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REPORT

Building a Crisis-proof Insurance Sector in The Netherlands

Lessons from the financial crisis



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Note to the Reader

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Introduction

Over the past months the insurance sector has found itself faced with challenges of a magnitude unprecedented in recent years. The international insurance sector has been hard hit by the financial crisis and almost all insurance companies have seen a substantial drop in their market value.

Nor has the Dutch insurance sector been spared the effects of the financial crisis. The Dutch government bought Fortis and in doing so obtained complete control of ASR, Fortis' Dutch insurance division. The government has also provided a number of players with large capital injections. The ING Group received EUR 10 billion to boost its capital position, while Aegon received EUR 3 billion and SNS Reaal EUR 750 million. Consequently, the Dutch government also obtained control over these players and appointed two supervisory board members at each party. Eureko requested EUR 1 billion additional capital from its major shareholders: the Vereniging Achmea and the Rabobank.

These developments have prompted a heated debate in the Netherlands on the role financial institutions played in creating the crisis and the question how they can better deal with such circumstances in future. In this context the Dutch Association of Insurers (Verbond van Verzekeraar) commissioned The Boston Consulting Group (BCG) to conduct an independent study into the role of insurers in the crisis and to translate the lessons learnt into recommendations for making the sector more 'crisis-proof' in future. This report presents the conclusions from that study and aims to reintroduce facts and analysis into the discussion.

The recommendations do not specifically apply to this crisis (which, after all, will not reoccur), but do apply

more generally to insurers. How can they better survive crises or better 'prepare' for crises?

The answers to these questions were reached from the perspective of the interest of the insurance sector as a whole and the role the sector plays in Dutch society. As such the focus is on the integrated perspective of all stakeholders: shareholders and insurers, but above all the end customer.

The report is written for a broad target group of potential readers. As a result, many terms will be explained and excessive detail will be spared in the area of regulation and risk management, for example (the bibliography includes a comprehensive overview of reports and other sources of background information). After all, the problems posed by the crisis affect a large group of people in the Netherlands, and for that reason this topic is relevant for many. We also believe that a wide range of people will have to be involved in making the sector better resistant to crises in future. As we explain in this report, this task will certainly not be limited to experts in the financial, actuarial and risk departments, though they will of course play an important role.



Summary

The report contains three chapters, in addition to the summary. In chapter 2 we explain the relevant aspects of the financial crisis and the impending recession. Chapter 3 goes into more detail of the effects for the Dutch insurance sector. The last chapter contains conclusions drawn from the analysis and presents four recommendations. The contents of the chapters can be summarized as follows:

Chapter two describes what caused the financial crisis and the imminent recession. The crisis can be best interpreted as the tail-end of an international ‘asset bubble’: possessions (assets), from houses to bonds and shares, had continued to increase in value, thus creating a bubble. But how could this bubble be created and why did it burst so rapidly?

National banks around the world had an important part in creating this bubble. They loaned money to banks at extremely low interest rates. Banks used this money to issue more loans to businesses and consumers, which resulted in increasingly higher debt ratios on the balance sheets of these banks (relatively high assets compared to equity capital). Consumers and businesses profited from the low interest rates for consumption and investments and also increased their debt. They too therefore ended up with higher debt ratios. Investors and hedge funds used debt to be able to make larger investments and, in doing so, to increase their profit. Virtually all players used the ‘lever’ on their own equity in this way, and thus increased their possessions or assets relative to their own equity. This lever between equity and assets is called ‘leverage.’ As a result of this high leverage combined with low interest on borrowed capital, higher returns could be achieved on one’s equity. This high leverage led to high demand for assets. These assets included houses, but also

bonds and shares. And, as we know, high demand leads to an increase in prices. Yet another reason for the higher asset prices was the underestimation of the risks of these assets. This was simply the result of years of growth in asset value and a relatively low credit risk during this period: most homeowners were able to repay their loans and businesses were relatively unaffected by bankruptcies. It is typical human behavior to translate a few years of good results into positive expectations for the future. This is how the asset bubble became a reality.

In the United States, the bubble burst when house prices fell because some consumers (primarily those who had financed their homes with so-called subprime mortgages) were no longer able to pay the interest and/or repayments on their mortgages. These consumers’ homes ended up in foreclosure, supply overtook demand, putting sales prices under pressure. The losses that resulted were largely swallowed by the mortgage banks, since consumers with subprime mortgages generally have no buffers or other assets. This led to a snowball effect: the devaluation meant that mortgage lenders consumed their equity capital, while at the same time ‘word got around’ that the risks of these mortgages were higher than first assumed, consequently more equity capital was needed. The solvency of banks deteriorated drastically as a result. This lower solvency affected the trust banks had in each other, as a result interbank flows of funds ground to a halt and liquidity problems arose. In some cases this effect was also reinforced as end customers withdrew or moved their assets. In order to bring liquidity and solvency back on level, banks had to abridge their balance sheets and sell assets. However, since there was now a large supply of assets, the prices declined dramatically and a vicious circle was created in which all types of assets were dragged along into the downward spiral.

The financial crisis constituted the starting point of the recession. On the one hand, consumers realize that they cannot continue to spend borrowed money. As a result, consumption declines (or this is expected to happen). On the other hand, the capital available for investments and expenditure also dries up. This already caused the technical recession in the United States and some European countries in the third quarter and led to a slowdown in the economy in other regions.

In chapter three we describe the effects of the crisis and the recession on insurers, more specifically on the Dutch players in the sector. The market value of insurers fell sharply, more sharply than the general share indices. Bancassurance institutions (which offer both banking and insurance services) and life insurers lost considerably more market value than non-life insurers and reinsurers.

The strong downturn at bancassurance institutions can be explained by the enormous direct write-offs at banks worldwide. A total of USD 708 billion was written off at banks worldwide, compared to USD 143 billion at insurers¹. Life insurers saw a sharper drop than non-life and health insurers. They had a very high asset level compared to their equity capital (high leverage) and more limited resources with which to respond to a crisis. The interest guarantees issued to policyholders apply for a longer period, and prices of current policies cannot be increased in the interim. That can be done quite easily at non-life and health insurers since these generally issue policies with a running time of a year.

The crisis hit the Dutch financial groups harder than the European insurers because the business mix of Dutch groups is much more focused on life insurances and because most of them also have banking activities.

It must be noted here that the solvency of the Dutch insurers has not dipped below the statutory minimum so far. Capital injections were undertaken to support Dutch insurance groups, but it is not yet clear to what extent these were necessary to support the solvency of Dutch insurance subsidiaries. It is therefore not the case that the insurance sector in the Netherlands is in panic. Still the crisis gives reason enough to implement improvements for the Dutch insurance sector as well.

We also address a number of factors that are often cited

¹ As of 1 December 2008

as significant causes of the crisis, but which in our view should be qualified by a few comments. The public debate, for instance, has focused much attention on management and the remuneration executives receive. As we will explain, the underlying reasons for the crisis are (unfortunately) much more complex and therefore one will have to seek beyond bonus structures for the solution. A second oft-cited reason is the quality (and remuneration structure) of the rating agencies and the mistakes they made in assessing risk, in particular with regard to new financial products. We certainly believe that mistakes were made, but it is wrong to put this blame entirely or even mostly on the rating agencies. The risks were underestimated by virtually everyone, and all financial parties (including insurers) bear responsibility for that. A third frequently heard argument is the structure of the new accounting rules (IFRS). We do believe these are ‘pro-cyclic’ and as such aggravated the crisis. However, the alternative accounting methods also have their limitations, and therefore would not lead to a factor that can easily be improved.

In chapter four we present four main recommendations specifically addressed to the insurance sector, the introduction of which could help the sector be better prepared for new crises.

1. Focus on bubble management, not on crisis management: Virtually all serious financial crises are preceded by an economic bubble: a period of strong growth and high returns. In essence the crisis is the last phase of the bubble. Measures must therefore be taken before and during the bubble to avert a crisis. These measures are not so much aimed at preventing the bubble (which would usually be impossible from the Dutch perspective), but rather at preventing a hard landing. Bubbles can be detected at the moment that parts of a business are growing rapidly and showing (extremely) high returns. That is often a sign that there is a risk that has not been correctly recognized (and prized). We believe that the management and the regulator must more actively keep an eye out for these bubbles in order to be able to have a good understanding of the risks and take measures accordingly.

2. Balancing risk and returns is the responsibility of every member of the Executive Board of an insurer: The outcomes of actuarial models and risk models

are often used for assessing the risk involved in important decisions. These are extremely complex models that are difficult to understand. Partly because of this, the responsibility for these models is often assigned to a small group of people within the organization. However, others do use the outcomes of the model as input for decisions. In this way risk management is often 'delegated' to the risk/actuarial department, which results in a division between risk management/actuarial tasks and general management at the company. This approach is less than optimal because risk models are by definition incomplete ('you don't know what you don't know'), and because in this manner the 'business sense' for risks remains unused. We believe that it must be the explicit responsibility of every member of the Executive Board to understand the risk model, so that he or she is aware of what this encompasses, but particularly also what it does not encompass². This means that risk managers/actuaries must devote more attention to sharing and elucidating the models and methods they use. Risk models must become more transparent and easier to explain (and if possible simpler). It also means that more attention must be devoted to the risks that are not included in the model and that the impact of extreme scenarios should be tested. For example, scenario analyses can be used that include factors not incorporated in the model (by actively seeking out scenarios in which the insurer would become insolvent). Stress testing and war games can be used to assess the impact of extreme situations. Every member of the Executive Board would therefore have to understand the risk and related returns, and the Executive Board should steer clear of products and investments that entail risks that it cannot fully comprehend.

3. The regulator must, when necessary, play a more activist role: In the past, regulators sometimes noticed a strong increase in risk at companies prior to a crisis and warned these companies of this. However, hard measures through interventions in the market as a whole were hardly ever taken. No requirements were introduced for necessary additional risk buffers and

no ban was instituted on further growth in a particular asset that was deemed a 'bubble'. These kinds of measures and requirements are needed, however, because individual players often cannot afford to behave in a way that strongly deviates from that of their competitors, especially if this would lead to lower returns for shareholders or end customers. After all, lower returns would prompt their clients or capital providers to withdraw and go into business with the competitor. We therefore believe that the regulator should not only warn, but also take active measures for the sector as a whole when individual companies are not taking such measures themselves. This applies therefore mainly in the bubble that is preceding the crisis. There is greater chance of accomplishing something at this point, after all. It is important for this to take place in a coordinated manner at a European level. It is therefore necessary that this aspect be given sufficient emphasis in the ongoing discussion on Solvency II, the project aimed at fundamentally revising the European directives for the insurance sector.

4. Continue to guarantee a strong capital position for Dutch operating companies: Supervision of insurers currently mainly takes place on a national level: the legal entities on that level concern themselves with local regulation. This is true both for local players and local subsidiaries of international insurance groups. Their legally required capital buffers with respect to solvency must also be held locally. The current requirements are set down in 'Solvency I'. We do not find these minimum requirements to be all that high, however. Even the buffer of an additional 50% capital maintained in the Netherlands seems limited, especially when considered at the time of a bubble; if the Dutch insurers had maintained 150% solvency at the time of the bubble (one and a half times the minimum requirement), that could have led to very alarming current situations. Fortunately, insurers maintained much higher levels of capital; the average solvency at the end of 2007 was more than 2.5 times the minimum level required. The minimum solvency requirements will once again be established in the

² In our opinion there are possible exceptions to the rule that every member of the Executive Board must comprehend the weighing of risks and returns in detail. It may be the case for instance that one member is responsible for marketing or sales without having a deep understanding of actuarial models and risk models. However, this person should not have any input into major asset investment decisions therefore. This person should understand and take into account the risk effects of decisions in his/her own domain.

plans for Solvency II. It will also be determined whether insurance groups may partially replace local solvency buffers with guarantees from the parent company to the legal subsidiaries. In our opinion the crisis has demonstrated that it is crucial that local subsidiaries continue to have an independently solid capital position. The example of AIG shows that sufficient (screened-off) capital at the legal subsidiaries is very important: when AIG found itself in trouble because of its portfolio in credit derivatives, it could not appeal to the capital located in the separate legal operating companies undertaking client-related insurance activities. AIG had to ask the government for money. The operating companies thus held on to their own solvency coverage. Even if the AIG group had gone under, it would not have caused extra problems for these legal operating companies and their insurance clients. We therefore believe that it should be guaranteed that every insurance operating company has an extremely solid capital position³. Additional capital can of course be deployed where it has the most value. This system is also important for potential support measures that the Dutch government can take when solvency margins are too narrow during a crisis. If it wants to support the company as a whole, a capital injection on the group level would be very valuable. If the situation is so serious that it only wants to protect the assets of Dutch policyholders, an injection on the level of the Dutch operating company is necessary and that requires that there be enough capital there.

None of the recommendations above is at odds with the aforementioned new policy regulations for solvency included in Solvency II. It is therefore important to continue the discussions on Solvency II and in fact use that platform to realize the necessary improvements. We hope these four recommendations can lend direction to this discussion. In addition, we argue that these recommendations be introduced in an accelerated fashion considering the introduction of Solvency II for Dutch insurers is not planned to take effect until 2012.

