Waves of change

The shifting insurance landscape in rapid-growth markets



|||Iu-

Contents

1 Introduction

2 Executive summary

6 A new lens on insurance market growth

12 Identifying opportunities

18 Regulatory trends affecting insurance in RGMs

22 Risks and volatility for insurers in RGMs

32 Conclusion: riding the wave of growth

Introduction

Globalization is driving business for today's insurance executive. Opportunities for global expansion into new markets represent a powerful force accelerating the growth in insurance premiums today – especially as economic performance languishes in much of the developed world. As a result, we believe that insurance executives must regularly evaluate and refresh their strategies to identify which international markets are most likely to offer the best prospects for focus and investment.

As regional markets around the world become more interconnected and complex, however, understanding how best to optimize the balance between opportunities and risks in individual countries remains a significant challenge. Even in a world linked closer together by macroeconomic trends, mobile phones and the internet, regulatory and cultural differences persist, and even nations that share a common border may diverge markedly when it comes to future risk.

To help executives better understand the rebalancing now taking place across the insurance landscape in rapid-growth markets, we have developed this report to highlight future growth opportunities in specific countries around the globe. Our analysis focuses on key markets, regulatory trends and new marketing innovations, and seeks to offer perspective on potential market risks.

While some large economies, such as the BRICs (Brazil, Russia, India and China), appear to have entered a period of slower growth, the overall contribution of rapid-growth markets to insurance premium growth will continue to be very significant. That makes it ever more important for global insurance executives to consider markets that might not previously have attracted their attention, especially as new waves of liberalization and rapid consumer adoption of new technologies open additional markets to foreign firms.

This shifting insurance landscape presents significant opportunities for international growth. We hope this informative report will help guide you as you consider expansion strategies in new emerging markets over the next two to three years.



Shaun Crawford

EY Global Insurance Leader

Published in collaboration with 0 X F 0 R D E C 0 N 0 M I C S

Executive summary

For insurance executives, the opportunities and risks within rapid growth markets (RGMs) have become much more complex. For insurance executives, the opportunities and risks within rapid-growth markets (RGMs) have become much more complex. While the share of global premiums generated in emerging markets will continue to increase – and financial sectors in many RGMs are now healthier than those of developed markets – a global rebalancing is also taking shape. Once-flourishing BRIC economies Brazil and India are now expanding at a slower pace, the US is rebounding, and the UK and the Eurozone are at last rising from their doldrums. (For further discussion, see *EY Rapid Growth Markets Forecast, October 2013.*) At the same time, a cluster of emerging markets, such as Malaysia, Indonesia, Mexico and Turkey, are making regulatory changes that could produce significant opportunities.

These shifts are causing insurance executives to reassess their strategies to determine which RGMs represent the most attractive investment options. To help navigate this rapidly evolving landscape, EY has created a matrix that analyzes the risks and opportunities for insurance firms across 21 RGMs. Our study identifies the following RGMs as particularly attractive for insurance investment:

- Turkey offers a greater level of opportunity than any other RGM in the study but also poses substantial risks. An economic downturn cannot be ruled out. While political turmoil has cooled in recent months, tensions could return. In addition, markets for some lines of coverage are relatively mature.
- Indonesia also offers an extremely strong economic growth picture – second only to China and Vietnam in our forecasts. However, it is challenging to obtain licenses, so acquisition is the main entry route.
- China, despite a recent slowdown in growth rate, continues to boast extraordinary income growth that spurs auto and home ownership. In addition, an aging population will drive the development of the life and health markets. However, market entry remains difficult for foreign firms.
- Malaysia offers an attractive mix of demographics and strong economic growth, and has become a base for the development of takaful, sharia-compliant insurance.
- Hong Kong (a special administrative region of China) ranks low for opportunity but presents less risk than any other market in our study. Hong Kong can also serve as a trade route into the rest of Asia.
- The United Arab Emirates (UAE) has become the fastest-growing insurance market among the Gulf States, with a CAGR of 17% over the past six years. Regulatory changes may create greater opportunity for expansion of takaful products.

Our analysis does not merely focus on markets with the highest opportunity and lowest risk but provides a more nuanced picture of the shifting landscape. Depending on a firm's appetite for risk, a second tier of RGMs also shows considerable promise:

- **Brazil** remains an important opportunity, though slowing growth rates have revealed festering economic risks. Following a program of liberalization, Brazil is the most accessible of the BRICs for foreign insurance companies. Brazil's key advantage is scale: of the markets in our study, it has the third-largest forecast growth in insurance premiums in US dollar terms, following China and India. Moreover, as EY's 2014 Latin America insurance outlook notes, record new car sales are propelling robust growth for automobile lines.¹
- **South Africa** follows Brazil with the fourth-largest absolute growth in insurance premiums. In addition to scale, South Africa may be a good trade route into sub-Saharan Africa, as South African companies have been among the most successful in penetrating other African markets.
- **Vietnam** has become one of the most exciting RGM opportunities. Its income growth and premium growth rates (when considered in percentage terms) place it among the top two markets we assessed. But investors face significant corruption and sovereign risks when entering Vietnam.
- Mexico has undergone a program of extensive liberalization, opening its market to foreign insurers. On some measures, Mexico is the most open insurance market in our study. Yet the pace and unpredictability of regulatory change can be risky for investors.
- India's opportunity is impossible to ignore, given that it is second only to China in terms of absolute forecast growth in insurance premiums. Yet, the regulatory environment has proved extremely challenging for investors. In addition, a large current-account deficit and reliance on portfoliocapital inflows elevate liquidity risks.

Our analysis suggests that while investment in RGMs will continue to be vital for global insurance firms, outsized returns will not come easily. Companies that carefully tailor products and develop market-entry strategies suited to particular economies and their cultures will see the greatest rewards.

How this report is organized

Our report is divided into five sections:

A new lens on insurance market growth

Here we present our matrix, which ranks opportunities and risks in 21 RGMs on the basis of market opportunities, risk and volatility.

Identifying opportunities

- An analysis of the key opportunities arising across RGMs, including rapidly evolving distribution channels, insurance product innovation and converging customer trends.
- **Regulatory trends affecting** insurance in RGMs

These include new rules around reporting, solvency and capital requirements.

Risks and volatility for insurers in RGMs

An analysis of key risks that can affect insurance markets across these markets, including vulnerability to stock market volatility and exchange rate shocks following the end of quantitative easing.

