

# The Financial Services Journal – Southern Africa

Sharing insights on key industry issues\*  
November 2009



We are pleased to release the Financial Services Journal, which is published annually to address certain key issues driving the industry. If you would like to discuss any of the issues raised in more detail, please contact the individual whose details are listed at the end of each article or your usual PwC contact.

# Contents

|    |  |    |
|----|--|----|
| 01 | Editor's comments                                      | 4  |
| 02 | Trustees' remuneration in the retirement fund industry | 6  |
| 03 | Solvency II – Year under review                        | 10 |
| 04 | Revenue Growth Strategies in financial services        | 16 |
| 05 | The future of banking                                  | 22 |
| 06 | Demystifying the concept of exchange traded funds      | 26 |
| 07 | Stress testing – are you stressed enough?              | 32 |
| 08 | Systems Automation in the SA Insurance Industry        | 36 |
| 09 | Contacts   | 42 |

# 01 Editor's comments

We are pleased to release the Financial Services Journal of November 2009. This annual publication is devoted to insights into strategic, operational and technical issues facing the financial services industry.

The **global financial crisis** was the one main theme that dominated the past year, and much has been written in the press about it. South Africa's economic activity also slowed down, and for the first time in 17 years the local economy is in recession. Most executives in financial services companies would admit that they cannot remember a more difficult time for the industry in recent times. Although the industry faces many challenges, current conditions should be viewed as a time of opportunity. Companies should move out of survival mode and start charting a course towards promoting long-term financial stability and growth.

This edition of our journal explores a number of relevant issues related to the financial services industry and we look in more detail at the challenges and opportunities facing our industry.

- A 'hot' and much debated topic in the retirement fund industry is **whether or not to remunerate trustees** for their services. The debate continues to be fuelled by the fact that trustees are becoming aware of their increased responsibilities and workloads. Boards of trustees should consider whether these increased responsibilities require any changes with respect to the remuneration of its trustees. In our first article, our retirement fund industry experts consider the entitlement of trustees to remuneration and explain why greater remuneration for trustees may be appropriate in the future.

- In our second article, we discuss **Solvency II** developments and why it matters for South African insurers. Despite the fact that Solvency II in its current form will only apply to the European insurers, South African insurers are encouraged to pay attention to the factors underlying its development. The Financial Services Board has announced their intention to review long term insurance capital requirements and that it will probably follow an approach informed by Solvency II. Financial Condition Reporting for short term insurers, in its proposed form, incorporates many features similar to Solvency II. Solvency II is set to overhaul the way insurance companies determine their capital requirements and run their businesses not only in Europe, but globally.
- With limited opportunities to grow through acquisition, the **challenge of growing revenue** organically is quickly becoming a high-priority agenda item for senior management across the financial services industry. To drive this growth, organisations are seeking to develop a richer and more granular understanding of their markets, customer needs, channels, propositions and marketing investment in an effort to create the competitive differentiation required to be successful.
- South African banks have largely escaped direct effects of the global financial crisis and primarily felt the impact indirectly; this is according to the South African Reserve Bank (SARB) in its Financial Stability Review report. South African bankers, in general, agree with this view, however, but indicated in the PwC Strategic and Emerging Issues in South African Banking 2009 survey that the financial crisis is the most significant driver of change in the banking industry. In our fourth article we address **the future of banking**, the challenges and actions to be considered.

- **Exchange Traded Funds (ETFs)** are seen as good value investments by investors and their attractiveness continues to increase globally and locally as investors seek out low cost investment tools. ETFs are one of the simplest investments investors can make, generally delivering better returns than savings accounts and more consistency than unit trusts. In our article: Demystifying the concept of Exchange Traded Funds, our authors explain the characteristics of ETFs and deliberate on the different types of ETFs. They look at the advantages of investing in ETFs and also list risks and disadvantages associated with ETFs.
- The economic climate and market conditions have highlighted the importance of **enterprise-wide risk management** and reporting of clear, accurate, comprehensive and timely risk information, as well as an understanding of the inherent limitations of the measures being reported, to Boards of Directors and their Committees in performing their risk management oversight roles. Stress testing is an example of a risk management and decision making tool for banks. In our sixth article our financial services risk specialists ask our banks the valid question: “Stress testing – are you stressed enough?”
- Over the past three years, South African insurers have made significant investments in systems to automate processes and consolidate legacy systems into a single platform, either through customised vendor packages or developed their own systems. In our final article, we share our **benchmarking results of the level of automation** of key business processes in the insurance industry.

We believe that staying informed and up to date with industry trends is the best way to remain competitive and relevant in evolving markets and hope you will find the articles in this journal of interest.

After many years Barry Stott has ended his term as editor of the journal. I would like to take this opportunity to thank him for his stewardship over the years.

My thanks to those of you who continue to provide feedback on our journal. Your feedback is invaluable – please continue to contact us with suggestions or comments.



**Tom Winterboer**  
Financial Services Leader  
Tel: +27 11 797 5407

A handwritten signature in black ink that reads "Tom Winterboer".

November 2009

# 02 Trustees' remuneration in the retirement fund industry



## The issue of whether or not to remunerate trustees for their services as trustees, and if so how much, continues to be the subject of much debate in the retirement fund industry in South Africa.

This debate continues to be fuelled by the fact that trustees are increasingly becoming aware that their responsibilities and workloads have increased over the last few years. This is a consequence of significant increases in the volume of legislation and regulations and economic pressures on the operations of funds. In addition, as a result of the increasing skills shortage in South Africa, the number of independent trustees with the appropriate levels of expertise is also becoming fewer and so funds, if they are not already doing so, may have to start remunerating their trustees appropriately in an effort to retain them.

Boards of trustees should be considering whether these increased responsibilities and skills shortages require any changes with respect to the remuneration of their trustees and, if so, at what level. As part of these considerations, it may be appropriate at this time to highlight the common law and governance duties of trustees. As individuals who exercise fiduciary responsibilities over the financial affairs of others, in accordance common law, trustees are expected to perform certain duties:

- First, they have a duty of care and utmost good faith. They should exercise the same level of care, diligence and skill over the affairs of others that an ordinary prudent person would exhibit over her or his own affairs. This requires that decisions should be taken with honesty and integrity and with due consideration to all relevant facts;
- Secondly, they have a duty of loyalty. They must always ensure that the interests of members of their funds remain paramount in their decisions and dealings, and that they do not use their positions for personal gain;
- Thirdly, they have a duty of obedience. They are required to act in accordance with the relevant legislation and within the rules of the fund.

These common law requirements have been amplified by seven principles of good corporate governance identified within the King Code namely: discipline; transparency; independence; accountability; responsibility; fairness; and social responsibility.

It is also amplified by law in the Financial Institutions (Protection of Funds) Act, 2001 by which trustees are required to physically sign off on the annual financial statements. Non-compliance can lead to a fine or imprisonment of up to 15 years.

Lastly, PF130<sup>1</sup> states that “Fundamental to the governance of a fund is the accountability of the board...” (par 6) and that “members and beneficiaries may request the Adjudicator or a court of law to determine the liability of the board” (par 7).

### Entitlement of trustees to remuneration

Although the Pension Funds Act is silent on remuneration, the Trust Act provides that a trustee is entitled to the remuneration provided for in the Trust Deed or, where no such provision is made, to a reasonable remuneration. Reasonable remuneration is not defined in the Act. What constitutes reasonable remuneration in any particular situation depends on the relevant facts and circumstances.

Trustees employed by the participating employer are generally not remunerated by the fund for their time and services, as these are assumed to be part of their duties as a paid employee. However, funds should consider to start paying them to ensure the trustee role is taken more seriously and people aspire to become skilled trustees.

In respect of independent trustees, it is accepted that funds will probably pay for the expertise that they have acquired for the benefit of the members.

<sup>1</sup>Financial Services Board Circular PF no. 130 – Good governance of retirement funds

## Current justification for remuneration of trustees

Where funds are currently providing remuneration to their trustees, most boards will justify their decision to pay them based on the following arguments:

- Participating employers want to compensate trustees for doing an important job;
- Trustees are now demanding payment in more instances;
- Funds do so in order to recruit and retain trustees; and
- Ongoing desire by funds to acquire particular expertise.

## Who should be remunerated and how much?

In the absence of a local equivalent, a number of international surveys on trustee remuneration over the last few years have shown that:

- There is an increasing trend in the level of remuneration being paid to trustees;
- It still remains unusual for all the trustees on a board to be paid, however, the majority of funds are now paying at least one trustee;
- Active members are generally not paid; and
- Trustees who are not independent of the participating employer mostly tend to be paid only if they are pensioners.

## How should the levels of remuneration be determined?

Decisions on remuneration practices within funds should take into account the best interests of the

members. In doing so, the following factors are generally considered when assessing the level of remuneration to be paid to trustees:

- Chairperson of board or sub-committee;
- Workload and availability;
- Reputation;
- Independence;
- Level of trustee experience;
- Size and performance of the fund;
- Performance of the individual;
- Perceived market rate; and
- Other skills, knowledge and qualifications.

Where a board of trustees has considered it appropriate to remunerate one or more trustees, it is critically important to establish a formal and transparent remuneration policy and to consider how remuneration levels relate to both individual and board performance, and also to market practice. The rules of the fund should allow for payments to be made to trustees. Boards should as far as possible avoid the conflict where trustees agree on their own level of remuneration.

In most cases the chairperson will be remunerated at a level that is a multiple of the other trustees' remuneration to acknowledge the additional responsibilities. Consideration should be given by boards to the payment of additional remuneration where substantial extra time and effort is required of some trustees in response to particular situations or events for example being appointed to

additional benefit or investment sub-committees.

## Trustee expenses

Trustees should be remunerated for the time and efforts expended in the performance of their duties on behalf of the members of the fund. Although expenses should not be considered remuneration, the fund should at least meet the reasonably incurred expenses of independent trustees in the discharging of their duties.

## Why greater remuneration of trustees may be appropriate going forward?

### Increased personal risks associated with the job

The Pension Funds Act and other legislation applicable to retirement funds in South Africa is continually being enhanced from year to year and there has also been an increase in the supervisory powers of the Registrar of Pension Funds, which puts pressure on trustees to keep up to date with the regulations and legislation. Potential legal liabilities for trustees are also on the increase, which has had an impact on the level of fidelity cover being held by trustees. In addition, the responsibilities of trustees are becoming more complex and trustees are often required to deal with highly technical issues like:

- Funding levels;
- Asset / liability matching;
- Investment decisions;
- Valuation of inactive and illiquid financial instruments;

- Dealing with the impact of corporate activity on the fund; and
- Assessing the adequacy of internal control systems not only of the fund administrator, but also of the respective asset managers as well.

