

“Value Creation in Top Asian Firms”

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Structure

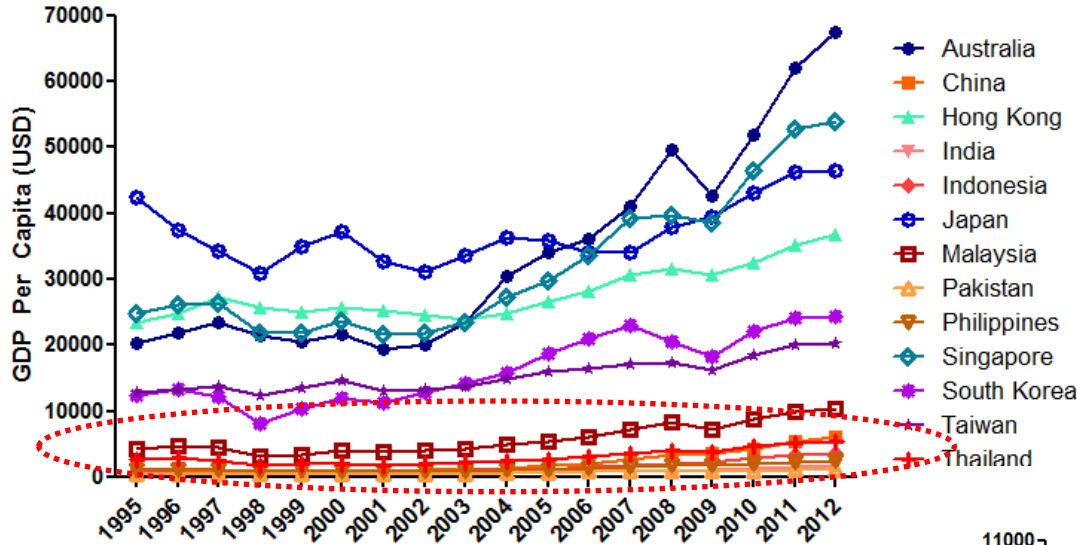
- Motivation:
 - The ‘Middle-Income Trap’
 - 1997 Asian Financial Crisis
- Why value creation?
- How to measure value creation?
- Why Residual Income (RI)?
- Findings

Summary

- Overall:
 - Firm level Value Creation – highly correlated with GDP per capita (e.g. 0.816 correlation for 13 Asian countries) & change in GDP per capita (0.551 correlation)
- Sector:
 - “Oil and Gas producers” create most value
 - “Alternative energy producers” create least value/sometimes destroy value
- Country:
 - Firms in high income countries consistently create more value
 - Middle income hard to catch up
- Positive long term effect of IMF bailout in 1997:
 - Firms in countries that received IMF package rebounded strongly & eventually outperformed those firms in the countries that opted out, creating more value by 2007
 - Reforms required under IMF created an environment that enhanced value creation?
- Corporate debt:
 - Low and moderately levered firms create more value than highly indebted firms

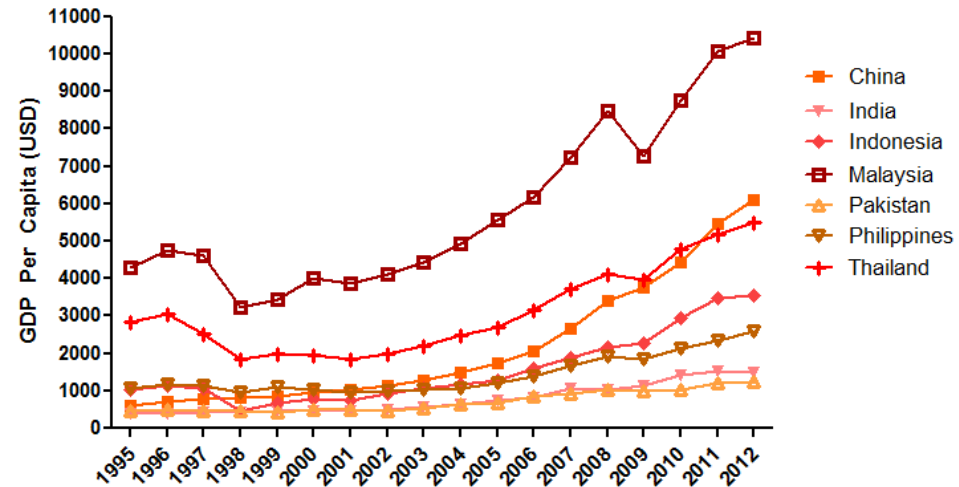
The 'Middle Income Trap'

GDP Per Capita (USD)



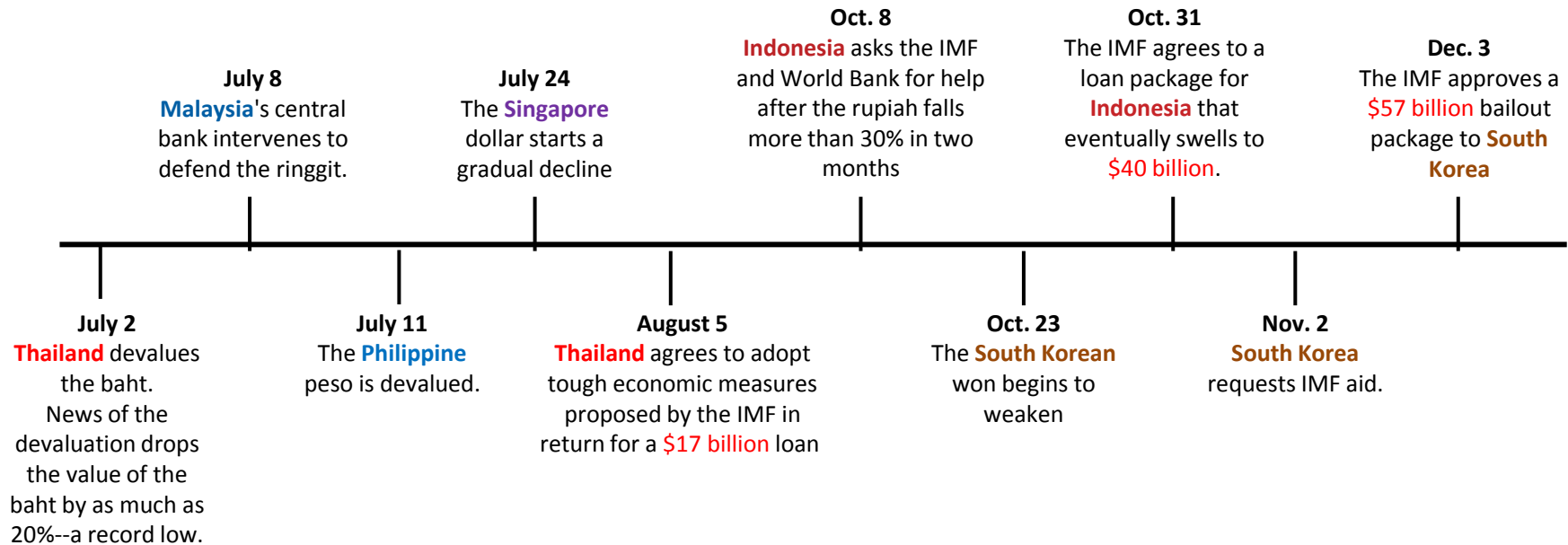
The gap between most High and Middle Income countries is widening over years...

GDP Per Capita (USD) - Middle Income



The 1997 Asian Financial Crisis

Timeline of the Panic in 1997



FDI inflows to South East Asia dwindled after 1997

Average FDI to World FDI Inflows (%)

	<i>1992–97</i>	<i>1999–2007</i>
Europe	38.06	48.75
Africa	2.09	2.40
Latin America	9.73	7.17
East Asia	13.94	10.33
South Asia	0.77	1.06
→ South-East Asia	7.71	3.34
North America	21.29	19.68
Others	6.41	7.28

Average FDI Inflows to Total World FDI Inflows (%), 1992–2007

	<i>1992–97</i>	<i>1999–2007</i>
China	10.52	6.22
→ Hong Kong	2.56	3.14
→ Indonesia	1.12	0.11
Korea	0.39	0.65
→ Malaysia	2.05	0.40
Philippines	0.45	0.14
→ Singapore	2.58	1.68
Taiwan	0.48	0.32
Thailand	0.77	0.63
Vietnam	0.50	0.20

Source: UNCTAD.