The four recommendations should enable the insurance sector to sufficiently withstand future crises resulting from asset bubbles (which includes a great many crises therefore). The most immediate possible crisis that we foresee, however, is of a different nature: the possibility of an extremely long period of low interest rates and low

returns that can have significant effects primarily for life insurers. This situation could be comparable to the economic development in Japan since the beginning of the 1990s. This kind of situation has such significant impact for life insurers precisely because these insurers work largely with guaranteed yields that can therefore be achieved only with difficulty, if at all. Moreover these guarantees cannot be adjusted with retroactive effect when things get difficult (that is what guarantees are for, after all). We must prevent that we look back in 10 years' time and observe that interest and yields have been low all that time, while excessively high guarantees continued to be issued to clients without the solvency reserves being supplemented accordingly in order to accommodate this. As we will explain in the last chapter, the four recommendations also apply to this situation (in a slightly adapted form).

³ The regulator will have to determine what qualifies as an 'extremely solid' capital position. We can imagine that this level will depend on the particular time (does the regulator feel that an asset bubble is taking shape?) and the player (according to different risk profiles, for instance).

Detailed overview of the financial crisis and recession

2.1 The financial crisis

The Dutch insurance sector is currently battling the effects of the largest international financial crisis since the 1930s. The direct effects have resulted in about USD 4,100 billion⁴ or 9% of the total US/EU gross national product (GNP) being written off.

The crisis is in fact the final phase of many asset bubbles: possessions that had acquired unrealistically high values and that were now deflating in value at lightening speed, such as real estate, shares and bonds. Figure 1 gives an example of the value accrual of real estate in the United States over the past 50 years as a percentage of the gross national product (GNP) of the United States. The graph shows an enormous relative increase of 50% in the GNP

in 1945 to more than 150% now.

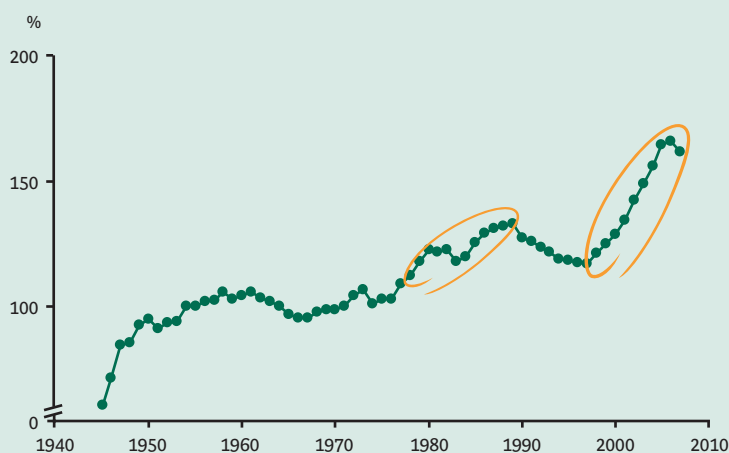
Share markets also experience bubbles. The S&P 500 for instance rose from a level of around 2,000 points in the mid 1980s to almost 15,000 points recently.

Another factor that contributed to these bubbles is the fact that central banks lent out money at low interest rates over the past 20 years. Some see the banking crisis in Japan that started at the end of the 1980s as the beginning of the asset bubble. The Japanese lowered the interest rate at that time in order to contend with the crisis. As a result hedge funds and investors could raise

⁴ As of the end of October 2008

Figure 1. Real Estate bubble booming in the past years

US private and non-profit real estate assets as % of GNP (1952–2007)



Source: US Federal Reserve; Bureau of Economic Analysis; BCG analysis

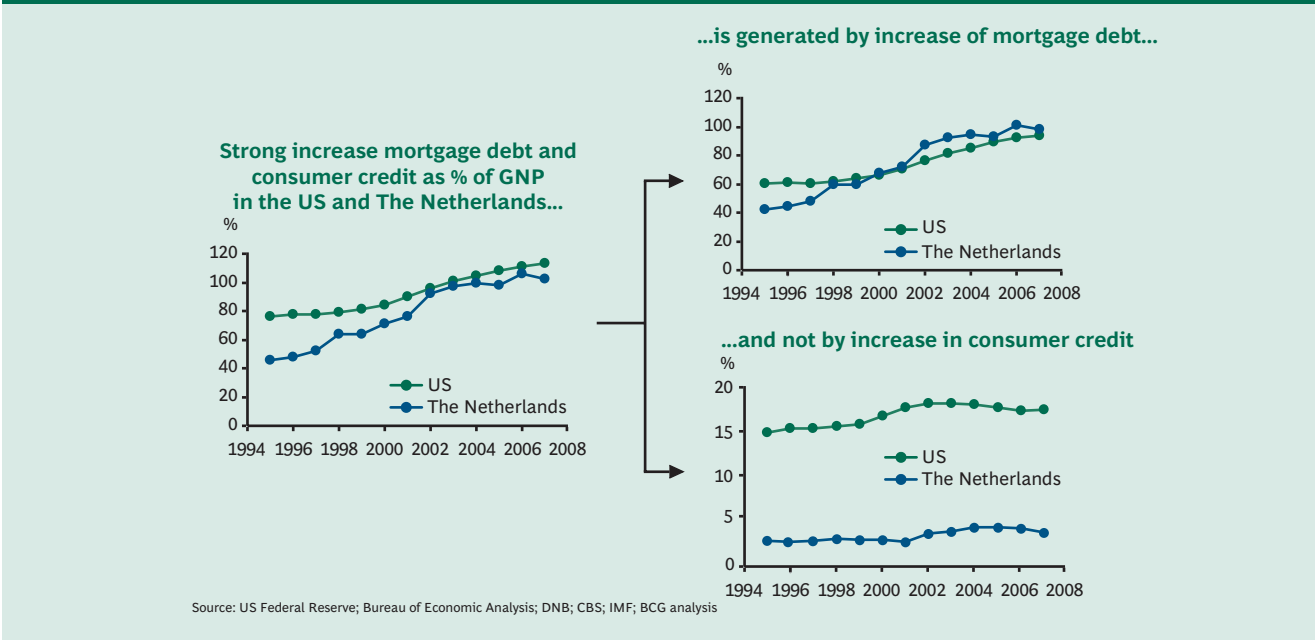
cheap capital and invest elsewhere in the world (like in the US, for instance). For many central banks the dot-com crisis was another reason to keep interest rates low. This caused the debt of the US and many other western countries to rise to historic levels over the past twenty years, even exceeding the level of just after World War II.

Banks used this liquidity to finance consumer spending in the United States, primarily by offering consumer credits and cheap mortgages to a growing number of unsuitable consumers (subprime mortgages). In doing so, they increased their debt ratio (high level of assets compared to equity capital). In the last phase of the bubble, banks offered very generous credit conditions because they underestimated the risks of nonpayment and ever-increasing house values served as collateral for the mortgages.

Strong growth of debt in the private sector in the Netherlands as well

The total debt burden of consumers also rose strongly in the Netherlands over the past years and is now at a comparable level with respect to the GNP as in the US (figure 2). An increase in mortgage debt contributed to the total debt burden, while the US also saw high levels of consumer credit. It is expected that the risk of a sharp housing value correction is less likely in the Netherlands because the balance between housing supply and demand is not so strongly motivated by emotional reasons alone and in a physical respect the Netherlands also actually has a low housing supply.

Figure 2. Strong increase of mortgage debt in both the US and The Netherlands



The issuing of credit was further stimulated because banks often accommodated the loans outside the balance sheet of the parent company, in separate legal entities called Special Purpose Vehicles (SPVs). In doing so, banks cleaned their balance sheets and lowered their debt ratio on paper. They bundled the mortgages and other loans in

these SPVs in packages of varying risk profiles and sold these on as bonds to investors, including insurance companies. These bonds were called Asset Backed Securities (ABS) or Mortgage Backed Securities (MBS). Since investors had no insight into the contents of the loans and the related risks, they depended on rating

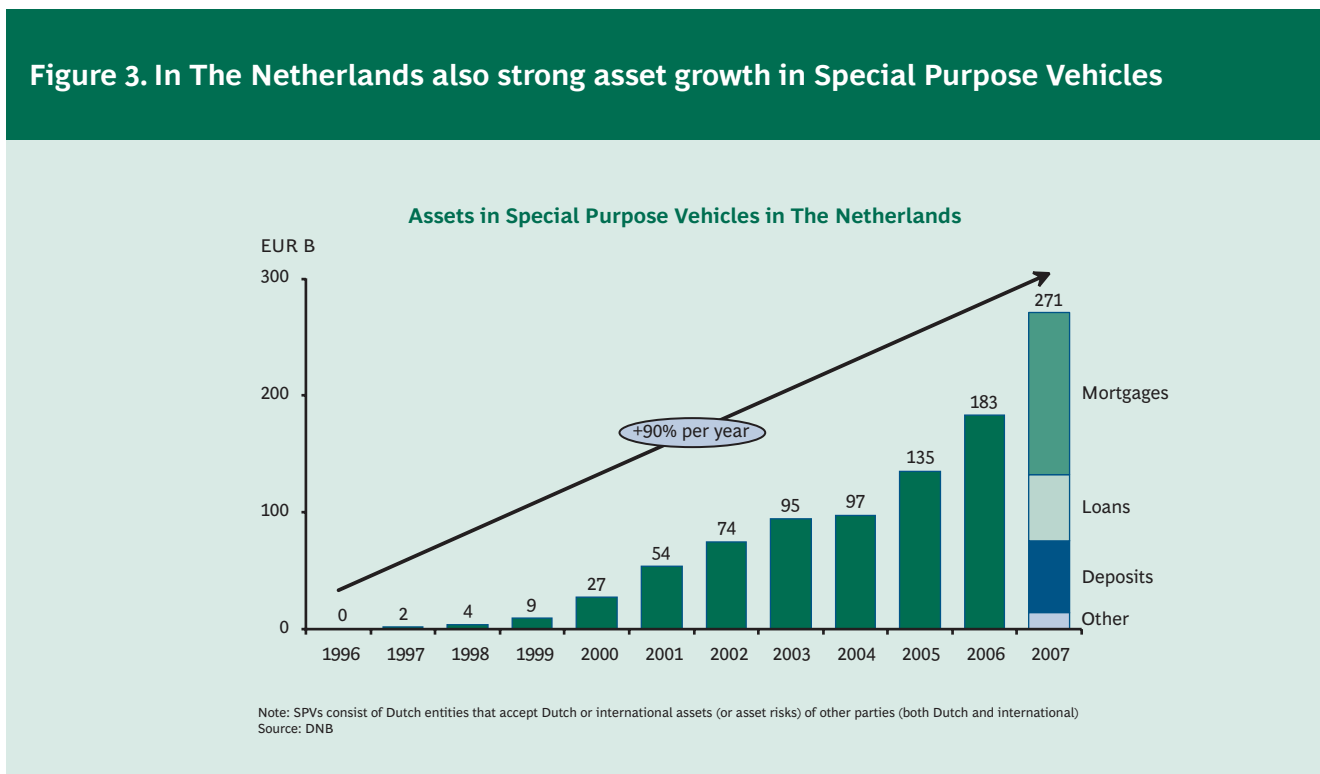
agencies to evaluate these bonds. It has now emerged that many mistakes were made and the rating agencies' estimations were far too positive. This was probably due to the fact that rating agencies were paid by those whom they had to evaluate or to the fact that it was impossible to properly assess the underlying risks of loans because of repeated repackaging. The investors also trusted that credit insurances and derivatives would protect them against the risk of nonpayment. They underestimated the risk however that the counterparty in these insurances could go under (counterparty risk).

SPVs and with them ABSs grew on a large scale in the US, but also in the Netherlands (see figure 3).

The total debt ratio rose to an unprecedented level in the United States. Figure 4 shows the total debt burden of households, businesses and the government of the United States.

It is striking that the previous peak in the United States' debt position did not come before, but after the wall street crash in 1929. At the time, the government poured extra money into the economy to keep it going. It commissioned many infrastructure projects to maintain the employment level.

