Equity and Debt Funding for Deposit Insurance Funds

An Application to Transition Economies

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The "Convergence" Program

"**Convergence**"/1 is a financial sector development program for South-East Europe focused on:

- Undertaking, as an "honest broker", analytical tasks of micro-institutional issues as a basis for identifying solutions tailored to country circumstances
- Taking EU integration as a strategic perspective
- Building awareness of market participants, involving them in the search of market-building solutions, and fostering their dialogue with authorities
- Using the experience of regional former policy makers and local experts whenever possible
- Working in partnership with other institutions

1/ "Convergence" is sponsored by the World Bank with the support of a grant from Italy's Ministry of Economy

Problem Definition

How to determine optimal premium when financial models that are usually used, cannot be applied? What should be the financial target of ex-ante or mixed system? What combination of financial instruments should it use?

Motivation

After our work for Convergence project in one SEE country, this approach can be applied elsewhere.

Scope

Optimization of DIF's financial structure at "normal" times (absence of any sign of banking crisis)

Contents

- Funding problem
- Specifics of deposit insurance in transition countries
- Nominal exposure, risk exposure and final loss from DIF perspective
- Exposure coverage ratio as a key policy target
- How to determine debt and equity (base premium) components of DIF financing
- How to calculate and apply the premium
- Policy implications

Funding – Key Issue

- Main worry (target) of DIF managers is to have enough resources ("funds") for deposit payouts when needed
- If funding is ex ante – premium represents a continuous cost for banks
- If funding is ex post – significant cost occurs only if and when there is a need for payout
- In both cases, there is a trade-off between "safety" (having enough cash reserve in the fund) and cost
- Neither DIFs nor banks can agree which model for premium determination is the best because two sides have different perspectives

Funding – Key Issue (continued)

- Unfunded
- Overfunded
- "Optimally" funded
- What is "optimally" funded?

DIF Perspective	Banks' Perspective
• Have resources at hand to cover "significant" part of deposits (e.g. discussion paper related to new EU Directive points out 2% of guaranteed deposits is needed in order to have a well capitalized scheme)	• reasonably low cost •avoid using DI for hidden subsidies

Transition Specifics

Main

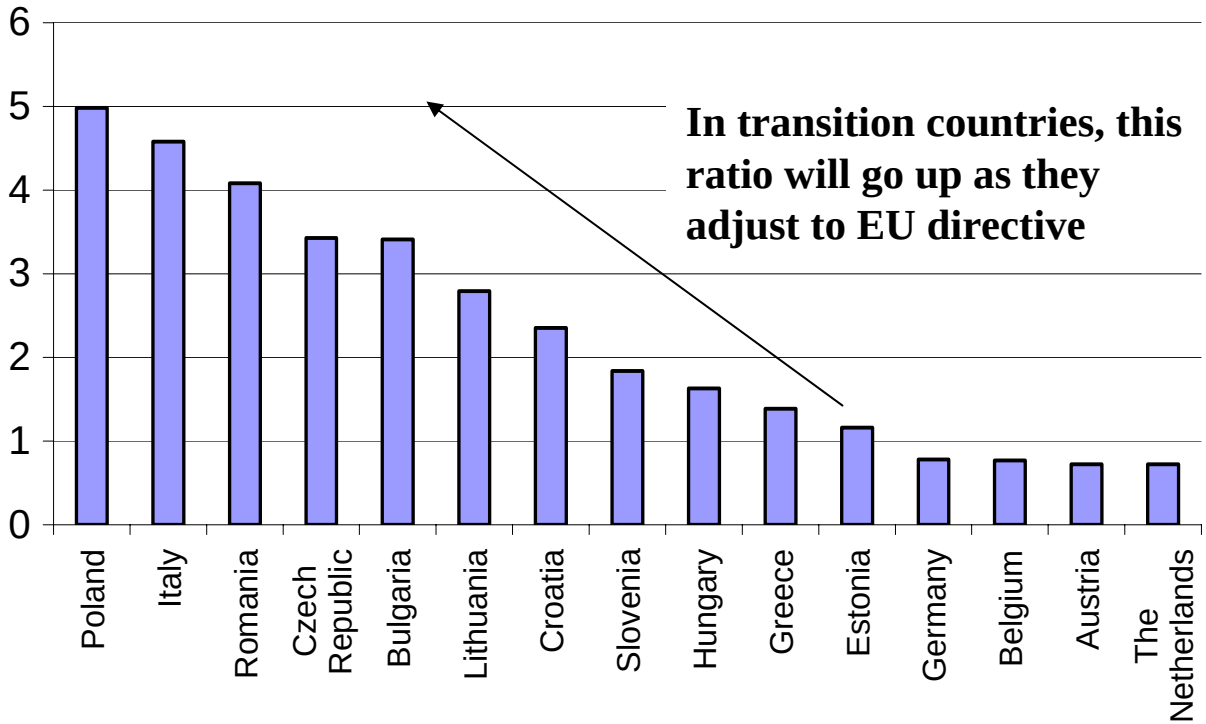
- Compliance with EU directive implies large insurance coverage (E 20,000)
- Large share of foreign ownership changes the mechanics of possible distress ("too international to fail"?)
- In small and open economies there is high concentration at the banking market ("too big to fail"?)