### Shortage of skills

The involvement of independent trustees can add depth and breadth to the trustee board skill base, and be especially valuable in helping to manage some of the conflicts that can arise between the trustee board and the participating employer. The existence of an active, independent trustee, especially in the role of chairperson, can also relieve the cost to the participating employer of otherwise lost senior management time. However, as demand continues to exceed supply locally, funds may need to start, or increase the levels of remuneration paid to independent trustees in order to attract the appropriate individuals with the necessary skills and competence to boards.

### Shortage of time

Trustees of retirement funds are legally required to have knowledge

and understanding across a wide range of areas, which requires a significant amount of time to be invested in maintaining the appropriate skills levels. As trustees' workloads continue to rise, issues such as additional time off for meeting preparation and training, as well as recognition for their efforts will also become increasingly important.

### The narrowing gap with corporate entities

The long-term objective of the Financial Services Board is to reduce the number of active funds in the retirement fund industry in South Africa. This is currently being achieved through consolidation and merging of the smaller funds into umbrella fund structures, with the result that the size of some of the larger funds is becoming more comparable with other corporate entities. As the funds become larger going forward, the role of trustees is becoming more onerous and has moved much closer to comparability with the roles performed by corporate non-executive directors. It may thus be sound practice to remunerate trustees appropriately in order to foster expertise and business-like fund management.

### Opportunity for better guidance

Trustee performance is not always monitored by funds, which may be a missed opportunity for enhancing trustee effectiveness. In order to evaluate trustee performance it is critical that all trustees know what is expected of them in discharging their duties. Without formal monitoring of trustee performance, there is less justification for remunerating trustees.

### Conclusion

The debate of whether to pay or not to pay trustees, and if so how much, is likely to continue going forward. Although, with international trends showing an increase in payments to trustees this is likely to be a matter that remains on the agenda's of local boards of trustees for quite some time. Should boards of trustees decide to increase the nature and or level of payment to their trustees it is imperative that equitable and robust remuneration policies and strategies are implemented. In addition, impeccable governance is mandatory for boards of trustees to be able to defend how much they are paying trustees.

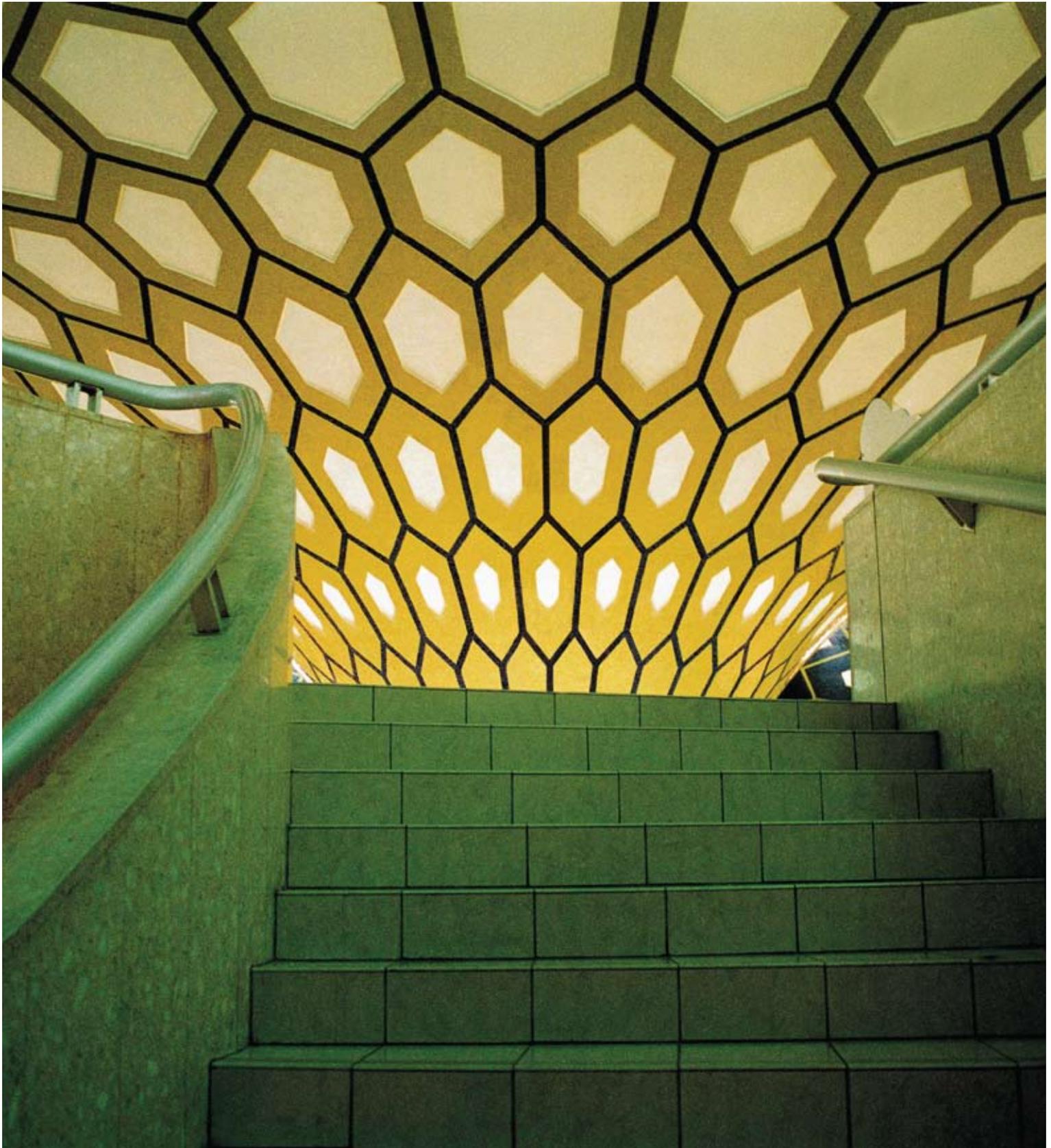


**Gert Kapp**  
Retirement Fund Leader  
Tel: +27 12 429 0059  
gert.kapp@za.pwc.com



**Bryan Ingram**  
Associated Director in the  
Financial Services practice  
Tel: +27 11 797 5730  
bryan.ingram@za.pwc.com

# 03 Solvency II – Year under review



## The last twelve months have seen significant progress towards full implementation of Solvency II by 2012, for European insurers.

The unfolding of the global financial crisis over this period, including the backlash against fair-value accounting and mark-to-market measurement, provided serious challenges to the market-based principles underlying Solvency II. That Solvency II is still on track, relatively unaffected by the crisis, is testament to the rigour of the process so far and the extent to which the underlying principles are accepted within Europe and by the International Association of Insurance supervisors and their member regulators.

### Solvency II developments in Europe

The European Union (EU) Parliament needed to vote to adopt the Solvency II Framework Directive in order to keep the process on track for full implementation by 2012. Two aspects of the proposal, both connected to the global financial crisis, threatened to derail the positive vote.

Firstly, the concern was raised that the proposed capital requirements are “pro-cyclical” in that they would intensify declines in financial markets. For example, lower equity markets:

- Reduce the market value of assets for insurers with equity exposure;
- Might push investment guarantees to be further in the money or less out of the money; and
- The increase in market implied volatilities typically associated with market crashes would increase the calculated value of these guarantees.

The decrease in asset values and increase in liabilities mean insurers would face lower capital adequacy. They would then have to de-risk their balance sheets to reduce their capital requirements. De-risking would typically involve selling equities, further depressing market prices, re-enforcing the downward cycle and putting further pressure on solvency.

### What is Solvency II and why does it matter to South African insurers?

Solvency II is the updated set of regulatory requirements for insurers that operate in the European Union.

Solvency II is based on economic principles for the measurement of assets and liabilities at market value. It is a risk-based approach that tailors the capital required based on the risks to which each insurer is exposed. It is analogous to Basel II for banks with a Three Pillar approach. The overall capital requirement is a one-year Value at Risk measure calibrated to 99.5% probability of solvency.

The Financial Services Board in South Africa has announced their intention to review long term insurance capital requirements starting in 2009 and that they will likely follow an approach informed by Solvency II. Financial Condition Reporting for short term insurers, in its proposed form, incorporates many features similar to Solvency II, including standard and internal models and the “use test” requirement.

Credit rating agencies are increasingly looking to assess the sophistication of insurer’s internal risk management and economic capital modeling as fundamental factors in credit rating. This has become more relevant over recent years as more South African insurers have issued subordinated debt or preference shares into the capital market.

Solvency II is more than just a new way to calculate capital requirements and solvency. It creates new standards for risk management and risk-aware decision making within insurers to bring strength, stability and consistency to the insurance industry.

A proposal, presented and motivated primarily by the French, was to include an explicit counter-cyclical component to the calculation. A so-called “equity dampener” would be incorporated into the calculation such that under equity market declines, the capital requirements for equity risk would decrease.

The second concern raised (and one of the fundamental innovations introduced by Solvency II) was the notion of “Group Support”. Under the Group Support regime, multinational insurance groups only need to hold low Minimum Capital Requirements in each territory in which they operate, provided they have sufficient capital at a group level. The Solvency Capital Requirement at a group level would take into account diversification of risks across all operations. Capital at a group level is deemed to support risks taken within local operations.

Smaller EU countries felt that they would be disadvantaged by the Group Support regime since large multinational insurers are mostly headquartered in the larger EU countries. The global financial crisis has increased the awareness of cross-border credit difficulties and heightened popular and political support for protecting national interests. Smaller countries felt they would still be required to step in to support domestic policyholders in the event of insurer failure, but under the Group Support system would have limited ability to ensure adequate capital protection.

Although the door to a counter-cyclical or equity dampener approach has not been fully shut, there seems to be only limited support and no changes were imposed before the vote. Group Support, thought by many to be fundamental to the modernisations hoped for under Solvency II, was cut from the Framework Directive in order to ensure an affirmative vote. Group Support will be reconsidered in future, but not for the initial implementation of Solvency II.

The EU Parliament voted to adopt the Framework Directive on 22 April 2009. Solvency II is thus still on track, for full implementation in Europe by 2012.

