



Cass Business School
CITY UNIVERSITY LONDON

Global Reinsurance Masterclass Series

Strategic Thinking for the
Reinsurance Industry

Masterclass 2

Fit for purpose?

How to tailor reinsurance products to
insurance industry lifecycles

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The Global Reinsurance Masterclass Series is sponsored by ESRC, WCI and IICI



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Executive Summary

Consolidation in the insurance industry is driving new trends in reinsurance buying.

This Masterclass:

- Shows consolidation of key insurers is grounded in industry life cycle dynamics;
- Develops a framework to explain the impact of consolidation on reinsurance buying behaviour;
- Applies product life cycle analysis to explain changing trends in reinsurance buying;
- Describes how competition is shifting premium towards a new class of reinsurance products.

It is the second of a series of seven such Masterclasses.

In late 2012 a rumour spread that Berkshire Hathaway was in discussion with QBE about their huge global Cat reinsurance programme that had recently been affected by Hurricane Sandy. With 80% of the programme already placed with three large reinsurers on a three-year basis, the eventual 15 percent share to Berkshire Hathaway across most of QBE's programmes denied many smaller reinsurers payback on the Sandy loss. This was no small amount of premium income, with QBE being one of the largest insurance companies in the world with turnover of AUD\$ 101 billion.¹ Consequently, for many reinsurers, even losing a small share on these global programmes meant going without a significant amount of important business premium.

As recently as 2010, QBE had struggled to gain market acceptance for such a centralized approach to buying reinsurance. They had found it hard to place a unique per-risk global cover, and had been forced to revise their expectations of multi-year coverage across the reinsurance market. As one Underwriter stated publically the issue was "not about price, but about the global nature of cover."² However, by 2012 QBE

was seen as just part of a broader trend. While QBE was the first, others were following with AIG streamlining its property per risk coverage into a single \$1.5bn programme for the 2013 renewal.³

In the market there was consensus about what was behind the demand for such programmes. Industry leaders at the Standard & Poor conference in London reflected on the fact that consolidation was driving the trend towards more centralized reinsurance buying. QBE's own history highlights this point: they acquired seven companies in 2010 alone, operating in countries as far ranging as Argentina, Ecuador, Colombia, Belgium, and the United States. There were many similar stories of industry consolidation and its implications at Baden Baden in 2012. Headlines from Day One of the conference included Generali's continued drive to centralize its reinsurance spend and ACE's second significant acquisition of a Mexican firm (worth \$865mn) in just over a month.⁴ Global insurers such as QBE, centralizing their reinsurance purchasing into huge globalized reinsurance programmes, were now just 'business-as-usual' for the firms providing them with reinsurance.

¹<http://www.bloomberg.com/quote/QBE:AU>; <http://www.businessspectator.com.au/asxtop20>, 28 January 2013;

²"QBE fills programme on one-year terms after reinsurer rejection", Insurance Insider, 5 January 2011

³"Consolidation fuels centralised reinsurance buying trend", Insurance Insider, 28 November 2012

⁴Baden-Baden Newsletter, The Insurance Insider, Sunday 21 October

1. A time of rapid change in the insurance industry

The reinsurance industry is a secondary industry. It exists to serve the needs of a primary insurance industry: so trends in insurance are likely to change the kinds of products which insurance companies need from reinsurers. This Masterclass focuses on the buyers of reinsurance - the primary insurers, whose world is rapidly changing - and shows how reinsurers need to position themselves to continue to attract insurers' premium.

1.1 Trends in the primary insurance industry

The primary insurance industry is consolidating. Through mergers and acquisitions (M&A), large players have sought to enhance their product, geographic reach, client base and operating efficiency. As these powerful players have grown, smaller insurers have protected their bottom lines by divesting non-core or underperforming business and subsidiaries, while withdrawing from foreign markets where they lacked sufficient scale.⁵

The impact of such consolidation is evident, with large players dominating insurance markets. Their presence is felt through their size, as evidenced by their massive market capitalization, and their scope in operating across multiple markets. Over the last 10 years, on average, leading insurance companies increased their total revenues by 37%⁶ and Axa Group grew by 47% percent during this period. Generally, 22 of the top 25 companies increased their asset size in 2011.⁷ Such large companies shape trends in reinsurance products, simply because they dominate the total spending on reinsurance.

