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Variable annuities are in pole position to meet the requirements of the European asset protection market

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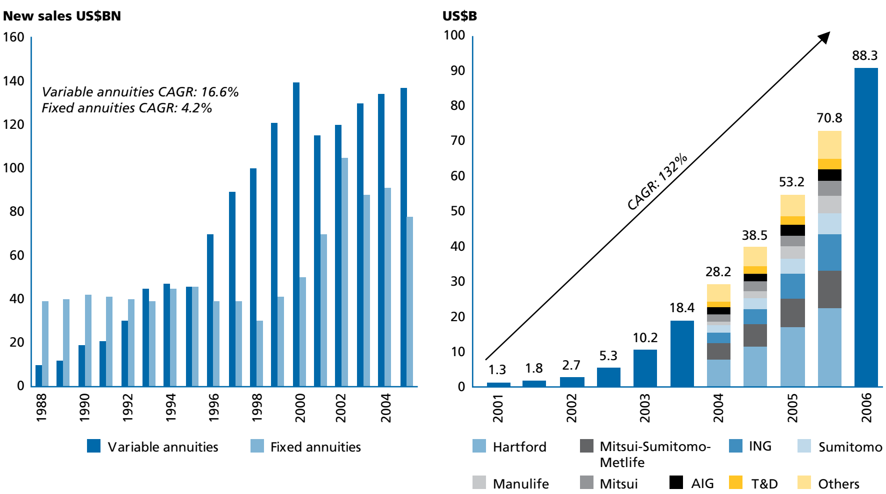
Introduction: Variable annuities arrive in Europe

Variable annuities (VAs) have been a major success story in the North American insurance market over the last decade. With compound annual growth in premiums of almost 17% in the United States, they have now overtaken traditional fixed annuities to become the primary form of protected investment. This success has been repeated in Japan, where growth has been even more spectacular, from almost no market in 2001 to $80 BN in 2005 (see figure 1). The Japanese market is projected to reach $350 BN in assets by 2010.

Figure 1:
Explosive growth in variable annuities in the US over the past 20 years ... which was replicated in Japan over the past 5 years



Source: Smith Barney, Milliman Global Insurance August 2006, Oliver Wyman analysis

Attention is now turning to Europe, with variable annuity products being launched across a number of its diverse markets. The appeal of these products for European insurers is not just fashion, but lies in the demographic changes taking place across the continent. Europe's over-50 population is becoming bigger, wealthier and more varied in life-stages and lifestyles. As consumers of financial products, over-50s have a wide range of needs depending on their current circumstances and their anticipated path through the various phases of pre- and post-retirement life. They require access to market returns in order to keep pace with a rising cost of living, but also look for protection of their assets and lifestyle given increased uncertainty from several sources: the volatility of asset returns, the level of state and company provisions they will receive, how long they will live and in what state of health. Our research has identified six needs and demands in particular (figure 2):

Figure 2: 50plus customer needs and demands

Customer needs	Issue
Longevity protection	▪ Outliving assets is perceived as a major risk – most current offerings are still not longevity focused
Liquidity flexibility	▪ Lifestyle and expense incidents in retirement are hard to plan, requiring flexible liquidity management
Asset protection	▪ Customers are increasingly demanding security and protection of wealth. Non-retirement wealth is still largely unprotected
Long-term care	▪ Both the funding of, and the level of service provided by, long-term care protection are of major concern
Advice	▪ Retirement management is complex – tailored, specific advice is still lacking
Services / affinity	▪ The broader service spectrum beyond financial management is increasingly relevant as an affinity area for distribution

Source: Oliver Wyman research

Current European products and propositions are becoming less suited to these changing needs. Traditional insurance profit-sharing products, for example, provide protection via guarantees but their complex smoothing processes dampen profits and obscure returns to policyholders. Short-term structured products, offered by banks as well as insurers, have proven a popular alternative but provide only short- to medium-term protected growth in a rigid structure, failing to offer any long-term asset protection, longevity cover or flexibility.

