

Ineichen Research and Management ("IR&M") is a research boutique focusing on investment themes related to absolute returns.

Regulomics

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- Regulomics stands for more government spending, higher taxes, uncontrolled money supply, and more regulation. Regulomics is the opposite of Reaganomics. The latter was good for investors.
- Legislation, regulation and scholarly finance seek precision where there is uncertainty and transparency where there is ambiguity. The term "risk-free rate of return" is the mother of all oxymorons.
- Applying financial orthodoxy to investment management is dangerous for system and investors alike. Regulation makes the financial system more homogeneous. It is market heterogeneity that is healthy from a systemic risk point of view, not homogenisation and normalisation through governmental intervention. The impact of regulatory change is synchronised behaviour of economic agents and a system that—due to homogenisation—is more prone to accidents. The VAR vicious circle hypothesis can be, well, vicious.
- The introduction of risk-sensitive regulation can result in de-risking. This bears the risk of de-risking the wrong risks.
- The more the well-fare-state building government gets easy money, the more profligate it is likely to become.
- The recent financial crisis was caused by too much debt. The authorities' solution? More debt. The complexity of risk management models was part of the problem. The regulator's solution? More complex models. We ought to simplify.
- Complex regulations will not only require substantial investments, but European insurers will need support from specialized service providers to optimize their investment structures, risk management and reporting.
- European insurers hold \$10.4 trillion in assets of which roughly 7% is in equities. The introduction of Solvency II will favour bonds over equities. Given that 7% of \$10.4 trillion is a lot of money, the regulatory-induced, semi-forced selling of equities could be material. If history is any guide, the selling will be conducted not at the end of a bull market but towards the latter stage of a bear market. Whether tougher capital requirements for insurers will also result in mass redemptions from private equity funds and hedge funds are yet unknown. It's a possibility.

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Alexander Ineichen

May 2011

Regulomics

By Alexander Ineichen

“Some folks are wise and some are otherwise.”

—Tobias George Smollett (1721-1771),
Scottish author

- ***Regulomics is the opposite of Reaganomics. The latter was good for investors.***
- ***Pending regulation is extremely complex. This complexity could well result in the opposite of what is intended: a financial system that is less transparent and runs less smoothly. The impact of regulatory change is synchronised behaviour of economic agents and a system that is—due to homogenisation of the market place—more prone to accidents.***
- ***The introduction of risk-sensitive regulation results in economic agents de-risking. This could impact everything.***

Introduction

Reaganomics—rightly or wrongly—stands for smaller government, less government spending, lower taxes, controlled money supply, and less regulation. The punch phrase from Ronald Reagan was “Government is not the solution to our problems; government is the problem.” Mr. Reagan even made a contribution to the English language by defining the ten most dangerous words: “Hi, I’m from the government, and I’m here to help.” Regulomics is essentially the opposite of that spirit. The current economic period has been called the *new normal* as well as *the age of deleveraging*. Herein we call it Regulomics, which essentially means bigger government, more government spending, higher taxes, uncontrolled money supply, and more regulation.

We don’t know how this will end. However, we do know this. When big government intervenes and the market cannot function properly, small inefficiencies typically turn into big problems. We don’t know exactly the magnitude and the timing of the problem resolving itself, for example the popping of a bubble, but we do know that the chicken eventually comes home to roost. The advantage of a free market that is transparent and liquid is that small inefficiencies do not turn into big problems but are typically corrected early on. The Euro experiment is just one example. A small problem turned into a big one. The proverbial can *can* indeed be kicked down the road for a while longer. However, a major adjustment of some sort will most likely unfold. Lieschen Müller, Harry Holland, Jean Dupont and True Finns won’t carry the PIIGS forever.

“It is well that the people of the nation do not understand our banking and monetary system, for if they did, I believe there would be a revolution before tomorrow morning.”

—Henry Ford

“History repeats itself; that’s one of the things that’s wrong with history.”

—Clarence Darrow (1857-1938),
American lawyer

The UCITS phenomena, covered in our April 2010 report, is another intervention. It is albeit an intervention that is welcomed by parts of the market. After the experience of 2008 many investors were not asking about the return *on* their investments but about the return *of* their investments. UCITS caters to this demand. A regulated product gives certain investors a sense of security. It is also better from a career risk perspective. Losing money with a regulated product is not the same as losing money with an unregulated one. It is well known that investing unconventionally involves career risk. Losing 50% of a 50% portfolio allocation in equities typically does not end an institutional investors' career. Losing 20% of a 5% portfolio allocation in an "alternative" investment can, has, and most likely will continue to end careers prematurely.

When on the topic of regulating financial products it is worth remembering that 84 out of all 85 banking crises unfolded without SPV, CDO, CDS etc.¹

Regulating financial products is just one aspect. The idea is—simplifying a bit—to protect the fish from the sharks, i.e. to "help" people buy financial service products they do not understand. (More formally: asymmetrical information.) A more important aspect of regulation is best described as "systems integrity." Well functioning capital and financial markets are the lubricant that allows the economy to run smoothly. The reason finance is much more heavily regulated than other industries is that market disruptions can have devastating consequences for the whole economy. An administration wanting housing for people who can't afford housing, coupled with cheap money and some skirmishes in the mortgage market resulted in the most severe global and synchronised recession in generations. (Table 1.) The failure of a shoe or cheese producer cannot impair the system's integrity, whereas the failure of a single financial institution can. A single failure, due to the interconnectedness of financial institutions, can indeed result in a systems failure. The societal costs of a systems failure can be enormous, as we now know. Financial regulation is a response to markets not being able to deal with this societal externality on its own; or, more precisely, the belief thereof.

"Worldly wisdom teaches us that it is better for reputation to fail conventionally than to succeed unconventionally."

—John Maynard Keynes

"Regulators get to the point of their incompetence and create the crisis because they fail to regulate, and then use the crisis as the argument for more power, and so now you have the Council of Regulators made up by the very same people who created the crisis in the first place."

