



# **Central Banks in An Era of Technology, Globalization and Change**

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# Central Bank Objectives

- ◆ **Monetary stability**
- ◆ **Banking stability**
- ◆ **Minimize systemic risk,  
especially payment systems**



# Technology & Globalization

- ◆ Improvements in technology/ telecoms result in 24 hour markets
- ◆ Deregulation, tax and regulatory arbitrage mean domestic markets move offshore
- ◆ Innovation cuts intermediation, intensify competition, eliminates franchises
- ◆ Domestic protection is only temporary, as market moves around regulatory obstacles
- ◆ **Ball game has changed!**



## **In 21st century, banking will be important, but not necessarily banks**

- ◆ **Free capital flows mean no domestic monetary autonomy**
- ◆ **Loss of domestic franchise & capital flight threaten banking stability**
- ◆ **Domestic payment system also channel of external shock**



# The Age of Technology

- ◆ If cars decline in price at the same rate as the price of PC computing power, the price of a car would be US\$5
- ◆ Internet financial transactions cost US1¢ vs. paper-based transactions cost of US\$1
- ◆ E-trading did not exist before 1995 - 10 mn investors can now choose from over 100 online brokers in US alone. Online trading accounts for 25% of all trades on NYSE and Nasdaq



## The future of E-trade

- ◆ E-Schwab opened 1.4 million new accounts in 1998. Charles Schwab market cap now US\$41.5 bn - size of the Thai market and bigger than Boeing or Merrill
- ◆ Amazon.com market cap just under the Jakarta market cap
- ◆ 8 traditional SEC registered stock exchanges, vs more than 20 electronic trading systems



# Only the paranoiacs survive

- ◆ Technology brings
  - ✱ change
  - ✱ confusion
  - ✱ competition
  - ✱ consolidation
- ◆ Cuts out the traditional middleman
- ◆ But offers creativity and opportunity
- ◆ Challenges traditional central bank roles



# Functions of Financial Markets

- ◆ Provision of information - price discovery and valuation of property rights
- ◆ Allocation of real resources - exchange of property rights
- ◆ Provision of choice in timing of consumption - saving or consumption
- ◆ Risk Management - enable diversification of risks
- ◆ Role in corporate governance



# Information & Markets

- ◆ **Markets need real time, reliable information to make correct decisions, especially for risk management in highly volatile environment**
- ◆ **High quality information need: -**
  - ✦ **Good accounting standards,**
  - ✦ **Reliable, timely statistical & reporting processes**
  - ✦ **Capacity to process, analyze and decide on information critical to competitive success**



# Financial Markets as Networks

- ◆ Networks have positive and negative externalities
- ◆ Power surges can cause weak hubs to trip fuse
- ◆ Stability and resilience of global network only as good as domestic networks
- ◆ Hence, charity begins at home
  - ✱ Need to build strong fundamentals
  - ✱ Fair, efficient and transparent markets, with sound regulation to international standards
  - ✱ Global competition - no one is immune



# Vulnerabilities

- ◆ High leverage increases volatility in markets
- ◆ Imposes two types of risks:
  - ✦ **Concentration risk**
  - ✦ **Market monopolistic power**
- ◆ Lack of transparency of operations do not enable counter-parties to appreciate their total credit and market risk exposure, thus putting public-guaranteed bank deposit funds at risk
- ◆ “Elephant in the pond” problem - HLIs can leverage themselves through derivatives and potentially can collude to manipulate smaller emerging markets



# Global gain - local pain

- ◆ Funds increasingly move offshore for
  - ✱ **Tax arbitrage**
  - ✱ **Regulatory arbitrage**
  - ✱ **Secrecy**
- ◆ Global gain, but local pain
  - ✱ **Benefits of globalization escape regulatory and tax net**
  - ✱ **Costs of crisis are borne by local economies without ability to tax resources moved offshore**
- ◆ Offshore centres should not harbour international crime and market misconduct, e.g. money laundering



# Global Markets - National Rules

- ◆ Differences in Standards, Codes of Practice, Rules and Regulations and Laws
  
- ◆ Differences in Interpretation, Adjudication, Enforcement and Due Process
  
- ◆ Need for convergence
  - ✦ Consensus building
  - ✦ Timing of Convergence
  - ✦ Process of conflict resolution
  - ✦ Dealing with Gaps



# Transparency & Accountability

- ◆ Gap in Disclosure
- ◆ Gap in Incentives to use information
- ◆ Gap in GAAP
  - ✦ **Should we use US GAAP or IAS**
- ◆ Gap in Capacity to understand information
  - ✦ **Urgent need to raise emerging market awareness of risks and full implications of globalization**



# Failure of Risk Management

- ◆ **Maturity mismatch**
- ◆ **Currency mismatch**
- ◆ **Credit risks grossly under-estimated**
- ◆ **Leverage under-reported**
- ◆ **Volatility of asset prices and capital flows grossly under-estimated**
- ◆ **Need for better VAR models**
- ◆ **Need for National Risk Management**



# How to Compete in Global Markets

- ◆ Competition and Productivity comes from
  - ✦ Improvements in computer and telecommunications technology
  - ✦ Revolution in management attitudes, incentives and processes
- ◆ Internet technology undercuts intermediation and traditional franchises
- ◆ Consumer sophistication requires better quality products, services, content, convenience, immediacy and lower costs
- ◆ Beating competitors at their own game



## **Alice Rivlin: Globalized domestic markets need**

- ◆ **Flexibility and adaptability of businesses, workers and communities**
- ◆ **Willingness of workers to learn new skills, take risks and move to new jobs and places**
- ◆ **Nimbleness, flexibility and risk taking on part of businesses**
- ◆ **Communities to be adaptable, diversify economic bases, attract new jobs and residents**
- ◆ **Governments to be imaginative to design transition assistance for workers and communities to change and adapt**



# Needs of Modern Central Bankers

- ◆ Knowledge based society
- ◆ The better knowledge, the more we can compete
- ◆ Central bank is store of knowledge and excellence
- ◆ Therefore, central bank must strengthen its own knowledge-base



# IT in Central Banking Knowledge Management

- ◆ Central bank has vast store of data
  - ✦ Bank supervision
  - ✦ Monetary & Economic research
  - ✦ Market supervision & Reserves Management
  - ✦ International relations
  - ✦ Payment systems
- ◆ Most data not properly organized & analysed for policy formulation
- ◆ IT strategy and staff IT skills vital in building proper knowledge & risk management



# Concluding Thoughts

- ◆ Independence of central bank as strong as its professionalism, integrity and competence - Tun Ismail
- ◆ Markets are continually evolving, requiring continual change in standards, systems and due process
- ◆ Central banks must form part of that change - either be a catalyst or be swept aside by change



**End of Presentation**