Outline

• Developments and impact on regional bond markets

• Fluctuating fortunes of regional equity markets

• Market integration Issues
## Bonds Outstanding in Major Markets

<table>
<thead>
<tr>
<th></th>
<th>1Q09</th>
<th></th>
<th>4Q96</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LCY Bonds Outstanding (USD Bln)</td>
<td>% of World Total</td>
<td>LCY Bonds Outstanding (USD Bln)</td>
<td>% of World Total</td>
</tr>
<tr>
<td>United States</td>
<td>24,962</td>
<td>42.3</td>
<td>10,926</td>
<td>42.8</td>
</tr>
<tr>
<td>Japan</td>
<td>10,289</td>
<td>17.4</td>
<td>4,456</td>
<td>17.4</td>
</tr>
<tr>
<td>France</td>
<td>2,824</td>
<td>4.8</td>
<td>1,303</td>
<td>5.1</td>
</tr>
<tr>
<td>Germany</td>
<td>2,570</td>
<td>4.4</td>
<td>1,888</td>
<td>7.4</td>
</tr>
<tr>
<td>UK</td>
<td>1,268</td>
<td>2.1</td>
<td>678</td>
<td>2.7</td>
</tr>
<tr>
<td>Emerging East Asia</td>
<td>3,658</td>
<td>6.2</td>
<td>537</td>
<td>2.1</td>
</tr>
<tr>
<td>of which: PRC</td>
<td>2,192</td>
<td>3.7</td>
<td>62</td>
<td>0.2</td>
</tr>
<tr>
<td>Emerging East Asia excl. PRC</td>
<td>1,466</td>
<td>2.5</td>
<td>475</td>
<td>1.9</td>
</tr>
<tr>
<td>of which: Korea, Rep. of</td>
<td>796</td>
<td>1.3</td>
<td>283</td>
<td>1.1</td>
</tr>
<tr>
<td>of which: ASEAN-6</td>
<td>568</td>
<td>1.0</td>
<td>158</td>
<td>0.6</td>
</tr>
<tr>
<td>Indonesia</td>
<td>73</td>
<td>0.1</td>
<td>7</td>
<td>0.0</td>
</tr>
<tr>
<td>Malaysia</td>
<td>160</td>
<td>0.3</td>
<td>81</td>
<td>0.3</td>
</tr>
<tr>
<td>Philippines</td>
<td>56</td>
<td>0.1</td>
<td>28</td>
<td>0.1</td>
</tr>
<tr>
<td>Singapore</td>
<td>120</td>
<td>0.2</td>
<td>25</td>
<td>0.1</td>
</tr>
<tr>
<td>Thailand</td>
<td>147</td>
<td>0.2</td>
<td>18</td>
<td>0.1</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>12</td>
<td>0.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Memo Items:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>893</td>
<td>1.5</td>
<td>299</td>
<td>1.2</td>
</tr>
<tr>
<td>India</td>
<td>450</td>
<td>0.8</td>
<td>81</td>
<td>0.3</td>
</tr>
<tr>
<td>Russia</td>
<td>33</td>
<td>0.1</td>
<td>43</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Source: Asia Bond Monitor.
Historical Growth of Emerging East Asia LCY Bond Market

Source: AsianBondsOnline.
Key Developments in 2009

- LCY bonds outstanding reached USD4.2 trillion at the end of 3Q09

- Strong growth of 14.8% y-o-y versus 13% in 2Q09. Q-o-Q growth was 4.3% in 3Q09 against 2.7% in 3Q08

- Government bonds grew 9.5% y-o-y, corporate bonds 30.3%
Broad-based Growth

- Growth in markets ex-PRC was 16.0% y-o-y in 3Q09

- Hong Kong, China; Indonesia; Singapore; Republic of Korea; and Thailand registered strong growth

- Government and corporate bonds (ex PRC) grew 18.4% and 13.2%, respectively
Growth of Emerging East Asian Bonds Outstanding

Growth of Emerging East Asian LCY Government Bond Markets in 3Q09 (y-o-y %)

Growth of Emerging East Asian LCY Corporate Bond Markets in 3Q09 (y-o-y %)

Note:
1. Calculated using data from national sources.
2. Growth rates are calculated from local currency (LCY) base and do not include currency effects.
3. Total emerging East Asia growth figure is based on end-June 2009 currency exchange rates and do not include currency effects.

