Setting the Target Fund Size
Philippine Experience

Outline

I. Overview of PDIC

II. PDIC’s Deposit Insurance Fund

III. Setting the Target Fund Size

- Target Fund Approach / IRT Framework
- Expert Opinion Approach

IV. Moving Forward

Overview of PDIC

Public Policy Objectives & Mandates

Examination and Resolution of banks

- Examines banks
- Grants Financial Assistance
- Conducts bank investigation

Receivership and Liquidation of closed banks

- Acts as receiver
- Liquidates assets of closed banks
- Distributes assets to creditors

Depositor Protection

Financial Stability

Deposit Insurance

- Manages the Deposit Insurance Fund
- Collects assessments from member-banks
- Settles deposit insurance claims

Membership & Risk Exposure

As of March 31, 2015 (Amounts in Billions)

Bank Type	No. of Banks	Total Domestic Deposits (TDD) [a/]		Estimated Insured Deposits (EID)		% Insured (EID/TDD)
		Amount	% to Total	Amount	% to Total	
Commercial	36	PHP 7,655 USD 171 [b/]	90%	PHP 1,617 USD 36	85%	21%
Thrift	69	PHP 676 USD 15	8%	PHP 189 USD 4	10%	28%
Rural	541	PHP 148 USD 3	2%	PHP 93 USD 2	5%	63%
Total	**646**	**PHP 8,479** **USD 189**	**100%**	**PHP 1,900** **USD 42**	**100%**	**22%**

[a/] Domestic deposits exclude deposits in overseas branches of Philippine Banks
[b/] Bangko Sentral ng Pilipinas Reference Exchange Rate Bulletin 31 March 2015 at US$1=PhP 44.796

Fund Sources

	2012	2013	2014
• Assessment Premiums	59%	63%	68%
• Income from investment	33%	30%	28%
• Income from Financial Assistance and Other Income	8%	7%	4%
	100%	100%	100%

