Big elephants in small ponds:
Risk absorption, risk diversification, and management of capital flows

ช้างใหญ่ บ่อน้ำเล็ก
และการจัดการกับเงินทุนเคลื่อนย้ายเพื่อสร้างภูมิคุ้มกันให้เศรษฐกิจไทย

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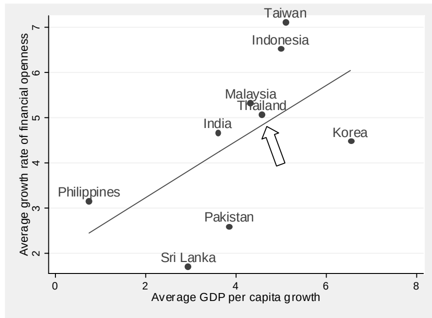
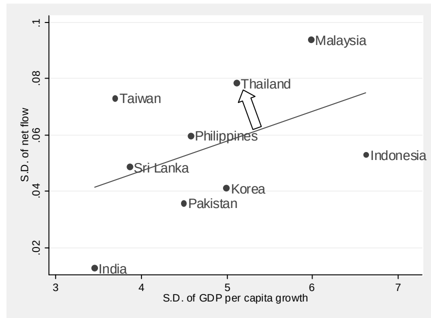
EA economies that integrates faster *tend* to grow faster. They may also face more volatile net flows and GDP.

Average growth of financial openness and long-term GDP growth



Flow volatility and GDP volatility



Correlation = 0.56

Correlation = 0.46

Source: IFS

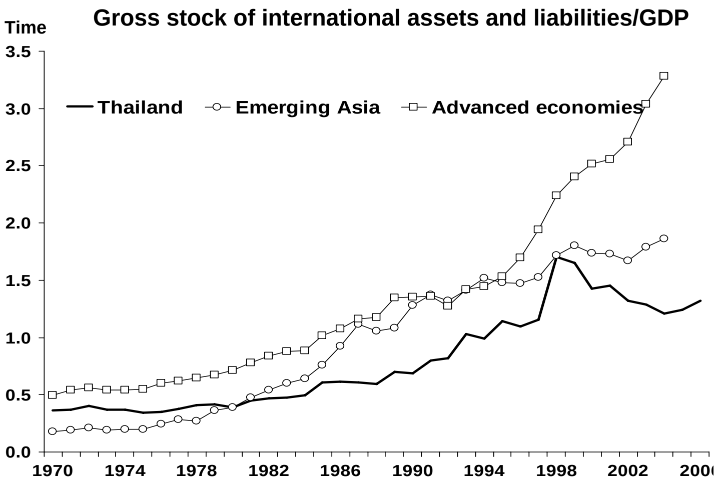
Outline

- **I Key developments related to financial integration**
- **II Theory and evidence on financial openness, growth and business fluctuations**
- **III Short-term policy tension**
- **IV The general principles for capital account policy for Thailand and conclusion**

I. Key developments related to financial integration

- **Degree of financial integration**
- **Sizes and composition of flows**
- **Volatility and flow types**
- **Thailand’s International Investment Position**

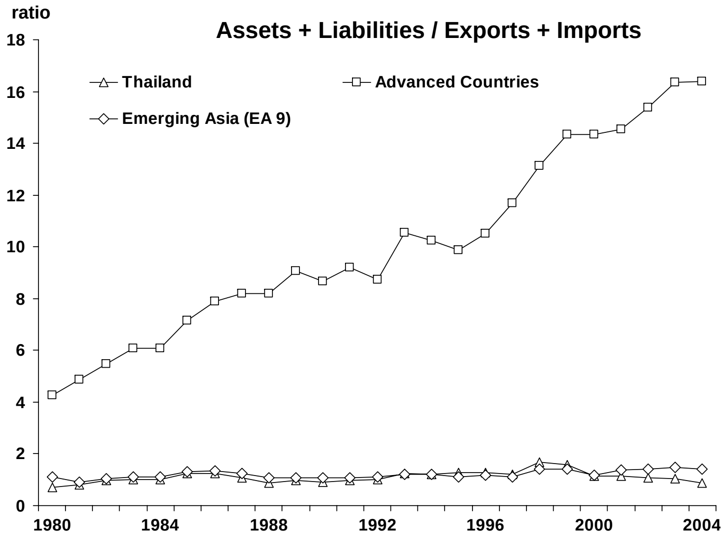
The world becomes more financially integrated. The integration of advanced economies outpaced that of Emerging Asia.



