# Risk Management

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## Disasters shake up insurance industry

**Changes are afoot as authorities and companies seek non-traditional ways of ensuring they have adequate protection, writes *Alistair Gray***

**Storm damage: the NY metro was closed down after Superstorm Sandy struck** Bloomberg

New York's subway was shut for days after Superstorm Sandy's surging 14-foot wall of seawater flooded its network of stations and tunnels. It was one of the US's worst transport disasters.

But when the authorities tried to minimise the potential costs of a future catastrophe, officials at the Metropolitan Transportation Authority encountered a problem. They struggled to negotiate reasonable terms for insurance.

Thomas Prendergast, the MTA's chairman, said the authority found it "exceedingly difficult" to obtain protection through the usual routes in the months following the disaster of autumn 2012.

It came up with an unusual solution. Instead of traditional insurance, the MTA turned to the capital markets. Last July, the authority issued the first ever "storm surge" bond, providing it with $200m worth of protection to help pay for future repairs.

The development is an example of the big changes under way in the insurance industry. "There's lots of innovative stuff going on . . . at the moment," says Mike Van Slooten, head of market analysis at Aon Benfield. The question is, can others benefit from such innovations – either by filling gaps in desired insurance coverage, as the MTA managed to do, or more indirectly, through lower premiums?

To be sure, specialist investors such as hedge funds have long been lured to "insurance-linked" securities by the promise of returns genuinely uncorrelated with those of other asset classes. But in the face of the low yields on offer from traditional fixed income securities, mainstream institutions, such as pension funds with trillions of dollars under management, are increasingly looking at this area.

**Insurance is 'a buyers' market', says John Hurrell, chief executive of Airmic, a corporate risk managers' association**

Apart from New York's MTA, however, examples of regular companies or public bodies issuing securities such as catastrophe bonds as an alternative to traditional insurance are few.

The vast majority of such instruments are used to transfer risk within the insurance industry. Primary insurance companies use them as an alternative to traditional reinsurers, such as those at Lloyd's of London, to minimise the costs of highly damaging events – those likely to occur less than once in 200 years.

There are some concerns among insurance executives that new sources of capital are fickle, and will flee when rising interest rates reduce the niche asset class's relative attractiveness. However, brokers insist a permanent, structural change is under way.

Still, the competitive pressures caused by the wave of capital from alternative sources has undoubtedly helped insurers enjoy big declines in reinsurance costs in recent months. An even bigger factor has been a relative absence of costly disasters. So far, though, there is only patchy evidence that lower costs are trickling down to the primary insurance market – and pushing down premiums for buyers of corporate insurance. The latest data from MarketScout show US commercial insurance prices have risen by 3 per cent in the year to March.

That said, within a historic context, insurance for companies in most areas is very cheap – other than a few exceptions, such as motor insurance – according to Guy Malyon, head of broking at Aon Risk Solutions. "It's a buyer's market," agrees John Hurrell, chief executive of Airmic, an association of big UK corporate risk managers. He adds that the market is "probably as soft as it's ever been".

The extent to which the relatively cheaper insurance is caused directly by new sources of capital is debatable.

Mr Van Slooten says the weak returns insurers are making from fixed income-dominated investment portfolios – traditionally an important source of profits – are encouraging many to keep premiums as high as possible. He says this is offsetting downward pressure on premiums caused by cheaper reinsurance.

Yet brokers say other innovations are benefiting corporate insurance buyers.

Big companies tend to want protection against low-frequency, high-impact events – of the sort that could prompt a stock exchange announcement, or materially threaten their annual profits. But more sophisticated analysis of data – by insurers, those covered by policies, and especially brokers – is increasingly making it easier for them to realise that ambition.

George Davies, chief client officer for Europe at Marsh, a risk management company, says such improvements "allow buyers to make better-informed decisions".

Mr Marsh adds: "The trend is to buy capacity at the top and retain more risk at the bottom."

Overall, low premiums are not necessarily prompting companies to buy more insurance, adds Mr Malyon. "Sometimes, they're just banking the savings into the profit and loss account," he says. Improvements in data analysis, and modelling of losses, could also help companies fill gaps in insurance coverage.

Pension funds do not act as traditional underwriters but rely heavily on such models to assess their potential exposures – although for critics in the industry, this cruder risk assessment raises important questions about whether such investors properly understand the risks they are running.

The alternative sources of capital are being attracted to the areas such as natural catastrophes in the US, where modelling is at its most sophisticated. According to Aon Benfield, "alternative" sources now supply about $50bn worth of capital to the catastrophe reinsurance industry.

This has helped push the total levels of capital in this corner of the market up 7 per cent in 2013 to about $540bn.

The capital markets money could in theory play an important role in financing natural disaster protection, as was the case with the MTA.

In the UK, officials behind the planned Flood Re subsidy fund – being drawn up because insurers are refusing to renew their commitment to universal flood cover – are considering turning to the capital markets to help finance the scheme.

Brokers hope innovations in the sector will help address complaints that demand for coverage still outstrips supply in important areas.

Big companies say they struggle for instance to buy adequate protection against threats to their reputation, supply chains and IT infrastructure.

This mismatch is likely to persist: risks other than natural catastrophes, particularly emerging threats such as cyber attacks, are considerably harder to model. Nonetheless, there are tentative signs the new money is beginning to finance protection against other kinds of threats such as corporate liability.

As Airmic's Mr Hurrell puts it: "The insurance market is moving fast, but the real world is moving faster."

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# Banks' skills gap forces up pay for talented minority

Recruitment

**Risk managers are back in demand, says *Daniel Schäfer***

Late last year, the Bank of England forced Richard Meddings, Standard Chartered's finance director, to hand over responsibility for key risk functions to Peter Sands, the chief executive.

This was the latest in a series of moves elevating such functions at banks to allow risk managers to report directly to chief executives or even bring them on to the management board. At HSBC, chief risk officer Marc Moses became a board member in January.

This epitomises a new era, with risk managers rising to prominence as bank failures and losses during the financial crisis were blamed on a serious misjudgment of credit and market risks.

"Over the past 20 years, banking has moved away from being a profession and this has created an inherent risk," says Carolyn Williams, technical director at the Institute of Risk Management. "A move away from professional exams in favour of narrow quantitative and sales training has, in my view, created a cultural inability by some banks to recognise and address risk in a holistic manner."