—Eliot Spitzer²

Table 1: GDP Year-on-Year Growth Rates (selection)

	2000-		2006			2007				2008				2009				2010				2011
	High	Low	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Median	4.5	-5.9	2.9	2.3	2.6	2.6	2.0	2.5	2.1	1.9	1.0	-0.3	-2.7	-5.4	-5.5	-4.4	-2.0	2.1	1.6	2.7	1.5	n.a.
US	5.4	-4.1	3.0	2.2	2.4	1.3	1.8	2.3	2.3	1.9	1.2	-0.3	-2.8	-3.8	-4.1	-2.7	0.2	2.4	3.0	3.2	2.8	2.3
China	14.0	6.0	11.5	10.6	10.4	14.0	12.6	11.5	11.2	11.3	10.1	9.0	6.8	6.2	7.9	9.1	10.7	11.9	10.3	9.6	9.8	9.7
Germany	4.3	-6.6	3.0	3.2	4.3	3.8	2.6	2.5	1.8	2.7	1.6	0.5	-2.0	-6.6	-5.5	-4.4	-2.0	2.1	3.9	3.9	4.0	n.a.
Japan	2.9	-9.7	0.9	0.9	1.5	2.9	1.7	1.2	0.7	0.2	-1.7	-2.8	-4.2	-9.7	-6.8	-6.2	-3.9	2.7	1.2	2.7	0.6	n.a.
UK	4.5	-5.9	2.7	2.6	2.6	2.6	2.9	2.9	2.4	1.9	1.0	-0.4	-2.7	-5.4	-5.9	-5.3	-2.8	-0.4	1.5	2.5	1.5	1.8
France	4.6	-3.9	2.9	2.3	2.4	2.6	2.0	2.6	2.1	1.8	0.7	-0.2	-2.0	-3.9	-3.1	-2.7	-0.5	1.2	1.6	1.7	1.5	n.a.
Italy	4.1	-6.7	1.8	2.0	2.7	2.3	1.7	1.5	0.0	0.3	-0.5	-1.8	-3.4	-6.7	-6.3	-4.9	-2.9	0.6	1.5	1.4	1.5	n.a.

Source: IR&M, Bloomberg

The authorities attempt to improve the system by making it less prone to accidents and failure is laudable. However, the attempt to eliminate failure entirely is not. Failure is an elementary part of learning and therefore progress. Many frogs fell flat on their nose and many died before the frog's strong legs evolved and allowed it to jump about as they do today. This trial and error, i.e. the process of natural selection worked very well for the system "frog" even if it didn't work out for every single frog and frog-predecessor that ever lived. The same is of course true for the system "financial markets." Single market participants need to be able to

"Good judgment comes from experience, and often experience comes from bad judgment."

—Rita Mae Brown, American writer

¹ The Warwick Commission on International Financial Reform: In Praise of Unlevel Playing Fields, The University of Warwick, 2009.

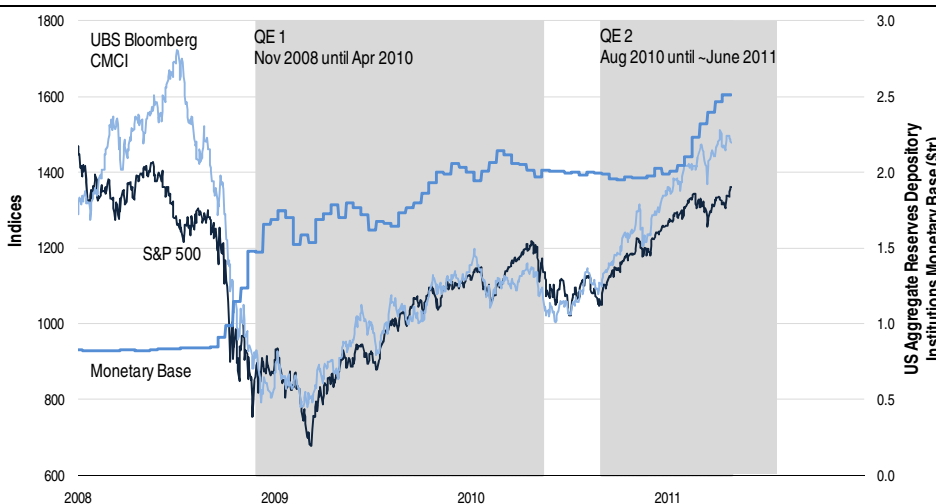
² Lunch with the FT: Eliot Spitzer, 30 September 2009

fail. It's part of trial and error, or evolution, or the "learning by doing" dictum. Losses and failure are a harsh, but also the most astute and pragmatic teacher. Small losses or the failure of single entities is essentially good for the system as it makes it stronger.¹ Surviving entities and those who can keep their capital base intact learn from the mistakes of those who have failed; one would expect.

Under Regulomics this process is disturbed and capital misallocated as a result. One reason for this process being disturbed is the interconnectedness of financial institutions mentioned earlier. Some are literally too big to fail. The societal costs of failure are too high; or are perceived as too high by those in power and their masters. But abandoning single entity failure through governmental intervention not only rewards failure but also disturbs the systems' ability to improve and progress and to allocate capital smoothly and efficiently. It's a perverted form of Robin Hood's code (of stealing from the rich and giving it to the poor); essentially giving to the profligate, reckless and failed by taking from the frugal, diligent and successful. By artificially eliminating single entity failure the system is weakened and the system's complete failure becomes inevitable. Something that cannot go on forever won't. Herbert Stein's Law applies.

Note that government intervention and central bank "assistance" is not all bad and has indeed short-term benefits. Banks' balance sheets are being reflatd through artificially creating a steep yield curve which arguably is a positive. Shareholders currently must appreciate abundant liquidity too because without it, equities wouldn't be rising. (Chart 1.) As soon as QE 1 was finished, equities fell; hence the introduction of QE 2 and current discussions/hope for QE 3. A similar statement could be made for the commodities complex. Correlation to equities, as the chart shows graphically, demonstrably and illustratively, has been very close to one recently. The cause is the expansion of the monetary base. QE is the drip that keeps the patient alive.

Chart 1: Expansion of US monetary base with impact for equities and commodities



Source: IR&M, Bloomberg
 QE: quantitative easing; 28 April 2011 inclusive.

¹ Both Goethe and Nietzsche are quoted saying something along the lines of "What doesn't kill me makes me stronger." The concept of learning by making mistakes is of course much older than a couple of hundred years. However, survival is a prerequisite for learning from mistakes. Using a hair blower in the bathtub for example is a mistake but the benefits from the learning-by-doing experience can be rather short lived.

