

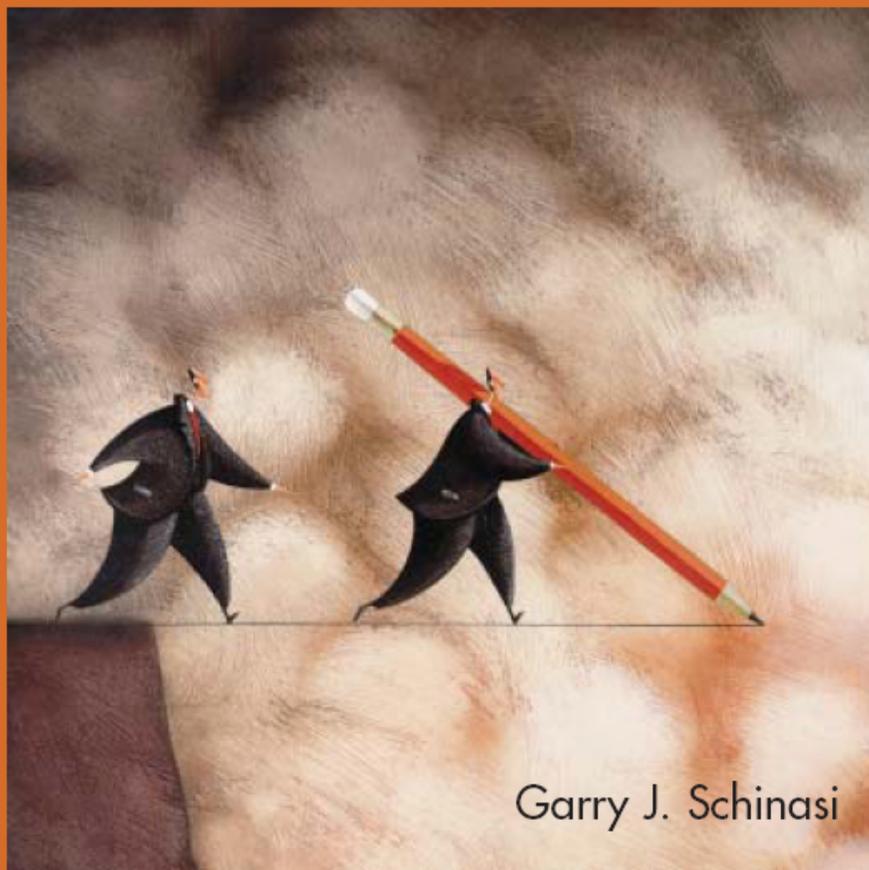
# **Understanding Financial Stability – Towards A Practical Framework**

Garry J. Schinasi

Bank of Spain Seminar  
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# SAFEGUARDING FINANCIAL STABILITY

Theory and Practice



Garry J. Schinasi

INTERNATIONAL MONETARY FUND

# Road Map

- **Growing Need for Financial Stability (FS) Framework**
- **Getting FS Definitions Right**
- **Framework for FS Assessment**
- **Future Needs**

# Road Map

- **Growing Need for FS Framework**
  - Getting FS Definitions Right
  - Framework for FS Assessment
  - Future Needs