Technical

- High reserve requirements imply that even failed banks may have relatively large amounts of liquid assets at disposal in bankruptcy
- Lack of historical data and banks' shares listed on the stock exchanges puts limits to the use of standard financial models (e.g. Merton) for calculating the premium

Coverage Problem

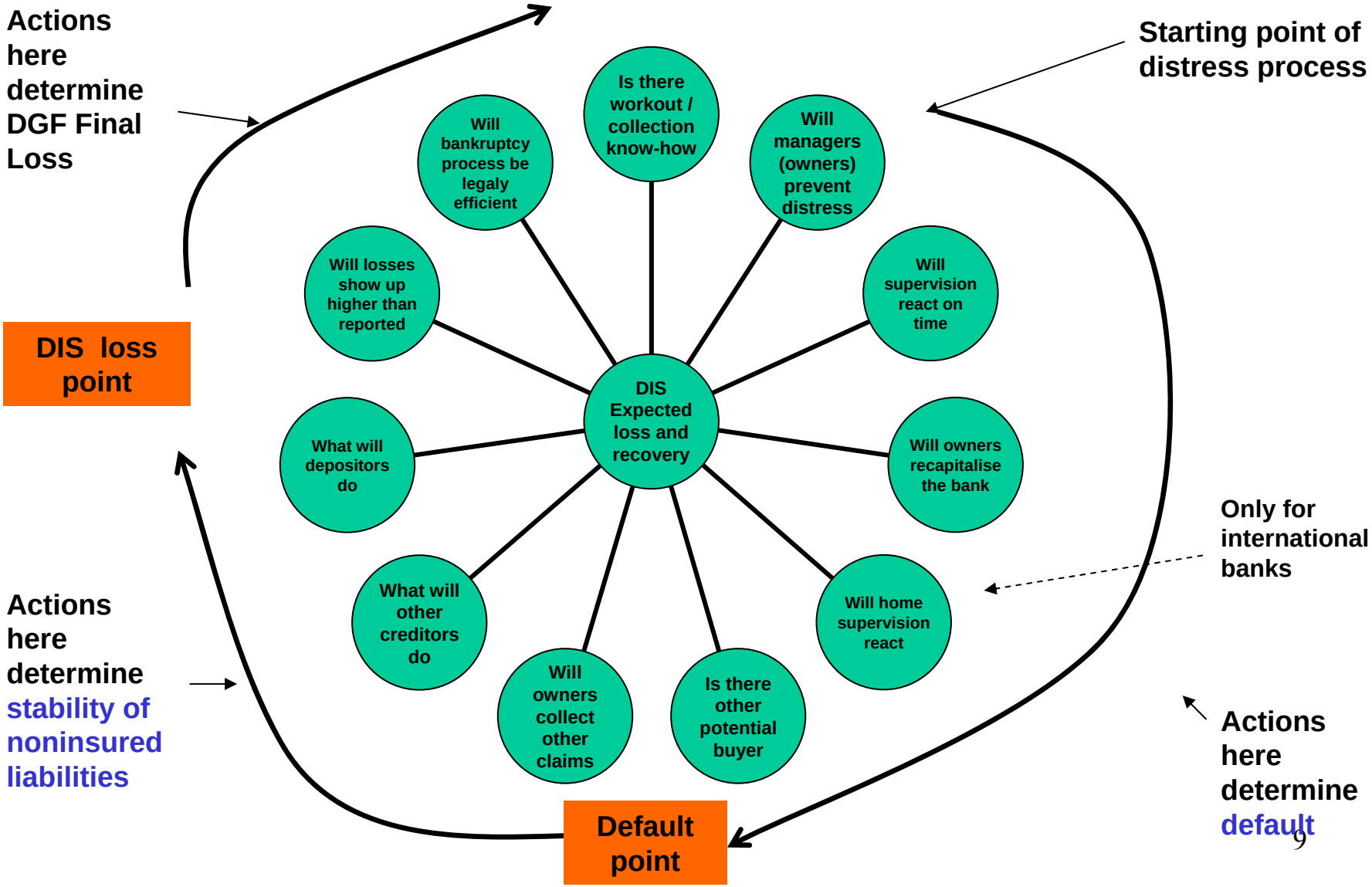
Coverage to GDP p.c. 2003



Problems:

1. **Moral hazard**
2. **Higher need for funding and related pressure on higher pricing / cost**

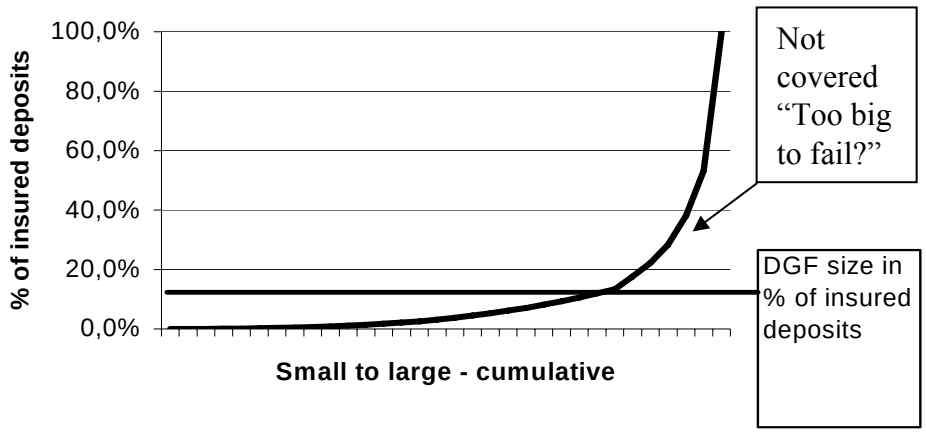
DIF Loss After A Long Distress Path: "Too international to fail"?



Concentration (3 largest banks): "Too big to fail"?

