FINANCIAL MARKET EXPECTATIONS AND THE BUSINESS OF INVESTMENT MANAGEMENT

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Questions To Be Addressed

Where do equities go from here, and how risky is the path we're on?

How much should investors care about the dollar and its likely return?

Inflation or deflation: what should we expect?

What will the business of investing look like tomorrow?
WHERE DO EQUITIES GO FROM HERE?
What’s Wrong With This Picture?

Long-term expectations based on historical returns

Assumes a 7.5%-8.0% return to equities
The Problem With Historical Returns

Most singularly important fact about last thirty years of market returns:

- Structural and secular decline in risk premium (“required return”)
  - Markowitz (1952) – manage risks in portfolios rather than in isolation
  - International diversification (1970’s)
  - Shareholder protection, improved transparency, etc.,

- For required return to fall, prices must rise
  - High single digit equity returns due to decline in required risk premium

If real earnings and real GDP grow between 1.5%-3.0%, where does a 6% real return on equities come from?
“Fatter tailed” world

- GDP growth more evenly spread across markets
  - Good news – diversification means smoother average day
  - Bad news – dependence upon less well developed, less tested, legal, financial, political infrastructure means wider cracks will appear in periods of stress
    - Even the cracks in the US have been shown to be wider than assumed
Key Points

- Equities face strong headwind from here
  - Developed market growth: overcoming balance sheet burden
  - Emerging market growth: exploiting balance sheet advantage

- Risks are asymmetrically biased to the downside

- Near-term inflation risk is commodity driven; monetary inflation risk is intermediate-term
Equities Can Trend Sideways For A Long Time

January 1872 – March 2010

Source: Global Financial Data (GFD)

Emerging market growth

Exploiting balance sheet advantage in growth markets:

- We have seen strong growth and strong growth forecast across emerging economies
- Public and private sector balance sheets have improved with tightening spreads and improving access to longer term funding
- Steady advances in infrastructure (“market plumbing”) support investments and growth prospects

Challenges associated with change

- Refining financial, economic, and social infrastructure.
- Risks of policy mistakes in unchartered waters is high.
- Differentiation between markets and types of economies important

Direct versus indirect exposure to growth
Inflation

The problem with our massive injection of liquidity
- Throwing gas on the fire – liquidity was a leading cause of our past crisis
- With money multiplier low (read: lending facility crippled), not likely to be an immediate problem
- Monetary-based inflation is a concern further down the road

Commodity-based inflation a nearer-term concern
- Commodity price inflation can be distinct from monetary inflation
- Not under the control of our central banks – we’ve forgotten that
- This may be main impediment to growth

Asset allocation implications
- If monetary inflation remains tame near-term, leveraged sovereign debt remains an attractive hedge against equity market decline
- Commodities take on more immediate importance as inflation hedge
### Does It Matter Whether the Dollar is Cheap or Expensive?

**January 1970 – March 2010**

<table>
<thead>
<tr>
<th>US Dollar(^1)</th>
<th>1 Yr Subsequent Return</th>
<th>3 Yrs Subsequent Return</th>
<th>5 Yrs Subsequent Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expensive</td>
<td>-3.0%</td>
<td>-19.6%</td>
<td>-29.5%</td>
</tr>
<tr>
<td>Q2</td>
<td>-1.4%</td>
<td>1.5%</td>
<td>-7.2%</td>
</tr>
<tr>
<td>Q3</td>
<td>-2.3%</td>
<td>-6.1%</td>
<td>-7.5%</td>
</tr>
<tr>
<td>Q4</td>
<td>-0.1%</td>
<td>2.2%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Cheap</td>
<td>2.3%</td>
<td>7.3%</td>
<td>13.1%</td>
</tr>
<tr>
<td><strong>Cheap-Expensive (Annualized)</strong></td>
<td><strong>5.3%</strong></td>
<td><strong>8.3%</strong></td>
<td><strong>7.4%</strong></td>
</tr>
</tbody>
</table>

\(^1\)USD returns are the MSCI World Ex-US cap weighted returns of USD.
# Potential Impact of Ignoring Hedging in Strategic Portfolio