### QIS4 results and plans for QIS5

The calibration of the Standard Formula for calculating capital requirements under Solvency II has been tested through a series of Quantitative Impact Studies (QIS) with participation from industry. The results of QIS4 (the fourth study) were released in October 2008. Approximately a third of applicable insurers participated, which was a significant increase over those participating in QIS3.

Most insurers showed a higher solvency ratio than under the existing EU solvency rules. However, many participants felt the equity shock was too low. Counterparty default risk (separate from credit risk of investments)

was felt to be incorporated in an overly complex manner, given the small total contribution to capital requirements for insurers. While the operational risk requirement was widely criticised for being insensitive to risk, many of the insurers that also presented the results of their internal models showed higher capital requirements for operational risks using internal models.

QIS5, originally planned for 2009, has been delayed due to the global financial crisis and to give additional time to analyse the results of QIS4 and is now scheduled for 2010.

### Opposition to 6% Cost of Capital Quietened

Solvency II prescribes a 6% Cost of Capital for determining the market value margins for non-hedgeable risks. While the objectivity and comparability of using a fixed 6% compares favourably with the uncertain and inconsistent approaches possible under the CFO Forum’s<sup>1</sup> Market Consistent Embedded Value Principles, many countered that 6% is too high. The CRO Forum<sup>2</sup> proposed a range of 1.5% to 4.0%.

The basis that the 6% Cost of Capital reflects the cost of raising new capital in the aftermath of a 1 in 200 year event has gained some support given the costs of raising capital in the height of the financial crisis.

<sup>1</sup> The European Insurance Chief Financial Officer Forum (‘CFO Forum’) is a high-level discussion group formed and attended by the Chief Financial Officers of major European listed, and some non-listed, insurance companies.

<sup>2</sup> The Chief Risk Officers Forum (‘CRO Forum’) comprises of Chief Risk Officers of major insurance companies and financial conglomerates.

## Actions for small and medium insurers

Small and medium insurers have the advantage that flatter management structures and fewer product lines mean that integrated risk management can be implemented and complete capital models can be created within modest timeframes and budgets.

Outside assistance may be useful in planning the modeling approach, developing the risk management framework and assisting with aspects of the technical modeling.

Improved risk and capital management can complement market understanding and distribution skills to generate positive risk-adjusted returns for shareholders and optimise capital deployment.

## Importance of risk correlations recognised

The standard formula presented as part of QIS4 uses a modular approach to incorporate all the sources of risk into a single Solvency Capital Requirement. The risks are aggregated allowing for multiple stages of correlation and diversification. The degree of diversification assumed to be available can have a dramatic impact on the Solvency Capital Requirement.

While the modular, multi-stage approach greatly reduces the number of correlation inputs

required, it can also result in some unintended resultant correlations between some risks. The most dangerous potential result is the over allowance for diversification between similar risks because of the paths that link the risk modules.

One of the lessons arising out of the global financial crisis is the extent to which risks are related and intertwined, particularly in the type of extreme or “tail” 1 in 200 scenarios relevant in Solvency II. Thus, both the estimation of these individual correlations and the challenges of ensuring coherent aggregate correlations have been raised as areas for concern.

Valid concerns aside, the inherent difficulty of estimating these correlation inputs may mean that the current proposals become final without adjustment.

## The role of rating agencies and new views on credit spread volatility

The role of credit rating agencies in the global financial crisis continues to be debated. Meanwhile, the credit risk components of the Solvency Capital Requirement remain heavily dependent on these ratings. Until an alternative, widely available approach becomes available, credit ratings by the major rating agencies will remain a key component of the credit risk module.

The explosion in credit spreads from July 2007 to their peak around the end of 2008 is cause for concern. If this recent experience of the volatility in credit spreads were incorporated into the historical

analysis of credit spreads used to calibrate the standard formula, the resultant 1 in 200 year scenarios could be worse than the QIS4 factors.

Some insurers are already revisiting their calibration of credit spread expansion in their economic capital models; it is plausible that similar changes will be contemplated for the final standard formula for Solvency II.

## Is Fair Value the correct measure for solvency?

The concerns raised by some business executives and market participants about the increased use of market values and mark-to-market measurement is a direct challenge to the market-value based approach of Solvency II. The CFO Forum decided to delay the mandatory implementation of Market Consistent Embedded Values due to insurance industry concerns around the volatility in reported numbers as a result of the market-sensitive approach and the unprecedented impact of not recognising liquidity premia in current market conditions.

Some went beyond describing mark-to-market measurement approaches as poor measures, and blamed mark-to-market for deepening the crisis by causing pro-cyclicality and panic from unreasonably low prices in markets with little or no liquidity.

Against this backdrop, it is encouraging to note that Solvency II was approved by the EU Parliament without major challenge to the underlying market-based approach.

This suggests there is tremendous support for Solvency II in this form, and probably broad support for mark-to-market measurement approaches in general, despite the vocal calls for a rethink.

### How Solvency II has already influenced South African capital requirements

Financial Condition Reporting for short term insurers, albeit delayed and not universally appreciated, clearly shows the influence of Solvency II in its planned revolution of non-life capital requirements and risk management. However, the practical impact of Solvency II in South Africa is actually a long-overdue evolutionary change in long term insurance Capital Adequacy Requirement (CAR).

Three changes have been made, drawing inspiration from Solvency II:

- Operational risk was added as a requirement, with the suggested allowance taken directly from the current proposed formula for operational risk from Solvency II;
- Credit risk has been incorporated into the CAR, based on a simplified version of the current Solvency II proposals; and
- A third, more subtle change is that the previous assumption of complete independence of risk types from one another has been modified to allow for partial dependence between market

and credit risk. This is a clear step towards the Solvency II approach of explicitly recognising correlations between separate risks.

The inclusion of Solvency II elements has created a mixed metric capital requirement. The historical calibration of the CAR elements was to approximate, with varying degrees of accuracy, a 95% probability of solvency over the lifetime of the existing policies. In contrast, Solvency II adopts an explicit one-year 99.5% probability of solvency target. The updated CAR formula now includes components calibrated to each of these measures, making intuitive interpretation of the resultant capital strength difficult.

Given the inclusion of additional risks in the CAR calculations, the same overall level of capital adequacy would be achieved with a lower CAR Cover Ratios (the ratio of Net Worth to the CAR). Local insurers have followed different approaches when determining their views of internal capital adequacy based on the new

calculations, economic and operating environment and market perceptions.

While many local insurers have already developed partial internal models beyond the requirements of the CAR, the primary focus has been on market risk, overwhelmingly the primary risk for typical life insurers. As these models mature, there will likely be a gradual shift away from targeting crude CAR Cover ratios toward basing economic capital requirements on internal models.

### The year under review

Solvency II has overcome a difficult period and emerged virtually unscathed. Its influence has spread to South Africa in both the short-term and long-term insurance industries. While the exact path and final outcome for Solvency II is uncertain, the impact it will continue to have in shaping the local insurance environment is undeniable.

### Actions for large insurers

Implementing Solvency II-like capital models and embedded risk management is a significant undertaking. Multiple business units each with multiple product lines and legacy systems with different interfaces turn this into a multi-year project which must compete for resources amongst many other organisational initiatives and day-to-day operations. Meanwhile, regulators, credit rating agencies and shareholders now expect this level of sophistication so compliance is no longer optional.



**David Kirk**

Associated Director in the Actuarial and Insurance Management Solutions practice  
Tel: +27 21 529 2517  
david.kirk@za.pwc.com

Solvency II has  
overcome a difficult  
period and emerged  
virtually unscathed.

# 04 Revenue Growth Strategies in financial services



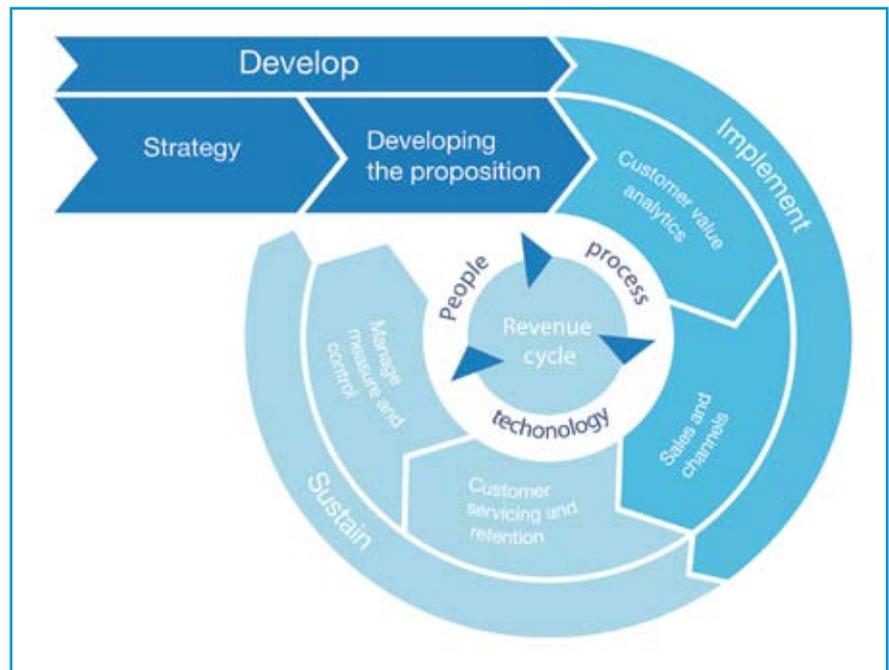
Revenue growth strategies in troubled economic times can be challenging. Making the cases for new markets and new products are hard to justify, but now could be the perfect time to address sales force inefficiencies and opportunities that might have been overlooked in the past.

Revenue Growth is one of the top three issues in the “C-Suite”, as reflected in in virtually every industry survey conducted, and in the conversations PricewaterhouseCoopers (PwC) is having with clients. PwC developed a Revenue Growth framework which has been adopted globally.

The revenue growth offering is founded on an in-depth, data-driven analysis of a firm’s strategy, its customers, channels and the interrelationship between these. Acquiring new customers is expensive. Often opportunities exist inside the sales organisation to leverage untapped potential that might have been overlooked in a growth environment.

The importance of the sales organisation relies on its central role in sales creation, of being the public face of the company, and on the fact that it is entrusted with the most important corporate asset – the customer. However, today’s business environment is exposing the weak spots in corporate selling capability and is making it harder to ignore critical performance issues previously concealed by a growth market. These weaknesses now undermine key

components of the sales machine and will continue limiting sales effectiveness, even after the economy improves. Furthermore the Sales Force is caught between two conflicting objectives. On the one hand they are being asked to increase prices, sell more and further differentiate the value proposition. On the other hand there is increased scrutiny on what they do, and



they must deliver more but reduce spend e.g. less travel, reduced entertainment, less marketing support and advertising. This is compounded in South Africa with the increased burden of compliance and reduction in commissions.