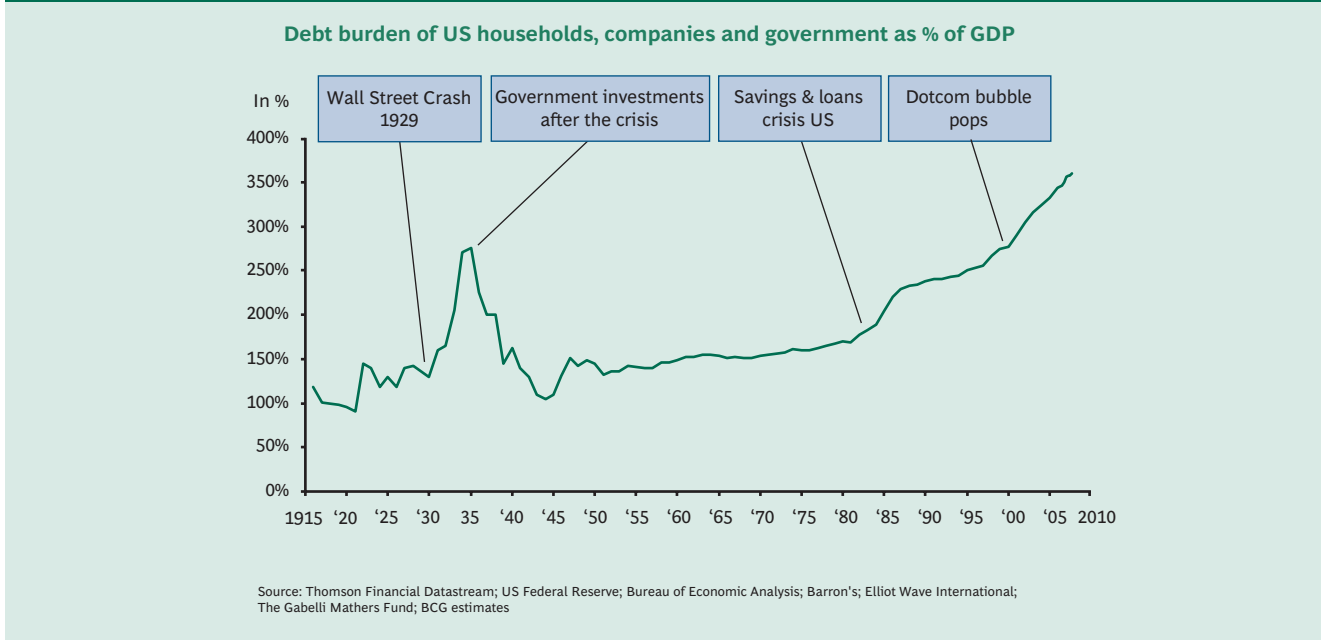
The enormous recent increase in money boosted the demand for possessions (assets), which in turn increased



The rise and success of hedge funds and private equity funds was also largely based on cheap and easily available credits. These players also had an additional effect, encouraging the companies they acquired to opt for cutting-edge financing. As a result the debt burden of those companies rose further.

in value. The perception that risk was low also led to an additional increase in the valuation of these assets. The emergence of a number of enormous asset bubbles was the result.

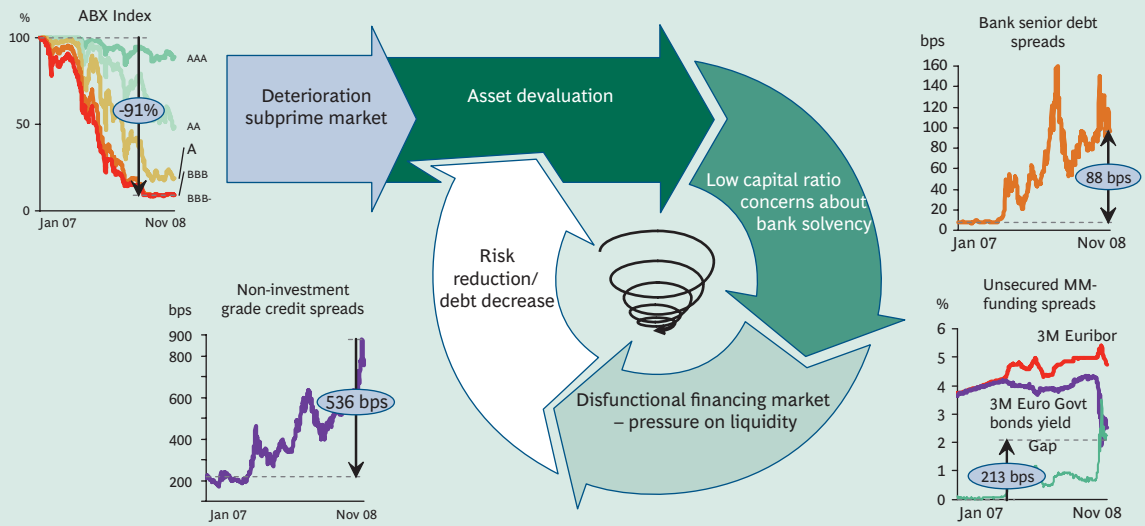
Figure 4. Record debt level in the US



The real estate bubble in the United States was the first to burst and announced the start of the financial crisis. Little by little other bubbles followed, such as the real estate bubbles in Spain and the United Kingdom and the share and bond markets worldwide. The bubble initially burst in a relatively small part of the US mortgage market (subprime) when consumers were no longer able to pay their mortgages. Since there were not enough new buyers at foreclosure sales, the asset value declined. This led to asset devaluations at banks that had been hit. Because of the high leverage of the institutions and limited transparency of the real risks, doubts arose regarding the solvency of banks. Banks and other players no longer did business with each other, which led to a liquidity crisis since the markets were no longer functioning.

In order to increase their liquidity, banks had to lower their risks and debt ratio by selling assets. As a result, prices fell and along with them asset values. This led to further asset devaluations, also for other financial products that were generally unrelated to the original problems. A vicious circle was created which drew in more and more financial products (figure 5).

Figure 5. A vicious cycle causes entire financial market to fall in a downward spiral



Source: BCG analysis

Procyclic effects of IFRS

The International Accounting Standards Board (IASB) established the 'International Financial Reporting Standards' (IFRS). IFRS is aimed at achieving more uniformity, transparency and harmonization in financial reporting. For insurers this applies both to the valuation of obligations (insurance contracts) and the valuation of possessions (assets).

The regulations on valuing obligations are set down in IFRS 4. The current version of IFRS 4 (phase 1) still gives insurers a great deal of latitude for different valuation methods, however. This is probably the reason why there is limited confidence in annual reports, since it is difficult to compare reports from different companies, thus making them difficult to understand. This could have had an aggravating effect on the crisis. The intention is that phase 2 of IFRS 4 should lead to more harmonization. A rapid introduction of this phase is therefore desired.

The discussion surrounding the effect of IFRS on the crisis, however, primarily focuses on the valuation of assets, as set down in IAS 39, and the explanation to that (IFRS 7). This standard states that it is often necessary (by regulation) or desirable (operationally) to value assets at market value (mark-to-market). This valuation method has the aim of giving as fair as possible an economic picture, but can, however, reinforce economic cycles. In order to better understand this procyclic effect, we will briefly explain the IFRS mechanisms for market valuation below. IFRS divides assets into four categories.

1. Loans and claims that are not held for trading purposes and not traded on an active market ('loans and receivables'; valued at amortized cost price unless a permanent depreciation occurs);
2. Loans and claims that are held to the end of their maturity ('held-to-maturity investments'; valued at amortized cost price unless a permanent depreciation occurs);
3. Assets valued at actual value subject to value changes in the profit and loss account ('fair value through profit or loss');
4. Other assets, available for sale ('available for sale'; valued at actual value with report of all value changes in equity capital up to the moment of sale or time at which a permanent depreciation occurs).

An asset is classified when it is acquired and in principle cannot be subsequently reclassified.

Possessions are valued at their market value at the moment of purchase. Short-term fluctuations in value have a different effect on the balance sheet and, therefore, on solvency:

- A. 'Fair value through profit or loss' and 'available for sale' include all assets held for trade ('Held for trading') and with respect to which this valuation was specifically chosen at purchase ('Designated as at Fair value through profit or loss'). The value of these assets must be based on the market (the market value, for instance). Revaluation of both categories therefore leads to a change in the solvency of an insurer¹. Changes in value for 'fair value through profit and loss' go directly via the profit and loss account, but in the case of 'available for sale' only at the sale or permanent devaluation. The effect on the result is therefore very different, except in the event of permanent depreciation.
- B. 'Loans and receivables' and 'Held-to-maturity investments' include assets that are not expected to be sold, or with regard to which there is the intent and possibility of retaining them until the end of their term. Mortgages are usually counted among these. These assets are not constantly revalued and changes to value are therefore not visible in the balance sheet, unless there is danger of nonpayment.

In our opinion, these rules generally provide a fair picture of the company's balance. However, if all market values simultaneously decrease significantly, as occurred in this crisis, that immediately has a major impact on assets in group A. Since the value of these decline, solvency also declines. When solvency starts to near the minimum solvency requirement, institutions are forced to sell more risk assets (shares, real estate) in order to improve their risk profile. If this effect occurs across the market,

the downward spiral is reinforced and the value of the assets falls further and faster. The negative effect on the value of these investments is further increased as the demand decreases or even comes to a halt (illiquid markets). If prices have already been set under these conditions, they are often lower than would be expected purely on the basis of market interest rates and creditworthiness.

In order to reduce this effect, especially for banks, the rules (IAS 39 and IFRS 7) were adjusted in October 2008. Assets 'Held for trading' and 'Available for sale' that are valued at market value can now be reclassified in certain circumstances² in group B, whereby valuation takes place at amortized cost price. Institutions must justify this adjustment and provide detailed explanation in the years following, until the instrument is off the balance sheet. Since banks generally have many more investments that are held for trading purposes, the adjustment is more significant for them than for insurers.

Some criticize the current IFRS rules for the reasons above and propose they be rejected (even after this adjustment). This discussion is understandable, but is not one with a clear outcome since the alternatives are not necessarily better.

One alternative, for example, is to keep assets at the valuation at the moment of purchase and only take book profits or losses when they are sold. Experience in Japan after the strong decline in value in the early 1990s shows, however, that this method too can have significant negative effects on the financial system. Banks in Japan kept loans on their books for years although it was already clear that large parts of these would never be repaid. This in order to avoid write-offs (the necessary so-called impairments were therefore 'forgotten'). As a result a very non-transparent and instable situation ensued that could persist for years.

In conclusion, we state that the IFRS system inherently involves effects that reinforce the economic cycle, but that it is unclear how a better system can be developed that does not have this disadvantage and does present an economically fair picture.

1) On the basis of regulation in the Netherlands; other countries (France, Germany, the US) have different rules.

2) For more background on the regulations for specific real estate, see IAS 40 and IAS 16

Note: See Supplement 23 from Ernst & Young IFRS Outlook for more background

2.2 De recession

The crisis was not limited to the financial markets but soon had an impact on the ‘real economy’: at the beginning of September most consumers and businesses outside the financial sector hardly had any concerns and 2008 seemed to be a very good year. After the fall of Lehman Brothers on 15 September, however, this sentiment quickly changed. Consumer confidence dropped; consequently consumers in the United States started spending less on the basis of borrowed money. Businesses observed an unprecedented fall in demand. The banking crisis also caused a vicious circle related to business credits: less investment, lower output and defaults on payments by businesses, which leads to job losses and declining demand.

Research by the IMF into historical recessions indicates that we are very probably on the threshold of an extremely deep recession. The IMF concludes that the worst recessions in history were initiated by a combination of a banking crisis, the collapse of the real estate market and the share market. This is exactly what we are witnessing today. The dramatic effects of the crisis already became apparent in the third quarter of 2008 and already caused recession in the United States and parts of Europe.

The example below shows that the automobile industry is clearly experiencing the effects of the crisis (figure 6).

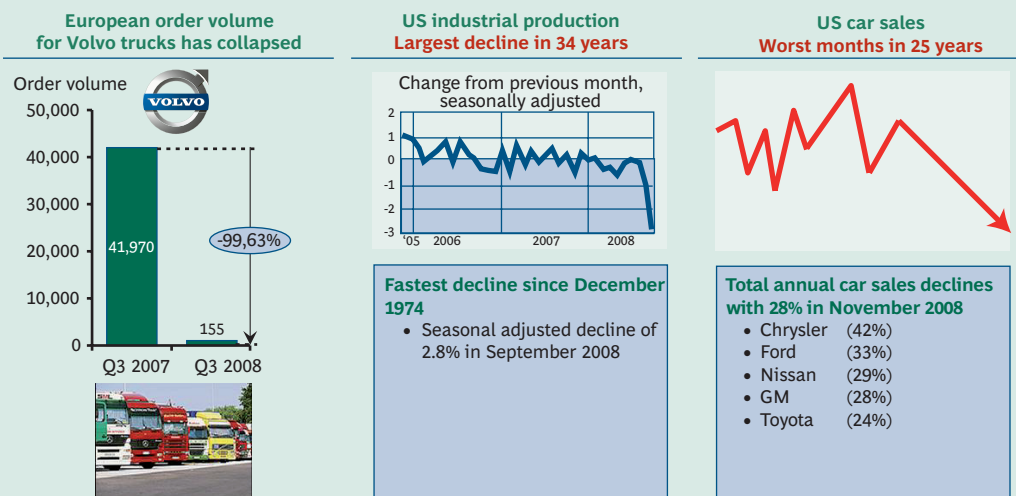
In order to better understand what could be in store for us, we must first realize that we are caught up in a ‘perfect storm’ in which many problems coincide. All developed economies are simultaneously moving towards a recession for instance, something which has not occurred since World War II. In addition, a great imbalance has arisen between countries. Some have enormous trade surpluses and other have great deficits. The United States, for instance, has a deficit of 5% with respect to GNP, while China has a surplus of 11%. Finally, governments, businesses and individuals in the world’s largest economies have built up substantial debt positions.

On the basis of this context we will give our view on three possible scenarios for 2009.

