Milliman EV Publication

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2013 Mid-Year Embedded Value Results: Generating Value

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INTRODUCTION

Disclosed embedded value (EV) results suggest overall that the first half of 2013 has proved to be relatively buoyant, indicative of growing consumer confidence in the European market. Economic performance has improved with equity markets rallying and credit spreads narrowing. Companies have, however, continued to find frustrating the lack of focused direction for Solvency II and the additional burden of understanding IFRS Phase II. Embedded value reporting has provided companies with a familiar metric with which to showcase to the market their performance and continues to be a key supplementary reporting metric.

As expected, fewer companies published mid-year embedded values compared to the year-end and the level of detail is typically scaled back. Of the 29 companies covered in our 2012 year-end publication, 12 disclosed mid-year results. However, those communicating to the market do so in a manner that provides insight over the first half of 2013. Furthermore, no firms disclosed any significant changes to their underlying embedded value methodology (the principles followed, the construction of the risk discount rate, the cost of non-hedgeable risks, the valuation of options and guarantees, etc.).

This mid-year publication provides an update on the embedded value reporting for European insurance companies that have published embedded value results as at the end of June 2013. For a detailed discussion on embedded value methodology, please see our year-end publication *2012 Embedded Value Results – Generating Value*.

We also include a comprehensive section on embedded value reporting in Japan. This covers the performance of key Japanese companies reporting embedded value and the *hot topic* issues facing the Japanese market.

THE STORY IN EUROPE

General improvement in equity market performance (as shown in Figure 1) and property values have been characterised by positive returns. However, many companies included in this update have stated that rising interest rates over the first half of 2013 (as shown in Figure 2) have had a dampening effect on embedded values.



Source: Bloomberg

Figure 1 shows that equity markets continued to rise over the first half of 2013 with the FTSE 100 increasing by 5.4%, FTSE All-Share by 6.4%, CAC 40 by 2.7%, and the DAX Index by 4.6%.

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FIGURE 2: RECENT TRENDS IN GBP AND EUR SWAP RATES



Source: Bloomberg

Figure 2 shows that GBP and EUR interest rates had generally been falling at all durations up to the end of 2012. However, for durations five years and longer they have risen sharply over the first half of 2013, whereas rates at short durations (such as one-year) have remained relatively stable.

Credit spreads continued to narrow over the first half of 2013. Those companies reflecting a liquidity premium in their risk-free rate implemented a small reduction within the range of zero to ten basis points.

Embedded value

Against this economic backdrop, companies included in our mid-year update have performed reasonably well over the first six months of 2013. Almost all companies that disclosed embedded value results at the mid-year experienced an increase in embedded value, of varying degrees, compared to year-end 2012. Figure 3 shows the embedded value for CFO Forum member and non-member companies that reported mid-year 2013 results. The combined embedded value was GBP116 billion at mid-2013 compared to GBP110 billion at year-end 2012.

Against this economic backdrop, companies included in our mid-year update have performed reasonably well over the first six months of 2013.



FIGURE 3: PUBLISHED EMBEDDED VALUE RESULTS AT MID-YEAR 2013 AND YEAR-END 2012, 2011 AND 2010

Source: Embedded value disclosures

The embedded values presented in Figure 3 include both covered and non-covered business. The top three performers based on percentage increases in embedded value (in domestic reporting currency) since year-end 2012 were St James's Place, Royal London, and Prudential.

St James's Place saw positive performance in three key areas: robust new business volumes, better than expected persistency experience, and very strong positive experience variance (primarily driven by the expected use of existing capital losses over the medium term). The UK environment experienced a number of regulatory and market changes as a result of the Retail Distribution Review (RDR), for example. St James's Place states that it has navigated the new distribution landscape well by growing the size of its adviser team.

Royal London identified several areas as contributing to its strong performance seen over the first six months of 2013. Although the new business sold was written with lower margins, this was counteracted by greater volumes. Indeed the dominant contributors from its pension and offshore investment business saw healthy increases in new business volumes. Both persistency and economic variances made significant contributions to the overall buoyant set of embedded value results for Royal London.