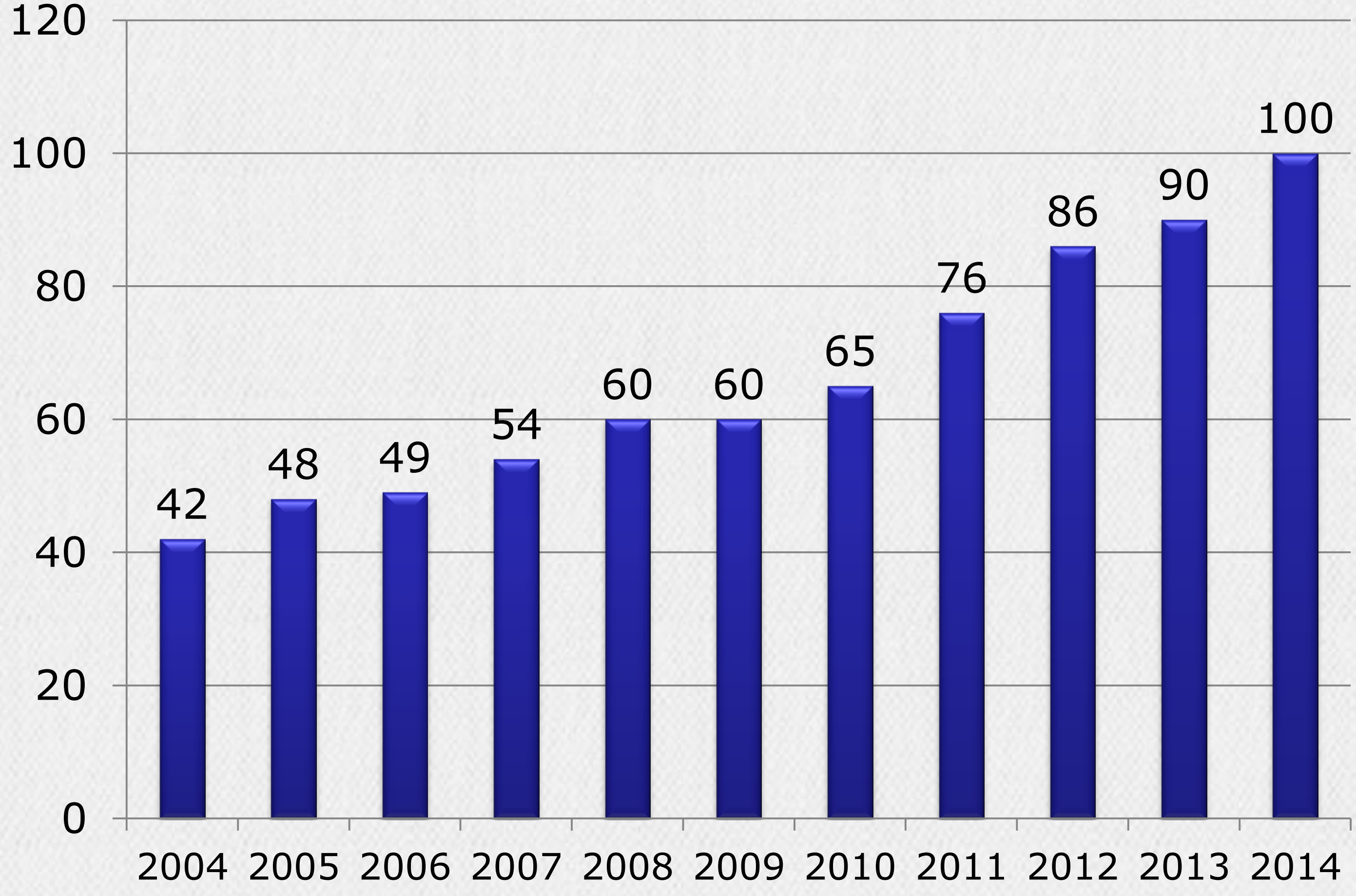
Fund Uses

- Deposit insurance payment
- Bank rehabilitation/resolution
- Operational expenses

PDIC's Deposit Insurance Fund (DIF)

Deposit Insurance Fund (2004-2014)

Amounts in Billion Pesos



DIF average growth:

- 2010 to 2014 (5 yrs) = 11%
- 2004 to 2014 (10 years) = 9%

DIF

- Pursuant to Section 13 of the PDIC Charter, DIF shall be the **Capital Account** of the Corporation and shall principally consist of the following:

   i. Permanent Insurance Fund

   ii. Assessment collections net of operating costs & expenses, additions to reserve, and net insurance & financial assistance losses for the calendar year

   iii. Reserves for insurance and financial assistance losses

   iv. Retained earnings

Components

- **Permanent Insurance Fund**
  - the capital amounting to P3 Billion provided by the National Government

Components

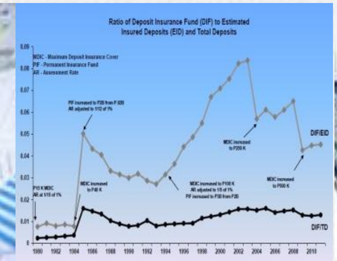
- **Reserves for Insurance Losses**

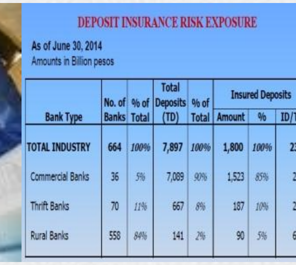
  —the accumulated reserves for probable losses for banks likely to fail in the future unless intervention from third party is made, such as grant of financial assistance as part of a bank's rehabilitation

Components

- **Retained Earnings**
  - the cumulative income of the Corporation, net of dividends declared to the National Government





DEPOSIT INSURANCE RISK EXPOSURE

As of June 30, 2014
Amounts in Billion pesos

Bank Type	No. of Banks	% of Total	Total Deposits (TD)	% of Total	Insured Deposits Amount	%	ID/TD
TOTAL INDUSTRY	664	100%	7,897	100%	1,800	100%	23%
Commercial Banks	36	5%	7,089	90%	1,523	85%	21%
Thrift Banks	70	11%	667	8%	187	10%	28%
Rural Banks	558	84%	141	2%	90	5%	64%

Setting the Target Fund Size

- The Target Fund Size is set by PDIC’s Governing Body
  - Section 2 (6) of the PDIC Charter gives authority to the PDIC Board of Directors to approve the methodology for determining the level and amount of provisioning for insurance and financial assistance losses