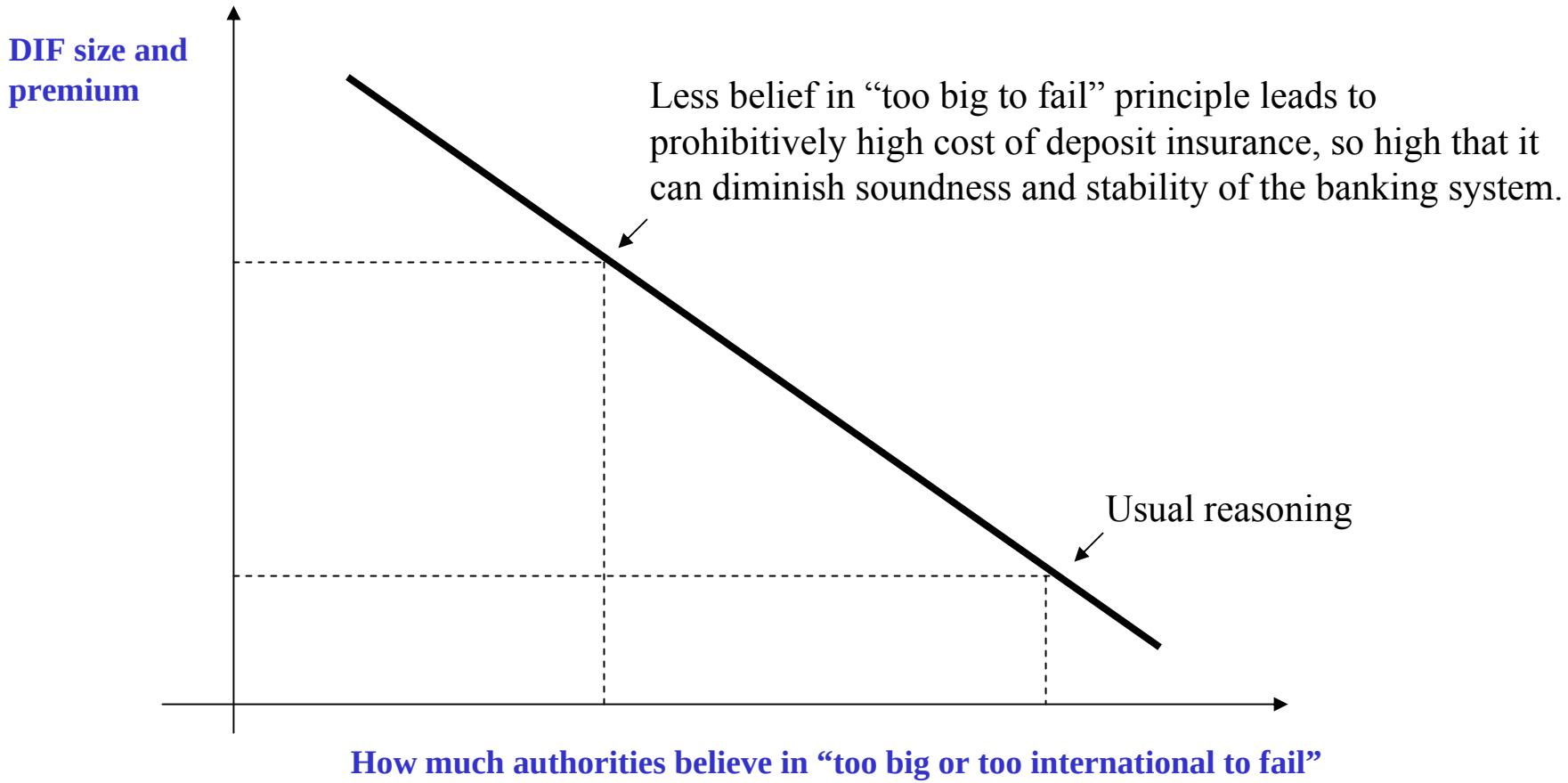
	2003
Estonia	98,2%
Netherlands	83,3%
Belgium	83,0%
Austria	79,8%
Lithuania	79,4%
Czech Republic	70,2%
Romania	66,2%
Greece	63,1%
Slovenia	60,6%
Croatia	57,5%
Hungary	54,0%
Bulgaria	46,8%
Poland	41,9%
Italy	40,5%

Source: Financial Structure Database, World Bank, using FitchScope



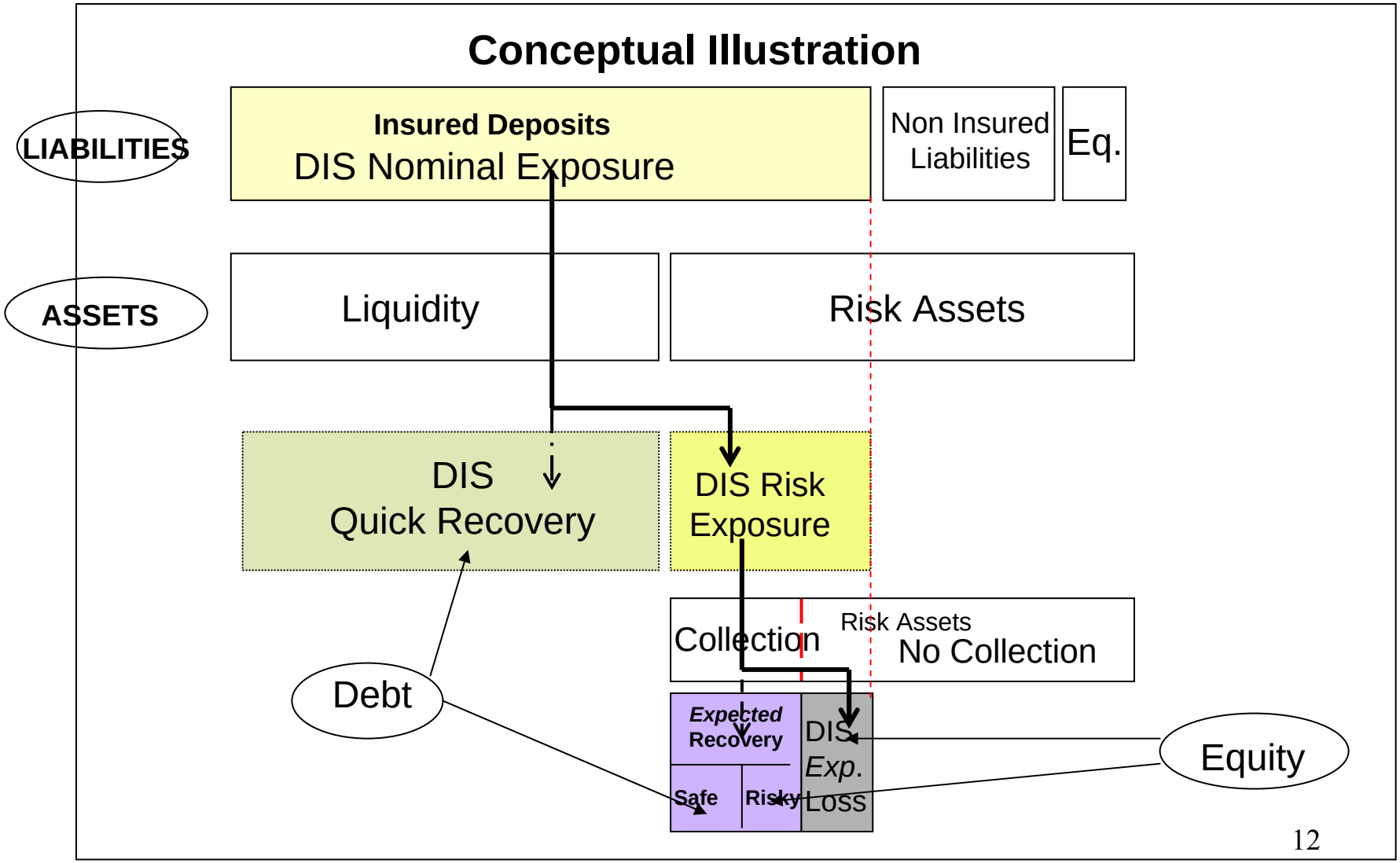
Banks are sorted cumulatively from smallest to largest in terms of % of insured deposits. In countries with high concentration, DIF size would have to grow immensely in order to have credible coverage for largest banks' failures.