A much greater emphasis on risk has prompted banks to hire staff in this area frantically in recent years, a process that recruitment experts say is far from over. "It still is a very busy market," says Anna Purves, manager of risk recruitment at Robert Walters.

Staff vacancies rose sharply in 2013, according to Barclay Simpson, a recruitment firm, to approach levels last seen in 2010, when the UK regulator pushed banks to expand risk management functions after the financial crisis.

Banks initially focused on providing senior staff by elevating their chief risk officer roles and hiring generalist risk managers as managing directors.

However, the drive to meet regulatory demands for higher standards in managing the unforeseen means they are now also replenishing junior levels.

Recruiters say risk managers at associate vice-president and similar levels have become some of the most sought-after posts. Salaries of the best people have increased because of a skills gap that widened after banks slashed their recruitment programmes following the financial crisis. There are also more employers seeking risk staff. Boutique banks and lenders from Australia, Asia and Canada are seeking to bolster their teams in the UK.

High priority: Peter Sands, Standard Charter's chief executive, has assumed responsibility for vital risk functions Bloomberg

> 'Companies are more selective. There are not enough risk managers with the right experience'

This hiring frenzy is at least partly driven by tougher regulatory requirements. International banks that had moved functions back to their head offices are now being required by the Prudential Regulation Authority to have a risk presence in the UK.

Credit risk is one area that is back in fashion, not just because of the lessons learnt from the credit crunch, but because banks are hoping to take advantage of an expected uptick in lending on the back of a return to economic growth.

Like many other things in banking these days, most of the resurgence in risk management seems to be driven by regulators.

In credit risk, investment banks have been forced to overhaul their counterparty analysis processes and procedures, spawning previously unheard of functions such as the "credit risk project manager".

Regulation has, to a large extent, also driven an increase in staff levels in market risk functions, where banks have to cope with such issues as the Basel requirements on capital levels, the review of the trading book, and stress tests in the US and Europe.

A third element of the trinity that is financial risk management has risen to prominence: beyond market and credit risk, banks have started to bolster their teams in operational risk after a string of scandals and mishaps, ranging from the alleged rigging of financial benchmarks to the mis-selling of payment protection insurance and rogue trading incidents. These have prompted regulators to push banks to test their control functions more rigorously. This has resulted in higher demand for people with specific testing skills, often with an auditing background.

The last trend underscores how nuanced and multifaceted risk management at banks has become.

"A lot of the risk roles have become more niche and, ultimately, the talent pool is smaller than the demand," says Ms Purves.

This is different from a few years ago, when banks were forced by regulatory pressure to build risk departments as fast as possible.

"At that time, there were large numbers of redundant risk managers available," recruiters at Barclay Simpson wrote in a recent report. "Companies are now more selective and there are not enough risk managers with the experience and skills required."

This has driven up salary levels. Pay for risk-related jobs has risen 6 per cent in the past year and grown 19 per cent for those who move to other organisations, adds Barclay Simpson.

And, unlike compliance functions, most banks are refraining from expanding the talent pool by simply poaching staff from regulators.

"Some banks have a straight hands-off policy in terms of taking on people from the Prudential Regulation Authority or Financial Conduct Authority," says Ms Purves. "Regulators have raised pay closer to market rates and it has become more interesting to work for them. So, we haven't seen that much crossover," she adds.

# More regulation offers greater security to Bitcoin users

## Virtual currency

**Those investing need to make a long-term bet, says *Maija Palmer***

There is no greater rollercoaster ride in the investment world at present than Bitcoin. The virtual currency, based on cryptography and independent of any government backing, is barely five years old, and in that time has gone from being worth pennies to more than $1,000 per Bitcoin last December – and then down again to less than $500.

"Most investors have seen the charts rising and that has got them interested," says Brett Stapper, co-founder of San Diego-based Falcon Global Capital, a Bitcoin investment fund. "But if you're seeking something that gives you a 5,000 per cent return in a single year, you have to accept it comes with some pretty high risks. You can't compare it to a normal investment. We don't even know some of the risks yet, because the technology is still evolving."

Broadly speaking, there are three main areas of risk when it comes to Bitcoin: theft, regulation and technological failure. Of these, theft is foremost in investors' minds, particularly after more than 650,000 Bitcoins have gone missing at Mt Gox, one of the oldest of the world's Bitcoin exchanges.

Bitcoins exist solely in electronic form and transactions of the currency are recorded in a central ledger run over the internet, designed to avoid fraudsters from being able to use the same Bitcoin multiple times for payment. The central technology has so far proven resistant to attempts to hack it, but the digital wallets and exchanges that store Bitcoins have occasionally proved less robust. With no government-backed deposit guarantees in place, losing your Bitcoins is like having paper money blown out of your hand by the wind.

Mr Stapper, however, is putting his faith in Elliptic, a London-based company offering secure storage of digital currencies. Falcon Global Capital is so confident in its security arrangements that it is offering insurance on its investors' Bitcoin deposits, one of the first Bitcoin companies to do so.

Tom Robinson, co-founder of Elliptic says investors' Bitcoins will be stored on a computer inside a bank vault that is not connected to the internet in any way. While this sounds impregnable, it raises questions about the security of Bitcoins at other times, such as when they are being moved between storage facilities.

Then there is regulatory risk. Governments globally are struggling to decide how to approach Bitcoin. Some – such as Germany – have been quick to put in place rules for its use, others – including China – have all but banned it. A majority of countries are undecided.

"More businesses are worried about the regulation than theft," says Lutz Auffenberg, attorney at the German law firm Winheller.

"Theft they see as a technical problem, which they can solve. Regulation is more difficult. If it turns out you need permission to run your Bitcoin business and you don't have it, it is a criminal offence and you can be shut down." Staying within the law is not simple. Even if your Bitcoin investment business is located in the Netherlands – where no licences are required – it may become subject to the far stricter German banking licence requirements if it is serving German customers.

Some more clarity has emerged after the US Internal Revenue Service last month announced it would treat Bitcoin as property for tax purposes, so transactions would need to be recorded and any taxable gains worked out for each transaction.

"It was very beneficial for us," says Mr Stapper. "We got more emails from interested investors on the day the ruling came down than we had any day previously. Now, investors will always take the tax into account when they look at how much they can make from an investment."