Scenario 1: a short recession followed by a period of modest growth. The ‘V scenario,’ (sharp decline, quick turnaround but gradual recovery)

After the write-offs and enormous decline of the last months, improvement in confidence is a logical next step. Governments acted quickly and adequately and

Figure 6. Financial crisis has a noticeable effect on the economy



Source: Global Insight; Financial Times (24 Oct 2008); Federal Reserve; Philadelphia Federal Reserve Autodata; Edmunds.com

prevented the financial systems from collapsing. Measures to support households and real estate prices in the United States will bear their fruits. Lower fuel and raw materials prices will give the economy ‘oxygen’ and increase the latitude for commercial and consumer expenditure. The great danger of inflation perceived six months ago has passed. This will benefit people’s real income. However, all these factors only lead to modest growth that is far below recent levels when overconsumption and excessive use of borrowed money spurred on growth.

Scenario 2: Quick turnaround to a new period of growth. The ‘J scenario’ (after the decline, quick continuation of the path to high growth)

Some believe that the extensive stimulus measures (those that have already been introduced and those to follow) can lead to a new boost in economic growth. Consumers rediscover their confidence in the economy and start spending again (on the basis of borrowed money), businesses start investing again and governments support both with measures such as low interest, guarantees, etc. However, since many businesses have already started reducing their production capacity in preparation for a long recession, higher inflation could once again rear its head (more money for fewer available products) combined with higher interest.

Scenario 3: a long and deep recession, but no depression. The ‘L scenario’ (after the decline a very long period of low or no growth)

In this scenario the stimulus measures by governments and central banks are insufficient for growth to resume quickly and banks, businesses and individuals will continue the process of ‘deleveraging’ (lowering the debt ratio). Governments and central banks will avert a depression, but cannot prevent the advance towards the recession that has already set in.

In the first two scenarios incidentally the problem of excessively high debt ratios and consumption on the basis of borrowed money is not systematically dismantled. This could lead once again in the medium-term to ‘bubbles’ (and the bursting of those). More attention to ‘bubble management’ in the future is very important, particularly for these scenarios.

The third scenario in many respects resembles the crisis in Japan in the 1990s: weakened financial players, large stimulus packages from the governments, persistently low interest with nonetheless permanently low growth. If this scenario becomes a reality, there is a possibility that the problems will become greater than was the case in Japan. Because of the international character of the recession, exports will not be able to compensate for low domestic consumption. Nor will the total debt ratio necessarily improve much in this scenario. It may improve at businesses and individuals, but the government could see its debt ratio deteriorate. Since 1989 the debt ratio of the Japanese government has tripled to 170% compared to GNP, while that of businesses and individuals remained constant at a level of below 100% of GNP.

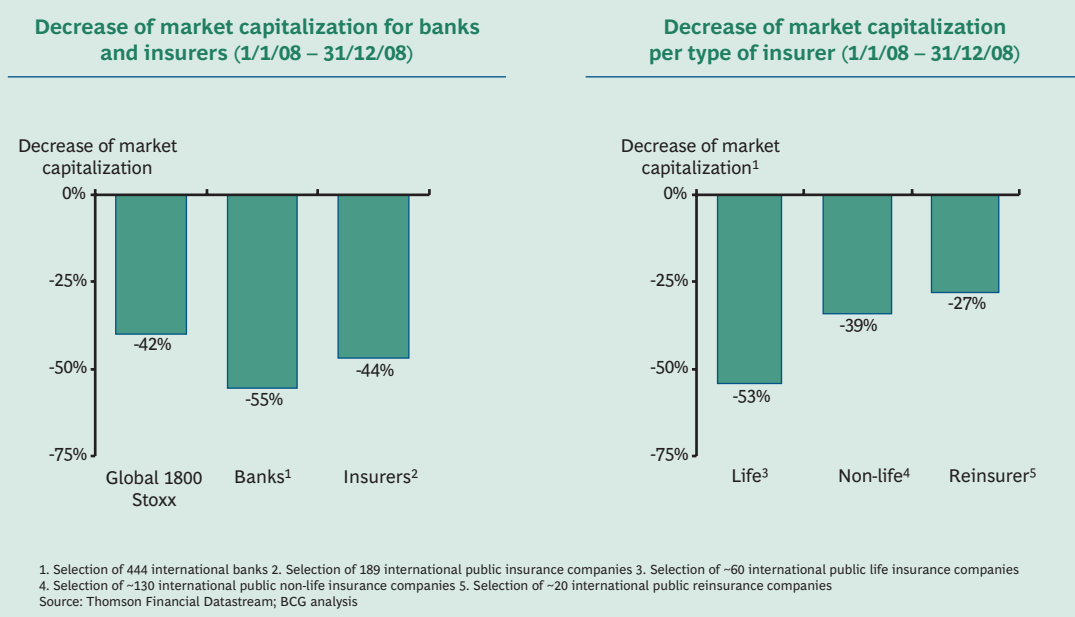
Effects of the crisis and the recession on Dutch insurers

3.1 The financial crisis

The market value of insurers fell strongly over the past year, even more than the general share indices. Banks and life insurers lost considerably more than non-life insurers and reinsurers (figure 7).

players in the US market, but were felt worldwide. The market value of US players did not plummet any faster than that of their counterparts in Europe and Asia. This may have been due to the fact that additional write-offs are still anticipated in Europe and Asia or the fact that the recession is expected to have a greater impact in those regions (the US is usually regarded as a country that is hit

Figure 7. Life insurers suffer biggest share loss



The financial crisis caused direct write-offs of USD 851 billion at banks and insurers. Banks were most affected with write-offs of USD 708 billion, while insurers saw USD 143 billion evaporate (figure 8).

Although US institutions accounted for the most write-offs (USD 425 billion for banks, USD 125 billion for insurers), the effects of the crisis were not limited to

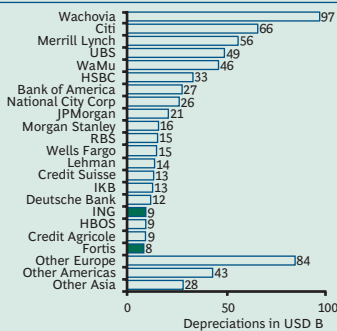
the hardest, but in which recovery also takes root relatively quickly).

5 Per 1 december 2008

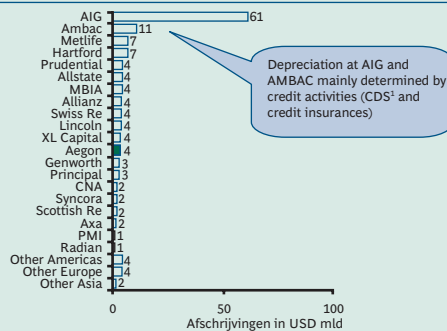
6 Hierbij moet wel opgemerkt worden dat verzekeraars relatief meer bezittingen hebben die pas afgeboekt moeten worden op het moment van verkoop. Er kan dus nog meer volgen.

Figure 8. Crisis has affected banks more than insurers and has affected the US more than the rest of the world

Banks: ~USD 708B in depreciations as a result of the crisis per December 2008...

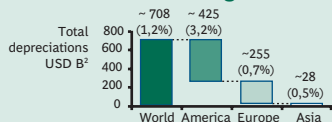


Insurers: ~USD 143B in depreciations as a result of the crisis per December 2008...



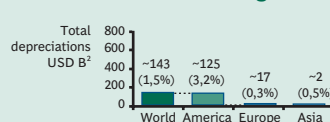
Depreciation at AIG and AMBAC mainly determined by credit activities (CDS² and credit insurances)

...affect US region most



1. Credit Default Swap: a forward contract with which buyers insure themselves against a value decline of company bonds in case of a bankruptcy
2. Percentage indicates depreciation compared to assets
Note: Depreciations as a result of the credit crisis per 1 December 2008 Source: Depreciations from Bloomberg, 1 December 2008; BCG analysis

...affect US region most



A large part of the USD 143 billion that insurers wrote off could be allocated to a single player: AIG wrote off USD 61 billion. This involved banking activities in financial derivatives (primarily Credit Default Swaps) and not insurance. European insurers wrote off a total of 'only' USD 17 billion.

The write-offs so far at insurers were therefore largely caused by trade in financial derivatives by a few parties. However, write-offs also took place in the core business and more could follow. These write-offs are primarily caused by share portfolios that were not hedged against a sharp drop in share prices (most insurers did have their 'hedging' for this properly in place) and because of a market-wide underestimation of credit risk on (asset backed) bonds and 'counterparty' risk (the risk that a major counterparty will go under).

Greater risk than was advisable was therefore also taken on the insurance market. The (often short-term) focus on high returns on the part of all stakeholders encouraged this:

- Policyholders (often assisted by brokers) demand high returns and at the same time notionally low risks. If that is not offered, they change over to a

competitor that does offer this or to investment funds or bank products. This is valid for the individual life market, but especially for collective life products, where pension advisors try to keep operational compensation and risk premiums very low. As a result insurers can only compensate with high return in investments and by entering into relatively higher risks. These effects especially play a role if the returns achieved have been high for years, and everyone wants their piece of the pie. The related risk can then be underestimated (also by customers).

- Shareholders want high returns for the risk taken (guaranteeing interest to clients).
- Managers like to lead large and successful institutions, do better than their colleagues, and be regarded as the most capable manager. They must achieve good returns in order to attract clients and keep shareholders happy with high profits. We do not believe that this was only driven by bonuses and remunerations, as we explain in the separate text box "Management's contribution to the financial crisis."

It is precisely insurers who should also offer security for the long term, in order to make good on their role as safe

haven in a world full of risks. The long-term perspective contains various bubble cycles and crisis periods. The total assets of a business must be sufficient to withstand the low point of the crisis and to be able to thrive in better times. Solvency requirements must assess whether insurers can also satisfy their obligations in the long term. This sector in particular must arm itself against the human pitfall of being focused on the short term. This applies to clients, investors and management alike.

The crisis is hitting life insurers structurally harder than non-life and health insurers. This is because they have the highest leverage (high level of assets relative to equity capital, in a ratio of 12:1) on the balance sheet (see figure 9). Because of this ratio, a 1% decrease in the value of their assets means that their equity capital falls by 12%. Moreover, they offer high guarantees (especially in collective life contracts) with high risk profiles and, since contracts usually have a very long term, they only have limited possibilities of increasing prices in order to rebuild their reserves. Health and non-life insurers are able to adjust their prices annually for the whole portfolio. As soon as the entire sector is in trouble, prices will therefore increase immediately for all customers.

The consumer's role

Our society rightfully protects consumers against fraud and misleading behavior by companies. However, consumer protection sometimes seems to overlook the fact that every decision in life entails a certain degree of risk and that the person who makes an informed decision should also bear (a part of) this risk. If the consumer were to bear (a part of) the risks, he/she would probably develop a preference for long-term security versus short-term returns. In order to guarantee this positive effect, financial services must be highly transparent so that it is possible to make informed decisions. Transparency consists of, among other things, comprehensible information on distribution costs, risk and yield of the product

Management's contribution to the financial crisis

The role of bonuses and other financial incentives is often discussed as one of the most important reasons behind the crisis and as such, one of the most important directions in which to look for a solution. We agree that the height and structure of remuneration played a role in creating the crisis, but this must be seen in the proper perspective with regard to other incentives that affect the actions of management and the pressure that shareholders and customers exerted in order to achieve high returns.

The rewards for management were so high, especially at commercial banks and investment banks, that it was certainly one factor that prompted managers to take high risks. Remuneration was lopsided. It was not unusual for remuneration of (tens of) millions of dollars to be awarded to managers in times of success, while the management did not have to pay back these amounts in the event of losses. It was also the case that the remunerations promoted a short-term focus, while managing risks by definition requires a long-term focus. The remuneration structure of mortgage sellers in the US, for example, also led to many evils since there was much to be gained by 'pushing through' a sale, even if this was not advisable in the light of the financial position of the sometimes unwitting customers. Remunerations in the insurance sector were generally not so extreme, although there were certainly excesses,

such as at the aforementioned AIG.

