



# RCI Progress and Challenges –Asia in an Interconnected World

**Iwan J. Azis**

Head  
Office of Regional Economic Integration (OREI)  
Asian Development Bank

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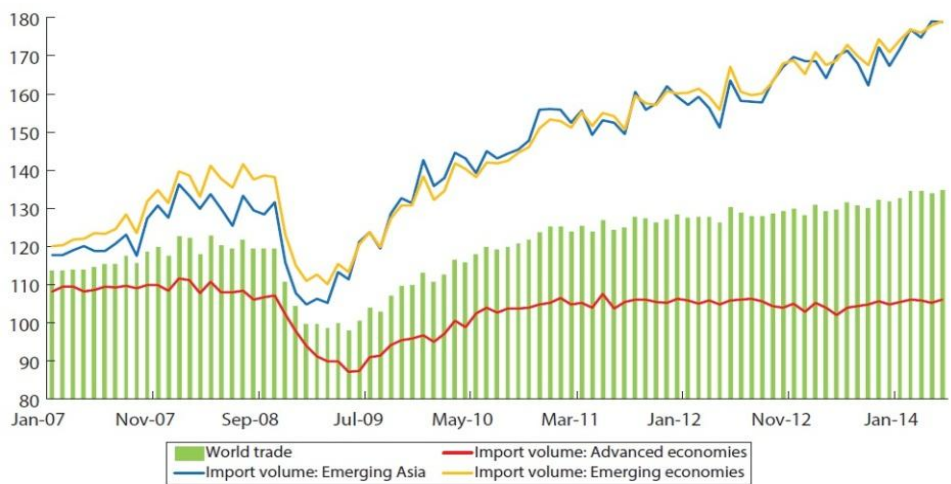
# Key Messages

- Amid restructuring, developing Asia including ASEAN countries will have steady growth driven by stronger trade and investment.
- Risks: jolt to US & eurozone; sharper slowdown in PRC; and volatile capital flows → warrant stronger financial safety nets
- Progress of Asian integration: intra-regional trade is down slightly, but between subregions rises along with intra-regional FDI. Cross-border portfolio flows are up (though remains to depend on global markets), migration steady, and tourism declines slightly.
- Trade cooperation & harmonization including FTA helps secure trade flows, although most is more market-driven fostered by liberalization in-line with growing production network (e.g., relocation of Japanese firms contributes to falling Japanese share in ASEAN trade)
- Financial cooperation strengthens (e.g., ABMI standardization, AMBIF multi-currency, equity exchange), bilateral swap & financial safety nets (e.g., CMIM, SAARC) needed to help counter risks of contagion
- Rising macro and overall interdependence (growing role of PRC)
- Costs of natural disasters grow faster than GDP → calls for regional cooperation in disaster risk management
- Regional convergence but with rising polarization



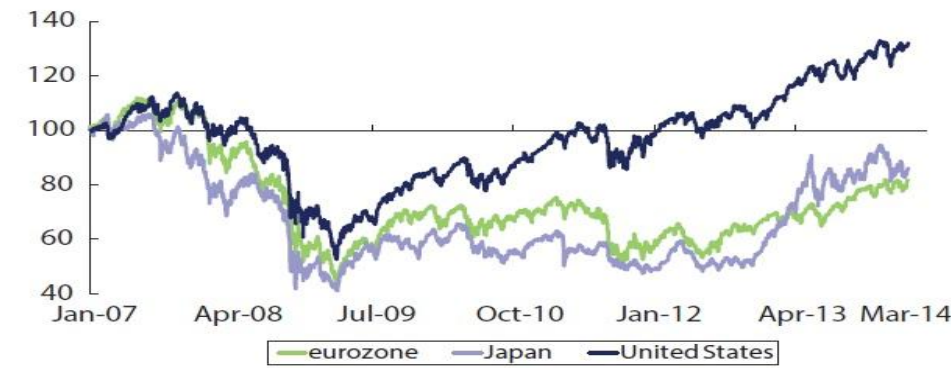
# As external environment improves...

**World Trade and Import Volume** (seasonally adjusted, 2005=100)



Source: *World Trade Monitor*, CPB Netherlands Bureau for Economic Policy Analysis.

**Stock Price Indexes—G3** (1 Jan 2007=100)



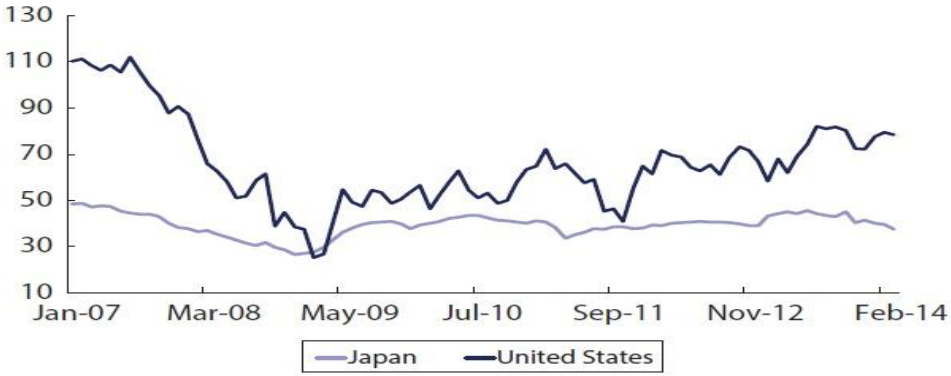
Note: Daily stock price indexes refer to MSCI EMU Index for eurozone, Nikkei 225 Index for Japan, and Dow Jones Industrial Average for the United States. Data as of 31 Mar 2014.  
Source: ADB calculations using data from Bloomberg.

**Industrial Production Indexes—G3** (seasonally adjusted, 2010=100)



Note: Data for Japan based on 3-month moving average. Data for eurozone and Japan until Dec 2013.  
Source: ADB calculations using data from CEIC.

**Consumer Confidence Indexes—Japan and United States**



Note: Japan index from Economic and Social Research Institute; United States index from The Conference Board. A reading below 50 suggests consumer pessimism. Data for Japan until Jan 2014.  
Source: ADB calculations using data from CEIC and national sources.