Note: Thailand's data for 2005 and 2006 is constructed from BOT's IIP survey

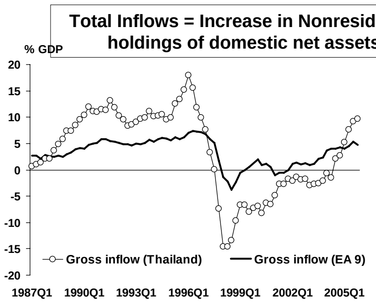
Source: Lane and Milesi-Ferretti (2006)

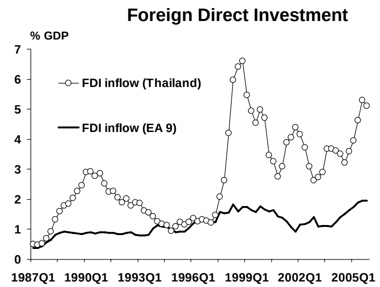
While financial integration has far outstripped trade integration in advanced economies, it has only kept pace with trade in Emerging Asia.

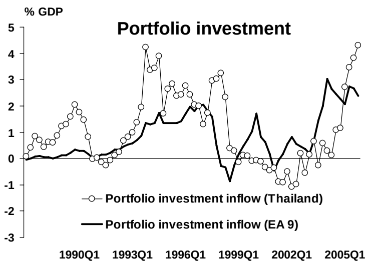


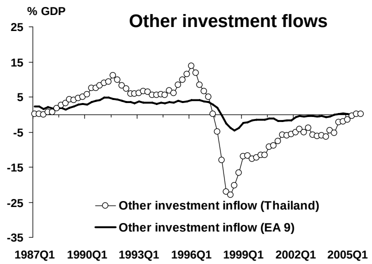
Source: Lane and Milesi-Ferretti (2006)

Inflows to Emerging Asia are close to historic highs, with increased role of FDI and portfolio investment

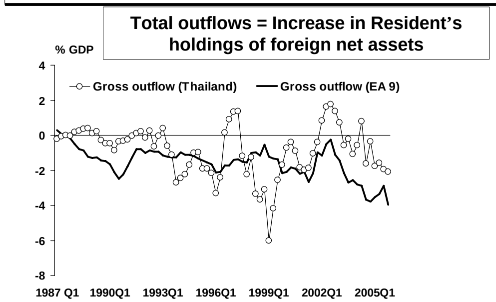


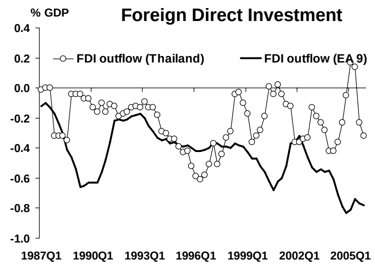


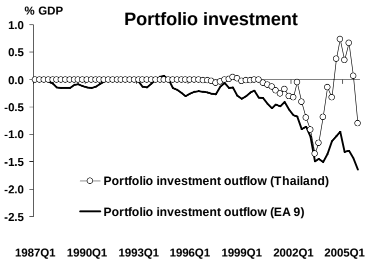


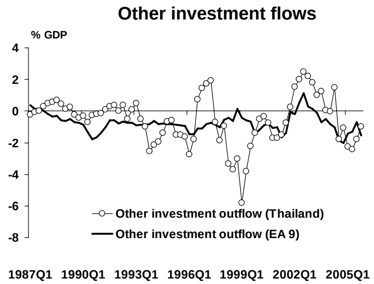


Outflows from Emerging Asia are at historic highs, due largely to increase in portfolio and FDI outflows

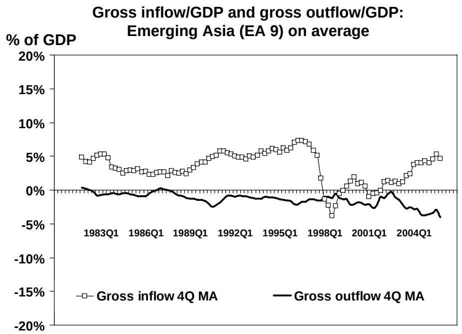


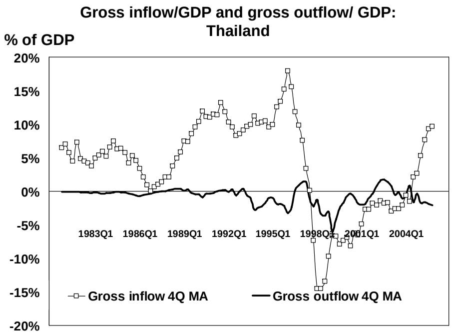






Unbalanced flow pattern in Thailand vis-à-vis EA.