I. Target Fund Approach

2003 - 2007

- In 2003, PDIC adopted a Target Fund Approach in setting the level of DIF

I. Target Fund Approach

- Framework
  - Target fund shall be based on the potential demand and direct threat to the Corporation's capital or reserves
  - PDIC's existing bank rating model or methodology shall serve as basis for identifying potential candidates posing direct threat to the insurance reserves
  - Target fund policy, procedures and results shall be reviewed at least once every two years

2003 - 2007

I. Target Fund Approach

- DIF Target based on direct threat and potential demand to PDIC’s capital or reserves, measured by:
  - PDIC’s exposure to banks considered on the verge of closure or beyond resolve unless with third party intervention
  - Additional buffer for the potential failure of those others arising from unforeseen events that may cause deterioration of bank condition

I. Target Fund Approach

2003 - 2007

- The Target Fund Estimation
  - Banks are risk rated Category 1 (worst) to Category 5 (best) using PDIC's Offsite Bank Rating Model (OBRM) (early warning system tool)

Category 1 banks	EID
Category 2 to 5 banks (medium sized [a/])	EID
TARGET FUND	**Total EID**

[a/] Medium sized banks refer to private/non-government owned domestic commercial banks with assets of below P100 Billion excluding banks risk rated under Category 1

I. Target Fund Approach

2003 - 2007

- The DIF Target level was set at PhP 60 Billion in 2003
- Adjusted to P90 Billion in 2004
  - —increase in Maximum Deposit Insurance Coverage from PhP100 thousand to PhP250 thousand
  - —PDIC then projected to be achieved in 8 years (2011)

II. IRT Framework

2008 - 2011

- In 2008, PDIC adopted the Insurance Reserves Targeting (IRT) Framework, a more risk-based approach

- The IRT is based on the risk rating of member-banks using the PDIC OBRM

II. IRT Framework

2008 - 2011

- IRT Framework Basic Principles:
  - The reasonable level of insurance reserves shall be determined thru a Target methodology, based on the estimated risks posed by member banks to the DIF.
  - The insurance reserves shall be maintained at a reasonable level that ensures capital adequacy.
  - Capital adequacy is essential to ensure that the Corporation can absorb losses arising from bank failures under non-systemic conditions.

II. IRT Framework

- The IRT is composed of:
  - —Specific Reserves and
  - —General Reserves
- The target was set annually

II. IRT Framework

2008 - 2011

- Banks are risk rated from a scale of 1 (worst) to 5 (best) using PDIC's OBRM

Banks-at-Risk of failing (BAR)	EID x probability x loss rate of failure	= Specific Reserves
Non-BAR	EID x 2.5%	= General Reserves

IRT = Specific + General Reserves

TARGET: DIF/IRT =100%

Since 2012

III. Expert Opinion

- In 2011, a study on Enhancement of Insurance Reserves Targeting Framework was conducted [1/] which was funded under a Technical Assistance (TA) from the World Bank/FIRST Initiative

- The objectives of the TA are:
  - to review and enhance the PDIC IRT Framework and
  - to assess what measures may be put in place to sustain the adequacy of insurance reserves

[1/] *Funded under a Technical Assistance (TA) from the World Bank/FIRST Initiative assigning Mr. Steven A. Seelig as Consultant*

III. Expert Opinion

- Guiding Principles in Assessing Adequacy of the Fund
  - reserve should be maintained at a level sufficient to assure that the PDIC has adequate capital to absorb losses from bank failures under non-systemic (normal) conditions
  - assessment should capture risks to the fund coming from both anticipated and unanticipated losses

III. Expert Opinion

Since 2012

- Conclusions on evaluation of the IRT Framework:

  Pros:

  - Indicators used in identifying banks at risk of failing are decent predictors of institutions likely to encounter problems
  - Loss rate used reflects the most recent data

III. Expert Opinion

Cons:

- IRT approach is backward looking and does not reflect changes in economic conditions or shifts in banking strategies
- Analysis used to set the reserve is relatively static
- No conceptual basis for using another country’s target rate for the general reserves

III. Expert Opinion

Recommendations:

- To develop *stress testing* and *failure prediction models* to estimate PDIC's risks in order to improve its capacity to assess and ensure adequacy of the DIF
- In the absence of said models, to use historical data on periods of stress to assess DIF adequacy based on a qualitative approach