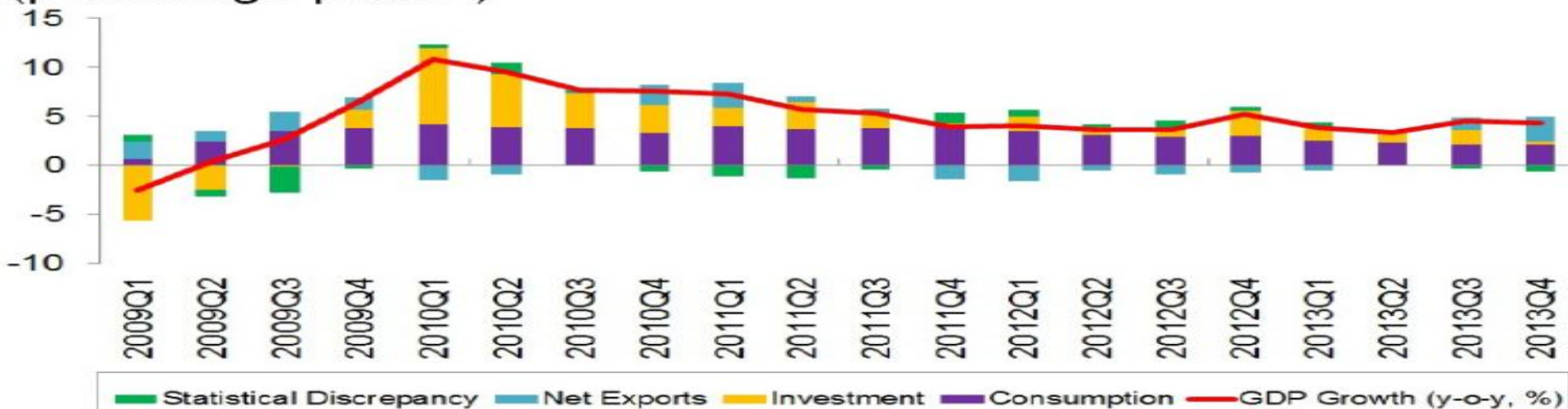
# Growth is expected to remain steady, supported recently by domestic demand and exports



Regional GDP Growth<sup>1</sup> (y-o-y, %)

	2009	2010	2011	2012	2013 <sup>8</sup>	Forecast <sup>9</sup>	
						2014	2015
<b>Developing Asia<sup>2</sup></b>	6.1	9.2	7.4	6.1	6.1	6.2	6.4
<b>Central Asia<sup>3</sup></b>	3.2	6.8	6.8	5.6	6.5	6.5	6.5
<b>East Asia<sup>4</sup></b>	6.8	9.8	8.2	6.6	6.7	6.7	6.7
People's Republic of China	9.2	10.4	9.3	7.7	7.7	7.5	7.4
<b>South Asia<sup>5</sup></b>	7.6	8.4	6.4	4.7	4.8	5.3	5.8
India	8.6	9.3	6.7	4.5	4.9	5.5	6.0
<b>Southeast Asia<sup>6</sup></b>	1.4	8.0	4.8	5.7	5.0	5.0	5.4
<b>The Pacific<sup>7</sup></b>	4.3	6.1	8.9	6.1	4.8	5.4	13.3
<b>Major Industrialized Economies</b>							
eurozone	4.4	2.0	1.6	-0.7	-0.4	1.0	1.4
Japan	-5.5	4.7	-0.5	1.4	1.5	1.3	1.3
United States	-2.8	2.5	1.8	2.8	1.9	2.8	3.0

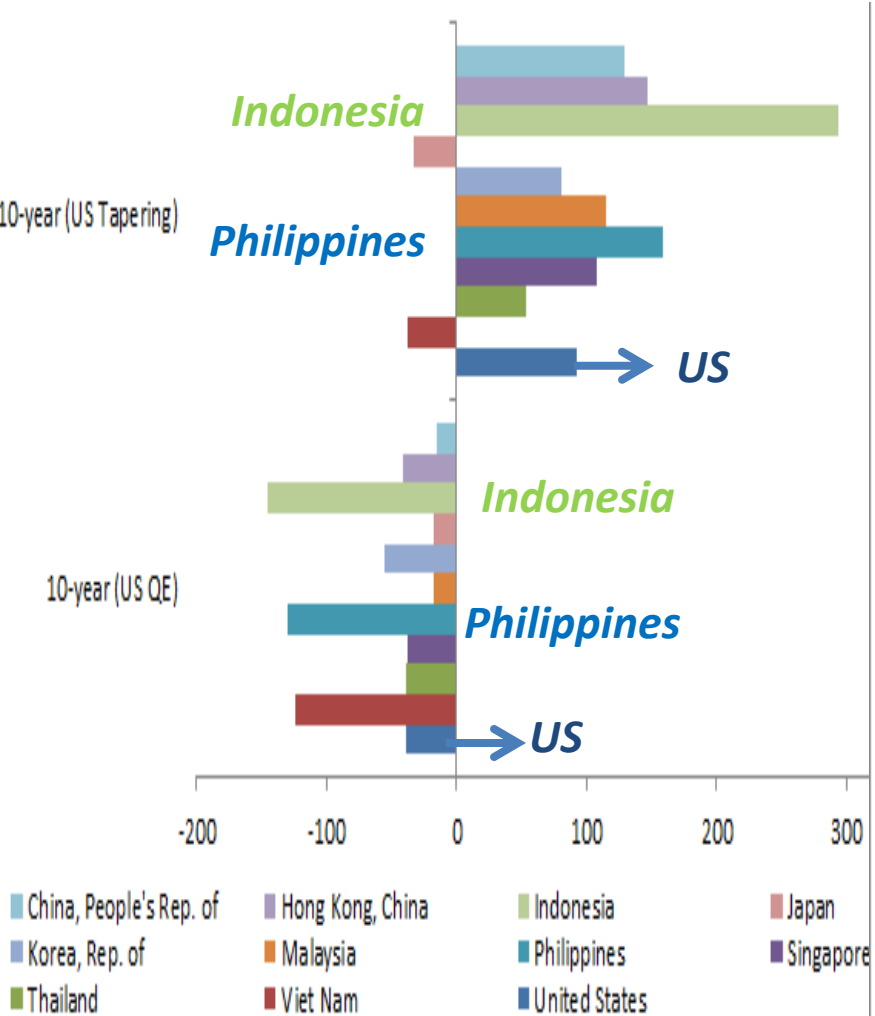
## Contributions to GDP Growth—Developing Asia<sup>1</sup> (percentage points<sup>2</sup>)