Variable annuities are different. They give access to market returns while offering protection in a flexible, transparent framework where customers choose what they want:

- *Asset growth* – The policyholder has direct access to the financial markets via linkage with a pooled investment fund. Clients have a choice of underlying asset classes and, often, of fund manager.
- *Asset protection* – Market risk exposure is mitigated with a variety of guarantees which are sold as add-ons to the base product. These protection features include minimum benefit payments on death or withdrawal, guaranteed annual fund returns, and resetting floor fund values, and can often be exercised at the customer's discretion.
- *Flexibility and control* – Customers are offered a range of investment choices and a range of levels of protection so they can choose the best fit for their desired risk/return profile. Maturity also ranges from medium-term (5 to 10 years with the possibility to roll over) to whole of life. This flexibility particularly suits those who want

to change their investments and guarantees as they get older. Switching of investment profile, although often constrained, is typically allowed throughout the policy term.

- *Transparency* – Charges relating to fund management, administration, mortality and guarantees are separately identified and typically specified from the outset with assets managed in a segregated account.
- *Tax effectiveness* – Variable annuities can be structured to provide exactly the same benefits as traditional products, albeit at the cost of some restrictions on the ability of the product to meet the other objectives.

The appeal of variable annuity products and their success in North America and Japan cannot be denied, and we expect to see similar growth in Europe with assets under management potentially being worth €45 BN over the next five years. Yet the challenges variable annuities present insurers should not be underestimated. There have been notable failures, both in the established variable annuity markets and more recently in Europe.

How can insurers considering entering the European variable annuities market avoid being a casualty? Our experience suggests that they must clearly understand three things:

- The demands and preferences of each local market
- The requirements of variable annuities risk management
- How to organise the variable annuities business operation

1. Understand your variable annuities market

It is tempting to believe that simply transplanting successful variable annuity products from existing markets to Europe will generate similar results. Deeper analysis shows that it is not that easy. In particular, variable annuities will only satisfy customers' requirements if they are appropriately tailored to local market conditions.

This is the lesson from Japan. The US and Japanese markets are similar in important respects – both exist within large, mature economies with favourable macroeconomics and tax incentives, and successful US players entered the Japanese market using the same risk management expertise and infrastructure that they had applied in their domestic market. Nevertheless, the business model required significant tailoring to the Japanese market and it is still not clear that the product economics are as exciting as for the North American markets.

For example, in the US market, the "customer" has typically been the intermediary. Complex new guarantee riders have therefore been primarily supplier driven, aimed at capturing intermediaries' attention, rather than explicitly demanded by end-consumers. Successful players have spent heavily to build their wholesaling network, pushing up initial commissions in the fight for market share. The key success factors have been a rapid product development cycle and the ability to manage both the cost base and customer retention.

By contrast, guarantee riders in Japan have been more end-consumer driven, with foreign players selling through banks and brokers and domestic competitors via tied agents. Successful players have focused their marketing on consumers rather than intermediaries, while still supporting intermediaries with appropriate incentives and training.

Differences between the North American and European markets are even more marked. For example, Spanish consumers have shown themselves to be highly averse to market risk, with unit linked penetration among the lowest in Europe. Given that variable annuity products typically have lower guarantees than the equivalent low-risk product, marketing efforts must focus on how the additional exposure helps customers meet their long-term ambitions better than a lower yielding, fully guaranteed bond. In the UK, on the other hand, recent developments in pensions regulation have meant an increased focus on the flexibility of investment choice available in post-retirement income products, so variable annuities sold into the UK will need to maintain a suitably broad range of investment options. In all markets variable annuities will be competing against existing offerings, and so will have to demonstrate better customer value in order to encourage advisors to shift their attention to these new products.

In short, variable annuity propositions must be tailored to the distinctive features of Europe's various long-term savings markets. More specifically, insurers should attend to the following important factors when adapting their variable annuity customer and business models:

- *Regulation* – In some cases, variable annuity products have been based on regulatory, and especially tax incentives. European convergence is not yet complete, and this will be an obvious area for local adaptation. In some markets, building variable annuity products introduces a degree of regulatory complexity.
- *Customers* – Socio-demographic trends, and customer needs and behaviours, vary across Europe. In some countries variable annuities may have limited appeal, while in others they will need significant reworking to meet the demands of the local market.
- *Distribution* – Innovation in variable annuities often depends on the distribution channel, and especially on whether it is direct or intermediated. The potential complexity means that significant effort will be required to educate existing distribution channels in the features and benefits of variable annuity products. Equally, providers should be careful to minimise the risk of having to buy market share, by ensuring that products are aligned with customer needs.
- *Competition* – The competitive environment will impact the direction and speed of innovation in both product and service. Variable annuity products will be competing with existing products from outside the insurance industry as well as with traditional insurance products. Variable annuity providers will have to work hard to establish the benefits of variable annuities relative to these well-entrenched products. Understanding the competitive landscape, as well as reacting to new entrants, product innovation and shifts in market concentration will be key factors in the ultimate success of this product.
- *Capital/Performance* – By their nature, variable annuities offer providers greater flexibility in shaping their capital requirements through active risk management. However they can also bring greater volatility in profitability, both at point of sale and through the life of the product. The capital requirements, and hence the return on capital, will be driven by a combination of the ability to determine which risks to hold and which to hedge, how to structure and price products accordingly, and the attitude of the supervising regulator.

