

# Embedded Value

## 內涵價值

### 1. BACKGROUND

The Group consists of three major business segments: the life insurance business, property and casualty insurance business and reinsurance business. The Group also has other companies and operations in the areas of investment holding, asset management, pensions and other businesses. The life insurance segment operated by TPL, a 50.05%-owned subsidiary, has become significant part of the Group in terms of gross premiums written, total assets and profitability. In order to provide investors with additional information to evaluate the profitability and valuation of TPL, the Group decided to disclose the Embedded Value and New Business Value of TPL. The Embedded Value consists of the shareholders' adjusted net worth plus the present value of future expected cash flows to shareholders from the in-force business, less the cost of holding regulatory solvency capital to support the in-force business. The New Business Value represents an actuarially determined estimate of the economic value arising from the new life insurance business issued during the past one year.

The Group's two other major business segments (property and casualty insurance and reinsurance) and its other operations (collectively, "Other Core Operations") continue to develop well. To provide investors with further information on these operations, the Group has now decided to also disclose the Group Embedded Value. The Group Embedded Value is defined as the Adjusted Net Worth of the Other Core Operations plus the Embedded Value of TPL. The Adjusted Net Worth of the Other Core Operations is determined by Hong Kong Financial Reporting Standards, with marked-to-market and goodwill adjustments. Please note that the Group Embedded Value calculation does not include any valuation for future new business.

### 1. 背景

本集團由三項主要業務分部組成：人壽保險業務、財產保險業務及再保險業務。本集團亦有其他公司經營投資控股、資產管理、養老保險及其他業務。太平人壽（本公司持有50.05%股權之附屬公司）運作之人壽保險分部就其毛承保保費額、總資產及盈利能力而言是本集團日益重要之部份。為向投資者提供額外資料以評估太平人壽之盈利能力及估值，本集團披露太平人壽之內涵價值及新業務價值。內涵價值包括經調整股東資產淨值及未來有效業務可為股東創造之預期現金流之現值，扣減為支持有效業務而按照監管要求持有償付資本之成本。新業務價值乃指以精算方法評估的在過去一年售出的人壽保險新業務所產生的經濟價值。

本集團另外兩個主要業務分部（財產保險及再保險）及其他業務（統稱「其他核心業務」）繼續發展良好。為向投資者提供更多有關以上營運的資料，本集團披露集團的總內涵價值。總內涵價值乃定義為其他核心業務的經調整資產淨值，加上太平人壽的內涵價值。其他核心業務的經調整資產淨值按香港財務報告準則釐定，並對市價及商譽作出調整。請注意總內涵價值的計算並不包括日後任何新業務的估值。

## Embedded Value 內涵價值

### 2. BASIS OF PREPARATION

The Group has appointed PricewaterhouseCoopers (“PwC”), an international firm of consulting actuaries, to examine whether the methodology and assumptions used by TPL in the preparation of the Embedded Value and the New Business Value as at 31 December 2011 are consistent with standards generally adopted by insurance companies in the PRC. PwC has also examined the methodologies used by the Group in preparing the Group Embedded Value.

### 3. CAUTIONARY STATEMENT

The calculations of Embedded Value and the New Business Value of TPL are based on certain assumptions with respect to future experience. Thus, the actual results could differ significantly from what is envisioned when these calculations were made. In addition, the Group Embedded value is also based on certain assumptions, and should not be viewed as the only benchmark for evaluating and valuing the businesses and operations of the Group. From an investor’s perspective, the valuation of CTIH is measured by the stock market price of the Company’s shares on any particular day. In valuing CTIH’s shares, investors should take into account not only the Embedded Value and the New Business Value of TPL and the Group Embedded value, but also various other considerations. In addition, TPL is 50.05%-owned by the Company. The Embedded Value and the New Business Value of TPL as at 31 December 2011 as disclosed below should therefore not be applied 100% in valuing CTIH. Investors are advised to pay particular attention to this factor, as well as the other assumptions underlying the calculations of the Embedded Value and New Business Value of TPL and the Group Embedded value, if they believe such calculations are important and material to the valuation of the Company.