(Adapted from Thangevelu et al. 2009)

Total Investment dips too

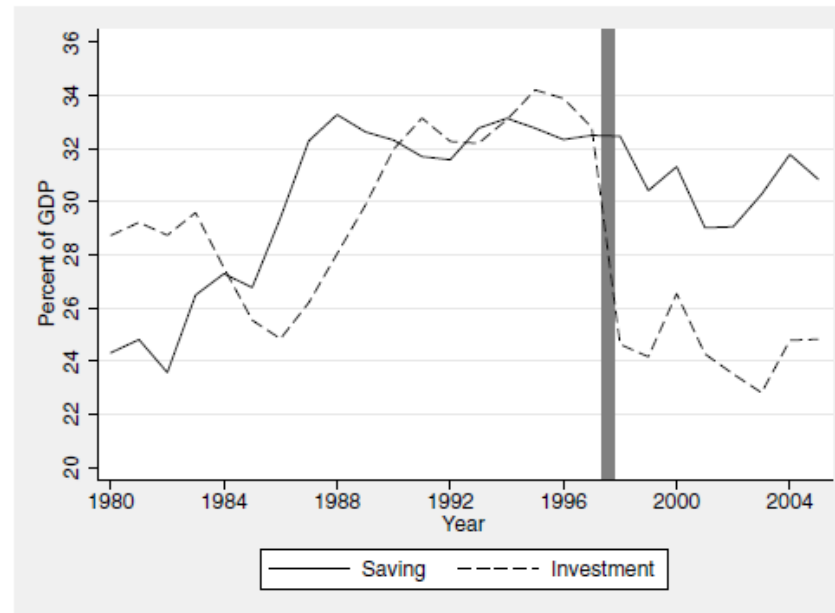


Figure 1: Aggregate saving and investment as percent of GDP for Asia-8 countries, 1980 to 2005

Note: Includes Indonesia, Malaysia, Philippines, Thailand, Singapore, Taiwan, Hong Kong and South Korea.

Source: World Development Indicators Database 2006, World Economic Outlook Database September 2006, CEIC.

(Adapted from Coulibaly & Millar 2011)

Gross Value-added

- Based on a country's Input-Output (IO) table
- Δ \$ of a country's output and the aggregate amount of its intermediate inputs of goods and services
- Correlates value creation with GDP and total export value (Daudin *et al.* 2011; Koopman *et al.* 2012)
- Limitations:
 - 1) Assume all firms in a certain industry use the same input to produce the same outputs
 - 2) Put weight on foreign imported intermediates

Residual Income (RI) – measure of Value Creation

EVA® (Economic Value Added) (Stewart 1991) &

Residual Income (RI) models (Ohlson 1995; Frankel & Lee 1998)

→ evaluate the economic or abnormal profit gained from going concern firms

$$\text{Residual Income per share (RI)} =$$

$$\text{Earnings per share} - \text{cost of capital} \cdot \text{Book value per share}$$

$$RI_t = EPS_t - r_t \cdot BV_{t-1}$$

Positive RI: value creation

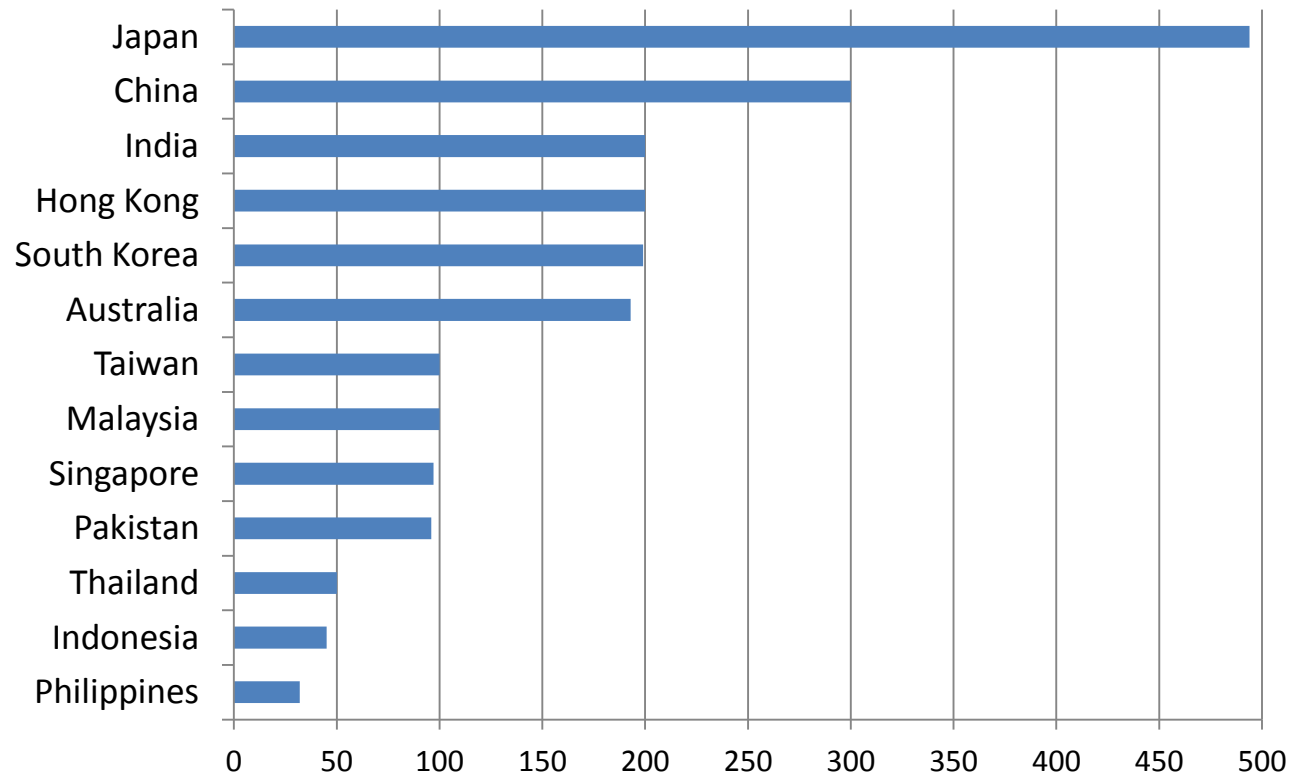
Negative RI: value destruction

after taking into account risks involved in the value generating activity

The Value Creation Study

Overview:

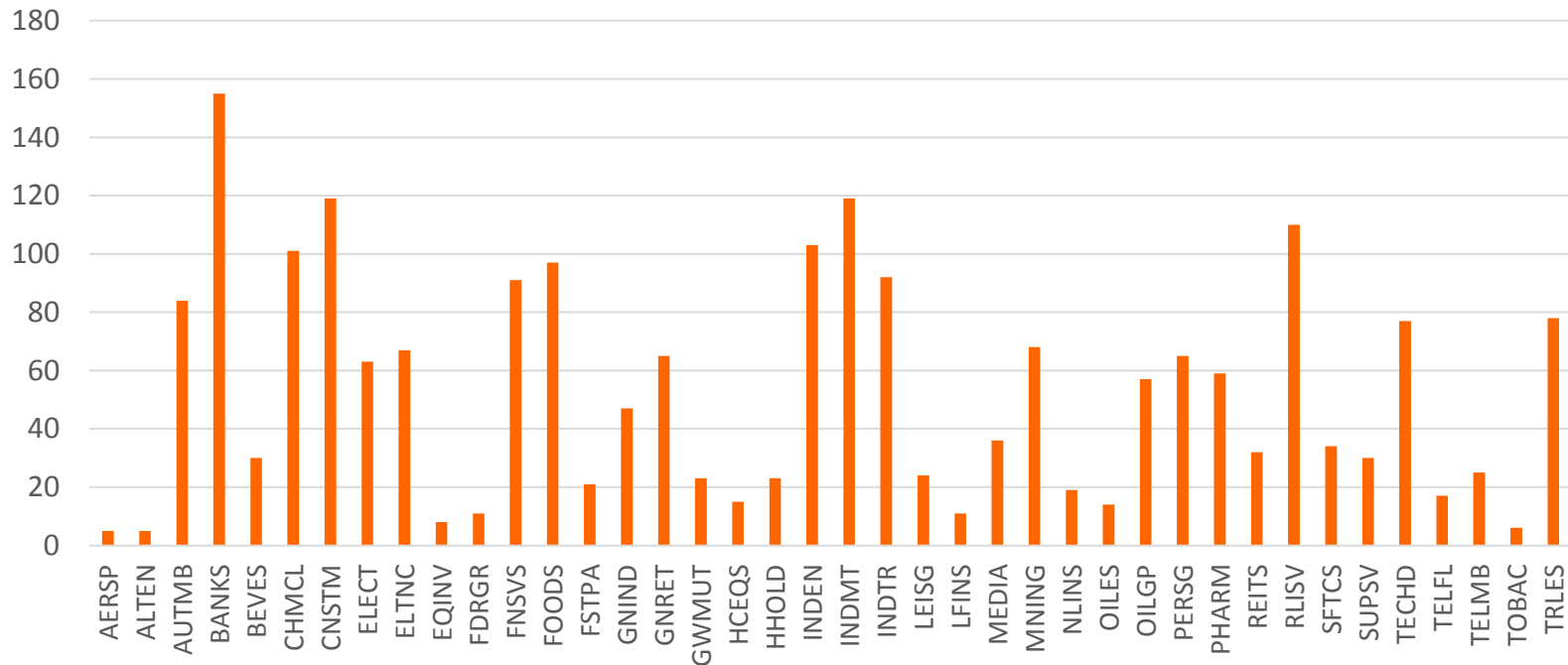
Over 2,100 firms across 13 Asian countries (1997-2012)