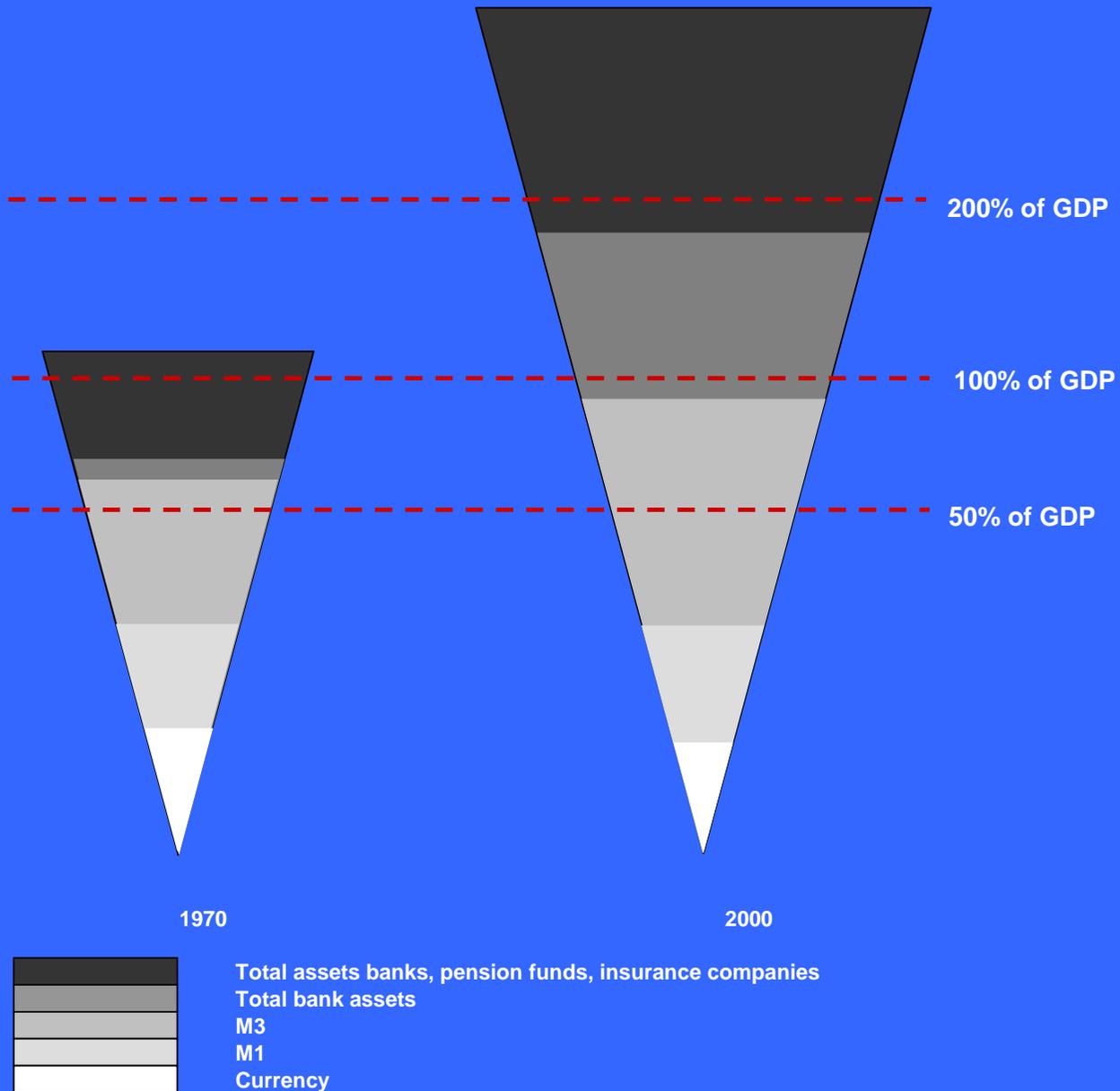
# Need for FS Framework

- Financial structural changes in recent decades
- Financial disturbances in 1990s and early 2000s
- Growing gaps in oversight regimes for finance
- Need for better monitoring and assessment to safeguard stability

