



# Shin Kong Life Insurance Co Limited .

Review of the Embedded Value as at 31.12.2005 and  
Value of 2005 New Business

8 May 2006  
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Audit . Tax . Consulting . Financial Advisory .



# Disclaimer

Certain of the statements contained herein are statements of future expectations and other forward-looking statements. These expectations are based on Shin Kong Life's views and assumptions and involve known and unknown risks and uncertainties.

Actual results, performance or events may differ materially from those in such statements due to, among other things, (i) general economic conditions, (ii) performance of financial markets, (iii) the frequency and severity of insured loss events, (iv) mortality and morbidity levels and trends, (v) persistency levels, (vi) interest rate levels, (vii) currency exchange rates, (viii) general competitive factors, (ix) changes in laws and regulations, (x) changes in the policies of the governments and/or regulatory authorities.

Shin Kong Life or Deloitte Actuarial assume no obligation to update any forward-looking information contained in this document.

The embedded value does not necessarily represent a sale value of the Company, nor the value which may be ascribed to the business by a potential buyer.

Deloitte gives no opinion on the "fair market value" of the Company.

In forming our opinion, we have relied on the veracity and integrity of the non-policy data information supplied by the Company. We have reviewed it for general reasonableness but did not independently verify this information. Policy data was independently checked and verified.

Deloitte Actuarial's review has been carried out in accordance with the methods, approach and other considerations as set out in:

- the relevant parts of:
  - Guidance Note 252 of the Institute of Actuaries of Australia entitled "Economic Valuations of Life Insurance Business", and
  - Guidance Note 552 of the Institute of Actuaries of Australia entitled "Economic Valuations", and
- the Professional Conduct Standards as defined by the Professional Affairs Board of the Institute and Faculty of Actuaries.

# Agenda

- Purpose and Scope of Deloitte Actuarial's Engagement
- Overview of Methodology and Definitions
- Review of Assumptions
- Review of Cash Flow Projection Model
- Review of Policy Data
- Results
- Analysis of Change of Value of In Force Business

# Purpose and Scope

- Purpose of Role of Deloitte

The purpose of Shin Kong Life's engagement of Deloitte Actuarial was to give an independent review and opinion on the reasonableness of the calculation done by the Company of their embedded value (EV) and value of one year's new business (V1YNB) and sensitivity tests of the same.

- Scope

- Review the EV (at 31.12.05) and V1YNB (1.1.05 – 31.12.05);
- Review and comment on the reasonableness of the assumptions, taking into consideration both Shin Kong Life's recent experience and our own knowledge of the Taiwanese life insurance market. The review covers the economic as well as the portfolio assumptions;
- Validate the financial cash flow projection model used by Shin Kong Life for EV and V1NB calculations, and recommend changes to the model where considered necessary so that the model operates correctly and models the products accurately;
- Examine the integrity of the policy data used in the financial model to calculate the values by way of comparing the starting policy statistics produced by the cash flow projection model against those on the Company's administration system;
- Check the reasonableness of the Company's valuation results by examining the profitability by individual product and by line of business, the net asset value and any other adjustments outside of the Prophet model;
- Review the calculation of the cost of capital by the Company;
- Review the analysis of change in VIF carried out by the Company.

- Key Points

- The valuation was carried out by Shin Kong Life
- Deloitte Actuarial has provided an independent review of the valuation of the EV and V1YNB
- The "multiplier" used to determine the value of future new business in the appraisal value is entirely the work of Shin Kong Life; Deloitte Actuarial offers no opinion on either the multiplier or the appraisal value

# Overview: Appraisal and Embedded Values

## An embedded value (EV) is equal to:

- The net worth
- + The value of in force business (VIF)