Overview:

Firms spread across 40 Industry sectors

Number of Firms



*40 sectors displayed are in accordance with Industry Classification Benchmark (ICB) level 4

Required Cost of Capital

Country	Annualised Cost of Capital, r (median)
Australia	21.3%
China	23.0%
Hong Kong	29.5%
India	31.1%
Indonesia	34.7%
Japan	8.7%
Malaysia	14.8%
Pakistan	32.9%
Philippines	22.2%
Singapore	25.8%
South Korea	26.1%
Taiwan	15.6%
Thailand	28.0%

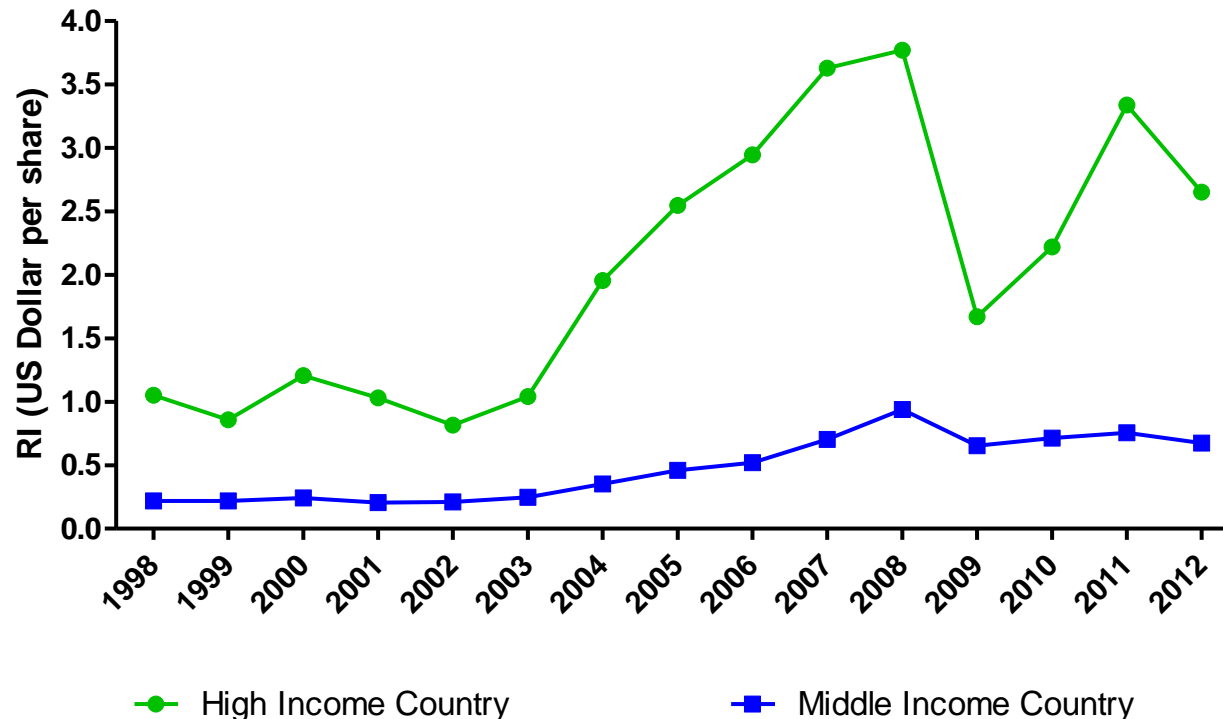
r estimated using the **Fama and French three factor model**

High Correlation between Residual Income per share & GDP per capita

Country	Median RI per share (USD) vs. GDP per capita (USD)	Median RI per share (USD) vs. <u>change</u> in GDP per capita (USD)
Australia	0.864	0.671
Singapore	0.907	0.468
Japan	0.643	0.129
Hong Kong	0.886	0.636
South Korea	0.889	0.389
Taiwan	0.657	0.293
Malaysia	0.804	0.750
China	0.939	0.969
Thailand	0.936	0.771
Indonesia	0.657	0.336
Philippines	0.914	0.718
India	0.779	0.556
Pakistan	0.736	0.475
Mean	0.816	0.551

High Income Countries create more value

Median RI by Country Income Level



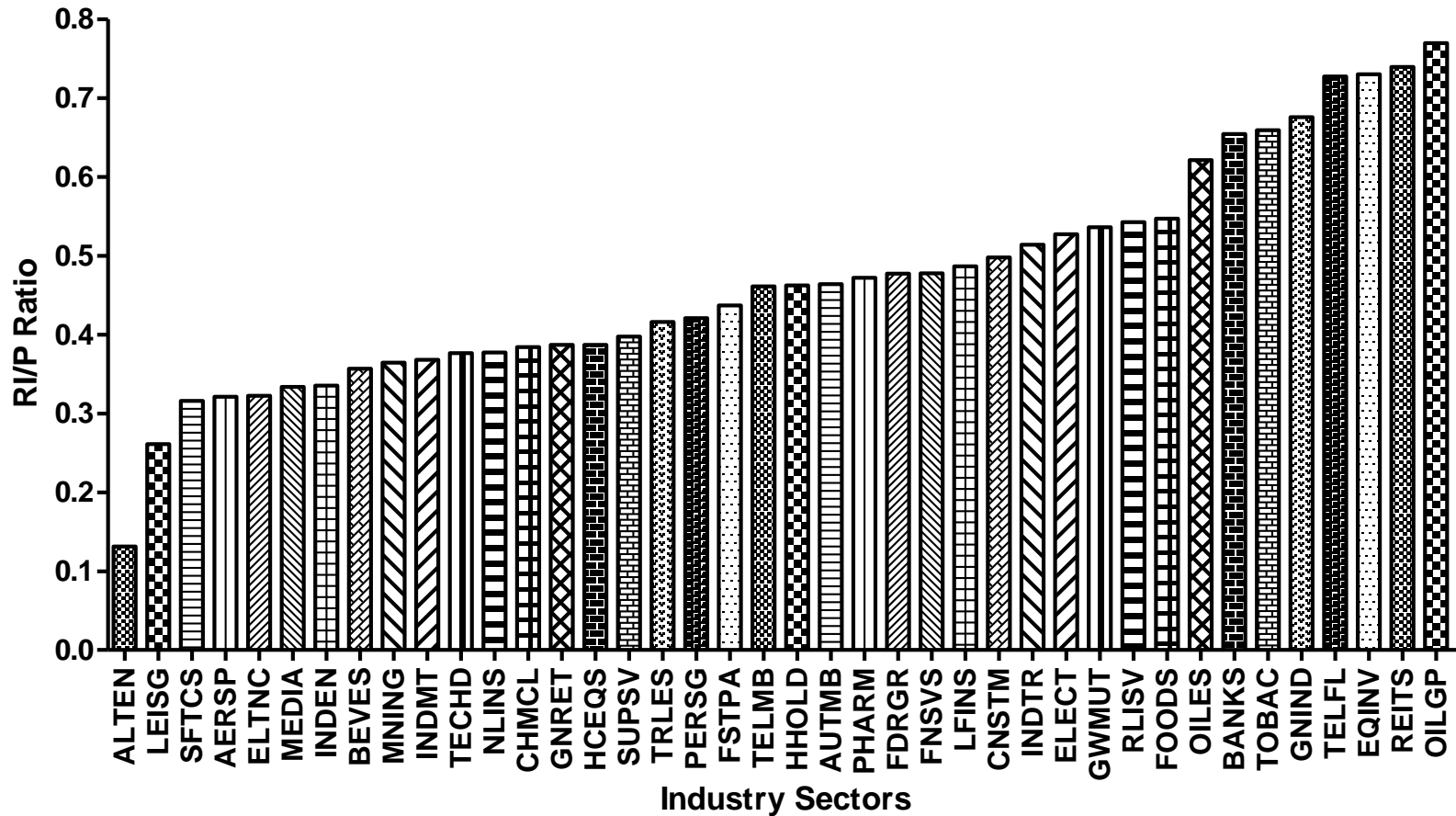
GDP per capita (2012)

