Manage Financial Institutions
- Credit analytical viewpoint

Shinhwa Chou, Vice President
Relationship Management, Financial Institutions Group
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Agenda

- **Analysis of banks & insurance companies**
  - From quantitative point of view
  - From qualitative point of view

- **Industry development trend & focus**

- **Strategies & Tactics to become a better FI**
  - Business Development
  - Cost Management
  - Risk Management
  - Capital Adequacy Management
How to Analyze Banks
CAMEL Approach

- Capital Adequacy
- Asset Quality
- Management
- Earnings Power
- Liquidity
**Capital Adequacy**

- **BIS Ratio**: Shareholders commitment in absorbing loss from risk assets

  Tier 1 + 2 + 3 capital - LT investment without consolidation

  > 10%

  Credit risk assets + Capital charge on market risk X 12.5

- **Tier 1**: common stocks, perpetual non-accumulated preferred shares/sub-debts, legal reserves, etc.

- **Tier 2**: Perpetual accumulated preferred shares/sub-debts, convertible bonds, bad debt reserves, 45% of re-valuation of LT capital gains, sub-debt > 5 yrs … etc.

- **Tier 3**: ST sub-debt, and non perpetual preferred shares
Capital Adequacy

■ Regulation requirement: BIS $\geq$ 8%, semi-annual release

<table>
<thead>
<tr>
<th>(十)資本適足性</th>
<th>九十三年九月三十日</th>
<th>九十二年九月三十日</th>
</tr>
</thead>
<tbody>
<tr>
<td>第一類資本</td>
<td>47,995,812</td>
<td>30,505,859</td>
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<td>第二類資本</td>
<td>16,235,214</td>
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<td>風險性資產總額</td>
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<td>380,855,700</td>
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<tr>
<td>自有資本比率</td>
<td>10.99%</td>
<td>10.52%</td>
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<tr>
<td>負債占淨值比率</td>
<td>1,094.87%</td>
<td>1,250.36%</td>
</tr>
</tbody>
</table>

■ Basel II
- Will be effective on 2006/12/31
- 3-pillar concept
- In addition to Credit Risk, Market Risk & Operational Risk are taken into consideration
As of 2004/06, Taiwan Banking Sector BIS was 10.01%
Asset Quality

- **NPL Ratio**: The potential credit cost in risk asset taking

  - **Broad Based (Narrow Based) NPL**: Net Loans < 2.5%

- **Non Performing Loan (NPL)**
  - International Standard (Broad Based): 90 days PDO (past due obligation)
  - MoF Standard (Narrow Based): 180 days PDO
## Asset Quality

- **How to read NPL Ratio on financial statements**

<table>
<thead>
<tr>
<th>(一)放款資產品質</th>
<th>九十三年九月三十日</th>
<th>九十二年九月三十日</th>
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</thead>
<tbody>
<tr>
<td>逾期放款（含催收款）</td>
<td>5,620,818</td>
<td>7,403,692</td>
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<tr>
<td>催收款</td>
<td>2,969,179</td>
<td>6,079,696</td>
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<tr>
<td>逾期比率（註5）</td>
<td>1.30</td>
<td>1.96</td>
</tr>
<tr>
<td>應予觀察放款</td>
<td>693,441</td>
<td>1,100,584</td>
</tr>
<tr>
<td>應予觀察放款占總放款比率（註5）</td>
<td>0.16</td>
<td>0.29</td>
</tr>
<tr>
<td>帳列放款及催收款準備（註5）</td>
<td>2,890,344</td>
<td>3,372,462</td>
</tr>
<tr>
<td>僵帳轉銷金額</td>
<td>6,041,134</td>
<td>6,942,834</td>
</tr>
</tbody>
</table>

**90D NPL Ratio:**  
- **1.46%**  
- **2.25%**
Asset Quality

- NPL Ratio is improving since 2001.
- Industry average is 5.29% as of 2004.
Asset Quality

- Starting from 2004/03, over 50% banks’ 90D NPL ratio is less than 5%
Asset Quality