III. Expert Opinion

Methodology:

—A 15-year historical data was used since it encompasses both the Asian and global financial crises in 1997 and 2008-2009 respectively

III. Expert Opinion

Since 2012

- Criteria for Approximation

— The fund should be sufficient to address/cover

1. actual losses on failed banks for the worst two contiguous years
2. failure of at least one large bank that under ordinary market conditions which would not be considered systemic
3. additional margin of comfort to cover unanticipated risks by providing
    a) sufficient funds to cover an additional year's failures, and/or
    b) additional commercial bank failure

III. Expert Opinion

Recommendations:

- Maintain 5% of EID target ratio
  - Failure of rural and thrift banks during periods of stress i.e. 2008-2010
  - Plus failures of the 6th and 15th largest commercial banks ranked by deposits (Not included in the analysis : Systemically important banks (SIBs) and those considered too big to fail banks)

III. Expert Opinion

- The 5% of EID will cover:

	EID	x loss rate	= Est. Losses
ANTICIPATED			
Actual failure on worst years			
2008	EID x	80%	= Est. Losses
2009	EID x	80%	= Est. Losses
Potential failure of large bank	EID x	50%	= <u>Est. Losses</u>
			Anticipated
UNANTICIPATED			
Actual failure on worst years			
2010	EID x	80%	= Est. Losses
Potential failure of large bank	EID x	50%	= <u>Est. Losses</u>
			Unanticipated