# Financial Structural Changes

- Larger balance sheets relative to size of economy

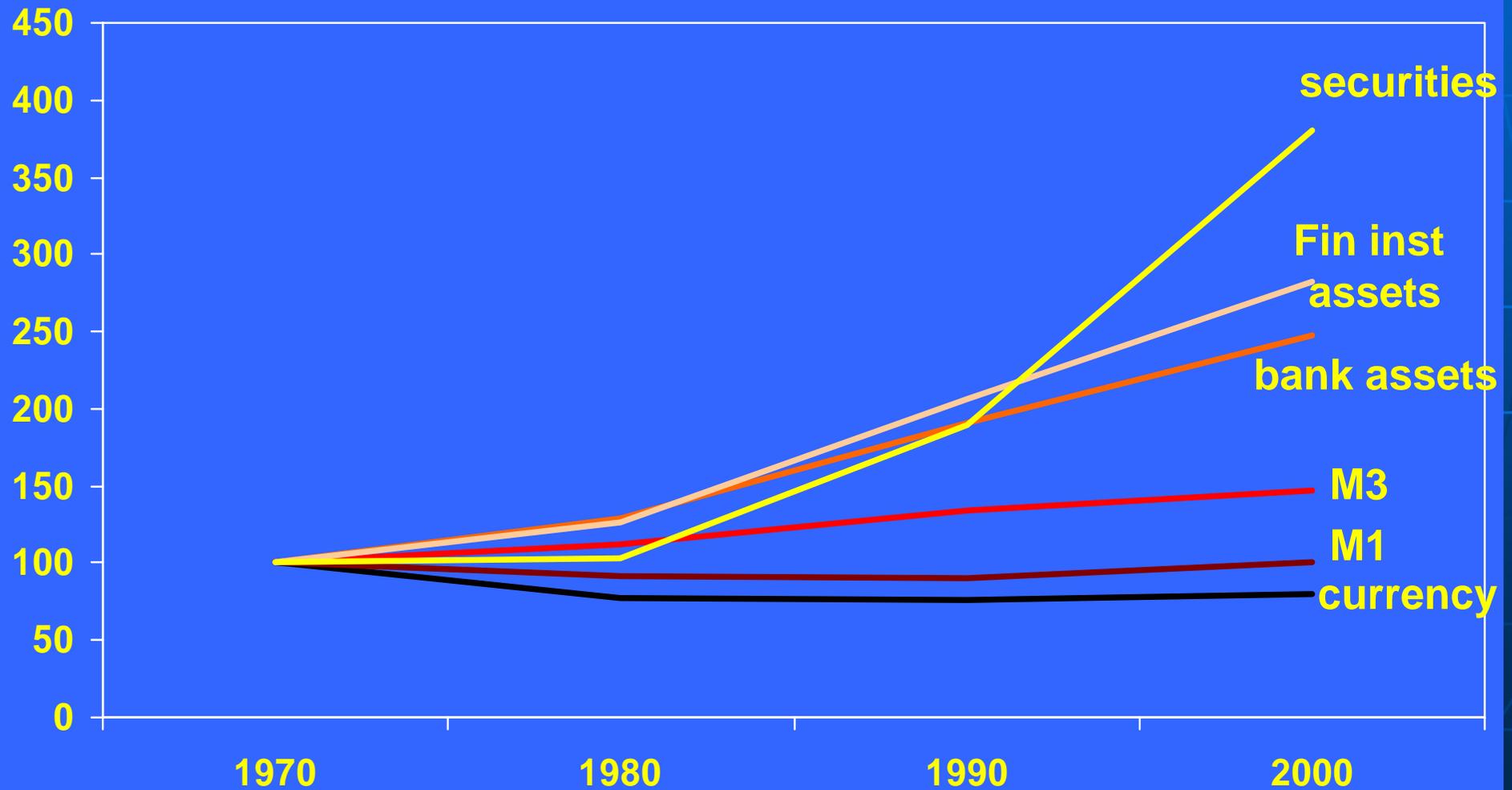
# Finance Has Outpaced GDP



# Financial Structural Changes

- Larger balance sheets relative to size of economy
- Changing composition of assets:  
increased share of non-monetary assets

# Finance Has Outpaced Monetary



# Financial Structural Changes

- Larger balance sheets relative to size of economy
- Changing composition of assets: increased share of non-monetary assets
- Globalization: greater global integration of financial markets and banking systems
- Complexity: of instruments and markets
- Complex dynamics, volatility, and turbulence in the 1990s and early 2000s