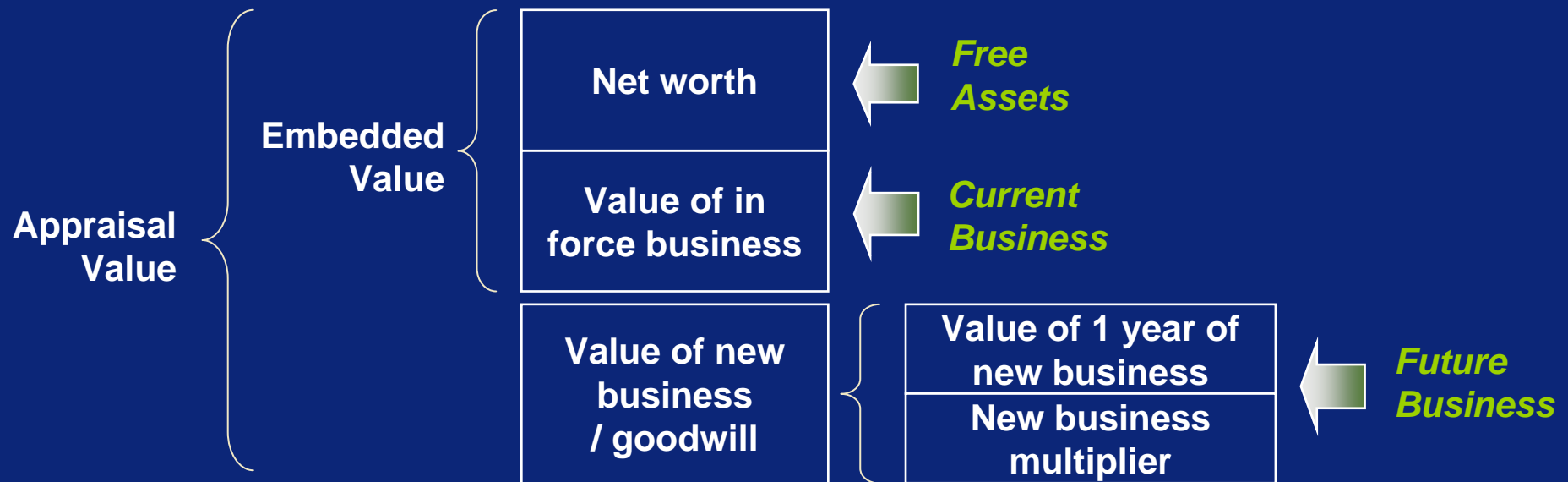
## An appraisal value (AV) is equal to:

- The embedded value
- + The value of future new business (VNB)

## The VNB is equal to:

- The value of one year's new business (V1YNB)
- x New business "multiplier"

- **Net worth**  
This is the value of the shareholder equity, or free assets
- **Value of in force**  
This is the value of future profits from business already sold
- **Value of new business / goodwill**  
This is the value of future profits from all business to be sold in the future
- **Value of one year's new business**  
This is the value of future profits from the business actually sold in the previous 12 months, valued from the point of sale
- **New business multiplier**  
This subjective component requires a view to be taken on the company's future new business volumes and profitability.



# Overview: “Cost of Capital”

- The “Cost of Capital” (“CoC”) is a negative adjustment to both the value of in force business and the value of future new business (and value of one year’s new business)
- It refers to the **opportunity cost** of needing to hold an **additional solvency margin** above the statutory reserves
- This is a standard calculation, in line with internationally accepted practice for EV
- **Additional solvency margin**
  - A minimum level of additional solvency margin is prescribed by the regulator
  - This margin must be held for as long as there are policies are in force, both now and in the future
  - It is not shown on the statutory balance sheet, and the statutory profits therefore do not take any account of the need to reserve for the additional solvency capital
  - Statutory profits cannot therefore be released to shareholders as they arise; part or all are retained in the company to fund the additional solvency margin
  - It can be released later as policies mature
- **Opportunity cost**
  - The assets covering the additional solvency margin are expected to earn the **long term earning rate**
  - However, shareholders expect a return on any capital invested equal to the **risk discount rate**
  - There therefore exists a gap, or **opportunity cost**, between the rate of return expected by the shareholders and the actual rate of return that can be achieved
  - This is determined to be a “cost” of doing business in this market and should be reflected in the value of the business

# Overview: Shin Kong Life's CoC Assumption

- In Taiwan the additional solvency margin is in the form of RBC (Risk Based Capital)
- The current minimum statutory requirement for the additional solvency margin in Taiwan is **200% of the standard RBC**
- Shin Kong Life has calculated its cost of capital based on 200% of the standard RBC
- Shin Kong Life's EV and V1YNB are therefore reflective of the minimum regulatory solvency requirement

# Assumptions: Risk Discount Rate

- Shin Kong Life's derivation

Shin Kong Life derived the Risk Discount Rate (RDR) assumption using the CAPM approach and with the following parameters:

	As at 31 December 2005
Risk Free Rate	3.75%
Taiwan Equity Risk Premium	6.25%
Beta	1.16
Theoretical Risk Discount Rate	11.0%
Risk Discount Rate used in Valuation	11.9%

Shin Kong Life kept the final RDR assumption unchanged from that used in the last valuation at 11.9%. The spread between the final assumption and that derived based on the CAPM approach allows for the risk associated with proxy hedging assumed in the investment strategy.