Prudential's Asian business continued to spearhead its fortunes, showing the largest increase in new business contribution. Overall, three areas were cited as contributing to the increase in embedded value: strong new business growth, increased underlying profitability of the in-force book, and the growing trend of higher interest rates (feeding through into economic assumption revisions). The other main contributors, the US and UK, performed solidly despite experiencing challenging conditions, for example from the continuing downturn in the variable annuity (VA) market affecting US sales (albeit offset by Prudential's VA without guarantees product) and the RDR impacting on savings new business in the UK.

Value of new business

The overall results for new business remained healthy for the first six months of 2013, with the vast majority of companies covered in our analysis reporting an increase in the value of new business compared to the equivalent six-month period in 2012. The total value of new business (VNB) reached GBP2.5 billion at mid-2013 compared to GBP1.9 billion at mid-2012.

Figure 4 shows the VNB performance over mid-2012, full-year 2012, and mid-2013. Prudential, Zurich Insurance Group (ZIG), and Aviva took the top three positions in terms of VNB at mid-2013. The top performer by percentage increase compared to mid-2012 was Aviva.

Prudential ZIG Aviva Legal & General CNP Standard Life St James's Place Old Mutual Resolution Royal London Phoenix Chesnara 0 500 1,000 1,500 2,000 **GBP** millions 2013 (Mid-year) 2012 (Year-end) 2012 (Mid-year)

FIGURE 4: PUBLISHED VALUE OF NEW BUSINESS AT MID-YEAR 2013, YEAR-END 2012 AND MID-YEAR 2012

Source: Embedded value disclosures

Prudential achieved relatively modest growth in both the volume of new business sold and the new business margins compared to other companies in our analysis. However, new business margins were above the average exhibited across our selection of companies and moreover, in absolute terms, the value of Prudential's new business for the first half of 2013 was more than double that of its nearest competitor.

ZIG saw one of the larger rises in new business margins, which drove the relatively significant increase in VNB. This in part was due to the first-time inclusion of VNB from Zurich Santander. The majority of ZIG's operations around the globe experienced increases except for Germany and the UK. The UK did see a dip in volumes, including in individual savings business, which is maybe a response to the market adjusting to the post-RDR landscape. ZIG's Swiss operations saw a significant increase in VNB, primarily driven by repricing of its protection business.

Aviva's increases were driven by a number of its operations around the world, including the UK, France, Turkey, and Asia. The UK operations experienced reduced volumes but benefited from higher margins that were partly due to repricing of annuities. However, some hefty decreases (in percentage terms) were seen in Italy and Spain–which are indicative of the ongoing difficult economic and consumer climates in these regions. The overall results for new business remained healthy for the first six months of 2013, with the vast majority of companies covered in our analysis reporting an increase in the value of new business.

OTHER MEASURES OF VALUE

In this section we discuss how results from embedded values compare and contrast with other metrics used by parties such as investors or market analysts. In particular, we consider first how embedded value compares to market capitalisation and then give a brief update on recent developments in both Solvency II and IFRS reporting.

Market capitalisation

It is often interesting to compare companies' reported embedded values with their market values at the same reporting date. The former can be seen as the company's own view of the value of its existing business (subject to the constraints imposed by the relevant principles under which an embedded value is calculated) and the latter can be seen as the market's view of the value of the business as a whole. Differences between the disclosed embedded value and the market capitalisation can be due to a number of reasons whose impact may not always be entirely clear. For example, no allowance is made within a company's embedded value calculation for future new business sales or for intangible assets such as the loyalty of a customer base, which may be factors investors consider and hence should be reflected within the market capitalisation. This may suggest that, as long as these items are thought to create value, market capitalisation should exceed the reported embedded value. Another reason for discrepancies may be timing differences between the availability of embedded value and market data.