### 2. 編製基準

本集團已委聘國際諮詢精算師普華永道（「普華永道」），審查太平人壽編製於二零一一年十二月三十一日內涵價值及新業務價值時所採用之方法及假設與中國的保險公司一般採納的準則是否一致。普華永道亦有審查本集團於編製總內涵價值時採用的方法。

### 3. 提示聲明

計算太平人壽的內涵價值及新業務價值乃基於有關未來經驗之若干假設。故此實際結果可能與作出該等計算時之預測有重大差異。此外，總內涵價值亦基於若干假設，因此不應視之為評價及評估本集團業務營運的唯一基準。從投資者角度看，中國太平控股之估值乃按照本公司股份於某個別日子之股市價格計量。於評估中國太平控股股份時，投資者不僅要慮及內涵價值及新業務價值及總內涵價值，而且亦應考慮到其他多項因素。此外，本公司擁有太平人壽之50.05%股權。因此，不應把下列所披露之於二零一一年十二月三十一日之太平人壽內涵價值及新業務價值全數作為中國太平控股的估值。倘若彼等認為該等因素重要，及對本公司之估值關係重大。投資者務須特別留意該因素，及其他支持計算太平人壽內涵價值及新業務價值計算及總內涵價值之因素。

## Embedded Value 內涵價值

### GROUP EMBEDDED VALUE

At 31 December, HK\$ million

### 總內涵價值

於十二月三十一日，百萬港元

			2011	2010
Adjusted net worth *	經調整資產淨值 *	<b>a</b>	<b>10,034</b>	13,144
Value of in-force business before cost of capital for TPL	太平人壽有效業務扣除 資本成本前之價值	<b>b</b>	<b>21,375</b>	14,156
Cost of capital for TPL	太平人壽資本成本	<b>c</b>	<b>3,061</b>	2,653
Value of in-force business after cost of capital for TPL	太平人壽有效業務扣除 資本成本後之價值	<b>d=b-c</b>	<b>18,314</b>	11,503
Group embedded value	總內涵價值	<b>e=a+d</b>	<b>28,348</b>	24,647
Attributable to:	應佔：			
Owners of the Company	本公司股東權益		<b>17,074</b>	15,731
Non-controlling interests	非控股股東權益		<b>11,274</b>	8,916
Group embedded value	總內涵價值		<b>28,348</b>	24,647

\* The adjusted net worth is measure based on CTIH's audited net asset value, after making the following major adjustments:

- (1) TPL's net asset value is measured based on the PRC statutory basis;
- (2) Certain asset values have been adjusted to their market values;
- (3) Goodwill and intangible assets produced during consolidation have been deducted.

\* 經調整資產淨值是按太平控股經審計後資產淨值，及進行以下主要調整而計量：

- (1) 太平人壽資產淨值以中國法定準則計量；
- (2) 若干資產價值調整至市場價值；
- (3) 扣除合併賬產生的商譽及無形資產。

## Embedded Value 內涵價值

### EMBEDDED VALUE OF TPL

#### 1. EMBEDDED VALUE

At 31 December, HK\$ million

			2011	2010
Adjusted net worth	經調整資產淨值	<b>a</b>	<b>3,260</b>	6,008
Value of in-force business before cost of capital	有效業務扣除資本成本 前之價值	<b>b</b>	<b>21,375</b>	14,156
Cost of capital	資本成本	<b>c</b>	<b>3,061</b>	2,653
Value of in-force business after cost of capital	有效業務扣除資本成本 後之價值	<b>d=b-c</b>	<b>18,314</b>	11,503
Embedded Value	內涵價值	<b>e=a+d</b>	<b>21,574</b>	17,511
Attributable to:	應佔:			
Owners of the Company	本公司股東權益		<b>10,798</b>	8,764
Non-controlling interests	非控股股東權益		<b>10,776</b>	8,747
Embedded Value	內涵價值		<b>21,574</b>	17,511

Adjusted net worth is the shareholders' net assets of TPL as measured on a PRC statutory basis, with fair value adjustment to certain assets.

經調整資產淨值是太平人壽按中國法定基準計量之股東資產淨值，並對若干資產的公允價值進行調整。

### 太平人壽之內涵價值

#### 1. 內涵價值

於十二月三十一日，百萬港元

## Embedded Value 內涵價值

### EMBEDDED VALUE OF TPL (Continued)

#### 2. NEW BUSINESS VALUE

HK\$ million

			For the Past 12 Months as of 31 December 2011 於二零一一年 十二月 三十一日 過去十二個月	For the Past 12 Months as of 31 December 2010 於二零一零年 十二月 三十一日 過去十二個月
New business value before cost of capital	新業務扣除資本成本前之價值	a	2,833	2,540
Cost of capital	資本成本	b	589	713
New business value after cost of capital	新業務扣除資本成本後之價值	c=a-b	2,244	1,827

### 太平人壽之內涵價值 (續)

#### 2. 新業務之價值

百萬港元

#### 3. MOVEMENT ANALYSIS OF EMBEDDED VALUE

The following analysis shows the movement of the Embedded Value from 1 January 2011 to 31 December 2011.