Large insurers have become dominant through their global presence in the main markets. For instance, Axa Group – the second world's largest insurer by total asset value⁸ - owes its global industry position to past acquisitions in the US, European, Asian and Latin American markets over the last decades. It aims to become the first general insurer and in the top-three life insurer globally by 2015.

The development of such large dominant players is the outcome of a global trend of M&A activity which has subsumed many smaller players. Indeed, both the number and the value of M&A activities have increased in the insurance industry over the last decade⁹, with a reported 75 deals worth a total of US\$18.25bn in December 2012 alone.¹⁰

This trend for consolidation is primarily driven by the search for economies of scale. Mid-to-smaller insurers have merged with competitors to extract synergies. Another driver is the need for geographic expansion, because the insurer's domestic markets are 'mature' (a term we will explore in section 1.2). One example is the acquisition of (among others) the Lloyd's (re)insurer Kiln by Tokio Marine & Nichido Fire Insurance, a large Japanese insurer which seeks expansion outside the static domestic Japanese market.

Such growth in leading insurers correlates with a decrease in the overall number of players in mature markets. For example, the number of companies in Europe fell by almost 3% in 2011, with the number in some more crowded markets such as the UK dropping by as much as 8% in a single year.¹¹ The 'lost' companies either failed in the face of competitive pressure, merged, or were acquired.

⁵2012 Global Insurance Outlook. Generating growth in a challenging economy takes operational excellence and innovation. Deloitte.

⁶Such percentage has been calculated considering the total revenues growth of leading companies reported in Datamonitor in 2002 and 2012. When the specific data was missing, it was read on the investor relations section of the company website.

⁷http://www.ambest.com/bestweek/marketreports/BW_WorldsLargest.pdf

⁸Top 20 global insurance organizations ranked by A.M. best Co.

⁹Top Ten Issues for Insurance M&A in 2012. Deloitte.

¹⁰<http://www.reactionsnet.com/Article/3137361/Regions/23102/Insurance-M-A-fell-in-2012-to-54bn.html>

¹¹European Insurance in figure. Statistics n.46, Jan 2013.

1. A time of rapid change in the insurance industry (cont.)

1.2 How industry life cycle theory illuminates trends in the primary insurance industry

The current, on-going consolidation of the insurance industry, and the simultaneous shake-out of smaller players, provide strong evidence of an industry heading towards maturity (Figure 1.2). While in some developing markets – such as those in parts of Asia, Latin America and Eastern Europe – the number of insurance companies is growing, the overall trend is one of consolidation into a small number of key players.

These key players increasingly move into the more profitable of new emerging markets through a range of organic growth, joint venture and M&A activity. The world stage is increasingly dominated by this group of multinationals as the insurance industry enters the maturity phase.

This global consolidation of insurers changes their strategies for buying reinsurance. In the following sections, we will discuss how industry life cycle effects cascade from the primary insurance industry to affect the product life cycle of the reinsurance industry. We will also discuss how reinsurers can predict these trends and respond strategically.

