Economic Divergence in the Era of Dissonance

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Chief Economist, CME Group
7 February 2012
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Economic Divergence in the Era of Dissonance

Sources of Dissonance and Current Status
- Population Dynamics
- Property Rights
- Policy Constraints

Global Economic Divergence
- US Recovery Gaining More Traction
- China Decelerating (Temporarily and Permanently)
- Europe and the UK, At Odds and Struggling
- Japan growing at trend (which is slow)
- Emerging markets cutting rates to cushion slowdown

Risk Management Implications
Sources of Dissonance: Population Dynamics – Aging

Population (in millions)
Sources of Dissonance: Population Dynamics – The Elders

Population (in millions)

Japan - 2011

Germany - 2011

Population (in millions)
Sources of Dissonance: Population Dynamics – Youth

![Age Distribution Graphs for Brazil and India (2011)]
Current Status: Population Dynamics

United States

Potential labor force growth slowing and already limiting long-run economic growth potential

China

Politics of aging are beginning to compete with the politics of job creation.

The larger aging challenges are still a decade away, but they will slow economic growth dramatically when they arrive.

Europe & Japan

Labor force growth has been non-existent for a long time, and long-run potential real GDP growth average 1.5% to 2.0% at best.

Emerging Markets

Strong long-term potential, robust growth of middle class.
Sources of Dissonance: Economic Growth Divide (Last Decade)

Cumulative Real GDP Growth from 2001 through 2010

- Japan
- Euro-Zone
- UK
- US
- Brazil
- India
- China

Source: World Bank Annual GDP Data from Bloomberg Professional
Sources of Dissonance: Economic Growth Divide (Next Decade)

Cumulative Real GDP Growth Projection for 2011-20

- **Japan**
- **Euro-Zone**
- **UK**
- **US**
- **Brazil**
- **India**
- **China**

Source: CME Research Estimates.
Sources of Dissonance: Property Rights

Property Rights – Broadly defined as the legal and political context which influences how well individuals and corporations can plan for the future.

United States

Dodd-Frank Rules Still Uncertain
Health Care Legislation in Front of the Supreme Court
Taxation Changes Delayed into 2013 (and beyond?)

China

Changing Rules/Pace for RMB Normalization and Bond Market

Europe & UK

Financial Transaction Tax and Future of City of London

Emerging Markets

Pendulum of property rights swinging in their favor, in general
US Financial Company Profits Remain Impacted by Dodd-Frank Uncertainty

Source: Financial Company Profits (CPBIDIF2) provided through the Bloomberg Professional.
Sources of Dissonance: Constrained Fiscal Policy

Comparison of Debt/GDP Ratios of Selected Mature Countries Compared to Emerging Market Countries

- Japan
- Greece
- Italy
- Germany
- France
- United Kingdom
- United States
- Brazil
- India
- Argentina
- Mexico
- China
- Russia

Outstanding Government Debt as Percentage of GDP - 2010
Sources of Dissonance: Fiscal Policy Status

United States

Major fiscal decisions delayed until 2013 helps 2012 economic growth outlook, makes for an uncertain long-run. In all scenarios, though, economic growth is likely to be constrained for a decade.

UK

Very tough fiscal reform has taken its toll on the economy.

Europe

Sovereign debt situation is no longer a crisis, but the medicine involves a protracted fiscal drag on the EU economies.

Japan

If the credit ratings had any consistency in how they rank countries, Japan would look like a nightmare debt bubble.

China & Emerging Markets

Fiscal policies generally in good shape.
Sources of Dissonance: Monetary Policy Status

United States

Federal Reserve to debate exit strategy from Quantitative Easing in 2012.

FOMC may commence raising the Federal funds rate in 2013.

Recent decision by the FOMC to publish Fed funds rate projections of its participants may lead to some market volatility around publication dates (4 times per year).

China

May choose to adopt highly expansionary monetary policy as growth decelerates.

Foreign reserve growth may halt as a consequence.

RMB normalization progress may accelerate.
Sources of Dissonance: Monetary Policy Status

UK
Monetary policy to stay accommodative to offset tough fiscal reform, but this policy mix has not worked so far.

Europe
ECB likely to keep rates on hold.
ECB has provided nearly unlimited long-term liquidity to the under-capitalized banking system.
ECD will NOT be a lender of last resort to countries in fiscal trouble.

Japan
Zero-rates for ever?