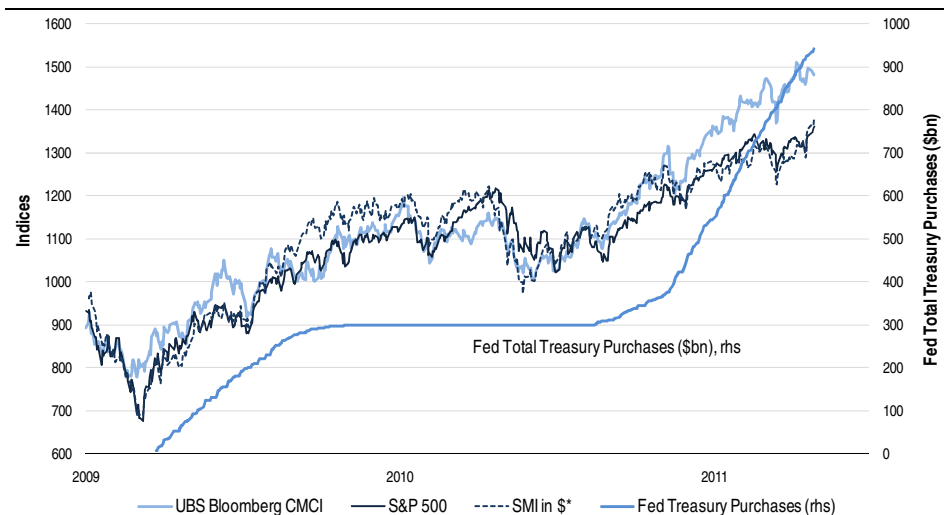
"Education is an admirable thing, but it is well to remember from time to time that nothing that is worth knowing can be taught."
 —Oscar Wilde

"Stock market bubbles don't grow out of thin air. They have a solid basis in reality, but reality as distorted by a misconception."
 —George Soros

"Blessed are the young for they shall inherit the national debt."
 —Herbert Hoover (1874-1964), US President from 1929-1933

Another way of showing the life preserving drip is by comparing equities and commodities in relation to the Fed's purchases of Treasuries. See Chart 2. We have added the Swiss Market Index (SMI) in US\$ as an example to demonstrate that when measured in falling US\$, everything seems to "rise" in a synchronised fashion.

Chart 2: Fed Treasury purchases with impact for equities and commodities



Source: IR&M, adapted and modified from Bloomberg Brief: Economics, 7 Apr 2011

* SMI in \$ divided by 5.4 to fit scale of y-axis; 28 April 2011 inclusive

Fiat money and uncontrolled money supply is part of Regulomics but not the main part of this publication. Adam Smith and Voltaire already made all the relevant points ages ago. Adam Smith: "The problem with fiat money is that it rewards the minority that can handle money, but fools the generation that has worked and saved money."

Note here that the old definition of "inflation" is the increase of the money supply. Only newer definitions of inflation refer to it as "a rise in the general of prices of goods and services".² (Old) inflation is caused by an increase in the money supply in excess of any corresponding increase in goods and services for sale, resulting in the devaluation of the currency. When people talk about inflation nowadays, they typically mean *price inflation*, e.g. the price of goods and services going up. However, rising tomato prices is caused by supply and demand for tomatoes. (Old) inflation (sometimes referred to as monetary inflation) results in price inflation with a lag and is a hidden tax.³ The people responsible for causing old inflation have an incentive to sugar-coat it a bit; hence the new definition, the

¹ The US\$ already has lost 95% of its value since the Fed was formed in 1913. President Woodrow Wilson on signing into law the Federal Reserve Act: "I am a most unhappy man. I have unwittingly ruined my country. A great industrial nation is controlled by its system of credit. Our system of credit is concentrated. The growth of the nation, therefore, and all our activities are in the hands of a few men. No longer a government by free opinion, no longer a government by conviction and vote of majority, but a government by the opinion and duress of a small group of dominant men."

² Henry Hazlitt, author of *What You Should Know About Inflation*, wrote: "Inflation is not a scientific term. It is very loosely used, not only by most of us in ordinary conversation, but even by many professional economists. It is used with at least four different meanings: 1. Any increase at all in the supply of money (and credit). 2. An increase in the supply of money that outruns the increase in the supply of goods. 3. An increase in the average level of prices. 4. Any prosperity or boom. Let us here use the word in a sense that can be widely understood and at the same time cause a minimum of intellectual confusion. This seems to me to be meaning 2."

³ Note that (old) inflation can cause *price deflation* in the short term through demand destruction, e.g. if prices for food and energy rise, demand for other items in the consumer's basket can fall.

"The advocates of public control cannot do without inflation. They need it in order to finance their policy of reckless spending and of lavishly subsidizing and bribing the voters."

—Ludwig von Mises

"At the end fiat money returns to its inner value – zero."¹

—Voltaire

"If the governments devalue the currency in order to betray all creditors, you politely call this procedure 'inflation'."

—George Bernard Shaw

introduction of hedonistic adjustments, or the focus on gauges that exclude items where prices are going up, i.e. “core” inflation.¹ (Alternatively, there are always hedge funds to blame when prices rise.) The old definition was a bit blunt, as it pointed the finger at the governing authorities; Joe Public could easily put the blame squarely where it belonged. Asset inflation is also part of old inflation; after all, the newly minted money has to go somewhere.² Fiat money allows the governing authorities to control the economy via the supply of money. The optimists’ view is that the governing authorities know what they’re doing.

* * *

The aim of this report to explore the implication of regulatory change with a particular focus on Solvency II—often dubbed Basel II for European insurers—for the absolute returns investor and the industry.

The insurance industry arguably faces some challenges; longevity, changes in accounting standards, increased regulatory and capital requirements, heightened economic and regulatory uncertainty, etc. Solvency II related issues are not yet a hedge fund topic neither is it a topic of global interest. However, it should be.

“CEOs and, in many cases, directors have long benefited from oversized financial carrots; some meaningful sticks now need to be part of their employment picture.”
—Warren Buffett³

¹ Annual price inflation in the US to February 2011 from John Williams’ shadowstats.com, which is based on reporting methodology in place before 1980, stood at 9.6%.

² At the time of writing, the money multiplier and money velocity in the US were low and falling. All the cash was/is with the banks.

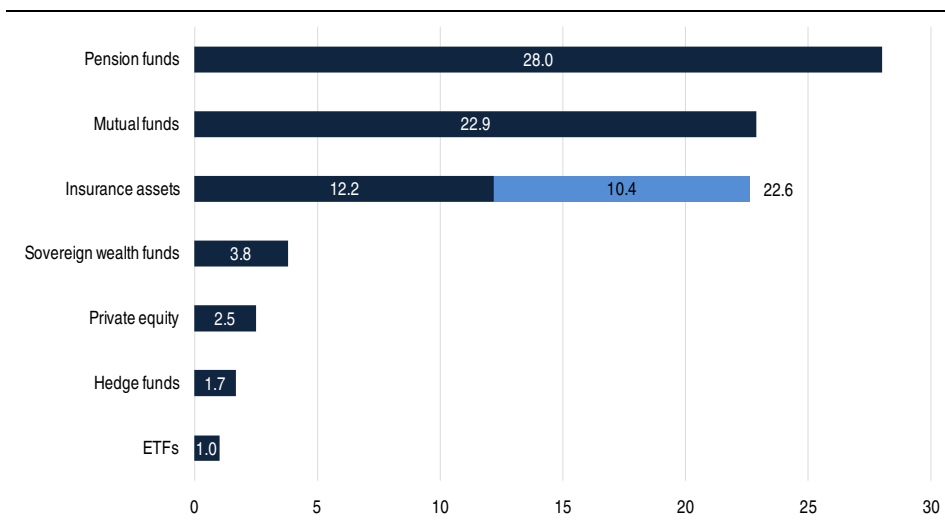
³ Berkshire Hathaway, 2009 letter to shareholders, 26 February 2010. Emphasis in the original.