He says his fund now has 250 investors "ready to go", and hopes to take in $100m by the end of the summer.

The UK has also recently announced it will treat Bitcoin as property, for tax purposes, after initially classifying it as vouchers. There could still be a great deal of change on regulatory rulings, admits Mr Stapper. "Regulatory change is one thing that is out of our control."

Then there is the risk of the whole Bitcoin system collapsing. Experts warn that should a fundamental flaw appear in the technology underpinning Bitcoin, the virtual currency could become worthless overnight.

A payments system is only valuable if people use it. A growing number of merchants are starting to accept Bitcoin, but if this trend were to reverse, the cyber currency could lose value rapidly. It nearly halved in value this year when the China banned its financial institutions from conducting Bitcoin transactions.

Investors such as Mr Stapper are basing their Bitcoin bets on two things. One is the network effects – that the value will increase as more people use it. The other is the law of supply and demand. Bitcoin has been set up so that only 21m coins can ever be created, so if demand increases, so will its price.

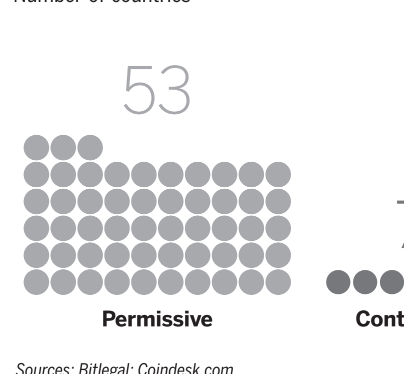
"It is a long-term investment, over a year or more," says Mr Stapper. Like most Bitcoin enthusiasts, he is confident that the concept of a decentralised, digital currency is here to stay. But he would not place a bet on the short term. "It is a recent innovation, so it is impossible to say where Bitcoin will go in the near future."

> 'Something that offers a 5,000 per cent return comes with high risks'

**How the world views Bitcoin**

A shop in Hong Kong displaying a Bitcoin sign Photo: AFP

**Regulatory stance towards Bitcoin**
Number of countries




**Bitcoin price**
$ per coin

1000, 800, 600, 400, 200, 0
Jan 2013 2014 Apr*

Sources: Bitlegal; Coindesk.com

* To Apr 23 FT graphic

# Tougher capital rules boost traders' feelings of security

Swaps and derivatives

***Philip Stafford* looks at how legislation is affecting a market worth $700tn**

Last month the International Swaps and Derivatives Association (Isda), a trade body, asked members and swaps users if markets were safer now than before the financial crisis.

It was a good time to ask. Higher standards, brought in under Basel III banking capital requirements and legislation such as the US Dodd-Frank act and the European Market Infrastructure Regulation, have been debated in the past five years to the point where they are beyond the comprehension of many.

Now, the largest participants in an opaque market with a notional outstanding value of $700tn are implementing waves of banking and markets regulations that aim to protect them and taxpayers.

Even so, Isda's respondents felt it may have been worth it. Of the 245 that replied, nearly six in 10 said the market was a lot safer because of reforms.

"The transparency of the global over-the-counter (OTC) market is improving," says Larry Thompson, general counsel of the Depository Trust and Clearing Corporation, a US post-trade services group. "However, there are a lot more obstacles till we meet the [G20's] vision."

That vision was formulated in 2009 in Pittsburgh, when the G20 backed the idea all standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, as appropriate, and cleared through clearing houses. Trades not going through clearing houses would need higher capital requirements. They also agreed that all trades should be reported to trade repositories, and that this radical overhaul should be completed in just over three years, by the end of 2012.

The last target was over-optimistic but progress has been made. Mandatory clearing operates in the US and Japan; Europe will follow in the coming year.

US Swap Execution Facilities (Sefs), electronic market-places, are open. Most have controls in place for trade reporting. Isda says 90 per cent of non-cleared derivatives trades were backed by collateral in 2013.

However, Isda's respondents said their confidence mainly reflected tighter credit risk management, a reduction of leverage in the financial system, or tougher capital requirements.

Some G20 remedies, such as central clearing and transaction reporting, were seen as less important.

Market participants say the plans may have unexpected consequences. As regulation is rolled out unevenly, brokers worry the global market may be split.

Research from JPMorgan found little evidence the OTC market has shrunk, or that trades have moved from the OTC market to a listed one. While the US market was unchanged by Sefs, "there is some evidence of the European market seeing a relative decline in volumes and an increase in dominance of European dealers, including affiliates of US dealers", it said.

Central clearing has also brought concerns for broker-dealers, from the costs of becoming a member, to their potential exposure to others. There is still no process in place to deal with the orderly wind-down of a clearing house, although the Basel-based Financial Stability Board, which monitors the global financial system, aims to have rules in place by November.

Many are concerned about a global "collateral crunch", in which demand for high-quality liquid collateral to meet new requirements will exceed supply.

The Bank for International Settlements (BIS) has estimated up to $4tn may be needed over several years. Such fears have been dismissed by others, including the Bank of England.

"The facts for this claim don't bear close scrutiny," says Andrew Hauser, head of sterling markets division at the BoE. "That [BIS] figure . . . is much smaller than measures of global supply. The supply of AAA- and AA- rated government bonds, for example, has risen more than $11tn since 2007."

Trade reporting, intended to give regulators a better picture of a global market, also has difficulties. Data have fragmented into repositories around the world as regulations allow market participants to report their trades to several venues. In the US, the Commodity Futures Trading Commission admits that mistakes in how it asked for the data have rendered much of it unusable.

In Europe, sweeping reporting requirements for market participants were squeezed into a three-month timeframe. Two days after the mandate began, officials were unsure whether some assets were included in the rules.

Furthermore, authorities have to reconcile trades from six repositories. Efforts to adopt a standard framework to tag trades with a unique code have also been patchy.

There may be some way to go to convince others of the benefits of the overhaul.

> Mistakes in how the CFTC asked for the data have rendered much of it unusable

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## Risk Management

# Europe seeks alternative gas supplies

**Ukraine crisis** The continent has been forced to address its reliance on Russia, says *Guy Chazan*

For those in Brussels who want the US to ride to Europe's rescue and provide an alternative to Russian gas, Charif Souki's words will have come as something of a disappointment.