Source: Asia Bond Monitor.
Issuance Volume

Source: AsianBondsOnline.
G3 Currency Issuance

Source: Bloomberg LP.

G3 Currency Issuance in Emerging East Asia

Source: Bloomberg LP.
Credit Default Swap Spreads – Senior 5 year

Note: In USD currency and based on sovereign bonds.

Source: Thomson DataStream.
Government Bond Yields

China, People's Rep. of

Indonesia

Korea, Rep. of

Philippines

Viet Nam

asianbondsonline.adb.org
Maturity Profile
(Individual Maturities as % of Total)

Note: Data is as of 3Q09 except for Philippines as of end-August.

Source: AsianBondsOnline.
Total Bills to Bonds Ratio

Note: Total bills comprise central bank bills plus treasury bills. Bonds comprise long-term bonds (more than 1 year in maturity) issued by central governments and central banks.

Source: Asia Bond Monitor.
Credit Spreads – LCY Corporate Rated AAA vs Govt. Bonds

Note: Credit spreads are obtained by subtracting the government yields from corporate indicative yields.

Source: Asia Bond Monitor.
Credit Spreads - LCY Corp
Rated BBB vs AAA

Note:
1. For the People's Republic of China, credit spreads are obtained by subtracting the corporate indicative yields rated as AAA from corporate indicative yields rated as BBB+.
2. For Malaysia, credit spreads are obtained by subtracting the corporate indicative yields rated as AAA from corporate indicative yields rated as BBB.
3. For the Republic of Korea, credit spreads are obtained by subtracting the corporate indicative yields rated as AAA from corporate indicative yields rated as BBB+.

Source: Asia Bond Monitor.
Ratio of Equity Market Capitalization to Corporate Bonds Outstanding

Source: Asia Bond Monitor.
MSCI Indexes – Emerging Asia

MSCI Indexes (2 Jan 2007 = 100)

Source: Morgan Stanley Capital International (MSCI) Barra.
MSCI Indexes – Emerging Asia

MSCI Indexes—Emerging Asia\(^1\) (2 Jan 2007 = 100)

1. Includes China, People's Rep. of; India; Indonesia; Korea, Rep. of; Malaysia; Philippines; Taipei, China; and Thailand.
2. PRC = People's Republic of China.
3. GDP = Gross domestic product.
Source: Morgan Stanley Capital International (MSCI) Barra.
### Market Capitalization