# Need for FS Framework

## Financial Challenges 1992-2002

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1992	Exchange rate crisis involving Italy and United Kingdom.
1994	Bond market turbulence in G-10 countries.
1994-95	Mexican (tesobono) crisis. Failure of Barings.
1996	Bond market turbulence in United States.
1997	U.S. equity market correction.
1997-98	Asian crises (Thailand, Indonesia, Republic of Korea).
1998	Russian default. Long-Term Capital Management crisis and market turbulence.
1999	Argentina crisis, Turkey crisis.
2000	Global bursting of equity price bubble.
2001	Corporate governance problems – Enron, WorldCom, Marchoni, Global Crossing, other. September 11th events.
2001-02	Argentina crisis and default. Parmalat.

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# Need for FS Framework

## Policy Issues and Risks

Issue/Risk	Domain of Policy Concern or Risk		
	Cross-Border	FX (Global)	Hedge Funds
	Institutions	Markets	
<b>Protection/Integrity?</b>	Investor Protection	Market Integrity	No; Possibly for Retail Investors (of funds of funds)
<b>Moral Hazard from Safety Net?</b>	Yes; & Home/Host Burden Sharing Issues	Possibly from G-3 Central Bank Liquidity	No
<b>Cross-Border and Systemic Risks?</b>	Maybe; Depends on Size, Complexity, etc.	Yes, via OTC markets and infrastructure linkages	Yes?, via opacity, complexity, and w/ institutions and markets

# Need for FS Framework Oversight Regimes

Type of Oversight	Domain of Oversight		
	Cross-Border Institutions	Global Markets	Hedge Funds
<b>Regulation</b>	National with cooperation	Not really; OTC	No
<b>Supervision</b>	National & Home/Host	n.a.	No
<b>Surveillance</b>	Indirect, as participant	Direct; National and International	Indirect, as participant
<b>Market Discipline</b>	Partially	Primarily	Exclusively

# Need for FS Framework

## **Systematic Assessment**

- Discipline
- Defining of key concepts
- Measuring the degree of financial stability
- Ensuring internal consistency

# Road Map

- Growing Need for FS Framework
- **Getting FS Definitions Right**
- Framework for FS Assessment
- Future Needs

# Getting Definitions Right

- **Financial system**
- **Financial stability**
- **Systemic risk**
- **Understanding the complexities**
- **Challenge of safeguarding financial stability.**

# Getting Definitions Right

## **Financial System**

- **All financial intermediaries** (*including banks, insurance, pension funds, etc*)
- **Financial markets** (*as alternative sources of finance and as sources of links between institutions*)
- **Financial system infrastructures** (*including clearance, payment and settlement as well as legal, regulatory, accounting and supervisory infrastructures*)

# Getting Definitions Right

## **Financial System**

***“ ... the financial system consists of the monetary system with its official understandings, agreements, conventions, and institutions as well as the processes, institutions, and conventions of private financial activities.”***

Adaptation of “international financial system” in Truman (2003).

# Getting Definitions Right

## Financial Stability

- At least three aspects (*Schinasi, 2004*):
  - Financial resources are being efficiently and smoothly reallocated from savers to investors
  - Financial risks are being assessed and priced accurately and they are being efficiently managed
  - Financial shocks can be comfortably absorbed
- All three have exogenous and endogenous elements
- First two also highlight dynamic and forward-looking aspects of finance

# Getting Definitions Right

## **Financial Stability**

### *Financial instability*

*“ . . .connotes the presence of market imperfections or externalities in the financial system that are substantial enough to create significant risks for real aggregate economic performance.”*

Roger Ferguson, May 17, 2004.

# Getting Definitions Right

## **Systemic Risk**

“Risk that an event will trigger a loss of economic value or confidence in, and attendant increases in uncertainty about, a substantial portion of the financial system that is serious enough to probably have significant adverse effects on the real economy.”

G-10 report on Financial Consolidation.