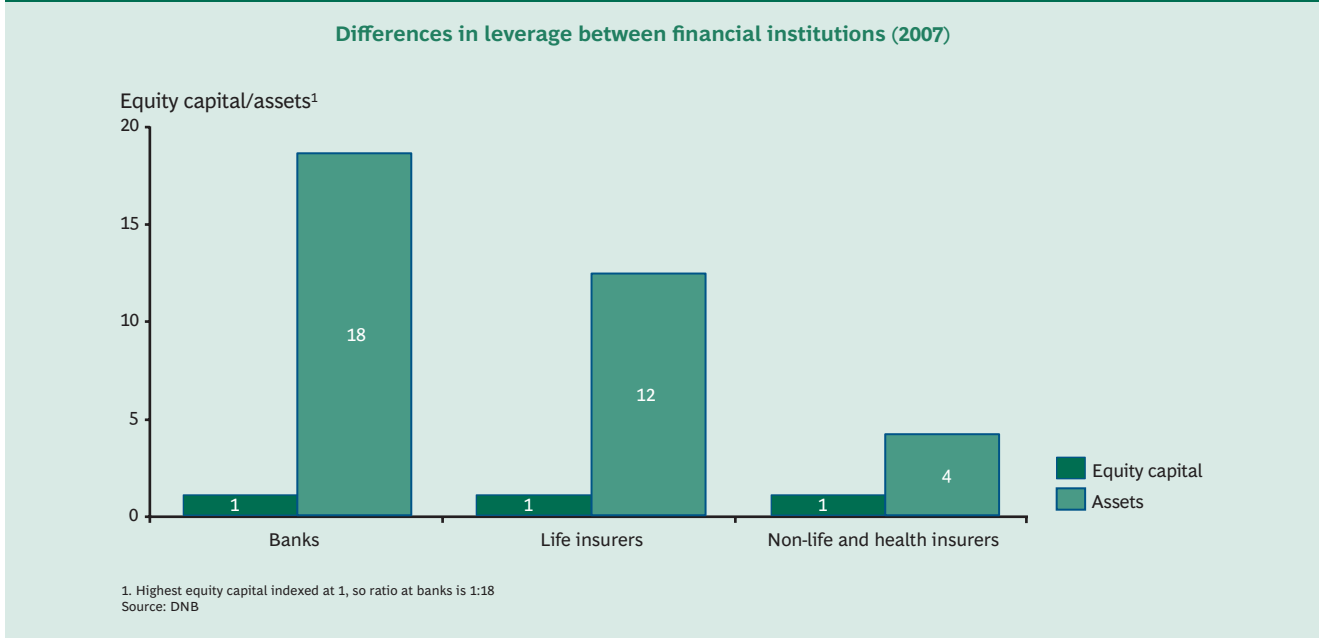
We must not overestimate the role of bonuses and financial incentives as a cause of the crisis however (which does not detract from the fact that the amounts were sometimes absurdly high, logically leading to a feeling of ‘unfairness’). The bonus amounts in themselves are not proportionate to what was lost and in terms of incentives there are other important reasons that determine the conduct of management, as described below. As we described in the second chapter, macro-economic factors, particularly the low interest rate of the past years, first caused the crisis.

In order to explain the actions of individuals and, by extension, management, it is worthwhile to further examine, adapt or improve bonus structures. It is possible to better define long-term objectives, give the Supervisory Board a more active role or even involve risk managers more actively in assessing bonus structures (in order to assess whether these contain any incentives that could have an adverse effect). These types of measures are also included in the recommendations from the Frijns commission on this topic. The commission did also note that the difference between high level and lower level remunerations is relatively small in the Netherlands and that the ratio between the variable and the fixed part of the remuneration is certainly not high from an international perspective.

Other (psychological) factors were, in our opinion, at least as important in management’s actions:

- Using only a few years of historical data on which to base long-term projections. Especially after a long period of prosperity, it seems increasingly difficult to accept that business could decline. This is true in particular for younger people who have not (consciously) experienced crises in the past.
- Overestimating one’s own predictions: many people announced in the run-up to the financial crisis that the risks were lower and better spread this time. This emerged not to be the case at all. Interestingly enough, research shows that so called experts are in error at least as often as lay people, but that they are generally more convinced that they are right (after all they have gathered ‘evidence’).
- Systematic underestimation of negative scenarios: people are generally optimistic and consequently they systematically underestimate related risks. In times of crisis, incidentally, the opposite can occur.
- Decisions and/or predictions limit our field of vision: after a decision is made, we see the world from the perspective of that decision (or the underlying predictions) and we mainly focus on facts that confirm the decision. In practice this determines the way in which we look at the world: two years ago, for instance, everyone was focused on returns, while currently people are mainly focusing on risk; both perspectives are probably biased.
- Overestimating short-term results: some insurers had not ‘hedged’ their position because this coverage was expensive and would therefore endanger short-term profitability. This is in line with the known and proven effect that people value short-term result above long-term effect. People would rather receive EUR 100 today than EUR 105 next week.
- Herd behavior due to social ‘proof’ and expertise: it is likely that people found the risk level of certain investments acceptable because many other insurers were making the same investments.

Figure 9. Banks and life insurers have a very high equity capital and debt capital ratio



This is the case especially for traditional guaranteed products. These products are characterized by a high level of assets relative to equity capital on the insurer's balance sheet and a guaranteed return for customers. Figure 10 shows what portion of the portfolio is renewed annually: just 11%. Therefore 89% of the portfolio consists of policies that were sold in the past and for which the price and guarantees have already been fixed. Adjustments to guarantees and higher rates to boost margins and thus reinforce solvency can therefore only be implemented in the portfolio very gradually.

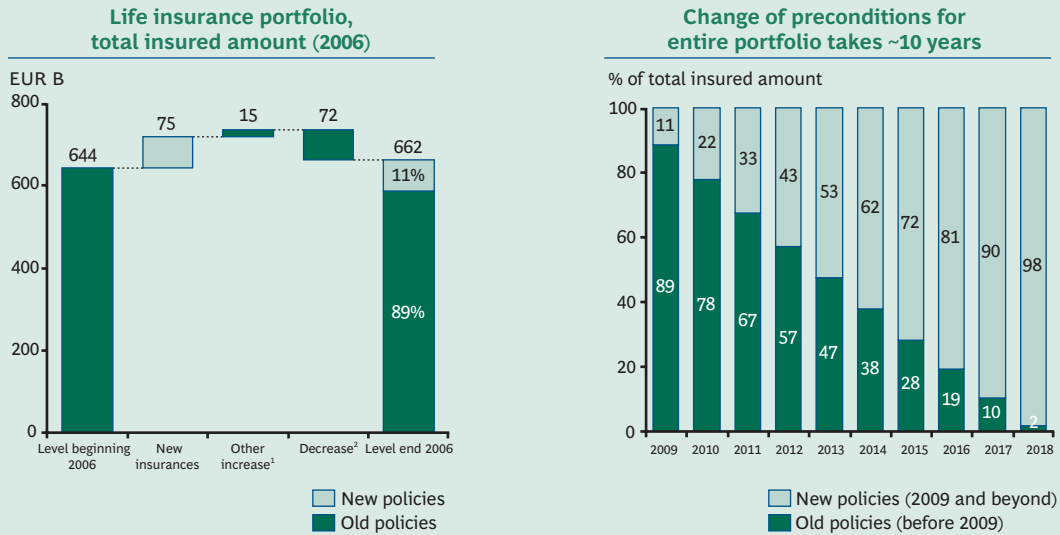
In the crisis, non-guarantee life products (unit-linked products) caused insurers far less worries since these products transfer the risk of returns on investment to the policyholder. Although this does not diminish the problems, the risk is explicitly for the end consumer and not for the insurer. In the Netherlands these products were unfortunately sometimes sold with ambiguous promises and non-transparent and often high costs (the so-called woekerpolisaffaire or 'profiteering policy affair'). This is a separate issue from the financial crisis, however.

The crisis hit large Dutch insurers harder than their European counterparts (figure 11). This can primarily be

explained by the fact that the Netherlands has a number of combined institutions that undertake both insurance and banking activities (SNS-Reaal, Fortis, ING). This model is much less common elsewhere in Europe and the rest of the world. In addition, the large Dutch insurers are primarily active in life insurance. This is the case both within the Netherlands, where the life market is relatively bigger than in most other countries, and in the international activities of particularly Aegon and ING. These last two players are also sizeable players in the United States, the heart of the current crisis.

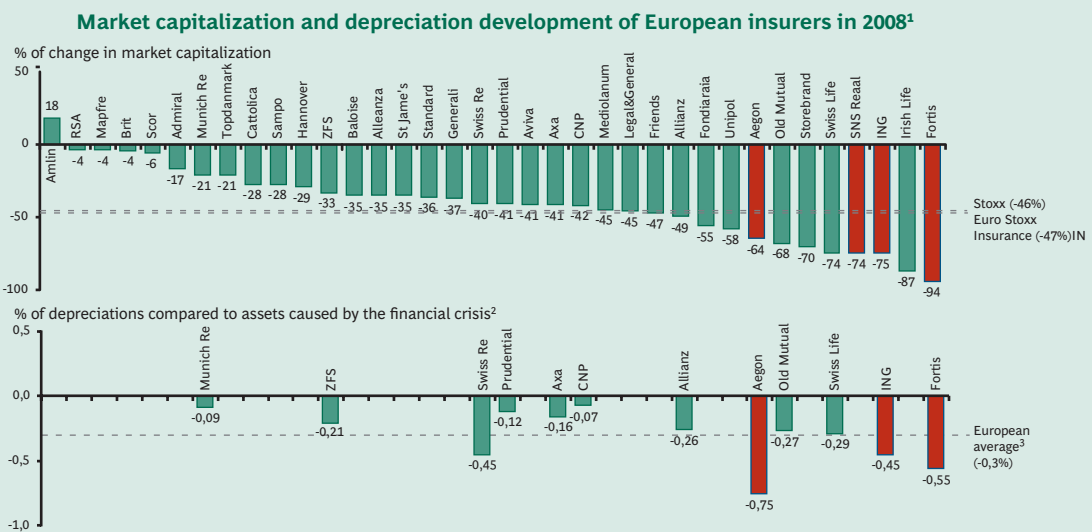
Nevertheless the solvency of Dutch insurers, as far as is known at the moment, was not really put in danger. Although the published solvency figures are outdated, no insurers have since announced that they are insolvent. One of the reasons for this is that the insurers had built up substantial solvency buffers over the course of time (> 250% at the end of 2007, or 2.5 times the minimum required level). A number of companies did receive state support, but it is unclear whether this was necessary to support Dutch insurance activities or because of banking activities or insurance activities elsewhere. The solvency figures from the end of 2008 will shed more light on this.

Figure 10. It takes ~10 years to completely renew insurance policy portfolio due to limited share of new insurances



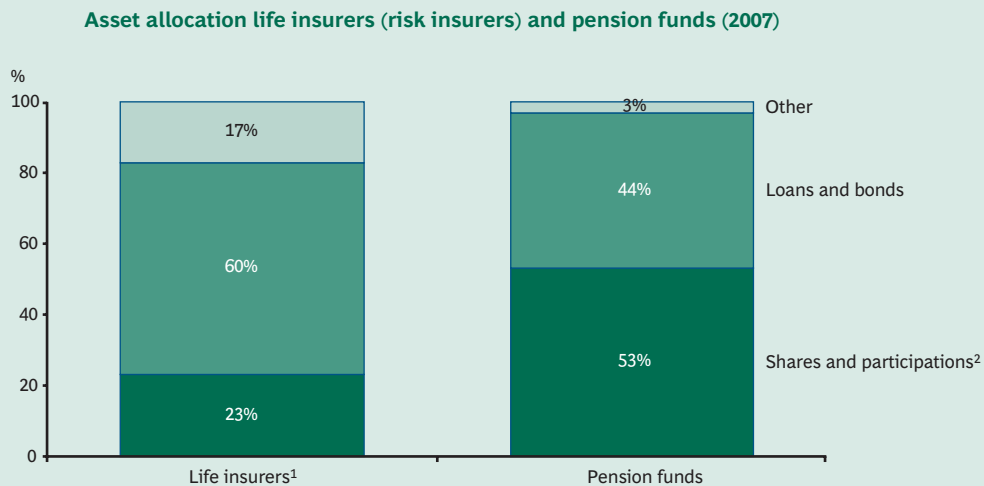
1. Taken over portfolios, increases and other causes 2. Death, expiration, adjustment, surrender, premium liberation and other causes
3. Assuming 11% new insurances per year and growth of the insured amount of 3% per year (based on historic averages)
Source: DNB

Figure 11. Tough situation Dutch insurers is not surprising considering structure¹ and exposure to US



1. Mainly bank insurers with a big life insurance portfolio and many US activities 2. Depreciation from Q3-07 till Q3-08, total assets 30/06/2008, data based on Bloomberg database (composed from regulatory files, press releases, reports published by companies and public information on executives such as profit conference calls); only available for a limited number of companies 3. As published in December 2008
Source: Datastream; Bloomberg

Figure 12. Pension funds have more risky asset allocation



1. Excluding unit-linked products (risk at policyholder) and derivatives; for pension funds: 31% shares, 20% participations and 2% derivatives
 2. For life insurers: 13% shares, 9% participations and 1% derivatives
 Source: DNB

The financial crisis has also had a clear impact on pension funds that play an extremely important role in the Netherlands – alongside life insurers – in old age provisioning. Their role is a different one however: pension funds provide for collective schemes on the basis of standardized products, while insurers focus on more customized products. The two are therefore complementary.

Because of their collective philosophy, pension funds are structured differently from insurers. In a time of over or undercoverage they can adjust the height of premium or decide whether or not to correct for inflation (index). As a result, pension funds have extra means of spreading risks between participants and over time. But that also means that the participants themselves bear the risk for disappointing performance (in which case premiums can be increased and/or payments lowered by failure to index) while at insurers it is the insurer that bears this risk.