Riding the wave of growth

Calls to action for globally focused insurance executives.

About this study

This report includes an analysis of 21 RGMs. References to RGMs pertain specifically to the following:



Developed vs emerging economies

For purposes of this study, developed (or "advanced") markets include the US, Canada, Western Europe (excluding Turkey), Israel, Oceania, Japan and the other advanced Asian economies (Hong Kong, Singapore, South Korea and Taiwan). Emerging economies conform to the definition used by the IMF ("emerging and developing" economies).

A new lens on insurance market growth

For most of the past decade, focusing on the BRICs seemed a simple strategy for insurance companies seeking to expand their business in RGMs. For most of the past decade, focusing on the BRICs seemed a simple strategy for insurance companies seeking to expand their business in RGMs. In 2007, the average growth of these four economies was 9.6%.

Today, however, growth in the BRIC economies has slowed markedly, especially in Brazil and India. According to recent forecasts from Oxford Economics, the average growth rate of real GDP in the BRICs was 4.3% in 2012, and that rate is expected to rebound only modestly, to about 5.6%, between now and 2018. Growth in other RGMs will be affected by this deceleration.

Nevertheless, significant opportunities persist across the range of RGMs. Assessing the potential of each market demands an analysis of the growth opportunities, as well as the latent risks within each individual economy. We have developed the matrix below to rank and segment the insurance sectors in 21 RGMs. We also explore four important "waves of change" that insurance executives should consider when creating investment priorities in RGMs.

As the matrix below illustrates, countries such as China, the United Arab Emirates, Thailand, Malaysia and Mexico offer intriguing near-term growth potential, with modest risk. Nations such as Turkey and Indonesia offer even higher growth potential but also exhibit greater risks.



Figure 1: Matrix of opportunity and risk for insurance investments

Note: The scales for each indicator are adjusted so that "O" is worst and "100" is best. The size of each bubble represents the amount of premiums written in 2012 – an indicator of market opportunity. The BRICs are colored yellow to distinguish them from the RGMs and to not obscure the markets that lie behind or overlap them.

China merits the highest risk-adjusted opportunity ranking, largely because of its immense scale. Rapid growth in income and in home and auto ownership, combined with an aging population and government support for the insurance sector, is generating substantial prospects for insurance growth. However, foreign insurers still face significant investment restrictions, making entering and operating in this market challenging.

Malaysia and the United Arab Emirates are both Islamic nations where rising incomes, a sustained construction boom and the increased adoption of sharia-compliant insurance products are creating new opportunities. Saudi Arabia's adoption of a health insurance system and the increasing sales of both conventional and sharia-compliant insurance policies are also expected to boost the insurance sector.

As our rankings illustrate, there are always trade-offs between opportunities and risks. Chile offers a favorable mix of opportunity and risk, albeit on a much smaller scale, because of its strengthening insurance sector and investor-protection regulations. Although Hong Kong ranks lower for opportunity, it is also less risky than any other RGM; an aging population should spur growth in savings-type products such as annuities.

Turkey offers a higher level of opportunity than any other RGM in the study but, at the same time, it also presents significant risks because of its large external deficit and political instability. As with China, the Turkish Government is determined to grow the insurance sector and offers a supportive policy environment. Yet, Turkey's exposure to Greece and the wider Eurozone crisis, as well as its dependence on international capital flows, means the risk of a significant economic downturn cannot be ruled out.

Colombia is also notable as a market that ranks relatively high in opportunity and only moderately on the risk scale. Despite low interest rates, the insurance market there has expanded at greater than 10% annually over the past four years and offers high growth potential because of relatively low insurance penetration. Significant regulatory liberalization that took effect in 2013 has also created new opportunities for foreign firms.

Building the matrix

The ranking matrix developed in this report plots 21 RGMs based on an analysis of their potential risk and opportunity. It is designed to help insurance executives weigh the opportunities against the risks of doing business in individual economies, and the analysis reflects a variety of indicators and forecasts.

These include the following:

- Insurance premium growth. We used a model to forecast insurance market premium growth, drawing on historical data on insurance penetration, including underlying economic growth rates, income per capita, automobile ownership, share prices and demographic factors, such as the rate of population aging.
- Regulatory change. We analyzed multiple regulatory factors that can affect insurance market growth, including pension policies, health policies, tax policies and insurance-sector regulation.
- Macroeconomic volatility. We assessed the impact of macroeconomic shifts on insurance premium growth, including private consumption, income and unemployment.
- Liquidity risks. Shifts in liquidity and currentaccount positions can affect the availability of capital, as well as exchange and interest rates. The tapering of quantitative easing expected to begin in 2014 will reduce global liquidity and is likely to hurt balance of payments in some emerging economies.
- Corruption risk. Corruption can expose insurers to fraud-related losses. To represent broader risks in the business environment, the Corruption Perceptions score assigned by Transparency International, based on multiple surveys, was collated for each RGM in the study.

We then assigned each market two scores: one for opportunity, determined by the degree to which regulatory, demographic and economic factors are expected to accelerate growth in that insurance market over the next two to three years; and another for risk, based on the extent to which macroeconomic issues, liquidity and corruption risks may cause problems for insurance firms.

Figure 2: Market ranking by highest opportunity and lowest risk

Opportunity		Risk	Risk	
Market	Score	Market	Score	
Turkey	92.49	Hong Kong	6.78	
Indonesia	81.19	United Arab Emirates	23.16	
China	70.90	Chile	23.77	
Colombia	66.39	China	33.63	
Russia	63.89	Saudi Arabia	35.11	
Malaysia	62.57	Malaysia	35.96	
Vietnam	62.50	Czech Republic	40.56	
Mexico	62.08	Thailand	44.62	
United Arab Emirates	57.47	Могоссо	50.07	
Brazil	57.45	Poland	51.62	
India	57.25	Mexico	52.04	
Morocco	56.15	Colombia	54.13	
Thailand	54.86	South Africa	54.68	
Chile	52.21	Brazil	57.22	
Czech Republic	49.92	India	58.39	
Saudi Arabia	47.29	Turkey	59.57	
Nigeria	44.44	Indonesia	59.72	
South Africa	41.30	Vietnam	63.90	
Poland	35.35	Russia	65.25	
Hong Kong	34.72	Kenya	74.08	
Kenya	12.50	Nigeria	74.77	

Key factors influencing market selection

When investing in RGMs, insurance executives will want to carefully consider four important waves of change:

1. The speed of regulatory change.

Some RGMs, such as South Africa and Mexico, are moving quickly to adopt new insurance regulations and may surpass advanced economies in the stringency of their risk-based regulation or consumer protection requirements.