European insurers

According to Swiss Re, the global insurance assets under management at the end of 2009 were \$22.6 trillion of which \$10.4 trillion were managed by European insurers (Chart 3). This means European insurers are a market heavyweight and their habitat is changing. The potential impact on supply and demand of nearly all asset markets from these changes needs to be assessed and, ideally, understood. The largest player in Europe is the UK (\$2.5 trillion), followed by France (\$2.3 trillion), Germany (\$1.3 trillion) and Italy (\$0.7 trillion).

European insurers can move markets

Chart 3: Global fund management industry, assets under management, 2009, \$ trillion



Source: IR&M, data from TheCityUK (Fund Management 2010) and Swiss Re (Sigma 5/2010)

The \$10.4 trillion industry was split into \$8.5 trillion belonging to life-insurers (81.5%) and \$1.9 trillion to non-life insurers (18.5%). Insurers traditionally are perceived as long-term and conservative investors, of which the latter point can be debated, as it depends heavily on how conservative is defined. Both life and non-life insurers hold most of their assets in government and highly-rated corporate bonds.¹ Despite some geographical differences non-life companies, generally speaking, hold proportionally more cash and equities while life companies hold more loans and fixed income instruments and less cash in their general accounts.

Insurers like bonds

Insurers manage assets based on MPT (Modern Portfolio Theory) and ALM (Asset Liability Management). Given that PPMPT (Post-post-modern-portfolio theory: essentially a common sense approach to institutional money management)—as presented in Ineichen (2010)—has not yet replaced MPT, there's not much else insurers can use than MPT which will celebrate its 61st birthday when Solvency II is implemented in 2013.² We still believe that many viable investment choices do not fit very well into a mean-variance optimiser and, more importantly, equating risk with volatility instead of uncertainty is ill-advised and dangerous to investors and system alike. Furthermore, many investors add many modifications to the data and add constraints and risk tolerances to the model. In other words, the input variables are fiddled around with until the output (the portfolio weights) is roughly in line with one's preconceptions prior to fiddling around with the data. Below is a quote from Knut N. Kjaer (2011) which summarises large parts of our research over the years in just one paragraph. This paragraph is common sense at its best.

“Common sense is the very antipodes of science.”

—Edward B. Titchener (1867-1927),
English psychologist

¹ Sigma No 5/2010

² We casually assumed the publication of Markowitz's paper in the *Journal of Finance* in 1952 as the birth of MPT.

The financial markets are complex and fragile networks characterized by adaptivity and reflexivity, and decision makers must cope with real uncertainty (unknown probability distributions). To be successful in risk and asset management, investors must guard against behavioral deficiencies, not only in a fund manager but also in a fund's own decision-making structure. Success entails being absolutely clear when defining the purpose of risk taking, the risk appetite, and the ownership of the risk-related decisions. It also requires making predefined decision rules to cope with stress events, avoiding the worst outcome, building more robust portfolios, and using alternative investments appropriately. Portfolio and investment complexity must be aligned with an investor's own competence and professionalism.¹ And a robust risk framework must be built that encompasses these objectives and is anchored at the top of the organization. Risk management and strategic asset management are essentially two sides of the same coin.

Because insurers must evaluate investments in the context of their insurance obligations, MPT only partially meets their needs. ALM provides the broader perspective that insurers need when investing. ALM is an ongoing process of devising and implementing strategies related to liabilities as well as assets to achieve financial objectives on a given set of risk tolerances and constraints. Swiss Re calls ALM the *sine qua non* of insurance asset management.²

ALM is the *sine qua non* of insurance asset management

Cash flow matching and interest rate management

Two key concepts of ALM are cash flow management and interest rate risk management. Matching cash flows is an important aspect because an insurer must ensure that its cash flows from the assets are sufficient to meet its obligations on the liability side. In theory, an insurer's liabilities can be perfectly matched by a bond portfolio where the bonds mature at exactly the times when its liabilities fall due. However, both the cash flows from the assets as well as the level of insurance payments are uncertain. Hence, cash flow matching cannot be precise.

In theory, liabilities can be matched with a bond portfolio

There is a trade-off: The more precise the cash flow matching ought to be, the higher the allocation to government bonds. The trade-off is that the higher the allocation to government bonds, the lower, obviously, the allocation to other, potentially, higher yielding assets and strategies. We believe this to be the consensus: The higher the risk, the higher the return. After all, investors are assumed to be rational and to only bear higher risk if they got compensated for it. We believe the consensus to be wrong, or, if not wrong, then at least misleading for three reasons discussed in the next section below. The assertion whether "risky" investments are more risky depends very much on the definition of risk. Assuming risk is equal to

"If you can't annoy somebody there is little point in writing."
—Kingsley Amis (1922-1995), English novelist and critic

- non-survival or negative compounding over ten years (essentially the perception of risk to the absolute returns investor), or
- underperforming a market or liability benchmark, or
- being tarred, feathered and publically exposed by the local regulator, or
- perceiving risk as volatility of returns or some ambiguous VaR measure

¹ This sentence is an important element of what we called PPMP (Post-post-modern-portfolio-theory) in Ineichen (2010). We address complexity in more detail later in this document.

² Sigma No 5/2010

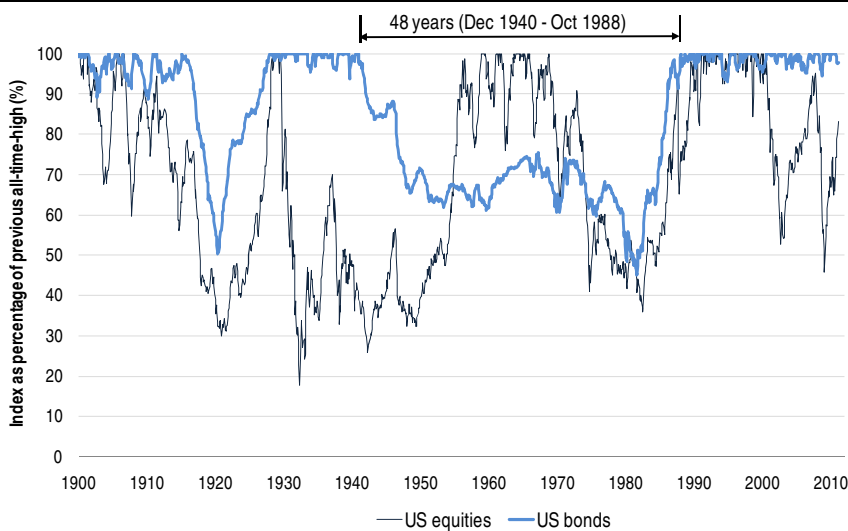
can result in materially different conclusions as to whether investment A is more or less risky than investment B. The consensus is that equities are more risky than bonds. However, if we define risk as time spent under water in real terms, bonds are more risky than equities. See Chart 4 below. All investments are speculative. As is so often the case when *human action* is involved, Ludwig von Mises already made the point a couple of decades ago:

There is no such thing as a nonspeculative investment. In a changing economy action always involves speculation. Investments may be good or bad, but they are always speculative. A radical change in conditions may render bad even investments commonly considered perfectly safe.¹

“A safe investment is an investment whose dangers are not at that moment apparent.”