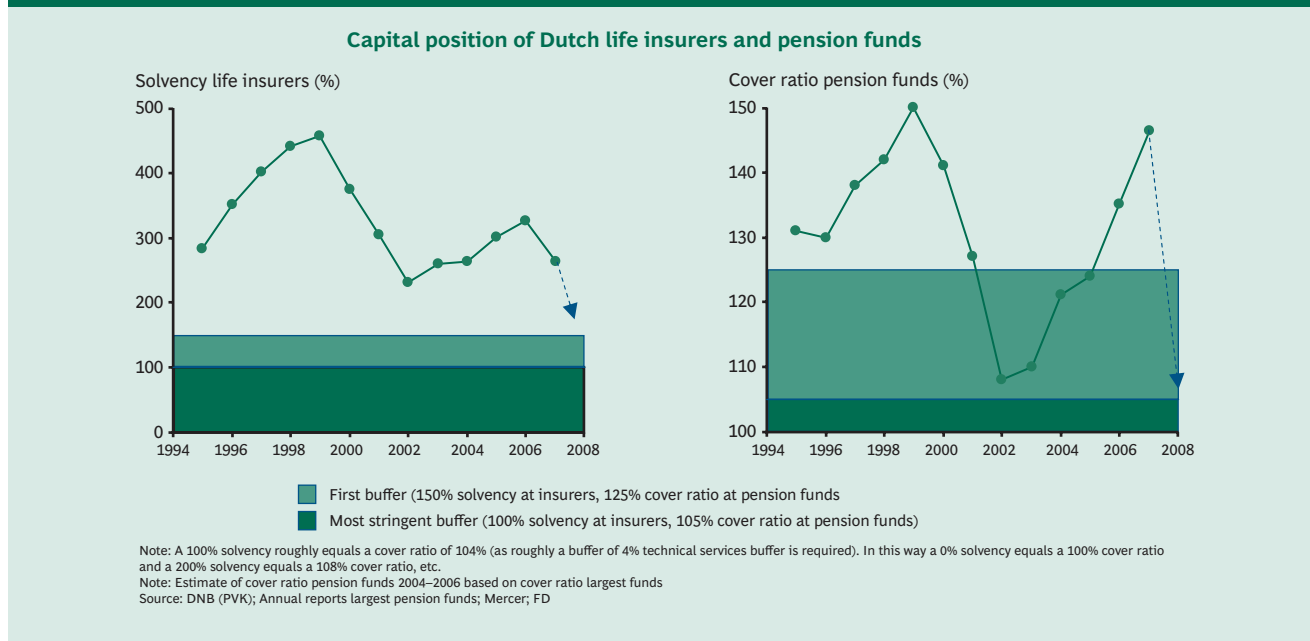
Nonetheless the financial crisis had a strong impact on pension funds. This was partly due to the fact that on average they maintain a much more aggressive risk profile in investing, both by putting more funds into shares and participations (see figure 12) and by hedging

this against great losses to a much more limited degree, according to reports.

Figure 13 shows the solvency of Dutch life insurers and the cover ratio ('dekkingsgraad') of pension funds. It is important to realize here that 100% solvency means that precisely the legal minimum buffer for unforeseen circumstances is available (on top of the technical reserves that are held to meet the insurance obligations). While for pension funds a 100% cover ratio means that the available resources are precisely enough to satisfy the nominal obligations (without indexation therefore), and there is entirely no buffer left.

In this graph two boundaries are given for both solvency and cover ratio. The first is the most stringent buffer, 100% in the case of solvency (the absolute minimum required level within Solvency I) and 105% in the case of cover ratio (below this level there is officially a case of undercoverage). The second boundary is a 'first buffer,' 150% for solvency (which is seen in the Netherlands as a more prudent lower limit) and 125% for cover ratio (below this level there is a case of a reserve deficit and a pension fund must submit a plan to exceed this level within a maximum of 15 years). A pension fund generally needs a cover ratio of between 135% and 150% in order

Figure 13. Capital position of pension funds is a lot more volatile than that of life insurers



to be able to index fully.

The cover ratio of pension funds shows a clearly more volatile pattern than the solvency of life insurers. This is caused by the aforementioned investment profile, but is also due to the fact that pension funds have to value their obligations on the basis of the applicable interest rate (a low interest rate increases the reserves needed at the moment to be able to satisfy the obligations in future). It is precisely the sharply falling interest rates of the past months that have had a great impact on the fallen cover ratio at pension funds, while these do not have the same effect on the solvency ratios shown for insurers. The greater exposure to the losses on the share market and the lower interest rate has resulted in a very low cover ratio. On 7 January 2009 Hewitt estimated the total cover ratio of the sector at 105%⁸, exactly the level below which there is ‘undercoverage.’

The solvency position of insurers will, in all likelihood, be markedly lower in 2008 than in 2007. At the end of 2007 the solvency was about 260%, well above the target solvency of 150% and the DNB’s minimum limit of 100%. What is striking is that solvency was even higher in 2006. It is also clear that an insurer that exactly satisfied the target solvency of 150% in 2007 would not have been in

a strong starting position to withstand a situation like the current crisis (unless all risks were fully hedged).

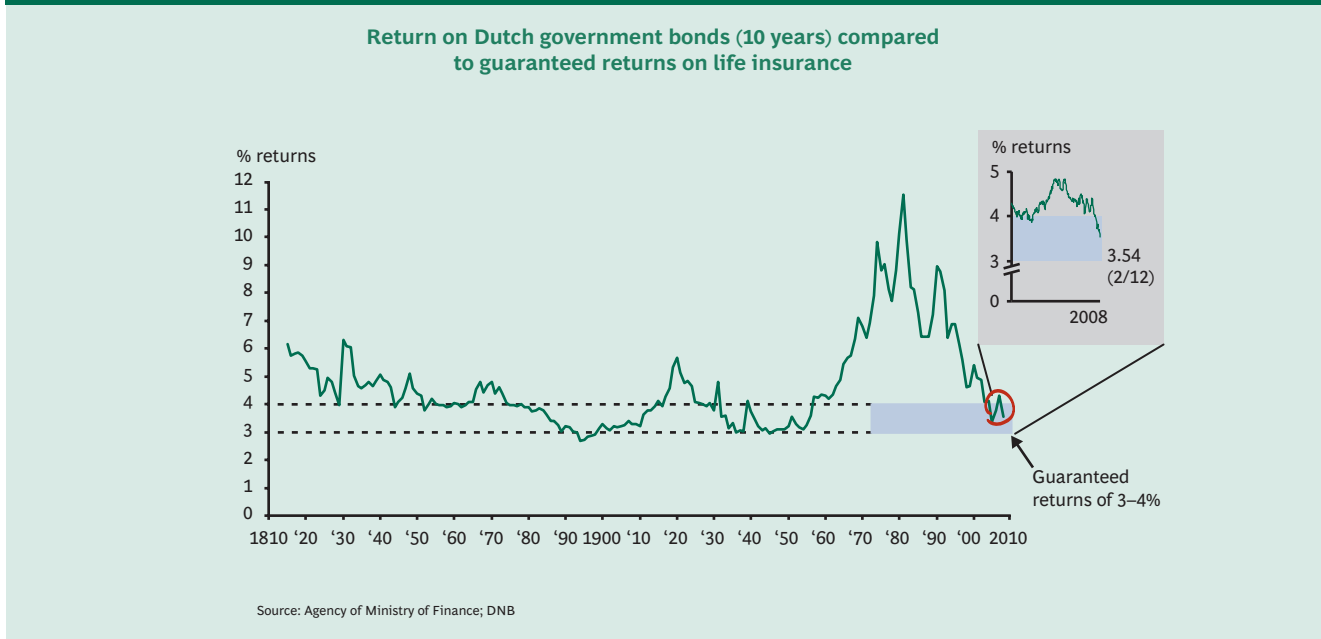
3.2 The recession

The recession is expected to cause even more headache for the insurance sector and can primarily undermine the profitability of life insurers. Life insurers usually guarantee their clients an interest rate and it could be very difficult to achieve good returns in the coming years. First of all the recession increases the percentage of default on bonds, as a result of which returns are in danger. Secondly, the returns from other assets may also be low and the costs of hedging against share price drops will in fact increase because of the high volatility of market prices. The last and most important danger is that the risk-free interest rates⁸ will remain very low in the coming years (the 30-year government bond had an interest rate of about 3.5% when this report was written, and was as low as 2.5% shortly before that).

⁷ www.pensioenthermometer.nl

⁸ To the extent there are risk-free investment opportunities, which is doubtful considering the high debts in the most important countries.

Figure 14. Guaranteed return on life insurance similar to return on government bonds



As figure 14 shows, the interest on government bonds has been relatively high over the past 40 years. This does not mean that this situation will return however. If a macro-economic scenario like the crisis in Japan becomes a reality, the insurers will be under great pressure to realize extra returns in excess of a persistently low interest rate. Insurers will once again face challenges to achieve relatively high returns on their investments, just as during the period of low interest rates preceding the crisis.

If this does not emerge to be feasible, serious consequences could ensue, as was the case in Japan. Eight insurers went under in Japan between 1997 and 2001. As a result, 10 million policies were lost, representing about

10% of all assets of the enormous Japanese life insurance market (the second largest in the world, following the United States). Returns for all policyholders involved were significantly lowered, well below the returns originally guaranteed. This is further explained in the box “The crisis in Japan and its effect on insurers”. Of course there is no guarantee this scenario will occur, nor is it certain that these would necessarily be the effects in the Netherlands. Still we believe that now is the time to think about such a scenario in order to take measures to prevent this situation in the long term.

The crisis in Japan and its effect on insurers

Many reports compare the current worldwide financial and economic crisis with crises from the past. This is also the case with regard to the collapse of the market in Japan during the 1990s, caused by the bursting of large share market and real estate bubbles.

Let us start with a brief summary of the Japanese crisis in the 1990s and its effects. At the end of the 1980s Japan's gross national product (GNP) grew by more than 5% per year. The share market reached unprecedented heights, the Nikkei 225 almost tripled between January 1985 and the end of 1989, when it reached the peak of 38,916 points. In the subsequent fall the Nikkei dropped to under 20,000 points. The housing price index for Japan's major cities peaked in 1991. At that time it was announced far and wide that the piece of land containing the imperial palace had become as valuable as the whole of California. The introduction of regulation of real estate loans led to a 25% fall in house prices between 1991 and 1993. The market for real estate entered a persistent period of declining prices, until prices started to rise again in 2006. The collapse of the house prices reinforced the banking crisis because Japanese banks had many large loans outstanding in the real estate sector.

The Japanese economy grew slowly in the early 1990s. From 1997 to 2003 only deflation could avert a decline in the GNP. At the same time, interest rates fell sharply. In 1991 the interest rate of the Bank of Japan peaked at 6%, but by 1995 this had fallen to 1% and has remained below that ever since. This low interest rate fed the worldwide credit bubble. Hedge funds, Japanese households and many others around the world took credits in yen in order to invest this elsewhere. They are now rushing to pay these back.

At first the government responded to the financial crisis to only a limited extent, particularly because it thought the number of bad loans was low and it feared the public would react very negatively to bailouts of large financial institutions. The measures that were ultimately taken (capital injections and the establishment of an organization to buy up bad loans) were not sufficient to turn the tide of the financial crisis. Between 1997 and 1998 three large banks and two stock brokers collapsed. This prompted the government and the Bank of Japan to take drastic policy measures, albeit somewhat late. The Financial Renewal Program required a very strict assessment of the quality of banks' assets. This restored some confidence in the market. In addition a turnaround fund set up by the government saved 41 companies from going under by taking over the debts on the balance sheet.

The crisis was also a turning point for the insurance sector. After the asset bubble burst, a large gap arose between the returns guaranteed to policyholders and the very low actual returns on investment. Even though the guaranteed returns declined from 6.25% at the beginning of the 1990s to 1.5% in 2001, the return on government bonds fell even faster. The low interest rate was combined with falling house prices and weak share markets. Insurers were forced to take higher risks to be able to pay out the guaranteed returns. Not all insurers were successful, and the sector as a whole lost USD 11 billion in 2001. Eight insurers went under between 1997 and 2001, consequently 10 million policies, with a value of about 10% of all the assets of Japan's life insurance market, were hit. Returns for all the affected policyholders were significantly lowered, well below the returns originally guaranteed.

This situation cannot be projected in its entirety on the situation in the Netherlands now, even if the interest rate should remain low for a long period. At the time, the investment portfolios of many Japanese investors could be called outright poor. This does not detract from the fact that the scenario of a persistently low interest rate could also have significant impact on the Netherlands and that a very good understanding of it is of crucial importance.



How to strengthen the Dutch insurance sector?

Dutch insurers have an important place in society because they take on risks and in doing so offer a safe haven. This role is very different from the bank's role as promoter of financial markets. The role of insurers also differs clearly from that of pension funds. These after all offer highly standardized collective contracts for old age pension, while insurers provide a more customized service for various purposes.

For this reason we believe that the lessons learnt and recommendations for insurers will differ from those for banks and pension funds. At the same time it must be ensured that the competitive relations between these parties are not too much disrupted.

Based on our analysis of the crisis, we present four recommendations to retain a stable and crisis-proof insurance sector that can continue to play an important role in Dutch society in the future. These four recommendations fit in well with the ongoing discussion on developing European legislation and regulation within the framework of 'Solvency II'. They direct attention and prompt deeper examination regarding specific points that in our opinion are crucial for a more crisis-proof sector in the future.