Implications of Too Big (or Too International) to Fail Principle on Pricing: Fundamental Trade - Off

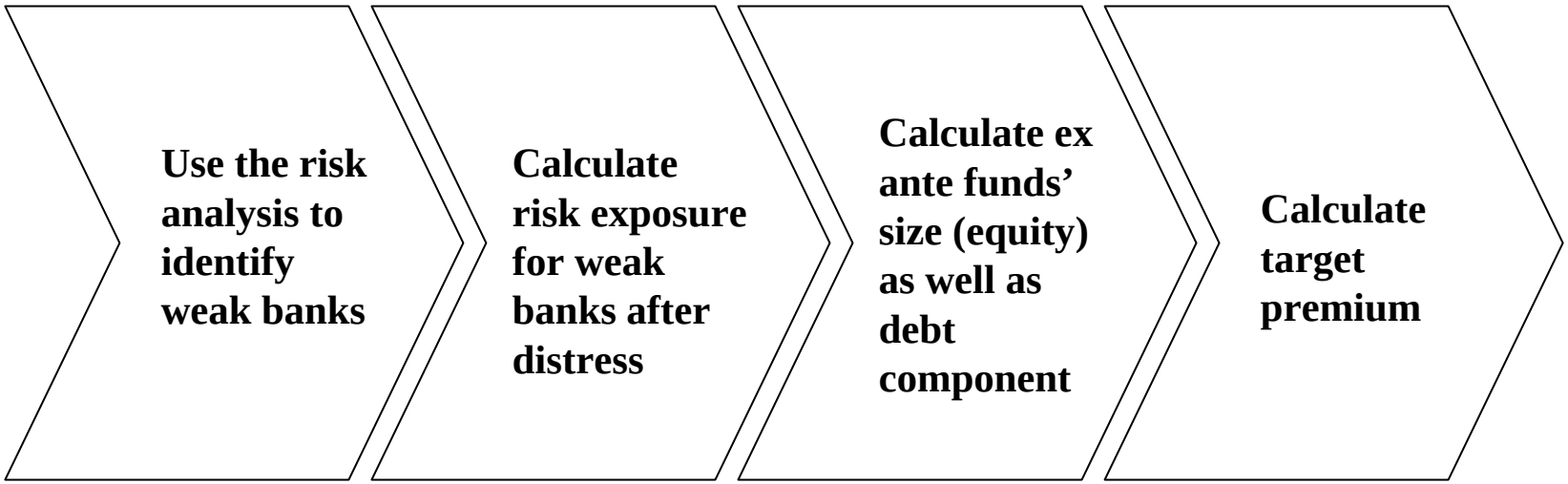


This reasoning is based on the assumption that DIF has to cover the whole amount of insured deposits