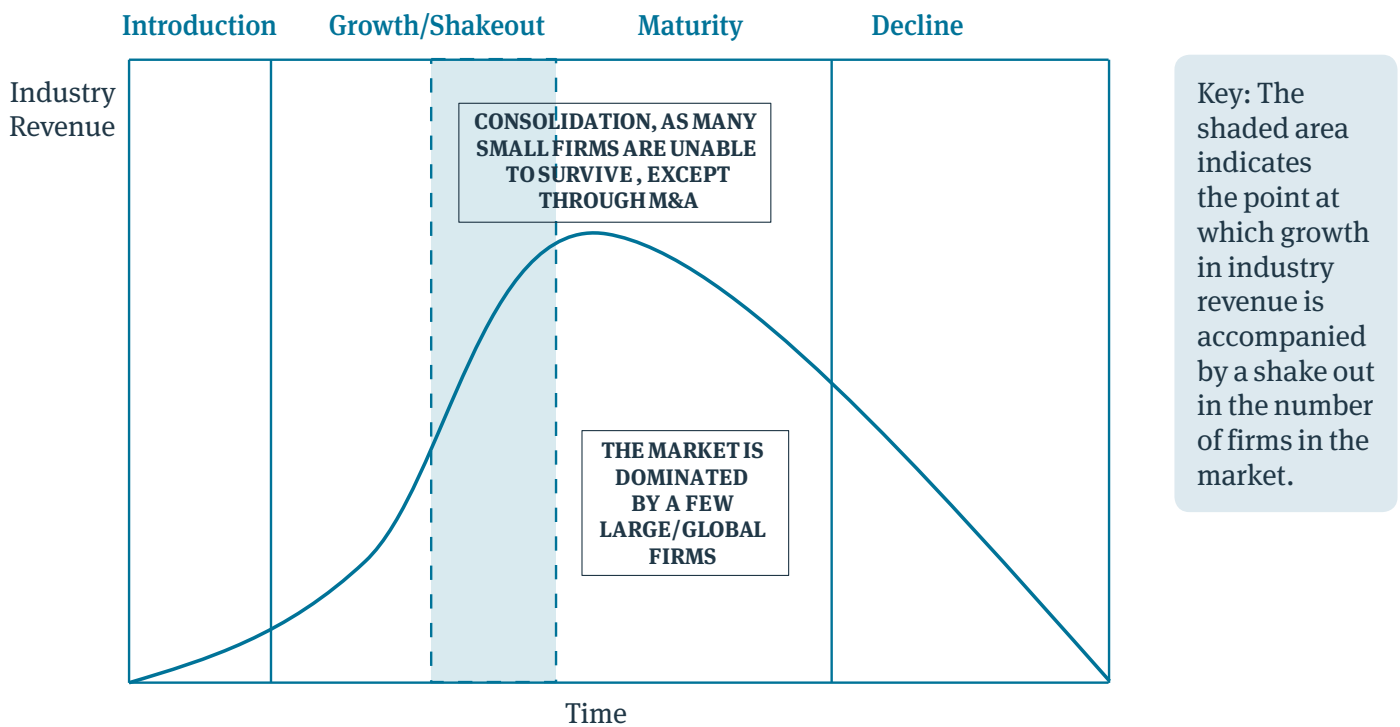


Figure 1.2. The standard industry life cycle

1. A time of rapid change in the insurance industry (cont.)

THEORY GUIDE: Industry life cycle theory (See Figure 1.2)

Industry life cycle (ILC) theory shows how the nature of an industry changes over time. The theory, which identifies four phases of introduction, growth, maturity and decline, provides insight into industry dynamics and the most appropriate strategies for firms in each phase.

- **Introduction.** The lack of competition and potential for innovation provide an abundance of opportunities that attracts many firms. Firms experiment with new approaches to the market, tend to be entrepreneurial, and focus on serving narrow geographic areas that are specific to their expertise and backgrounds.
- **Growth/shakeout.** Entry of new players is discouraged because recognised brands and products which are already in place satisfy the needs of buyers. Production techniques become refined and the volume of sales **grows** dramatically. However, as some business models are more successful than others, **shakeout** begins for less successful firms. As there is more product standardization, firms that are large enough to be able to benefit from economies of scale will be forced to exit or will be acquired by competitors.
- **Maturity.** Sales keep growing, but at a slower rate than previously. The industry becomes centred around those few large dominant players that were able to gain market share during the growth/shakeout phase. Industry consolidation proceeds through mergers and acquisitions as on-going operational efficiency and market share is sought.
- **Decline.** Some of the existing product base becomes obsolete and some industries may move into decline.

Study Question 1

To what extent is the evolution of the insurance industry in your area following the pattern of the industry life cycle model?

- (a) In your area of the market, identify two examples in the last two years of insurance company consolidation. How have these two consolidations affected you, if at all?
- (b) Are you aware of any insurance companies in your area which are operating in ways characteristic of the introductory period of an emerging market – i.e. are entrepreneurial, innovative, and/or perhaps narrowly focused? Do they require a particular type of reinsurance product?