Australia (USD67,436);
Singapore (USD54,007);
Japan (USD46,548);
Hong Kong (USD36,708);
South Korea (USD24,454);
Taiwan (USD20,386)

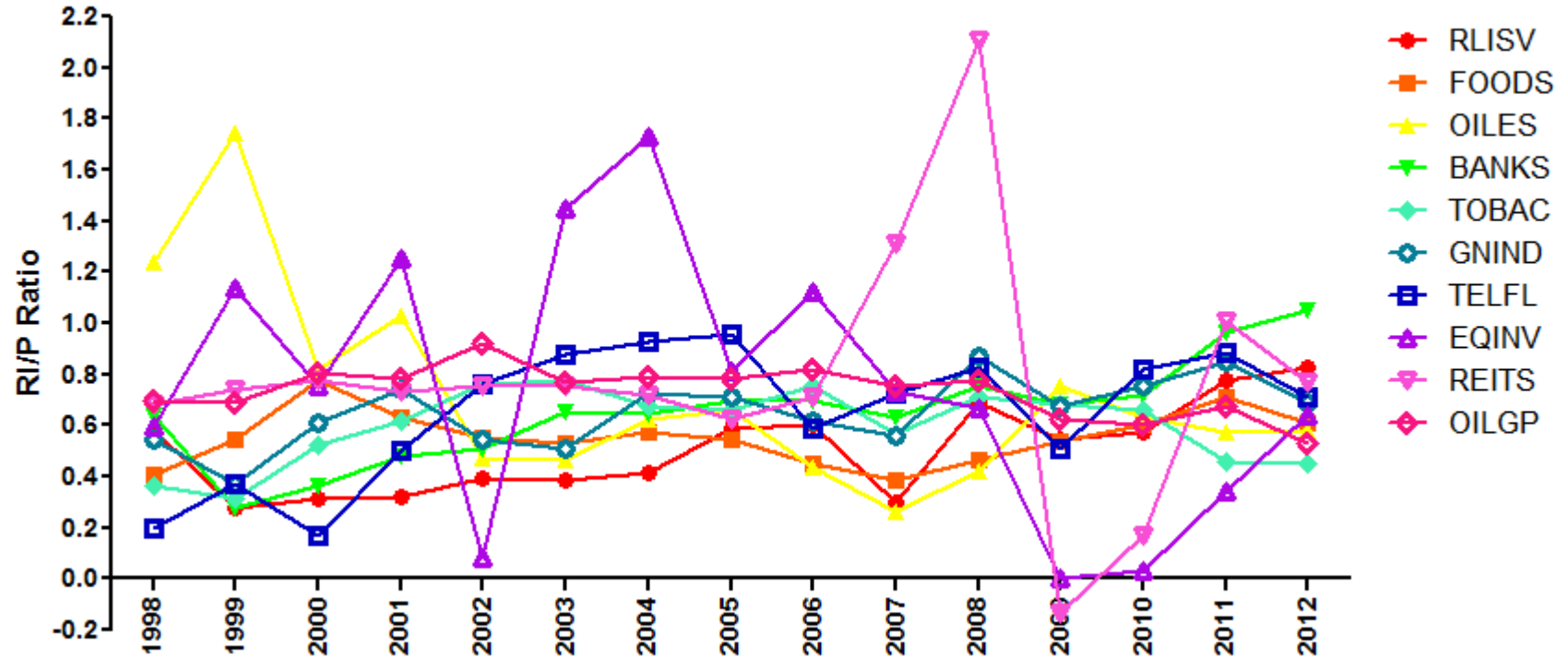
Malaysia (USD10,432);
China (USD6,093);
Thailand (USD5,480);
Indonesia (USD3,551);
Philippines (USD2,587);
India (USD1,503);
Pakistan (USD1,255)

Scaled RI across Industry Sectors

Median R/IP

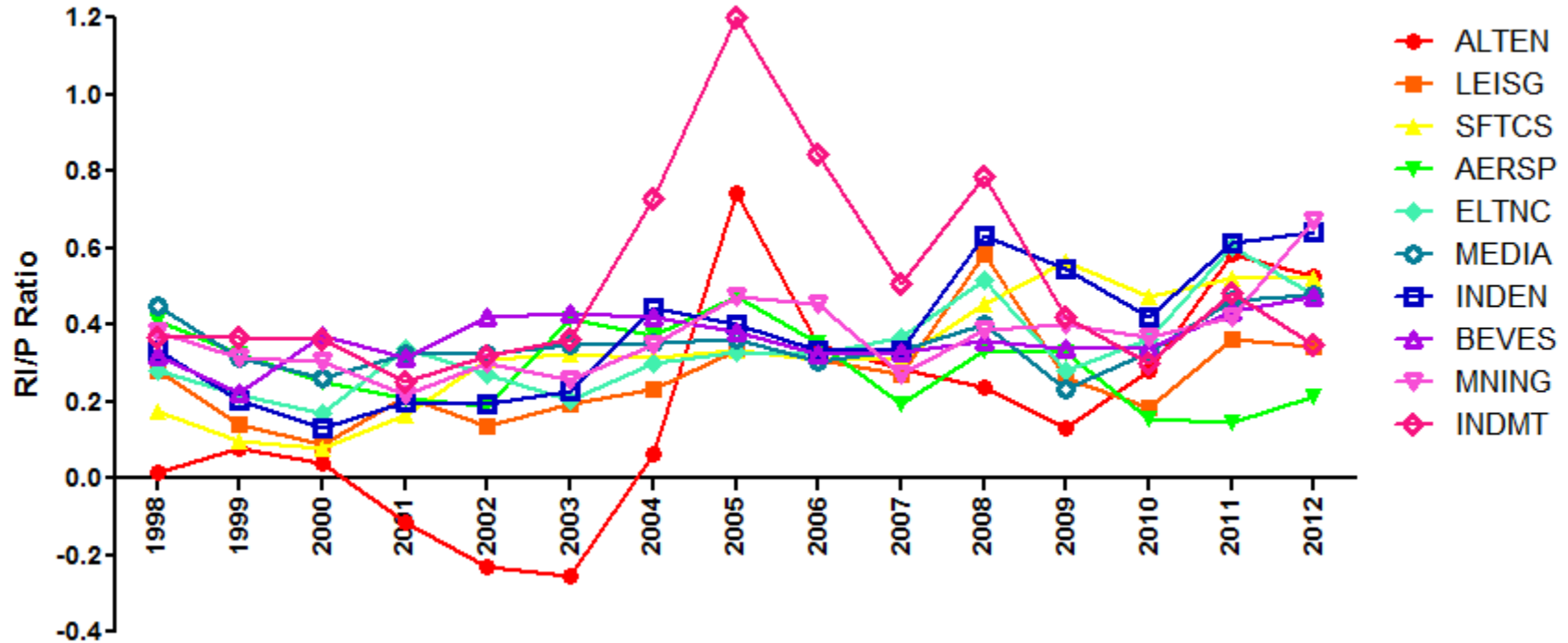


Top 10 Most Value Creating Sectors



RLISV- Real Estate Investment & Services; FOODS - Food Producers; OILES- Oil Equipment & Services; BANKS – Banks; TOBAC – Tobacco; GNIND- General Industrials; TELFL- Fixed Line Telecommunications; EQINV- Equity Investment Instruments; REITS- Real Estate Investment Trusts; OILGP- Oil & Gas Producers