- **Coverage Ratio**: Loss estimation from bad loans

<table>
<thead>
<tr>
<th>Loan Loss Reserve</th>
<th>&gt; 60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Performing Loan</td>
<td></td>
</tr>
</tbody>
</table>

- **Reserve adequacy is subject to**:
  - LTV Ratio: Loan / Collateral Value
  - Evaluation of collateral
    - Appraisal base
    - Update frequency
## Asset Quality

### Coverage Ratio

<table>
<thead>
<tr>
<th></th>
<th>九十三年九月三十日</th>
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</tbody>
</table>

Coverage Ratio: **45.78%**  **39.67%**
Asset Quality

Coverage ratio

2003 Industry Average 23.22%

8% 2003

16%

76%

2004 Industry Average 30.34%

16.33%

26.53%

57.14%

<40% 40-60% >60%

<40% 40-60% >60%
Earnings Power

- ROA & ROE: Collective return per $1 risk asset taking and $1 shareholder money
  - ROA > 1%
  - ROE > 15% ~ 20%

- A business indicator for assessment of:
  - Revenue Stream: diversified, sustainable
  - Cost Control: credit cost, funding cost, operational cost
  - Business Strategy: pricing strategy, loan growth plan
  - Financing Strategy: capital structure, Tier 1 capital surplus
2004 Taiwan banking’s avg. ROA: 0.61% & avg. ROE: 15.71%
Earnings Power

- Efficiency: cost to income ratio (SG&M / EBIT) < 40%
- 2004 Taiwan banking’s avg. 90.49%

![Pie chart showing distribution of efficiency ratios:]

- <40%: 33.33%
- 40-80%: 16.67%
- 80-120%: 38.10%
- >120%: 11.90%
Liquidity

- Loan to Deposit Ratio: Self-funding capability

\[
\text{Loan to Deposit Ratio} = \frac{\text{Total Net Loans}}{\text{Total Customer Deposits}} \leq 85\%
\]

- Too high or too low, for assessment of:
  - Efficiency of fund’s flow utilization
  - Adequacy of liquidity strain buffer

- Funding source consideration
  - Diversified funding: retail or wholesale
  - Sustainable deposit base
  - Alternative funding source
Liquidity

2004 Taiwan banking’s avg. L/D ratio was 81.94%
Management - Qualitative point of view

Risk Architecture

Management Reputation

Franchise
**Risk Architecture**

**Credit Risk**
- Level of sophistication of a bank’s credit committee
- Management team’s credit awareness
- Roles and responsibilities of credit management
- Systems and infrastructures to detect and manage the risk
- The evaluation model to reflect its customer’s credit soundness
- The risk profile and the composition of its customers

**Market Risk**
- Analyze whether the bank takes appropriate positions and protects against losses that result from market fluctuations, both price and liquidity risk
- We evaluate a bank’s risk identification and quantifying capabilities such as market-to-market system, its risk management skills, the limit setting, approval controls, regular reporting, ongoing validation

**Track Record of Credit Management**
- The track record reflects how a bank has managed its credit exposure and gives us an idea of where this bank stands in the industry
- Also, we can further evaluate whether a better bank can continue its strength
Management Reputation

Integrity

- the bank’s level of compliance with regulations
- accounting methods and information disclosure
- factors that may influence management integrity (which include the background and composition of the board members, whether the bank has close relationship with local conglomerate, the operation and financial soundness of the conglomerate, the level of professionalism of the team)

Strategic Vision of Business

- Strategic vision is one of the most important factors in shaping a business and anchoring the direction to which a business is heading.
- A sound management team must demonstrate that they know where they are today, where they used to be in the past, and where they want to be in the future.
- A sound management also needs to have a clear vision on how the business will be developed and the vision must be successfully implemented in each function areas, business units, product development, risk management, etc.

Execution and Leadership

- Whether the management team could establish the link between the management of human assets and the bank’s vision and strategies
- Whether the bank can realize its competitive advantage through leadership and human resource management all the way from recruitment, selection, training, retention, performance management and evaluation,
- Whether the bank could aligning the management system with business goals and the organizational structures.
Franchise

- Scale / Diversification of Business
  - number of branches,
  - asset size,
  - number of customers,
  - deposit and loan portfolio,
  - power and niche of the franchise and whether the value can be replaceable or replicated by other bank.