Total Est. Losses = Anticipated + Unanticipated Losses

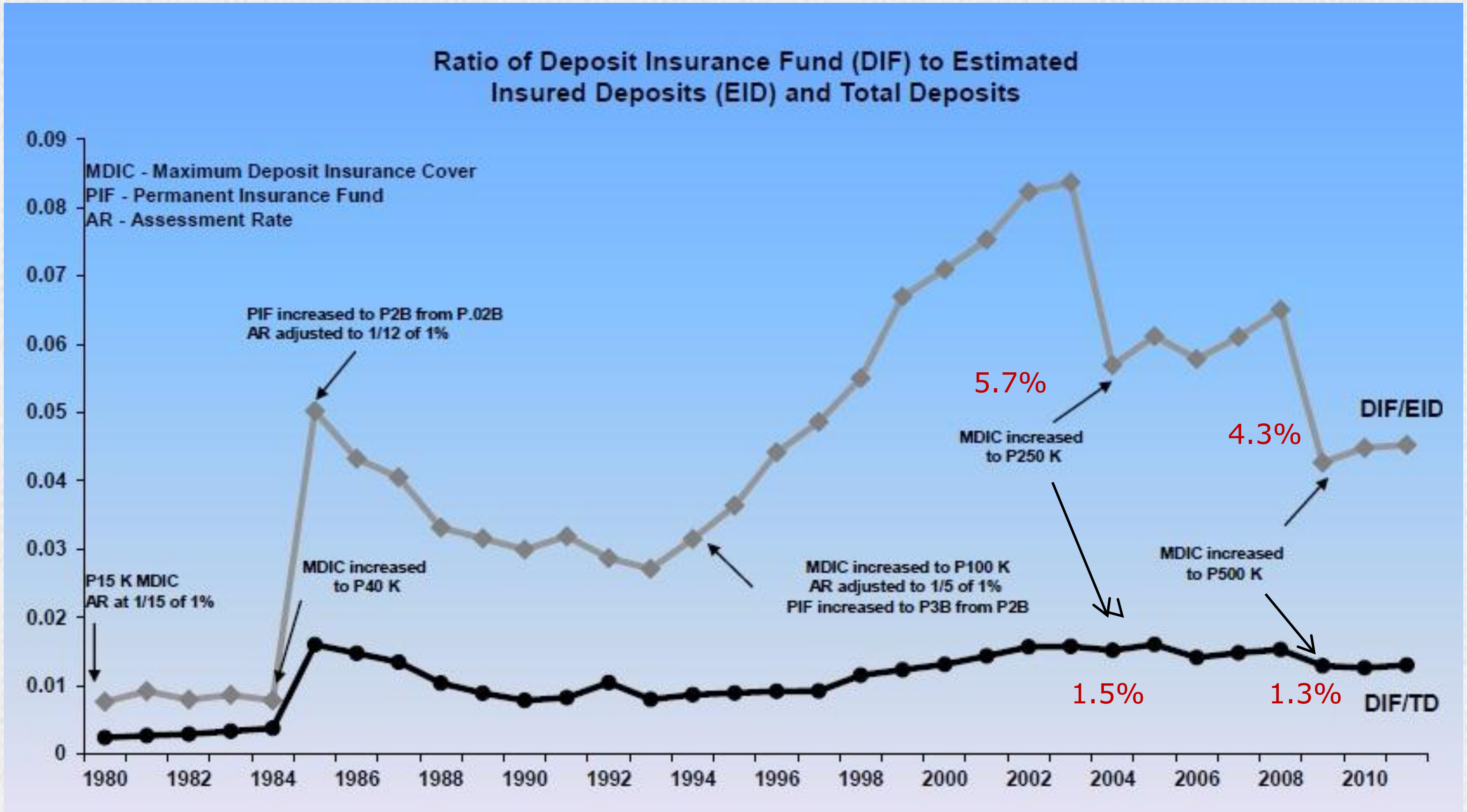
TARGET: Total Est. Losses/EID = 5%

III. Expert Opinion

Recommendations:

- DIF target be tied to insured deposits instead of total deposits
  - to reflect the risk of additional exposure of the insurance fund associated with an increase in MDIC.

III. Expert Opinion



Summary of Approaches

	**PAST** *What we have BEFORE* (2003 to 2011)			**PRESENT** *What we have NOW* 2012 to Present
Approach/ Method	Target Fund Approach/ IRT Framework			Expert Opinion
	2003	2004-2007	2008-2011 (IRT Framework)	
Target Fund Size	PhP 60 Billion	PhP 90 Billion	Ratio to DIF/IRT of 100%	**DIF/EID= 5%**

Target vs. Actual

	2009	2010	2011	2012	2013	2014
	Target Ratio DIF/IRT			Target Ratio DIF/EID		
Target	66%	77%	91%	5%	5%	5%
Actual	67%	86%	97%	5.3%	5.0%	5.6%

Moving Forward

- Conduct a study on the DIF target to ensure capital adequacy, sustain its level, and enable the Corporation to provide continuing insurance coverage to the depositing public

—Possible fine-tuning of the methodology for setting the target fund size by using the Bank Failure Prediction and Stress Testing Models

—Incorporate the results of the DIF Target Ratio study to enhance current approaches and practices

Thank you

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Expert Opinion

Since 2012

- Factors Considered in Setting the Target Fund Size
  - Financial system structure & characteristic
    - » Risk exposure
    - » Loss experience of DIA
  - Prudential regulation, supervision and its effectiveness and failure resolution regime
  - Legal framework
    - » Mandates/powers
  - Availability and accessibility of emergency/ back-up funding

Financial Models

- Bank Failure Prediction Model
  - — Comprised of 3 models with "bank failure" defined as
    - » 1) bank closings,
    - » 2) capitalization less than 2% and
    - » 3) both closings and/or capitalization less than 2%

Financial Models

- Bank Failure Prediction Model
  - Uses 5 bank condition and performance indicators/ratios representing CAEL as follows:
    - » Gross Problematic Assets-to-Unimpaired Capital
    - » Past Due Loans-to-Gross Loans
    - » Net Interest Income-to Ave. Interest Earning Assets
    - » Profit (Loss) after taxes-to-Ave. Assets (ROA), and
    - » Quick Assets-to-Total Assets
  - Familiar structure for data entry using PDIC financial ratios
  - One-year forecast horizon

Financial Models

- Stress Testing Model
  - The model is an excel based projection model principally designed to evaluate large banks and monitor problematic banks in a forward-looking manner.
  - It simulates the potential impact of assumed stress variables/set of assumptions on a bank’s capital adequacy, profitability, assets, liabilities and liquidity over a chosen projection horizon
  - Projection horizon of 12 periods may be monthly or quarterly

Financial Models

- Stress Testing Model
  - Provides financial soundness indicators
  - Allows for stress testing to be applied on a single bank or groups of banks
  - Allows for combining all the banks and applying stress testing on a system-wide basis