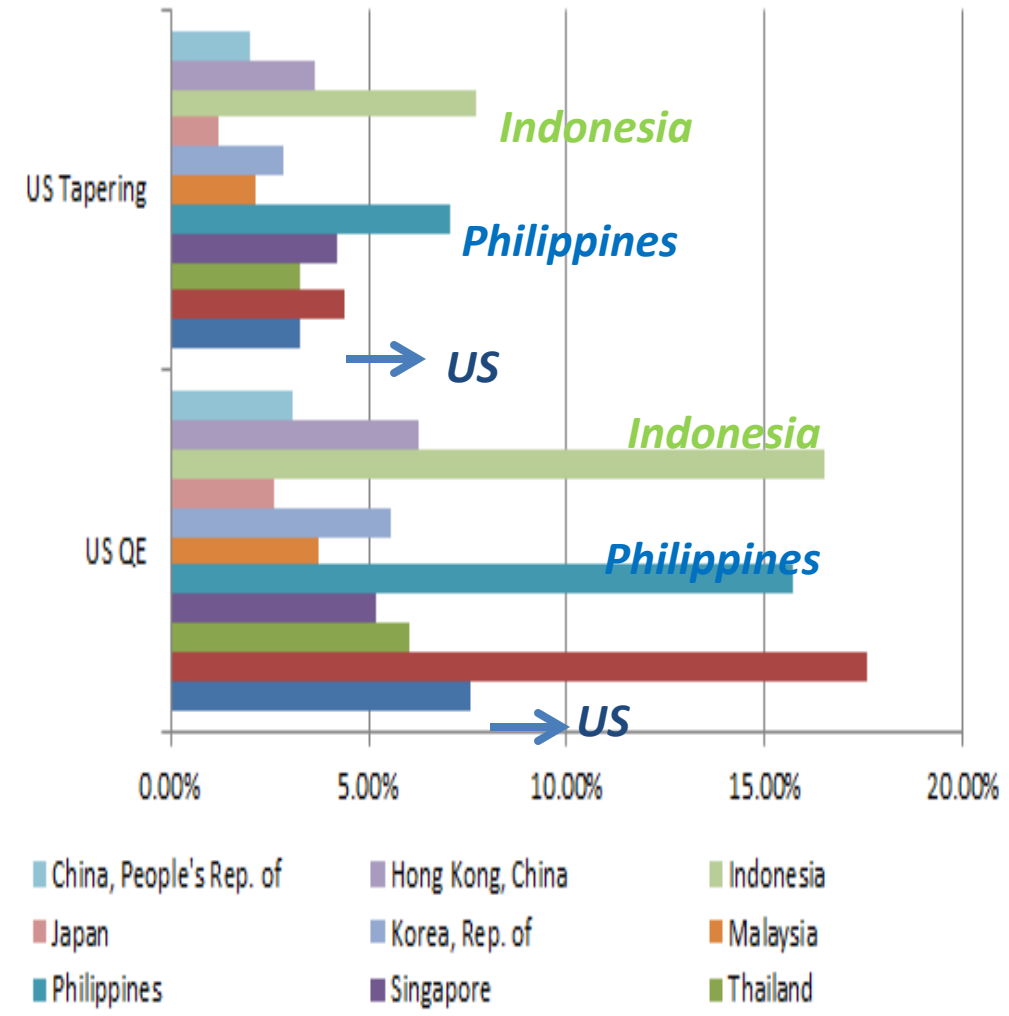
# QE (6/4 2008 to 5/22 2013) and QE tapering (5/22 2013 to 3/7 2014): fundamentals & market overreaction → need stronger financial safety nets



Yield Changes (bps, annualized)