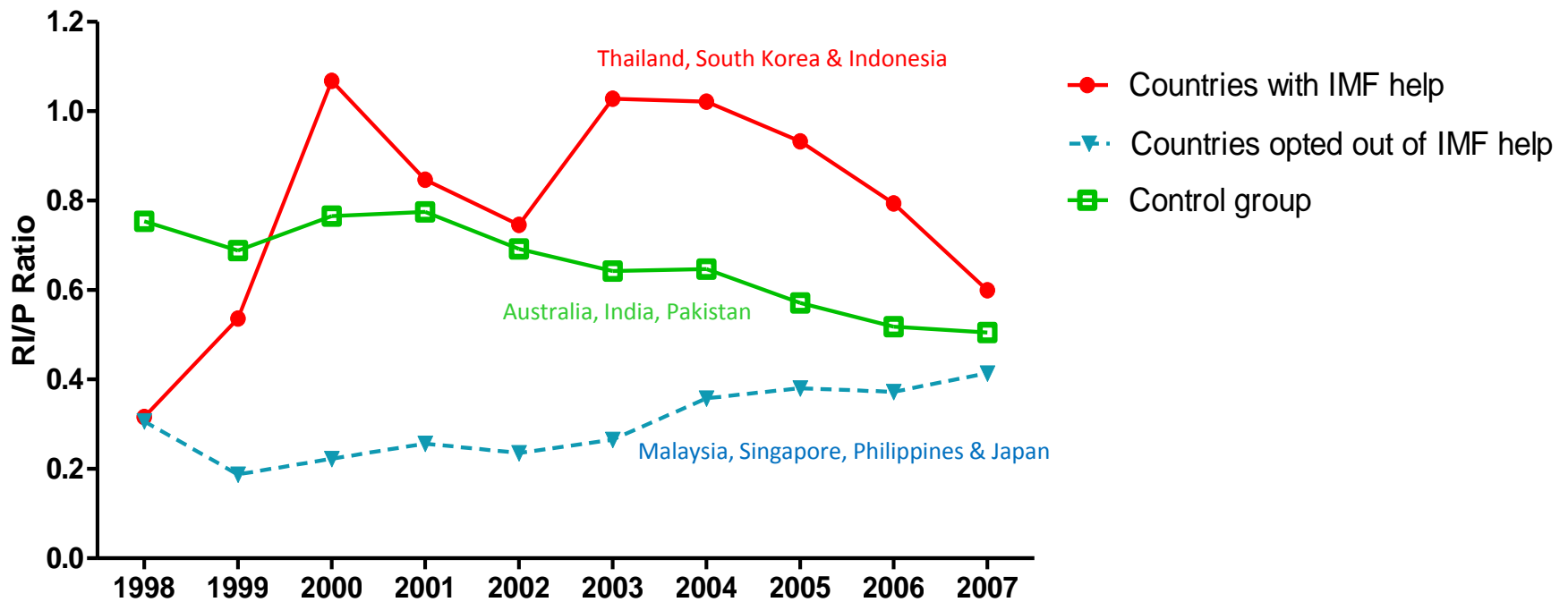
Bottom 10 Least Value Creating Sectors



ALTEN - Alternative Energy; LEISG - Leisure Goods; SFTCS- Software & Computer Services; AERSP- Aerospace & Defense; ELTNC- Electronic & Electrical Equipment; MEDIA- media; INDEN- Industrial Engineering; BEVES- Beverages; MNING- Mining; INDMT- Industrial Metals & Mining

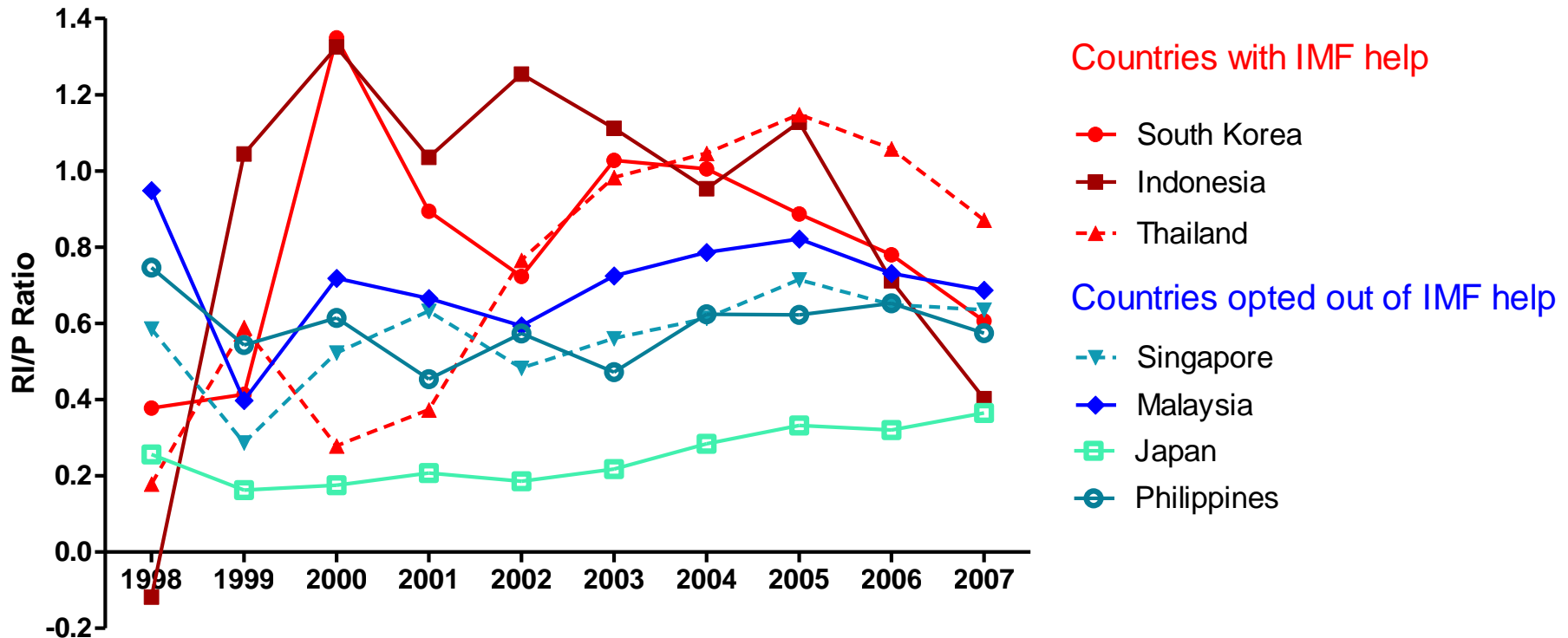
Countries with IMF help recovered faster and created more value