2. Implications of life cycle effects for reinsurance buying

What insurers want from their reinsurance provider has evolved as part of the industry lifecycle. As a result, insurers have clustered around a small number of different strategies for reinsurance buying.

Different groups of cedents can be identified by three dimensions that emphasize their different priorities in the purpose, products and organization of reinsurance buying. Cedents differ in their:

- degree of capitalization;
- need for central coordination of buying across multiple locations

- bundling of the products purchased.

We can draw a cube that uses these three dimensions as the three axes. This is how Figure 2, below, is organized. Any individual cedent will occupy a position in the 3D space of the cube: for instance a cedent may have low capitalization, little geographical spread and therefore low need for central coordination, but may need to bundle a number of lines into one reinsurance product. This would place it at the front lower left-hand corner of the cube.

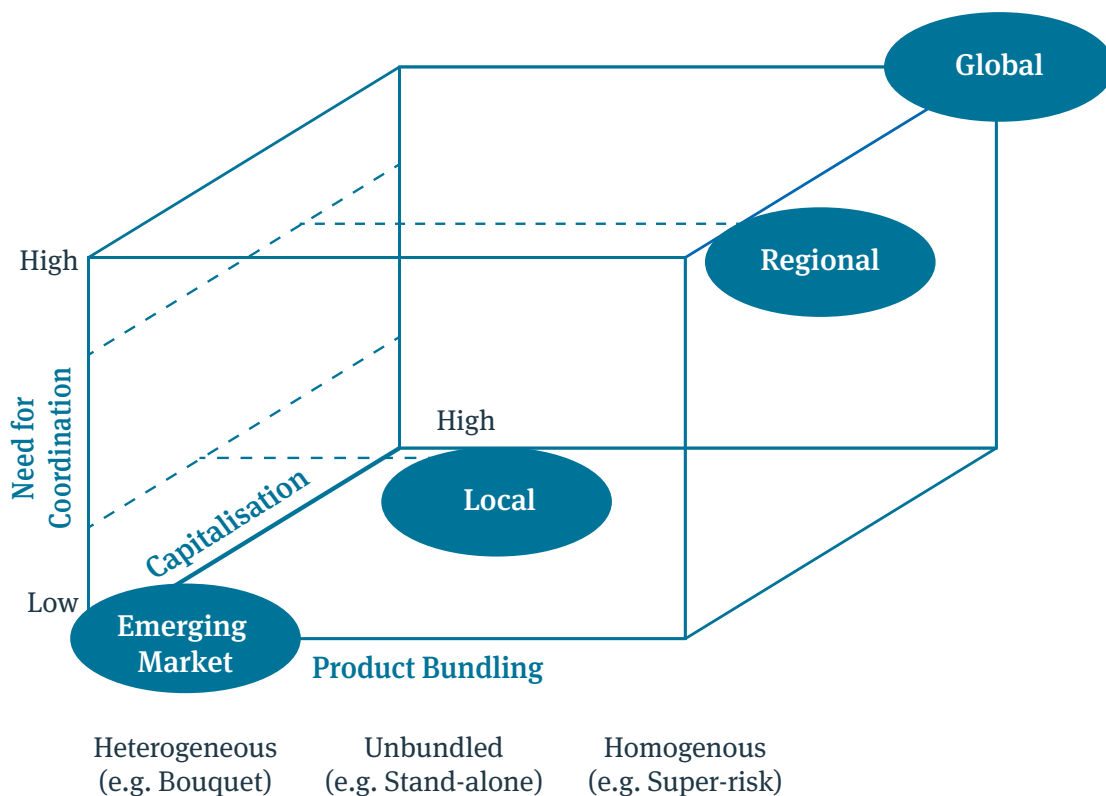


Figure 2. Insurers' positioning cube

In the sections which follow, we will first discuss these three dimensions - which characterise the ways in which cedents buy reinsurance (section 2.1). Then we show how cedents are not evenly distributed throughout the 3D cube, but tend to form two clusters, each containing two identifiable groups. These two clusters represent two different

sets of needs for reinsurance: different types of reinsurance product will be appropriate to the two clusters (section 2.2). Finally we show how the growing maturity of the insurance industry is driving reinsurance buying away from one cluster, towards the other, as the firms that have survived the growth/shakeout phase get bigger (section 2.3).

