Living In “Interesting Times”
By Jim Moore, Managing Director, PIMCO

International Actuarial Association

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Agenda

- Short Horizon Stressors on the System
  - Political Dysfunction
  - Precarious Fiscal Situations combined with Anemic Growth

- Longer Horizon Worries
  - China’s Middle Income Transition
  - Demographic Shifts and Impacts on Capital Markets

- Implications for Return Distributions, Portfolio Construction, and Risk Management
  - Re-thinking the basics
Oscillating politics create stalemates

- Disillusioned voters
- Powerful and unpredictable independents
- No “Grand Bargains” on the horizon

SOURCE: American National Election Study

The 'Liberal-Conservative’ spectrum provides the industry standard for identifying political ideology based on historical voting patterns and campaign platforms of members of Congress and the President, in this case.
“The Ring of Fire” morphs into “Cleanest Dirty Shirts”

As of February 2010
Refer to Appendix for additional chart and risk information.
Scarcity of “riskless*” assets

As of 27 March 2012
SOURCE: PIMCO, Bloomberg
* "riskless" assets defined as government debt of sovereigns with Sovereign CDS <90bp
Refer to appendix for additional chart and risk information.
For Bond Investors, the Old Rules for Managing in Such an Environment are No Longer Applicable

Traditional framework

INDUSTRIAL COUNTRIES

Interest Rate Risk

EMERGING ECONOMIES

Credit Risk

New Global Fundamentals

INDUSTRIAL COUNTRIES

Credit Risk

EMERGING ECONOMIES

Interest Rate Risk

SOURCE: PIMCO

Refer to Appendix for additional risk information.
Can a company be less risky than its government?

<table>
<thead>
<tr>
<th>% of companies that trade inside of their sovereigns (5-yr CDS spread)*</th>
<th>Percent of index</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>iTraxx Index (Europe)</td>
</tr>
<tr>
<td>10%</td>
<td>iTraxx Japan (Japan)</td>
</tr>
<tr>
<td>20%</td>
<td>IG Index (U.S.)</td>
</tr>
</tbody>
</table>

As of March 2012
SOURCE: Bloomberg
* CDS spread not quanto-adjusted
Refer to Appendix for additional index information.
Anemic real yields in developed markets provide evidence of financial repression

As of 30 April 2012
SOURCE: Barclays
China’s uncertain path to developed country status

Political reality

- Traditionally closed regimes experience initial instability as they traverse the J-curve toward a freer and more open society.

Economic reality

- China is facing the “Middle Income Trap”
  - ~$5,000 per capita annual income
- Over the past 50 years, few countries have broken out of this trap:
  - S. Korea, Israel, Taiwan
  - Greece, Ireland, Portugal, Spain
- GDP growth tends to drop after economic rebalancing:

GDP Growth

<table>
<thead>
<tr>
<th>GDP % yoy</th>
<th>At time of rebalancing</th>
<th>10 years after</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>Japan</td>
<td>China</td>
</tr>
<tr>
<td>5%</td>
<td>Korea</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: Credit Suisse
Aging population: Blessing or curse?

FORECASTED POPULATION OVER 65 BY REGION

Excess per capita GDP growth for G-7 countries, based on demographic composition, 1955-2050

Abnormal GDP Growth Due to Demography, 1955-2050

Japan’s economic miracle aided by demography

SOURCE: Research Affiliates, based on data from United Nations, Penn World Table and Global Financial Data
Refer to Appendix for additional outlook information.
Forecasts for stock returns, 2011–2020, based on demographic composition

SOURCE: Research Affiliates, based on data from United Nations, Penn World Table and Global Financial Data
Refer to Appendix for additional outlook information.
Forecasts for bond returns, 2011–2020, based on demographic composition

SOURCE: Research Affiliates, based on data from United Nations, Penn World Table and Global Financial Data
Refer to Appendix for additional outlook information.
Major Financial Crises Since 1980

<table>
<thead>
<tr>
<th>Year(s)</th>
<th>Event Description</th>
<th>Year(s)</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>Mexican Default</td>
<td>1994-5</td>
<td>Mexican Peso Crisis</td>
</tr>
<tr>
<td>1987</td>
<td>Black Monday, Dow drops 22.6%</td>
<td>1997-8</td>
<td>Asian Financial Crisis</td>
</tr>
<tr>
<td>1989-91</td>
<td>United States S&amp;L Crisis</td>
<td>1998</td>
<td>Russian Default and LTCM</td>
</tr>
<tr>
<td>1989-91</td>
<td>Latin American Debt Crisis</td>
<td>2001-2</td>
<td>Argentine Default, dot-com bust, Enron</td>
</tr>
<tr>
<td>1992-3</td>
<td>European Monetary System Crisis</td>
<td>2007-9</td>
<td>Global Financial Crisis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011-12</td>
<td>Sovereign Debt Crisis</td>
</tr>
</tbody>
</table>

S&L (Savings & Loan): Long-Term Capital Mgmt (LTCM)
Refer to Appendix for additional index information
One “bad year” can erase the gains from many “good years”

10-year annualized return factoring a 10th “Bad Year”