## Currencies Have Large Impact on International Investments Over One, Three and Five Year Periods (Cheap – Expensive)

<table>
<thead>
<tr>
<th>Currency</th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Dollar</td>
<td>5.3%</td>
<td>8.3%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Sterling</td>
<td>6.5%</td>
<td>5.5%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Yen</td>
<td>8.5%</td>
<td>8.4%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Euro</td>
<td>2.5%</td>
<td>4.4%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

1USD returns are the MSCI World Ex-US cap weighted returns of USD. 2JPY, GBP currency returns are relative to an equal weighted basket of the currencies in MSCI Developed World markets (AUD, CAD, DKK, EUR, HKD, JPY, NOK, NZD, SGD, SEK, CHF, GBP, USD). 3DEM used in place of Euro prior to Euro formation.
Climbing Again, But Carrying Heavier Burden

Why We’ll Succeed
- Cheap money – massive injection of liquidity
- Flexible, adaptive economies
- Growth from less burdened economies (e.g., emerging markets)
- Tendency to succeed in the face of adversity

Why We Might Stumble
- Consumer and sovereign balance sheets leave little room for error
- Credit facility not what it used to be
- Improvements in corporate profits mostly result of cost cutting
- Potential for further decline in residential real estate
- Commercial real estate and regional banks
- Dependence on less well developed infrastructure in more global economy

Successful Growth Requires a Stronger Back and More Careful Steps
Asset Allocation Implications

Guard against tail risk
- Leveraged sovereign bonds to hedge against equity related risk
- Real assets to hedge against commodity-based inflation risk
- Utilize options for hedging when price of “insurance” is fair or cheap

Stand ready to adjust strategic return assumptions if extremes return
- Utilize tactical approach or revisit strategic assumptions
- Establish currency hedge ratios based on fair value
WHAT WILL THE BUSINESS OF INVESTING LOOK LIKE TOMORROW?
What Should Investors Have Learned From Recent Events?

- Diversification didn’t fail. Portfolio construction did.
- Too much risk is equity-related.
- Risks should be better balanced.
- Optimal portfolio changes with the risk climate.
- Clarity about the roles of individual asset classes needs to be developed.
The Role of Diversification in Your Portfolio

What Diversification Does Do For You

> “Beta” is exposure to non-diversifiable (systematic) risk
  > Often confused with market risk
  > Non-diversifiable, or systematic, risk has expected compensation
  > Diversifiable risk is not expected to be compensated

> Diversification dissolves diversifiable, uncompensated risk... leaving “beta matter” that should be compensated

Risk avoidance is not the goal of diversification.

The goal is to favor systematic risk over idiosyncratic risk,

and by so doing, favor compensated risk over uncompensated risk

Fallacies

> Individual markets are “betas”
> “Don’t keep all your eggs in one basket”
> Diversification means spreading risk across asset classes
> Diversification should prevent large losses

“Diversification is used to dissolve the diversifiable sources of risk. Beta is produced by this mixing and dissolving.”
– Max Darnell, FQ Perspective, Jan 2009
Rethinking Beta
Conventional View of Diversification vs. Reality

Sample Investment Plan Asset Allocation
Correlations to S&P 500 Index – Five Years Ending March 31, 2010

**EQUITIES (60%)**
- Russell Large Value 10%
- Russell Large Growth 10%
- Russell Small Value 10%
- Russell Small Growth 10%
- MSCI World Ex-US 15%
- MSCI Emerging Markets Equity 5%

**FIXED INCOME / ALTERNATIVES (30/10%)**
- Barclays Capital US Aggregate 20%
- Citigroup World Ex-US Govt. 5%
- Merrill Lynch High Yield 5%
- Dow Wilshire Real Estate 2.5%
- HFRI Private Issue/Reg.D 2.5%
- HFRI Fund of Funds 2.5%
- S&P GSCI 2.5%

**Total Sample Plan Asset Allocation**
Correlation to S&P 500 Index: 0.97

Sources: First Quadrant, LP, StyleAdvisor, Bloomberg

1Sample Plan is a hypothetical portfolio used for illustrative purposes only.
"Increasing breadth, by increasing the number of pie slices, may reduce diversification of the total portfolio by increasing correlations across asset classes."

– Ed Peters, FQ Perspective, Does Your Portfolio Have “Bad Breadth?”