—Lord Bauer (1915-2002), Austria-Hungary born economist and advisor to Margaret Thatcher

Chart 4: US equities and bonds under water (Jan 1990 – Mar 2011, real total returns terms)



“There can be few fields of human endeavor in which history counts for so little as in the world of finance.”

—John Kenneth Galbraith

Source: IR&M, Global Financial Data, Bloomberg

Equities: S&P 500 TR Index, estimate prior to 1988; bonds: BarCap US Aggregate TR Index, estimate prior to 1976. Indices adjusted with CPI.

- Bonds can spend a long time under water. Whether it is charts like these that influenced Bill Gross’ mass liquidation of Treasuries, announced in March 2011, we don’t know. He arguably has a point in asking “who will buy Treasuries when the Fed doesn’t.”
- The 48 year period to October 1988 in the chart is outside of most investor’s memory and VaR-enthusiasts as well as disciples of the long-only-buy-and-hold doctrine don’t think this is a big deal. Professor Galbraith was certainly on to something in the side text above.
- Equities can spend a long time under water too.

Bottom line

Legislation, regulation and scholarly finance seek precision where there is uncertainty and transparency where there is ambiguity. Terms such as “unambiguous legislative drafting” or “transparent political solution” (or just “political solution”) seem oxymoronic; like “political science” or “Congressional ethics” or “exact estimate” or “united nations” or “social security” or “airline food” or “debt ceiling” or “deficit-cutting plan” or—most importantly of all, arguably the mother of all oxymoronic terms in finance—“risk-free rate of return.”

“The free market punishes irresponsibility; government rewards it.”

—Harry Browne (1933-2006), American libertarian writer and politician

¹ Mises (1996), p. 517.

Absolute returns and risk – Beware of white tigers

1. ALM is about absolute returns and relative value

We believe that institutional investment management has slowly moved from a relative return approach towards an absolute return approach. The difference between the two approaches or investment philosophies is depicted in Table 2.

Table 2: Difference between relative return and absolute return model

	Relative-return models		Absolute-return model
	(Indexing)	(Benchmarking)	
Return objective	Relative returns		Absolute returns
<i>General idea is to</i>	<i>Replicate benchmark</i>	<i>Beat benchmark</i>	<i>Exploit investment opportunity</i>
Risk management	Tracking risk		Total risk
<i>General idea is to</i>	<i>Replicate benchmark</i>	<i>Beat benchmark</i>	<i>Preserve capital</i>

Source: Ineichen (2001)

The return objective of a relative return manager is determined by a benchmark. An index fund aims to replicate a benchmark at low cost while a benchmarked manager tries to beat the benchmark. In both cases the return objective is defined relative to a benchmark, hence the term “relative returns”. An absolute return approach—in our opinion—does not have as its goal the beating of a benchmark index. The goal is to achieve absolute returns by exploiting investment opportunities while staying alive; i.e. compounding capital positively over time.¹ We would classify a benchmarked “long-only” approach under “relative-return model” and for example a “relative value” strategy seeking absolute returns under “absolute-returns model.” The big difference between the two is that *total risk* (as defined in Table 2) is uncontrolled with the former, as it is determined by the choice of benchmark, while total risk is controlled with the latter. Managing tracking risk or total risk is arguably very different.

Like many investors, insurers were enlightened when equities went into freefall post the TMT bubble bursting some ten years ago. The enlightenment was that getting the beta wrong was much worse than getting the alpha wrong. If liabilities increase and assets fall by 20%, capturing 20 basis points of alpha is actually not such a big deal. As we have elaborated before, it was mainly free falling equities that put hedge funds and absolute returns on the agenda of institutional investors. However, we continue to believe that alpha is the small story of all of this while active risk management is the big story; the game changer. Getting beta wrong is a big deal as it is measured in percentage points while getting alpha wrong not so much, as it is measured in basis points. Since we believe (and have elaborated ad nauseam) that hedge funds and absolute return investing is directly related to active risk management, it is essentially free falling equities that put risk management on the agenda of the institutional investors and regulators.²

¹ See Ineichen (2010) or earlier scribbling for more colour.

² One is tempted to make the argument that risk management should be on the agenda prior to an accident. However, as elaborated in our April 2010 piece, “learning by doing” is an extremely powerful concept with wide applicability among investors and legislators/regulators alike.

Absolute returns are important in institutional asset management too

Trying to compound capital positively is materially different from trying to outperform a benchmark

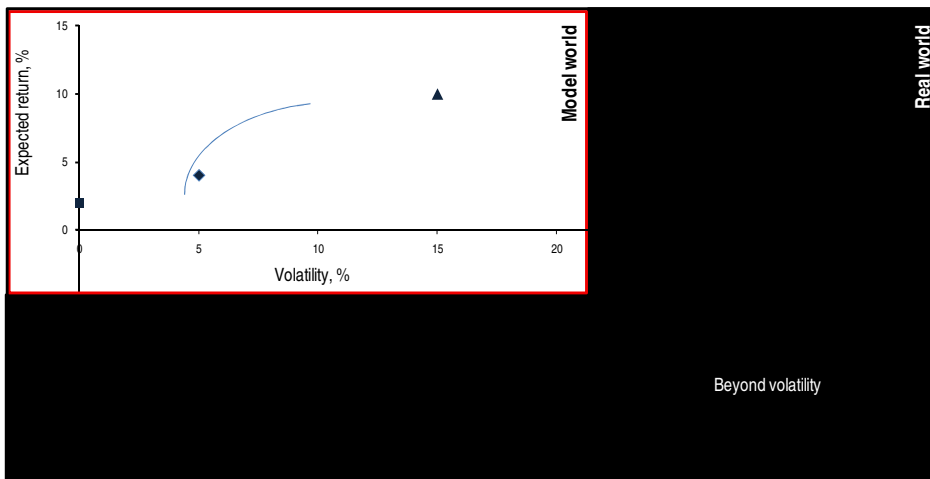
Declining equities put hedge funds and therefore active risk management on the institutional agenda

An ALM approach is essentially a relative value strategy. The assets are the long book and the liabilities are the short book. The idea is to compound capital positively over time by the long book outperforming the short book. If liabilities rise, the assets need to rise by more; if liabilities fall, assets need to fall by less. In other words, not only are banks hedge funds; at one level, insurers are “hedge funds” too.