- **Historically, inflows in Emerging Asia tended to be much larger than outflows However, flows have become more balanced post-crisis.**
- **Thailand's Inflows and outflows appear to be less balanced than East Asia on average.**

Evolution of flow volatility for Emerging Asia

Emerging Asia (S.D. of change in the ratio of flow to GDP)	Inflows		Outflows		Net flow	
	1987-1996	2001-2005	1987-1996	2001-2005	1987-1996	2001-2005
Total capital flows	4.96	5.62*	2.55	4.55**	4.98	5.59*
Direct investment flows	0.65	1.15**	0.39	0.39	0.75	1.17**
Portfolio investment flows	1.35	3.32**	0.41	2.00**	1.36	3.45**
Equity	1.04	2.24**	0.12	0.55**	1.04	2.28**
Debt	0.75	2.18**	0.38	1.76**	0.75	2.37**
Other investment flows	4.84	4.13**	2.47	4.34**	4.81	5.30

- **Flow volatility has increased.**
- **As expected, other investment flows and portfolio flows are more volatile compared to FDI flows**
- **Volatility of portfolio flows increase most significantly**

*** ,** denote significant level of 5%, and 10% respectively, indicating whether volatilities during 2001 – 2005 are different from volatilities during 1987-1996**

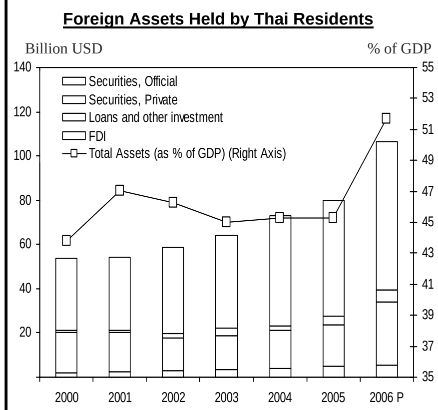
Evolution of flow volatility for Thailand

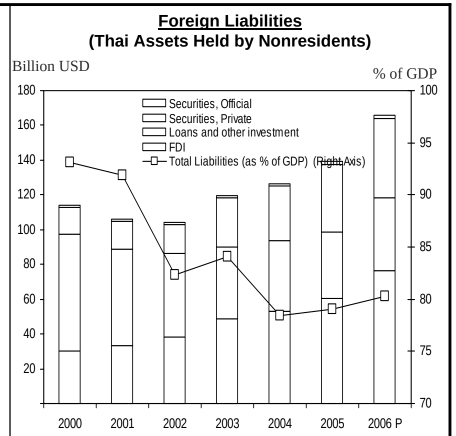
Thailand (S.D. Of change in the ratio of flow to GDP)	Inflows		Outflows		Net flows	
	1987-1996	2001-2005	1987-1996	2001-2005	1987-1996	2001-2005
Total capital flows	5.12	6.39	2.95	5.84**	3.60	5.25**
Direct investment flows	0.59	1.60**	0.34	0.52**	0.61	1.47**
Portfolio investment flows	2.57	2.43	0.00	1.48**	2.57	2.74
Equity	1.85	1.84	0.00	0.21**	1.85	1.86
Debt	1.11	2.20**	0.00	1.40**	1.11	2.60**
Other investment flows	4.88	5.98	2.90	6.20**	4.02	5.47

- **Thailand's volatility of net flow increased by more compared to EA**
- **As expected, other investment flows and portfolio flows are more volatile compared to FDI flow**
- **Volatility of portfolio debt flows increase most significantly**

*** ,** denote significant level of 5%, and 10% respectively, indicating whether volatilities during 2001 – 2005 are different from volatilities during 1987-1996**

Though Thailand's external position remains a net foreign liability position, its currency exposure has reduced at the aggregate level.