Never before has managing customers and sales been more important than it is today. In today's uncertain market conditions, a sales strategy is truly tested. South African business leaders are rightly questioning their sales investment strategy and facing up to tough decisions on market coverage, customer mix, product mix and payment risk, while at the same time are still focussed on the growth agenda.

### The South African Context

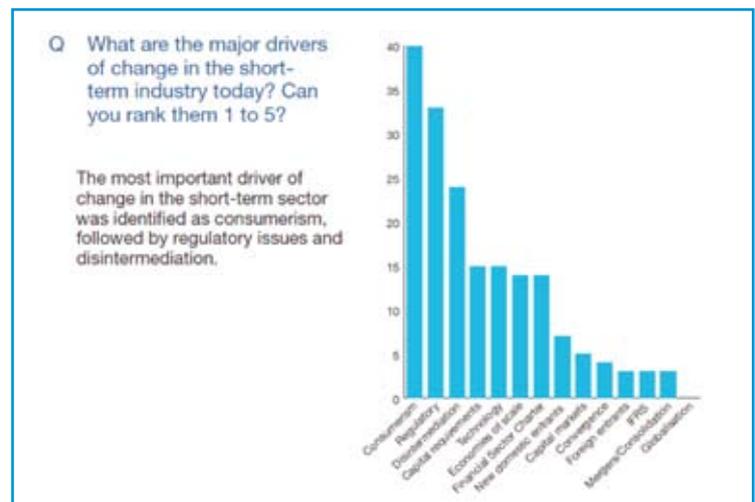
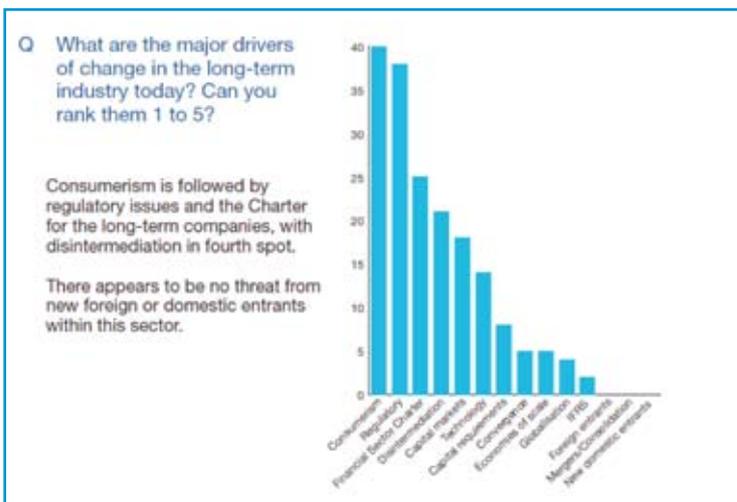
In 2008, PwC surveyed managing directors and senior executives in 27 South African insurance companies as part of the Emerging Trends and Strategic Issues in South Africa Insurance Survey. This survey reinforced the interrelationship between customer expectations in

the form of consumerism, the need to reach new markets (particularly in the long term industry) and the need to reduce costs or increase effectiveness in intermediated channels.

Enhancing customer facing activities is crucial in reinforcing confidence in meeting customer needs in these tougher times. This therefore requires an even more detailed understanding of customer value, in order to revitalise the sales strategy and inform the key decisions that matter.

In limited markets, where companies are often competing for the same customer and have similar offerings, what can organisations do to truly make a difference? Beyond simply cutting the cost of sales, smart organisations are seizing the opportunity to transform existing sales models in an effort to stay ahead of the pack. PwC have pinpointed three key differentiating attributes that successful companies are concentrating on in these uncertain economic times.

- Rather than a knee-jerk reaction to acquire new customers or enter new markets, leading companies focus on organic growth opportunities – it is far more costly to acquire new customers than to increase revenues from existing customers through better channel management, retention, account penetration, cross selling and up selling.
- Take an “outside – in” view of your sales organisation. Be obsessive about understanding how customers buy your products and services and build clear, segmented value propositions that can be implemented through your sales channels.
- Execute brilliantly and “Earn the right to sell” through superior customer experience – many aspire to world class selling and service but few can truly deliver time and time again due to a failure to link operational service decisions with front line delivery requirements and customer desires.



## The way forward

Whilst battening down the hatches is prudent, it is only effective if you do not lose sight of the direction in which your customers and competitors are heading. The critical questions that organisations are asking themselves in order to survive in the current climate are:

- Do we have the right sales strategy to meet the changing economic conditions?
- Are we targeting the right customers?
- Have we maximised all current opportunities to their full potential?
- Do we have major prospective customers with little or no existing sales coverage?
- Could we be smarter with managing existing leads and opportunity sources?
- Is now the right time to optimise or right-size our sales talent?
- Should we reassess how we apply our total sales and marketing investment?

In response to the significance of the Sales role in an organisation's overall growth and customer strategy, PwC clients are asking for a different perspective on the sales organisation and the performance of sales teams.

We have found that Sales organisations today face several challenges that can lead to declining channel efficacy. Many of these factors are highly manageable.

These include:

- Poor customer experience and high customer churn.
- Poor management of leads, including life stage events, inbound service requests, internally generated contractual events and retention opportunities.
- Insufficient customer knowledge and poor application of insights.
- Low sales force engagement and high talent turnover.
- Ineffective sales techniques and tools leading to poor sales performance.
- Process inefficiencies driving non-selling time.
- Reward and performance management not driving desired behaviours and results.
- Poor coaching and training design and execution.
- Poor alignment to the go-to-market strategy.
- "Service only" versus growth focus.
- Inadequate dashboards and other value reporting tools.

From international research, we are able to draw on global experience of what leading edge firms are doing with regards to sales practices. This experience has shown us that leading edge sales teams outperform developing teams across key sales metrics:

- They achieve twice the revenue growth.
- They achieve four and a half times the customer growth.
- They achieve one and a half times higher conversion rates.

In addition, research shows developing sales organisations that choose to embrace improvement opportunities can improve their sales performance.

New frameworks have been developed to identify key sales and channels issues and opportunities, and provide a mechanism for understanding change implications across the entire sales organisation. The framework is particularly useful in understanding interrelationships across the different components of the sales organisation.

Using the Sales and Channels framework is allowing PwC clients to answer critical questions on how to drive value for customers and the firm:

- Is strategy of the sales organisation consistent with the firm's overall strategy and are anticipated changes to the firm's strategy being adequately mapped to the sales organisation?
- Is there sufficient differentiation between the various parts of the sales organisation and is this aligned with where value is being created?
- How are resources deployed within the sales organisation and can this be improved?
- Is the current organization optimised across the key levers of people, process and technology?
- Can new or alternate technologies or business processes be considered to improve strategic focus and cost effectiveness?
- Given the constraints on capital, where should investment take place and where should this be held back.

## Conclusion

In the current economic climate, it is necessary to reconsider the strategic options that face the sales organisation; but it would be dangerous to focus on cost reduction and rationalisation as the only potential responses. As we approach the bottom of the cycle,

and the so-called “green shoots” are evident, the time may have come to refocus the sales organisation on the activities that add the most value in anticipation of the coming growth, without losing ability to respond in the event that the recovery takes longer than anticipated.



**Ernst Maritz**

Director in the Financial Services  
Advisory practice  
Tel +27 21 529 2002  
ernst.maritz@za.pwc.com



**Riaan Wienekus**

Associate Director in the Advisory  
practice  
Tel +27 11 797 5210  
riaan.wienekus@za.pwc.com



**Jan Gey van Pittius**

Director in the Advisory practice  
Tel +27 11 797 5331  
jan.gey.van.pittius@za.pwc.com

Never before has managing customers and sales been more important than it is today. In today's uncertain market conditions, a sales strategy is truly tested.

# 05 The future of banking



Over the past 18 months the financial services industry globally has changed fundamentally and permanently. Before the global financial crisis, systemic risk was a subject for abstract theoretical discussions and seen as something for others to worry about.

Derivatives, securitisation, risk management and the new Basel II banking regulations were thought to have made the world a safer place, not a more dangerous one. Then everything changed and the foundations of global financial service institutions were shaken to their core. The speed and intensity, with which financial markets changed, combined with the scale and complexity of banking models exposed the structural weaknesses of major global players. Some global institutions have disappeared, while only a few are able to survive on their own and gain market share.

The general feeling expressed by South African bankers in the 2009 PricewaterhouseCoopers survey “Strategic and Emerging Issues in South African Banking” was that South Africa largely escaped the global financial crisis but that the secondary wave of the global economic recession would have a significant impact on South Africa. Bankers however indicated that the global financial crisis is the most significant driver of change in the South African banking industry.