Mr Souki, chief executive of Houston-based Cheniere Energy, which is due to become an exporter of natural gas next year, was asked if his company could reduce Europe's dependence on Gazprom, the Russian gas group.

"It's flattering to be talked about like this, but it's nonsense," he said. "It's so much nonsense that I can't believe anybody really believes it."

His words came at a sensitive time. After Russia annexed Crimea in March and the west began imposing sanctions on Moscow, Europe was suddenly forced to face up to the extent of its dependence on Russian energy exports.

Concerns about its exposure increased in April, when Vladimir Putin, Russian president, warned that Russia might halt gas supplies to Ukraine unless action was taken over Kiev's unpaid bills. The warning came after Gazprom almost doubled its price for gas to Ukraine.

Ukraine, the key transit route for Russian gas flowing into Europe, looms large in the continent's energy equation. Russia sent some 155bn cubic metres (bcm) of gas into Europe last year, some 30 per cent of overall demand, and more than half of that – 82bcm – passed through Ukraine.

Brussels has made it a priority to diversify its gas supplies, but Europe's options are limited. In the short term, it is prepared for a gas cut-off. As of mid-April, the 28 EU member states' stores were 48 per cent full, with 38 bcm of gas – more than usual for the time of year following a mild winter.

Also, new interconnectors between European countries have made them more resilient. Connecting pipelines have been built between Romania and Hungary, Hungary and Croatia, Slovenia and Austria, and Poland and the Czech Republic. In late March, the leaders of Hungary and Slovakia inaugurated their own connector.

"Reverse flow" pumps have also been installed that allow gas to be pumped west to east. Germany's RWE and Polish state company PGNiG supplied small volumes of gas to Ukraine in this way last year, and talks are under way to provide Ukraine with gas from Slovakia as well.

Such infrastructure is of little help to countries almost totally reliant on Russia, such as the Baltic states. They, too, have attempted to diversify. Lithuania has built a $330m floating liquefied natural gas (LNG) import terminal that will start working by the end of the year. Poland is also due to complete a large LNG terminal this year.

Such ventures reflect the hope that Europe might be able to replace some Russian gas with LNG imports. But this would mean a big change in current trends. Europe was badly hurt by the 2011 Fukushima nuclear disaster, which led Japan to swap to gas-fired power generation and signalled a move of LNG cargoes from Europe to Asia. Last year, Europe's net imports of LNG were about 48 bcm, the lowest since 2004, and well below the 90 bcm peak in 2011, according to BG Group.

If Europe wants more LNG, it will have to pay for it. The continent spends about $11 per million British thermal units for gas, while in Asia, LNG fetches about $15 per mBTU.

"LNG is not a particularly cheap insurance policy," says Howard Rogers, director of gas research at the Oxford Institute for Energy Studies.

Upward pressure on price could be mitigated by an improving supply picture, however. Wood Mackenzie, the consultancy, says 150 bcm of LNG production capacity is being built globally, and not all will go to Asia.

In particular, substantial LNG exports from the US would make European consumers drool. Cheniere, which is building an LNG export terminal in Louisiana, has committed some cargoes to Asia but also struck deals with European companies such as BG and Centrica of the UK.

The US could emerge as a big exporter of LNG. About 28 export projects have been proposed there, with more than 350 bcm of capacity, but most estimates suggest a fraction of those will be built. BG says roughly 90 bcm of export capacity will be in place in the US by 2025. The expectation is most of that will go to Asia.

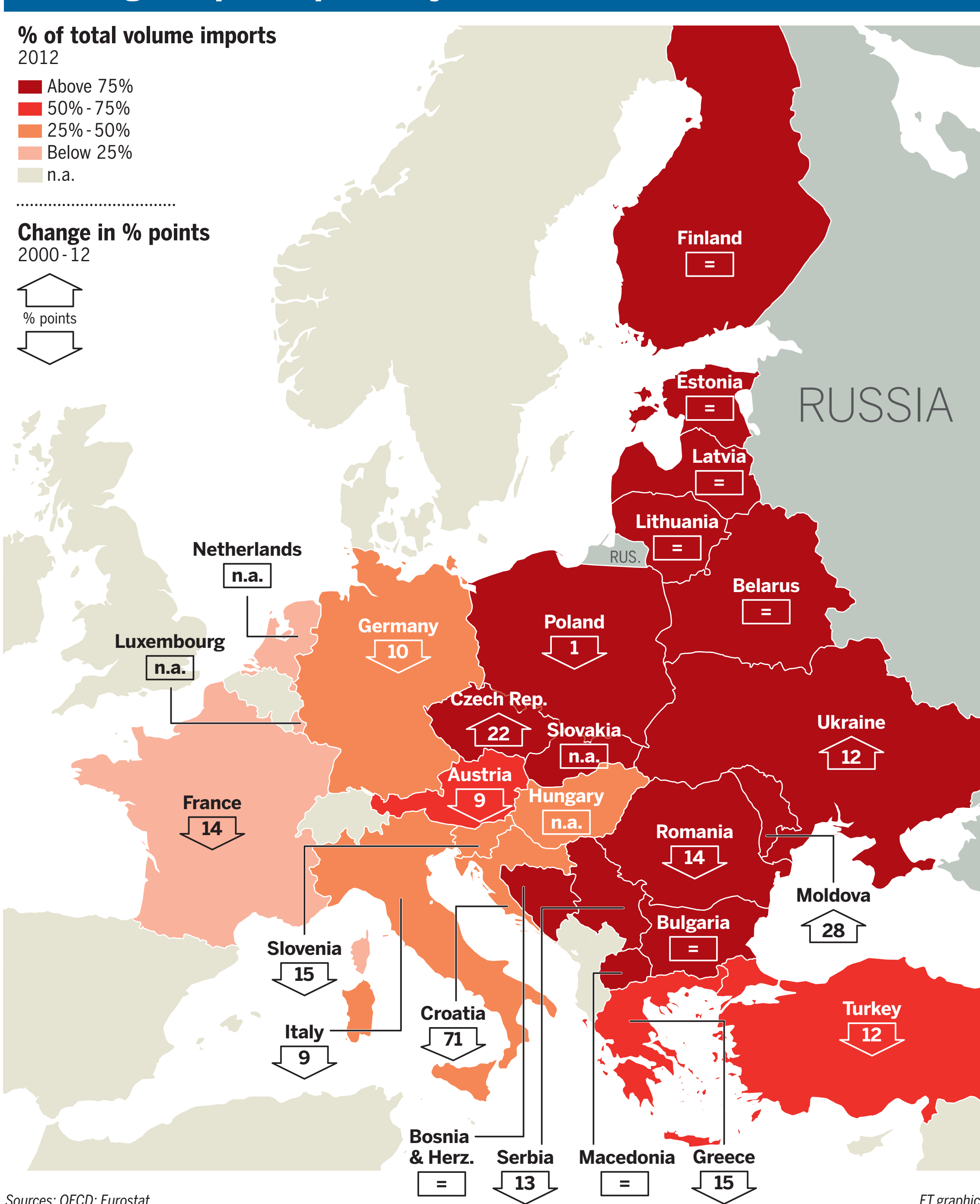
Europe could try to replicate the success of the US shale boom and develop its unconventional gas reserves. But progress has been slow: some countries, such as France and Bulgaria, have banned hydraulic fracturing processes, and while countries such as the UK are eager to exploit shale reserves, public opposition is strong. In Poland, thought to have enormous reserves, drilling results been discouraging, and some companies have given up.