- Deloitte Actuarial's comments

Deloitte Actuarial carried out an independent calculation of the RDR and derived 12.0%. The assumption used by the Company is close to our independently derived RDR.



# Assumptions: Investment Return

- **Shin Kong Life's derivation**

Shin Kong Life kept the investment return assumption unchanged from that used in the last valuation:

Assumed Rate of Investment Return	5.05%
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- **Shin Kong Life's rationale**

Interest rates will rise in the next 10 to 20 years to the level in the US plus a country risk margin

Shin Kong Life expect to implement a certain percentage of proxy hedging; the risk of proxy hedging is allowed for in the higher RDR

With possible relaxation of overseas investment limit (possibly rising from 35% to 50% of total investments), Shin Kong Life expect to have more overseas investments in future, enhancing the overall return

- **Deloitte Actuarial's comments**

The investment return assumption is in the form of a single long-term average rate, reflecting the long-term nature of the liabilities. It takes account of the current low interest rate situation and assumes that interest rates in Taiwan will rise over the long term to levels consistent with US interest rates. It is a common practice that we have observed in the valuation done by other life insurance companies in Taiwan to assume future interest rate rises in the investment return assumption, and we view Shin Kong Life's assumption as being reasonable in this context.

We note that some observers might regard this practice as being aggressive

We have reviewed the impact on the values which would have resulted had different investment return assumptions been used

# Assumptions: Other Economic

- Deloitte Actuarial have reviewed the following other economic assumptions set by Shin Kong Life and used in this valuation:

Assumptions	Changes from Last Valuation	Deloitte Actuarial's Comments
Dividend interest rate	Similar to assumption used in last valuation	Assumption is consistent with investment return assumption and is within a reasonable range
Crediting rate	Assumption has increased such that the spread between the Company's earned rate and credited rate is in line with the Company's crediting strategy	Assumption is consistent with investment return assumption, SKL management strategy and regulations governing declaration of crediting rate
Inflation rate	No change	Assumption is consistent with the investment return assumption and within a reasonable range

# Assumptions: Portfolio

- Deloitte Actuarial have reviewed the following portfolio assumptions set by Shin Kong Life and used in this valuation:

Assumptions	Changes from Last Valuation	Deloitte Actuarial's Comments
Mortality assumption	Decreased slightly to reflect the improvement in mortality seen in both company and industry experience	Assumption is in line with company and industry experience and within a reasonable range
Morbidity assumption	Increased slightly to reflect the recent experience and expectation of future experience	Assumption is in line with company and industry experience and within a reasonable range
Lapse assumption	Similar to last valuation, lapse assumption varies by product line and by pricing interest rate. Overall lapse assumption has decreased slightly, reflecting experience observed in the industry	Assumption is in line with company and industry experience and within a reasonable range
Expense and override assumption	Higher fixed expenses per policy and lower percentage of premium expenses are assumed this year. Override assumption has decreased from that used in last valuation	Assumption is in line with the Company's expected future expense level. We are satisfied that it reasonable to move to a higher weighting towards per policy expenses

# Cash Flow Projection Model

- Deloitte Actuarial have reviewed the cash flow projection model used by Shin Kong Life in this valuation

**We found the model to be materially sound and accurate**

- The modelled results at product group level as well as of the surveyed individual products were found to be consistent with:
  - the product and policy features
  - the data features
  - the chosen assumption set
  - internationally accepted methods and approaches for these valuations
- Deloitte Actuarial spotted certain errors in the assumption tables and had a different view on the treatment of premium tax for the unit-linked product; all of these errors were quickly corrected by the Company
- A comparison of the results between the cash flow projection model and the Company's ALM model was satisfactory

# Policy Data

- Why does the policy data need to be reviewed?

In order for the cash flow projection model to carry out the valuation, policy data on the company's mainframe computer has to be converted into a format readable by the model, and summarised into smaller blocks, but without losing accuracy

- How was this done?