#### 3. 內涵價值之動態分析

以下分析反映自二零一一年一月一日至二零一一年十二月三十一日期間內涵價值之動態變化。

		Notes 附註	HK\$ million 百萬港元
Embedded Value as at 1 January 2011	於二零一一年一月一日 之內涵價值		17,511
New business value	新業務之價值	a	2,244
Expected return on Embedded Value	內涵價值預期回報	b	1,548
Assumption and modeling changes	假設及模型變化	c	1,400
Investment return variance	投資回報差異	d	(4,024)
Dividend variance	分紅差異	e	1,585
Other experience variance	其他經驗差異	f	442
Exchange gain	匯率收益	g	868
Embedded Value as at 31 December 2011	於二零一一年十二月三十一日 之內涵價值		21,574

# Embedded Value

## 內涵價值

### EMBEDDED VALUE OF TPL (Continued)

#### 3. MOVEMENT ANALYSIS OF EMBEDDED VALUE (Continued)

Notes:

- (a) New business contribution from sales of new business in 2011.
- (b) Return on value of in-force business plus expected interest on adjusted net assets.
- (c) Changes from model improvements and assumption changes having an impact on the future distributable earnings of the in-force business.
- (d) Differences between the actual investment returns and expected investment returns in 2011.
- (e) Differences between the actual and expected policyholder dividend in 2011 and the increase of accumulated loss in participating fund in 2011, which is assumed to be recovered from future profit.
- (f) Differences between the actual experience and expected experience for mortality, morbidity, lapses, expenses, income tax and business taxes.
- (g) Exchange gains arising from the appreciation of the RMB.

#### 4. KEY ASSUMPTIONS

TPL has adopted the best estimate approach in setting the assumptions used in the calculation of its embedded value and new business value. The assumptions have been based on the actual experience of TPL and certain benchmarks set by referencing general PRC economic conditions and the experience of other life insurance companies.

##### 4.1 Risk discount rate

The risk discount rate represents the long-term, post-tax cost of capital of the investor for whom the valuation is made, together with an allowance for risk, taking into account factors such as the political and economic environment in the PRC.

### 太平人壽之內涵價值 (續)

#### 3. 內涵價值之動態分析 (續)

附註：

- (a) 二零一一年新業務銷售之貢獻。
- (b) 有效業務回報加調整後淨資產預期利益。
- (c) 此項包括模型改進及假設改變所引起的變化，對未來有效業務之可分配收入將有所影響。
- (d) 此乃二零一一年實際投資回報與預期投資回報之間的差額。
- (e) 此乃二零一一年實際保單持有人分紅與預期保單持有人分紅之間的差額及二零一一年分紅基金的累計虧損增加，假定未來的盈利可抵銷該累計虧損。
- (f) 此乃實際經驗與預期經驗之間的差額主要包括死亡率、發病率、退保、費用、稅項及營業稅。
- (g) 人民幣升值所產生的匯率收益。

#### 4. 主要假設

太平人壽在設定計算內涵價值及新業務價值之假設時乃採納最佳估計方法。有關假設乃基於太平人壽之實際經驗，及參照中國之整體經濟狀況及其他壽險公司之經驗而設定之若干基準。

##### 4.1 風險貼現率

風險貼現率乃指接受估值之投資者之稅後長期資本成本，同時慮及中國有關政治經濟環境等因素對風險作出調整。

# Embedded Value

## 內涵價值

### EMBEDDED VALUE OF TPL (Continued)

#### 4. KEY ASSUMPTIONS (Continued)

##### 4.1 Risk discount rate (Continued)

As calculated, the discount rate is equal to the risk-free rate plus a risk premium. The risk free rate is based on the PRC ten-year government bond and the risk premium reflects the risk associated with future cash flows, including all of the risks which have not been considered in the valuation.

The risk discount rate currently applied by TPL is 11.5% for all in force and new business.

##### 4.2 Investment return

Future investment returns have been calculated as the weighted average of the investment returns on existing assets and new assets assuming an investment return of 4.29% (2010: 4.2%) on new assets from fixed income securities. The investment returns on existing assets have been determined by the projected investment income in future years divided by the projected value of the assets. The calculation of projected investment income and the value of assets are based on yield to maturity, term to maturity and the book value of the assets.

The investment returns have been assumed to be 4.1% in 2012 (2010: assumed to be 4.05% in 2011), increasing to 4.5% in 2020 and thereafter (2010: 4.5% in 2020 and thereafter).

##### 4.3 Expenses

Expenses have been projected based on benchmark assumptions.