Meanwhile, reducing demand would cut Europe's gas imports. Building more renewable generating capacity would have a similar effect. However, the eurozone crisis and concerns about rising energy costs have triggered a rethink of the cost of renewable subsidies, and several EU countries are paring back their support. That will slow the construction of wind farms and solar parks.

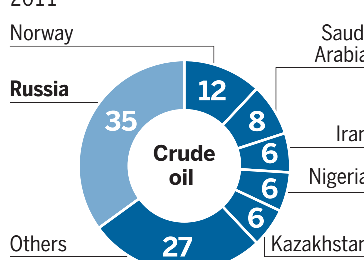
For analysts at Bernstein Research, all this leads to one clear conclusion. "We continue to believe Gazprom's most profitable market is safe," they wrote in a recent report. "Like it or not, Europe is stuck with Russian gas."

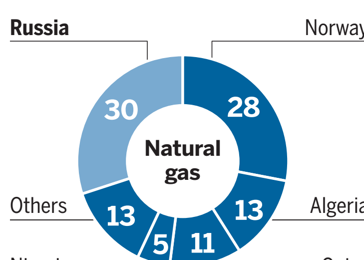
> 'Like it or not, Europe is stuck with Russian gas'

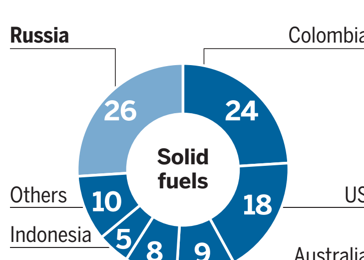
**Natural gas import dependency on Russia**






## Oil Important policy questions hang over North American self-sufficiency

North America's reliance on oil imports to supplement its historic deficit in domestic output is diminishing.

As US President Barack Obama said in this year's State of the Nation address: "America is closer to energy independence than we've been in decades."

This, combined with the prospect of the continent emerging as a key supplier of gas and coal for export, is creating radically different scenarios for the role the US might play in world energy markets in coming decades.

It is also creating an alternative ranking of leading economies that are most vulnerable to supply shocks and price rises for imported fuels.

A report by consultancy Wood Mackenzie predicts the continent will be energy-independent by 2020, before moving into a net exporting position; and BP, the oil major, has said that North America could switch from a net importer to net exporter of energy by 2018.

Both political doves and hawks have suggested that a possible result may be that the US will be less interventionist abroad.

But Skip York, an analyst at Wood Mackenzie, says if the continent does move more towards export, the US will still be left playing a key role in world energy markets as other economies become more prone to energy shocks.

But the path towards overall self-sufficiency and export may not be smooth. For example, although the glut of shale gas available to US power generators has prompted a diversion of coal for export to Europe, it will be some years before liquefied natural gas can be exported in scale from the US.

A revival in conventional oil output from the Gulf of Mexico, with growth in shale and tight oil production and oil sand projects, is narrowing demand for oil imports.

However, Mr York notes, the US is likely to remain a net importer of crude oil – albeit at significantly reduced levels – for the foreseeable future.

This picture of increased home production destined for domestic – and increasingly foreign – consumption, will reshape, but not redefine, geopolitics, says Wood Mackenzie.

It may even align the strategic objectives of the US and energy-hungry states such as China in areas such as the Middle East.

Companies in the sector are also predicting that global markets for energy will continue be marked by escalating demand for fossil fuels, as well as regional imbalances between production and consumption.

BP's latest energy outlook, predicting global trends until 2035, suggests Europe's existing energy dependence will increase. However, it also paints a picture of stable energy consumption in OECD countries, in part because of increasing energy efficiency, in addition to moderating consumption in developed economies.

Risk, it appears, is shifting east.

China and India lead the list of economies driving a worldwide increase in demand, as Asia emerges as the world's dominant energy importing region.

A pattern of strong growth in energy consumption in emerging economies is expected to lead to an overall increase in energy demand of more than 40 per cent between 2012 and 2035, BP says.

And, in spite of attempts by some industrialised countries to curb greenhouse gas emissions, oil, gas and coal are still expected to provide the bulk of the world's energy source 20 years from now.

> 'Do you want to supply energy to economically competing economies?'

As the BP projections show dioxide emissions will rise by 29 per cent over the same period, it would seem sustainability – rather than the reliability – of supplies is likely to be a big part of assessing future risks.

However, the US's role as a potential supplier, rather than importer, of energy raises more questions for policy makers than how much surplus energy supplies should be reserved to boost homegrown industry or directed for sale abroad.