Emerging Markets
Rates being cut to cushion economic growth deceleration.
Economic Divergence: 2012 Update

United States

3.5% to 4.0% real GDP growth in 2012, slowing in 2013

Europe & UK

Flirting with recession on average, some growth in northern Europe which benefits more from the weaker Euro.

China

Decelerating rapidly in 2012. Transition to consumer-driven economy will not be smooth.

Japan

Reasonable (trend) year for economic growth, as the rebuilding from the devastating earthquake and tsunami in 2011 continues.

Emerging Markets

Slower growth in 2012, but middle class expansion continues to suggest excellent long-run potential.
US Economic Growth Outlook

US Real GDP Growth Rate

Annual Average Percentage Change

Source: Bloomberg Professional (GDP CHWG), Forecasts by CME Group Research.
# US Economic Growth Outlook

<table>
<thead>
<tr>
<th>End of Year</th>
<th>Inflation (Year over Year)</th>
<th>Core Inflation: Excludes Food and Energy (Year over Year)</th>
<th>Real GDP Growth (Annual Average over Annual Average)</th>
<th>Federal Funds Rate</th>
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</thead>
<tbody>
<tr>
<td>Dec-2006</td>
<td>2.52%</td>
<td>2.61%</td>
<td>2.66%</td>
<td>5.24%</td>
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<tr>
<td>Dec-2007</td>
<td>4.09%</td>
<td>2.42%</td>
<td>1.91%</td>
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<tr>
<td>Dec-2008</td>
<td>-0.04%</td>
<td>1.75%</td>
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<tr>
<td>Dec-2009</td>
<td>2.76%</td>
<td>1.80%</td>
<td>-3.49%</td>
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<td>Dec-2010</td>
<td>1.39%</td>
<td>0.65%</td>
<td>3.03%</td>
<td>0.18%</td>
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<tr>
<td>Dec-2011</td>
<td>2.98%</td>
<td>2.23%</td>
<td>1.72%</td>
<td>0.07%</td>
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<tr>
<td>Dec-2012</td>
<td>3.42%</td>
<td>3.61%</td>
<td>3.65%</td>
<td>0.20%</td>
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<tr>
<td>Dec-2013</td>
<td>4.06%</td>
<td>3.48%</td>
<td>2.74%</td>
<td>2.00%</td>
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<tr>
<td>Dec-2014</td>
<td>4.58%</td>
<td>4.06%</td>
<td>1.70%</td>
<td>4.00%</td>
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</tbody>
</table>

*Data Source: Bloomberg Professional for Historical Data, Forecasts by CME Research.*
US Consumer Credit

End of Deleveraging by US Consumer during 2011

Source: Bloomberg Professional (CCOSTOT Index)
Increased Consumer Credit will Feed Into Retail Sales

US Retail Sales Growth

Steadier Retail Sales Growth Ahead

Source: Bloomberg Professional (RSTATOTLIndex)
US Corporate Profits Have Recovered from the 2008-2009 Financial Panic

![Graph showing US NonFinancial and Financial Company Profits](image)

Source: Financial (CPBIDIF2) and NonFinancial (CPBIDIN2) Profits provided through the Bloomberg Professional.

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US New Weekly Unemployment Claims

New Weekly Unemployment Claims Have Continued to Decline -- the Unemployment Rate Will Eventually Follow

Source: Unemployment Claims Data (INJCJC) from the Bloomberg Professional.
Fiscal Policy

Post Office has adopted plan to shed 100,000 jobs through attrition, less service – may postpone cash flow crunch temporarily.

Bush tax cuts will expire on 31 December 2012, and it will be left to the next Congress to retro-actively (to January 1, 2013) decide on new tax rates.

Debt ceiling will be hit again early in 2013.

The Joint Budget Super Committee failed, so large spending cuts automatically kick-in in FY 2013, unless the new Congress decides to make some changes.