Source: BOT's International Investment Position Survey (2007)

However, weaknesses remain in sectoral mismatch and debt-equity profile

Thailand's International Investment Position Classified by Sector

(Million US Dollars)

	Year	Banks	Non-bank Corporations	Government and State Enterprises	Monetary Authorities	Total	
						Amount	% of GDP
Assets	2001	16,546	3,807	923	33,048	54,324	47
	2006	25,628	11,702	2,335	66,985	106,650	51.7
Liabilities	2001	15,160	61,769	20,912	8,325	106,166	91.9
	2006	26,890	119,253	19,468	0	165,611	80.3
Net	2001	1,386	-57,962	-19,989	24,723	-51,842	- 44.9
	2006	-1,262	-107,551	-17,133	66,985	-58,961	- 28.6

Thailand's IIP by Debt-Equity Classification

%	Year	Debt	Equity
Assets	2001	94.8	5.2
	2006	91.3	8.7
Liabilities	2001	65.1	34.9
	2006	34.7	65.3

Source: IIP (2007)

- **Most of foreign assets (63%) are concentrated with central bank, which doubled over the past five years.**
- **Non-bank's liabilities are ten times larger than its assets.**
- **Most of foreign assets are in debt form, while liabilities are in equity form, implying suboptimal portfolio allocation in term of risk-return profile**

Thailand's Foreign Asset Holding is relatively low by international standard

Comparisons of foreign assets as percentage of GDP across countries (by types of flow)

Stock as % of GDP	Direct investment outflows		Portfolio Equity outflows		Debt outflows (Portfolio + Other)		Foreign reserve minus gold	
	1995	2004	1995	2004	1995	2004	1995	2004
Malaysia	10.5	21.0	1.0	2.2	14.7	31.2	26.8	56.4
Singapore	46.9	104.4	41.5	139.2	77.3	250.4	81.8	105.1
Philippines	1.7	2.3	0.7	1.7	13.2	20.1	8.4	15.2
Indonesia	0.8	1.3	0.0	0.0	5.7	7.4	6.8	15.5
Thailand	1.4	3.3	0.0	0.4	6.2	11.1	21.4	29.8
Korea	3.1	7.8	0.3	2.0	12.1	13.4	6.3	29.2
Taiwan	10.4	29.9	3.2	37.0	32.1	64.9	34.1	75.1
China	2.5	2.2	0.1	0.3	8.7	15.6	10.8	37.3
Japan	4.5	7.9	2.8	7.8	39.0	55.3	3.5	17.8
US	18.4	28.0	10.7	21.5	22.1	33.9	1.0	0.6

Source: EWN Mark II dataset

Summary of key findings

- **The global economy has become more financially integrated.**
- **Both volume and volatility of flows has increased.**
- **Shares of portfolio and FDI has risen, implying improved risk sharing among countries.**
- **However, increased portfolio flows contribute to higher volatility.**
- **Thailand's international investment position has shown improvement at aggregate level. However, weaknesses remain in asset distribution and allocation as well as relatively low private sector's overseas investment.**

II. Theory and evidence on financial openness, growth and business fluctuations

Risks and Benefits of Financial Openness:
Three main questions

Financial openness

1. **Growth benefit?**
2. **More output volatility?**
3. **Less consumption volatility?**

How to maximize benefits while keeping risk contained?

Financial openness has growth benefits

1. Growth Benefit?

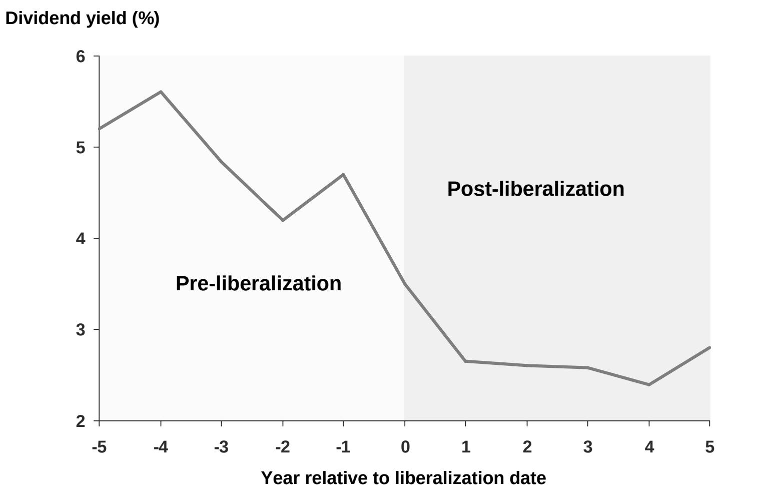
Inconclusive
- Aggregate data & cross-section regressions
- Measurement error
- Mixed samples
- Research on debt flows' benefit is lacking