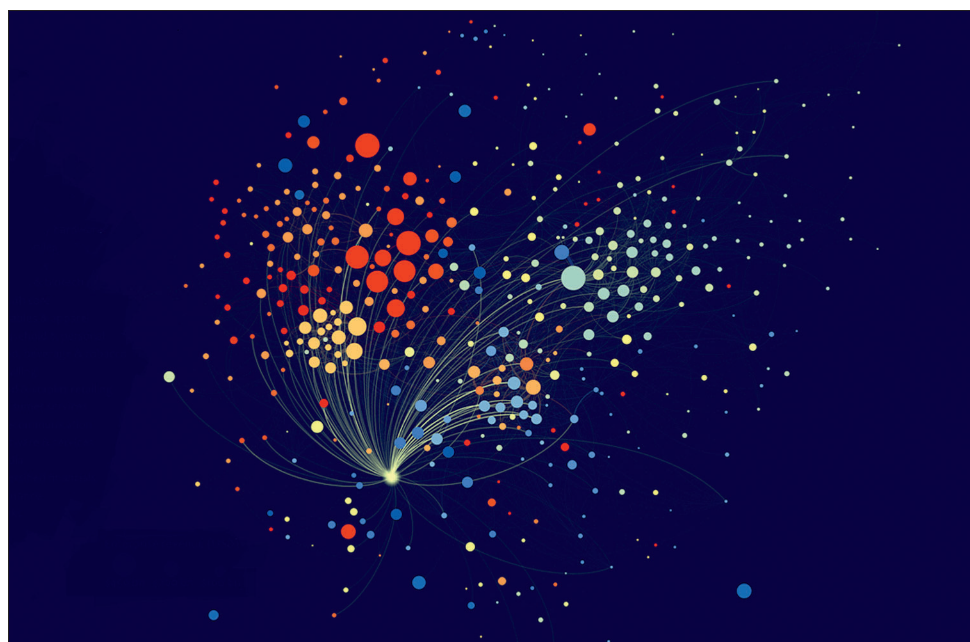
As Mr York says: "Do you want to supply to economically competing economies?

"If they are importing their energy, do you want them to be dependent on our energy? Are you better off making them dependent on us? They are going to be dependent on someone, is it better for them to be dependent on us?"

**Michael Kavanagh**

# Diversity is the way to avoid cyber collapse

**Viewpoint**
MICHELLE TUVESON and SIMON RUFFLE


**Joining up the dots: a cyber-economy map showing how Systemically Important Technology Enterprises are linked, produced by researchers at the Cambridge Centre for Risk Studies**

Regulatory consciousness has increasingly focused on the reduction of systemic risk to ward off another financial crisis.

Regulators have poured vast amounts of intellectual capital into formulating the best measures for preventing taxpayer bailouts of collapsing institutions.

As a result, they created the "Systemically Important Financial Institutions" (SIFIs) brand to indicate a bank that may need rescuing.

In a recent discussion at a Cambridge Chief Risk Officer Council event, one bank official asked: "Why should a bank be worried about systemic risk? Its own risk should be its only focus." The remark captures the tension between the micro and macro risk perspectives.

A parallel phenomenon is occurring in the area of cyber and technology risks. These are among the foremost worries for risk managers today. The fear of the unknown magnifies their worries: cyber threats are relatively new and are mostly outside their company's expertise.

Recent cyber-related examples include the massive breach of customer credit card data at Target, one of the US's largest department stores, and the software-precipitated trading losses at Knight Capital, a financial services firm on the NYSE. A software error in its high-frequency trading algorithm resulted in losses of $440m in less than an hour – 38 per cent of annual revenue – and led to its takeover.

One could argue these breaches were confined to two businesses and did not affect the global economy.

But what is worrying is the potential for a global system-wide IT failure occurring simultaneously across many organisations – a "correlated loss" event that affects a vast number of companies, or an entire sector. As businesses get more interconnected, this type of threat becomes a real possibility.

A number of technology companies has become so deeply embedded in business productivity that they are systemically important to the overall economy. Like the SIFIs, they and their products are so interlinked their failure would cause problems on a very large scale. We refer to these companies as Systemically Important Technology Enterprises (SITEs).

Mapping of the cyber economy identifies the technology enterprises vital to international corporate productivity. The mappings also show the centrality of a cluster of companies and provide a visual representation of how potential failures may spread.

> What is worrying is the potential for a global IT failure occurring across many organisations

Could the economic effects of such a global cyber catastrophe be estimated? Any type of failure or attack that exploits vulnerabilities in products and applications of SITEs could permeate the world economy.

Many factors can cause IT failures – cyber attacks, hardware breakdowns, software errors. But what causes the failure is less important than the penetration levels of common IT applications.

There are many possible types and levels of harm. Past failures, not all maliciously inspired, that have caused multibillion-dollar damage to companies include data compromises and other IT problems.

Models of the sheer degree of connectivity of the SITEs highlight the possibility of a severe correlated cyber loss across thousands of big companies. Most have IT platforms in common, with coincidental data architectures, and structures and shared industry standards. Their business processes evolved alongside product platform standardisation.

As a society, we have become attracted to standardisation. While this has delivered greater connectivity and economic value, it has also vastly increased the scale of a potential disaster.

The risk of a cyber catastrophe could be managed through portfolio diversification. In theory, the dangers of SITEs are eerily similar to the perils of SIFIs. More research is needed to determine if this anxiety is well founded.

Without a central bank to govern risk regulation and ensure standards of robustness, responsibility lies with individual IT companies to prevent a potentially catastrophic technology meltdown throughout the economy.

*Dr Michelle Tuveson is the executive director and Simon Ruffle is the director of technology research and innovation at the Cambridge Centre for Risk Studies at the University of Cambridge Judge Business School*

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# Dynasties raise questions over democratic rights

**Politics** Western leaders are consumed by fears they are losing touch with voters as getting elected has become a family trade, says *George Parker*

The Founding Fathers of the US had a stab at eliminating political dynasties, the flow of power through blood down the generations: "No title of nobility shall be granted by the United States," declared the constitution.

The attempt was to little avail: in the 21st century, in many places, power still seems to pass through genes, raising questions about whether political dynasties now pose a political risk.

Western liberals have long disdained the concept of politics as a family business when practised by autocrats in the developing world or Middle East, whether Kim Jong Un and his clan in North Korea, the Castros in Cuba, the House of Saud or the Assad family in Syria.

Yet dynastic tendencies in western democracies are also coming under close scrutiny.

In the US, Hillary Clinton's apparent determination to contest the 2016 US presidential election confirms little has changed in the land of the Adams family and the Kennedys, and raises the prospect of a White House line-up of Bush, Clinton, Bush, Obama, Clinton.