<table>
<thead>
<tr>
<th>Region</th>
<th>2009</th>
<th>% of GDP</th>
<th>2008</th>
<th>% of GDP</th>
<th>2007</th>
<th>% of GDP</th>
<th>Peak</th>
<th>Trough</th>
<th>2004-2007 Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USD billion</td>
<td></td>
<td>USD billion</td>
<td></td>
<td>USD billion</td>
<td></td>
<td></td>
<td></td>
<td>(Annual Average)</td>
</tr>
<tr>
<td>Emerging Asia</td>
<td>9701.1</td>
<td>110.6</td>
<td>5299.1</td>
<td>65.3</td>
<td>12099.6</td>
<td>163.2</td>
<td>163.2 (Dec 07)</td>
<td>55.1 (Feb 09)</td>
<td>48.0¹</td>
</tr>
<tr>
<td>China, People’s Rep. of</td>
<td>3302.9</td>
<td>69.4</td>
<td>1775.6</td>
<td>40.4</td>
<td>4459.5</td>
<td>127.8</td>
<td>127.8 (Dec 07)</td>
<td>16.5 (Jan 06)</td>
<td>112.9</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>2305.0</td>
<td>1103.7</td>
<td>1328.9</td>
<td>613.6</td>
<td>2653.6</td>
<td>1281.3</td>
<td>1429.2 (Oct 07)</td>
<td>277.6 (Mar 03)</td>
<td>40.1</td>
</tr>
<tr>
<td>India</td>
<td>1301.2</td>
<td>104.7</td>
<td>637.3</td>
<td>58.1</td>
<td>1815.0</td>
<td>166.0</td>
<td>166.1 (Dec 07)</td>
<td>35.2 (Jun 04)</td>
<td>62.8</td>
</tr>
<tr>
<td>Indonesia</td>
<td>212.1</td>
<td>41.2</td>
<td>95.9</td>
<td>21.8</td>
<td>204.8</td>
<td>48.5</td>
<td>48.5 (Dec 07)</td>
<td>14.9 (Feb 09)</td>
<td>40.9</td>
</tr>
<tr>
<td>Korea, Rep. of</td>
<td>822.1</td>
<td>102.7</td>
<td>484.0</td>
<td>69.5</td>
<td>1103.3</td>
<td>114.0</td>
<td>126.1 (Oct 07)</td>
<td>37.5 (Feb 09)</td>
<td>37.1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>284.0</td>
<td>137.0</td>
<td>186.3</td>
<td>89.3</td>
<td>324.4</td>
<td>168.5</td>
<td>168.5 (Dec 07)</td>
<td>75.5 (Feb 09)</td>
<td>20.1</td>
</tr>
<tr>
<td>Philippines</td>
<td>85.3</td>
<td>53.8</td>
<td>48.5</td>
<td>31.1</td>
<td>102.0</td>
<td>64.0</td>
<td>68.1 (Oct 07)</td>
<td>25.5 (Mar 04)</td>
<td>46.2</td>
</tr>
<tr>
<td>Singapore</td>
<td>448.3</td>
<td>274.8</td>
<td>248.0</td>
<td>142.4</td>
<td>498.0</td>
<td>286.8</td>
<td>313.9 (Oct 07)</td>
<td>102.3 (Feb 09)</td>
<td>31.5</td>
</tr>
<tr>
<td>Taipei, China</td>
<td>733.1</td>
<td>205.1</td>
<td>386.7</td>
<td>140.8</td>
<td>701.1</td>
<td>267.6</td>
<td>312.6 (Oct 07)</td>
<td>108.5 (Jan 09)</td>
<td>14.4</td>
</tr>
<tr>
<td>Thailand</td>
<td>173.7</td>
<td>65.2</td>
<td>99.0</td>
<td>28.0</td>
<td>212.9</td>
<td>56.7</td>
<td>65.2 (Dec 09)</td>
<td>22.3 (Feb 09)</td>
<td>18.4</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>33.3</td>
<td>36.3</td>
<td>8.8</td>
<td>8.2</td>
<td>24.9</td>
<td>35.1</td>
<td>36.3 (Dec 09)</td>
<td>6.9 (Feb 09)</td>
<td>—</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2989.9</td>
<td>136.0</td>
<td>1995.7</td>
<td>74.5</td>
<td>4046.9</td>
<td>144.2</td>
<td>147.9 (Apr 06)</td>
<td>60.7 (Feb 09)</td>
<td>14.5</td>
</tr>
<tr>
<td>Japan</td>
<td>3466.6</td>
<td>68.7</td>
<td>3264.8</td>
<td>58.8</td>
<td>4545.9</td>
<td>98.9</td>
<td>121.6 (Mar 06)</td>
<td>56.0 (Feb 09)</td>
<td>10.6</td>
</tr>
<tr>
<td>United States</td>
<td>13740.1</td>
<td>96.3</td>
<td>10606.3</td>
<td>74.4</td>
<td>17663.5</td>
<td>127.9</td>
<td>136.1 (May 07)</td>
<td>60.0 (Feb 09)</td>
<td>7.0</td>
</tr>
</tbody>
</table>

¹Average does not include Viet Nam because data for the period is not available

Note: Peaks and troughs were defined over the period Jan 2003–Dec 2009.

Sources: Bloomberg and IMF *World Economic Outlook* (GDP 2009).
Market Integration and Spillovers

• Correlation between regional equity markets and US have increased over time

• Correlations between individual Asian equity markets have increased more than those with the US

