At the Crossroads:
Local Bonds and FX Amid a Reconfiguring World

Peter Marber
HSBC and Columbia University
“The Elephant in the Room” – Globalization

- More interconnected than ever before
  - Instantaneous mobile capital
  - Unprecedented, complex linkages
- Rise of new economic and financial powers
  - Their actions affect the global system
Country wealth and output is linked to human productivity and population growth

- Historically, countries with more people were the largest economies
- Little difference in human output until the Industrial Revolution in early 19th century
- This has been for the human species for millennia up until the last 200 years

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Increased Human Output is a Recent Phenomenon

Wealth and Human Progression, 2000BCE – 2000CE


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By 1900, Global Population and Productivity Started to Change Dramatically

- Seminal changes in less than one century
  - Industrial Revolution in the West, almost non-existent in Asia and Africa
  - Europe and the U.S. output per capita dramatically increases; mass education key to increasing output
  - The “Western” dominated global economy is born
    - But it won’t last that long

Source: Worldmapper. © Copyright SASI Group (University of Sheffield) and Mark Newman (University of Michigan). HSBC Global Asset Management
Technology Proliferation and Free Market Economics has Created a Different Global Economy Since 1960

- **1960: 150 Years After the Industrial Revolution**
  - European and American populations grow and become more productive
  - China and India stagnate in terms of individual output
  - US becomes the largest single country economy

- **2015: world shifts towards pre-Industrial Revolution period**
  - China and India rising again
  - Some new countries rising
  - Older wealthy economies slowing

Source: Worldmapper. © Copyright SASI Group (University of Sheffield) and Mark Newman (University of Michigan).
## World economic leaders

### 1820-2050F

<table>
<thead>
<tr>
<th></th>
<th>1820</th>
<th>1870</th>
<th>1950</th>
<th>2005</th>
<th>2050F</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>33%</td>
<td>China</td>
<td>17.20%</td>
<td>US</td>
<td>27.30%</td>
</tr>
<tr>
<td>India</td>
<td>16%</td>
<td>India</td>
<td>12.20%</td>
<td>USSR</td>
<td>9.60%</td>
</tr>
<tr>
<td>France</td>
<td>5.50%</td>
<td>UK</td>
<td>9.10%</td>
<td>UK</td>
<td>6.70%</td>
</tr>
<tr>
<td>Russia</td>
<td>5.40%</td>
<td>US</td>
<td>8.90%</td>
<td>Germany</td>
<td>6.50%</td>
</tr>
<tr>
<td>UK</td>
<td>5.20%</td>
<td>Russia</td>
<td>7.60%</td>
<td>China</td>
<td>5.00%</td>
</tr>
</tbody>
</table>

Represents percentage of world GDP.

Sources: OECD, World Bank, Goldman Sachs (2005).
As governments have undergone reform, emerging markets economic policies have greatly improved and continue to:

- But not all countries are the same
- Some need capital, others don’t
- Some are more trade focus than others

Depegging begins

1975
- Multinational banks in the US and Europe actively lend to developing markets

Late 1970s
- Global economic difficulties lead to defaults
  - Skyrocketing oil prices
  - Double digit inflation

1980
- Global debt and equity markets grow
  - Berlin Wall comes down
  - Eastern Europe and former Soviet Union participate in global world markets

1985
- Market growth begins to outpace the legal and economic infrastructure of emerging countries

1990
- Russian default
- Long Term Capital Management crisis

1994
- Mexican devaluation

1995
- Long Term Capital Management crisis

1997-1998
- Asian financial crisis
  - Currency depreciated
  - Growth declined
  - Requested emergency financial support from IMF

1998
- Russian default
- Long Term Capital Management crisis

2000
- Mexico raised to investment grade

2001
- Argentine default

2003
- Local debt sovereign issuance surpasses hard currency issuance
- Russia raised to investment grade