- Product Innovation
  - The bank has right people and mechanism to design, sell, and provide after-sales service for new products.
  - The bank can leverage on other entities to provide new products to clients.
  - Whether the bank has incentives to motivate the product innovation.
  - Whether the new products suitable and appropriate for this bank’s client.
  - Whether the product innovation fit in the bank’s vision and will benefit the bank in the long term.

- Financial Flexibility
  - Evaluate a bank’s historical financials, the capital structure, the financial instruments it has been using to raise capital.
  - Evaluate how diversified the instruments are, and how successful each fund-raising was.
  - Whether a bank is closely followed by foreign brokers and investment companies, including the percentage of foreign FIs holding, how is it rated by international rating agencies.
Quantitative and Qualitative Assessment

Key Successful Factors

- Solvency
- Liquidity
- Operating Efficiency
- Investment Return
Solvency

- The minimum standard of financial health for life insurance; it is presented by the excess of an insurer’s assets over its liabilities.

- Taiwanese insurers tend to have lower solvency ratio due to higher required reserves by local regulation. Industry average is 5.59% in 2003.

Solvency Ratio

\[
\text{Solvency Ratio} = \frac{\text{Net Worth}}{\text{Life Technical Reserves}} > 12\%
\]
Liquidity

- Insurer’s ability to meet claims payments to the policyholders when they are due.

Liquidity Ratio

\[
\text{Liquidity Ratio} = \frac{\text{Liquid Assets}}{\text{Technical Reserves}} > 70\%
\]

- Liquid Assets
  - Cash, deposits, and marketable securities

- Technical Reserves
Operating Efficiency – Claims Ratio

A rough indicator to evaluate insurers underwriting capability in pricing policy annual premium sufficient to buffer annual claims payments, based on policy actuarial estimation and policy renewal rate maintenance.

Claims Ratio

\[
\text{Claims Incurred} \quad < 90 \%
\]

\[
\text{Net Written Premium} = \text{Gross written premium} - \text{gross written premium ceded to re-insurers}
\]
Expense ratio is to assess insurers’ expenses structure and adequacy of the economy of scale for new policy sale per year.

\[
\text{Expense Ratio} = \frac{\text{Expenses}}{\text{Net Written Premium}} < 20\%
\]

- Expenses include general and administration expenses, commission expenses.
Investment Return

- Investment return measures insurers’ asset management capability in delivering claims and bonus payments to policyholders as promised in policy guarantee rates.

Investment Return

\[
\text{Investment Return} = \frac{\text{Interest Income} + \text{Trading Gain} + \text{Rental Income}}{\text{Qualified Investment Assets}} \geq \text{Averaged Policy Reserve Rate}
\]
**Investment Asset Allocation**

- Government bonds and foreign investments (mostly in securities) are the two largest asset classes in portfolio.