<table>
<thead>
<tr>
<th>Portfolio Return for 9 “Good Years”</th>
<th>-25%</th>
<th>-30%</th>
<th>-35%</th>
</tr>
</thead>
<tbody>
<tr>
<td>8%</td>
<td>4.1%</td>
<td>3.4%</td>
<td>2.7%</td>
</tr>
<tr>
<td>10%</td>
<td>5.9%</td>
<td>5.1%</td>
<td>4.4%</td>
</tr>
<tr>
<td>12%</td>
<td>7.6%</td>
<td>6.9%</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

SOURCE: PIMCO
Sample calculation can be applied to all examples: 4.8% = ((1+8%)^9*(1-20%))^{0.1} – 1. If calculated using the formula given this would be the annual return of a portfolio that generates 8% /year for 9 years and followed by a -15% drawdown in the 10th year. **Hypothetical example for illustrative purposes only.** Not indicative of the past or future performance of any PIMCO product. Refer to Appendix for additional hypothetical example information.
Increasing evidence of bi-Modality

31 December 2011
SOURCE: Bloomberg, PIMCO
Not indicative of the past or future performance of any PIMCO product.
Refer to Appendix for additional index information.
Increasing evidence of bi-Modality

31 December 2011
SOURCE: Bloomberg, PIMCO
Not indicative of the past or future performance of any PIMCO product.
Refer to Appendix for additional index information.
Risk Theory for the New Normal

SOURCE: PIMCO
Hypothetical example for illustrative purposes only.
Key message: Question what you’ve been taught for the most of your career

- Suspect stationary: “Past performance is no guarantee of future results”. In fact, extrapolating it may lead to disastrous consequences.
- Don’t trust, verify: Over-reliance on what “the experts” say about risk can be dangerous. Run your own stress tests.
- It’s all endogenous: Be sensitive to short-run (political) and long-run (demographic) feedback loops
- Prepare for non-linear change
Past performance is not a guarantee or a reliable indicator of future results.

CHART
Charts provided for illustrative purposes and are not indicative of the past or future performance of any PIMCO product.

HYPOTHETICAL EXAMPLE
Hypothetical example for illustrative purposes only. No representation is being made that any account, product, or strategy will or is likely to achieve profits, losses, or results similar to those shown. Hypothetical or simulated performance results have several inherent limitations. Unlike an actual performance record, simulated results do not represent actual performance and are generally prepared with the benefit of hindsight. There are frequently sharp differences between simulated performance results and the actual results subsequently achieved by any particular account, product, or strategy. In addition, since trades have not actually been executed, simulated results cannot account for the impact of certain market risks such as lack of liquidity. There are numerous other factors related to the markets in general or the implementation of any specific investment strategy, which cannot be fully accounted for in the preparation of simulated results and all of which can adversely affect actual results.

OUTLOOK
Statements concerning financial market trends are based on current market conditions, which will fluctuate. There is no guarantee that these investment strategies will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market. Outlook and strategies are subject to change without notice.

RISK
All investments contain risk and may lose value. Investing in the bond market is subject to certain risks including market, interest-rate, issuer, credit, and inflation risk; investments may be worth more or less than the original cost when redeemed. Equities may decline in value due to both real and perceived general market, economic, and industry conditions. Investing in foreign denominated and/or domiciled securities may involve heightened risk due to currency fluctuations, and economic and political risks, which may be enhanced in emerging markets. Inflation-linked bonds (ILBs) issued by a government are fixed-income securities whose principal value is periodically adjusted according to the rate of inflation; ILBs decline in value when real interest rates rise. Treasury Inflation-Protected Securities (TIPS) are ILBs issued by the U.S. Government. Commodities contain heightened risk including market, political, regulatory, and natural conditions, and may not be suitable for all investors. REITs are subject to risk, such as poor performance by the manager, adverse changes to tax laws or failure to qualify for tax-free pass-through of income. Derivatives may involve certain costs and risks such as liquidity, interest rate, market, credit, management and the risk that a position could not be closed when most advantageous. Investing in derivatives could lose more than the amount invested.

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INDEX DESCRIPTIONS

The Dow Jones Industrial Average (DJIA) is a price-weighted average of 30 actively traded “blue chip” stocks, primarily industrials, but including financials and other service-oriented companies as well. The components, which change from time to time, represent between 15% and 20% of the market value of NYSE stocks.

The S&P 500 Index is an unmanaged market index generally considered representative of the stock market as a whole. The index focuses on the Large-Cap segment of the U.S. equities market.

The MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada. The MSCI EAFE Index consists of the following 22 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

S&P Goldman Sachs Commodity Index Total Return (S&P GSCITR) is an unmanaged index composed of futures contracts on 25 physical commodities, designed to be a highly liquid and diversified benchmark for commodities as an asset class. The Total Return Index includes an implied T-Bill rate on the notional value of the futures contracts.

Dow Jones U.S. Select Real Estate Investment Trust (REIT) Total Return Index, a subset of the Dow Jones U.S. Select Real Estate Securities Total Return Index, is an unmanaged index comprised of U.S. publicly traded Real Estate Investment Trusts. This index was formerly known as the Dow Jones Wilshire REIT Index.

It is not possible to invest directly in an unmanaged index.