The optimal degree of customisation (e.g. country by country or by groups of countries) is an important strategic question for anyone entering the market. Several European insurers are now developing pan-European platforms for multi-country products. Their challenge will be striking the right balance between scale at the central hub and tailored products for local markets.

2. Understand your variable annuity risk management

Risk management has always been a core capability of insurers. However, variable annuities require a new, and more sophisticated, set of risk management capabilities. Variable annuities can have a much more direct impact on the shareholder balance sheet than other products. They require much closer monitoring and the active management of a variety of complex risks – most notably, policyholders' options to lapse, withdraw funds or change the asset mix.

The framework within which the risks presented by variable annuities are managed must be rational, implementable and adaptable, as described in Figure 3.

Figure 3: Requirements for effective risk management of variable annuities

		Description	Variable Annuity considerations
Cornerstones of risk management	**Rational**	Insurers should have a clearly defined risk strategy and decision framework	▪ The strategy and decision framework should be linked to the insurer's risk appetite, and capture the dynamic and volatile nature of both market exposures and the risks brought by customer behaviour ▪ An appropriate level of diversification must be maintained both within the variable annuities portfolio and across the company
	Implementable	The framework must be well-understood and accepted throughout the business, and be capable of having an impact at all levels	▪ A common risk language must be developed to ensure the strategy is understood by all parties, right from product development through to hedge implementation ▪ Additional staff with specialised skills (e.g. derivatives trading, customer behaviour analysis) may be required to ensure that the operational reality can be aligned with the risk strategy
	Adaptable	The changing nature of the business requires an oversight and monitoring system that allows and supports swift changes to proposition or organisation	▪ Risk management must be fluid and responsive, reacting dynamically to changing market conditions and customer preferences and behaviour ▪ Risk management should be able to accommodate growth, new products and altered risk exposures, and not prevent or delay product innovation ▪ Effective feedback mechanisms are needed to ensure continuous refinement of both product design and internal processes

Much discussion regarding risk management for variable annuities concerns hedging practices to reduce the risk exposure from the written guarantees. While this is important, the true risk management task is significantly broader. It starts at the product design stage. Understanding product economics, how they are affected by both customer behaviour and hedging strategies makes risk management central to designing and pricing guarantees as well as managing the resulting exposure. With a significant portion of the overall risk (often above 75%) being mitigated through static or simple dynamic hedges, exposure to complex behavioural and operational risks becomes proportionally much higher, and therefore warrants greater attention than it does in other product types. These risks need to be incorporated into the overall risk assessment. They should also form a part of the broader decision process about which risks to hold and which to pass through to other parties, for example through reinsurance or hedging.

A strong risk management framework also provides the backbone for a successful hedging programme. As they develop such frameworks, more advanced providers are employing a variety of approaches to hedging, tailored to suit their capabilities, strategies and risk appetites. Broadly speaking, there are four approaches to hedging for variable annuities (see figure 4). Dynamic hedging is a common approach but a number of companies are moving towards a hybrid approach, purchasing a more static hedge base when rates are cheap to mitigate the more complex risks, and complementing this with dynamic hedging to fill the gaps.