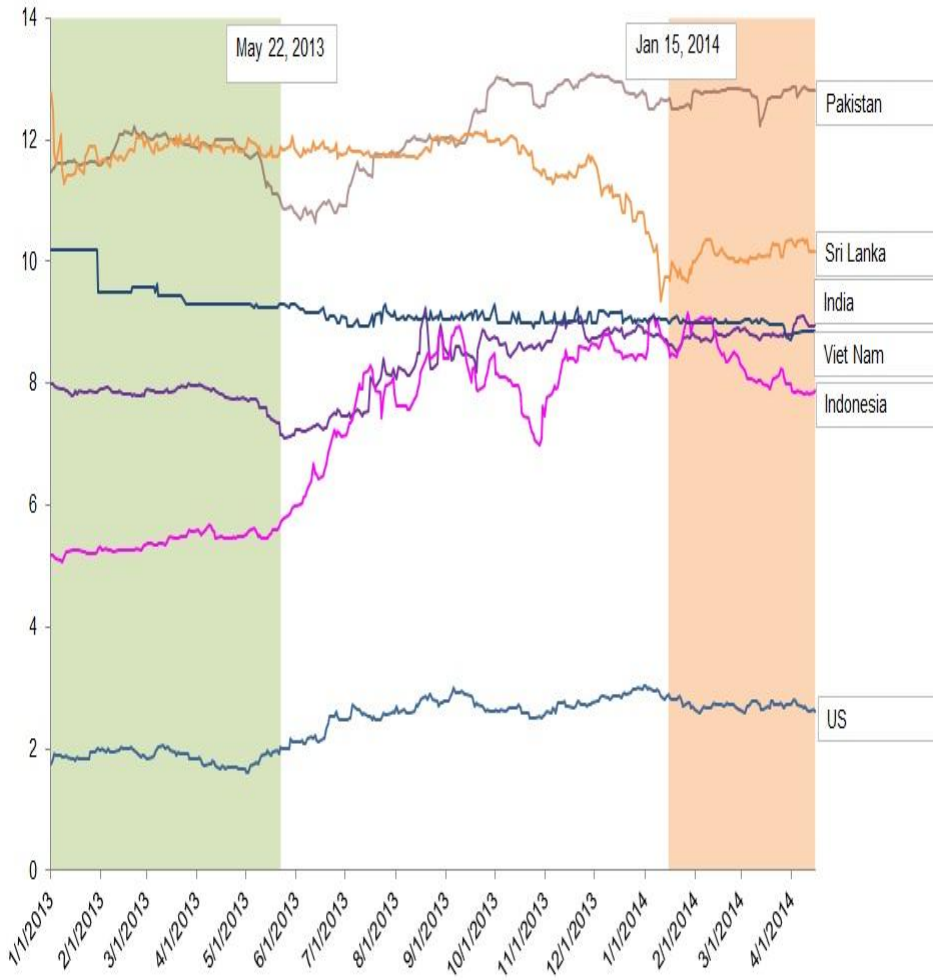
10-year Annual Bond Volatility



# Bond markets have stabilized, but Asia should not be complacent

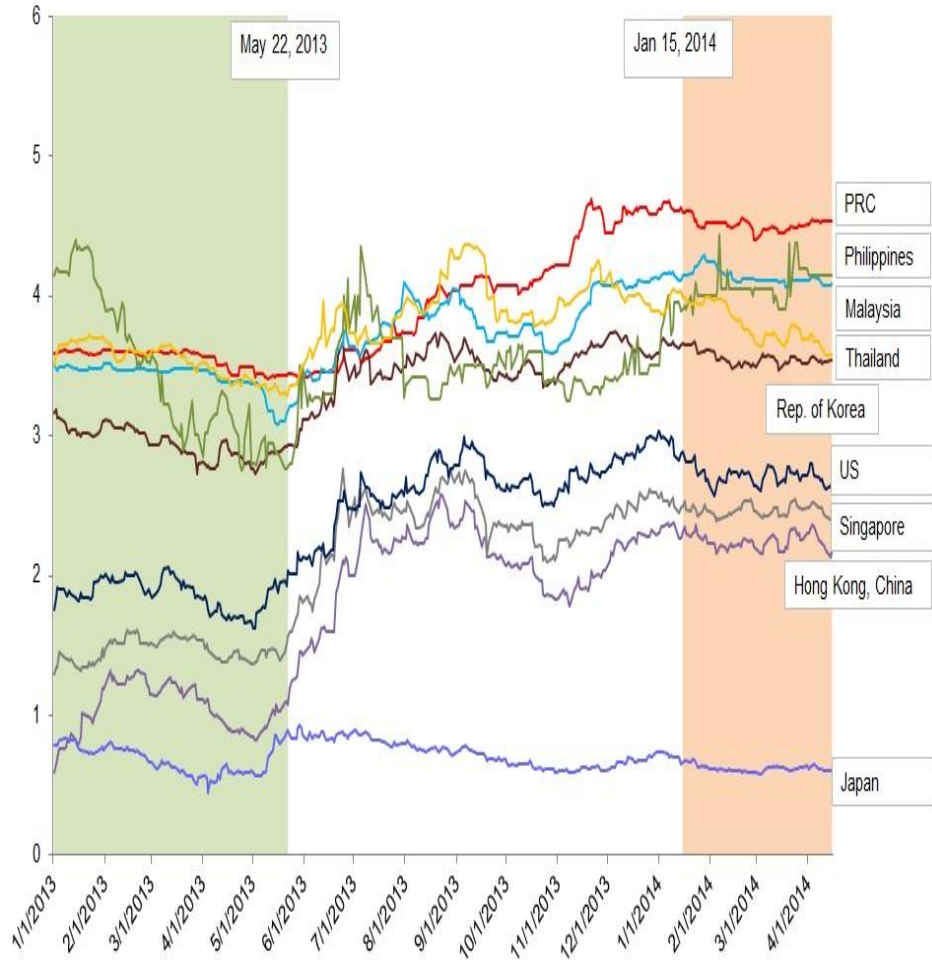


10-Year Local Currency Bond Yields (%)



Source: Bloomberg

10-Year Local Currency Bond Yields (%)



Source: Bloomberg



58

54

25

15

# Intra-Subregional Integration since 2011

Subregions	FDI (%) 2012	Trade (%) Jan-Aug 2013	Equity Holdings (%) 2012	Bond Holdings (%) 2012	Correlations 2008-2012
ASEAN+3 (including Hong Kong, China) <sup>1</sup>	41.77 ▼	45.88 ▼	22.14 ▲	8.72 ▲	0.58 ▲
Central Asia	-	6.31 ▼	0.18 ▲	-	0.28 ▲
East Asia	54.67 ▲	33.61 ▼	17.53 ▲	5.53 ▲	0.63 ▲
South Asia	-	4.25 ▼	0.11 ▲	0.64 ▼	0.24 ▲
Southeast Asia	17.35 ▲	24.49 ▼	9.20 ▲	11.29 ▲	0.52 ▲
The Pacific and Oceania	1.61 ▼	6.98 ▼	6.30 ▲	1.41 ▼	0.13 ▲

# Regional Integration since 2011

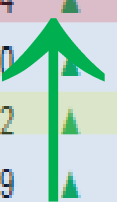
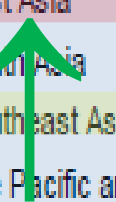
TOTAL	FDI (%) 2012	Trade (%) Jan-Aug 2013	Equity Holdings (%) 2012	Bond Holdings (%) 2012	Output Correlations 2008-2012
Asia <sup>2</sup>	58.05 ▲	54.08 ▼	25.24 ▲	14.80 ▲	0.33 ▲
ASEAN+3 (including Hong Kong, China)	65.53 ▲	55.91 ▼	26.81 ▲	15.39 ▲	0.43 ▲
Central Asia	-	37.25 ▲	12.85 ▲	12.76 ▲	0.30 ▲
East Asia	60.40 ▼	51.64 ▼	21.88 ▲	12.69 ▲	0.44 ▲
South Asia	22.77 ▲	33.31 ▼	17.06 ▼	25.58 ▼	0.30 ▲
Southeast Asia	75.23 ▲	68.13 ▲	41.68 ▲	35.61 ▲	0.42 ▲
The Pacific and Oceania	33.99 ▼	69.42 ▲	17.34 ▲	5.90 ▼	0.19 ▲

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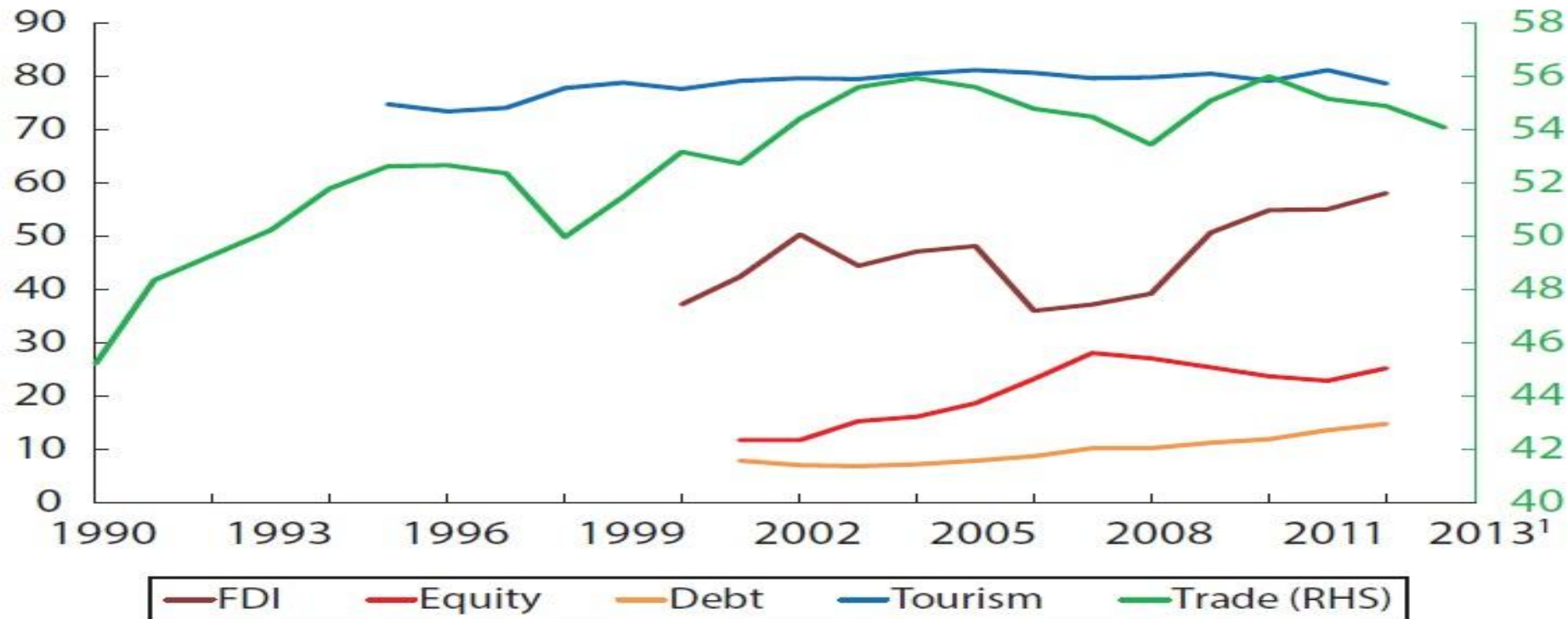




# Progress of regional integration



## Regional Integration Indicators—Asia (intraregional as % of total)



FDI = foreign direct investment, RHS = right-hand scale.