This article substantially takes its reference points from banking systems which have been more badly bruised than that in South Africa. Having said that, South African banks are far from immune from the global financial crisis and could benefit from reviewing the following areas covered below:

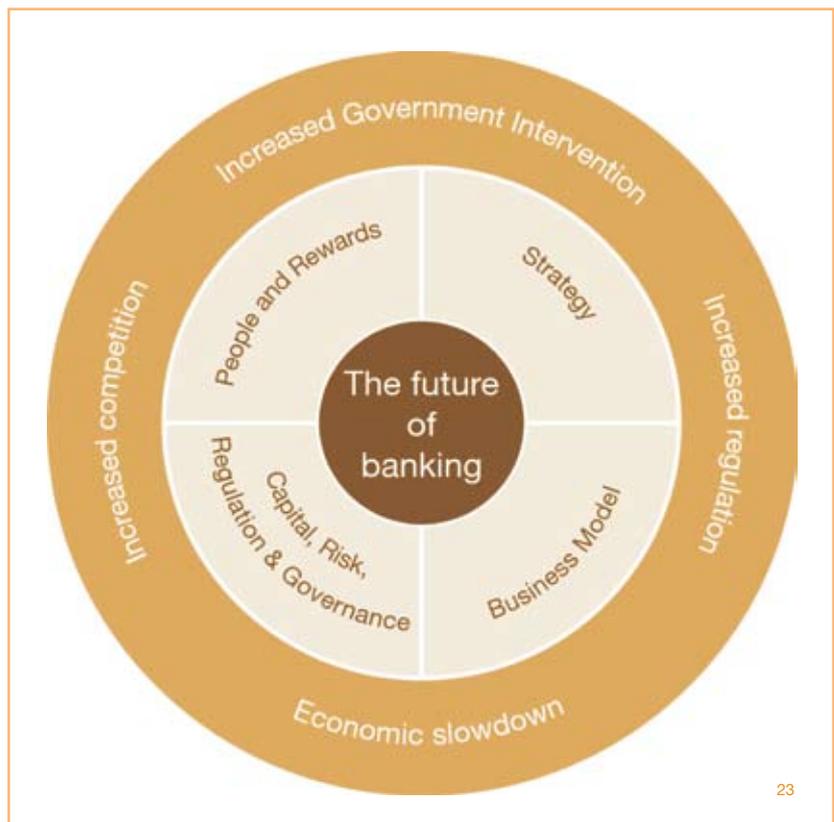
- Strategy
- Business Models
- Capital, risk, regulation and governance
- People and Reward

These topics are discussed in more detail in our recent global thought leadership publication: “The Future of Banking – returning stability to the banks and the banking system”

### A Global Point of View

Globally, typical reactions to the financial crisis have been short-term in nature, in many cases driven by the need for survival. Short-term actions alone will however not suffice and fundamental questions need to be asked and issues tackled. A few leading institutions are beginning to address those fundamental issues and prepare themselves to prosper in a new world while others have not begun the process. In order to address this, the following key questions should be answered:

- How will institutions address risk management, capital and liquidity requirements?
- How will banks make money in the future?
- What will the regulatory environment be like and how will individual institutions need to respond?
- How well will business models survive and will they be efficient?



Banks must decide on their strategy and how they can build the right business model to deliver it. Nothing less than a world-class approach to management of capital, risk, regulation and governance will suffice. To help deliver their strategy, banks must focus on employing the right people, while rewarding them fairly and transparently.

The successive wave of global bank failures has taught the industry a number of lessons that remain unheeded:

- First, that integration of group-wide control functions – risk, compliance, finance, human resources and internal audit and in particular the co-ordination of these between the front, middle and back offices – has been inadequate.
- Second, that senior management in the banking industry has to varying degrees ignored the warnings they have received from these control functions. This has been starkly illustrated by recent press reports of the warnings management of a number of banking groups apparently received concerning their banks' cultures and management practices.
- Third, that the complexity of banks in terms of products, customers, geographic coverage and cultural norms have proven to be a serious block to allowing them to properly understand and therefore manage their risks. This has been further compounded by their over-reliance on quantitative risk analytics, which have been subsequently proved to be flawed.

## Strategy

The competitive position of many financial institutions has been dramatically affected by the financial crisis.

In the PricewaterhouseCoopers survey “Strategic and Emerging Issues in South African Banking 2009” it was noted that certain banks are refocusing their strategies.

The future belongs to organisations that can first identify the market segments where they add value and where there are customers who are willing to pay for their products, and then have the courage to invest in these businesses while shrinking others.

Cost reduction is a priority for all banks. Banks should endeavour not just to cut costs, but to be strategic and seek to modernise their business. They must simplify and reduce the complexity that has built up over many years, better integrate their processes and systems, and better connect the different parts of their businesses that serve their customers. In summary, banks should focus on increasing efficiency rather than just relying on head count reduction to achieve their new cost targets.

Banks should also fundamentally challenge the design of their control systems and governance in order to achieve better integration, reduce complexity and give greater prominence to control functions. If this is not achieved regulators may move to enforce very significant control frameworks on the industry that could result in increased costs.

## Business Model

The global financial services sector has been blessed by a benign business and regulatory environment over the last decade, which masked a number of unsustainable business models within the industry. But more awkwardly for many is that the financial crisis and wider global recession have challenged the core operating models responsible for delivering the business strategy.

As banks look to the future, transitional change will probably be insufficient – structural and transformational change must be considered. Regardless of changes to the business strategy, the way that strategy is delivered will certainly change.

Transformational changes to the business and operating model are rarely undertaken, but the current environment provides a “perfect storm” of the driving forces behind such wholesale reconstruction: dramatic adverse changes in financial performance, significant regulatory intervention and substantial changes to leadership teams.

Business models should strike a balance between efficiency – the degree to which business and operating models align strategy, capability and policy – and survivability – the degree to which the business and operating model is aligned to meet customer needs, competitive threat and regulatory intent.

Although we do not believe that South African banks need to undertake a review of their entire

business model, the challenge lies in how to take maximum advantage of current circumstances to strengthen their relative position.

### Capital, risk, regulation and governance

Globally capital is now a scarce commodity and the people, processes, policies and systems that govern its deployment will have to become more effective and robust. Capital and funding structures are likely to become simpler and lower returns on equity are expected.

The PricewaterhouseCoopers survey “Strategic and Emerging Issues in South African Banking 2009” indicated that funding constraints, regulation and reporting remain important drivers for change in the South African banking industry. South African bankers expressed a general feeling that regulators around the world are nervous and that comprehensive regulatory changes are expected and that the local Registrar of Banks would watch developments in other markets and consider them for the needs of the South African banking market.

We believe that Basel II will be transformed, with higher capital requirements and capital buffers that

flex over the economic cycle, to give better counter-cyclical protection. There will be significant changes to the techniques used to analyse how much capital is required. Broader funding, liquidity and operational risks are under greater scrutiny and banks will become smarter at measuring, monitoring and limiting their liquidity risks and building a better assessment of liquidity risk into their business decisions.

Governance, risk and compliance need to become more prominent and increased focus on risk, risk management systems, and their integration with other systems at the banks are required.

### People and rewards

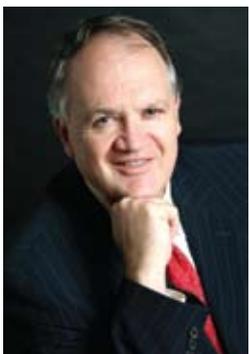
Globally, people, rewards and culture have without doubt played a key role in the development of the global financial crisis. Now, more than ever, the industry needs talented individuals to lead it through a period of huge uncertainty and change.

In order to prosper in the future, South African banks should recognise the requirement for an enhanced set of skill, smarter development and deployment of talent and the realignment of remuneration structures.

South African banks need to build strong and resilient cultures in which responsible risk taking, within the risk appetite of the bank, simply becomes “the way we do things around here”. This will require different approaches to reward, development, performance management, communication and recruitment.

### Conclusion

The global financial crisis has shaken the foundations of financial service institutions to their core. Globally industry conditions changed fundamentally and permanently. Although South African banks believe that they largely escaped the global financial crisis and that the secondary wave of the global economic recession would have a more significant impact on our banking system and economy, history reminds us again and again that periods of rebuilding after major disruptions provide opportunity for the far-sighted and disciplined to set up opportunities for competitive advantage well beyond the single economic cycle.



**Tom Winterboer**  
Financial Services Leader  
Tel: +27 11 797 5407  
tom.winterboer@za.pwc.com



**Johannes Grosskopf**  
Director in the Financial Services  
practice  
Tel: +27 11 797 4346  
johannes.grosskopf@za.pwc.com

# 06 Demystifying the concept of exchange traded funds



## The first Exchange Traded Fund (“ETF”) was launched in the United States in the early 1990’s, and the global market has experienced considerable growth since then.

In August 2009, according to [etftrends.com](http://etftrends.com), there were more than 500 ETF’s globally that hold approximately US\$486 billion in assets. By 2011, total assets under management globally in ETF’s are expected to surpass US\$2 trillion.

Consistent with global trends, South Africa has also seen a keen interest from investors in ETF’s. The Johannesburg Stock Exchange (“JSE”) launched the Satrix 40, only its first ETF in 2000, with more than 25 ETF’s being listed to date. South African investors can expect the launch of many new ETF’s as new strategies and indices are developed which will no doubt attract huge attention and it is expected that the industry will experience the same growth as has been seen internationally.

### Characteristics of ETF’s

ETF’s or Index Funds are investment vehicles traded on stock exchanges, much like equities. They are passive investment funds that track the performance of an index by investing directly in the underlying blue chip constituent shares. ETF’s therefore allow investors to buy and sell an entire basket of equities with a single trade. ETF’s are listed and registered on stock exchanges, just like any other listed security. However, instead of offering investors exposure to only one company, they provide investors with an entire portfolio of listed companies. Accordingly, with the convenience of a single purchase of an ETF, the investor obtains an entire portfolio of shares, which offers the performance of an entire index. In addition, the investor reaps the benefits of obtaining a diversified portfolio of shares, typically the top companies on the market. The diversity and quality of the index-based portfolios are designed to both reduce risk and enhance performance.

ETF’s trade like a single security or share on a stock exchange. They are similar to Collective Investment Schemes (“CIS”) in that one can invest in a basket of securities with one transaction, but unlike CIS’s, they

trade throughout the day on stock exchanges offering the flexibility of normal market-listed shares. Unlike traditional CIS’s, ETF’s do not sell or redeem their individual shares at net asset value. Investors can take advantage of intraday price movements that aren’t available with CIS’s, which trade only once a day. If purchased as listed securities, they require less time and effort on the part of the investor and carry reduced costs, as annual fees and management costs are not payable if they are purchased through a stockbroker. There are also significant cost benefits in that the investor gains access to an entire basket of shares, but only pays brokerage and JSE transaction costs once.

When an ETF is initially set up, financial institutions will in most instances purchase a large block of shares directly from the ETF. The initial purchase by an institution of the block of shares is what is called creation units. Purchases of the creation units are generally done in kind, with the institutional investor contributing a basket of securities of the same type and proportion held by the ETF, although some ETF’s may require or permit a purchasing shareholder to substitute cash for some or all of the securities in the basket of assets. The institutional investor has the ability to redeem creation units in the same manner. The ability to purchase and redeem creation units by the institutional investor’s gives ETF’s an arbitrage mechanism intended to minimise the potential deviation between the market price and the net asset value of ETF shares. Existing ETF’s have transparent portfolios, so institutional investors will know exactly what portfolio assets they must assemble if they wish to purchase a creation unit, and the exchange disseminates the updated net asset value of the shares throughout the trading day. If there is strong investor demand for an ETF, its share price will temporarily rise above its net asset value per share, giving arbitrageurs an incentive to purchase additional creation units from the ETF and sell the component ETF shares in the open market. The additional supply of ETF shares increases the ETF’s market capitalisation and reduces the market price per share, generally

eliminating the premium over net asset value. A similar process applies when there is weak demand for an ETF and its shares trade at a discount to net asset value.