2. Implications of life cycle effects for reinsurance buying (cont.)

2.1 The dimensions which characterise cedents' reinsurance buying

Capitalization. The purpose of reinsurance is to support risk transfer from the insurer to the reinsurer through capital provision. In general, the more insurance coverage an insurer writes, the more capital they need to hold to cover potential payouts to clients. (They can make their capital go further by holding highly diverse risks, which are unlikely to be triggered by a single social trend, or change in business conditions, or environmental catastrophe. For instance, marine risk in Thailand is highly unlikely to be connected to a catastrophic event in Europe, so the chance of payouts on both at once is relatively small.) Reinsurance transfers some of the primary-insurers' risk so that they can cover more clients - or free up some of their capital to invest in infrastructure/human resource to further their growth ambitions. Effectively the insurer is buying potential access to more capital from reinsurers, in the event of having to make big payouts.

Hence, the level of capitalization in insurers influences their reinsurance needs. Well-capitalised insurers, particularly those with high capital efficiency arising from well-diversified portfolios, do not need reinsurance to either grow or to transfer some of the risk from their portfolio. Rather, they require it to cover peak risk - those 'Armageddon scenarios' where a single event, such as a hurricane, or the asbestos scandal, wipes out a major part of the portfolio, and the company is flooded with claims.

By contrast, less well-capitalized players require reinsurance as a source of affordable capital, enabling them to grow or to cover greater risk for their clients.

Need for coordination. The need for coordination is a function of the insurer's size and scope. As firms grow into new markets, they need to shift from allowing local operating companies (LOC) to purchase their own local reinsurance cover to coordinating the buying centrally across all LOCs. Coordination of reinsurance buying enables capital efficiency through diversification, avoids duplication as a firm acquires more LOCs, and ensures that a group has oversight of, and is adequately hedged for, risk taken in LOCs. Global purchasing of coordinated reinsurance is also a more efficient and less costly working practice. High levels of formal coordination are particularly necessary for bundling homogeneous risks across multiple LOCs, such as aggregated catastrophe covers.

Smaller companies have fewer opportunities for capital efficiency and less need for formal coordination of reinsurance buying.

Product Bundling. The extent to which reinsurance products are bundled and the form that bundling takes are a feature of an insurer's size, complexity and capitalization.

At one end, small insurance firms bundle different lines into a single reinsurance product, the bouquet, as they have some small risks that would not be worthwhile for reinsurers as stand-alone programmes. These can instead be traded as a bundle with other different types of risk (for example, marine combined with property). As insurance firms become larger, they tend to 'un-bundle' their products. Such programmes are typically single territory, or combine a few similar territories, for the cover of a single type of risk, such as a third party motor liability product, or a Cat cover.

At the other extreme, large insurance companies with accumulations of a particular type of risk favour bundling this into a multiple territory (or even global) programme reinsured through a 'super-risk' product. These super-risks are popular with large insurers because they enable capital and resource efficiency.

2.2 Groups and clusters of cedents with similar needs

Based on the above dimensions, insurers can be clustered into four groups, identified by their different strategic needs for reinsurance: emerging markets, local, regional and global insurers. Figure 2 (on page 5) shows how they differ on the three related dimensions.

- **Emerging market insurers** are those that operate in a single emerging market territory or in a small number of similar territories and require reinsurance for access to capital and to alleviate overall portfolio volatility.
- **Local insurers** are those that, while well-established within well-known territories, still practice largely within their country or state of origin.
- **Regional insurers** are those that have extended beyond their domestic market to include surrounding regions.
- **Global insurers** are at the peak of all three dimensions, as they operate in diverse territories and cover different lines of business through their complex multidivisional structure.

2. Implications of life cycle effects for reinsurance buying (cont.)

Figure 2, on page 5, shows that there are two main clusters of strategic groups. On the one hand, there are emerging and local market companies, with a low degree of capitalization and less need for centrally coordinated buying because of their relatively small geographic spread. Due to their lower capitalization, they require reinsurance for access to capital and to alleviate volatility (i.e. transfer some risk). They bundle different lines into a single product (bouquet) or, if sufficiently large, separate different risks into traditional stand-alone products covering a single territory.