We carried out checks on the summarised data files to ensure that the integrity of the policy data had been maintained during the conversion process

Checks were by means of reconciling statistics produced by the model (e.g. no. of policies in force, statutory reserve in force) with actual statistics from the Company's mainframe and audited returns

- Results of our review

We were satisfied that the modelled statistics are materially consistent with the policy data on the mainframe

# Results: Embedded Value

Unit: NTD bn Valn Date: 31 December 2005 Solvency Basis: 200% RBC			Base Case Scenario		
	All else equal except:		Inv Return 5.05% p.a. RDR 11.9% p.a.	All else equal except:	
	Inv Return 4.80%	Inv Return 5.30%		RDR 10.9%	RDR 12.9%
Net Worth	84.6	84.6	<b>84.6</b>	84.6	84.6
VIF	20.3	56.1	<b>38.3</b>	41.3	35.9
EV (before COC)	<b>104.9</b>	<b>140.7</b>	<b>122.9</b>	<b>125.9</b>	<b>120.5</b>
Cost of Capital (COC)	36.4	32.9	<b>34.6</b>	33.2	35.7
EV (after COC)	<b>68.5</b>	<b>107.8</b>	<b>88.3</b>	<b>92.7</b>	<b>84.8</b>

All values are calculated by Shin Kong Life. Results are independently checked and verified by Deloitte Actuarial. Figures above may not add up exactly due to rounding.

# Results: Value of One Year's New Business

Unit: NTD bn Valn Date: Point of Sale for sales January 05 to December 05 Solvency Basis: 200% RBC			Base Case Scenario		
	All else equal except:		Inv Return 5.05% p.a. RDR 11.9% p.a.	All else equal except:	
	Inv Return 4.80%	Inv Return 5.30%		RDR 10.9%	RDR 12.9%
V1NB before COC	8.2	9.6	<b>8.9</b>	9.7	8.2
Cost of Capital (COC)	1.0	0.9	<b>1.0</b>	0.9	1.0
V1NB after COC	7.2	8.7	<b>7.9</b>	8.8	7.2

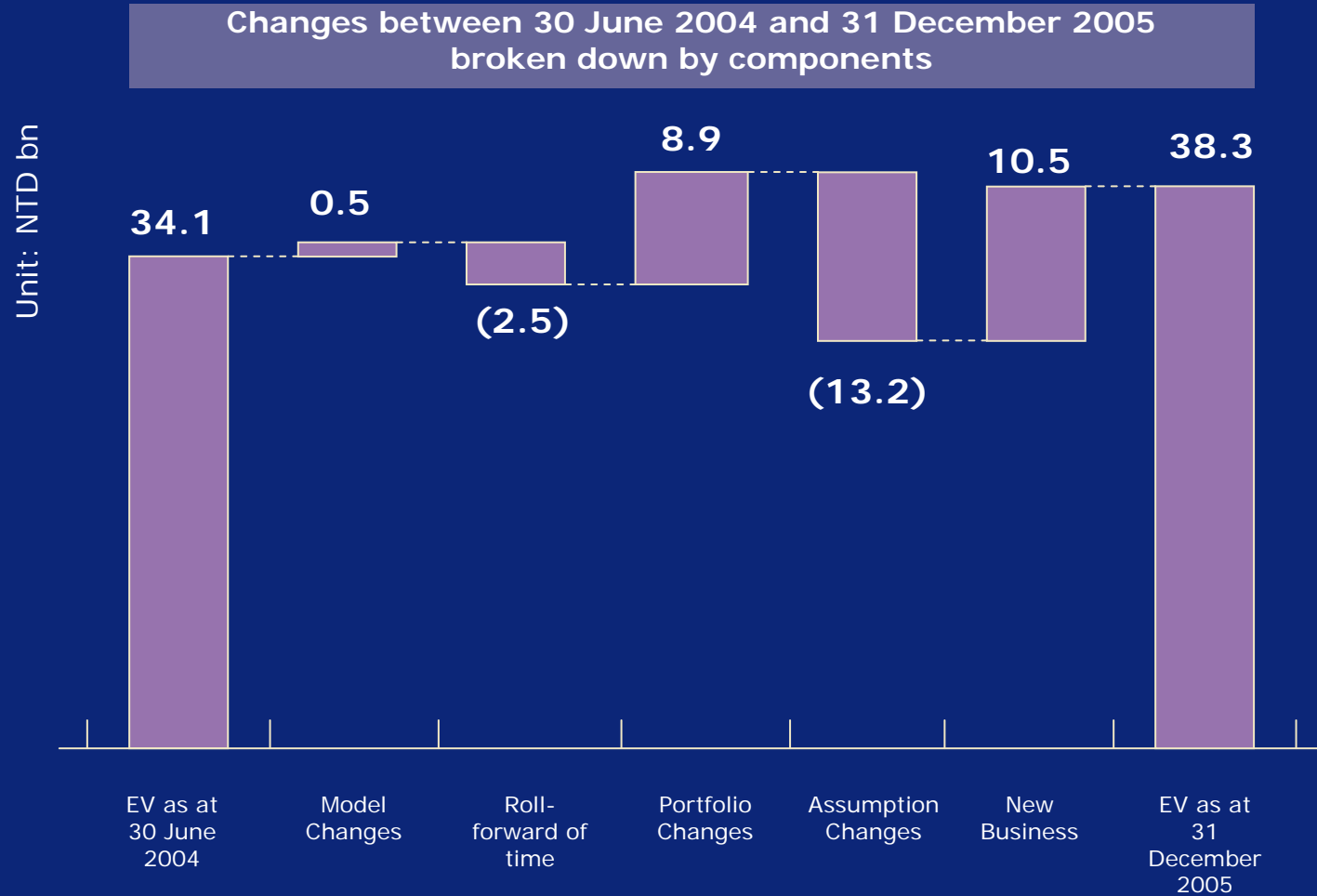
All values are calculated by Shin Kong Life. Results are independently checked and verified by Deloitte Actuarial. Figures above may not add up exactly due to rounding.