Figure 5 shows the market capitalisation as a percentage of the embedded value for the current CFO Forum members that disclosed embedded values as at 30 June 2013, 31 December 2012, and 31 December 2011. Recently, the ratio of market capitalisation to embedded value has been rather volatile for many companies. Compared to the 2012 year-end ratios, most companies that disclosed an embedded value saw a rise in this ratio as their market value increased at a greater rate (an average of 9.8%) compared with the embedded values (with an average increase of 5.9%).



FIGURE 5: MARKET CAPITALISATION AS A PERCENTAGE OF EMBEDDED VALUE AS AT MID-YEAR 2013, YEAR-END 2012 AND 2011

Source: Bloomberg and embedded value disclosures

Compared to the 2012 year-end ratios, most companies that disclosed an embedded value saw a rise in this ratio as their market value increased at a greater rate compared with the embedded value.

Solvency II developments

The uncertainty surrounding the final form and implementation timetable for Solvency II continued throughout the first half of 2013. As such, it remains difficult to assess what the impact on embedded value reporting will be. The results from the Long-Term Guarantee Assessment (LTGA), conducted by the European Insurance and Occupational Pensions Authority (EIOPA) during March 2013, showed that further changes were needed to the proposed package of measures intended to address issues associated with products with long-term guarantees before it can be finalised. While the package of measures continues to recognise the illiquidity premium in firms' long-term asset investments through adjustments to the discount rate used to value corresponding liabilities, the details of these adjustments have been updated. Specifically, it is proposed to:

- Replace the countercyclical premium with a volatility adjustment based on a proportion of the spread on a representative portfolio of assets.
- Restrict the matching adjustment to products exposed only to longevity risk.
- Introduce a 'catch-all' transitional measure aimed at moving technical provisions in linear fashion from Solvency I to Solvency II.

While the full implementation date for Solvency II is not likely until 1 January 2016 at the earliest, the following elements of the Solvency II project look likely to be phased in from 1 January 2014:

- Forward-looking assessment of the undertaking's own risks, based on the Own Risk and Solvency Assessment (ORSA) principles.
- System of governance.
- Pre-application of internal models.
- Reporting.

Although the final guidelines for the introduction of these elements are still outstanding, the reporting requirements in particular look likely to require firms to put in place processes to provide Solvency II balance sheet reporting from 1 January 2014. While this does not specifically require firms to provide calculations and results on a Solvency II basis, with Solvency I requirements still in force, this will potentially leave firms reporting on at least three different metrics for the interim period.

IFRS developments

In June 2013, the International Accounting Standards Board (IASB) issued an Exposure Draft (ED) on insurance contracts, which builds on the ED issued in 2010. The revised ED proposes some farreaching changes to accounting for insurance contracts. It may be implemented as early as year-end 2018, and is open for comments until 25 October 2013. It is a significant milestone in the IASB's long-running project on insurance contracts.

Some of the key proposals in the ED include:

- Balance sheet liabilities will reflect current discount rates, but the impact of changes in discount rates will be split on the income statement. A portion will be recognised in the profit and loss (P&L) statement and a portion through 'Other Comprehensive Income.'
- There is a proposal for a 'mirroring' approach. This applies when payments to policyholders depend on the return on underlying assets, as would be the case for unit-linked business or potentially with-profits business. Under this approach, the cash flows which vary directly with the underlying asset are separated from other cash flows, and the accounting for them follows the accounting on the underlying asset. It means that the P&L in the estates of UK with-profits companies will be recognised immediately with no mechanism for smoothing short-term fluctuations. It also means that the portion of the estate set aside to cover new business and unforeseen events is recognised as a liability rather than in equity.
- The balance sheet follows the 'building block' approach outlined in the earlier ED. Under this approach, there is no profit on initial recognition of a contract-profit (and revenue) is recognised as services are delivered to the policyholder.
- Revenue is no longer directly linked to the premiums written.

