Strategic asset allocation for Asia-Pacific life insurers

How optimized is your portfolio?
The journey to optimization

Many life insurers that pursued de-risking activities after the financial crisis are revisiting their strategic asset allocation (SAA) and exploring investment into higher-yielding assets. Conventional bond strategy is becoming relatively less attractive due to pressure from low yields and increased credit volatility. As the regulatory environment changes and insurance market competition intensifies across the Asia-Pacific region, risk and capital profiles continue to evolve. These factors will likely have investment implications on the cost of capital and pricing competitiveness.
On the supply side, it is encouraging to see that alternative investment markets such as property, credit lending and infrastructure have opened up for insurers. However, without a sound asset liability management (ALM) strategy, insurers chasing high yields and short-term tactical gains could put their earnings and solvency position at risk. As a result, we believe that insurers should look to optimize their risk-adjusted return via the use of a redefined efficient frontier.

In this paper, we will explore a new efficient frontier that is customized based on a life insurance company’s key performance indicators (KPIs), risk appetite limits and capital constraints. This approach integrates investment, risk and capital management into one powerful framework. We will also provide a glimpse into an EY proprietary SAA database that allows asset allocation and assumptions to be compared with industry practices.

Why optimize your asset portfolio?

- Increase embedded value, IFRS profits and long-term investment returns through yield enhancement, alternative and offshore investments
- Improve capital efficiency by optimizing shareholder returns at a given level of risk and practical constraints, allowing full rewards for the risks that are taken
- Enhance product competitiveness by offering better yields to policyholders and improving the likelihood of meeting illustrated bonuses
- Unlock free surplus by diversifying into alternative and offshore asset classes that have a low (or even negative) correlation with existing core assets
- Better manage risk vulnerability and surplus volatility by selecting a portfolio that minimizes risk exposure, such as interest rate duration and convexity mismatch between assets and liabilities
In Asia-Pacific markets, we found that most life insurers’ SAAs can be further optimized. This can be explained by local regulatory constraints and capital charges, limited financial instruments in domestic markets, and complexity in managing the risk and return trade-off from the various perspectives of shareholders, policyholders, regulators and rating agencies.

Exhibit 1 illustrates conceptually how an optimized SAA can be achieved using ALM techniques. The “efficient frontiers” represent all possible combinations of SAAs that offer the highest return at a given level of risk and constraint. In this example, embedded value and economic capital form the basis of the return and risk dimensions, respectively. Note that the dimensions can differ depending on the company’s KPIs, such as IFRS earnings versus risk-based capital for a domestic insurer or return on equity versus Solvency II for a multinational insurer. Equally important are secondary constraints, such as local solvency ratio, minimum credit rating, liquidity ratio and duration gap.

ALM is not a new concept: the approach to SAA optimization is still evolving. The traditional “asset-only” investment model does not work well for insurers that intend to focus on long-term insurance liability characteristics, capital and liquidity implications. Often, they need to manage multiple performance and capital metrics that are measured under fundamentally different frameworks.

By testing different combinations of asset allocations and asset strategies (e.g., duration-matching, illiquid assets, global diversification, held-to-maturity), insurers can identify a portfolio that provides the optimized return metrics at a given level of economic capital. Simply maximizing expected investment return does not imply an efficient portfolio. In the insurance industry, riskier assets may be heavily penalized by higher statutory capital requirements and reserves (e.g., increase in resilience reserve in Hong Kong), thereby increasing the cost of capital and reducing the adjusted net worth of the embedded value. Similarly, economic capital focuses on tail risk rather than asset volatility, which is often measured in terms of standard deviation.

In fact, insurers generally have two approaches to further improve their risk-adjusted returns on capital. The first approach is to utilize their “risk budget,” measured in terms of free surplus (i.e., how much more risk can be taken before breaching the risk appetite limit). Another approach is to diversify into offshore and alternative assets such as real estate, private equity and infrastructure debt with relatively low correlations to the traditional asset classes. Allocation to alternative investments can enhance portfolio efficiency and effectively move a portfolio upward and/or to the left of its existing position (on the efficient frontier), thus achieving a higher reward but at a lower risk.