# Change in VIF before CoC: Definitions

- The change in **Value of In Force Business before Cost of Capital** from June 2004 to December 2005 has been broken down into the following components:
  - **Model changes**  
Refinements and/or corrections made to the cash flow projection model since last valuation date
  - **Roll-forward of time**  
Impact to EV as at 31 December 2005 due to elapse of time between June 2004 and December 2005
  - **Portfolio changes**  
Differences in the policies in force as at 31 December 2005 projected by the June 2004 valuation assumptions and the actual policies in force as at valuation date
  - **Assumption changes**  
Differences in valuation assumptions used in last valuation and this valuation
  - **New business**  
Refers to policies sold between 30 June 2004 and 31 December 2005, and their contribution to the EV as at this valuation date



# Change in VIF before CoC: Results



All values are calculated by Shin Kong Life. Results are independently checked and verified by Deloitte Actuarial.

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We are one of the leading professional services providers in the Chinese Mainland, Hong Kong SAR and Macau SAR. We have more than 5,000 people in ten offices including Beijing, Dalian, Guangzhou, Hong Kong, Macau, Nanjing, Shanghai, Shenzhen, Suzhou and Tianjin.

As early as 1917, we opened an office in Shanghai. Backed by our global network, we deliver a full range of audit, tax, consulting and financial advisory services to national, multinational and growth enterprise clients in China.

We have considerable experience in China and have been a significant contributor to the development of China's accounting standards, taxation system and local professional accountants. We also provide services to around one-third of all companies listed on the Stock Exchange of Hong Kong.

**Deloitte.**

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# SKL - Estimate of Appraisal Value Results

Unit: NT\$Bn Valn Date: 31 Dec, 05 Solvency Basis: 200% RBC			Base Case Scenario		
	All else equal except		Inv Return 5.05% p.a. RDR 11.90% p.a.	All else equal except	
	Inv Return 4.8%	Inv Return 5.3%		RDR 10.90%	RDR 12.90%
Net Worth	84.6	84.6	<b>84.6</b>	84.6	84.6
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Cost of Capital(COC)	36.4	32.9	<b>34.6</b>	33.2	35.7
<b>EV after COC</b>	<b>68.5</b>	<b>107.8</b>	<b>88.3</b>	<b>92.7</b>	<b>84.8</b>
<b>V1NB after COC</b>	<b>7.2</b>	<b>8.7</b>	<b>7.9</b>	<b>8.8</b>	<b>7.2</b>
After COC					
<b>AV (5 years NB)</b>	<b>91.5</b>	<b>135.2</b>	<b>113.3</b>	<b>121.2</b>	<b>107.2</b>
<b>AV (20 years NB)</b>	<b>118.5</b>	<b>167.8</b>	<b>143.0</b>	<b>157.4</b>	<b>131.9</b>

Notes:

The Appraisal Value of a life company is often used as one measure of market value and as such can be considered a measure of value to shareholders, though this is not the only measure, nor should it be considered the final value. This economic value represents the potential value as an ongoing concern to its current shareholders. It identifies and quantifies the potential future earnings streams of the products and services as a result of the supporting infrastructure, technologies and distribution.