Yes

Direct effects
- Reduce capital cost
- Investment growth
- Equity
- FDI

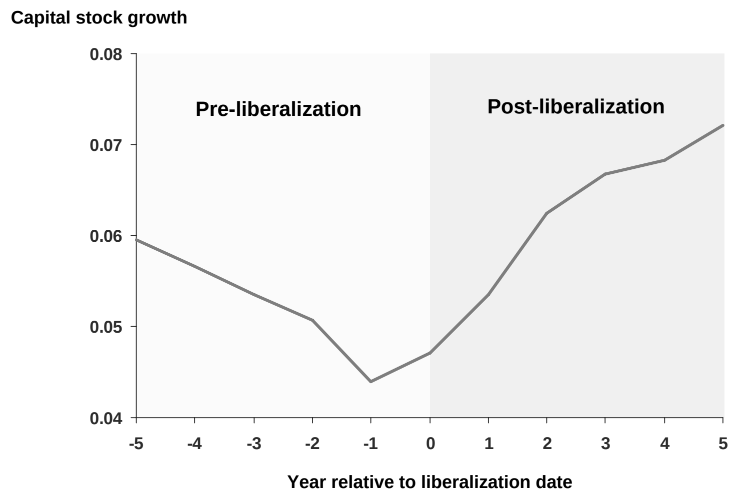
Indirect effects
- More competition
- Enhance efficiency
- Equity *(Thin evidence)*
- FDI

Evidence of Direct Growth Channel from Equity Market:
Cost of capital falls from falls in risk-free rate and market risk premium after liberalization



Source: Henry (2000, 2006); 12 emerging markets, including Thailand (date of liberalization is 1988)

Evidence of Direct Growth Channel from Equity Market:
Capital stock grows faster after liberalization



Source: Henry (2003, 2006); 18 emerging markets, including Thailand

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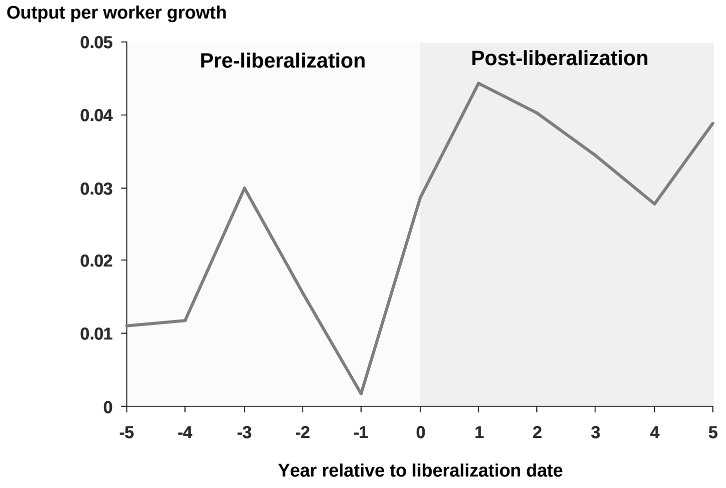
Evidence of Direct Growth Channel from Equity Market:

Average labor productivity grows faster after liberalization



Source: Henry (2003, 2006); 18 emerging markets, including Thailand

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Evidence of (TFP) Efficiency-Induced Growth

At firm's stock price level

- Capital inflow should seek firms with highest return
- Their stock prices rise, costs of capital decline
- Extra reduction in firm's risk premium below market risk premium

Strong evidence that lower firm-specific risk contributes to below-market cost of capital

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Evidence of (TFP) Efficiency-Induced Growth

Firm's investment decision

- Efficient investment criterion:

  marginal product of capital = cost of capital
- Lower cost of capital should lead to higher investment
- Given common risk-free rate, firm with lower risk premium should invest more than pre-liberalization period

Thin evidence that firms with extra reduction in risk premia invest more in projects that *were* too risky

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Growth Benefits from Different Flow Types

- Robust direct growth evidence of <u>equity</u> market liberalization.
- Weak indirect growth evidence.