Meanwhile, in Britain, a new generation of "Red Princes" is lining up to continue the work of their parents in the UK's Labour party.

Western politicians are consumed by a fear their trade is losing touch with the lives of ordinary people, as a professional political class of advisers and party hacks rises to the top.

The ascent of political dynasties is perhaps the most graphic manifestation of what some see as an increasingly closed system.

Liz Truss, a Conservative education minister in David Cameron's UK government, said in March that British politics was not just disfigured by the prevalence of an expensively educated elite in top jobs. "It's actually about people coming from the same family, people who have always been involved in politics, being involved in politics," she said.

The next British election in 2015 will see Labour candidates including Stephen Kinnock, son of former Labour leader Neil, and Will Straw, son of former Labour foreign secretary Jack. Euan Blair, son of former Labour premier Tony, is also tipped to run for parliament.

A survey by House of Commons officials found that 57 of the 650 people with a seat in the House of Commons are related to other serving or former MPs. It includes six married couples, 21 MPs whose parents served in the Commons and three pairs of siblings.

The criticism runs that the young dynasts enjoy the contacts, name recognition and – especially in the case of US presidential hopefuls – the financial backing that comes from being part of a well-connected – and established – political family. For Bernard Jenkin, a Conservative MP and son of former cabinet minister Patrick, it is not surprising that so many politicians are following in the family trade but he admits it is not a desirable trend.

> 'Politics is becoming divorced from mainstream public life'

"The point about politics becoming an exclusive Westminster village circle thing is very dangerous," he says.

"I don't resent anyone questioning how families have succeeded themselves in public life. Politics is becoming divorced from mainstream public life – we no longer have a citizens' parliament of the butcher, baker, candlestick maker, who happened to be a member of parliament in their spare time as well. We now have 650 virtually professionally politicians."

John Cryer, a Labour MP whose parents, Bob and Anne, both sat in the House of Commons, says a decline in deference across society means that it no longer impresses candidate selection panels if one has a well-known parent.

But he argues that the idea of children going into the same occupation as their parents is hardly unique to politics: in trades such as coal mining and printing, family connections were far more common.

"When they say there are 57 MPs who have relatives who are or were MPs, I don't think that's a startlingly high figure," he says.

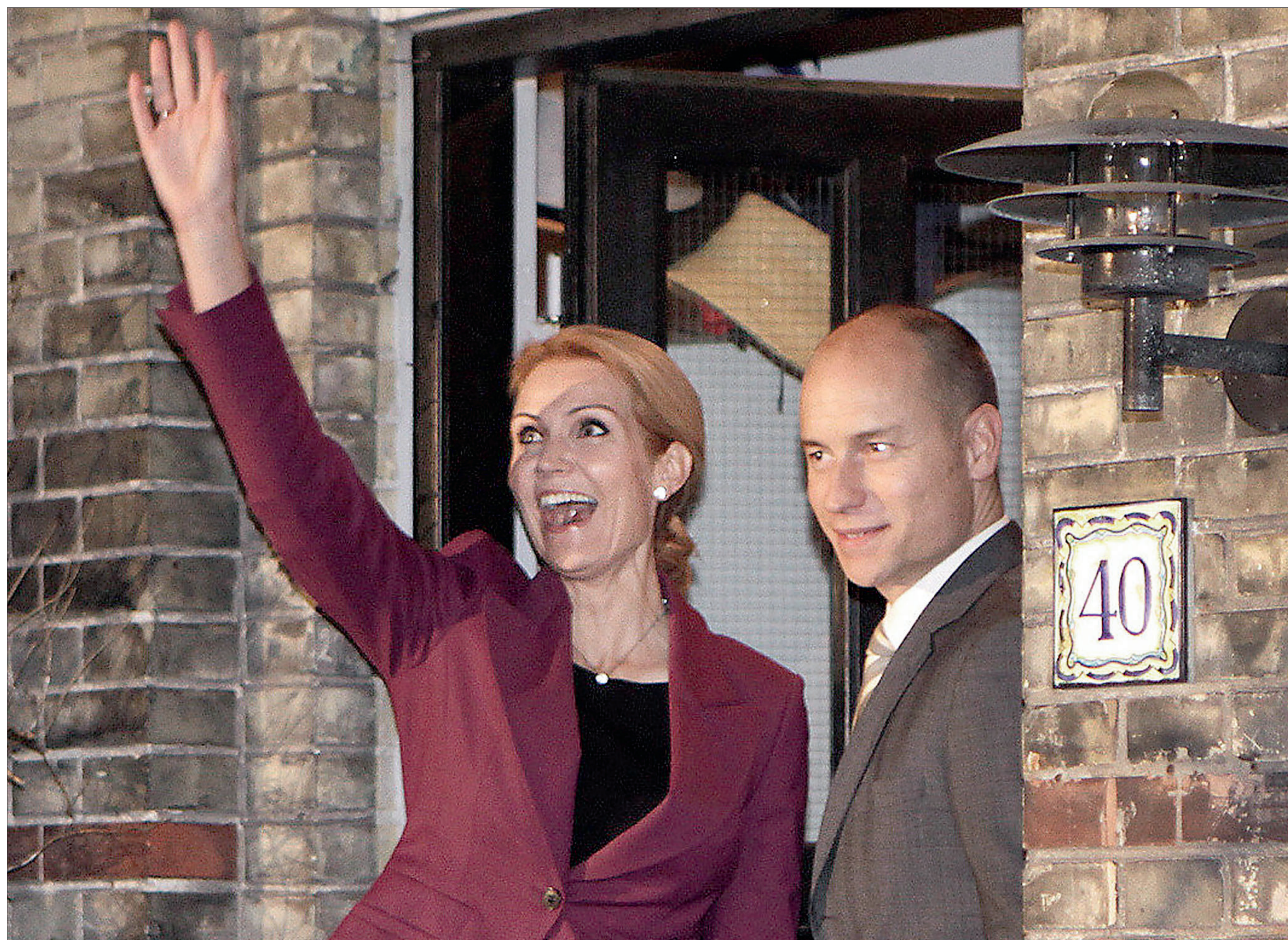
Defenders of political dynasties point to a commitment to public service running through generations, an almost chivalrous notion given full expression in the supposed "Camelot" of the Kennedys.