2. Customer adoption of insurance products.

The rise of social media and the growing popularity of overseas educational experiences are among the forces breaking down traditional barriers to insurance penetration. Many markets where traditional cultures tended to limit adoption of insurance products, such as Vietnam and Saudi Arabia, are now experiencing rapid premium growth.

3. Government fiscal policy.

Offering tax incentives for insurance products can significantly affect how customers choose savings and pension services. At the same time, a lack of confidence in public pension and welfare schemes can encourage adoption of private insurance alternatives.

4. Government attitude.

In most RGMs, the government considers the insurance sector "strategic". This is in part because of the crucial role insurance plays in facilitating savings, investment and entrepreneurship. Understanding the government's goals for the sector's long-term development is therefore crucial. Some governments will focus on the potential growth benefits of insurance development and seek as much foreign expertise as possible in developing the insurance sector. Others will wish to have the insurance market dominated by domestic companies over the long term.

Prospects for future growth

Insurance executives actively weighing investments in new markets today will also want to consider future growth prospects. While it is difficult to predict how governance, market volatility and sovereign risk will change in individual countries over the medium term, the chart below illustrates the projected economic growth in RGMs through 2020. Our projections indicate a significant renaissance in Brazil and slowdowns in Indonesia, Malaysia and the United Arab Emirates. These forecasts also reinforce the view that China will continue to play an outsized role in driving premium growth in international markets.

Insurance executives actively weighing investments in new markets today will also want to consider future growth prospects.



Figure 3: Economic and premium growth forecasts for the RGMs, 2020

Identifying opportunities

Even as the global economic outlook becomes more nuanced, one unassailable fact about RGMs remains: they will account for an increasing percentage of global economic output and a greater share of global insurance premiums. Even as the global economic outlook becomes more nuanced, one unassailable fact about RGMs remains: they will account for an increasing percentage of global economic output and a greater share of global insurance premiums. This section highlights four key developments:

- The improved outlook for financial stability in many of these markets
- The development of new distribution systems to drive growth
- The evolution of new product innovations across many RGMs
- Converging consumer trends that will create new insurance demands

Financial-sector stability in some RGMs exceeds that of some developed markets

Markets most affected: South Africa, Turkey, Thailand, Poland

Between 2001 and 2011, insurance premiums grew by an average of 11% per year across all emerging markets, compared with a scant 1.3% per year in the developed economies. As a consequence, the emerging-market share of global insurance premiums rose from 5% to 14% in life and from 7% to 16% in non-life over the same period.² According to SwissRe, premiums grew 6.8% in emerging markets in 2012, compared with only 1.7% in the advanced markets.³

Healthy capital markets tend to encourage the growth of insurance markets and foster new product development. In the years following the financial crisis of 2008-09, the average stability of the financial sectors in the 21 RGMs began to exceed the developed market average (see Figure 4), generating new opportunities. For example, the recent growth of credit-related life products in Russia has been bolstered by the expansion of consumer loans.⁴ A similar phenomenon has occurred in Latin America.⁵ Meanwhile, a recovery in India's capital markets is likely to boost unit-linked products and pension sales.⁶

Figure 4: Short-term economic and premium growth forecasts for the RGMs





Figure 5: Financial sectors are now healthier in RGMs than in developed markets

Figure 6: Protection of investors' rights is improving in RGMs



All across Asia, the global financial crisis generated widespread interest in pension reform. Governments are now seeking value for money, focusing on fees and efficiency, and revising social welfare and pension systems.⁷ These revisions, along with continued growth in many of these economies, are likely to create opportunities for global insurers.

Protecting investor rights is another area where RGMs may soon overtake developed markets. Colombia, for example, has tightened capital markets regulations in recent years and has moved ahead of the developed-market average (see Figure 5).

Moreover, while perceptions of corruption have increased in many developed markets in recent years, some RGMs have seen a reduction. Of the RGMs covered in the study, Poland and Turkey have improved particularly rapidly in their control of corruption, with Poland nearing the developedmarket average.

New distribution channels drive growth

Markets most affected: Malaysia, China, Mexico

Domestic insurance companies, traditionally, have controlled markets in emerging economies, but the recent promotion of banks as an important sales channel for insurance products offers fresh opportunities for foreign insurance firms to gain



new footholds. In emerging economies, bancassurance - a

Other innovative channels for distribution are also taking hold. In Chile, retail stores have increased their share of insurance sales to 10.1% in 2008 from 3.8% in 2001.¹¹ Affinity groups, such as utility companies, are also being used by insurers to sell policies in RGMs. In Latin America, for instance, new entrants are expanding their distribution channels by using travel agents to sell travel insurance.¹²

Of course, digital channels – including mobile devices and social networks – are becoming critical for insurance providers. Our recent report, *Insurance in a digital world: the time is now*, ¹³ analyzed the need for insurance firms to gain greater



Figure 7: Bank penetration in RGMs is rising rapidly

digital skills and outlined the exponential growth expected in mobile and tablet use. Mobility alone is driving the rapid expansion of insurance opportunities in RGMs that might previously have been considered unattractive. As there is evidence that insurers often lag behind others in their adoption of digital technologies, firms should explicitly evaluate their digital strategies for RGMs as they ponder global expansion.¹⁴ As EY's *2014 Asia-Pacific insurance outlook* notes, online insurance sales in India grew approximately 70% in 2013 over the previous year.¹⁵

RGMs pioneer micro-payments and other product innovations

Markets most affected: India, Brazil, Mexico, Malaysia, Indonesia

RGMs are hotbeds for insurance product innovation, as insurance firms retool their offerings to meet new market needs. Micro-insurance represents perhaps the most exciting area of product development: the total value of the global micro-insurance market now exceeds US\$40 billion, according to SwissRe. In Brazil, insurers have created automobile policies for older cars that offer smaller amounts of coverage along with a higher deductible, as well as one-month, thirdparty liability automobile insurance plans that buyers can activate using their mobile phones.¹⁶ Micro-insurance in Brazil is promoted by a simplified product approval process, and insurance firms can collect premiums via prepaid and electronic debit cards.¹⁷

Index-based weather insurance represents another area of product innovation in RGMs. In India and Mexico, policies have been developed that pay out when levels of rainfall or temperatures deviate from climatology standards. In India, this market is growing with the support of global reinsurers and government subsidies.¹⁸

Takaful, or sharia-compliant insurance, represents another area of innovation and growth. Takaful products have become significant in Malaysia and Indonesia, as explained in our recent report, *Global Islamic insurance industry insights*.¹⁹ Malaysia is the biggest takaful market worldwide, with total contributions (the equivalent of premiums) estimated at US\$1 billion in 2010. However, even in Malaysia, the market penetration of takaful is only 10%, compared to 40% for conventional life insurance.²⁰ Internet sales of takaful are also increasing in the UAE, where policy sales have shown consistent growth.