- Industry and firm data show <u>FDI</u> generates *vertical* productivity spillover
- Strong linkage between <u>FDI</u> and trade flows

- Little productive research on growth benefits of <u>debt</u> flows

Financial openness may exacerbate output fluctuation in emerging markets

2. More output volatility?

No obvious prediction

Business cycle theory's lessons

Yes, if

1. Inflexible wage, price
2. High financial screening and monitoring costs

Flow volatility amplifies output volatility with more information friction

T_0

$T_{1,2,..}$

Capital flow

HH & Firms' financial conditions

External finance premium

Screening & monitoring cost

Credit

Investment

Consumption

Output

Financial openness has yet to help dampen consumption volatility in emerging markets

3. Makes consumption more volatile?

Theory

- Consumers desire smooth consumption
- Perfect insurance doesn't exist
- Better access to financial insurance helps

Evidence

- Volatile emerging markets have yet to benefit
- High potential benefits from insurance
- Limited-access models predicts realistic US consumption response to income

No study on benefits from outflows

Hypothesis: Level of financial openness is still below risk-sharing benefit threshold

Implications for Policy Prioritization

1. To gain from capital inflow-TFP link, need less monopoly, more competition
2. Minimal trade barriers improve gains from financial flows
3. Lower cross-border financial costs boosts ability to invest abroad
4. Flexible prices, exchange rate; lower financial costs lower capital flows' impact on output volatility
5. Better access to insurance requires deep financial market

III. Policy Tension

- Capital control on short term inflows
- Relaxation on outflows

Short-term Tension, Controls on Short-term Inflows and Their Effectiveness

Inability to adjust flexibly in short-run or financial bubble may worsen tradeoff, increases temptation to control inflows

Benefits

- Seem to give monetary policy more autonomy
- Alter composition of inflows
- Effect on real exchange rate unclear

Costs

- Efficiency loss from higher costs of fund
- Smaller firms more affected
- Increased policy unpredictability may discourage other flows

Policy Tension, Relaxation of outflows and its Effectiveness

In the past, with balance of payments deficits, investment needs discouraged outflow relaxation

Benefits going forward

- Risk-diversification, enhanced return
- Better flow balances
- Reduce need to intervene in FX market
- Effectiveness depends on cyclical and structural factors

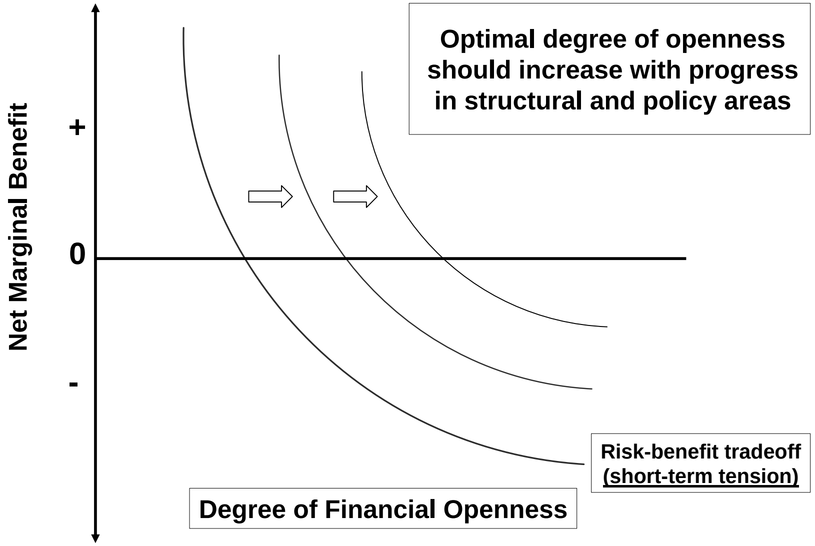
Risks

- Inadequate investor protection and literacy
- Inadequate data monitoring
- Weak fundamentals may lead to excessive outflow

IV. The general principles for capital account policy for Thailand

How to maximize gains while containing risks?

Ability to adjust flexibly seems to be the key



A balanced approach with good pacing and sequencing

Greater Financial Integration

International and regional cooperation

Openness Policy

- Openness to trade
- Consistent capital account policy that is clear and transparent

Enhance financial system resiliency

- Financial market deepening (institutional investors, products, governance, and literacy)
- Effective prudential regulation and supervision
- Quality data for better monitoring and pricing of risks

Economic Restructuring & Inclusiveness

- Lower market frictions, regulatory burden and monopoly
- Benefit sharing policy including quality assistance program for affected workers and investment to improve human resources

Sound, consistent and sustainable macroeconomic policies.