In business, family-run companies, such as Rupert Murdoch's News Corp, have often been lauded for providing longer-term vision and stability than those with shorter time horizons.

But the idea of family connections buying power still makes the concept an awkward one in pluralist western democracies, especially where it can be shown that it confers an advantage – as with the Bushes or the Clintons – in terms of political connections and vast financial backing.

In 2006, a study of political dynasties in the US Congress found that politicians who held office for more than one term were 40 per cent more likely to have a relative in Congress in the future than other members.

The study drew no conclusion on whether dynasties are good or bad for US governance. Liberals can at least reassure themselves that – unlike the people of North Korea and Saudi Arabia – voters in the west can make up their own minds on that point.




**Hands across the globe: Helle Thorning-Schmidt, Denmark's prime minister, with her husband Stephen Kinnock, son of former UK Labour party leader Neil** Reuters

# Preparation is vital to doing business in danger zones

**Post-conflict**

Security must be at the centre of companies' activities, writes *Adam Palin*

The pursuit of almost any financial opportunity comes with dangers, and investments in post-conflict areas may be accompanied by more than usual.

Companies attracted by the economic potential of politically unstable areas, such as hydrocarbon-rich Iraq and Libya, must place security at the centre of their operations.

However, says Richard Fenning, chief executive of Control Risks, the consultancy, companies focused on narrow business objectives often fail to attach sufficient importance to security matters. While some are overly risk-inhibited, others "remain recklessly blasé about risks they should be cautious of".

Anthony Skinner, director of the Middle East and north Africa practice at Maplecroft, a consultancy, says that since the Arab uprisings that saw the overthrow of Egypt's and Tunisia's regimes. "There is greater awareness and companies are trying to ascertain the stability of regimes and anticipate shifts driven by social change," he says.

The militant attack on an Algerian natural gas facility operated by BP and Statoil in January 2013, which killed 40 people, underlined the need for risk mitigation.

Charles Gurdon, managing director of Menas Associates, a consultancy, cites neighbouring Libya – where a political and security vacuum has prevailed since the collapse of Muammer Gaddafi's 41-year rule in 2011 – as an illustration of how companies can misunderstand the investment dangers.

Violent rivalries between local militias have rendered the elected government in Tripoli powerless. There was great optimism the post-Gaddafi era would herald opportunities, and "lots of companies jumped on the bandwagon and went in without proper knowledge", says Mr Gurdon.

A lack of information has increased the political and security risks that companies have exposed themselves to, he says.

To gain insight and support in post-conflict areas, companies often hire local "enablers", explains Tim Mitchell, managing director of G4S Risk Management. These can offer strategic advice about influential people and systems that may not be transparent.

Engagement with local stakeholders – from community leaders to the wider population – is "a powerful mechanism to mitigate security risk", says James de Labillière, head of war, terrorism and political violence at Hiscox, the insurer.

Demonstrating a positive contribution to communities may be particularly valuable, given the high levels of unemployment – particularly among young men – in post-conflict areas such as Libya.

When political continuity is far from certain, and the situation is highly charged, as in Egypt, Mr Skinner says it is important for companies to avoid overt support for any single political faction to avoid potential repercussions.

A pillar of effective security risk mitigation is the provision of traditional guarding services, offered by companies such as Aegis Defence Services and G4S.

For example, a report by Statoil into the attack on the Amenas plant in Algeria in January 2013 by al-Qaeda-linked militants, found companies may have been over-reliant on Algerian military protection.

But the limitations of physical safety measures are illustrated by the unwelcome presence of private security companies in Libya, says Mr Gurdon. "There are far too many Libyans with arms and not a lot to do; the last thing they want is mercenaries and [private companies] controlling security in the country."

Threats can relate to physical assets – employees and equipment – and non-physical assets – such as contracts and rights – but there are specialist insurers that can cover corporate exposure in danger areas.

Mr de Labillière says that insurance should be considered a central part of the risk management process as it is an area that businesses can have greater control over.

Ed Nicholson, partner in the credit, political and security risk team at Jardine Lloyd Thompson, says brokers will work with companies to lessen any risks associated with an investment.

Products range from kidnap and ransom cover, and accident and evacuation insurance for staff, to insuring a company's physical assets.

When an investment is dependent on finance, bespoke insurance against damage to assets as a result of political violence is usually a requirement, says Mr Nicholson.

Although most companies operating in high-risk areas consult insurance companies at the beginning of their investment, there are some that only consider doing so when it is too late, says Mr Nicholson.

"If you come to insurers [looking for cover] when things are starting to get a little hairy, the answer will usually be 'no'."

**Iraq** Businesses look beyond elections

Despite car bombs and shootings, Iraqis are preparing for the country's third parliamentary elections on April 30.

It is the first national poll since US forces left in 2011, and international companies are also looking to the country's future.

The economy has had strong growth in the past five years but an upsurge in terrorist attacks over the past year has seen civilian casualties rise to 2008 levels. More than 7,800 died in 2013.

"It is ironic, that at a time when the country is under monstrous attack, almost on a daily basis, most of Iraq is growing at 9-10 per cent a year," says Lady Emma Nicholson, executive chairman of the Iraq Britain Business Council.

The trade organisation, which helps businesses enter the country, has expanded to 52 companies, up from 39 in 2011. Members include BP, PwC and Royal Dutch Shell.

Iraq is host to the world's fifth-largest proven oil reserves, which are easy and cheap to extract. International energy companies including ExxonMobil, Total and CNPC, operate fields there. "Many oil majors have a robust attitude towards Iraq because the geology is overwhelming," says Richard Fenning, chief executive of Control Risks.

Other sectors, such as infrastructure and professional services, are following.

For those wanting a presence in this market of 32m people, being on the ground is important. "It is a mistake to believe you can do business at arms-length in the Middle East . . . It needs to be face-to-face," says Lady Nicholson.

Kevin Bolton, principal consultant for crisis consulting at Aon Risk Solutions, says that, despite the cost, security companies are necessary to international companies.

But Mr Fenning says such companies provide no protection from political risks. With deep divisions between Iraq's Shia and Sunni Muslims, it is unlikely, in the short term, that elections will allay investor concerns.

**Adam Palin**

**Well placed: reserves are easy and cheap to extract** AFP

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