There is no single “right answer” to the choice of a target portfolio (i.e., selecting a point of the frontier) as it depends on various factors such as investment objectives, corporate risk appetite and constraints. However, this new efficient frontier framework offers an integrated approach in which marginal risk and return can be carefully analyzed. Based on our experience, there is still substantial room and a wide range of possibilities to be explored that can further enhance portfolio efficiency.
Many Asia-Pacific insurers are moving away from local sovereign bonds and short-term deposits, which may not provide an attractive risk and return trade-off. Instead, they are considering more calculated risks such as global equities, corporate credit, illiquid assets, currencies and alternative investments that can unlock free surplus via diversification benefits. Alternative assets can offer attractive yields, long term cash flows and desired asset liability matching against interest rate fluctuations. As restrictive regulation on investments eases in markets such as mainland China, Taiwan and Korea, alternative assets are likely to become more mainstream.

Recently, more Asian insurers are diversifying across asset classes and strengthening their risk management systems to monitor asset volatilities. Optimizing the SAA may substantially increase embedded value and/or reduce economic capital, thereby achieving a long-term investment yield that is beyond what could be obtained from existing asset classes. Exhibit 2 illustrates the optimized asset allocation with and without internal investment constraints, such as a portfolio's minimum credit rating.

As shown, constraints typically reduce investment flexibility and return, but ensure that a portfolio is constructed within the company's risk appetite. If unconstrained, the optimal portfolio weight could be too extreme (e.g., reallocate all treasury bonds to high-yield corporate bonds), and therefore, become counterintuitive. Other SAA considerations typically include implications on the value of new business, earnings at risk, dollar duration match, and the probability of meeting illustrated bonuses for policyholders.

This way of optimizing the SAA will ensure a balanced evaluation of investment strategies. Nevertheless, there are factors that are critical to the success of this optimization. These include: the choice of efficient frontier design, objectives, constraints, investment strategies, level of financial analyses, and – last but not least – asset risk calibration (and its relative position compared to the existing asset classes). Complications emerge in determining the ideal investment strategy when balancing the conflicting views of risk and return trade-off among shareholders, policyholders, regulators and rating agencies.

### Financial implications for your business

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### Exhibit 2: Illustrative SAA result summary

<table>
<thead>
<tr>
<th>Asset mix</th>
<th>Current asset allocation</th>
<th>Capital-minimized portfolio</th>
<th>Optimized without investment constraints</th>
<th>Optimized with investment constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>5%</td>
<td>5%</td>
<td>25%</td>
<td>10%</td>
</tr>
<tr>
<td>A corporate</td>
<td>5%</td>
<td>15%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>AA corporate</td>
<td>20%</td>
<td>35%</td>
<td>25%</td>
<td>20%</td>
</tr>
<tr>
<td>AAA corporate</td>
<td>25%</td>
<td>45%</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>U.S. Treasury bonds</td>
<td>30%</td>
<td>45%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Investment yield</td>
<td>4%</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
</tr>
</tbody>
</table>

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Exhibit 3: Asset allocation benchmark analysis (market level)

Exhibit 4: Asset allocation benchmark analysis (product level, excluding mainland China)

Exhibit 5: Company count by market

Benchmarking facts:
- Companies: 70
- Markets: 11
- Assets: USD $1,050 billion
Proprietary industry benchmark on asset allocation

Our proprietary EY SAA database provides competitive insights by comparing a portfolio against those of the industry peers across various dimensions, including (but not limited to) by country/region, fund size and product portfolio. This benchmark database consists of data from 70 major local and multinational insurers across Asia-Pacific, with a total invested asset value of over US$1 trillion. As indicated, the focus is on market (Exhibit 3), product (Exhibit 4) and insurance company participation (Exhibit 5).

Exhibit 3 summarizes the average asset allocation across nine Asian markets from our database. As seen in the chart, the high-level asset allocation varies significantly across markets because of local regulations on investment constraints, capital charges, maturity level of the domestic financial markets and asset management expertise.