### Correlation to Citi US Treasury Index, 7-10 Year

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citi US AAA/AA Corporate Index</td>
<td>0.84</td>
</tr>
<tr>
<td>ML High Yield Master</td>
<td>0.00</td>
</tr>
<tr>
<td>ML Emerging Market Sovereign Plus¹</td>
<td>0.18</td>
</tr>
</tbody>
</table>

### Correlation to S&P 500

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Overall</th>
<th>High Volatility regime</th>
<th>Low Volatility Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citi US Treasury Index, 7-10 Year</td>
<td>0.05</td>
<td>-0.07</td>
<td>0.36</td>
</tr>
<tr>
<td>Citi US AAA/AA Corporate Index, 7-10 Year</td>
<td>0.25</td>
<td>0.20</td>
<td>0.38</td>
</tr>
<tr>
<td>ML High Yield Master</td>
<td>0.57</td>
<td>0.61</td>
<td>0.36</td>
</tr>
<tr>
<td>ML Emerging Market Sovereign Plus¹</td>
<td>0.54</td>
<td>0.61</td>
<td>0.40</td>
</tr>
<tr>
<td>Diversified Bond Portfolio¹²</td>
<td>0.52</td>
<td>0.57</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Sources: StyleAdvisor, Datastream

¹Merrill Lynch Emerging Market Sovereign Plus index inception date is January 1992. ²Equal weighted portfolio consisting of the following: Citi US Treasury Index, 7-10 Year, US AAA/AA Corporate Index, 7-10 Year, ML High Yield Master, ML Emerging Market Sovereign Plus Index.
Using Leverage to Balance Risk
A long-term perspective based on empirical evidence

Diversifies Risk and Maximizes Reward

<table>
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<tr>
<th>Plan Type</th>
<th>Stock/Bond</th>
<th>Sharpe Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Balanced Plan</td>
<td>60% / 40%</td>
<td>0.67</td>
</tr>
<tr>
<td>Risk Balanced Plan</td>
<td>28% / 72%</td>
<td>0.77</td>
</tr>
<tr>
<td>Risk Balanced Plan</td>
<td>43% / 114%</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Traditional Balanced Plan and Risk Balanced Plan are hypothetical plans used for illustrative purposes. Stock is based on broad market index. Bond is based on broad market Long-Term Treasuries.
Does Risk Balancing Work?

January 1960 – December 2009

Sources: Bloomberg, Global Financial Data (GFD)

Global Balanced (60/40), Risk Balanced (40/140), and Global Stocks are broad-based indices based on data from Global Financial Data. Global Balanced (60/40) is a hypothetical plan used for illustrative purposes and is comprised of 60% global stocks weighted by capitalization and 40% global bonds and also weighted by market capitalization. Risk Balanced (40/140) is a hypothetical plan used for illustrative purposes and is comprised 40% global stocks equally weighted across 11 equity markets and 140% global bonds equally weighted across 6 bond markets.
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Sources: Bloomberg, Global Financial Data (GFD)
Risk Balancing Will Underperform a 60/40 at Times
3 Year Annualized Returns, January 1963 – December 2009

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Sources: Bloomberg, Global Financial Data (GFD)
Summary: Benefits of Risk Balancing

- Risk Balancing Reduces the Downside Loss More than It Reduces Upside Return
- Risk Balancing Produces More Return for a Given Level of Risk
- No Active Decisions
- Simply a More Efficient Strategy

Return vs. Risk
January 1960 – December 2009

**Sources:** Bloomberg, Global Financial Data (GFD)

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Volatility Regimes Impact Asset Allocation

January 1990 – March 2010

- US Recession (VIX = 30)
- Bond Market Sell-off (VIX = 20)
- Asian Market Risk (VIX = 35)
- LTCM (VIX = 44)
- Tech Bubble (VIX = 30)
- 9/11 (VIX = 34)
- Iraq War (VIX = 40)
- Subprime Credit Crisis (VIX = 60)

Sources: Chicago Board Options Exchange, First Quadrant, LP
In Summary

- Expect lower returns
- Expect more volatility
- Look for growth where balance sheets are in better shape
- Increase allocations to non-equity related sources of return
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