In South Africa, most ETF's are structured as open-ended management investment companies (the same structure used by traditional CIS's and money market funds). ETF's structured as open-ended funds have greater flexibility in constructing a portfolio and are not prohibited from participating in securities lending programs or from using futures and options in achieving their investment objectives. An ETF defined as a registered open-ended management investment company would perform the following functions:

- Issues (or redeems) creation units in exchange for the deposit (or delivery) of basket assets the current value of which is disseminated on a per share basis by a national securities exchange at regular intervals during the trading day;
- Identifies itself as an ETF in any sales literature;
- Issues shares that are approved for listing and trading on a securities exchange;
- Discloses each business day on its publicly available web site the prior business day's net asset value and closing market price of the fund's shares, and the premium or discount of the closing market price against the net asset value of the fund's shares as a percentage of net asset value; and

- Either is an index fund, or discloses each business day on its publicly available web site the identities and weighting of the component securities and other assets held by the fund.

Most ETF's in South Africa are also registered with the Financial Services Board ("FSB") as CIS's. This provides additional investor protection and regulation, over and above the controls exercised by the JSE on ETF's as stock exchange listed entities.

### Advantages of investing in ETF's

ETF's generally provide the easy diversification, low expense ratios, and tax efficiency of index funds, while still maintaining all the features of ordinary equities, such as limit orders, short selling, and options. Because ETF's can be economically acquired, held and disposed of, some investors invest in ETF shares as a long-term investment for asset allocation purposes, while other investors trade ETF shares frequently to implement market timing investment strategies. Among the advantages of ETF's are the following:

- **Lower costs** – ETF's generally have lower costs than other investment products because most ETF's are not actively managed and because ETF's are insulated from the costs of having to buy and sell securities to accommodate shareholder purchases and redemptions. ETF's typically have lower marketing, distribution and accounting expenses.

- **Buying and selling flexibility**– ETF's can be bought and sold at current market prices at any time during the trading day, unlike traditional CIS's and unit investment trusts, which can only be traded at the end of the trading day.
- **Tax efficiency** – ETF's generate relatively low capital gains, because they typically have low turnover of their portfolio securities. While this is an advantage they share with other index funds, their tax efficiency is further enhanced because they do not have to sell securities to meet investor redemptions.
- **Market exposure and diversification** – ETF's provide an economical way to rebalance portfolio allocations and to "equitise" cash by investing it quickly. An index ETF inherently provides diversification across an entire index. ETF's offer exposure to a diverse variety of markets, including broad-based indexes, broad-based international and country-specific indexes, industry sector-specific indexes, bond indexes, and commodities.
- **Transparency** – ETF's, whether index funds or actively managed, have transparent portfolios and are priced at frequent intervals throughout the trading day.

### The different types of ETF's

- **Index ETF's**  
Index ETF's are funds that hold securities in an attempt to replicate the performance of a stock market index. This is done

by holding in its portfolio either the entire contents of the respective index or a portion of the contents of the index together with other derivative instruments that will achieve the same level of tracking.

- **Commodity ETF's**

Commodity ETF's invest in commodities, such as precious metals and futures, they are generally like index funds, but track non-securities indexes.

- **Currency ETF's**

These funds track all major currencies.

- **Actively managed ETF's**

Actively managed ETF's are any ETF's that are being actively managed. Active management currently requires full transparency and publishing of the current securities portfolio.

- **Hedge Fund ETF's**

A hedge fund ETF tracks a hedge fund and or follows the activities of a group of hedge funds.

- **Leveraged ETF's**

A leveraged exchange traded fund, or simply leveraged ETF, is a special type of ETF that attempts to achieve returns that are more sensitive to market movements than a non-leveraged ETF.

## Investment strategies

ETF's are well suited to individual and institutional investments strategies. Some of the ways in which the strategies are implemented are detailed below:

- **Asset Allocation**

ETF's enable individual investors to diversify their investments across portfolio baskets at minimal cost, enabling them too conveniently, efficiently and affordably allocate their assets.

- **Cash Management**

Investors typically seek exposure to equity markets, but often need time to make investment decisions. ETF's provide a 'parking place' for cash that is designated for equity investment. Because ETF's are liquid, investors can participate in the market while deciding where else they can achieve their desired

returns.

- **Hedging Risks**

ETF's are excellent hedging vehicles, as these can be borrowed and sold short.

- **Transition Management**

An overriding concern when institutional investors change asset managers is to maintain equity exposure while the transition occurs. An effective method of achieving this goal is to liquidate the portfolio while simultaneously buying ETF's. Once the assets are transitioned, the new manager can redeem the ETF securities to pay for stock purchases.

- **Core-satellite strategy**

This strategy is used to build a cost effective and benchmarked core portfolio based on ETF's. The remaining part of the portfolio (satellites) can be actively managed through investment in selected equities.

## Risks and disadvantages associated with ETF's

Although ETF's can be regarded particularly over the medium to long term as lower risk investments, their asset portfolios still consist primarily of investments in shares or other securities, therefore they do inherently carry the risk associated with trading in any securities exchange. Particular risks thus include; general market risk, interest rate risk, currency risk, liquidity risk and legal and regulatory risks.

An ETF will rise and fall in value according to market changes. As with CIS's and most investment vehicles, ETF's are not capital protected therefore, depending on market movements during the investment period, one is not guaranteed to get back the full investment when cashing it in.

Some of the disadvantages associated with ETF's are as follows:

- As ETF's trade like equities, every time one buys or sells an ETF a trading fee is paid e.g. commission. Depending on how often one trade an ETF, trading fees can quickly add up and reduce investment performance;

- Despite the fact that ETF's contain more than one underlying position it does not mean that it cannot be affected by volatility. The volatility of an ETF will depend on the scope, focus and type of investments it includes;
- The biggest factor in any publicly traded instrument like an ETF is liquidity. If an ETF is thinly traded, there can be problems getting out of the investment, depending on the size of the position in relation to the average trading volume. A sign of an illiquid investment is large spreads between the bid and asking price;
- In some cases, an ETF will distribute capital gains to shareholders. This may not be desirable as shareholders are responsible to pay the capital gains tax;

- Monthly investments into ETF's will be more costly than lump sum investments, due to the additional trading fees associated with monthly investments.

## Conclusion

The ETF industry in South Africa is expected to continue to show exponential growth going forward. However, accompanying this growth, the industry needs to ensure that investors understand the dynamics of these investments and that the highest levels of transparency are maintained in order to ensure that investors fully understand the benefits, risks and disadvantages associated with investing in ETF's.



**Pierre de Villiers**  
 Asset Management Leader  
 Tel: +27 11 797 5368  
 pierre.e.de.villiers@za.pwc.com



**Bryan Ingram**  
 Associated Director in the  
 Financial Services practice  
 Tel: +27 11 797 5730  
 bryan.ingram@za.pwc.com



**Rachel Rapote**  
 Manager in the Financial Services  
 practice  
 Tel: +27 11 797 5874  
 rachel.rapote@za.pwc.com

South Africa has also seen a keen interest from investors in ETF's. The Johannesburg Stock Exchange ("JSE") launched the Satrix 40, only its first ETF in 2000, with more than 25 ETF's being listed to date. South African investors can expect the launch of many new ETF's as new strategies and indices are developed which will no doubt attract huge attention.

# 07 Stress testing – are you stressed enough?



## The global financial crisis has proved to be one of the most ruthless economic downturns the world has ever seen.

The speed at which the crisis evolved and the cross-over effects between financial market movements, credit events and the subsequent liquidity crisis have truly emphasised the interconnection between risk types. This has prompted many banks to reconsider whether their stress testing practices were sufficient prior to the crisis and specifically whether stress testing practices were flexible enough to cope with the rapidly changing circumstances during the crisis.

### An introduction to stress testing

Stress testing is a risk management technique used to evaluate the potential impact of broad macro-economic scenarios and stress events on the financial position of an organisation. More specifically, the aim is to determine the potential impact of specific events on the bank's earnings, liquidity and capital to enable management to evaluate the bank's strategy and remedial actions.

Stress testing is also promoted by supervisors through the Basel II capital adequacy framework as it provides a complimentary risk perspective to other risk management tools and in many cases the outcomes for a particular portfolio can provide insights about the validity of the assumptions underlying more complex statistical risk models or the historical data upon which these analyses are based.

### An integrated approach to stress testing

Stress testing at a bank level should highlight vulnerabilities the bank may face due to extreme but plausible scenarios. Included in the definition of stress scenarios are adverse macro-economic scenarios over a specific time horizon and market or bank specific events.

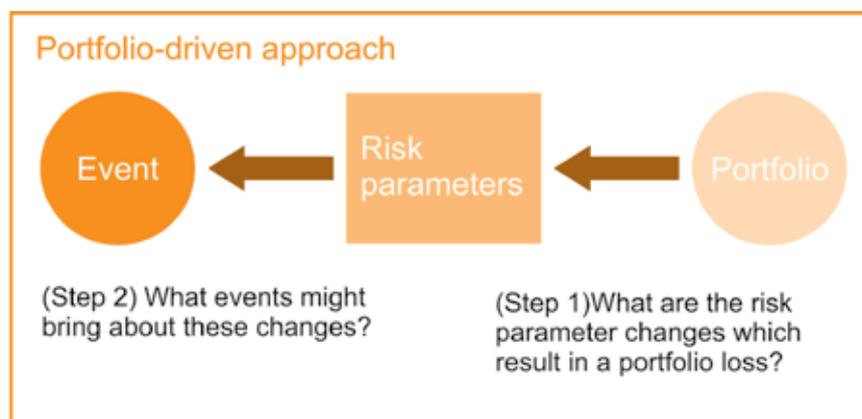
The involvement of the Board and senior management is critical to ensure the appropriate use of stress testing in bank risk management and capital planning. There needs to be sufficient internal debate and challenge of assumptions, especially those related to liquidity.

Multi-disciplinary involvement from business, finance and risk is required to determine which specific events to incorporate in the stress test. Prior to the recent financial crisis, many stakeholders outside the risk function were not sufficiently involved in the scenario development process and therefore considered the stress scenarios implausible.

The financial crisis played a significant role in ensuring full participation of stakeholders. An integrated approach to stress testing also ensures that stress scenarios are applied across various risk types.