On the other hand, there are the regional and global players. These have a high degree of capitalization (and thus ability to retain their own risk). They also have a high need for coordination, which prompts them to centralize reinsurance buying decisions, centralize retention of risk, and bundle homogeneous risks, such as catastrophe risk, into single 'super-risk' products, to increase efficiency in reinsurance buying. For instance, the resurgent American International Group (AIG) is undertaking a significant consolidation of its property per risk reinsurance by buying a single US\$1.5bn global treaty, further demonstrating the trend of major insurers streamlining their own risk transfer.¹²

2.3 The progress of the insurance industry life cycle is changing the types of product needed

The industry life-cycle trend we have identified, towards fewer but more dominant global players, can be clearly seen in the 3D representation of Figure 2 to be generating a corresponding trend in reinsurance buying. The consolidation and shift towards Global Buyers means that their programmes, which are few in number but of high premium volume, will increasingly provide a greater share of available premium for reinsurers. In this sense, Global Buyers, who are increasingly dominating the insurance industry as a whole, will also dominate the product set that the industry is buying.

Increased industry maturity thus has implications for the products reinsurers need to provide to their clients, as we will investigate in section 3 overleaf.

Study Question 2

- (a) Take one of your major primary insurance clients and work out where they stand on the three 'dimensions' of our cube. Are they low, medium or high on each of these axes (capitalization; need for coordination; need for bundling)?
- (b) Can you identify another of your clients which stands in a distinctly different part of the 3D cube?

¹²<http://www.insuranceinsider.com/consolidation-fuels-centralised-reinsurance-buying-trend?>

3. The reinsurance product life cycle

The changing reinsurance buying behaviour of insurers, described above, is driving changes in the reinsurance product life cycle: as some existing products mature or decline, new products grow, and potential competing products emerge.

In this section we use Product Life Cycle analysis, to show how products also go through a life cycle in terms of their sales and profitability. Specifically, the reinsurance product life cycle can be divided into sequential stages: introduction, growth, maturity and decline (Figure 3).