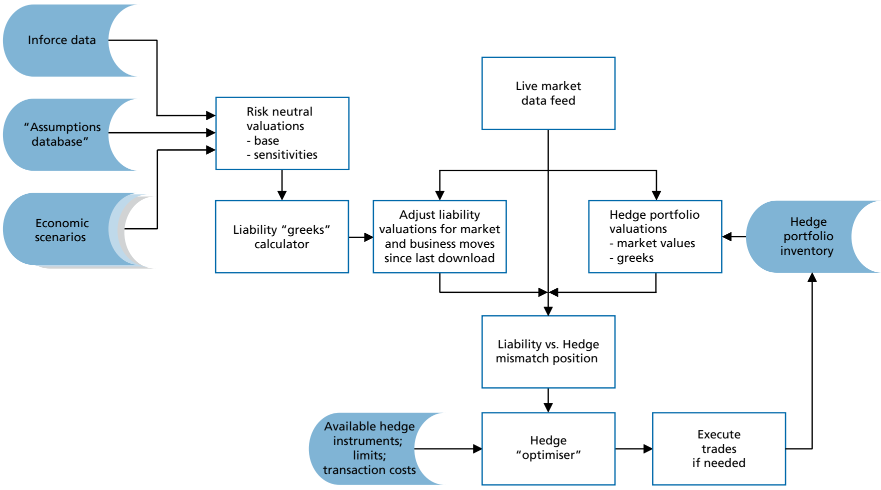
Figure 4: Approaches to the hedging of Variable Annuities

Stochastic distribution analysis provides framework for evaluating the risk/reward tradeoff (e.g. stochastic embedded value)

	Advantages	Disadvantages
Run Naked	▪ No specialised A/LM expertise needed ~ obligations (however measured) supported by fixed income securities ▪ Full upside potential	▪ Limited downside protection ▪ Earnings volatility ▪ No capital relief
Structured	▪ Reinsurance and structured hedging vehicles ▪ Customised; can offer significant protection ▪ Does not require dedicated team to maintain	▪ Expensive, illiquid, counter-party risk ▪ Residual risk (e.g. persistency) ▪ Difficult to integrate into product design
Static Hedge	▪ Typically involves the purchase of exchange-traded or OTC options ▪ Value of strategy depends on cash flow ▪ Less frequent rebalancing	▪ Counterparty risk ▪ Without rebalancing, can be significantly over or under hedged over longer term ▪ Subject to market risk and volatility
Dynamic Hedge	▪ Typically involves the frequent trading of exchange-traded futures, options & swaps ▪ Strategy based more on 'change in value' ▪ Can be highly effective (dampen volatility)	▪ Requires frequent monitoring/rebalancing ▪ Might not be able to transact at reasonable prices when most needed ▪ Trading costs, operational risks

Selecting the right hedging programme and model for your overall product strategy is only the first step. It is in implementation that hedging programmes succeed or fail. The process, from identifying the risk exposure through to determining and executing the trades required to maintain a reasonably matched position, is complex and requires a number of different system components, data feeds and decision tools. Figure 5 illustrates a process map describing the inputs, outputs and analysis tools required in a static or dynamic hedging programme.

Figure 5: Illustrative process map for hedging programme



Entering the variable annuity market will require staff with specialised skills: specifically, the asset management and trading expertise to ensure that hedges are efficient and mitigate risk as intended, and that they are implemented in a controlled manner. Many insurers currently lack access to this expertise, either because it is confined within their asset management function or because it is missing from the organisation altogether. Either way, there is likely to be increasing demand for professionals with the right combination of risk, insurance, trading and business experience, who can also work with the product design and distribution functions to ensure an integrated approach to risk management.

3. Understand how to organise your variable annuities function

Product design and risk management must not operate in isolation. On the contrary, risk management should start with the product design itself, where the guarantee structure, choice of funds and policy conditions define the risk landscape.

This early involvement of risk management is required to combat the natural tendency of a marketing function to see things purely from a customer demand point of view, without adequate appreciation of the risk-based economics of new products. Some insurers, who have rushed products to market without fully understanding the financial cost or consequences of product features, have come to rue their haste. Figure 6 profiles two examples: the 'reset option', which was developed without appropriate communication between product design and risk management, and the 'dollar-for-dollar' withdrawal option, where the implications of customer behaviour were not appropriately understood or valued.

Figure 6: An option too far

Canadian 'reset option'

- Rising equity markets led to a significant number of customers lapsing policies with a guaranteed fund value (since these were becoming less and less valuable) and purchasing new products with a higher guaranteed level.
- Providers therefore allowed consumers to 'reset' their option and 'lock-in' market gains reducing expenses related to lapsing and re-issuing and avoiding commissions to the distributor.
- Deemed equivalent to a new sale rather than an additional product feature, the reset option was assumed to have zero cost to the provider and did not need risk management involvement.
- In fact the reset option proved much more difficult to hedge and became very costly.
- With a >75% utilisation prior to the burst of the technology bubble, this resulted in significant losses for some companies due to the higher concentration of maturity dates.