2005
- Global financial crisis begins

2007
- Brazil raised to investment grade
- Ecuador default

2008
- Global financial crisis begins

2009
- Dubai debt crisis

2010
- Greek debt crisis

2015
# World Financial Momentum is Shifting

**EM hard currency reserves, US$billions, 1996-2010**

<table>
<thead>
<tr>
<th>Country</th>
<th>Late 1996</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>89</td>
<td>2,399</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>60</td>
<td>260</td>
</tr>
<tr>
<td>India</td>
<td>18</td>
<td>259</td>
</tr>
<tr>
<td>Indonesia</td>
<td>15</td>
<td>66</td>
</tr>
<tr>
<td>Malaysia</td>
<td>25</td>
<td>93</td>
</tr>
<tr>
<td>Philippines</td>
<td>8</td>
<td>44</td>
</tr>
<tr>
<td>South Korea</td>
<td>36</td>
<td>264</td>
</tr>
<tr>
<td>Thailand</td>
<td>38</td>
<td>134</td>
</tr>
<tr>
<td>Taiwan</td>
<td>85</td>
<td>348</td>
</tr>
<tr>
<td>Singapore</td>
<td>72</td>
<td>207</td>
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</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Late 1996</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>18</td>
<td>91</td>
</tr>
<tr>
<td>Brazil</td>
<td>58</td>
<td>239</td>
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<tr>
<td>Argentina</td>
<td>14</td>
<td>43</td>
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<tr>
<td>Venezuela</td>
<td>8</td>
<td>53*</td>
</tr>
<tr>
<td>Poland</td>
<td>17</td>
<td>73</td>
</tr>
<tr>
<td>Russia</td>
<td>12</td>
<td>438</td>
</tr>
<tr>
<td>Hungary</td>
<td>9</td>
<td>43</td>
</tr>
<tr>
<td>Czech</td>
<td>13</td>
<td>40</td>
</tr>
<tr>
<td>South Africa</td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>Egypt</td>
<td>1</td>
<td>32</td>
</tr>
</tbody>
</table>

Source: JP Morgan Chase, World Bank, Bloomberg, 2Q 2010

*Estimate
Theoretical Currency Valuations: Emerging Markets Undervalued?

**Top 10 industrialized economies vs. emerging economies**

GDP vs. PPP highlights potentially overvalued and undervalued currencies

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>PPP</th>
<th>GDP% of PPP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US</strong></td>
<td>14,224.58</td>
<td>14,224.58</td>
<td>100.00%</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td>5,069.89</td>
<td>4,154.59</td>
<td>122.03%</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>3,306.76</td>
<td>2,769.01</td>
<td>119.42%</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td>2,206.41</td>
<td>2,118.45</td>
<td>104.15%</td>
</tr>
<tr>
<td><strong>Switzerland</strong></td>
<td>493.03</td>
<td>323.033</td>
<td>152.63%</td>
</tr>
<tr>
<td><strong>Sweden</strong></td>
<td>392.509</td>
<td>327.957</td>
<td>119.68%</td>
</tr>
<tr>
<td><strong>Denmark</strong></td>
<td>317.82</td>
<td>192.269</td>
<td>165.30%</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>1,344.89</td>
<td>1,278.46</td>
<td>105.20%</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td>960.302</td>
<td>815.828</td>
<td>117.71%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>PPP</th>
<th>GDP% of PPP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>China</strong></td>
<td>4,862.72</td>
<td>8,956.98</td>
<td>54.29%</td>
</tr>
<tr>
<td><strong>Brazil</strong></td>
<td>1,499.04</td>
<td>2,012.54</td>
<td>74.48%</td>
</tr>
<tr>
<td><strong>South Korea</strong></td>
<td>837.122</td>
<td>1,386.17</td>
<td>60.39%</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td>1,269.31</td>
<td>3,615.22</td>
<td>35.11%</td>
</tr>
<tr>
<td><strong>Mexico</strong></td>
<td>861.143</td>
<td>1,600.66</td>
<td>53.80%</td>
</tr>
<tr>
<td><strong>Russia</strong></td>
<td>1,322.10</td>
<td>2,115.73</td>
<td>62.49%</td>
</tr>
<tr>
<td><strong>Turkey</strong></td>
<td>620.749</td>
<td>872.292</td>
<td>71.16%</td>
</tr>
<tr>
<td><strong>Poland</strong></td>
<td>738.798</td>
<td>687.874</td>
<td>63.79%</td>
</tr>
<tr>
<td><strong>South Africa</strong></td>
<td>285.822</td>
<td>500.051</td>
<td>57.17%</td>
</tr>
</tbody>
</table>