JAPANESE MARKET EMBEDDED VALUE REPORTING

As at the fiscal year ending 31 March 2013, 14 domestic Japanese life insurance entities¹ representing 19 separate Japanese life insurance companies disclosed embedded values. The reporting companies accounted for more than 80% of Japanese industry assets. In addition, several subsidiaries of European insurers report embedded values as part of their parents' reporting processes. Most Japanese companies employ a market-consistent approach, and several have fully adopted the CFO Forum's Market Consistent Embedded Value (MCEV) principles over the past few years. Three companies report on a traditional embedded value basis. The relative homogeneity of reporting approaches facilitates comparability of results by company. Figure 6 shows the framework followed by our group of 14 Japanese entities over fiscal years 2012 and 2011.²

FIGURE 6: EV REPORTING PRINCIPLES FOR JAPANESE COMPANIES

EV REPORTING PRINCIPLES	20	11	2012 ³		
	REPORTING ENTITIES	INDIVIDUAL COMPANIES	REPORTING ENTITIES	INDIVIDUAL COMPANIES	
EEV	0	0	0	0	
MARKET-CONSISTENT EEV	8	12	8	11	
MCEV	2	2	3	5	
OTHER	3	3	3	3	
TOTAL	13	17	14	19	

Source: Embedded value disclosures

For companies reporting under a market-consistent basis, it is fair to say that any deviations from the principles of the CFO Forum are minor. The most common–showing the sensitivity of results to a change in yield curve of 50 basis points rather than 100 basis points–is not unreasonable given today's very low interest rate environment.

Recent trends in reported embedded value

Embedded values dropped materially after the 2008 financial crisis, which was due mainly to the impact of declining equity values on reported capital and surplus. Since then, embedded values have gradually recovered, though results have been volatile from period to period.

Perhaps the most striking feature of embedded values reported by traditional Japanese companies is the extremely low value of in-force business when compared to the size of the book of business. This is a result of the low interest rate environment and the negative spread (the excess of the rate credited to policyholders over the actual rate earned on assets) that persists on older blocks. In fact, the value of in-force business is negative on many of these older blocks. Related to this, as market interest rates fluctuate, the shift of reported value between capital and surplus and in-force value can be dramatic.

- ¹ By 'entity' we mean any organisation that issues an embedded value report. Some companies having multiple subsidiaries, such as Dai-ichi Life, report a consolidated embedded value. In this situation, we count one reporting entity. In addition, we count one individual company for each Japanese life subsidiary whose results are shown in the consolidated report. In some cases, such as TMN, subsidiaries prepare separate reports and there is no consolidation. We count each of these subsidiaries as a reporting entity and an individual company.
- ² Fiscal 2012 in Japan is the year ending 31 March 2013.
- ³ The increase in number of reporting entities from 13 to 14 was due to the notable addition of Kampo (Japan Post Insurance), Japan's largest life insurer. Kampo published results under a market-consistent EEV basis. Also during this period, T&D Holdings (the parent of Taiyo, Daido, and T&D Financial) moved from a market-consistent EEV approach to MCEV, and Sumitomo Life published market-consistent EEV results for their Medicare Life subsidiary.

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Perhaps the most striking feature of embedded values reported by traditional Japanese companies is the extremely low value of in-force business compared to the size of the book of business. The decline in existing business value was particularly notable as of the year-end closing on 31 March 2013. Because interest rates were near historical lows (less than 1% on a 10-year Japanese government bond), existing business value approached zero for many of the companies that have large legacy blocks. There was a substantially offsetting increase in adjusted net worth for most companies. Overall, embedded values increased for most Japanese firms in fiscal year 2012, which was due to a solid contribution to value from new business and to equity gains that emerged as Japan's stock market recovered from recent lows. Figure 7 illustrates this trend in increasing embedded value over the past few years.

FIGURE 7: PUBLISHED EMBEDDED VALUE RESULTS AT END FISCAL YEAR 2012, 2011 AND 2010



Source: Embedded value disclosures

Note: The 2010 result for NKSJ Himawari combines Himawari Life's MCEV and Nippon Koa Life's TEV; subsequent years are based on MCEV for both companies. The 2010 result for T&D Holdings is based on EEV; subsequent years are based on MCEV.