US 'dollar-for-dollar' option

- Many US insurers offered a dollar-for-dollar withdrawal option on GMIB/GMDB.
- A $1 withdrawal from the fund balance translates into a $1 decrease in guaranteed value (as opposed to pro-rata by market value).
- As the market declines, policyholders can withdraw funds and maximise the value of remaining guarantees. For example, if the market value of the fund is $750 and the guaranteed death benefit is $1,000, the policyholder could withdraw $700 and obtain "almost free" insurance for the remaining $300.
- 'Dollar-for-dollar' provisions can therefore produce significantly larger capital requirements and lead to much higher hedging costs in declining markets.
- Written mostly in an increasing market environment the risks associated with rational customer behaviour were not appropriately priced.

To avoid similar mistakes insurers must achieve real integration across different functions – product design, pricing, sales and marketing, administration, risk management, hedge execution and asset management. This requires smooth and clearly-articulated processes that involve all relevant functions in decisions at the appropriate time and with the required information.

For example, rapid product development requires risk management, product design, pricing, investments and the administration back office to work together from the outset. Similarly, policy administration, risk management and hedge execution must be in frequent communication to keep pace with customer behaviour and competitor actions. If new funds are to be introduced to the product range or market conditions change significantly, the implications for pricing, risk management and customer behaviour must be understood. Few European insurers have achieved this level of integration to date. Indeed for traditional products, it has not generally been necessary: insurers have traditionally seen themselves as long-term holders of both market and non-market risks. Risk management has often happened at the back end, through the discretion that companies have had to alter the policy conditions once sold, through setting bonuses or changing the underlying asset mix. These opportunities are not available under variable annuities, where the pricing and policy conditions are determined up front and policyholders drive the asset allocation. It is therefore much more important that the products are structured in such a way as to minimise the exposure to unwanted risks, and priced so that the hedging strategy is funded by the product charges.

Surmounting these organisational and operational challenges requires constant effort and cannot be achieved overnight. However, there are a number of actions that should be considered from the outset when developing a variable annuity offering:

- *Prioritise* – Achieving full integration across all functions is unrealistic. Instead, companies should identify the areas of integration that will be most important to their variable annuity offering. The degree of collaboration between product development and risk management for example, should depend on the range and complexity of the products being offered. Pricing and hedging, however, should always be closely integrated.
- *Organise* – Reporting and governance processes should be aligned to encourage integration in the most valuable areas. Clear reporting lines, 'circuit breakers' to control independent function responsibilities, appropriate incentive structures and well defined decision-making mandates are some of the tools that help achieve this.

- *Enable* – Making the right decisions and making them quickly depends on effective information flows. These need to include daily reporting of risk exposure to support the hedging programme, periodic reports highlighting key exposures and changes to management, regular attribution analysis to understand gains and losses due to hedging, and data on customer take up rates to enable feedback into product development and risk management.

Underpinning all of these capabilities are information technology and systems. Data integrity and timeliness are extremely important due to the active nature of product management, and will have a direct influence on the quality of reporting and therefore the ability to manage the business. This will typically require an investment in both hardware and software. For these reasons it is important to engage information technology professionals at an early stage of development.

These capabilities must also be considered in the context of the overall organisational philosophy. Many pan-European variable annuity market entrants for example, are exploring ways to operate some functions from a central hub, and some companies with experience from more developed variable annuity markets are attempting to make use of existing capabilities and processes (for example, in hedging). The challenges in integrating the relevant functions to the required level will therefore be different depending on the overall organisation. Whether the market entry strategy is a slow organic build out from one product in one country or a high impact multiple product and market entry, companies should consider what the overall organisation will look like sooner rather than later.

Conclusion

Variable annuities have a big future in Europe. They are better suited to the changing and complex needs of the growing 50plus segment than the products that currently dominate European markets. Capitalising on this opportunity, however, presents European insurers with challenges in product design, risk management, and organisation.

Meeting these challenges will require considerable management attention and investment in both staff and systems. But we believe it is an effort worth making. Those who rise to the challenge will not only profit from the introduction of variable annuities into Europe, they will have equipped themselves more generally for success in an increasingly sophisticated and dynamic long-term savings market.

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