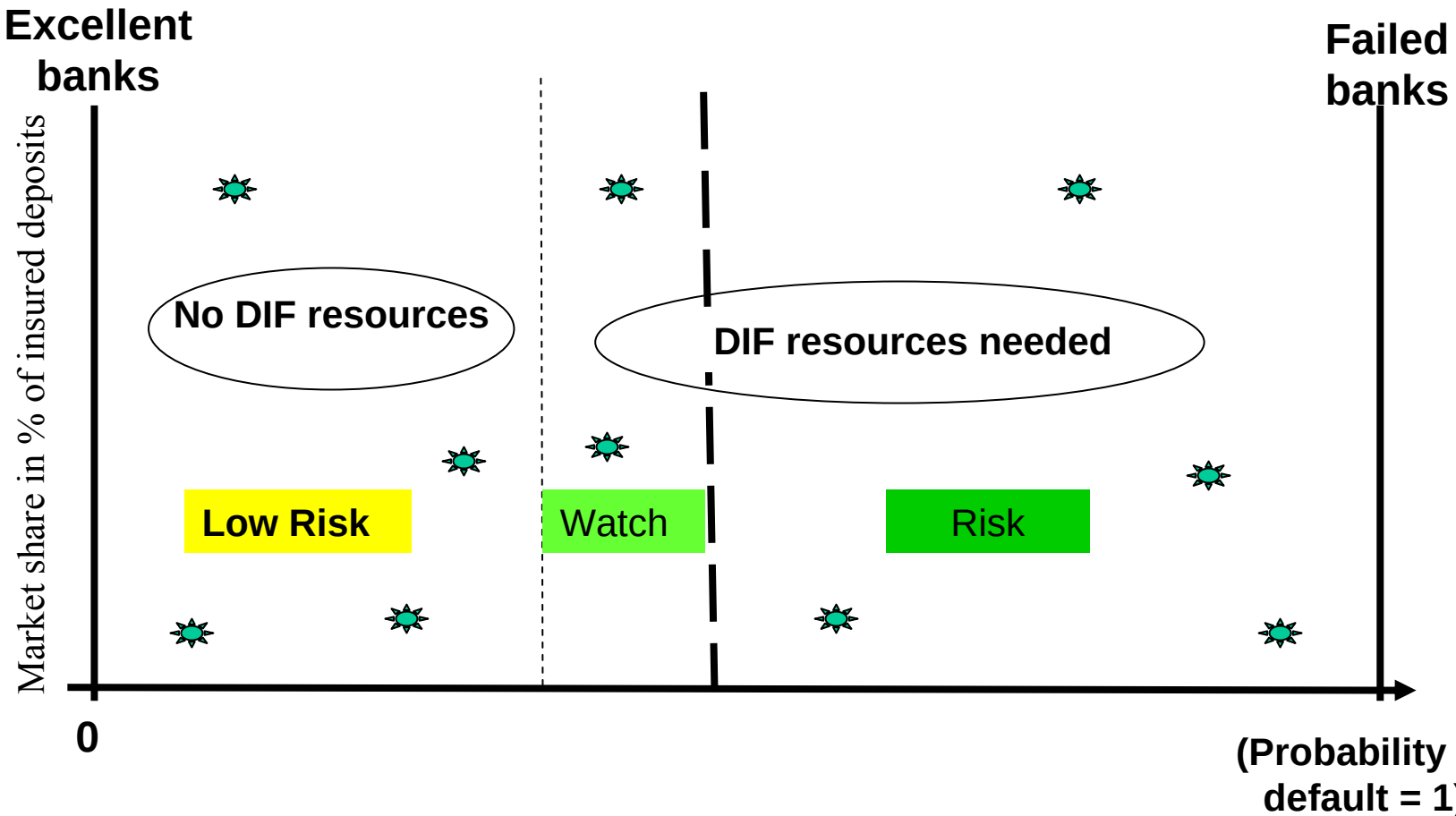
Solution to be Found in the New Framework: Focus on Risk Exposure



How to Use the New Framework



What Risk Analysis: An Illustration

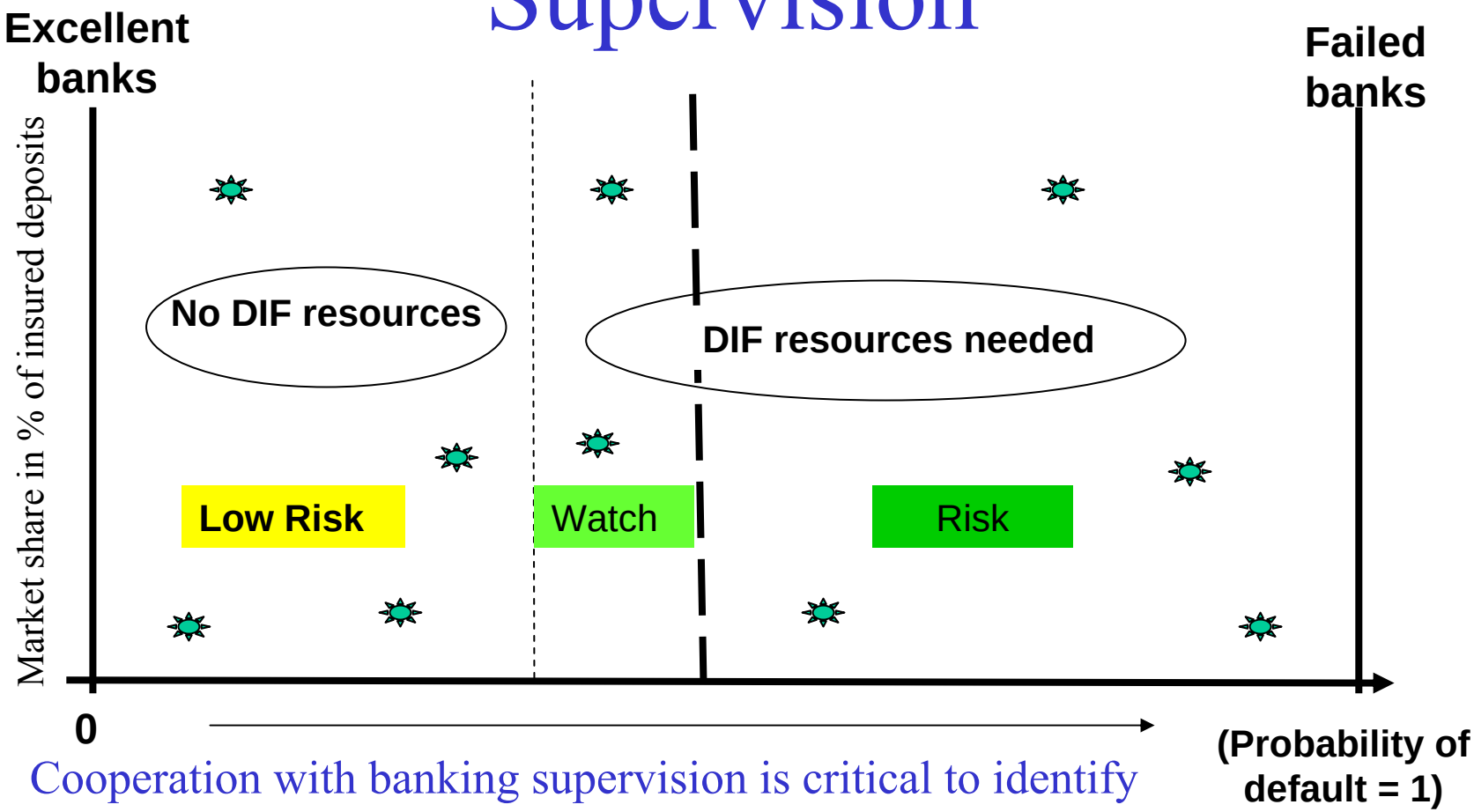


For each bank: Market share (% of ID) x PD = Coverage ratio, individual bank

Sum over all banks to obtain Exposure Coverage Ratio

Source: FITD

Relationship with Banking Supervision



Cooperation with banking supervision is critical to identify banks whose risks are migrating to higher probability of default as well as to identify if solutions to distress will involve payout.