The recovery in embedded value was particularly dramatic at Meiji Yasuda, Dai-ichi Life, and Sumitomo Life. Although these companies have reduced equity holdings compared to those that were typical 20 years ago, they retain large enough equity holdings to have reaped the benefit of recent improvements in equity markets.

The situation with respect to new business value appears more typical of what one might expect in other developed markets. Newly issued business has been priced to reflect the low interest rate environment. As a result, and because of strong margins on protection business, most companies anticipate healthy gains on new business. A new business margin (embedded value divided by the present value of new business premiums) of 5% could be viewed as reasonably typical, with most companies reporting results in a range of 3% to 8%.





Source: Embedded value disclosures

Japan's low interest rate environment and volatility in the equity markets have led companies to review and frequently revise product strategies. In spite of the low interest rate environment, the largest companies have seen growth in new business value since 2010. Because Japanese company reporting of new business results is less detailed⁴ than that offered by many European insurers, it is challenging to gain a precise understanding of the drivers of growth in new business value. Some of the growth in value as well as the volatility in reported results (as illustrated by the decline in Meiji Yasuda's new business value in 2012) is due to growth or decline in the volume of single premium business sold through bank channels.

Risk discount rate overview

The key areas of consideration when determining the risk discount rate to use in the calculation of embedded value include:

- Whether to construct the risk discount rate using a bottom-up or top-down approach.
- Whether to use swaps or Japanese government bonds (JGB) as the underlying basis for the riskfree rate.
- Whether an allowance for any liquidity premium is made.
- The extrapolation of the yield curve.

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⁴ In particular, Japanese companies typically do not include a breakdown showing the movement in new business value from one year to the next.

Because the majority of Japanese companies employ some form of market-consistent methodology (see Figure 9), a bottom-up approach is most commonly followed.

Corporate Group	Principles	Risk Discount Rate Methodology	Underlying Basis for Discount Rate	Liquidity Premium	Extrapolated Risk-Free Curve?
Dai-ichi Life Group	EEV (MC)	Bottom-up	JGB	Not disclosed	Υ*
Kampo	EEV (MC)	Bottom-up	JGB	Not disclosed	Y, flat beyond year 30
LifeNet	EEV (MC)	Bottom-up	Swaps	Not disclosed	Not disclosed
Meiji Yasuda	EEV (MC)	Bottom-up	Swaps	Not disclosed	Y, flat beyond year 40
Mitsui	EEV (MC)	Bottom-up	Swaps	Not disclosed	Y, flat beyond year 30
MS Aioi	EEV (MC)	Bottom-up	JGB	Not disclosed	Y, flat beyond year 30
MS Primary	EEV (MC)	Bottom-up	Swaps	Not disclosed	Y, flat beyond year 40
NKSJ Himawari	MCEV	Bottom-up	JGB	No	Y, flat beyond year 40
Orix	TEV	Top-down	N/A	N/A	N/A
Sony	MCEV	Bottom-up	JGB	No	Y, flat beyond year 40
Sumitomo Life Group	EEV (MC)	Bottom-up	JGB	Not disclosed	Y*
T&D Holdings	MCEV	Bottom-up	JGB	No	Y, flat beyond year 30
TMN Anshin	TEV	Top-down	N/A	N/A	N/A
TMN Financial	TEV	Top-down	N/A	N/A	N/A

FIGURE 9: OVERVIEW OF RISK DISCOUNT RATE CONSTRUCTION

* Takes into consideration the relevant Japanese swap rate for periods greater than 30 years. Source: Embedded value disclosures

All companies following market-consistent methodologies use swap rates or JGB yields to represent the risk-free rate; at this point, no company discloses the use of a liquidity premium and there does not appear to be a move in that direction. Many companies prefer to use JGB yields in lieu of swaps which is due in part to the relatively high proportion of general account assets allocated to JGBs. MCEV companies using JGBs as the risk-free proxy report a sensitivity showing results under the swap curve.

Extrapolation of the yield curve is commonplace. Once again, there is a fairly even split in approach, with companies choosing either 30 or 40 years as the point after which the yield curve is assumed to be flat.