<table>
<thead>
<tr>
<th>Invest. Asset</th>
<th>Cathay</th>
<th>Shin Kong</th>
<th>Nan Shan</th>
<th>ING Life</th>
<th>Mercures</th>
<th>Taiwan</th>
<th>Fubon</th>
<th>China</th>
<th>Global</th>
<th>PCA</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank Deposit</td>
<td>3.11%</td>
<td>6.18%</td>
<td>0.50%</td>
<td>2.15%</td>
<td>8.92%</td>
<td>1.44%</td>
<td>1.62%</td>
<td>6.10%</td>
<td>9.37%</td>
<td>7.18%</td>
<td>4.11%</td>
</tr>
<tr>
<td>Securities-Subtotal</td>
<td>21.78%</td>
<td>26.23%</td>
<td>57.06%</td>
<td>62.42%</td>
<td>49.77%</td>
<td>56.23%</td>
<td>69.96%</td>
<td>37.88%</td>
<td>41.01%</td>
<td>56.59%</td>
<td>39.68%</td>
</tr>
<tr>
<td>Gov &amp; T Bonds</td>
<td>2.95%</td>
<td>14.05%</td>
<td>50.22%</td>
<td>47.38%</td>
<td>33.93%</td>
<td>33.27%</td>
<td>50.88%</td>
<td>20.33%</td>
<td>22.17%</td>
<td>55.30%</td>
<td>24.22%</td>
</tr>
<tr>
<td>Stock</td>
<td>7.37%</td>
<td>3.55%</td>
<td>1.71%</td>
<td>5.40%</td>
<td>7.04%</td>
<td>7.09%</td>
<td>18.35%</td>
<td>9.18%</td>
<td>4.79%</td>
<td>0.03%</td>
<td>5.80%</td>
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<tr>
<td>Corporate Bonds</td>
<td>0.75%</td>
<td>1.30%</td>
<td>2.59%</td>
<td>5.40%</td>
<td>2.74%</td>
<td>10.03%</td>
<td>0.78%</td>
<td>2.89%</td>
<td>7.21%</td>
<td>0.43%</td>
<td>2.90%</td>
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<tr>
<td>Benefit Certificates</td>
<td>5.03%</td>
<td>0.44%</td>
<td>1.88%</td>
<td>0.17%</td>
<td>4.91%</td>
<td>4.34%</td>
<td>4.84%</td>
<td>5.29%</td>
<td>5.06%</td>
<td>0.18%</td>
<td>3.11%</td>
</tr>
<tr>
<td>ST Invest</td>
<td>5.65%</td>
<td>6.91%</td>
<td>0.67%</td>
<td>4.36%</td>
<td>1.15%</td>
<td>1.51%</td>
<td>15.10%</td>
<td>0.22%</td>
<td>1.79%</td>
<td>0.17%</td>
<td>4.50%</td>
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<tr>
<td>Real Estate Invest.</td>
<td>6.80%</td>
<td>10.74%</td>
<td>0.10%</td>
<td>0.04%</td>
<td>0.00%</td>
<td>0.39%</td>
<td>0.00%</td>
<td>11.93%</td>
<td>1.71%</td>
<td>0.43%</td>
<td>4.55%</td>
</tr>
<tr>
<td>Loan to Policyholders</td>
<td>13.22%</td>
<td>14.32%</td>
<td>7.44%</td>
<td>8.08%</td>
<td>3.74%</td>
<td>6.33%</td>
<td>3.04%</td>
<td>5.38%</td>
<td>9.07%</td>
<td>8.29%</td>
<td>9.68%</td>
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<tr>
<td>Mortgage Loans</td>
<td>18.27%</td>
<td>9.36%</td>
<td>5.60%</td>
<td>9.96%</td>
<td>17.63%</td>
<td>5.31%</td>
<td>0.87%</td>
<td>6.83%</td>
<td>12.65%</td>
<td>5.56%</td>
<td>10.26%</td>
</tr>
<tr>
<td>Foreign Investments</td>
<td>33.30%</td>
<td>29.87%</td>
<td>26.11%</td>
<td>16.16%</td>
<td>13.18%</td>
<td>27.74%</td>
<td>23.57%</td>
<td>28.93%</td>
<td>24.36%</td>
<td>21.16%</td>
<td>25.44%</td>
</tr>
<tr>
<td>Project &amp; public invest</td>
<td>3.52%</td>
<td>3.44%</td>
<td>0.18%</td>
<td>1.21%</td>
<td>1.76%</td>
<td>2.10%</td>
<td>0.94%</td>
<td>3.43%</td>
<td>1.82%</td>
<td>0.72%</td>
<td>2.11%</td>
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<tr>
<td>Total (MM)</td>
<td>1,390.08</td>
<td>671.099</td>
<td>667,494</td>
<td>249,161</td>
<td>83,767</td>
<td>115,783</td>
<td>114,081</td>
<td>122,022</td>
<td>16,300</td>
<td>60,288</td>
<td>4,255,153</td>
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<tr>
<td>Inv. Return 03</td>
<td>5.18%</td>
<td>5.22%</td>
<td>6.26%</td>
<td>4.74%</td>
<td>5.03%</td>
<td>6.43%</td>
<td>5.09%</td>
<td>5.18%</td>
<td>5.73%</td>
<td>6.85%</td>
<td>5.91%</td>
</tr>
<tr>
<td>Inv. Return 02</td>
<td>4.69%</td>
<td>5.03%</td>
<td>5.89%</td>
<td>4.41%</td>
<td>3.76%</td>
<td>4.73%</td>
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Key Successful Factors