Highlights of the market analysis include:

- In particular, the SAAs of insurers operating in less-developed markets such as Thailand and Vietnam tend to be driven primarily by local regulatory regimes that favor domestic sovereign bonds (regardless of the external rating) over riskier and offshore assets.
- Korea and Taiwan have legacy ALM and duration gap issues caused by a combination of high product guarantees and low domestic interest rates in recent years.
- Hong Kong and Singapore insurers enjoy more flexibility in choosing assets to support their liabilities but are subject to higher resilience reserve (in Hong Kong) and certain concentration limits (in Singapore).
- In mainland China, the concentration in domestic bonds and deposits can be explained by the high returns from onshore money markets and the relatively local restrictive regulations.
- Similar levels of deviation can be observed between multinationals and locals in most countries.

Insurers are in a risk business offering a wide range of protection and wealth management products. Thus, an SAA benchmark offers much more insight at the product portfolio level given the different natures of liability characteristics, product design and investment mandate. For instance, a long-term fixed-income strategy with some duration constraint is often used to back non-par products such as universal life to lock in investment yield and target spread. Participating whole life portfolios usually contain a heavier portion of equity investment to boost yield and enhance product competitiveness. Some insurers have an SAA dedicated specifically to shareholder funds, but the underlying asset allocation varies depending on the shareholders’ investment objectives and risk appetite.

Our proprietary benchmark database allows detailed comparisons, given specific asset assumptions, bond composition, credit mix and type of alternative asset. It helps insurers to identify where their portfolio stands in relation to the rest of the industry. The database also enables insurers to benefit from market intelligence and best practices, ensuring that their portfolio is at least as competitive as the others from their peer group.

As regulations and capital regimes continue to evolve in recent years, we believe that insurers need to rethink their asset allocation in today’s new landscape. For instance, the China Insurance Regulatory Commission (CIRC) introduced their second-generation solvency regulation system and relaxed investment restrictions on insurance funds, creating tremendous investment opportunities for yield enhancement. A number of other Asian countries are also moving toward a risk-based capital regime, which will reset the risk and return trade-off for investment strategies. Conversely, European subsidiaries operating in Asia will need to manage Solvency II requirements as the rule becomes effective in 2016.

These initiatives will give rise to a new SAA based on new asset strategies and diversification into alternative and offshore investments. Taking no action could be riskier than rebalancing the asset portfolio. Under the new landscape, insurers must recalibrate their expectation on asset return and volatility to take advantage of the new opportunities that lie ahead.

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1 This includes par, non-par, universal life and shareholder funds; unit-linked product is excluded as it does not require a corporate SAA. The SAA charts show the weighted-average asset allocation for the life insurance companies, basing the weights on the latest market values available to us.

New environment, new strategies

In response to the recent monetary tightening, insurers have become more concerned with sharp interest rate hikes, which can potentially force them to sell fixed income assets at a realized loss to cover policy surrender benefits. Tactically, insurers could shorten their asset duration to take advantage of the higher new money rates, but a longer-term bond strategy has yet to be developed.

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As the market leader in ALM consulting, we have advised life insurers across Asia-Pacific in designing and reviewing their SAA to meet their specific investment and risk objectives. We understand both sides of the balance sheet, regulatory capital and accounting regimes, and the key business considerations of insurance companies.

Our SAA practice can help analyze an asset and liability profile, derive forward looking assumptions, and construct investment strategies and portfolios that will optimize the risk and return metrics of your choice.

Our strong relationships with asset managers and investment banks enable us to provide direct access to independent assessments of a wide range of new investment ideas, including specialized asset and hedging solutions.

If you are not sure whether your SAA is currently optimized, please contact us.

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EY enablers for SAA optimization

- An EY proprietary database allows our clients to benchmark their asset mix and assumptions against industry peers across Asia-Pacific down to the portfolio level
- Efficient frontier and financial analysis templates based on best practices
- Database of global asset assumptions that reflects both the historical and forward-looking views of expected return and volatility
- Economic scenario generation (ESG) and risk calibration tools that fit monthly asset return data to statistical distributions