2. Thinking of volatility as risk is dangerous

Harry Markowitz in the 1950s used volatility as a proxy for risk, well aware of its shortcomings; the main shortcoming being that it makes no difference between positive and negative returns while the investor’s utility from the former is materially different than the investor’s utility from the latter. Using volatility as a proxy for risk allowed Mr Markowitz to prove an old idea with mathematical precision, namely the old idea of not putting all of ones eggs in one basket.¹

Chart 5: Model world versus real world



Source: Ineichen (2010)

The financial crisis has added more question marks about the role and practicability of financial economics (MPT, CAPM, correlation coefficients, etc.). Chart 5 is an attempt to visualize what we believe is becoming apparent to more and more market participants: There is a big difference between the model world and the real world. The model world was always the model world and everyone knew it. However, the difference between the model and real world is so large that one is probably better off ignoring the former (in its current form) in its entirety. As side-texted on page 10, US economist J.K. Galbraith’s brought it to the point: “There can be few fields of human endeavour in which history counts for so little as in the world of finance.” For believing that an equity long-only strategy is *investment panacea* one has to ignore nearly all economic systems that have failed. A long-only strategy implies indifference to large drawdowns. Chart 5 shows conceptually that real risk is “beyond volatility” and that asset classes can indeed compound negatively for a very long period of time. Peter Bernstein’s “inescapable darkness of the future” is shown in black.

¹ On page 6 of *Portfolio Selection*, Markowitz (1959) states in a footnote when discussing the trade-off between return and risk: “In later chapters we must give precise definitions to terms such as ‘likely’ and ‘uncertainty.’ For the present we may leave them as rough, intuitive concepts.” We actually like concepts that are intuitive, even if they are rough. Speculating a bit: MPT could be the beginning of financial economics orthodoxy trying to square the circle; aiming for precision where no precision is warranted; even dangerous and misleading to investors and system alike.

² Von Mises (1996), p. 871.

ALM is a relative value strategy

“All great truths begin as blasphemies.”

—George Bernard Shaw

“If it were possible to calculate the future state of the market, the future would not be uncertain. There would be neither entrepreneurial loss nor profit. What people expect from the economists is beyond the power of any mortal man.”

—Ludwig von Mises²

“Remember always: Risk is not about uncertainty but about the unknown, the inescapable darkness of the future.”

—Peter Bernstein

Regulatory and accounting frameworks such as Solvency II (or Basel III, IV, and potentially V too) need to build on the scientific consensus. What else? If the “scientific consensus” turns out to be wrong then the framework still needs to be on a scientific footing. Again, what else? The tool of the technocrat is science, not thought. The tool of the bureaucrat is to listen to the technocrat, so quite often the end result turns out not being very thought-through or thoughtful. In business, those with the responsibility have a strong incentive to be *managerial correct* which means handing down responsibility to those who have scientific credibility (even if the gut suggests otherwise). As Keynes put it:

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back.

Too large a proportion of recent ‘mathematical’ economics are mere concoctions, as imprecise as the initial assumptions they rest on, which allow the author to lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols.¹

In politics, *political correctness* dictates going with the scientific consensus too. Regulatory and accounting frameworks are political constructs. Assuming for a moment we are correct in arguing that they are built on false theories and axioms, the effect will be a transfer of wealth from those who are wrong to those who are right. That’s what markets do; they punish the foolhardy and reward the savvy. Seeking truth, therefore, is a profitable endeavour, not a political one. Capital is transferred from approaches that work only in theory to approaches that work in both, theory and practice. (The European Monetary System [ERM, essentially the predecessor of the current EMU] was at best a good idea in theory only.) One need not be an Ayn Rand glorifying market fundamentalist or Austrian laissez-faire libertarian to acknowledge that it is the speculator and investor who are the true seekers of truth, not the legislator, the regulator or the advising theoretician.

Imagine for a moment two hypothetical artists taming white tigers and making a show out of it in the gaming and entertainment metropolis of the world, Macao. Such a venture can go well for a very long time. Risk is obviously not measured by volatility; risk is system-inherent and is “measured” by the probability of an “accident” of the system. Tigers are beasts and even if one builds up a high degree of conviction that the system is safe; it isn’t. Accidents lurk in all man-made (and natural) systems. There is uncertainty. Markets can erase investors’ wealth overnight (for example when socialists/communists land a successful coup), asset classes can compound negatively for decades, sovereigns can default on their obligations, monetary authorities can inflate ones’ wealth away (together with someone else’s debt), currency unions can fail, etc. We believe it is uncertainty that is the proper way to think about risk and the management thereof. However, this is not at all in the mindset of the bureaucrats and technocrats drafting legislation and regulation of our financial institutions. Confusing uncertainty with volatility is like mistaking a white tiger for a pussy cat. It’s irresponsible and dangerous.

“If a million people say a foolish thing, it is still a foolish thing.”

—Anatole France (1844-1924),
French writer

“The truth is found when men are free to pursue it.”

—Franklin Roosevelt

“The more corrupt the state, the more numerous the laws.”

—Cornelius Tacitus, Roman historian
and senator

¹ The General Theory of Employment Interest and Money (1935)

3. The equity risk premium idea is dangerous too

If equities were always to outperform bonds, then why should we consider equities as more “risky”? Japanese equities have been compounding at a rate of around -5% per year on a nominal total returns basis since 1990 whereas government bonds have been compounding at around 4-5% over the same time span.² In other words the sign is reversed and there is no such thing as an equity risk premium.³ Note that compounding at -5% over twenty years brings an investment of 100 to 36 whereas compounding at 5% brings the initial investment to 265.⁴ (So the sign before the compounding rate, the “-”, has a rather material long-term impact on ones financial (and probably mental) health.) This is a rather big difference. The whole notion of equities outperforming bonds rests on the empirical fact of a couple of stock markets outperforming bonds in the very long-term. However, it could well be that this “long-term” is too long to be of any value for practitioners making investment decisions under uncertainty.