Effect of IMF Bailout Package to Countries



Countries with IMF help recovered faster and created more value

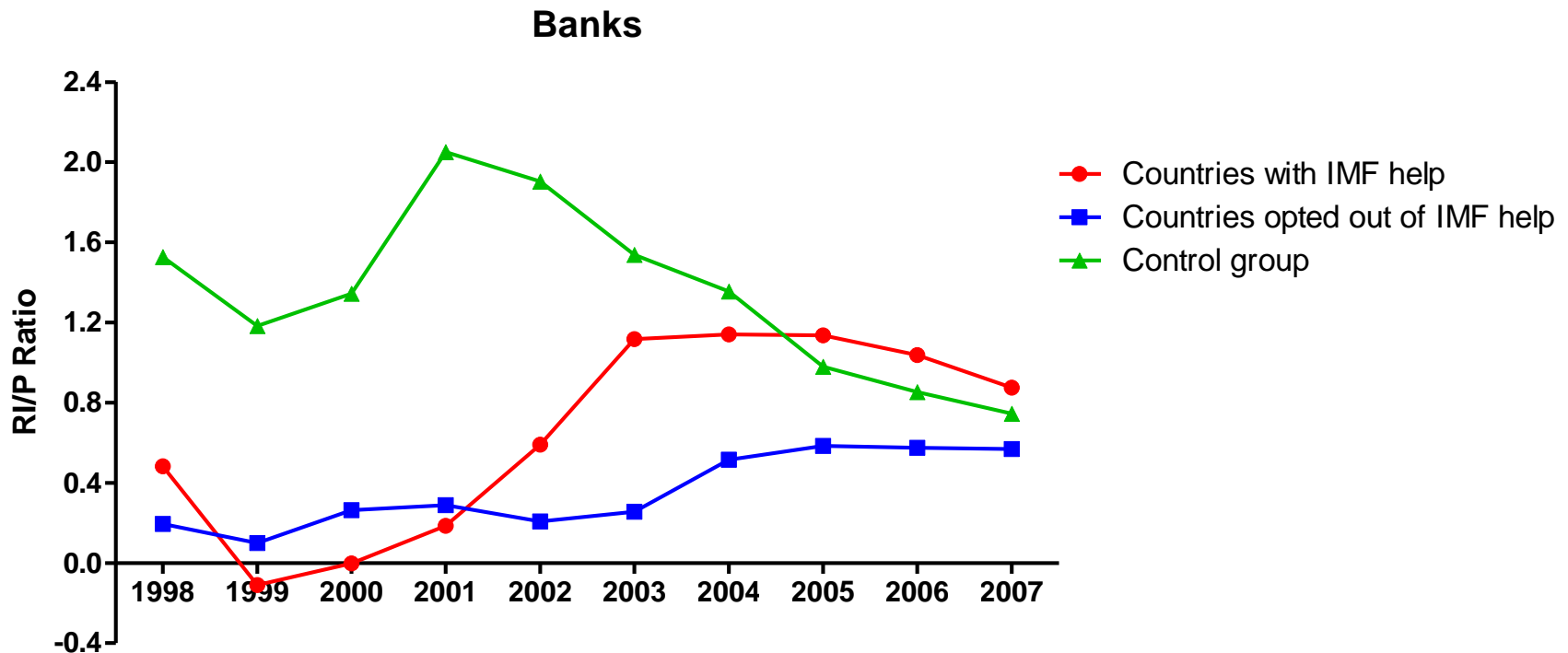
Effect of IMF Bailout Package to Countries



Further analysis into most vulnerable sectors during the crisis

- Banks – Non performing loans
- Construction & Materials – property bust

Banks in countries with IMF bailout recovered faster

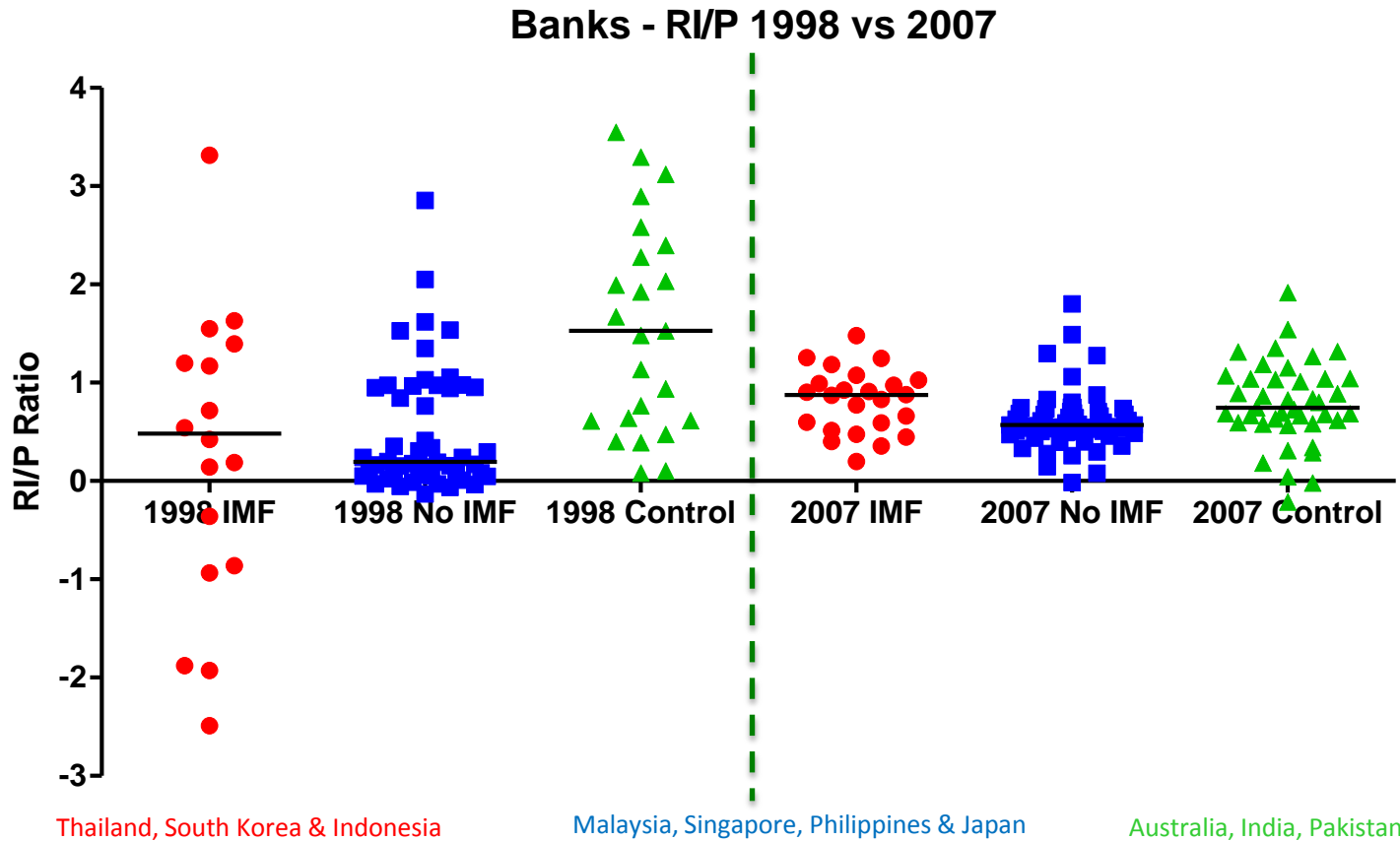


Thailand, South Korea & Indonesia

Malaysia, Singapore, Philippines & Japan

Australia, India, Pakistan

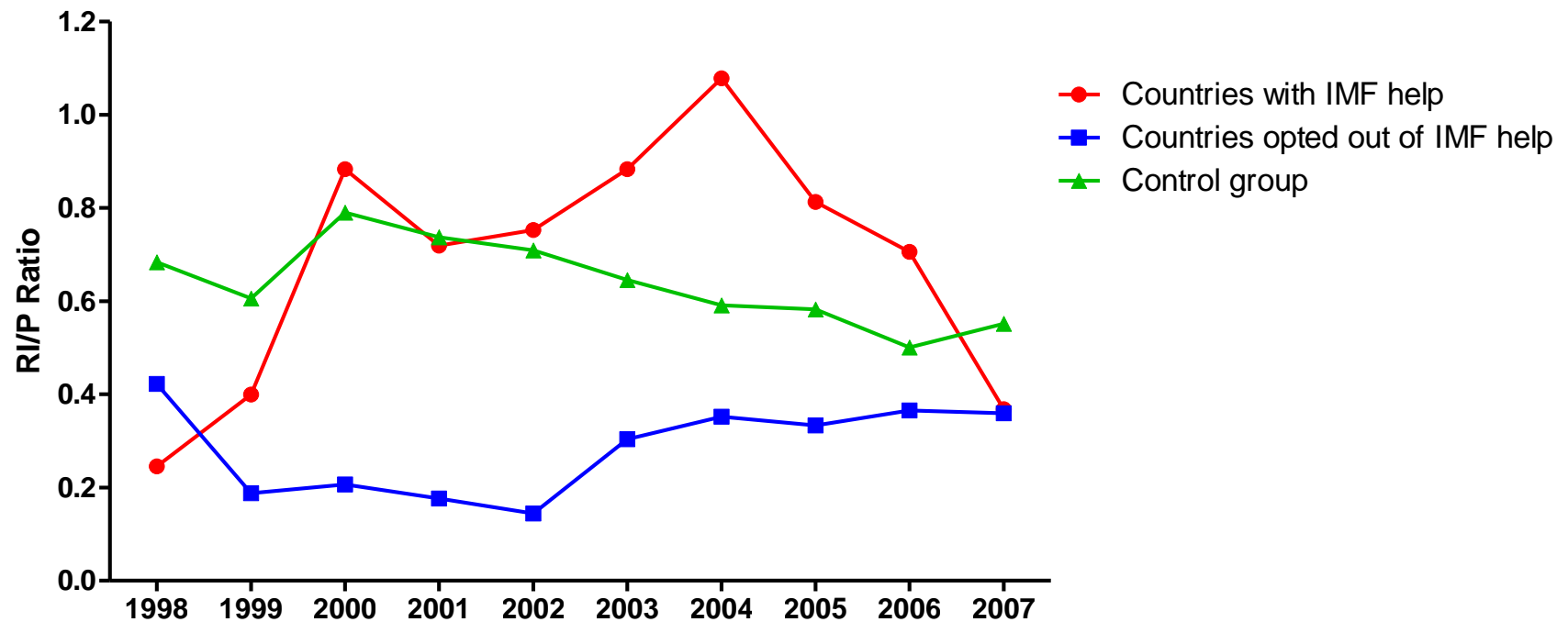
Banks in countries with IMF bailout created more value in 2007



