension liabilities to 6.8% so far this year. This is good news for plan sponsors who likely saw an increase in plan funded status over the quarter.

As plans' funded status rise, we expect to see an uptick in pension risk transfer activity. The RP-2014 mortality tables have yet to be mandated under PPA for funding liabilities. This offers plan sponsors an opportunity to cash out some terminated participants prior to the implementation of these new mortality tables.

However, the IRS recently announced it will halt approval for lump sum payments to retirees, leaving annuity purchases and risk transfers to insurance companies as the pension risk transfer options available to this group of plan participants. NEPC is an important partner in any risk transfer activity, working closely with insurance companies, actuaries and plan sponsors to provide liquidity for lump sum payments or to reallocate plan assets into a portfolio most desirable for an insurance company.

Hedge Funds

Hedge fund performance was mixed in the second quarter with funds broadly underperforming US equities. The Credit Suisse Hedge Fund Index lost 0.5%, trailing the 0.3% return of the S&P 500. The underperformance can be attributed primarily to volatility spurred by the Greece-Eurozone debt negotiations, the downturn in China's equity market and the reversal in commodities.

Tactical trading strategies lagged the broad hedge fund universe for the quarter. The Credit Suisse Managed Futures and the Credit Suisse Global Macro indexes were down 10.6% and 1.8%, respectively. Managed futures strategies performed poorly amidst sharp risk reversals that occurred throughout the period. Specifically, popular trends in the euro/ US dollar,

Composite	Quarter	1 Year	3 Yrs	5 Yrs
•			•	-
DJCS Hedge Fund Composite	-0.5%	3.3%	7.1%	6.2%
Relative Value	Quarter	1 Year	3 Yrs	5 Yrs
DJCS Convertible Arbitrage	2.5%	-1.0%	3.6%	4.8%
DJCS Fixed Income Arbitrage	0.9%	1.7%	5.0%	6.2%
DJCS Equity Market Neutral	2.1%	-1.1%	3.2%	3.3%
DJCS Multi-Strategy	0.2%	6.5%	9.0%	8.5%
Event Driven	Quarter	1 Year	3 Yrs	5 Yrs
DJCS Event Driven	0.4%	-2.0%	8.6%	5.9%
DJCS Event Driven - Distressed	-0.4%	-3.7%	8.3%	6.4%
DJCS Event Driven - Risk Arbitrage	1.7%	-2.0%	2.7%	2.6%
DJCS Event Driven - Multi-Strategy	0.7%	-1.3%	8.7%	5.7%
Equity Hedge	Quarter	1 Year	3 Yrs	5 Yrs
DJCS Long-Short Equity	1.7%	6.0%	10.8%	7.8%
DJCS Emerging Markets	1.4%	4.5%	7.1%	5.6%
DJCS Dedicated Short Bias	-4.8%	-8.1%	-17.0%	-15.7%
Tactical	Quarter	1 Year	3 Yrs	5 Yrs
DJCS Global Macro	-1.8%	4.8%	4.8%	6.0%
DJCS Managed Futures	-10.6%	12.9%	2.9%	2.9%
Traditional Markets	Quarter	1 Year	3 Yrs	5 Yrs
BC Aggregate Bond	-1.7%	1.9%	1.8%	3.3%
S&P 500	0.3%	7.4%	17.3%	17.3%

oil and European interest rates reversed over the quarter leading to underperformance in CTA strategies broadly.

Event-driven strategies continued to benefit from robust mergers and acquisitions activity through the first half of 2015. The Credit Suisse Event Driven Index returned 0.5% in the period, driven by a strong quarter for risk arbitragefocused strategies which gained 1.7%. Concerns in Greece created mark-to-market volatility for event-driven managers, but the real impact is muted as most funds have limited exposure. In addition. renewed concerns around Puerto Rico's ability to repay its debt led to heightened volatility in its bonds, fueling underperformance in distressed strategies focused on the opportunity. Performance of credit funds was supported by fundamentals and oil price stability earlier in the quarter, but these gains eroded as macro-related risks fueled a technical selloff in risky assets.