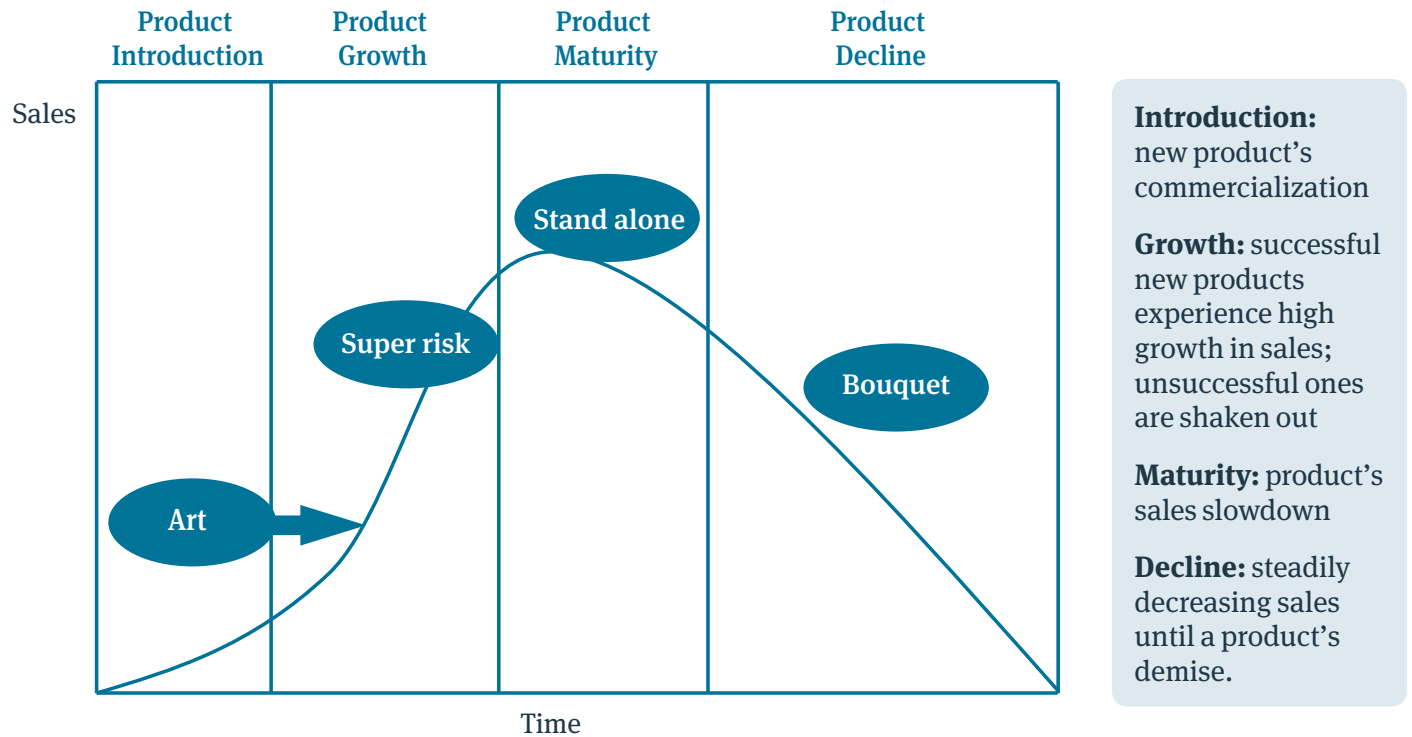


Figure 3. The standard product life cycle, showing the positioning of the three major types of reinsurance product (and of a product which substitutes for some functions of reinsurance)

3.1 Major reinsurance product types and their position in the product life cycle

For ease of explanation in this analysis, we do not distinguish between Excess of Loss (XL) and proportional products but rather refer to overall trends in the product types we have previously described:

- Bouquet (single territories, multiple types of risk);
- Stand-alone (single risk-type single or similar territories)
- Super-risks (covering multiple, or even global territories)

We will also refer to a relatively new class of product, alternative risk transfer products (ART), such as Insurance Linked Securities (ILS).

Bouquet products are declining in popularity but may remain in demand for insurers that are small and unlikely to grow. In particular, they are in demand in some emerging markets, where firms have risks that are too small to be attractive to reinsurers on a stand-alone basis.

Unbundled **stand-alone** products are a mature product, and are under threat from new products that are growing. Specifically, as global players acquire local companies, stand-alone reinsurance products disappear from the market, and are being replaced by their new parents' bundled 'super-risks'.

Super-risk products are thus growing, indicating the effects of consolidation in the primary insurance industry upon the reinsurance product life-cycle. Dominant insurers centralize their buying and develop regional or global catastrophe and per-risk products. These products then replace the stand-alone local products of the companies that they have acquired.

3. The reinsurance product life cycle (cont.)

ART (alternative risk transfer) products are not traditional reinsurance products (i.e. not generally offered by reinsurers). Instead they are securities whose returns depend on the occurrence of a specific insurance event. For instance, a Cat bond will be triggered only if the issuer loses more than a specified amount, due to a specified catastrophe. If nothing happens, the investors in the Cat bond (typically pension funds or hedge funds¹³) make money; if the bond is triggered, they lose it, as the issuer is not obliged to repay the principal. From an *insurer's* point of view, such ART products can be a partial substitute for traditional reinsurance (the term *substitute* was explored in our discussion of market forces in Masterclass I.) From a *reinsurer's* point of view, ART products compete with traditional reinsurance products: they reduce the total premium available to reinsurers.

3.2 Super-risk programmes as the driver of change in reinsurance

The main driver of change in the reinsurance product life cycle is the growth of the super-risk product. There are four main implications of this growth, which will force reinsurers to adapt.

3.2.1 Pressure on smaller reinsurers

From the reinsurer's point of view, there is a shift from multiple stand-alone products each yielding smaller, territory-specific premiums, to fewer, larger multi-territory reinsurance products each yielding large premiums. The distribution of global premium thus also shifts towards these super-risks - forcing more and more reinsurers to find ways to offer such products. It also puts pressure on smaller players in the reinsurance industry, who may be ignored, or squeezed out of such deals: they struggle for relevance because they could only write a tiny fraction of the overall deal. For example, the majority of QBE's global programmes are placed with three large reinsurers.