- Brand Reputation: The added value of the brand name image
- Product Innovation: Product design to meet economic environment, and policyholders’ needs
- Distribution Channel: The effectiveness of marketing channels and sales force to deliver new business growth
- Investment / Risk Management: Ability to match the investment return to the promised rate of return on the policies u/w
- Operating Efficiency: The efficiency of the business operation structure to weather changes in business environment
Industry Development Trend and Focus
As a matured economy, investment products correspond to social needs.

**Financial Product Life Cycle**

- **Deposit**
  - Savings
  - Checking
  --- etc.

- **Loan**
  - Student loan
  - Credit Card
  - Mortgage
  - Auto Loan
  - Personal Loan
  --- etc.

- **Investment**
  - Mutual Fund
  - Securities
  - Structured note
  --- etc.

- **Asset Management**
  - Insurance.
  --- etc.
Optimize Shareholders’ Value

Deliver Promising Profitability

Maximize Market Capitalization

EPS

Full P/E & P/B Multiple
Enhance Franchise Value

Market Share Dominance / Expansion

- Acquisition / Consolidation
- Organic Growth

Credit Rating Upgrade

- Risk Mgmt
  - Credit risk
  - Market risk
  - Operational risk

Corporate Governance

- Internal Control
  - Independent directors & supervisors
  - Compliance adherence

- Info Disclosure Transparency
  - Periodic biz update to the public
  - Financial reporting in line with int’l standard
Strategies & Tactics to Become a Better FI
A Good Financial Institution

- Reflect shareholders’ interest with:
  - Growth potential
  - Growth sustainability

- Approach
  - Business development
  - Risk management
  - Cost management
  - Capital adequacy management
Business Development

Revenue Diversification

By Products
- Loan / Deposit
- Investments
- FX / Derivatives
- Custody
- Cash Management
- Trade Finance

By Customers
- Individual
- Big corporate
- FI
- SME
- Public sector

By Channels
- Direct Sales
- Branch
- Third Party
- Telemarketing
- DM

By Geography
- Urban
- Island-wide
- Regional
- Global
Business Development

■ Revenue Sustainability
  – Create customer loyalty (active card usage, low mortgage attrition, high insurance retention, less frequent redemption, better x-sell ..etc)
  – Develop appropriate product mix (annuity revenue v.s. deal revenue)
  – Build cross-sale to same customer base (finance v.s. investment v.s. risk hedging)
  – Build franchise coverage/value

■ Revenue Growth
  – New customer / Selective Target Market
  – New product / Innovation
  – New market development / penetration
  – Organic growth vs Inorganic growth (M&A e.g.)
To achieve sustainable revenue growth:
- Matrix organization

<table>
<thead>
<tr>
<th>Product Family</th>
<th>APCB</th>
<th>SME</th>
<th>GRB</th>
<th>FI</th>
<th>Prof. Mkt</th>
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</thead>
<tbody>
<tr>
<td>Loan</td>
<td></td>
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<tr>
<td>Inv. Banking / CM</td>
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<tr>
<td>FX/Derivatives</td>
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<tr>
<td>Funding/Gapping</td>
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<tr>
<td>Custody</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cash/Trade</td>
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Interest Income

Fee Income

Trading Income
Risk Management

- Risk Categories

Credit Risk
- Lending
  - Direct
  - Contingent
- Counterparty
  - Pre-settlement
  - Settlement
- Issuer
- Clearing

Market Risk
- Price
  - Interest Rates
  - Stock /Commodity
- Currency
  - Volatility in Options
- Liquidity
  - Funding
  - Trading
- Underwriting