What we are trying to say is that equities are indeed more risky; but assuming they are more risky *and* will outperform bonds in the long-term is ill-advised. We could expand on this idea. Investments in government bonds seek to capture the sovereign default risk premium, investments in corporate bonds seek to capture the credit spread, investments in private equity seeks to capture the equity risk premium adjusted for leverage plus an illiquidity and complexity premium etc. These ideas in combination with the belief one cannot time the market have resulted in the long-only, buy-and-hold paradigm of the past couple of decades. This was supported by the idea that time diversifies risk, an idea we also believe is wrong and very much dependent on how risk is defined. If risk is defined as being exposed to a serious accident or non-survival then time clearly increases risk. The probability of San Francisco being flattened by an earthquake within the next 50 years is much larger than San Francisco experiencing a natural disaster within the next 50 days. We address time diversification in the next section.

Bottom line

Applying financial orthodoxy to investment management is dangerous for system and investors alike.

“We’ve reached a funny position where the long run doesn’t work. Where long-run evidence doesn’t fit circumstances as they are today.”

—Peter Bernstein¹

“If you give a pilot an altimeter that is sometimes defective, he will crash the plane. Give him nothing and he will look out the window. Technology is only safe if it is flawless.”

—Nassim Taleb⁵

“Read the small print, and follow your instinct.”

—Aston Martin advertisement

¹ “Throw Out The Rulebook!” Interview with Peter Bernstein, welling@weeden, Vol. 5, Issue 4, 28 February 2003

² The broad Bank of America Merrill Lynch Japanese Governments Index compounded at 4.25% per year from Jan 1985 to March 2011, which might or might not seem counter-intuitive, given where yields have been the past couple of years.

³ Dimson, Marsh, and Staunton (2010) show an equity risk premium over bonds for Japan to 2009 of -7.8% since 2000, of -5.0% since 1985, of -0.8% since 1960, and +5.1% since 1900. So if an investor in the Meiji Period favoured equities over bonds throughout the Taisho Period, the Showa Period, the current Heisei Period until today, then yes, the investor would indeed have picked up the equity risk premium.

⁴ If Japanese equities start compounding at 5% per year while bonds compound at 1% for an equity risk premium (ERP) of 4%, a 2% ERP will have materialised around 2076 for the 1990 to 2076 period while a 3% ERP will be captured by around 2153 for the 1990 to 2153 period. Note that this is the bullish assumption. Japanese equities could also continue compound at an annual -5%. Mean reversion is a powerful concept in finance. However, it might only apply to societies with their demographics intact, i.e. growing populations. The ERP idea could well be regime specific.

⁵ Taleb (1997)

Time diversification and risk measurement

The practical relevance of these issues addressed above is that if regulatory bodies force certain market participants to behave in a certain (synchronised) fashion, and it turns out that this “forced-upon-fashion” is ill-advised in the prevailing market environment, then it is the “certain market participant” with his share and stakeholders who will be punished for the regulatory folly. This is what markets do; not occasionally but relentlessly: punish folly. This is also the reason why a certain type of politician wants to limit market forces. If you are a (hypothetical) politician and you want your flock to buy your bonds and you only want to pay them 5% when the markets thinks 10% is more appropriate given current circumstances, then by definition you won’t be a libertarian advocating free markets, light regulation and lean government.

Two misconceptions touched upon above are the idea of time diversification and the danger of confusing risk measurement and risk management. Regulatory frameworks are built on the scientific consensus, as mentioned earlier, and the consensus is that time diversifies risk. In addition, regulators are being advised by the scholars of finance who write books on risk management and not practitioners who steer skillfully through financial tsunamis. Nearly all our books with “risk management” on the dust jacket are on risk measurement. However, nearly all the monthly and quarterly investor letters from absolute return managers are on risk management in the real world. We find the difference between risk *measurement* and *management* to be rather material.

Time diversification

Over the past 20 years or so there has been a debate as to whether time reduces or “diversifies” risk or whether risk is amplified when the investment horizon is lengthened; sometimes referred to as the *time diversification controversy*. We believe the consensus on the topic is the former, i.e. the idea that time indeed diversifies risk. The premise of investing for the long run in a long-only buy-and-hold fashion is that short term volatility is ironed out in the long run. This is true if risk is defined as volatility (annualised standard deviation of returns). The logic is that if one has an investment horizon of 25 years or longer, one has the time “to sit it out,” i.e. can recover from large dislocations. In addition, equities have a higher probability of outperforming government bonds over 25 years when compared to outperformance probability over one year. Many institutional investors have the financial stability and liquidity to handle a downturn in the market even with a large allocation to long-only equities. For these plans, any amount not invested in equities simply reduces the long-term growth of assets with no offsetting benefit.

We believe time amplifies risk. It is true that the annual average rate of return has a smaller standard deviation for a longer time horizon. However, it is also true that the *uncertainty* compounds over a greater number of years. Unfortunately, this latter effect dominates in the sense that the total return becomes more uncertain the longer the investment horizon. The logic here is that over the longer term, more bad things can happen and the probability of failure (i.e., non-survival) is

“To some degree this is a battle between the politicians and the markets... But I am firmly resolved—and I think all of my colleagues are too—to win this battle... The fact that hedge funds are not regulated is a scandal.”

—Angela Merkel¹

“There is no safety in numbers, or in anything else.”

—James Thurber (1894-1961),
American author

“The long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in the tempestuous seasons they only tell us that when the storm is past the ocean will be flat.”

—John Maynard Keynes²

The long term is nothing else than many short term periods adjoined together

¹ Reuters 6 May 2010.

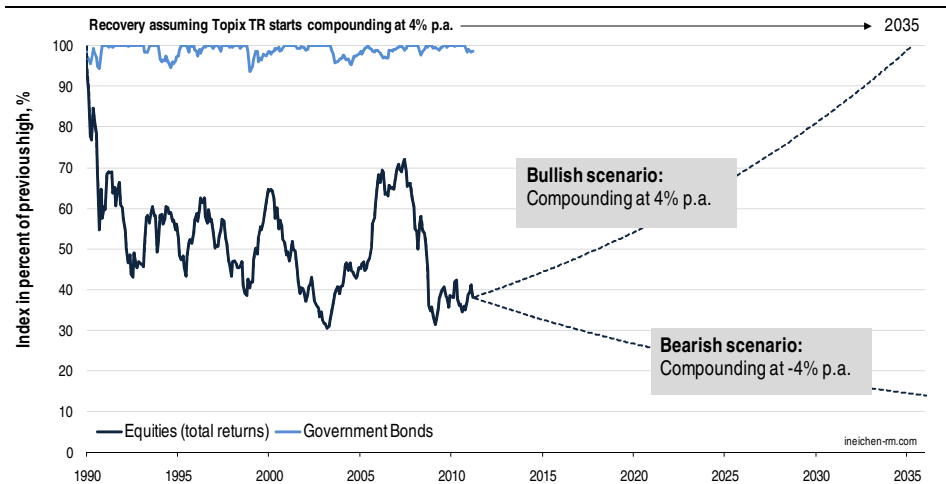
² A Tract on Monetary Reform (1923)

higher. If accidents happen in the short term, one might not live long enough to experience the long term. After all, the *long term* is nothing else than many *short term* periods adjoined together.