3.2.2 Change in reinsurance operations and resources

Super-risks are a complex product, covering multiple territories and perils. This has destroyed the direct link between the origin of risk and its cover that is prevalent in stand-alone products. They are thus grounded in more complex financial modelling than existing products, and so require different competencies in analysing risk and return from their reinsurers. As super-risk programmes increase, fewer and fewer reinsurers can actually handle the level of analysis required. If reinsurers

are to re-position themselves to offer super-risk products, they need to acquire these new competencies, change their operating structure, and acquire the skills to manage the different organization required. These issues are covered in Masterclass IV.

3.2.3 Growth of ART products that compete with reinsurance

Super-risks have provided the basis for competition from a new set of products. The function of super-risks for large insurers is to provide capital to cover peak risk - a major event which catastrophically affects a large part of the portfolio. Insurance-linked Securities (ILS) are also designed to work at this portfolio-wide level, not at the level of individual stand-alone programmes. ILS (which include Catastrophe bonds, Cat bonds) are partial *substitutes* (see Masterclass I) for traditional reinsurance, whose use looks likely to grow, and further eat into the premium available to reinsurers. For example, 2012 saw the second highest level of Cat bond issuance on record¹⁴ and the premium that fuels this growth no longer fuels the reinsurance market.

These partial substitutes further alter the reinsurance product life cycle in ways that threaten existing stand-alone and bouquet products: as more premium goes into super-risks and ART, a declining share is left for stand-alone and bouquet products.

3.2.4 Super-risks alter the reinsurance product life cycle in emerging markets

Super-risks provide bases for imitation as insurers grow in emerging markets. In larger emerging markets with high growth potential, insurers may move quickly to acting like big players in their demands for more centrally coordinated and capital-efficient reinsurance products. Firms that learn from industry leaders are likely to jump straight to a requirement for large bundled super-risks without passing through an intermediary stage of unbundled products. China and India are examples of emerging markets that, due to their size and the potential for a few large nationwide players to dominate the market, can move quickly to buying bundled super-risks that cover their whole regional market. For example, three main players currently dominate the Chinese market due to their significant assets.¹⁵

Reinsurers have to follow the insurers through every phase of their industry life cycle, providing different products as insurers' demand changes. This may force the reinsurer to make changes in company strategy, or in its operational practices. Such changes are explored in Masterclasses III and IV.

¹³<http://www.intelligentinsurer.com/news/ils-issuance-hits-new-heights>

¹⁵Ping An Insurance with RMBm 2,844,266 million, PICC with RMBm 290, 424 million, and China Pacific Insurance with RMB 570,600 million assets.

3. The reinsurance product life cycle (cont.)

Study Question 3

- (a) To what extent has your area of the insurance industry encountered and embraced super-risk products? Have you been affected, directly or indirectly, by this aspect of the evolving product life cycle and, if so, in what ways?
- (b) Identify a typical example of clients demanding each of the following: 1) bouquets; 2) stand-alone products, 3) super-risks, and 4) ARTs. What do you think is behind the differentiated product needs of those clients? Which product is the most difficult for you or your organization to supply?

List of Global Reinsurance Masterclasses

- Re-Think reinsurance: How to shape your future through a strategic understanding of global market forces
- **Fit for purpose?** How to tailor reinsurance products to insurance industry lifecycles
- Winning the game: How to identify reinsurance rivals and spot growth opportunities
- Be a better reinsurer: How to align structure, knowledge and roles for operational excellence
- Strategic reinsurance relationships: How to evaluate information and build trust
- Intelligent matchmaking: How to maximise value from broking
- Imagining the future: How to stay ahead in the reinsurance game through scenario planning

The aim of the Global Reinsurance Masterclass Series is to support (re)insurance and broking companies in analysing their position and improving their competitiveness during a period of global change. They are based on in depth analysis of a global reinsurance data set, supplemented with analysis of secondary data and findings from complementary industries.

Each masterclass functions as a standalone module that can be used on its own or in conjunction with other masterclasses.

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