Exposure Coverage Ratio (ECR)

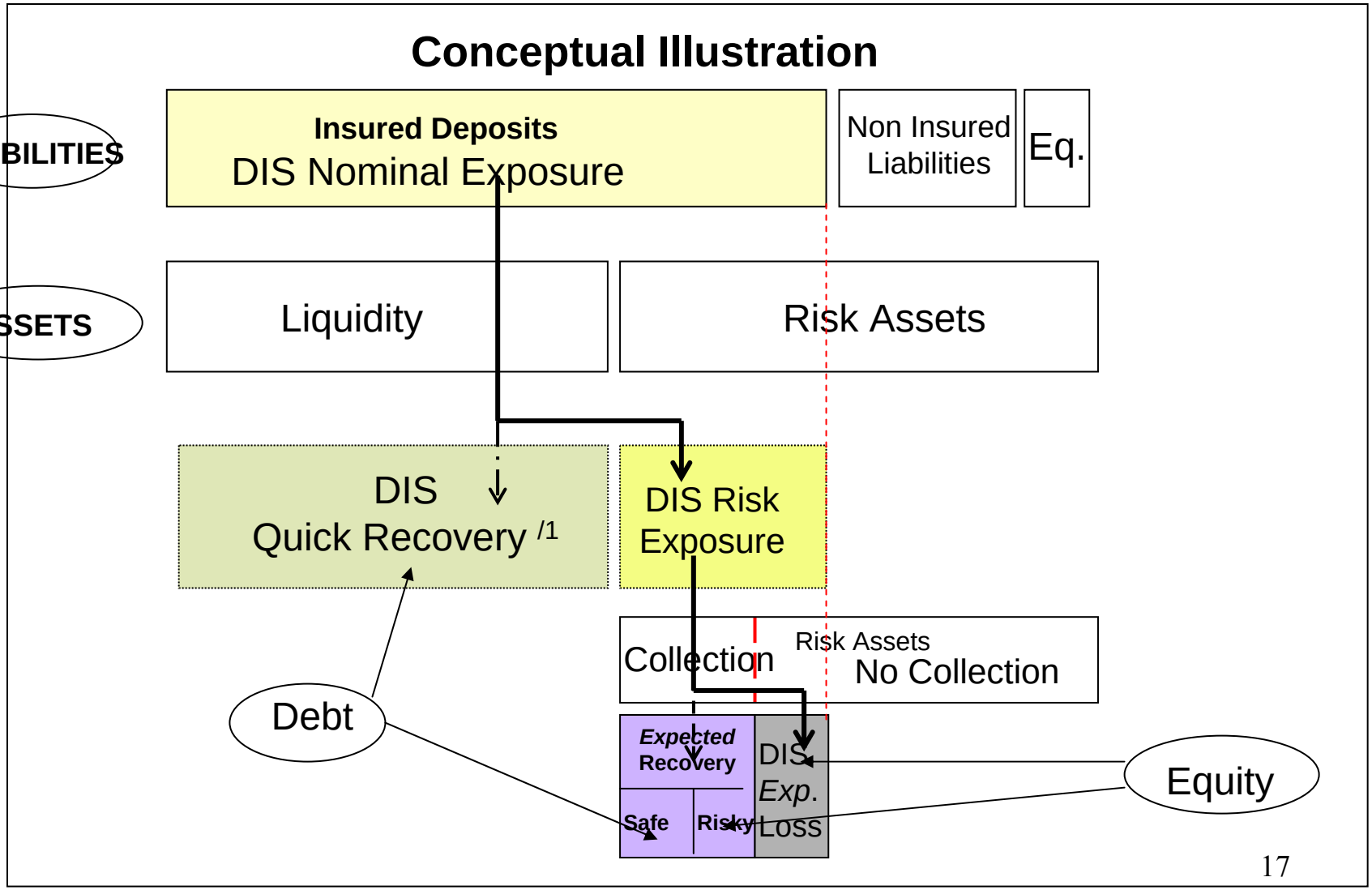
$$\text{Exposure coverage ratio} = \frac{\text{Fund's available resources}}{\text{Insured deposits}}$$

ECR measures deposit insurance fund's (DIF) financial potential to cover actual and/or potential obligations.