### 太平人壽之內涵價值 (續)

#### 4. 主要假設 (續)

##### 4.1 風險貼現率 (續)

計算時，貼現率乃按無風險利率加風險溢價計算。無風險利率乃基於中國十年政府債券，而風險溢價反映與未來現金流有關之風險，包括所有在估值時未有慮及之風險。

太平人壽現時就其所有有效業務及新業務所採納之風險貼現率均為11.5%。

##### 4.2 投資回報

未來投資回報乃按現有資產及新貨幣之加權平均投資回報計算，假設新固定收入證券資產之投資回報為4.29% (二零一零年：4.2%)。現有資產之投資回報乃按未來年度之預期投資收益除以有關資產之預期價值計算。預期投資收益及資產價值乃基於滿期收益率、發行期限及資產之賬面值計算。

投資回報假設於二零一二年為4.1% (二零一零年：假設於二零一一年為4.05%)，於二零二零年及以後年度提高至4.5% (二零一零年：於二零二零年及以後年度為4.5%)。

##### 4.3 費用

費用乃根據基準假設而預計。

## Embedded Value 內涵價值

### EMBEDDED VALUE OF TPL (Continued)

#### 4. KEY ASSUMPTIONS (Continued)

##### 4.4 Tax

The tax rate is assumed to be 25% according to the tax regulations of the PRC.

##### 4.5 Mortality

The experience mortality rates have been based on 70% of the China Life Insurance Mortality Table (2000-2003) for non-annuitants, with a three-year selection period. For annuity products, 80% and 70%, for male and female respectively, of the China Life Insurance Mortality Table (2000-2003) for annuitants have been used.

##### 4.6 Morbidity

The experience morbidity assumptions have been based on the Group's own pricing tables. The loss ratios for short term accident and health insurance business have been assumed to be in the range of 37% to 50% (2010: 40% to 57%).

##### 4.7 Lapses

The lapse assumptions have been based on TPL's actuarial pricing assumptions and adjusted to reflect the results of its recent experience studies.

##### 4.8 Required capital

The required capital has been based on 100% of the minimum solvency margin (2010: 120%).

### 太平人壽之內涵價值 (續)

#### 4. 主要假設 (續)

##### 4.4 稅項

根據中國訂定之稅務規例，稅率為25%。

##### 4.5 死亡率

經驗死亡率乃按中國人壽保險業經驗生命表(2000-2003)非養老金業務表，加三年選擇期之70%比率為基準計算，就年金產品而言，按中國人壽保險業經驗生命表(2000-2003)養老金業務表的男性及女性的比率分別為80%及70%為基準計算。

##### 4.6 發病率

發病率根據本集團本身的定價表假設計算。短期意外及健康險業務的賠付率乃假設以37%到50%之間的比率計算(二零一零年：40%到57%)。

##### 4.7 退保

退保假設乃基於太平人壽之精算定價假設，並作出調整，以反映其最近之經驗考察結果。

##### 4.8 資本要求

資本要求是按最低償付能力的100%計算(二零一零年：120%)。



## Embedded Value 內涵價值

### EMBEDDED VALUE OF TPL (Continued)

#### 5. SENSITIVITY TESTING

Sensitivity testing in respect of the following key assumptions are summarized below:

At 31 December 2011, HK\$ million

Assumptions 假設		Value of in-force business after cost of capital 有效業務於扣除 資本成本後 之價值	New business value after cost of capital 新業務於扣除 資本成本後 之價值
<b>Base scenario</b>	<b>基本情景</b>	<b>18,314</b>	<b>2,244</b>
Risk discount rate of 12.5%	風險貼現率為12.5%	17,310	2,014
Risk discount rate of 10.5%	風險貼現率為10.5%	19,451	2,506
Investment return increased by 25bp every year	投資回報每年提高25點子	19,098	2,397
Investment return decreased by 25bp every year	投資回報每年下跌25點子	17,518	2,091
10% increase in maintenance expenses	維持費用提高10%	18,140	2,214
10% decrease in maintenance expenses	維持費用下跌10%	18,478	2,273
10% increase in lapse rates	退保率提高10%	18,436	2,226
10% decrease in lapse rates	退保率下跌10%	18,163	2,256
10% increase in mortality and morbidity rates and claims ratio	死亡率及發病率及 賠付率提高10%	18,197	2,219
10% decrease in mortality and morbidity rates and claims ratio	死亡率及發病率及 賠付率下跌10%	18,421	2,268
Policyholder dividend increased from 70% to 80%	保單持有人股息由 70%提高至80%	16,341	1,913
Lapse rates for Universal Life increased to 50% at the end of the 10th policy year	萬能壽險於第十個 保單年度之退保率 提高至50%	18,260	2,244
Required capital at 150% of solvency margin	資本要求按150%的 償付能力	16,250	1,864

### 太平人壽之內涵價值 (續)

#### 5. 敏感性測試

有關如下主要假設之敏感性測試概述如下：

於二零一一年十二月三十一日，百萬港元