Financial budgets and forecasts are key inputs to the process. These financial forecasts are stressed based on a house view of potential future economic scenarios, ranging from a base case economic view to severe but plausible stressed economic conditions. Specific events are then incorporated to determine the combined impact of economic scenarios and stress events. Event scenarios could be based on historical- or hypothetical events but the potential impact must be severe to inform meaningful decision taking by senior management and the Board.

Scenarios can be constructed using different approaches as illustrated on the following page.



Whether one chooses an event driven approach or a portfolio driven approach the principles underlying sound stress testing remains the same. Ultimately the scenarios need to be extreme but plausible and include all the risks and effects that may affect the portfolio adversely. The scenarios need to be credible and should be supported by business and senior management.

Finally, an integrated framework requires adequate documentation of stress tests particularly around the assumptions and fundamental elements of the stress tests. This also includes the reasoning and judgements underlying the tests. Most underestimation in the stress testing results can be ascribed to inappropriate assumptions or assumptions that have not been thought through sufficiently.

### Lessons learnt from recent financial crisis

The results of stress testing performed before the crisis underestimated the depth of the crisis in many respects. Weaknesses in the stress testing processes

and infrastructure compounded these effects significantly. Weaknesses were not only identified in methodology and scenario selection, but also in the use of stress tests and the integration of risk governance and infrastructure.

As noted above, successful stress testing ensures that results are integrated across risk types and business lines. This contrasts sharply with the typical risk management organisation structure. Risk management functions are often organised by business line and within the business line by risk type. Prior to the financial crisis, stress tests were mostly carried out by these separate units with a specific focus on their business line. Integration of stress test results across risk type and business line were, therefore, limited.

Due to the organisational structure most banks are challenged by weaknesses in their infrastructure, which also limits their ability to identify, analyse and aggregate exposures across the bank. This was painfully obvious when the business environment changed rapidly and adjustments to stress

tests were required almost overnight in order to cope with the new developments.

The challenge today is to develop an integrated stress testing framework that fulfils a range of requirements through the execution of stress testing at multiple levels of the organisation that promotes risk identification and control. It should provide complimentary risk perspectives to other risk management tools and enhance capital and liquidity management. In particular stress testing frameworks should ensure that actions can be agreed to mitigate the risks arising from stress events.

Banks manage their risks mostly on a risk type basis (credit, market and operational) and often have these risk type functions within business units, largely because these risks are often based on different assumptions. In market risk a full profit and loss distribution is generated, whilst in credit risk, loss distributions are modelled.

Although this ensures appropriate focus on each risk, it could lead to weaknesses when identifying areas

where there may be interaction between credit and market risk and where simple aggregation cannot be deemed to be conservative. In addition, the effects of simultaneous pressure in funding and asset markets and the effect of that on exposure valuation should be carefully considered.

### Stress testing results influence management action on multiple levels

As we have already noted, the purpose of stress testing is to inform pro-active decision taking by senior management and the board of directors. Potential management actions could be categorised under business, hedging or capital strategies. Business strategy changes could include changes in credit origination strategies, pricing amendments or increased diversification. Hedging strategies could include market hedges and credit insurance.

Capital strategies range from changes in dividend policies, accessing the capital markets, optimising the capital allocation across the business or reducing risk weighted assets.

The most appropriate remedial action will, however, be influenced

by the severity of the stress event, the speed with which it evolves, potential costs and the reputational impact of remedial actions.

### Successful stress testing principles

Summarised below are some factors that could enhance the credibility of the stress testing process:

- Tests should be based on accurate and granular data, supported by a flexible infrastructure to conduct stress testing. The flexibility should be evident in the data structures and granularity of data to enable the banks to aggregate exposures to certain risk factors across the bank, to perform more rigorous testing on particular portfolios on an ad hoc basis as required;
- The stress testing methodologies should be well-documented and areas of judgement should be well articulated;
- Ensure adequate expert input that not only involves reviewing and questioning the plausibility and completeness of scenarios, but also focuses on identifying portfolios where the interaction between various risk types could lead to adverse results;

- Management should be able to perform the stress tests quickly and efficiently on an ad hoc basis. In addition, stress tests should be flexible enough to cater for changes in market conditions or specific events; and
- The potential remedial actions should be actionable.

The most important action following the results of stress testing is to use this information at an executive level to design and agree action plans to mitigate the effects of such events, should such an event occur. As a result, the involvement of the board of directors and senior management is critical to ensure the appropriate use of stress testing in bank risk management and capital planning. There needs to be sufficient internal debate and challenge of assumptions, especially those related to liquidity.

Banks that were highly exposed to the financial crisis and still managed to fare comparatively well, had senior management that took an active interest in the development and results of stress testing practices. In these organisations, stress testing results supported informed strategic decision taking, which assisted the bank in its capital and crisis management processes.



**Ina de Vry**  
Director in Advisory Financial Risk Services practice  
Tel: +27 11 797 4036  
ina.de.vry@za.pwc.com



**Keith Ackerman**  
Director in the Financial Services practice  
Tel: +27 11 797 5205  
keith.ackerman@za.pwc.com

# 08 Systems Automation in the SA Insurance Industry



South African insurers have made significant investments in their systems over the past few years in order to automate processes and consolidate legacy systems into a single platform. Some of these insurers have invested in customised vendor packages, whereas others have gone the route of developing their own systems.

To determine how much progress has been made in this regard over the last three years, PwC performed an assessment and review on over 40 systems of 18 SA insurers – both short and long term - regarding their level of automation.

The ratings used in this study were as follows, with zero being least automated and 4 being most automated:

| Rating | Observation  |
|--------|--|
| 0      | Process is completely manual with no system intervention.  |
| 1      | Spreadsheets are used for storing/ processing data or performing calculations.   |
| 2      | The process is performed by the system but extensive override occurs – this includes changing data directly on the database, overriding calculated values, or bypassing mandatory processes. The system does not enforce sign-off for overrides. |
| 3      | The process is performed by the system and only limited override occurs, which includes switching to alternative calculations or rules. Specified approval is required before the override comes into effect.                                    |
| 4      | The specific process is completely automated.  |

The following key processes were assessed, using 172 key functionalities:

- New business
- Policy maintenance
- Underwriting
- Reinsurance
- Premiums and collections
- Claims/ provider payments
- Commissions and broker management.

Each of the above key processes was classified into the following four areas of automation:

- Record keeping (such as audit trails and transaction history)
- Authorisation and review
- Calculations
- Product and business rules and data validations.

### Results – short-term insurance industry

The study found that some insurers have made significant improvements to their information technology, such as completely changing their databases and operating system platforms. The direct insurers appear to have automated their processes more so than indirect insurers, with the indirect operators tending to place more reliance on the systems of brokers.

**Diagram 1**

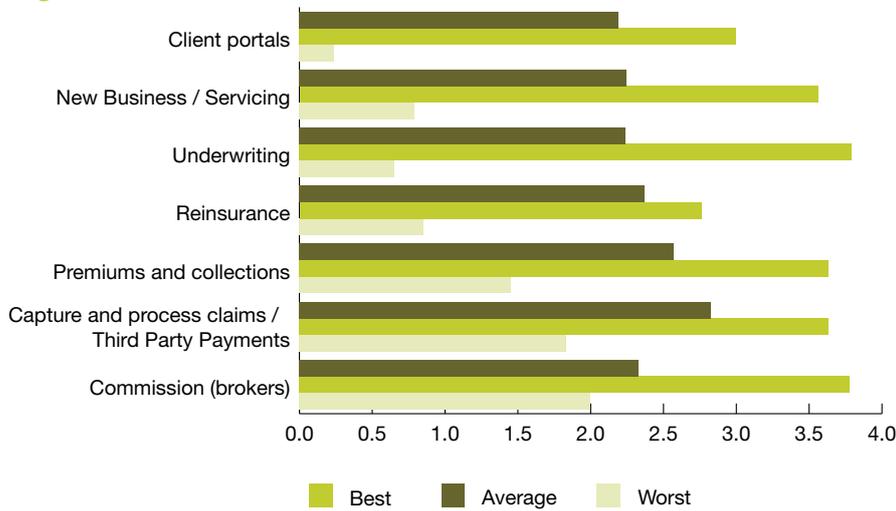


Diagram 1 (Key Processes) illustrates the level of automation found in the short-term insurance industry, on the 0 to 4 scale.

The automation of the bordereaux process (the list of premiums payable and claims paid or due) seems to be a significantly challenging issue. Insurers allow brokers to use their own policy administration systems to process premium collections and low value claims, and calculate commissions.

Processes at direct insurers are generally more automated than indirect insurers. Underwriting data stored by direct insurers is used more in assessing price risk associated with customers.

In general, motor insurance product rules are more automated, followed by household insurance. Salvage and recovery processes are not adequately automated.

Several systems shortcomings remain and these include:

- Low levels of automation – which can lead to ineffective pricing, underwriting, credit control, claims management and reinsurance recoveries.
- Bypassing underwriting processes - this may result in unprofitable new business being accepted.

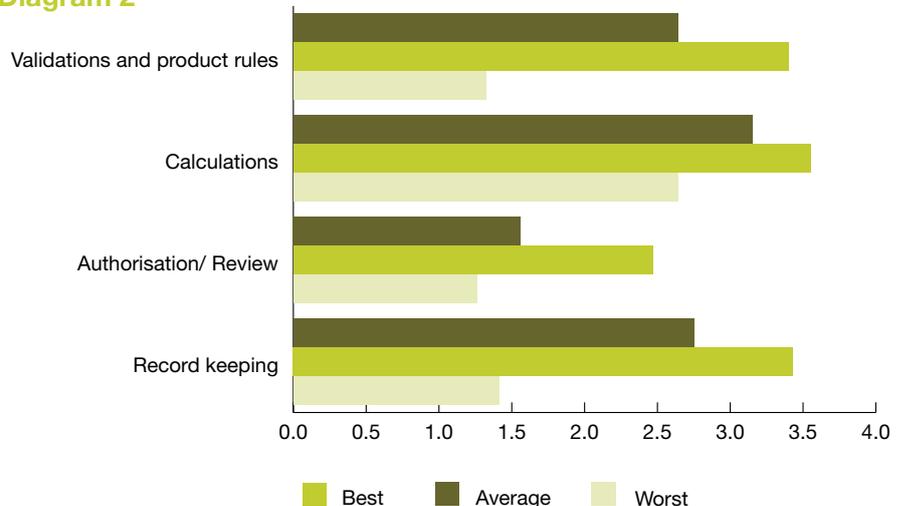
- Non-compliance with terms of reinsurance contracts and treaty rules for high risk policies – which may result in shortfalls on premium collections or claims recoveries.
- Ineffective collection methods - which could result in a high level of policy cancellations and lapses.
- Inadequate operational and management information relating to facultative (unusually large specific risks) reinsurance.
- Inadequate record keeping regarding broker contracts and commissions payable.
- Inadequate management information - which makes it difficult to monitor broker and product performance.