Cost of capital

As the majority of companies apply a market-consistent approach to their embedded value reporting, the cost of capital is typically modelled using a frictional cost approach. The required capital used in the calculation is generally set with reference to the Japanese regulatory solvency standard, often guided by the results of an internal model. It is typical to include a sensitivity showing the value that would emerge assuming adherence only to the minimum statutory requirement.

All companies following market-consistent methodologies use swap rates or JGB yields to represent the risk-free rate.

Residual non-hedgeable risks

As required by the CFO Forum MCEV Principles, all companies reporting under an MCEV approach explicitly allow for a cost of residual non-hedgeable risks (CRNHR). All follow an economic capital approach, with Sony and NKSJ disclosing methods that parallel those prescribed under Solvency II. Japanese companies reporting under EEV typically employ a simplified model. Details are described in Figure 10.

FIGURE 10 OVERVIEW OF APPROACH TO RESIDUAL NON-HEDGEABLE RISKS

Group	Model	Method	Equivalent cost of capital charge	Covered risk
Dai-ichi Group	Simplified model	Not disclosed	N/A	Operational risk and the risk that the existing tax loss carry forward cannot be fully utilised are explicitly disclosed.
Kampo	Simplified model	Not disclosed	N/A	Operational risk, catastrophe risk, and the risk that the existing tax loss carry forward cannot be fully utilised are explicitly disclosed.
LifeNet	Simplified model	Not disclosed	N/A	Insurance risks including lapse risks, mortality and morbidity risks, and operational risks are explicitly disclosed.
Meiji Yasuda	Simplified model	Not disclosed	N/A	Operational risk, pandemic risk, and the risk that the existing tax loss carry forward cannot be fully utilised are explicitly disclosed.
Mitsui Life	Simplified model; as it pertains to operational risk, a Solvency II type method is followed	Operational risk is calculated by cost of capital	6.0%	Operational risk is calculated by a Solvency II type method. Other risks are not explicitly disclosed and are calculated by a simplified model.
MS Aioi	Simplified model	Not disclosed	N/A	Operational risk and the risk that the existing tax loss carry forward cannot be fully utilised are explicitly disclosed.
MS Primary	Simplified model	Not disclosed	N/A	Counterparty risk from the reinsurer for minimum guarantee risk from variable insurance, operational risk, and the risk that the existing tax loss carry forward cannot be fully utilised are explicitly disclosed.
NKSJ Himawari	Economic capital, Solvency II type (LTGA)	Cost of capital	6.0%	An allowance for the uncertainty of non-economic assumptions and the portion of economic assumptions considered to be non-hedgeable.
Sony	Economic capital, Solvency II type (QIS5)	Cost of capital	2.5%	An allowance for the uncertainty of non-economic assumptions and the portion of economic assumptions considered to be non-hedgeable.
Sumitomo Life Group	Not disclosed	Cost of capital	2.5%	Operational risk, unavoidable market risk, uncertainty risk of non- economic assumptions and the risk that the existing tax loss carry forward cannot be fully utilised.
T&D Holdings	Economic capital (calibrated to a 99.5 percentile value at risk over one year)	Cost of capital	2.5%	An allowance for the impact of extreme events such as operational risk, catastrophe risk, reputational risk, other asymmetric impacts of non- economic assumptions, and the risk of unrecoverable tax losses and non-hedgeable financial risks; in addition, an allowance for additional uncertainty not included in these elements.

Source: Embedded value disclosures

MARKET CAPITALISATION

For listed companies, ratios of market capitalisations to embedded value since the financial crisis have been extremely low. While listed companies traded for approximately 100% of embedded value in the years leading up to the crisis, ratios typically fell to below 50% shortly after the initial crisis and have not materially recovered since then. Market capitalisation to embedded value trends are shown in Figure 11 for several companies where such a comparison is appropriate. Many companies are excluded from this analysis because they are either a mutual, closely held, or part of a larger group where the life company embedded value represents a small proportion of the group's total value.



Note: For Sony, market capitalisation reflects Sony Financial, while embedded value is that for Sony Life, the largest contributor to Sony Financial value.