• Spillover from global crisis to Asian equity markets was largely through real sectors
<table>
<thead>
<tr>
<th>Market</th>
<th>Modified Duration (years)</th>
<th>2008 Returns (%)</th>
<th>1H09 Returns (%)</th>
<th>2009 Returns (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LCY Total Return Index</td>
<td>USD Unhedged Total Return Index</td>
<td>LCY Total Return Index</td>
</tr>
<tr>
<td>China, People’s Rep. of</td>
<td>4.76</td>
<td>11.91</td>
<td>18.71</td>
<td>(0.48)</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>3.46</td>
<td>10.22</td>
<td>10.85</td>
<td>(2.09)</td>
</tr>
<tr>
<td>Indonesia</td>
<td>4.82</td>
<td>3.22</td>
<td>(12.30)</td>
<td>9.62</td>
</tr>
<tr>
<td>Korea, Rep. of</td>
<td>3.60</td>
<td>11.46</td>
<td>(18.20)</td>
<td>0.29</td>
</tr>
<tr>
<td>Malaysia</td>
<td>4.58</td>
<td>7.58</td>
<td>2.89</td>
<td>(1.64)</td>
</tr>
<tr>
<td>Philippines</td>
<td>4.02</td>
<td>1.63</td>
<td>(12.55)</td>
<td>5.07</td>
</tr>
<tr>
<td>Singapore</td>
<td>5.23</td>
<td>6.75</td>
<td>6.80</td>
<td>(0.41)</td>
</tr>
<tr>
<td>Thailand</td>
<td>4.82</td>
<td>16.88</td>
<td>13.72</td>
<td>(3.91)</td>
</tr>
<tr>
<td>Pan-Asian Index</td>
<td>4.36</td>
<td>n.a.</td>
<td>4.14</td>
<td>n.a.</td>
</tr>
<tr>
<td>HSBC ALBI</td>
<td>5.72</td>
<td>n.a.</td>
<td>0.97</td>
<td>n.a.</td>
</tr>
<tr>
<td>US Govt 1-10 years</td>
<td>3.91</td>
<td>n.a.</td>
<td>10.95</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

LCY = local currency, n.a. = not applicable.

Note:
1. The ABF indices contain only government debt and government-guaranteed debt obligations.
2. Market bond indices are from iBoxx Index Family. 2009 returns year-to-date are as of 31 December 2009.
3. Annual return is computed for each year using natural logarithm of end-of-year index value/beginning year index value.
4. Duration is as of 31 December 2009.

Source: Asia Bond Monitor
### MSCI Index Returns

<table>
<thead>
<tr>
<th>Market</th>
<th>2008 Returns (%)</th>
<th>1H09 Returns (%)</th>
<th>2009 Returns (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LCY Currency</td>
<td>USD Terms</td>
<td>LCY Currency</td>
</tr>
<tr>
<td></td>
<td>Terms</td>
<td></td>
<td>Terms</td>
</tr>
<tr>
<td>China, People's Rep. of</td>
<td>(52.23)</td>
<td>(51.94)</td>
<td>35.10</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>(53.16)</td>
<td>(52.88)</td>
<td>32.56</td>
</tr>
<tr>
<td>Indonesia</td>
<td>(50.76)</td>
<td>(57.57)</td>
<td>44.65</td>
</tr>
<tr>
<td>Korea, Rep. of</td>
<td>(40.62)</td>
<td>(55.87)</td>
<td>24.60</td>
</tr>
<tr>
<td>Malaysia</td>
<td>(40.77)</td>
<td>(43.39)</td>
<td>24.45</td>
</tr>
<tr>
<td>Philippines</td>
<td>(46.77)</td>
<td>(53.79)</td>
<td>30.10</td>
</tr>
<tr>
<td>Singapore</td>
<td>(49.50)</td>
<td>(49.55)</td>
<td>30.59</td>
</tr>
<tr>
<td>Thailand</td>
<td>(48.72)</td>
<td>(50.34)</td>
<td>39.10</td>
</tr>
<tr>
<td>Far East ex Japan Index</td>
<td>(48.14)</td>
<td>(51.96)</td>
<td>31.80</td>
</tr>
<tr>
<td>MSCI USA</td>
<td>n.a.</td>
<td>(38.58)</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

LCY = local currency, n.a. = not applicable.

**Notes:**
1. Market indices are from MSCI country indexes. 2009 returns are as of 31 December 2009.
2. Far East ex Japan includes: PRC; Hong Kong, China; Indonesia; Korea, Rep. of; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

Sources: AsianBondsOnline and Bloomberg LP.
Thank You

For inquiries:

Sabyasachi Mitra
sabymitra@adb.org

www.asianbondsonline.adb.org