Source: IMF. Data as of May 2010.

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The Economist’s *Big Mac Index* and Theoretical Currency Value (July 2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>Big Mac Index, local-currency valuation against the dollar, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>7.20</td>
</tr>
<tr>
<td>Switzerland</td>
<td>6.19</td>
</tr>
<tr>
<td>Brazil</td>
<td>4.91</td>
</tr>
<tr>
<td>Euro area</td>
<td>4.33*</td>
</tr>
<tr>
<td>Canada</td>
<td>4.00</td>
</tr>
<tr>
<td>Turkey</td>
<td>3.80</td>
</tr>
<tr>
<td>Australia</td>
<td>3.84</td>
</tr>
<tr>
<td>United States</td>
<td>3.731</td>
</tr>
<tr>
<td>Japan</td>
<td>3.67</td>
</tr>
<tr>
<td>Argentina</td>
<td>3.56</td>
</tr>
<tr>
<td>Britain</td>
<td>3.48</td>
</tr>
<tr>
<td>Hungary</td>
<td>3.33</td>
</tr>
<tr>
<td>Singapore</td>
<td>3.08</td>
</tr>
<tr>
<td>South Korea</td>
<td>2.82</td>
</tr>
<tr>
<td>Poland</td>
<td>2.60</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2.51</td>
</tr>
<tr>
<td>Mexico</td>
<td>2.50</td>
</tr>
<tr>
<td>South Africa</td>
<td>2.45</td>
</tr>
<tr>
<td>Taiwan</td>
<td>2.34</td>
</tr>
<tr>
<td>Russia</td>
<td>2.33</td>
</tr>
<tr>
<td>Philippines</td>
<td>2.19</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2.17</td>
</tr>
<tr>
<td>Thailand</td>
<td>1.95</td>
</tr>
<tr>
<td>China</td>
<td>1.90</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1.90</td>
</tr>
</tbody>
</table>

*Sources: McDonald’s; The Economist*

*Weighted average of member countries. †Average of four cities. ‡At market exchange rate (July 21st)*

*The Economist’s* Big Mac index is based on the theory of purchasing-power parity (PPP), the idea that exchange rates should move to equalize the prices of a basket of goods and services across different countries.

The Economist uses a Big Mac as their simple baskets. For example, the cheapest burgers are in Hong Kong and China, at $1.90-95, compared with an average American price of $3.73. This implies that the yuan is 48% undervalued relative to its Big Mac Dollar-PPP. On the same basis, the Euro is about 25% overvalued, the Yen fair valued.
G7 Investors are Underweight EM Bonds

- EM Bonds are Roughly 20% of Global Bond market
  - Not fully investable
  - China and India notable

- G7 Investors Have Less than 5% of their Bond Portfolios in Emerging Markets
  - Huge migration beginning
Adding Local Debt to a Traditional Global Bond Portfolio, 1999-2010

- For the same risk, a 7% allocation increased returns by 58 bps
- Add 48%, returns increase by 350 bps while volatility only increases 223 bps.
Correlation of Emerging Markets Debt to Other Asset Classes (1999-2009)