# Getting Definitions Right

## Understanding the Complexities

- Financial stability (FS) occurs along a continuum
- FS cannot be summarized in a single quantitative indicator
- Developments in FS are difficult to forecast
- FS is only partially controllable
- Policies aimed at FS often involve trade-offs between efficiency and resiliency
- FS policies may be time inconsistent

# Getting Definitions Right

## **Financial Stability Challenge**

- Maintain smooth functioning of financial system and its ability to facilitate and support efficient functioning and performance of economy.
- Prevent systemic threats and resolve problems when prevention fails.

# Road Map

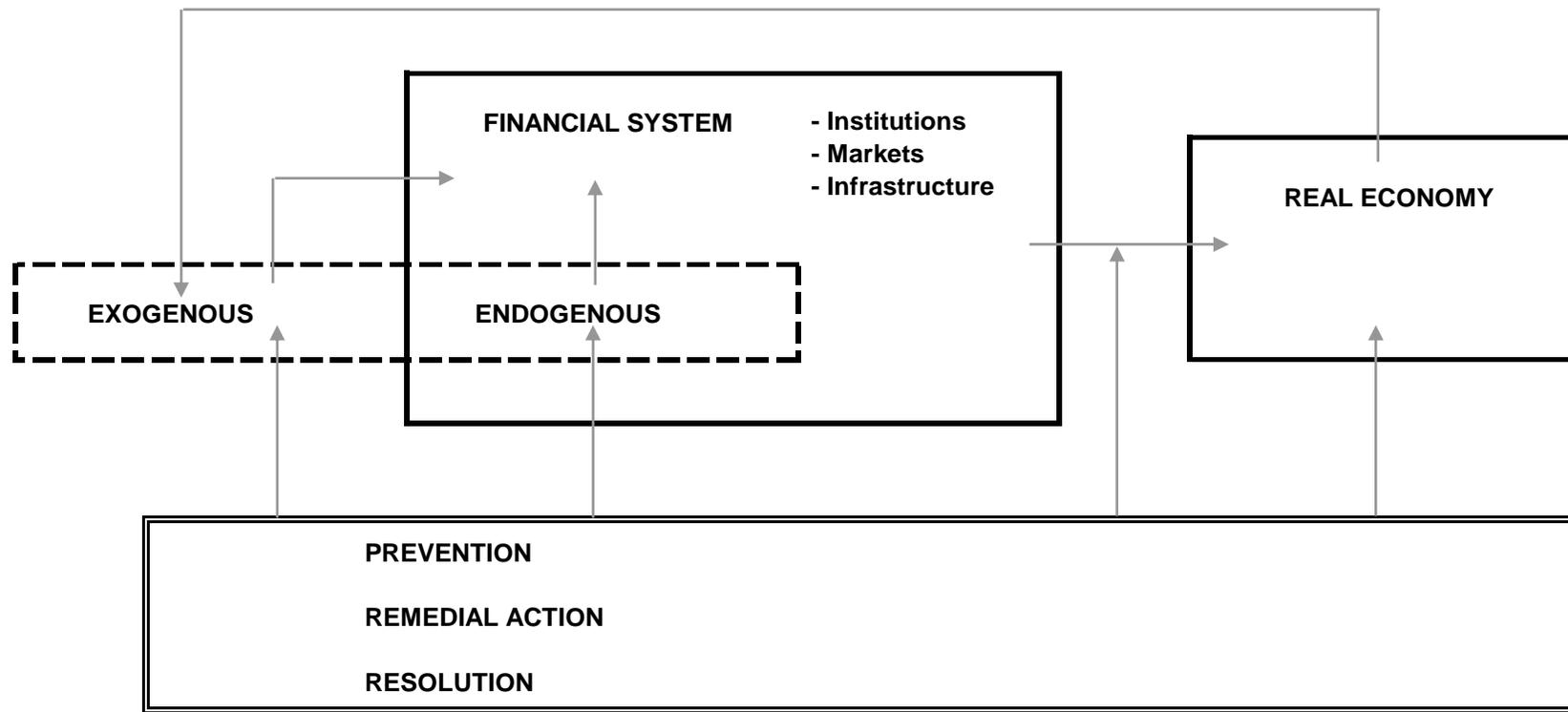
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# Framework For Stability