Notes:

<sup>1</sup>Jan-Aug 2013 data for Trade.

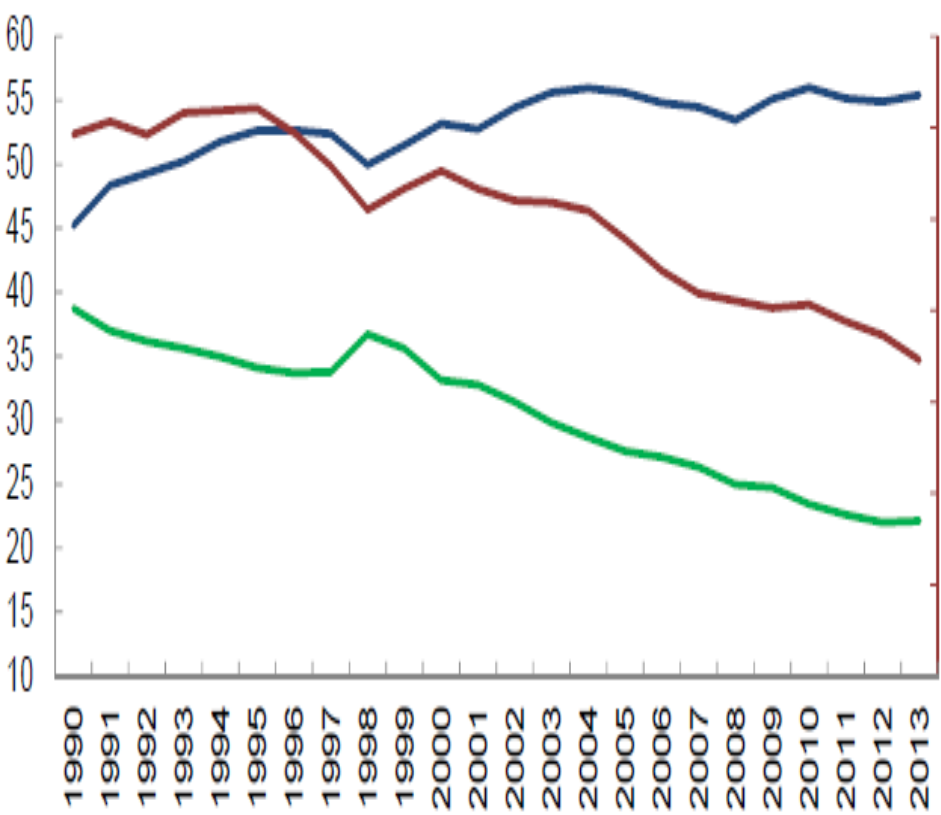
Source: ADB calculations using data from ASEAN Secretariat; Asia Regional Integration Center, Asian Development Bank; CEIC; *Coordinated Portfolio Investment Survey*, International Monetary Fund; *Direction of Trade Statistics*, International Monetary Fund; Organisation for Economic Co-operation and Development; United Nations Conference on Trade and Development; and United Nations World Tourism Organization.

# Changing trade pattern and production network

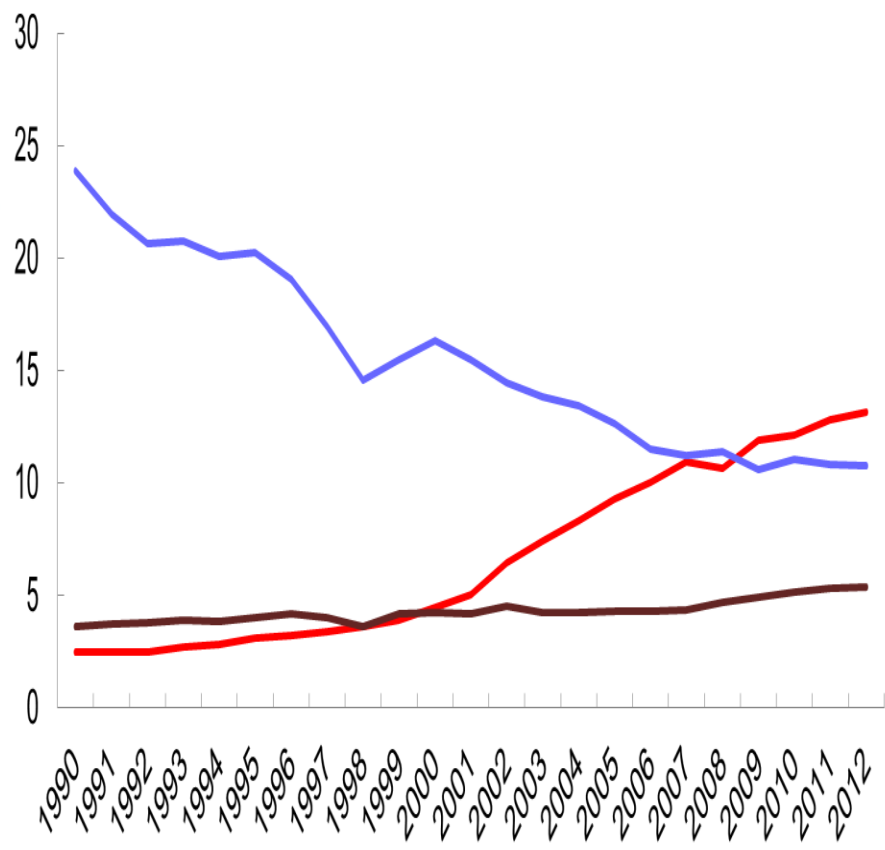


ASEAN total trade—PRC, Japan, and Rep. of Korea (% of total ASEAN trade)

Asia's trade share (%)