Converging consumer trends foster new insurance needs

Markets most affected: Czech Republic, Hong Kong, Poland, China, Mexico

Across many RGMs, rapid globalization is breaking down many cultural barriers that have impeded insurance growth. As the middle class expands in many RGMs, family members who once stayed home to care for children and the elderly are entering the workforce and can no longer serve as caregivers. As a result, sales of insurance products that support home health care and long-term disability are escalating. These trends help explain why insurance market growth has accelerated in countries where penetration rates once were low. Indonesia, Vietnam and Saudi Arabia each saw compound annual growth rates in insurance premiums per capita in excess of 10% from 2008 through 2012.

With income levels rising fast in many RGMs, more affluent families can buy homes, cars and other goods once beyond their grasp. For example, China has already become the world's largest market for auto coverage, and compulsory third-party liability coverage alone accounted for 72% of the country's aggregate non-life premiums in 2012.²¹ A forecast for growth in car ownership by 2015, shown in Figure 7, below indicates that Indonesia will join China and Brazil in the top three.









Of course, insurance premium growth in these markets will depend on factors beyond simple economic trends. During the global financial crisis, China and Brazil, which have large domestic auto-manufacturing industries, sought to support these industries with subsidies on auto purchases (in China) or tax breaks (in Brazil). In 2012, in China, auto premium growth slowed as these subsidies were phased out and new restrictions on car ownership were imposed. An analysis of China's vehicle market prospects can be found in our report, *Megatrends shaping the Chinese light vehicle industry*.^{22,23}

At the same time, RGMs are seeing shifts in health patterns that mimic those of the developed world. While rates for contracting infectious diseases, such as malaria, or acute illnesses, such as tuberculosis, are falling, a set of chronic and degenerative illnesses, such as heart diseases, cancer and diabetes, is climbing rapidly. Indeed, a profound "epidemiologic transition" is unfolding in many RGMs as people increase their consumption of fast food, alcohol and tobacco and work together in office environments. As diseases usually associated with the "rich world" become more commonplace in the RGMs, they will place a greater burden on health care systems, since these diseases usually require expensive long-term treatment. Aging is also an issue, as forecasts for population growth of those 65 years of age or older (see Figure 9) make clear. Although China and India have comparably sized populations, the projected increase in the number of Chinese elderly is more than double that of India's. China's aging population will place a strain on both pension and health care systems. Across RGMs, these aging trends will increase needs for life and health insurance products, particularly as national social security systems come under financial strain.

Regulatory trends affecting insurance in RGMs

Regulatory forces can quite literally make or break a firm's efforts to develop or successfully expand into new markets. Regulatory forces can quite literally make or break a firm's efforts to develop or successfully expand into new markets. Many RGMs have opened up their insurance markets over the years by privatizing state-owned organizations, encouraging foreign investment and reducing tariffs and non-tariff barriers. While deregulation of the insurance sector has come relatively late in many emerging economies, reduced government intervention and the opening of domestic markets to global players created an array of attractive opportunities for the insurance industry.

In the aftermath of the global financial crisis, however, new efforts are under way to increase oversight of insurers in many RGMs. New stringency tests and capital requirements, as well as enhanced consumer protection rules, could make operating in these markets more costly and complex, but they could also provide more structural stability and lower risks.

This section reviews two key regulatory trends within RGMs: the liberalization of insurance and the impact of new regulations and changing regulatory standards.

Insurance is opening to foreign firms in RGMs

Markets most affected: India, Mexico

Only a decade ago, the insurance sector in Latin America was dominated by state monopolies. In 2008, the last remaining insurance monopoly in Latin America – in Costa Rica – was abolished.²⁴ In 2013, Colombia implemented important new rules that allow foreign insurance companies to establish branches and operate as local insurers. In most parts of the world, as in Latin America, insurance markets that once were severely restricted opened up first to domestic private firms and then to foreign companies hoping to expand into new markets.

Global insurers can gain significant market share when protected domestic markets are open to outside players. Across the spectrum, the relative openness of insurance markets in RGMs is fast approaching that of developed



Figure 10: Openness to foreign insurance investment is increasing in RGMs

markets, as figure 10 indicates. It reflects restrictions on ownership, use of foreign staff, movement of capital across borders and licensing requirements.

Of course, some of the world's biggest growth markets still limit foreign ownership in the insurance sector; but, in each, the prospects for significant change always appear just over the horizon:

- China, which promised greater access to the domestic insurance market as part of its entry into the World Trade Organization, allowed foreign ownership of insurance ventures to rise to 51% and, in 2012, opened the market for compulsory motor liability insurance to foreign insurers.²⁵
- The Indian Parliament continues to promise that it will unlock the insurance market to foreign players.

The momentum to modernize regulations and reduce the government's role in the insurance sector has also led to the abolition of regulated tariffs in many RGMs. China ended regulated automobile insurance rates in 2003; similarly, over the last decade, most Latin American markets did away with regulated tariffs, except for compulsory automobile coverage.

But liberalization can also have a downside:

- In Turkey, a rush of foreign players to gain access to domestic insurance assets has led to fierce price wars, limiting the prospects for profitability.
- In India, deregulation of non-life insurance rates in 2007 led to deep discounting and deteriorating growth in the non-life sector, as well as charges that new firms improperly sold their products. Policy makers are now re-imposing regulations to address the growing "trust deficit" between the industry and consumers.²⁶

The impact of new risk-based regulations in RGMs

Markets most affected: South Africa, Chile

The global financial crisis of 2008-09, coupled with the US\$184 billion US Government bailout of the insurance giant AIG, led to heightened calls to regulate the global insurance industry and the globe's biggest banks. Recently, the Financial Stability Board named nine global insurers as "Global Systemically Important Insurers," or G-SIIs. These insurers now face the prospects of closer regulatory scrutiny and tougher capital standards.