## Objectives

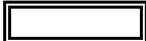
- Early identification of potential vulnerabilities
- Promote preventive and remedial policies to eliminate threats to financial stability
- Resolve instabilities when preventive and remedial measures fail

# Environment



## LEGEND

 Sources of imbalances

 Policy

 Influence

# Framework For Stability

## Sources Of Risks And Vulnerabilities

### ■ Endogenous (within financial system)

- Institutions based
- Market based
- Infrastructure based

### ■ Exogenous (macro-economic, events)

# Framework for Stability

## Sources of Risk

### Endogenous

#### *Institutions-based*

- Financial risks (credit, market, liquidity)
- Operational risk
- Information technology weaknesses
- Legal or integrity risk
- Reputation risk
- Business strategy risk
- Concentration risk
- Capital adequacy risk

#### *Market-based*

- Counterparty risk
- Asset price misalignment
- Run on markets (Credit, Liquidity)
- Contagion

#### *Infrastructure-based*

- Clearance, payment, and settlement risk
- Infrastructure fragilities (legal, regulatory, accounting, supervisory)
- Collapse of confidence leading to runs
- Domino effects

### Exogenous

#### *Macroeconomic disturbances*

- Economic-environment risk
- Policy imbalances

#### *Event risk*

- Natural disaster
- Political events
- Large business failures

# Framework For Stability

## Three Step Process

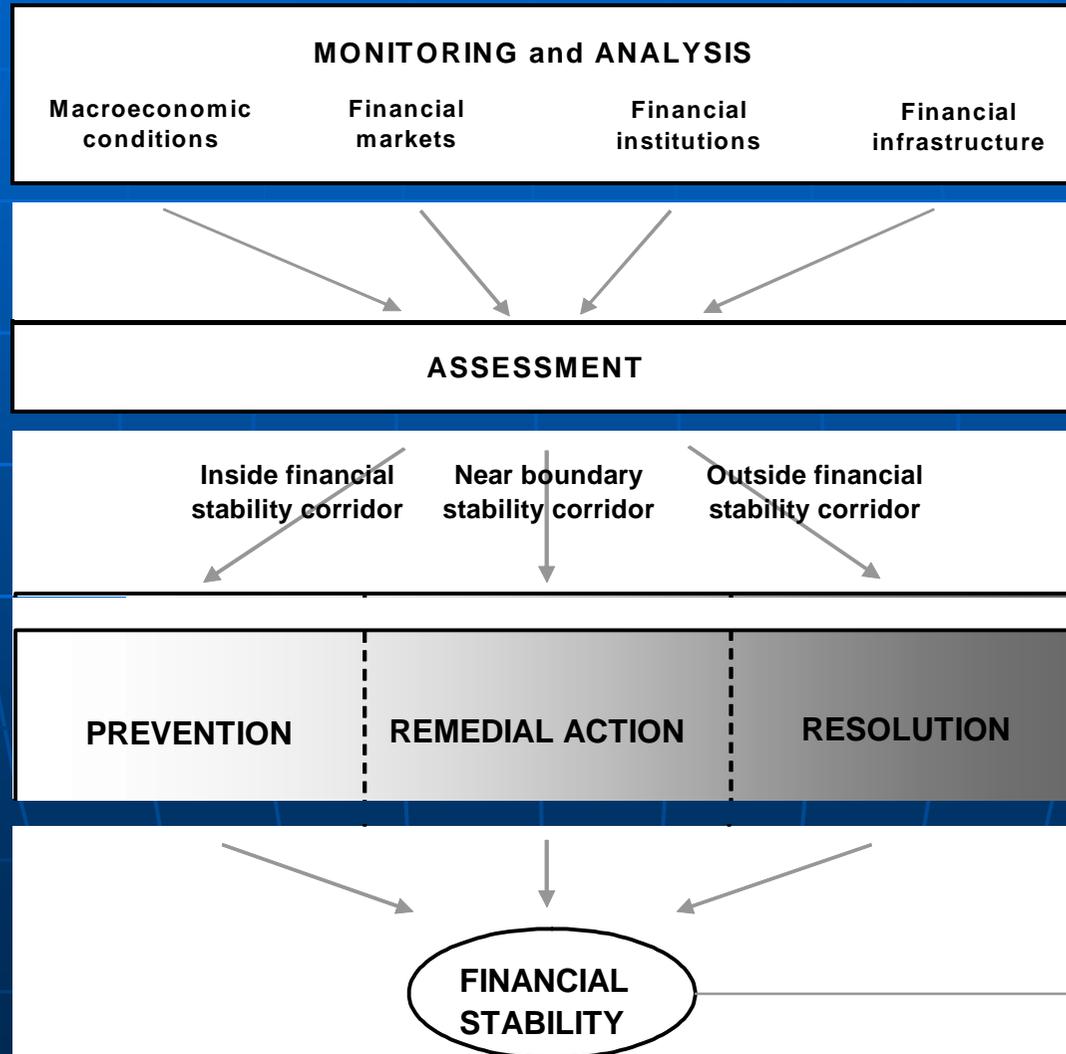
- Assess contemporaneous robustness of the financial system (endogenous risks)
- Identify the main sources of (downside) risk and vulnerability to financial stability (exogenous risks)
- Given (1), assess the ability of the financial system to absorb the sources of risk and vulnerability identified in (2), should they crystallize