- Inadequate claims management – this could lead to strained customer relations and fraud.
- High volume of data fixes due to weak validations by front-end applications.
- Limited change control processes and data integrity management in actuarial spreadsheets - this could mean incorrect reserve or actuarial value calculations.
- Ineffective call centre and quote processes and procedures - which could strain broker and customer relations.
- Staff incentive schemes are not maintained by the system – problematic integrity issues have been identified.

Diagram 2 (Area of Automation) illustrates that on average, short-term insurers are maintaining good records, and that calculations and product rules are embedded into their systems.

Segregation of duties within systems in the short-term insurance industry is generally weak. Premium refunds and low value claim payouts are

**Diagram 2**



often not subject to secondary review, and internal fraud relates mostly to these areas.

Not all indirect insurers maintain detailed records of collections and commissions.

Not surprisingly, there was a direct correlation between the level of automation and the strength of internal controls.

### The way forward

Short-term insurers are expected to significantly increase their levels of automation over the next three years. They will need to put specific focus on the following areas:

- Legislative requirements will mean that rules and regulations must be embedded into processes.
- Increasing industry competition will mean more reliable data is required so that products can be priced more competitively.
- As the customer experience becomes increasingly important, the underwriting, pricing and claims processes will need to be increasingly automated.
- Customer and broker portals will become focus areas in order to more effectively quote, serve and resolve claims, and better manage the distribution channel.
- Online business, including online payments, should expand.
- Salvage and asset recovery processes will be automated
- Business-to-business interaction will become a necessity. Integration with third party business systems - such as

e-Natis, brokers, salvage agents, providers, suppliers and reinsurers – will be essential.

- Management information requirements will increase to enable the more effective evaluation of underwriting performance, profitability of reinsurance contracts, capital adequacy requirements and broker performance, and to better identify trends in external fraudulent activities.

### Results – long-term insurance industry

Most long-term insurers were found to have made significant information technology investments, either changing or considering changing their platforms. In general this sub-sector has a high level of automation, with the exception of reinsurance processes which are mostly manual.

Diagram 3 (Key Processes) illustrates the level of automation found in the long-term insurance industry.

Manual intervention in the collection process has resulted in some insurers double-billing clients. Refunds are then required.

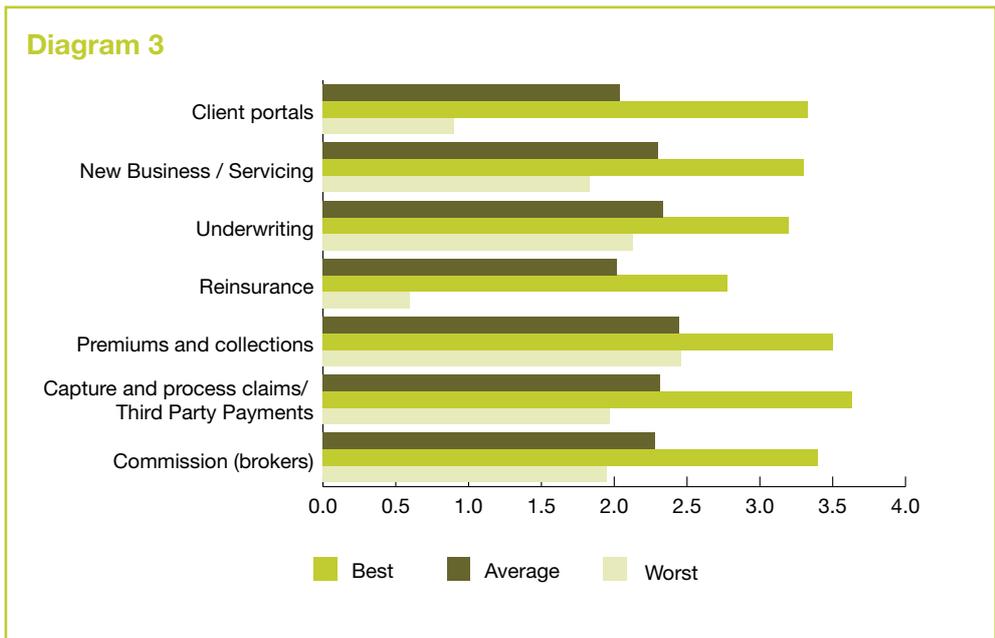
Business rules on funeral type products are the most automated, with group benefit products being the least automated.

Customer and self service portals are underutilised, which means that expensive help desk facilities are required.

Commissions, collections and claims processes in general are well automated, although workflow does not always link with the policy administration system.

The most common problem areas found in the long-term insurers were:

- High administration costs - resulting from administrative staff processing changes to policy details, and having to follow up on outstanding or outdated information.



- Missing contract/ medical details - due to workflow not being linked to the policy administration system.
- Bypassing of underwriting rules by accepting business at discounted prices or taking on additional risk.
- Manual reinsurance processes which affect reinsurance collections and recoveries.
- Data integrity issues due to back-end system changes to policy contract details.
- Over-collection of premiums if collection runs are not adequately automated - which means policyholders need to be refunded.
- Overrides on discounts and refunds - which leads to fraudulent payments.
- Limited control over unallocated cash - which may lead to fraud.
- Overriding product rules when paying claims - which may lead to fraud or incorrect payments.
- Non-compliance with rules and regulations, as these are not embedded into systems and processes – for example, FAIS, VAT, FICA, commission rules, policy holder protection rules.
- Duplication of systems and inefficient use of scarce IT resources, due to common processes not being managed as a shared service centre.
- Broker and claims fraud going undetected due to inadequate record keeping, especially on group / corporate business.

- Low level of data integrity due to product rules and calculations not being embedded into the system, and outdated policyholder information on record.
- Policy movement data (new business, renewals, cancellations, surrenders, claims, maturities etc) not being adequately recorded by the policy administration system.
- Product launches often delayed due to limited system flexibility and significant code change requirements.

Diagram 4 (Area of Automation) for long term insurers illustrates similar trends to Diagram 2 for the short term insurers.

Although product rules are embedded into the system, there are a number of insurers that perform large volumes of back-end changes directly on the database.

Reinsurance calculations occur on spreadsheets.

Policy history and audit trails are generally well maintained.

### The way forward

Long-term insurers are expected to consolidate their systems and increase the level of automation for their group benefit products. Although significant systems investment was made over the last three years, further investment is required in order to achieve efficiencies and reduce cost per policy.

The following areas will require specific focus from the long-term groups:

- Legislative requirements will mean that rules and regulations must be embedded into processes.



- Some insurers will introduce self-service portals to manage the administrative burden on group benefit products such as collections, updating member details, monthly declarations, benefit switches etc.
- The complexity of some reinsurance contracts will require automation of underwriting, collections and claims recovery, to ensure compliance with reinsurance contracts and to minimise recovery risk.
- Asset price volatility has necessitated the automation of the bank reconciliation process. Reconciling differences may leave insurers with open positions if cash is not invested in accordance with policy stipulations.
- Due to the complexity of legislation and the importance of the client mandate compliance process, compliance monitoring tools should be implemented to track compliance on a regular basis regarding investment and retirement products.
- Recent impairments and investment performance, complexities in the valuation of securities, and the calculation of capital gains tax, will require regular business-to-business interface with asset managers.
- The workflow, actuarial, general ledger and electronic payment processes will all become more integrated with the policy administration system.
- Management information requirements will mean long term insurers should have up to date, readily available information on investments held, customer service, cash flows and capital adequacy requirements.



**Hennie Jansen van Rensburg**  
 Director in the Advisory practice  
 Tel: +27 11 797 5728  
[hendrik.jansen.van.rensburg@za.pwc.com](mailto:hendrik.jansen.van.rensburg@za.pwc.com)

# 09 Contacts

The leadership of our Financial Services practice for Southern Africa would be pleased to hear from you.

Financial Services; and  
Banking and Capital Markets Leader:  
Tom Winterboer

Telephone: +27 11 797 5407;  
E-mail: tom.winterboer@za.pwc.com

Insurance Leader: Victor Muguto

Telephone: +27 11 797 5372;  
E-mail: victor.muguto@za.pwc.com

Retirement Funds Leader: Gert Kapp

Telephone: +27 12 429 0059;  
E-mail: gert.kapp@za.pwc.com

Asset Management Leader: Pierre de Villiers

Telephone: +27 11 797 5368;  
E-mail: pierre.e.de.villiers@za.pwc.com

Zimbabwe: Clive Mukondiwa

Telephone: +263 43 383 628;  
E-mail: clive.k.mukondiwa@zw.pwc.com

Namibia: Louis van der Riet

Telephone: +264 61 284 1018;  
E-mail: louis.van.der.riet@na.pwc.com

Botswana: Rudi Binedell

Telephone: +267 395 2011;  
E-mail: rudi.binedell@bw.pwc.com

Swaziland: Paul Lewis

Telephone: +268 404 3143;  
E-mail: lewis.paul@sz.pwc.com

Mozambique: Rob Walker

Telephone: +258 21 307 620;  
E-mail: robert.david.walker@mz.pwc.com

Actuarial and Insurance Management Solutions  
(AIMS) Leader: Mark Claassen

Telephone: +27 21 529 2521;  
E-mail: mark.claassen@za.pwc.com

Western Cape Financial Services Leader:  
Hennie Nel

Telephone: +27 21 529 2118;  
E-mail: hennie.nel@za.pwc.com

Tax Services: Louis le Grange

Telephone: +27 11 797 4263;  
E-mail: louis.le.grange@za.pwc.com

Advisory Services: Ernst Maritz

Telephone: +27 21 529 2002;  
E-mail: ernst.maritz@za.pwc.com

This journal has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this journal without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this journal, and, to the extent permitted by law, PricewaterhouseCoopers Inc, its members, employees and agents do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this journal or for any decision based on it.

© 2009 PricewaterhouseCoopers Inc. All rights reserved. 'PricewaterhouseCoopers' refers to PricewaterhouseCoopers Inc or, as the context requires, the PricewaterhouseCoopers global network or other member firms of the network, each of which is a separate and independent legal entity. PricewaterhouseCoopers Inc is an authorised financial services provider.