What precise form these new regulations will take is not yet clear. But the largest insurers are likely to find themselves saddled with new capital requirements.

Even before new rules affecting G-SIIs are promulgated, however, a number of governments in RGMs are taking action to impose more stringent reporting and higher capital requirements. Indeed, some emerging economies may leap ahead of the developed markets in the rigor of their regulation.

For example:

- In Mexico, a new insurance law modeled on Solvency II will become effective in 2014.
- In Chile, risk-based supervision is expected to be introduced within the next few years.²⁷
- Brazil adopted International Financial Reporting Standards (IFRS) as the guiding accounting standard for insurers in 2010, and it is moving toward risk-based capital requirements.²⁸
- Across Asia, regulators are transitioning to risk-based capital standards and models based on the approaches

outlined in European Solvency I/II. Regulations relating to capital models, IFRS, enterprise risk management and consumer protection are either anticipated or already under development in many Asian RGMs.

- India is shifting from a regime based on Solvency I to one based on Solvency II.²⁹
- China's regulatory body has raised its standards by requiring insurers to have an established risk function headed by a chief risk officer and is in the process of developing the "second generation" of solvency standards, which will adopt a more risk-based approach.³⁰

Such new regulatory standards can impose costs on insurers and may slow market growth temporarily. However, more stringent rules may also offer advantages to foreign insurers that may be able to use sophisticated applications of risk and capital management tools to carve out a competitive edge.³¹

The tightening of consumer protection regulations in RGMs can also disrupt growth in insurance premiums. The regulatory changes promulgated in India's life insurance sector, including new rules for unit-linked products and the length of policies, cut new premium growth in 2011.³² Premiums fell again in 2012 in response to regulatory changes designed to combat inappropriate sales and low transparency. In Poland, efforts to better regulate insurance sales by banks may slow growth in the life sector.³³

While adding to complexity, regulation can often stimulate growth in RGMs. Compulsory third-party automobile liability insurance was a key factor in making China the largest market for automobile insurance.³⁴ The clampdown on "shadow banking" in China will likely lead to increased sales of life insurance products.



The tightening of consumer protection regulations in RGMs can also disrupt growth in insurance premiums.

Risks and volatility for insurance in RGMs

No insurance executive can comfortably develop a business plan for any new market without understanding the inherent risks. No insurance executive can comfortably develop a business plan for any new market without understanding the inherent risks. RGMs are intrinsically riskier than advanced economies: their markets are more vulnerable to currency fluctuations, social or political turmoil, and the impact of natural disasters. They can also be heavily influenced by economic shifts taking place in the larger, wealthier economies because the economies of most RGMs are much smaller and often export a significant percentage of their output to the developed world.

This section reviews three measures of volatility that are inextricably linked with the performance of insurance markets in RGMs:

- Macroeconomic conditions, particularly levels of private consumption, income and unemployment
- Liquidity, using the current-account deficit as a proxy to determine the level of money flowing into and out of the country
- Corruption, which can lead to insurance fraud for our analysis, we relied on measurements from the Transparency International Corruption Perceptions Index

In addition, we have forecast sovereign risk ratings for all 21 RGMs, using an average of the S&P, Moody's and Fitch ratings.

Figure 11: Indicators of an emerging markets slowdown



Continuing macroeconomic risks, particularly in the BRICs

In 2013, average growth rates slowed across the emerging world. High-frequency indicators of economic activity showed a pause notably in the BRIC economies (see Figure 10). Emerging-markets equity indices have also fallen, reflecting investor expectations of federal tapering in the US and its unfavorable impact on growth and interest rates in emerging markets.

Clearly, any slowdown in the RGMs is likely to limit premium growth. Slower car sales and weaker housing markets affect prospects for the non-life market. Tightening credit conditions and sluggish financial markets tend to slow growth in life premiums. Furthermore, premium income tends to fall during periods of economic difficulty, as policyholders who can no longer afford their premiums surrender their policies or decline to renew them.

Mexico, the Czech Republic and Poland are now experiencing the biggest slowdowns in key economic measures, such as private consumption and income levels. Brazil is also suffering a sharp slowdown in domestic demand despite a weakening of the currency, which should help exports rebound. Exposures to Europe's doldrums also make Poland and the Czech Republic likely to face high unemployment and relatively weak growth.



BRICs: Manufacturing Purchasing Managers' Index Index, breakeven level = 50 In some economies, however, the reasons for the slowdown may ultimately benefit the insurance industry. China's slow down in growth rate reflects in part its effort to clamp down on shadow banking. This effort will likely benefit the regulated insurance industry, whose expansion is supported by China's Government.

Broad government policies introduced to offset a slowdown may also aid the insurance sector. As the global financial crisis unfolded, for example, government efforts to bolster the automotive sector in both China and Brazil more than made up for overall economic weakness and fostered healthy growth in the auto insurance market in both countries.³⁵



Figure 12: RGMs most and least exposed to macroeconomic risks

Forecast impact of macroeconomic risks on insurance market growth in 2014

Lowest	t-risk RGMs		Highest-
Rank	Market	Risk mitigants	Rank
1	Indonesia	Excellent demographics and fast-growing regional trade within Asia.	17
2	China	Chinese industries moving up the value chain, even as growth and competitiveness slow.	18
3	Chile	Sound macroeconomics manage- ment coupled with good performance in trade and mining.	19
4	Nigeria	Oil sector weakness offset by strong non-oil performance. Despite some risks related to political uncertainty, Nigeria should be quick to bounce	20
5	Morocco	back from shocks. Rapid agricultural sector expansion	21
		expected after drought and Eurozone exposure slowed growth.	Oxford Ecc income an

Highes	Highest-risk RGMs		
Rank	Market	Risk drivers	
17	Brazil	Consumer spending boom not matched by expansion in industrial output amid interest rate increases.	
18	South Africa	Large capital-account deficit and structurally high unemployment likely to cause a slowdown, despite strong regional growth prospects.	
19	Mexico	Sharp slowdown in domestic demand. In the medium term, export competitiveness should rise, boosting exports.	
20	Poland	Exposure to the Eurozone and high unemployment slow market growth.	
21	Czech Republic	Exposure to the Eurozone and high unemployment are key concerns.	
Oxford F	Oxford Economics forecast for combined impact of private consumption.		