<table>
<thead>
<tr>
<th>Index</th>
<th>EMD Hard Currency</th>
<th>EMD Local Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMD Hard Currency</td>
<td>1.00</td>
<td>0.65</td>
</tr>
<tr>
<td>EMD Local Currency</td>
<td>0.65</td>
<td>1.00</td>
</tr>
<tr>
<td>Global Developed Equity</td>
<td>0.65</td>
<td>0.64</td>
</tr>
<tr>
<td>European Equity</td>
<td>0.59</td>
<td>0.75</td>
</tr>
<tr>
<td>US Equity</td>
<td>0.61</td>
<td>0.56</td>
</tr>
<tr>
<td>Global Bond – Unhedged</td>
<td>0.46</td>
<td>0.66</td>
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<tr>
<td>Global Bond – Hedged</td>
<td>0.20</td>
<td>0.15</td>
</tr>
<tr>
<td>European Fixed Income</td>
<td>0.22</td>
<td>0.06</td>
</tr>
<tr>
<td>US Fixed Income</td>
<td>0.59</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Emerging Markets Local Debt

*Interest rates and FX are important components*

- Bond (Income/Spread) and FX are both important sources of return for Local Debt
- 2005 and 2008 represent examples when rates compensated for USD appreciation

**Cumulative Return of the Return Components of Emerging Markets Local Debt**

**Annual Returns Broken Out by Bond (Income/Spread) and Currency Components**

Real Interest Rate Differentials, October 2010

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Thailand</th>
<th>Israel</th>
<th>Peru</th>
<th>Korea</th>
<th>Malaysia</th>
<th>Colombia</th>
<th>Poland</th>
<th>Philippines</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011e CPI</td>
<td>1.30%</td>
<td>2.10%</td>
<td>2.07%</td>
<td>2.47%</td>
<td>3.27%</td>
<td>3.87%</td>
<td>3.63%</td>
<td>3.47%</td>
<td>4.90%</td>
</tr>
<tr>
<td>O/N</td>
<td>0.25%</td>
<td>1.25%</td>
<td>1.50%</td>
<td>1.50%</td>
<td>2.00%</td>
<td>2.50%</td>
<td>3.00%</td>
<td>3.60%</td>
<td>4.25%</td>
</tr>
<tr>
<td>1 YR</td>
<td>0.24%</td>
<td>1.99%</td>
<td>2.06%</td>
<td>2.59%</td>
<td>3.20%</td>
<td>2.07%</td>
<td>3.75%</td>
<td>3.35%</td>
<td>4.66%</td>
</tr>
<tr>
<td>3 YR</td>
<td>0.78%</td>
<td>2.77%</td>
<td>2.65%</td>
<td>1.89%</td>
<td>3.92%</td>
<td>3.16%</td>
<td>5.47%</td>
<td>4.97%</td>
<td>5.39%</td>
</tr>
<tr>
<td>5 YR</td>
<td>1.52%</td>
<td>3.04%</td>
<td>3.09%</td>
<td>4.85%</td>
<td>4.49%</td>
<td>3.35%</td>
<td>7.02%</td>
<td>5.42%</td>
<td>6.10%</td>
</tr>
<tr>
<td>10 YR</td>
<td>2.82%</td>
<td>3.42%</td>
<td>3.54%</td>
<td>5.64%</td>
<td>4.85%</td>
<td>3.86%</td>
<td>7.24%</td>
<td>5.81%</td>
<td>7.39%</td>
</tr>
</tbody>
</table>

- Low absolute and relative returns are creating unprecedented investor flows and pressure on emerging markets.