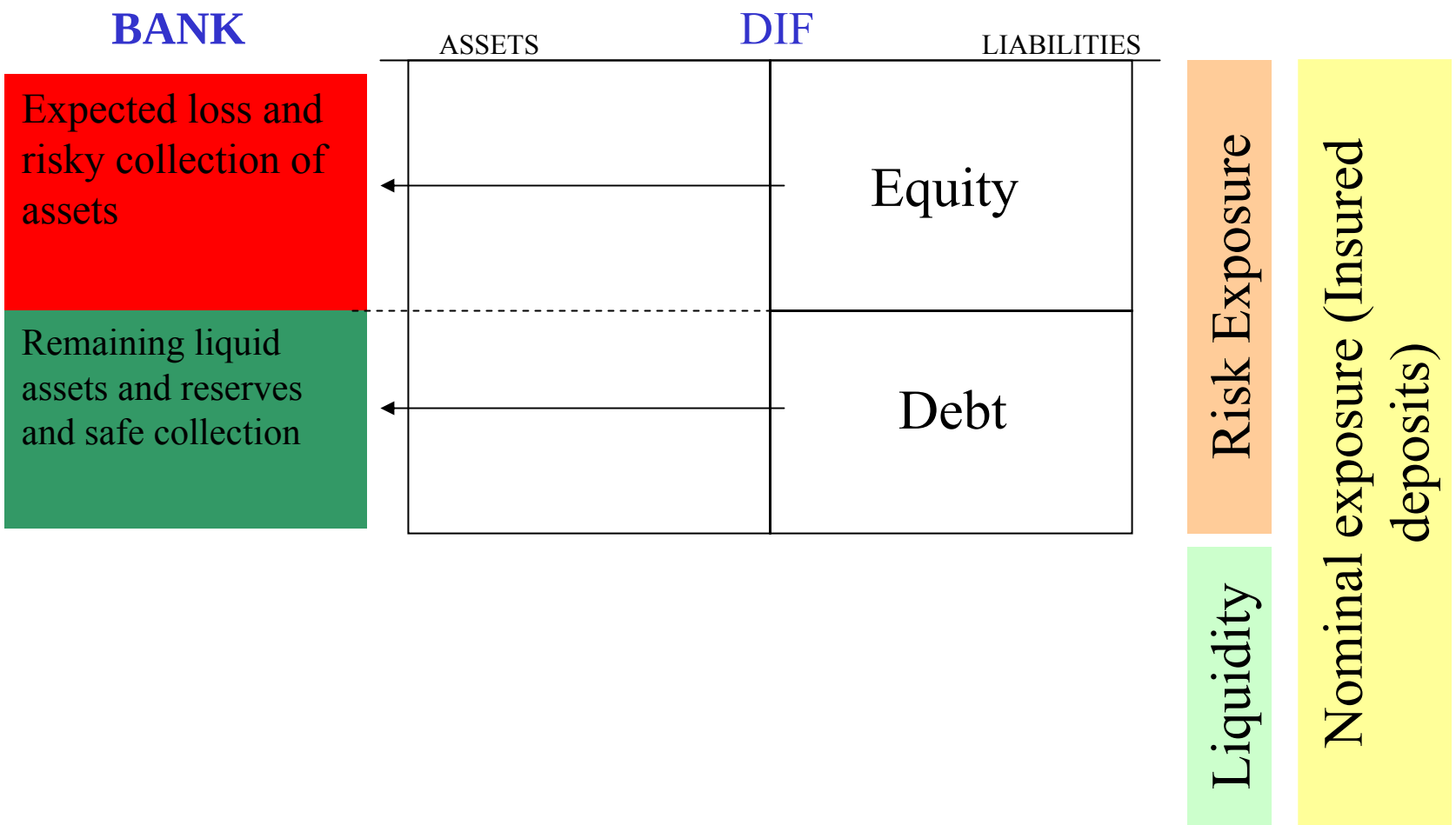
It is the main policy target.

What should ECR cover? Nominal exposure, risk exposure, or only a fraction of risk exposure?