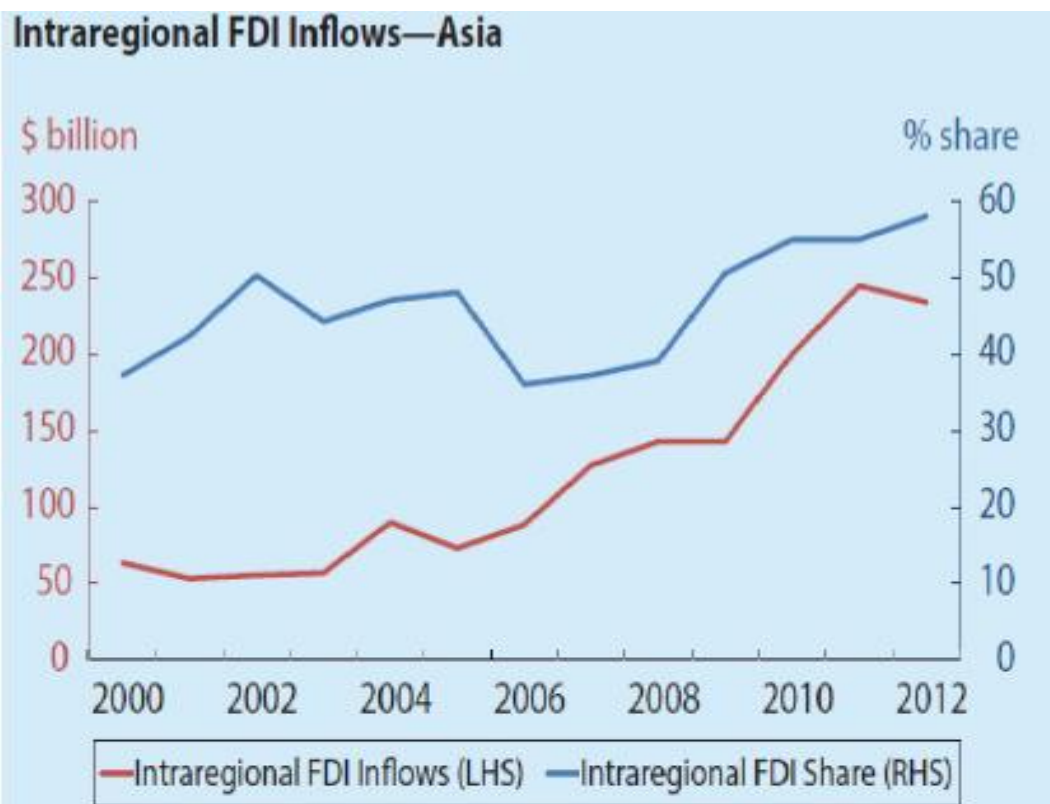
— Intra-Asia — G2 — Japan (RHS)



— PRC — Japan — Rep. of Korea

Source: ADB calculation using data from UN comtrade.

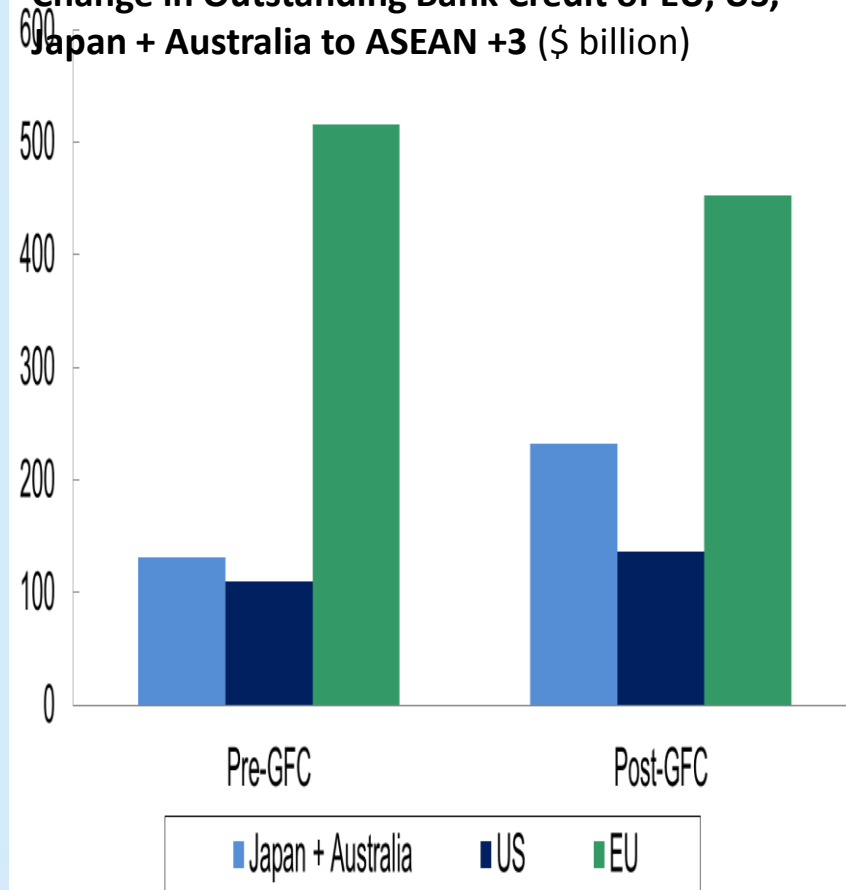
# Rising share of intraregional FDI, and falling share of EU banks substituted by JPN+AUS banks



FDI = foreign direct investment, LHS = left-hand scale, RHS = right-hand scale.  
 Note: Asia includes ASEAN; Australia; the People's Republic of China; Hong Kong, China; India; Japan; the Republic of Korea; New Zealand; and Pakistan. Data for Australia and New Zealand start from 2001. Missing 2012 data were estimated using actual value from previous period.

Source: ADB calculations using data from ASEAN Secretariat, CEIC, Organisation for Economic Co-operation and Development, and United Nations Conference on Trade and Development