Solvency II and the crisis

The planned introduction of Solvency II aims to better match the solvency buffers required of insurers to the actual risks they run.

Solvency II encompasses three important focus areas, also called 'pillars.' Pillar 1 consists of the quantitative requirements (how much capital an insurer must maintain). Pillar 2 touches on the qualitative requirements and regulatory activities of an insurer. Pillar 3 is concerned with market discipline and regulatory reporting.

Pillar 1 addresses the technical facilities, a Minimum Capital Requirement (or MCR), and a Solvency Capital Requirement (or SCR). These requirements represent a change from the current policy which only touches on the insurance risk, and requires that all types of risk be taken into account. Insurers must maintain capital because of market risk (the risk of a fall in the value of the investments), credit risk (the risk that parties to whom funds are loaned are no longer able to pay their debts) and operational risk (the risk that systems fail to function or that processes prove insufficient to prevent fraud, for instance). None of these risks are currently included in Solvency I, even though it is known that they can pose a serious threat to an insurer's solvency.

Pillar 2 forces insurers to devote sufficient resources to identifying, measuring and managing risks that can arise in future. This must be undertaken on the basis of a so-called "Own Risk and Solvency Assessment" (ORSA) process. In addition pillar 2 requires that the functions of risk management, risk modeling (for internal models), compliance, internal audit and actuarial affairs are properly provided for. Pillar 2 also introduces criteria for the knowledge and skills of management. Pillar 2 further contains a so-called "Supervisory Review Process" (SRP), which states that the regulator determines for each insurer to what extent the insurer maintains enough capital and whether the risk management and governance structures are adequate for the type, size and complexity of the particular insurer.

There is currently much discussion among national governments, the European Parliament and the European Commission surrounding the role of the regulator of insurance groups. The essence of this discussion is the question of what role belongs to the regulator of financial groups that are active in several countries compared to the role of the regulators in the countries where the subsidiaries of these groups are located.

Pillar 3 requires that insurers become more transparent by sharing and publishing more information. This makes the market more transparent, as a result risks are better understood and competition between insurers is promoted.

In our opinion Solvency II is a very important step in the right direction and its earlier introduction could have limited the implications of the crisis for some insurers.

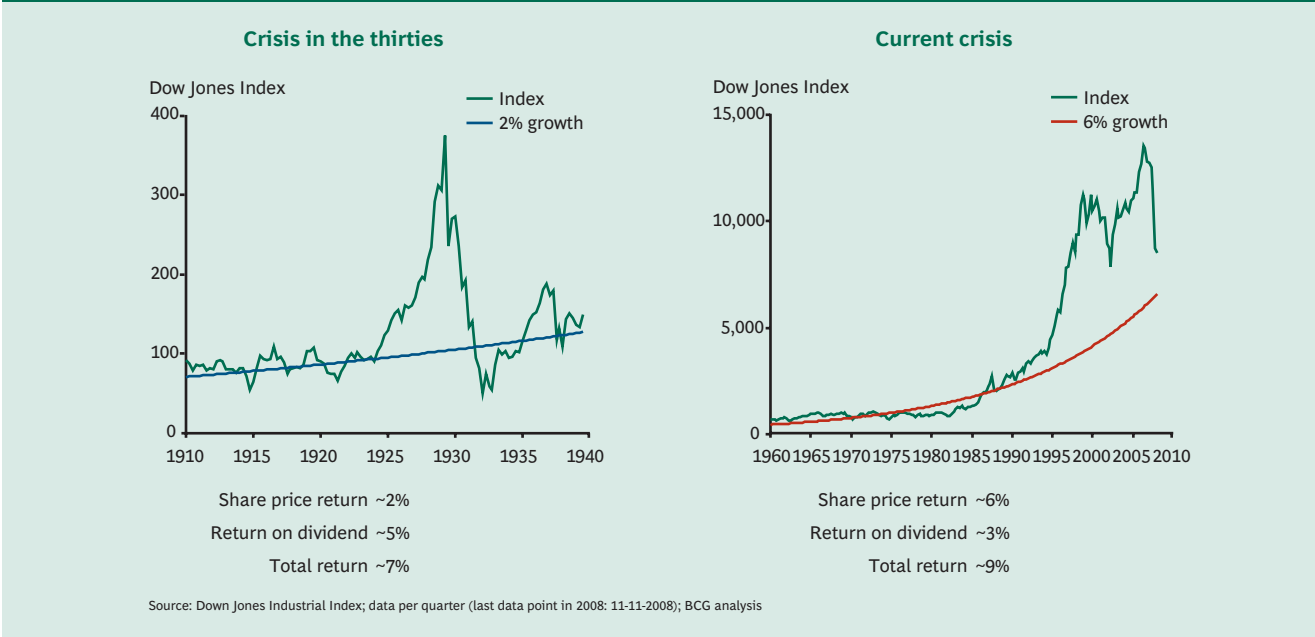
Our recommendations do not go against the grain of the direction taken by Solvency II. It is therefore important to continue the discussions concerning Solvency II and work on the necessary improvements precisely by means of that platform. The recommendations direct focus within that discussion.

4.1 Focus on bubble management, not on crisis management

If we look at the share market crashes of the 1920s and 1930s and more recent developments, the question arises of whether we are dealing with a crash or a bubble. Figure 15 shows the development of the S&P 500 from 1910 to 1940 and from 1960 to 2008. With regard to the 1930s crisis, it is often said that the share prices of 1929 were not regained until 1954. Share prices took 25 years

to recover therefore. This shows how deep the crisis was. The figure shows, however, that it was not the depth of the fall that was extraordinary, but primarily the enormous rise previous to it. Share prices rose far in excess of the average growth of 2% performance per year over the whole period. This percentage seems perhaps low in comparison to today's percentages, but at that time it was in fact customary to pay relatively higher dividends (around 5%). The current picture is not all that

Figure 15. A crisis is the last phase of a bubble



different; once again it is very striking how fast share prices have risen recently with respect to a line of about 6% performance (and an additional 3% dividend). The share price drop is therefore primarily the end of this enormous bubble.

This observation is important since action is needed precisely during the creation of the bubble. At that moment there is more time for such action and also more resources are available. But in such cases attention is being called to a possible problem in future. The need to intervene seems less relevant since there appears no end to the growth at that time. Nonetheless there are often indications that a bubble is forming, such as unusually high share prices or a real estate market that has undergone significant growth.

Even during the bubble it will generally be impossible to prevent a crisis or allow the bubble to deflate. This would not be within the power of the insurance sector, let alone the Dutch insurance sector on its own. All financial markets these days are interconnected and investors are active worldwide. The Dutch insurance sector will therefore have to focus on limiting the negative effects of global problems. This can be done by collectively refraining from investing in particular risky investment instruments, by hedging risks or by in fact strengthening reserves during the bubble.

The current crisis shows that the position of insurers during the bubble ultimately determines the impact the crisis will have on them. After all, once the crisis is a fact, risky assets are extremely difficult to get rid of (or only at a very low price), hedging costs increase significantly and raising new capital is very problematic and/or expensive.

In order to anticipate this during the bubble already, two steps must be taken: first of all understanding is needed to know where the returns are coming from and what risks are entailed, and secondly, action must be taken by limiting or hedging this risk.

In order to understand bubbles, both management and the regulator must carefully observe the divisions that are performing very well (high profit and/or high growth). Generally it is the divisions with (recognized) problems, however, that receive the most attention from risk managers, general management and the regulator. In

Insurers must not only trust in rating agencies

There is much criticism of the role of rating agencies and their remuneration structure (they are paid by the parties they rate) in assessing the risks of composite financial products. This criticism is justified, in our opinion. However, insurers too, as professional investors, have a role in assessing the assets they purchase and the related risks. If they make use of the services of a third party, they are therefore also responsible for assessing this third party. It is therefore not justified to lay the 'blame' entirely or even mainly on the insufficient risk assessments from rating agencies.

'problem divisions' the risks are therefore much better understood than in the divisions that are performing well and growing fast. It is precisely successful divisions that could contain new types of risks that are still not sufficiently comprehended. These risks are not yet assessed, the profit margins here (after risk costs) therefore seem much higher than they really are.

This also has implications for the talks between management and the regulator therefore. These talks should be more focused on 'star divisions' of the companies, not only on problem areas. Regulators must also discuss challenging long-term scenarios in which bubbles may burst and the stability of the institution can be threatened.

The second point is proceeding to action, which is difficult while the bubble is being created. It may be necessary to go along with the bubble in order to generate profit and compete on the market. Simply withdrawing unilaterally from strongly rising shares, for example, is not an option, since customers and shareholders demand high returns, otherwise they will bring their money elsewhere. Risks can be covered by hedging or by allowing solvency margins to rise, for example. Most insurers in the Netherlands had (partially) hedged their losses on the share market and their solvency margin had clearly increased during the bubble.

The current situation does prompt the question of whether the current actions were sufficient, how to take action in future, and to what extent this should be solely at the initiative of the insurers or whether the regulator should play a more active role. The following recommendations go into this further.

4.2 Weighing risk against returns is the responsibility of every member of an insurer's Executive Board

The example of AIG can serve to illustrate this point. AIG was active in the market for credit derivatives, products primarily offered by banks and which offer investors protection if their bonds cannot be repaid as the result of bankruptcies. AIG Financial Products Corp, the (banking) department of AIG which was concerned with this, showed good margins and enormous growth. The portfolio grew to USD 600 billion in 'exposure' in these derivatives in a few years' time. The Wall Street Journal of 31 October 2008 reported on a specific risk model that was used to assess the risks of this portfolio. This model reportedly would assess the risks that the credit derivatives were supposed to pay out. The model reportedly explicitly did not take any account however of the possibility that more capital would have to be held at the relevant business division 'AIG Financial Products Corp' as extra guarantee as the result of a decrease in the value of the underlying bonds or a decline in the AIG group's rating. This is exactly what happened: because AIG group's rating was lowered, AIG had to sluice more capital into this division as collateral (an extra guarantee deposit or 'margin call'). That money was simply not freely available in the group. Consequently an immediate liquidity problem arose at AIG.

The question now is whether management realized that this risk component was not a part of the models and underestimated the height of this specific risk, or simply did not know and the saw the outcomes of the model as the whole truth concerning the risk assessment of this portfolio.

In both cases it can be concluded that management insufficiently understood the risks. This example illustrates the problems that were also present at other insurers, albeit to a much lesser extent. In the insurance sector, particularly the credit risk of bonds and counterparty risk, and reportedly for some insurers also the (unhedged) market risk of share price drops, led to unexpected devaluations of assets. Members of the Executive Board trusted in risk experts and risk models without fully understanding the limitations.

We believe that a number of general lessons can be drawn from this example. The most important lesson is that weighing risk against returns is an integral responsibility of every member of the Executive Board⁹. This means that every member must sufficiently understand both risk and returns. In concrete terms, this means, in our opinion, that risk decisions cannot be fully delegated to a specialized risk department. Risk management continues to be a core task of the whole executive board. If the Executive Board does not fully understand certain products or investments, it should refrain from getting involved in these products or investments.

For the risk department this means that they must support the Executive Board with comprehensible information. The department continues to support risk analyses with risk models, they cannot suffice with only presenting the outcomes. All members of the board must understand the assumptions as well as the limitations of the models. Consequently, simpler models must be developed where possible, general management must be provided with explicit explanation of how these models work and more attention must be devoted to extreme situations and the elements that are not included in the models.

So-called stress tests can assess extreme situations and show their implications. In order to devote attention to risks outside the models, scenarios that describe a situation in which the insurer would be in trouble can be used. This scenario may include all sorts of risks and problems, also (and in fact especially) those that are not included in the risk models. That means that an active search must be undertaken to find the situations in which the insurer would encounter serious difficulty. Finally war games could be conducted in order to test how the insurer would fare in extreme circumstances.

In all these cases the interplay between the business sense of general managers and the calculation skills of actuaries and risk managers is crucial. By bringing these

⁹In our opinion there are exceptions possible to this rule. It may be the case for instance that one member is responsible for marketing or sales without having a deep understanding of actuarial models and risk models. However, this person should not have any input into major asset investment decisions therefore. This person should understand and take into account the risk effects of decisions in his/her own area.

together and actively trying to understand each other and test each other, the best weighing of risk against returns takes place. When the Executive Board does not understand particular investment risks, it should decide not to make those particular investments.

In order to ensure this process runs smoothly, it is important that group behavior be avoided and that risk management have a prominent and as independent a role as possible. This can be supported by ensuring that the individual members of the Executive Board can make a considered weighing of risk against returns. It is the chairman's task to make sure this is actually the case. The Supervisory Board supervises the weighing of risk against returns and must therefore also have a good understanding of this material. As indicated in the previous recommendation, this concerns both discussions on divisions where there are clear problems and the divisions where business seems to be going well. This same logic applies for the individual members of management teams of lower entities who must be able to hold discussions on this topic with the members of the Executive Board.