* Note: 1 outlier each was removed from 1998 IMF and 1998 Control group

Construction and Materials firms in countries with IMF bailout recovered faster

Construction & Materials



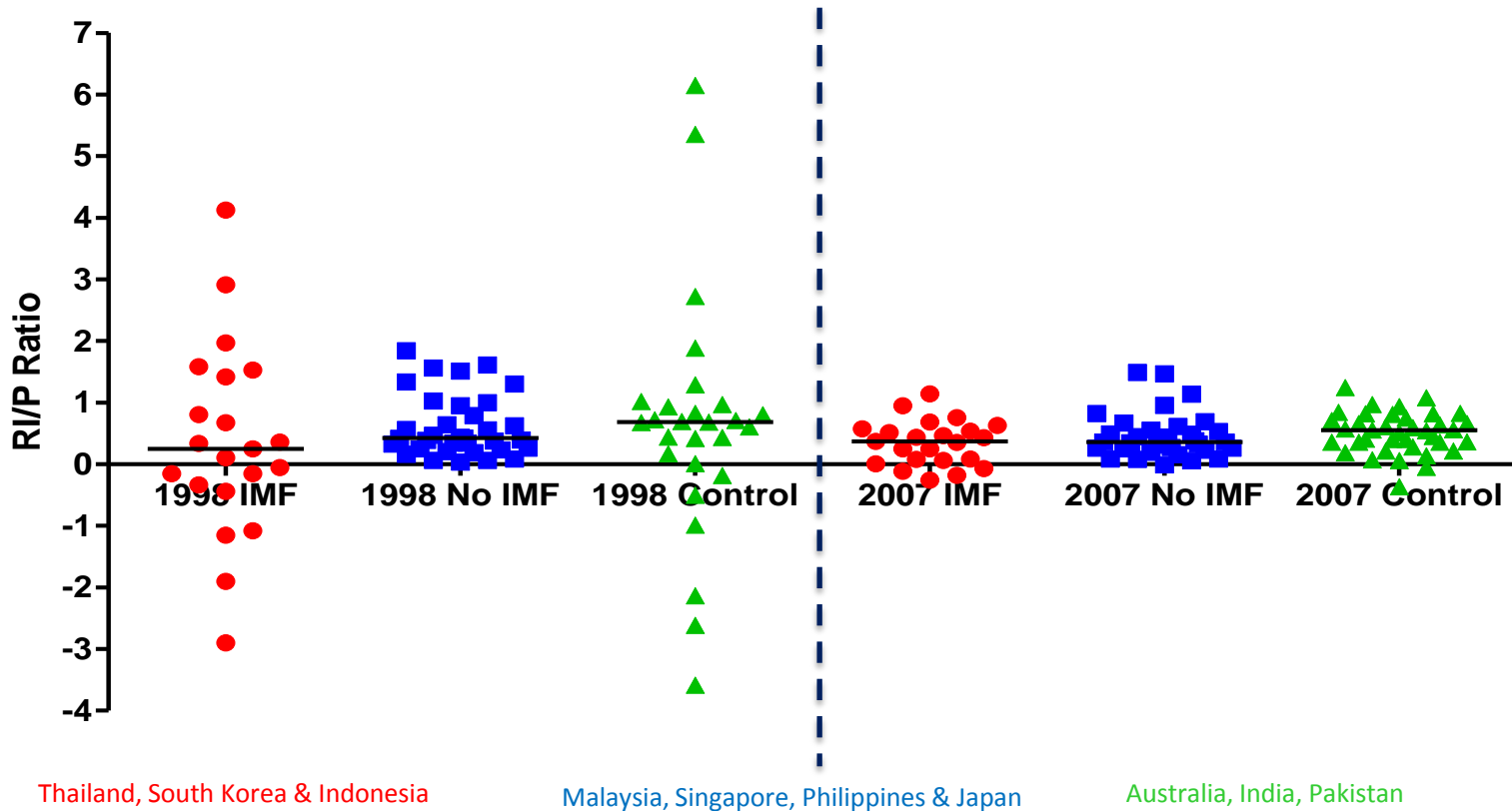
Thailand, South Korea & Indonesia

Malaysia, Singapore, Philippines & Japan

Australia, India, Pakistan

Construction and Materials firms in countries with IMF bailout created (slightly) more value in 2007

Construction and Materials - R/I/P 1998 vs 2007

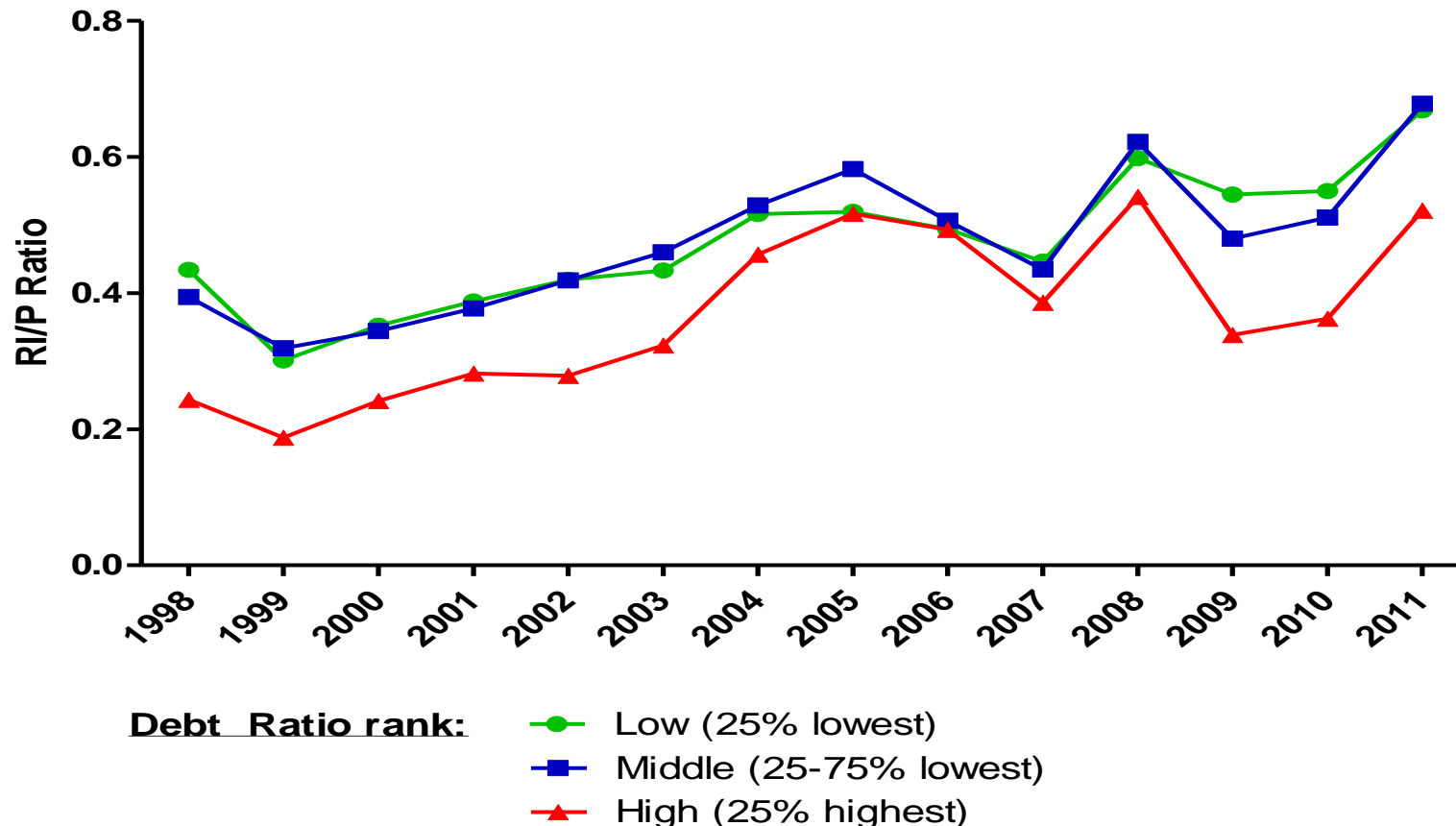


Is there any optimal level of Debt?