### Change in Outstanding Bank Credit of EU, US, Japan + Australia to ASEAN +3 (\$ billion)



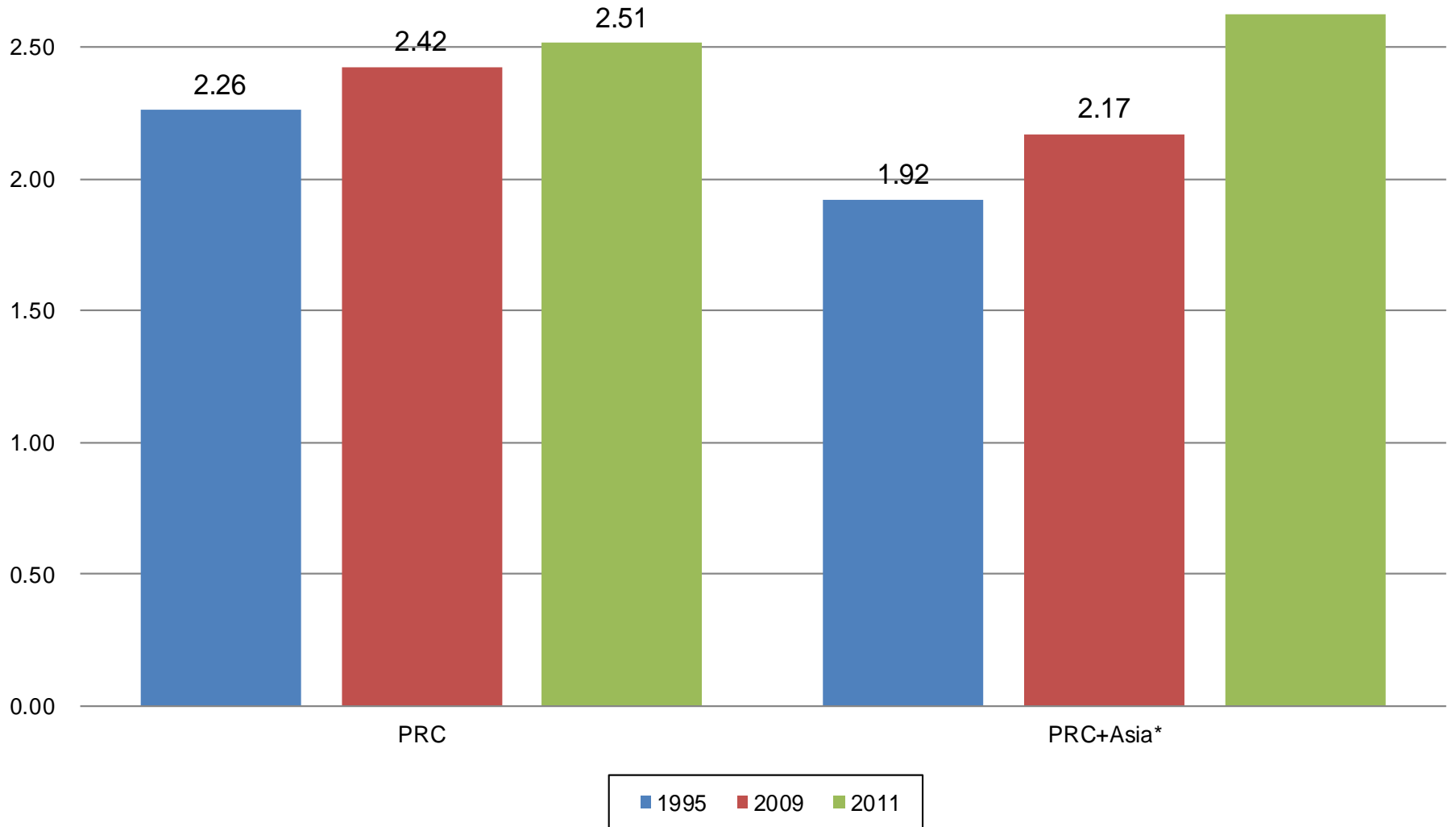
AUS = Australia, EU = European Union, GFC = global financial crisis, JPN = Japan, US = United States, Q-o-Q = quarter-on-quarter.

Note: Data refer to the sum of quarter-on-quarter difference of outstanding foreign claims of banks. Pre-GFC coverage is from 2004Q2 to 2008Q2. Post-GFC coverage is from 2009Q3 to 2013Q3.

Source: ADB calculations using data from Table 9B (Consolidated foreign claims of reporting banks-immediate borrower basis) Bank for International Settlements

# Coefficient of Interdependence

$$\sum_{j=1}^n \phi_j b_{\bullet j} = \sum_{i=1}^n \phi_i b_{i\bullet}^* \quad \text{where} \quad \phi_k = \frac{x_k}{\sum_{k=1}^n x_k}$$



# Growth of “+3” economies more strongly correlated over time

**Table 11: Correlation Coefficients: GDP Growth Rates**

	1993Q1–2013Q4	1993Q1–2003Q1	2003Q2–2013Q4
PRC–Japan	0.32 [0.11,0.5]	0.18 [–0.13,0.47]	0.41 [0.13,0.64]
PRC–Korea, Rep. of	0.34 [0.13,0.51]	0.26 [–0.05,0.52]	0.67* [0.46,0.81]
Japan–Korea, Rep. of	0.52 [0.34,0.66]	0.54 [0.28,0.73]	0.79 [0.64,0.88]
PRC–US	0.08 [–0.13,0.29]	–0.09 [–0.38,0.23]	0.27 [–0.04,0.53]
Japan–US	0.56 [0.39,0.69]	0.02 [–0.29,0.33]	0.83* [0.7,0.9]
Korea, Rep. of–US	0.36 [0.16,0.53]	0.03 [–0.28,0.34]	0.62* [0.39,0.77]

\* indicates that the statistic is significantly higher than 1993Q1–2003Q1.

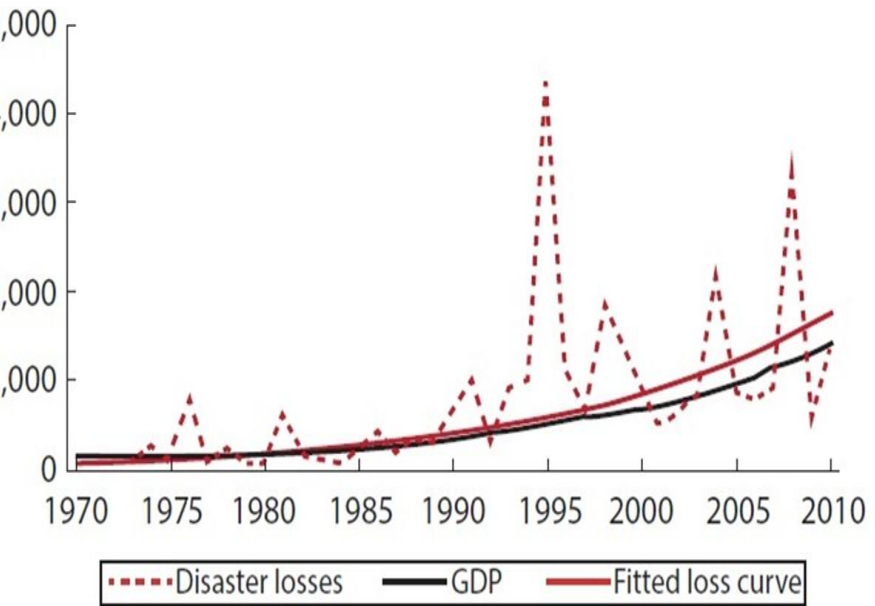
Note: Figures reflect pairwise correlations. 95% confidence intervals are reported in square brackets. Japan data only up to 2013Q3.

Source: ADB calculations using data from Haver Analytics.



# Cost of natural disasters grows faster than real GDP: Need for cooperation in disaster risk management

Real GDP and Natural Disaster Losses—Asia (1970=100)



GDP = gross domestic product.  
 Note: Annual GDP and direct physical losses were both set at a base value of 100 in 1970 and growth indexes in subsequent years calculated relative to 1970 to facilitate a comparison of growth rates.  
 Source: ADB. 2013. *Investing in Resilience: Ensuring a Disaster-Resistant Future*. Manila.