Oxford Economics forecast for combined impact of private consumption, income and unemployment on insurance market growth.

How alternative macro scenarios would affect RGMs

Because of the high correlation between macro events and emerging-market performance, it is important to consider potential macroeconomic trends and their impact on RGMs. As part of our analysis, we assessed the impact of three possible economic scenarios:

Eurozone breakup. The effect of Greece deciding to leave the Eurozone will exert political and economic strain on the remaining economies and could lead to further exits of such nations as Ireland, Portugal, Spain, Italy and Cyprus. In this scenario, which could start to unfold next year, the impact on the Eurozone would be severe, with far-reaching global repercussions. Mexico, the Czech Republic and Poland would plunge into recession, with GDP falling by more than 8% from our baseline in some instances. Even some of the more economically robust economies, such as Indonesia, would experience a significant slowdown.

BRICs fall harder. In China, there are significant concerns about the degree of risk that the fast-growing shadow-banking sector involves. In other emerging markets, such as Brazil and India, growth could be further constrained by poor institutional and policy errors. This scenario assumes that these issues escalate and cascade to economies through financial and trade linkages. A financial crisis in

China would result in growth falling by 10% below the baseline and unemployment rising to over 5.5%. The impact on the other BRICs is less pronounced, but due to dependence of the other RGMs on these large economies, the effects would be widespread.

Faster QE taper in the US. If the US Federal Reserve were to taper quantitative easing (QE) faster than our base case, it could lead to greater financial volatility. The ensuing period of risk aversion and falling asset prices would not only constrain growth in the US, but it would also hit the fragile RGMs particularly hard. RGMs would experience significantly higher costs of borrowing for governments, corporations and individuals. This would likely cause a broad-based slowdown, with emphasis on investment, not only due to the increased cost of borrowing but also weakness in business confidence. It might therefore have a smaller impact on the insurance industry than we would otherwise expect with such a reduction in growth.

Figure 13: RGM scenarios

GDP (maximum % difference from baseline unless otherwise stated)				
	Baseline (GDP growth in 2012)	Eurozone breakdown	US faster taper	Shaky emergers
Argentina	1.9	-4.5	-3.2	-4.6
Brazil	0.9	-6.5	-0.9	-5.1
Chile	5.6	-4.1	-2.8	-5.3
Czech Republic	-0.9	-8.9	-3.2	-2.3
Hong Kong	1.5	-11.3	-1.5	-12.5
India	5.1	-3.6	-2.1	-5.8
Indonesia	6.2	-3.3	-1.5	-5.8
Malaysia	5.6	-6.0	-1.5	-4.6
Mexico	3.6	-6.8	-2.0	-4.5
Poland	2.0	-8.4	-1.5	-1.6
China	7.7	-7.0	-1.5	-10.0
Russia	3.4	-5.1	-1.5	-5.5
South Africa	2.5	-4.3	-1.0	-3.4
Thailand	6.5	-4.0	-1.5	-6.2
Turkey	2.2	-7.0	-1.0	-2.7

Eurozone breakdown: In this scenario, these countries are affected due to an overall decline in global demand, which has negative knock-on effects on their domestic economies.

US faster taper: The US Fed tapers QE slightly earlier than in the baseline leading to a negative response from financial markets. US GDP is negatively affected, the impact of which feeds through to other countries.

Shaky emergers: Problems in the Chinese banking sector escalate, and other economies in the region, as well as the rest of the world, are affected due to financial contagion and trade linkages.

Liquidity risk could affect RGMs dependent on external capital inflows

QE – the coordinated efforts by central banks to boost recovery by making enormous asset purchases and forcing real interest rates to fall to nearly zero – created enormous global liquidity. A significant portion of this flowed into emerging economies, slashing borrowing rates and boosting economic growth. However, it also pushed up asset prices, perhaps most dramatically in the case of property prices in China and other parts of Asia.

When QE is scaled back, which many expect will occur in the first half of 2014, some emerging economies will suffer balance-of-payments problems, leaving insurers exposed to stock market volatility, exchange rate shocks and even a breakdown in exchange transfer (as occurred during the Argentine financial crisis of 1999), or limits on currency

Figure 14: RGMs most exposed to liquidity risks

Exposure to global liquidity risks in RGMs

Lowest-ris	Lowest-risk RGMs			
Rank	Market	Risk mitigants		
1	Saudi Arabia	Enormous current-account surplus and sovereign wealth fund and limited reliance on foreign investment mitigate liquidity risks.		
2	UAE	Significant exposure to variability in international capital flows, but positive prospects for construction, logistics and tourism.		
3	Malaysia	Strong export performance drives persistent trade and capital-account surpluses, but government debt is rising.		
4	China	Excellent government fiscal position and strong export performance offset risks relating to potential asset bubbles and "shadow banking" concerns.		
5	Nigeria	Large oil-related current- account surplus offsets liquidity risks. However, commodity price volatility and political uncertainty remain concerns.		

conversions. These trends are already evident in Brazil, Turkey, Indonesia and India, where exchange rates are falling and interest rates are rising.

Turkey, Morocco and Kenya represent the insurance markets most exposed to liquidity risks:

- Turkey is highly dependent on external capital flows, although high levels of relatively stable direct investment flows offer something of a buffer.
- Morocco's exposure results from very large fiscal- and current-account deficits, creating significant reliance on international liquidity. These deficits are, in part, the result of weak export and tourism sectors.
- Kenya's situation is perhaps most challenging. A large current-account deficit, coupled with rising investor concerns, pose significant liquidity risks. Rising risk perceptions are also likely to affect crucial tourism revenues.

Highest-ris	Highest-risk RGMs			
Rank	Market	Risk drivers		
17	India	Significant liquidity risks generated by large portfolio inflows, limits on foreign direct investment and high government deficits.		
18	South Africa	Large, liquid capital markets put pressure on interest and exchange rates during periods of low liquidity. High exposure to decline in commodity prices.		
19	Turkey	Highly dependent on external capital flows, although much comprimises direct investment flows.		
20	Morocco	Weak export and tourism sectors create large fiscal and current-account deficits and significant reliance on international liquidity.		
21	Kenya	Large current-account deficit, coupled with rising risk perceptions, create significant liquidity risks and could limit tourism revenues.		