Remember: Focus on Risk Exposure, There's Equity and Debt Financing



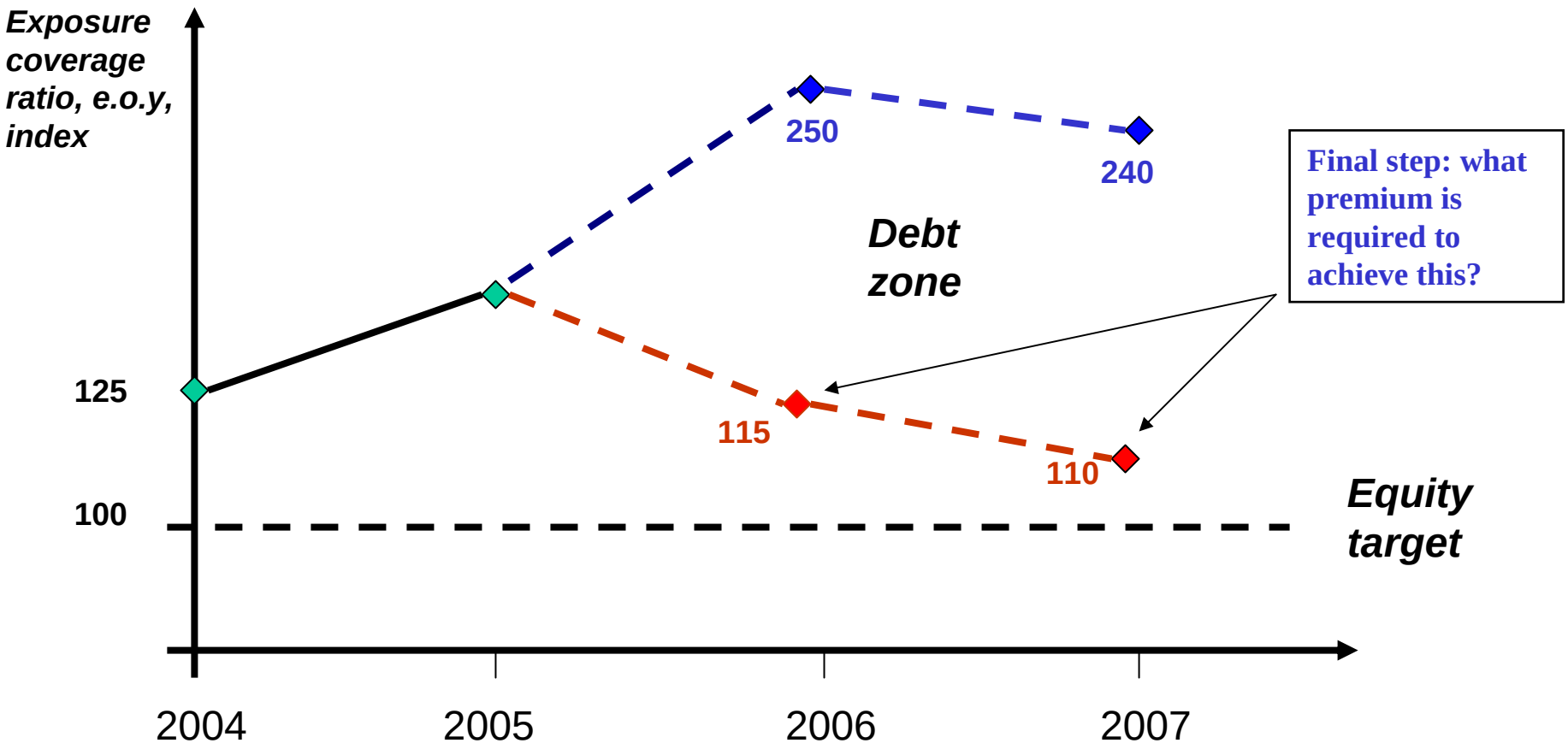
DIFs' Size and Financial Instruments



What Debt and Why?

- Our view of the role of debt is radically different from traditional use of debt in deposit insurance
- Traditional: use debt for crisis financing
- Convergence: use debt to finance the safest part of recovery
- Debt is not a substitute for ex post premium
- Stand-by line of credit from strongest banks, possibly supported / arranged by IFIs
- Alternative: other market based debt
- Negotiate special conditions (e.g. zero fee etc.) because debt arrangement helps banks optimize the premium
- Small or close to zero risk because debt is raised against safe recovery components
- Useful for authorities (gives confidence that they will be able to pay-out the whole required amount) and public (credibility effect)

An Illustration (Not a Real Country)

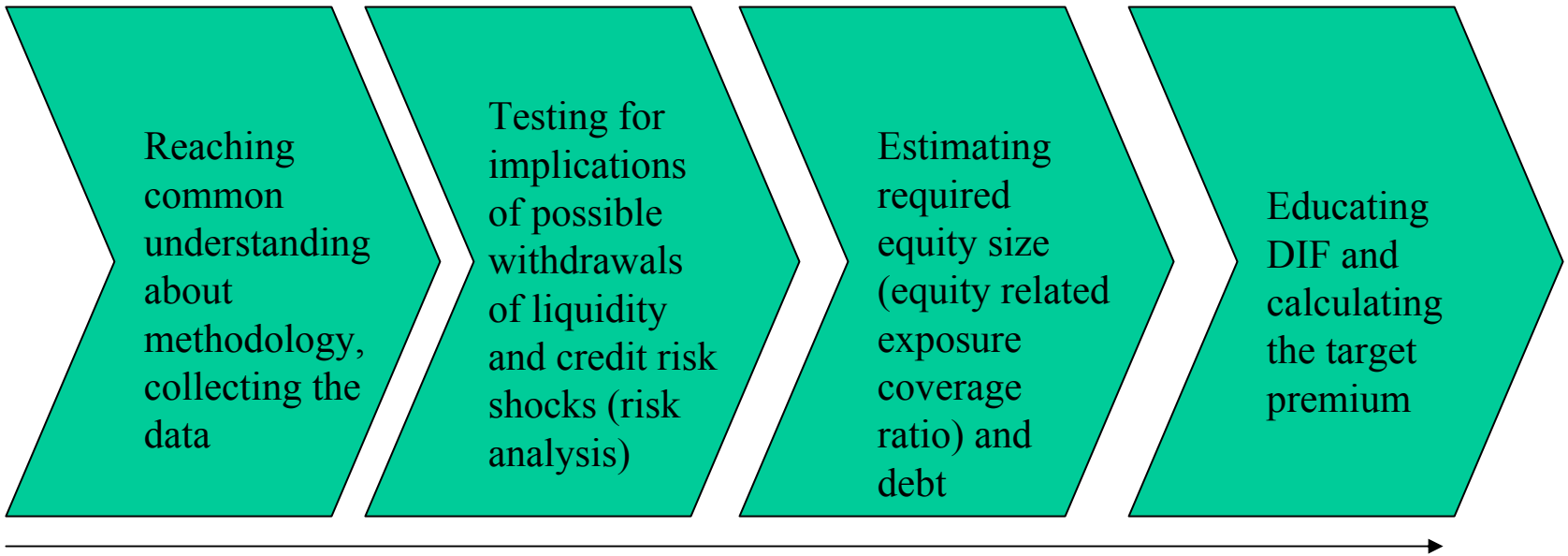


ECR adjustment is gradual because there are regime change risks and calculation risks.

Principles of Calculating the Premium

- Consider doing it annually by using all available information and knowledge (requires introduction of some flexibility in premium determination on the side of authorities)
- Do medium term financial planning and smooth out envisaged changes in order to avoid unnecessary volatility of premium

Methodological (Project) Flow



Process takes 3 months if the project runs smoothly

Conclusion

➢ By combining "risk exposure" approach with indicators / early warning / distance to default methodology, deposit insurance policy makers in South-East Europe can:

- overcome the problem of lack of historical dana
- estimate the appropriate size of the deposit guarantee fund
- estimate optimum and target premium paths
- fine-tune management methods and principles
- improve institutional environment for deposit insurance operations

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- Private consulting company from Zagreb, Croatia, established 2003, specialized in financial and macroeconomic consulting for authorities and financial institutions
- Macroeconomic and financial forecasting
- Strategic management and consulting for financial institutions
- Decision support systems
- Policy advise

Who we are

- Velimir Šonje (Director), former Board Member Raiffeisenbank Austria d.d. Zagreb, 1995 – 2000 Executive Director Croatian National Bank
- Đurđica Ognjenović (Consultant), former Department Director, Croatian Agency for Deposit Insurance, Consultant to various governments in the region