4.3 The regulator must take a more activist role when necessary

During the last bubble, some regulators noticed the growth in risk at companies and warned companies of this. Nonetheless no additional measures were taken. No requirements were introduced for necessary extra risk buffers and no ban was instituted on further growth in a particular asset that was deemed a 'bubble.'

In our opinion, at the very least a credible threat of intervention is necessary when a bubble is forming. If the regulator does not require any concrete actions, individual players will sometimes refrain from individually taking important measures that would be rational for all the players on the market (such as building up extra capital reserves). After all, if a single player takes this measure, he puts his competitive position in danger. He would then be offering a lower return for the clients and/or capital providers. There is a chance that these parties will take their money elsewhere.

We believe that the logic of managing bubbles also has important consequences for the regulator's role, therefore, especially during the period in which bubbles take shape.

Regulators should focus on companies and/or products showing strong growth and/or high returns in order to understand the related weighing of risk against returns. On the basis of this understanding, they must be able and willing, by means of new directives, to act towards the total Dutch market.

This could include introducing higher solvency requirements that may be adjustable, for instance as a function of value developments on asset markets, in order to cushion a fall in share prices. Another example is prohibiting high investment in certain asset categories that are regarded as potentially too risky (such as CDOs), or requiring that the risks of a sharp drop in value be hedged.

In order to spread understanding of how bubbles arise, the regulator will have to start discussions with companies' management on the integral perspective of risk and returns, also for those products that seem in fact to be performing very well. This means quite a bit of work for the regulator, who will therefore have to have a deep knowledge of the Dutch insurance market and be able to conduct the discussion on a level comparable to that of the insurers themselves.

It is important that this is coordinated in Europe, and preferably even on the global level. It is therefore necessary that this aspect be given adequate emphasis in the ongoing discussion on Solvency II.

4.4 A strong capital position for Dutch operating companies must continue to be guaranteed

Supervision of insurers mainly takes place on the national level currently: the legal entities on that level concern themselves with local regulation. This is true both for local players and local subsidiaries of international insurance groups. Their legally required capital buffers with respect to solvency must also be held locally.

The current requirements with respect to buffers are set down in 'Solvency I'. However, we do not consider these minimum requirements to be all that high. Even the buffer of an additional 50% capital maintained in the Netherlands seems limited, especially when considered at the time of a bubble; if the Dutch insurers had maintained 150% solvency at the time of the bubble (one

and a half times the minimum requirement), that could have led to alarming current situations. Fortunately insurers maintained much higher levels of capital; the average solvency at the end of 2007 was more than 2.5 times the minimum level required.

The minimum solvency requirements will once again be established in the plans for Solvency II. A distinction will be made within Solvency II between SCR (Solvency Capital Requirement), which indicates the level of capital that an insurer must maintain in order to be able to satisfy all obligations with a high degree of certainty (99.5%) for a time horizon of a year, on the one hand, and MCR (Minimum Capital Requirement), which sets a so-called 'drop dead' capital requirement below which the severest regulatory measures take effect, on the other.

Discussion is currently ongoing as to whether insurance groups must maintain the solvency capital of subsidiaries (such as Dutch operating companies) between the level of the MCR and SCR centrally rather than locally if, instead of this, they issue capital guarantees from the group to the subsidiary. The MCR will always have to be held at the level of the subsidiary. Such a move can be understood from the perspective of spreading risk: after all, by holding the capital centrally, risks are collectively spread within the group. The group as a whole can then cushion problems at an operating company in a particular country. It also gives the financial group the possibility of achieving diversification advantages; on the total level it therefore needs less capital than the sum of its parts (the SCR capital for the subsidiaries). In extreme situations however there is the risk of contamination: major problems in one operating company would have an effect on the solvency position of the group as a whole. In that case the other operating companies would only have disposal of the MCR. This is not necessarily a problem if the MCR is high enough, but it is very doubtful whether this is the intention in the current plans for Solvency II.

The example of AIG shows that sufficient (screened-off) capital at the legal subsidiaries is very important: when AIG found itself in trouble because of its portfolio in credit derivatives, it could not appeal to the capital located in the separate legal operating companies undertaking client-related insurance activities. AIG had to ask the government for money. The operating companies thus held on to their own solvency coverage. Even if the AIG group had gone under, it would not have

caused extra problems for these legal operating companies and their insurance clients. This is also true for AIG Europe (Netherlands) NV., for instance, which has its own reserves and is under the supervision of De Nederlandsche Bank. We therefore believe that it should be guaranteed that every insurance operating company has and continues to have an extremely solid capital position¹⁰. Additional capital can of course be deployed where it has the most value. This can be interpreted in two ways within Solvency II; either by maintaining the full SCR capital at the subsidiary level or by ensuring that the level of MCR is high enough.

This logic applies particularly for life insurers since that sector has the greatest risk of a 'perfect storm' in which all countries are hit equally (like now as a result of the falling value of assets).

This solid capitalization on the subsidiary level is also important for potential support measures that the Dutch government can take when solvency margins are too narrow during a crisis. If it wants to support the company as a whole, a capital injection on the group level would be very valuable. If the situation is so serious that it only wants to protect the assets of Dutch policyholders, an injection on the level of the operating company is necessary and that requires that there be enough capital there.

In addition to this discussion of capitalization, there is a related discussion ongoing concerning the supervision on insurance groups. Within the current model of 'solo plus supervision,' regulation mainly takes place on the local level (solo). For insurance groups (limited) regulation takes place alongside this on the group level as an extra review (plus). In the interest of more harmonization three alternative models are currently being discussed: regulation by groups of regulators from all countries where the financial conglomerate is active (colleges of supervisors), this same model with a clear leading role for the regulator from the home country of the conglomerate (group support supervision) or the full integration into a single comprehensive European regulator.

In order to recognize the current situation in which there

¹⁰ The regulator will have to determine what qualifies as an 'extremely solid' capital position. We can imagine that this level will depend on the particular time (does the regulator feel that an asset bubble is taking shape?) and the player (according to different risk profiles, for instance).

Insurers are not banks and therefore should be treated differently

Although banks and insurers are often addressed collectively under the single label of 'financial institutions' and the dividing line has indeed become vague on some points, we still believe that these two types of player differ from each other fundamentally and therefore require a different approach. This is the case in two specific areas: their role in causing the crisis and their role in society.

1) Their role in causing the crisis: Banks played an active role in causing the crisis by loosening credit standards for borrowing money and thus selling many subprime mortgages, for instance. In addition they packaged these loans into Asset Backed Securities, which were then sold on to third parties. They were also the most important players in the newly created credit derivatives market (credit default swaps) that hedged the risks of losses on, for example, Asset Backed Securities. Insurers primarily played a role by buying these products as part of their investments without evaluating the related risks on their value. They (along with pension funds) also invested - sometimes aggressively - in private equity and hedge funds, for example, which in turn contributed to high debt ratios and non-transparency of the sector. As such, insurers did play a role, but not in proportion to that of banks.

In public perception, a few insurers, like AMBAC and AIG in the United States, seem to constitute an exception to this. They issued guarantees on Asset Backed Securities. They did not do this within their actual insurance companies, but on the group level in (banking) divisions set up especially for this purpose. AIG is therefore number 20 on the list of players active on the market for credit derivatives. The other players on this list are banks.

The implication of this is that in regulating banks, attention must be devoted to measures to prevent future asset bubbles by, for example, sharpening up procedures for product launches. For insurers the attention must be focused on rules regarding the purchase and risk assessment of such products so that they are better prepared when asset bubbles burst.

2) Their role in society: Banks play an important role in society by enabling the economy as a whole to function. They raise money mainly from individuals and lend it out to businesses and individuals so these funds can be invested optimally (on the basis of weighing returns and risk). This role is of great social importance and although many things went wrong over the past years, there are no other parties that could have logically fulfilled this role. The money that banks borrow is mainly short funding (payable on demand) which does not apply of course for the loans they issue (that would be unacceptable to businesses). As a result, confidence in the banks is of crucial importance and a 'run on the bank' in which individuals demand their money is disastrous because it immediately creates a liquidity problem.

Insurers play a different role. They are a safe haven in a society full of risks. For life insurers, this means that they have a more long-term perspective: they issue guarantees for a longer period. This also means that clients cannot simply withdraw their assets in the interim. Insurers therefore have almost no liquidity risk. Solvency (whether there are enough buffers to satisfy the obligations in the long term) is much more important for them. This solvency is in particular affected by the returns achieved on investments. One of the biggest underlying risks is therefore that the returns achieved could be structurally lower than the returns guaranteed to customers.

The implication of this is that support measures like capital injections from the government (also at high margins) can be very valuable for banks: they reinforce the buffers so that individuals know that they do not have to worry and that their money is safe at these institutions. In general these injections are only needed for a limited period of time. The main concern for insurers in the event of weak solvency is that they have a much longer period in which to recover their position. This can be achieved by temporarily tolerating lower solvency levels (analogous to accepting undercoverage at pension funds) or by means of capital injections. These injections must be issued at a low interest rate however. Expensive funds (at a high interest rate) is useless because although it increases the assets, to an even stronger degree it increases the future obligations that now also include the repayment and interest on the loan. Consequently these types of injections can even worsen the balance sheet situation. Such a capital injection may look good on paper, but in reality it does not help much.

are many international insurance groups and to set up as efficient a supervisory model as possible, this last model is optimal. However, the markets within Europe are currently greatly diverse, not only in the types of products, but also in terms of fiscal regimes and distribution channels. A single integrated regulator that determines the ‘rules of the game’ everywhere may sound optimal, but it is not yet possible in practice to do this in a high-quality way. Should an actual European insurance market arise in the future, then a European supervisor will be very logical and advisable. This is however something for the future rather than a reality in the coming years.

The discussion focuses on the first two alternatives mentioned, ‘colleges of supervisors’ and ‘group support supervision’. In December 2008 under the presidency of France it was decided to scrap a section about group supervision in Solvency II. As a result the second alternative can be seen as a less likely outcome. The French proposal does not however have unanimous support in the European Parliament, consequently the discussion will continue.

We claim that local regulation is and remains crucial for insurance. As indicated in the previous recommendation, regulators have to be more active in determining what is permitted and what is not permitted in a particular market. In doing so they should ensure that risks that are too high are avoided and that a ‘level playing field’ is maintained in a market (the rules apply after all to all players on that market). Regulators will also have to assess compliance with these rules. This will require deep knowledge of the local market and the players on the market.

This strong role for the local regulator can be interpreted at both ‘colleges of supervisors’ and at ‘group support supervision’ and therefore does not directly result in a choice between the models but does direct the interpretation of these models.

This does not take away that the supervision structure can be and should be increasingly harmonized within Europe and if possible even worldwide. IAIS and in particular Solvency II in Europe aim to initiate harmonization and we think this is a welcome and important approach. We do therefore believe in an international supervision model, but preferably mainly in local execution through local supervisors.

The four recommendations should enable the insurance sector to sufficiently withstand future crises resulting from asset bubbles (which therefore covers many crises). The most immediate possible crisis that we foresee, however, is of a different nature: an extremely long period of low interest rates and low returns that can have significant effects primarily for life insurers. This situation could be comparable to the economic development in Japan since the beginning of the 1990s. This kind of situation has such significant impact on life insurers precisely because these insurers work largely with guaranteed yields that can therefore be achieved only with difficulty, if at all. Moreover these guarantees cannot be adjusted with retroactive effect when it becomes difficult (that is what guarantees are for, after all). We must prevent that we look back in 10 years’ time and observe that interest and yields have been low all that time, while excessively high guarantees continued to be issued to clients without the solvency reserves being supplemented accordingly in order to accommodate this.

These four recommendations could also apply to this situation (in a slightly adapted form):

1. Bubble management: Although it is not a bubble, the conclusion that it is better to think about a crisis before it occurs, certainly applies here as well. Hesitating to take action because this future scenario may not occur, means that we will definitely be too late later on if it does happen.
2. Weighing risk against returns: In this situation too every member of the Executive Board must be fully aware of the consequences of a structurally low interest rate and low returns for the next 10 to 15 years.
3. Regulator: It is very difficult for individual insurers to start up unilateral actions to, for instance, issue lower guarantees or maintain extremely higher solvency in order to accommodate for this future scenario (for example, by raising prices). The regulator therefore plays a role as well. The regulator can, for instance, set a moderate legal maximum guaranteed return with profit sharing if the results turn out to be higher. But there are certainly alternatives such as an interest guarantee that is linked to the market interest rate or a gradual solvency accrual in order to accommodate such a situation.

4. Capital position of Dutch operating companies: It is important that the capital position of the Dutch subsidiaries is guaranteed precisely for such extreme situations. If other countries continue to issue high guarantees for competitive reasons and the interest rate remains low there over the long term, assets of Dutch clients may not be endangered.

We hope that this report and the recommendations will initiate a broad discussion on enabling the insurance sector to remain stable in future. The financial crisis has had a clear influence on the sector, without so far resulting in the loss of accrued assets of policyholders. It is the duty of the sector as a whole to draw lessons from this crisis in order to guarantee that this will not happen in future. Only in this way will the insurance sector continue to play its role as a safe haven in a world full of risks.

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