All the big fiscal policy decisions will hit the new Congress just after they are sworn into office.
US Inflation Outlook

Inflation Creeps Higher in 2013-2014, Core Converges on Total Inflation, as Monetary Policy Gains Traction

Core Inflation
Total CPI Inflation

Source: Blooomberg Professional for Historical Data, CME Research for Forecasts through 2014.
There is a Wide Dispersion of Views on the FOMC

Views of FOMC Participants on When to Raise the Federal Funds Rate

Source: FOMC Participants' Supplemental Economic Projections, Federal Reserve Board, 25 January 2012
FOMC 2011 Real GDP Projections were too Optimistic

Source: FOMC Participants' Supplemental Economic Projections, Federal Reserve Board
FOMC 2012 Real GDP Projections have been depressed by their 2011 Mistakes

Source: FOMC Participants' Supplemental Economic Projections, Federal Reserve Board
European Bank Stocks: Hit Hard in the Summer of 2011 Have Now Stabilized

Source: Bloomberg Professional (GLE FP & SX5E)
European Bond Spreads

European Sovereign Bond Market Tensions Finally Start to Ease in Q4/2011 with Arrival of IMF, Coordinated Global Central Bank Support, and clearer ECB Policy Stance

Source: 10-Year Generic Government Debt Yields provided by Bloomberg Professional.

Spanish and Italian 10-Yr Yield Spreads over Germany in Percentage Points

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Market Implications: Counterparty Risk

Perceived Increased Counterparty Risk Coincides with Increased FX Trading on Futures Exchanges 2010-11.

Source: Trading Volume Data for the Nearby Euro-USD Futures Contract (EC1 <Currency>) provided through the Bloomberg Professional.
China Economic Growth

China: Average Annual GDP Growth by Decade

Source: Real GDP History based on World Bank Annual Data provided through the Bloomberg Professional. Forecasts by CME Research.
China will hit a Brick Wall in terms of Economic Growth in the 2020s

China’s current rapid rate of real GDP growth is fueled by the rural to urban migration which will run its course during this decade.

China is aging (in terms of average age) faster than any major country ever has, thanks to decades of the one-child policy.

In the decade of the 2020s, China’s rapidly aging population and stagnant labor force will totally change growth dynamics in the country.
China Foreign Reserve Growth to Slow

Source: IMF IFS Data Base from the Bloomberg Professional
Japan Economic Growth

Japan was a near 5% Real GDP Growth Country in the 1980s and a sub 2% Growth Country for the Last Two Decades and Probably Going Forward

1.7% Average Growth from 1991-2011/1H

4.7% Average Growth in the 1980s

Source: Bloomberg Professional
Brazil: Short-Term Interest Rates & Inflation

Brazil Overnight Rate and Inflation Both Headed Downward

Source: SELIC (BZSELICA) and Inflation (BZPIIPCA) provided through the Bloomberg Professional.
India: Short-Term Interest Rates & Inflation

India: Inflation Declining, Rates May Follow

Money Market Rate

Source: Money market rate (NSERO) and Inflation (INCPIIND) provided through the Bloomberg Professional.
Commodity Market Challenges for 2012

Oil
- Declining US Imports
- Weakening China and Emerging Market Demand
- Possible OPEC output cuts (not large)

Gold
- Debate in US over exit from Quantitative Easing
- Declining market fears associated with Europe
- Central Bank Buying

Corn & Wheat
- Rise of middle class in Emerging Market Countries
- Continued volatile weather patterns
US Crude Oil Imports may be leveling off?

Source: US Monthly Crude Oil Imports (USIMCRUD) provided through the Bloomberg Professional.
Policy: Foreign Reserves – Gold & Diversification Challenge the US dollar

After the Panic of 2008, Central Banks Became Net Buyers of Gold

Source: International Monetary Fund Data provided through the Bloomberg Professional
Changes in Ground Water have tremendous potential to disturb agricultural production.

Source: Map produced by NASA using data from the NASA/German Aerospace Center Gravity Recovery and Climate Experiment (Grace) mission.
Rain Patterns: Extra rain in 2010 actually resulted in a net transfer of water from the sea to the land – temporarily.

Source: Map produced by NASA using data from the NASA/German Aerospace Center Gravity Recovery and Climate Experiment (Grace) mission.
Era of Dissonance: Long-Term Implications

Politics matter more than ever for financial risk management

Risk managers need to embrace forward-looking approaches given the limits of historical data and Quantitative systems need to be dynamic and error-learning

Counterparty risk can matter as much as market price risk

Exposures, such as options, that focus on dynamic volatility will play an increasingly important role in risk management.

FX markets will often be the focal point as the arbiter of different economic prospects and policies between countries

Asset classes are more inter-connected than ever, but not necessarily in a stable manner

Security exposures within an asset class may rise and reduce diversification at the wrong times