<table>
<thead>
<tr>
<th></th>
<th>Mexico</th>
<th>India</th>
<th>Hungary</th>
<th>S. Africa</th>
<th>Indonesia</th>
<th>Turkey</th>
<th>Egypt</th>
<th>Brazil</th>
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<tbody>
<tr>
<td>2011e CPI</td>
<td>3.80%</td>
<td>5.80%</td>
<td>2.00%</td>
<td>6.60%</td>
<td>6.70%</td>
<td>7.90%</td>
<td>9.70%</td>
<td>4.60%</td>
</tr>
<tr>
<td>O/N</td>
<td>4.50%</td>
<td>5.25%</td>
<td>5.25%</td>
<td>6.50%</td>
<td>6.50%</td>
<td>6.50%</td>
<td>8.25%</td>
<td>9.50%</td>
</tr>
<tr>
<td>1 YR</td>
<td>4.76%</td>
<td>6.49%</td>
<td>5.60%</td>
<td>7.07%</td>
<td>5.83%</td>
<td>7.90%</td>
<td>0.51%</td>
<td>11.26%</td>
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<td>5.25%</td>
<td>7.30%</td>
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<td>7.91%</td>
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<td>8.85%</td>
<td>12.02%</td>
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<td>5.81%</td>
<td>7.69%</td>
<td>6.91%</td>
<td>7.52%</td>
<td>7.42%</td>
<td>8.70%</td>
<td>9.41%</td>
<td>12.06%</td>
</tr>
<tr>
<td>10 YR</td>
<td>6.54%</td>
<td>7.82%</td>
<td>7.09%</td>
<td>8.34%</td>
<td>7.89%</td>
<td>n.a.</td>
<td>10.85%</td>
<td>12.62%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1 Y - O/N</th>
<th>3 Y - 1 Y</th>
<th>5 Y - 1 Y</th>
<th>10 Y - 1 Y</th>
<th>5 Y Real</th>
<th>10 Y Real</th>
</tr>
</thead>
<tbody>
<tr>
<td>O/N</td>
<td>0.26%</td>
<td>-0.74%</td>
<td>0.36%</td>
<td>0.57%</td>
<td>-0.67%</td>
<td>1.40%</td>
</tr>
<tr>
<td>1 YR</td>
<td>0.49%</td>
<td>1.23%</td>
<td>0.84%</td>
<td>0.25%</td>
<td>0.66%</td>
<td>0.34%</td>
</tr>
<tr>
<td>3 YR</td>
<td>1.05%</td>
<td>1.31%</td>
<td>0.45%</td>
<td>1.59%</td>
<td>0.80%</td>
<td>0.90%</td>
</tr>
<tr>
<td>5 YR</td>
<td>1.78%</td>
<td>1.33%</td>
<td>0.27%</td>
<td>0.06%</td>
<td>2.34%</td>
<td>0.76%</td>
</tr>
<tr>
<td>10 Y R</td>
<td>2.01%</td>
<td>1.89%</td>
<td>4.01%</td>
<td>2.02%</td>
<td>0.72%</td>
<td>0.80%</td>
</tr>
<tr>
<td>5 Y Real</td>
<td>2.74%</td>
<td>2.02%</td>
<td>4.19%</td>
<td>2.64%</td>
<td>1.19%</td>
<td>n.a.</td>
</tr>
<tr>
<td>10 Y Real</td>
<td>2.74%</td>
<td>2.02%</td>
<td>4.19%</td>
<td>2.64%</td>
<td>1.19%</td>
<td>1.15%</td>
</tr>
</tbody>
</table>

- Low absolute and relative returns are creating unprecedented investor flows and pressure on emerging markets.
Local Bond Markets are Smaller, Less Developed, and Less Liquid than G7 Bond Markets

- US bond market is approximately 160% of GDP, Europe 140%
  - Emerging markets much less – 33% on average
    - Mexico is 30%, Turkey is 35%; Brazil only 20%, China 28%
- Emerging market corporates even less developed
  - Maybe 1/3 or less in EMs versus 2/3 in mature economies
- Turnover a fraction of mature markets
  - 1500% per annum in US vs. 200-500% in EMs
Time for New Bretton Woods?

- Structurally, the center of economic and financial activity is shifting quickly
  - Imbalances have been building since the EM crises of the 1990’s
  - Older powers contending with effects from the credit crisis

- Local bond markets need to be developed in coordination with other economic and monetary policies
  - Lack of consensus poses huge risks
  - G20 to the rescue?