# Framework for Stability Continuous Process



# Framework for Stability

## Integrate Analyses & Assessment



# Framework For Stability Policy Instruments

	<b>Prevention</b>	<b>Remediation</b>	<b>Resolution</b>
<b>Tools</b>	Implement existing policies to safeguard stability	Preventive measures to reduce risks to stability	Reactive policies to restore stability
<b>Market Discipline</b>	Maintain, update	Strengthen	Discretionary measures
<b>Self-regulation</b>	Maintain, update	Strengthen	Discretionary measures
<b>Safety nets</b>	Maintain, update	Strengthen	LOLR, deposit insurance
<b>Surveillance</b>	Maintain, update	Intensify	Further intensify
<b>Sup &amp; Reg</b>	Maintain, update	Intensify	Discretionary measures
<b>Communication</b>	Existing policies	Moral suasion	Restore confidence
<b>Macro policies</b>	Maintain, update	Lower imbalances	Discretionary measures
<b>Legal System</b>	Maintain, update	Strengthen	Discretionary measures

# Road Map

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# Future Needs

## **Internally Consistent Frameworks**

- Overall assessment should take account of real-financial feedback and should be internally consistent – IMF FSAP
- Stress testing useful but limited potential without robust models of entire financial system
- Ideally, we need a dynamic general equilibrium model that is capable of measuring (possibly non-linear) interaction between financial and non-financial sectors of the economy, including at the global level

# Future Needs

## **Internally Consistency: Reality**

- Literature on real-financial interaction generally finds transmission of real-to-financial simpler to quantify than vice versa
- Until we have internally consistent frameworks, we must accept second best eclectic approaches but apply them with discipline

# Future Needs

## Data, Indicators And Models

### ■ Data-sets

- Micro data in particular (helps in looking beneath the surface)

### ■ Market data and indicators based on them:

- Forward looking and all encompassing nature should help in shedding light on the likelihood of adverse scenarios and their impact
- Quantification of downside risks

### ■ Models and a better grip of the links:

- Simple and small-scale (the bursting of the 2000 bubble was predictable but maybe not the consequences for European insurance, etc)

# Future Needs

- Data (distributions, etc.)
- Empirical tools and models
- Indicators of risks and vulnerabilities
- Institutional implications
- Policy instruments

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