Equity strategies were mixed over the second quarter. The Credit Suisse Equity Market Neu-

tral and Credit Suisse Long-Short Equity indexes gained 1.7% and 2.1%, respectively, while short-biased strategies fell 4.8%, according to the Credit Suisse Dedicated Short Bias Index. Strategies favoring biotech benefited from higher mergers and acquisitions activity. Energy-focused strategies grappled with oscillating oil prices in the second quarter which hurt managers with bullish views on the energy market.

Private Markets

Private equity fundraising has totaled a hefty \$185 billion so far this year, including \$102 billion raised in the second quarter. On an annualized basis, 2015 is closely tracking the \$350 billion raised last year. While uncertainties around economic growth and reform plague several key Asian countries, recent market volatility and lower private capital allocations could enhance the attractiveness of Asian deal flow for long-term private equity investors. Buyout and growth equity funds remain the anchor in most investors' portfolios, accounting for over 50% of capital. Energy funds raised 16% of total capital as managers and investors make tactical allocations to benefit from oil-related price dislocations.

On the new deal side, mergers and acquisitions activity hit its highest level since 2007. With competition intensifying and easy debt financing, buyout valuations remain elevated, especially in the US. Global buyout activity in the second quarter totaled 755 deals worth \$96.1 billion. The quarter saw 373 exits worth \$114 billion as mature private equity funds profited from the high levels of mergers and acquisitions and new deal activity. In the US, venture capital continued its strong streak with \$17.5 billion of investments in 1,189 deals in the second quarter, representing the highest quarterly total since 2000.

Looking ahead, we advise clients to balance their commitments between opportunities likely to benefit from long-term economic recovery and those that can capitalize on near-term volatility in public equity and debt markets. We favor managers with demonstrated price discipline, strong value orientation and those possessing operational capabilities to enhance portfolio company performance.

Moving to real estate, NEPC maintains its neutral view on US private core real estate and real estate investment trusts (REITs). Private core real estate generated robust returns in the second quarter. Real estate fundamentals remain strong and assets are priced at attractive income yields relative to interest rates, though absolute yields are low based on historical averages. Our main longer-term concerns for US core real estate are large inflows of capital that have driven up pricing, low relative absolute yields, the impact of higher interest rates on capitalization rates and asset values, and signs of new construction. We remain neutral on real estate debt. Yields have generally remained low and lenders continue to loosen credit standards. NEPC remains positive on value-add and opportunistic real estate. We still view Europe as the best candidate for a marginal dollar of real estate investment. For non-core real estate in the US, we continue to favor niche-focused and historically conservative managers with a proven ability to understand local markets and avoid overheated markets.

In real assets, we are positive on energy and neutral on agriculture, infrastructure, metals and mining, and timber. NEPC continues to evaluate the spectrum of liquid and illiquid energy-related investment opportunities given the dislocation in oil prices. Oil prices have been volatile in the first half of 2015 and the market remains oversupplied. The recent nuclear agreement with Iran introduces more uncertainty into the market as the country's reserves are massive, but its capacity to increase production in the near term is unclear. Investors generally expect oil prices to settle around \$70 in 2016 and NEPC shares this view. The energy sector has shown an ability to adapt through greater efficiency and reduced service cost, allowing for new production but at a lower growth rate. Capital markets have generally been accommodative to energy companies but bank borrowing bases will be reset in the fall redetermination period, putting increased stress on the sector if oil prices remain low and hedges roll off. This will likely result in decreasing cash flows and companies will require capital, generating a variety of investment opportunities. This has already started to occur with a handful of companies and is expected to grow this year and into 2016.

Final Thoughts

Financial markets typically provide spells of uncertainty and volatility in a dynamic global environment. To this end, our goal at NEPC is to identify potential investment opportunities arising out of these times. As such, we favor international developed equities over US stocks and recommend a 50% strategic currency hedge for developed market currencies. We endorse the use of benchmark-agnostic emerging market mandates and dynamic strategies, for instance, global macro and global asset allocation, to navigate macroeconomic and currency risks. In addition, we encourage investors to shift from benchmark-focused global bond strategies to US duration exposures, as low global yields reduce their diversification benefit relative to US yields. While opportunities and stresses will undoubtedly arise, we hold firm in our belief that a diversified risk-balanced portfolio best serves investors' ability to withstand a multitude of economic environments over the long term.

Disclaimers and Disclosures

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.
- The information in this report has been obtained from sources NEPC believes to be reliable. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.
- This report contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.