Cost of Natural Disasters to Asia

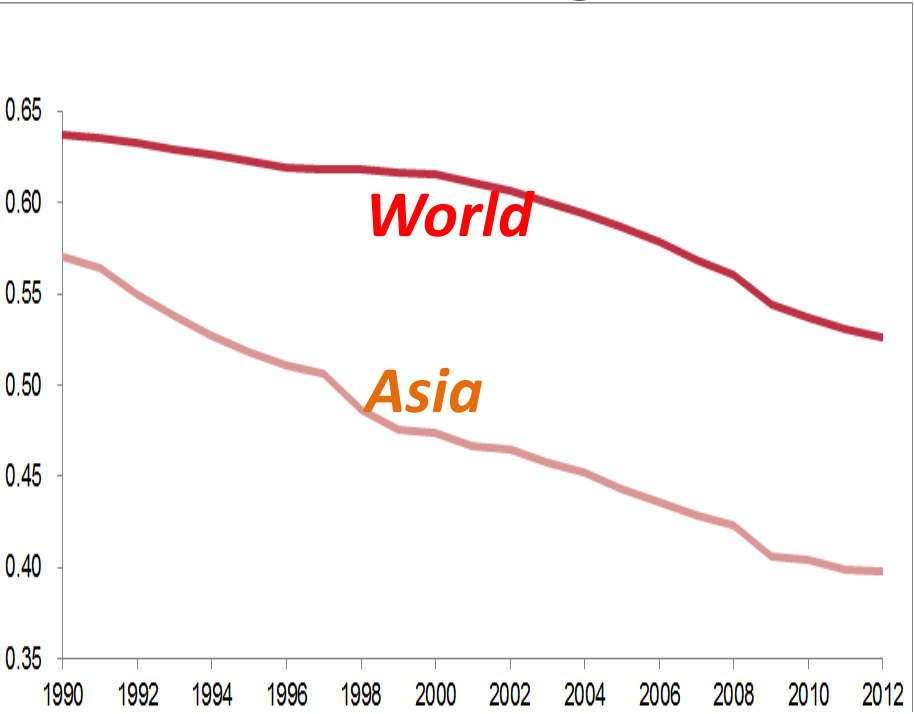
	Total, Bn\$	Annual Average Cost, Bn \$	% of GDP	% of world
1970-1979	18.6	1.9		
1980-1989	41.2	4.1	0.13	22.2
1990-1999	330.3	33.0	0.45	47.2
2000-2009	357.0	35.7	0.31	40.0
2010-2013	434.9	108.7	0.50	56.5
1991-2010	727.7	36.4	0.36	43.5
2011-2013	380.8	126.9	0.56	59.7
1994-2013	1,056.3	52.8	0.42	48.7

Note: Natural disasters include epidemic, insect infestation, extreme temperature, drought, flood, mass movement (wet and dry), wildfire, earthquake, volcanic eruption, and storm. Total cost of damages consists of direct (e.g. damage to infrastructure, crops, housing) and indirect (e.g. loss of revenues, unemployment, market destabilisation) consequences on the local economy. Data until Nov 2013. It does not yet include estimated economic cost of typhoon Haiyan (Nov 2013), which ranges from \$885 million to \$13 billion based on various sources.  
 Source: EM-DAT, The International Disaster Database, CRED





# Gini index between and within countries: Increased convergence but also rising polarization



## Between

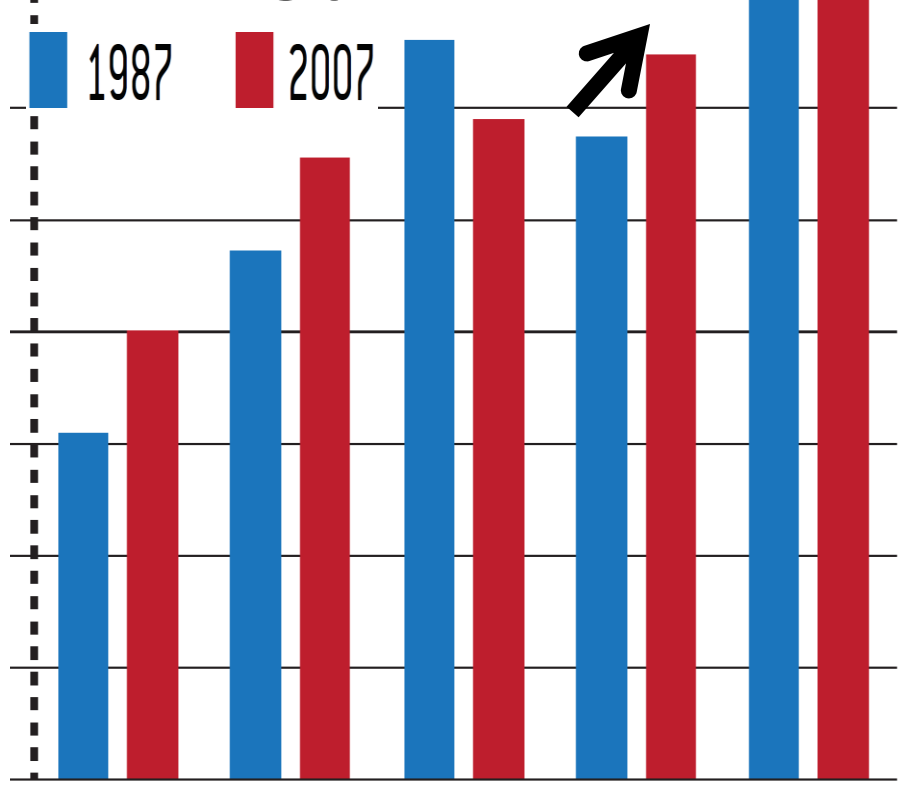
PRC = People's Republic of China.  
Notes: Developing Asia is Asia excluding Japan and Oceania. Data for Afghanistan, Cambodia, Cook Islands, Maldives, Marshall Islands, Myanmar, Nauru, Palau, Timor-Leste, and Tuvalu are unavailable. Estimates are based on GDP per capita, PPP terms of a balanced panel of 161 countries, including 38 Asian countries.

\*Gini Coefficient is computed as follows:

$$Gini = \frac{-(n+1)}{n} + \frac{2}{n^2 \mu_x} \sum_{i=1}^n ix_i$$

where  $x_i$  is the income of individual  $i$ ,  $\mu_x$  is the average income of the population, and  $n$  is the total number of individuals in the population. The Gini coefficient ranges from 0 (all individuals have equal income) to 1 (all income held by one person).

Source: World Development Indicators, accessed 23 January 2014; PWT 7.1 and government statistics for Taipei, China.



## Within