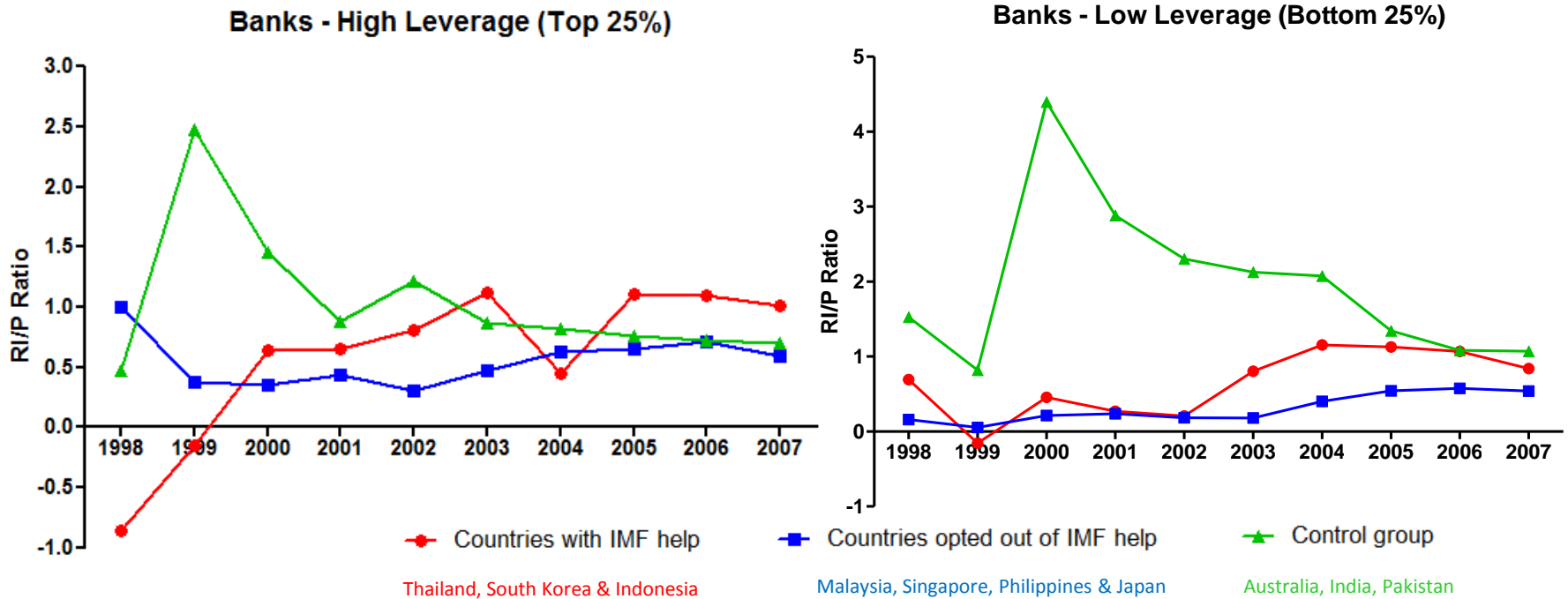
- Modigliani and Miller Hypothesis
- Corporate debt – key issue during 1997 crisis

Firms with Low and Medium debt ratio outperformed those with high debt ratio

Median RI/P by Leverage

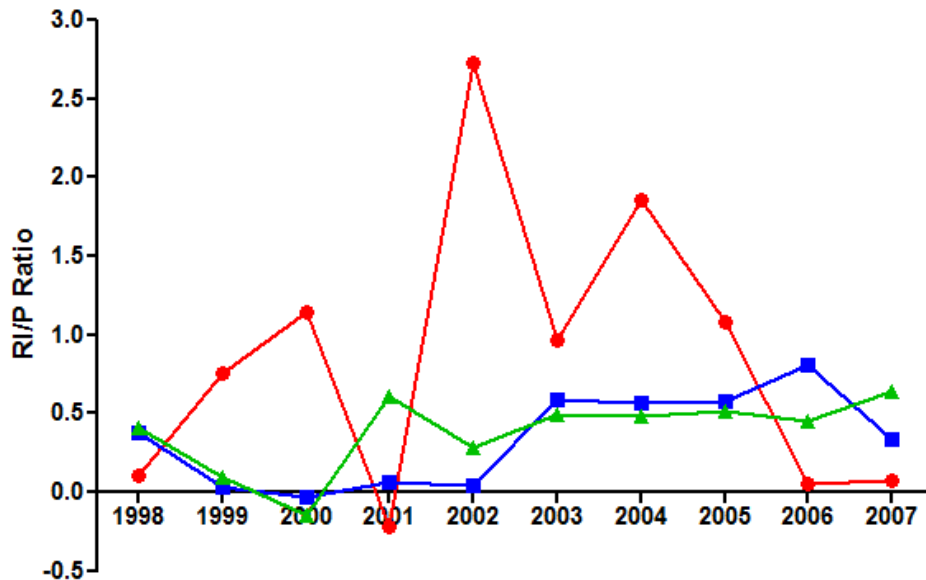


Banks with Low or High debt ratio in IMF bailout countries performed better than IMF opted out counterparts

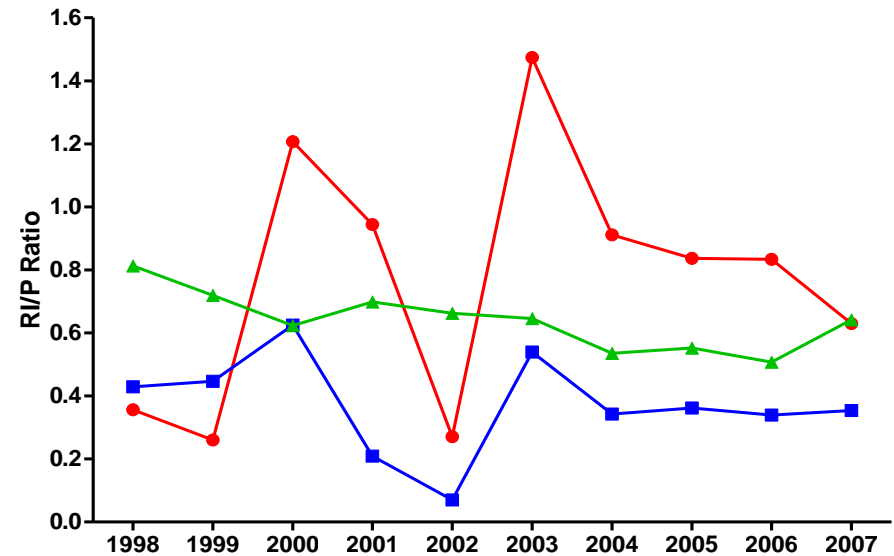


Construction and Materials Firms with Low or High debt ratio in IMF bailout countries performed better than IMF opted out counterparts

Construction & Materials - High Leverage (Top 25%)



Construction & Materials - Low Leverage (Bottom 25%)



- Countries with IMF help
Thailand, South Korea & Indonesia
- Countries opted out of IMF help
Malaysia, Singapore, Philippines & Japan
- ▲ Control group
Australia, India, Pakistan

Thank you!