Source: Nikkei Kaisha Jouhou, Financial Reports and Embedded Value Disclosures

Prior to the crisis, market participants appeared willing to value life insurance companies at or above embedded values. Immediately after the crisis, reported embedded values declined at both Sony and T&D Holdings; although stock prices declined as well, the ratio remained initially near or above 100%. Over the next several years, a recovery in embedded value was accompanied by a gradual ongoing decline in stock prices; the ratio of market capitalisation to embedded value moved towards a range of 40% to 60%. Dai-ichi Life Group's market capitalisation has traded in this range subsequent to its initial public offering (IPO).

Why has this ratio never recovered? Some observers have argued that the life sector is undervalued. Potential reasons are outlined in Figure 12.

FIGURE 12: POTENTIAL REASONS UNDERLYING THE LOW RATIOS OF MARKET CAPITALISATION TO EMBEDDED VALUE FOR JAPANESE LISTED LIFE INSURERS

Reason	Explanation
Low Discount Rates and Long Tail Profits	Some analysts and potential investors may be concerned that the low risk-free rate used to discount long tail profits leads to an overstatement of value, especially on highly profitable protection business. While the low discount rate should be compensated for by the CRNHR and other elements underlying market-consistent reporting, investors may not fully understand the methodology or may believe that the CRNHR is understated.
Fear of Price Competition	Japanese company mortality and morbidity margins exceed margins that can be earned in many of the developed markets on broadly similar business. Investors likely fear growing price competition.
Saturated Market	The Japanese population is highly insured; the potential size of the market may be declining because of Japan's declining population and workforce. Combining this concern with the fear of price competition, investors may place little value on new business.
Possible Understatement of the Cost of General Account Options	Insurance companies offering book value withdrawals on traditional savings products face potentially severe disintermediation risk. A material increase in interest rates will certainly lead to an increase in lapses. Though it is difficult to model policyholder behaviour, if rates were to return to historical norms, the market may experience materially increasing lapses.
	In addition, whilst most companies now believe that liability durations exceed the durations of their asset portfolios, it is not difficult to envision scenarios where this relationship is reversed. Japanese companies may be exposed to material balance sheet risk, and this may be depressing market capitalisations.
Broader Macroeconomic Concerns	The low valuation of Japanese life insurers likely reflects general market concern, in particular concerns over Japan's economy, demographics, global competition, and the prospects for 'Abenomics.' 5
Limited Market Acceptance of Embedded Value as a Performance Measure	Analysts may not fully accept or understand the approach. Results have been volatile, which is due both to volatility in life insurer balance sheets and to the impact of fluctuating market interest rates. In spite of the low ratio of market capitalisations to embedded values, price-earnings ratios are rather high. Confusion over this disconnect may be depressing insurer values.

The issues raised in Figure 12 are legitimate items for discussion and analysis. However, it is important to adopt a balanced view. For example, although low discount rates may lead to a favourable valuation of long-term profits, they also increase the liability associated with investment guarantees. Indeed, for most companies, gradually increasing rates—both earned rates and risk-free discount rates—would lead to significantly enhanced embedded values.

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⁵ http://www.milliman.com/insight/insurance/Op-Ed-Misconceptions-regarding-deflation-and-stimulus-in-Japan/

Future challenges

Price competition may continue to increase in Japan, but any increase is likely to be gradual. Companies still have opportunities to enhance efficiencies; they can counter growing competition through enhanced capital allocation and careful operational change. While Japan's demographic situation implies that the traditional life segment is shrinking, there may be growing opportunities in the health and retirement income sectors.

Japanese insurers face significant market pressures and balance sheet risk. In this context, embedded value reporting or similar techniques will remain an important financial metric for Japanese insurers. We anticipate a continuation of the trend of the past two decades toward enhanced transparency in financial reporting. This will facilitate the work of analysts and will help management better understand and manage the drivers of risk and profitability. Whilst Japan will not be for the faint of heart, it will certainly be an interesting market to follow.

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