Other Major Risks
- Country
  - Political
  - Transfer/Convertibility
- Fiduciary
- Documentation
- Legal & Regulatory
- Franchise
- Fraud
- Processing
- System
Credit Risk Management

- Asset quality management to achieve the desired Risk /Return
  - Dynamically diversify credit portfolio by:
    - Business segment
      - Corporate banking, Consumer banking, Investment banking, Credit card, etc.
    - Industry
      - Industry limit determined by industry life cycle
    - Customer base
    - Product
      - Trade finance, Securities investment, Bilateral/syndication loan, Mortgage, Credit card, Vehicle loan
    - Collateral
      - Property / Mortgage, PDC, Deposit, Standby LC, Equity, Chattel, etc.
    - Geography / Sovereign
    - Obligor Risk Rating
Credit Risk Management

■ Use risk rating methodology to reflect risk level of the credit portfolio
  - Scoring method
  - Forced ranking method

■ Develop early warning / classification process to proactively monitor the credit quality

■ Establish control limit within portfolio via segment, product

■ Establish effective / efficient remedy management process

■ A required factor for BIS ratio determination under the new Basel Capital Accord
Market Risk Management

■ Liquidity Management
  – Diversified funding sources
    • Deposit / interbank borrowing / capital market
    • committed v.s. un-committed
    • short-term v.s. long-term
  – Appropriate liquid asset level
  – Dynamic asset/liability management : tenor, interest rate, currency match
  – Stress test

■ Rate Risk Management
  – VAR / Loss Limit / Sensitivity Limit
  – Stop loss discipline

■ Underwriting / Syndication Risk
Operation Risk Management

■ Operational performance
  – Infrastructure
    • System implementation and employee training
    • Routinely update infrastructure and maintain its reliability and productivity
  – Process efficiency
    • Standard procedure enhances efficiency
    • Interfaces for optimum access
  – Back-up plan
    • Business continuity test

■ Compliance risk
  – Internal control
  – Regulations
Cost Management

Marketing & Distribution

- Measure the effectiveness & efficiency
  - Marketing: DM / Advertisement
  - Distribution:
    » Branch
    » ATM or other automation platforms
    » Internet
    » Telemarketing
    » Direct sales / RM / AO
    » 3rd party
Cost Management

■ Processing
  – Regionalization / Centralization / Outsourcing
  – Automation / Straight-through Processing (STP)
  – ATM, E-trade, on-line insurance, phone-banking
  – Back-end automation / rationalization
  – re-engineering
  – quality projects
Capital Adequacy

- Risk assets requires capital reserve, and capital comes with cost. Therefore, earning power of asset is determined by:

\[ \text{ROA} \cong \text{ROE} \times \text{BIS} \]

- Calculate min ROA based on required ROE (IRR), and BIS
- Below-than-hurdle ROA will lead to BIS lower than minimum requirement
- Control BIS to improve ROE without increasing asset pricing
Strategies to Improve BIS

Financial solutions

**Balance Sheet**

**Assets**
- Asset Securitization
  - Credit Card
  - Cash Card
  - Mortgage Loan
  - Corporate Loan
- Fixed Assets (Real Estate)
  - Sell & Lease back
  - CMBS / REIT
- NPL disposal
  - Sell down to AMCs
  - Securitization

**Liabilities**
- Deposit
  - FRN / FRCD
- Bond / Debenture
  - ST Sub-Debt
  - LT Sub-Debt
- Convertible Bond

**Equities**
- Perpetual accumulated
- Preferred share
- Hybrid capital note
- Common Stock
- (ADR/GRD)

**Capital Tier**
- III
- II
- I
Strategies to Improve BIS

- Business model adjustment

BIS = NW

Earnings power improvement
- Cross-sale
- Price to risk
- Product breadth

Credit portfolio optimization
- Credit risk mitigation
- Risk assets reallocation

Risk weight transparency
- Credit risk rating model

Eliminate Market / operational risk
- Operation outsourcing
- Insurance
- Hedging