Top five and bottom five rated by Oxford Economics forecast for size of current-account deficit in 2013.

While corruption risks are falling on average, fraud risks persist in some RGMs

Even as governance improves in RGMs, relatively high levels of corruption persist in some markets. Such corruption can expose insurers to fraud-related losses, particularly in nonlife sectors, such as home or auto policies. Even when an insurer's internal fraud and risk controls are strong, insurance opportunities can be stunted if anti-fraud laws are not effectively enforced by local authorities.

Ratings from Transparency International suggest that the RGMs in this study that face the highest levels of risk from perceived corruption are Nigeria, Kenya and Russia:

- In Kenya, the state's ability to enforce anti-fraud regulation is notably weak, although improvements are being made in transparency and accountability.
- Nigeria faces an even more extreme situation, and fraud in Nigeria is a globally recognized problem. In addition, an environment of limited transparency and accountability fosters "grand corruption" involving well-connected business and political figures.
- Compared to others, Russia offers a comparatively high level of economic development, but has faced criticisms regarding its capacity to battle corruption and claims of political influence over its judicial processes.

Figure 15: RGMs most exposed to fraud and corruption risks

Fraud and corruption risks in RGMs

Lowest-	Lowest-risk RGMs			
Rank	Market	Risk mitigants		
1	Hong Kong	Strong rule of law and judicial freedom on par with advanced economies limit risks.		
2	Chile	Strong judicial independence, democratic accountability and fiscal transparency, bolstered by ongoing institutional reform.		
3	UAE	Regulatory quality and financial transparency are high, despite major presence of flight capital. The rule of law is weaker.		
4	Poland	EU membership bolsters anti- fraud regulation and regulatory enforcement.		
5	Czech Republic	As with Poland, EU membership bolsters anti-fraud regulation and regulatory enforcement.		

Highes	t-risk RGMs	
Rank	Market	Risk drivers
17	Indonesia	Governance remains poor, and regional authorities can exercise arbitrary power. Fraud schemes can be highly organized and sophisticated.
18	Vietnam	Rapid transition to a quasi- market system creates a chaotic regulatory environment, with significant opportunities for corruption, though improvement is ongoing.
19	Russia	Offers a comparatively high level of economic development, but has faced criticisms regarding its capacity to battle corruption and claims of political influence over its judicial processes.
20	Kenya	State capacity to enforce anti-fraud regulation is weak, but improvements are being made in transparency and accountability.
21	Nigeria	Fraud is a serious, globally recognized problem. An environment of limited transparency and accountability fosters "grand corruption" involving well-connected individuals.

Top five and bottom five rated by Transparency International Corruption Perceptions Index.

Sovereign risks will persist in RGMs

Sovereign risk will remain significant in some RGMs, particularly Kenya, Nigeria and Morocco. Both Kenya and Morocco are grappling with an extreme reliance on international capital flows and significant perceived political risks – the latter issue is particularly acute in Kenya, where the president is standing trial. In Nigeria, political uncertainty is also significant, and the country's exposure to volatile commodity prices exacerbates concerns over the financial sector. Vietnam's sovereign risk rating remains low but is improving as the country's foreign exchange reserves grow.

Figure 16: RGMs most exposed to sovereign risks

Sovereign risks in RGMs

Lowest-ris	Lowest-risk RGMs			
Rank	Market	Risk mitigants		
1	Hong Kong	Excellent governance quality and sound macroeconomic management mitigate sovereign risks, although the territory remains exposed to potential economic shocks from China.		
2	United Arab Emirates	Overall government effectiveness is high, mitigating to some extent Dubai's exposure to shifts in international capital flows.		
3	Saudi Arabia	Macroeconomic management is improving and the oil sector continues to generate a foreign currency surplus, despite looming demographic and fiscal challenges.		
4	Chile	Despite exposure to commodity price fluctuations, excellent macroeconomic management and a high governance quality mean sovereign risks are moderate.		
5	Czech Republic	Excellent regulatory quality partially offsets the impact of exposure to the Eurozone crisis and the risk of Eurozone breakup.		

Highest-	Highest-risk RGMs			
Rank	Market	Risk drivers		
17	Indonesia	A current account deficit and recent influx of portfolio capital create substantial exposure to international liquidity risks.		
18	Morocco	Weak exports and a slowdown in tourism threaten foreign exchange earnings, and the current-account deficit is approximately 10% of GDP.		
19	Nigeria	Corruption, political uncertainty and exposure to commodity price fluctuations create significant sovereign risks.		
20	Vietnam	The transition to a quasi- market economy expose corruption and inefficiency, but a current account surplus provides some cushion.		
21	Kenya	Weak export growth and a high current-account deficit limit foreign reserves. President Kenyatta's trial at the ICC, creates high political uncertainty risk.		

Top five and bottom five rated by Oxford Economics sovereign risk forecast for 2013.

Sovereign risk rating*			
Market	2012	2015	Point difference
Kenya	7.0	5.0	-2.0
Nigeria	8.0	8.0	0.0
Vietnam	7.0	8.0	+1.0
Morocco	10.7	9.3	-1.4
Brazil	12.0	10.0	-2.0
Turkey	9.7	10.7	+1.0
India	11.0	11.1	+0.1
Indonesia	10.7	11.3	+0.6
Colombia	11.0	11.5	+0.5
Russia	12.3	12.3	0.0
South Africa	13.2	12.5	-0.7
Mexico	12.3	12.7	+0.4
Malaysia	14.0	13.1	-0.9
Thailand	12.7	13.5	+0.8
Poland	14.3	14.3	0.0
Czech Republic	16.3	16.3	0.0
China	16.7	16.7	0.0
Chile	16.4	17.0	+0.6
Saudi Arabia	17.0	17.0	0.0
Hong Kong	19.3	19.3	0.0

Figure 17: Sovereign risk ratings expected to improve across some RGMs

* Ratings on a 0 (lowest) to 20 (highest) scale.

Note: UAE does not carry a separate rating, as the agencies rate the seven constituent emirates separately.



Conclusion: riding the wave of growth

We trust that this analysis of unfolding business prospects in RGMs is not only informative and stimulating but also of practical use to organizations looking to maximize their capital returns and generate additional growth outside of the developed markets. We trust that this analysis of unfolding business prospects in RGMs is not only informative and stimulating but also of practical use to organizations looking to maximize their capital returns and generate additional growth outside of the developed markets.

The importance of RGMs to the global insurance portfolio will only grow in the foreseeable future. As the data and projections contained within this study make plain, the growth potential for firms to develop insurance and wealth-generating products within the RGMs is already enormous, and that potential will continue to grow over the next several years.³⁶ Already we are seeing many developed market insurance firms redirecting their focus as the value of their RGM businesses starts to exceed the returns in their home markets. This trend is likely to accelerate during the next three years.

As we reach out and speak with global insurance executives around the world who are grappling with the challenges associated with international growth, there are some clear calls to action we believe deserve attention:

- Be sure your global strategists are attuned to potential regulatory changes in the market and have plans in place when new rules do take effect. In a number of markets (India being the most notable example), rules that promise to open the domestic market more widely to foreign firms have long been promised and may, in fact, be adopted fairly soon. At the same time, however, the pace of implementing European-driven capital regulations similar to Solvency II and the potential requirements for more extensive consumer disclosures of potential risks and fees (similar to PRIPS in the Eurozone and RDR in the UK) are speeding up across many geographies.
- Become closely attuned to changing consumer behaviors in specific markets,³⁷ especially rapid technological change. The rise of digital technologies³⁸ as an important new channel for attracting customers, as well as a means for selling and servicing insurance, will create opportunities in a vast number of RGMs, though regulatory and cultural barriers will differ from country to country.

- Understand changing government attitudes. In some RGMs, governments will become more proactive in creating incentives for the insurance industry to grow and will seek more active participation by foreign insurance firms.
- Consider how macroeconomic trends will affect specific RGMs. Is the pattern of foreign direct investment (FDI) within an individual market sustainable, that is, one that favors long-term, patient capital investment? Or, is the FDI more speculative and more likely to disappear should the currency weaken or trade patterns shift temporarily? The overall composition and character of FDI – not just the absolute amount of funds invested – will help firms determine the risk and volatility in an individual market.
- Recognize that shared services options can be effective in some – but not all – circumstances. While incentives and potential back-office efficiencies can encourage firms to develop shared services operations within particular RGMs, limitations and tax implications may also exist (see EY publication, Shared services in life insurance³⁹). As a consequence, this solution might not be appropriate in all circumstances. EY can help you ascertain the best strategy.
- Recognize that not every RGM is the same: local culture matters. When implementing a regional operating model, many companies often ignore the cultural differences across the RGMs that can significantly affect the design of the operation and the deployment of key personnel. When putting together such a regional structure, integrating people, processes and technology effectively can demand a significant strategic review, as well as continuing management focus.

EY member firms have 8,500 insurance professionals across the world and a presence in all the RGMs mentioned in this report. We have excellent relationships with local regulators and can help with both business development advice, introductions to potential local business partners and local access to technical tax, actuarial and financial advice.

ha hf

Shaun Crawford

EY | Assurance | Tax | Transactions | Advisory

About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

© 2014 EYGM Limited All Rights Reserved.

EYG No. EG0156 1312-1170293 NY ED None

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax or other professional advice. Please refer to your advisors for specific advice.

ey.com

Contacts

Shaun Crawford

Global Insurance Leader +44 (0) 207 951 2172 scrawford2@uk.ey.com

Jonathan Zhao Asia-Pacific Insurance Leader +85 2 2846 9023 Jonathan.Zhao@hk.ey.com

Andreas Freiling EMEIA Insurance Leader +49 6196 996 12587 andreas.freiling@de.ey.com

James Littlewood Latin America Insurance +1 305 415 1849 james.littlewood@ey.com

- 1. EY 2014 Latin America Insurance Outlook
- Amit Kalra and Oliver Futterknecht. "Insurance in Emerging Markets: Growth drivers and profitability." Sigma. 1 November 2011. 2011 Swiss Reinsurance Company Ltd.
- 3. Milka Kirova and Lukas Steinmann. "Life Insurance: Focusing on the consumer." *Sigma*. 20 September 2013. 2013 Swiss Re.
- 4. Ibid.
- 5. Kaira and Futterknect, op cit.
- 6. Kirova and Steinman, op cit..
- 7. EY 2013 Asia-Pacific insurance Outlook.
- 8. Kirova and Steinman, op cit..
- 9. Kaira and Futterknect, op cit.
- 10. EY 2014 Latin America Insurance Outlook.
- 11. Kaira and Futterknect, op cit.
- 12. EY Latin America insurance Outlook 2013.
- 13. EY Insurance in a Digital World: The Time is Now 2013.
- 14. EY Insurance in a Digital World: The Time is Now 2013.
- 15. EY 2014 Asia Pacific Insurance Outlook.
- 16. Kaira and Futterknect, op cit.
- 17. EY 2013 Latin America insurance Outlook.
- 18. Kaira and Futterknect, op cit.
- 19. Ernst & Young, Global Islamic insurance industry insights 2013.
- 20. Kaira and Futterknect, op cit.
- 21. EY 2014 Asia Pacific Insurance Outlook.
- 22. Kirova and Steinman, op cit
- 23. EY Mega trends shaping the Chinese light vehicle industry.
- 24. Kaira and Futterknect, op cit.
- 25. Kirova and Steinman, op cit..
- 26. Kaira and Futterknect, op cit.
- 27. Swiss Re Sigma Report 2013.
- 28. EY Latin American insurance Outlook 2013.
- 29. EY Asia Pacific insurance Outlook 2014.
- 30. EY Asia Pacific insurance Outlook 2014.
- 31. EY 2013 Latin America Insurance Outlook.
- 32. Kaira and Futterknect, op cit..
- 33. Kirova and Steinman, op cit...
- 34. Kaira and Futterknect, op cit..
- 35. Ibid.
- 36. EY Insurance Business Pulse 2013.
- 37. EY Consumer Survey 2012.
- 38. EY Insurance in a Digital World: The Time is Now 2013.
- 39. EY: Shared services in life insurance: Creating highly efficient and cost-effective operations centers, Summer 2013.