Chart 6 is a drawdown chart (showing loss as percentage of previous all-time high) and shows a Japanese equity and a bond index with two possible future scenarios for equities. The first dotted line assumes the Topix Index starts compounding at 4% per year. In such a scenario the index would reach its all-time-high from December 1989 around the year 2035.

Compounding capital negatively over many decades is a possibility

Chart 6: Equities and bonds in Japan (Jan 1990 – Mar 2011 with two trajectories for equities)



Source: Ineichen Research & Management, Bloomberg

Equities: Topix Index shown in percent of all-time-high December 1989 based on monthly data (January 1990 to March 2011). Trajectories are based on annual compounding of 4% and -4%. Government bonds: Bank of America Merrill Lynch Japanese Governments Index.

Equities are expected to rise in the long run, i.e. time is supposed to diversify/reduce risk. However, from January 1990 to March 2011 the Topix TR (total returns) Index compounded at an annual rate of -4.4%. That's the trend. The second trajectory in Chart 6 shows the index assuming compounding continues at -4% per year. In theory, buyers should come in when there are valuation differences. In practice, the theory doesn't seem to hold up very well. We do acknowledge that mean reversion is one of the most powerful concepts in finance (dead cats nearly always bounce). However, it doesn't always seem to work. Or it might take too long to be a practical concept to bet on. There is uncertainty regarding the reversion to the mean.

“The proof of a theory is in its reasoning, not in its sponsorship.”
—Ludwig von Mises

Value investors have been pointing out for years that the Japanese stock market is cheap. However, stocks (as well as everything else for that matter) only go up if the buyers are more powerful than the sellers. If there are no buyers, share prices do not rise, irrespective of their valuation or the “sentiment” among investors.¹ This lack of buying could be due to long-term changes in demography. Demographic changes are a game changer. Increased longevity, falling birth rates, and early retirement mean dependency ratios of many industrialised countries particularly in Europe and Japan are set to rise over the next half century.

“In all affairs it's a healthy thing now and then to hang a question mark on the things you have long taken for granted.”
—Bertrand Russell

¹ We're simplifying a bit. While the Japanese market is cheap in relation to book values, the returns on capital are often very low, and the market therefore can be perceived as *fundamentally* unattractive. Nevertheless, at the time of writing, more and more hedge funds were getting bullish on Japanese equities. Foreign participation in the stock market has been increasing. However, a bottom has been called many times before.

Changing demographics and rising liabilities are beyond the scope of this report. However, Niels Jensen, author of the Absolute Return Letter, put it nicely in a nutshell:

Ageing related liabilities are a monster we have to deal with for many years to come. Demonstrating a lack of responsibility which defies belief, policy makers continue to more or less ignore the problem. Meanwhile, many countries are getting sucked into a deflationary spiral which only makes the problem worse – in fact much worse. Adding to that the likelihood of life expectancies continuing to be extended (a one year extension translates into an increase in pension liabilities of approximately 5%), and countries across the OECD are left with a real shocker of a problem.¹

Regulatory intervention is a game changer too. Old investment rules and practices might become obsolete. These game-changing events are beyond “volatility”. Mass application of financial orthodoxy might indeed result in instability and non-transparency through complexity; exactly the opposite of what it is intended for.² Kjaer (2011) makes a valid point, sadly with no reference to George Soros³, and argues that financial markets are in the process of moving away from economic orthodoxy:

Before the crisis, textbooks and teaching focused on equilibrium models based on rational behavior and the efficient market hypothesis. Today, the focus is on financial markets as complex adaptive networks and on behavioral finance. There is renewed interest in John Maynard Keynes’s theory of disequilibrium, Hyman Minsky’s theory of financial instability, and the theory of reflexivity (the assertion that investors’ trading activity can shape market prices by changing an asset’s underlying fundamentals). There is also a realization that investors need to be extremely humble about their ability to forecast markets.

We hope he is right. Whether scholarly finance has moved on, we’re not so sure. Whatever the case might be, we still believe that there is confusion between risk management and risk measurement.

Confusing risk measurement and risk management

The recent financial crisis was caused by too much debt. The authorities’ solution? More debt.⁴ Local regulation has largely failed. The authorities’ top priority? More regulation and expanding regulation globally. The complexity of risk management models was part of the problem. The authorities’ solution? More complex models. This is clearly going the wrong way. We ought to simplify. As John Kay from the FT put it:

“In short, complexity helps the malfasant.”

—Richard Bookstaber

“Computers are useless. They can only give you answers.”

—Pablo Picasso

¹ The letter was on Solvency II and was brilliantly titled “Insolvency Too”.

² The reduction of transparency through banning important, liquidity-enhancing market practices is beyond the scope of this document. Suffice to say, many recent papers examining the restriction of (naked) short-selling conclude that a ban is ill-advised and reduces both liquidity and transparency and, most importantly, market stability. See for example Shadab (2010), Boehmer, Jones, and Zhang (2009), Mason (2010), Stulz (2009), or Duffie (2010) just to name a few.

³ A reference to George Soros in scholarly finance is probably like a reference to Samuel Hahnemann in pharmacology.

⁴ Note that according to Richard Koo from Nomura, the US and the West are in a balance sheet recession and now is the wrong time to be pulling the proverbial rug from under the economy’s feet. Bill Boner (Daily Reckoning) argues: “As Japan Goeth... So Goeth the US.”

We will succeed in managing financial risk better only when we come to recognise the limitations of formal modelling. Control of risk is almost entirely a matter of management competence, well-crafted incentives, robust structures and systems, and simplicity and transparency of design.¹

That's the common sense approach to better risk management and a stronger financial system. Regulomics means going the other way though. CEOs of financial intermediaries are unlikely to become quantitatively literate any time soon, as Professor Andrew Lo (2010) recently suggested they should.² Not only is the science behind the models too complex, the axioms on which the science is based are wrong too. Business people will remain business people and quants will remain quants most certainly for a long time into the future. (The overlap between the two "personality profiles" is arguably small.)

Institutional investors are currently beefing up their risk management capabilities partly due to increased regulation and partly due to after-the-accident-learning-experience. It is becoming increasingly apparent that some of the beliefs and assumptions, which were formed during the historic equity bull market that ended more than ten years ago, are false. Risk management (as opposed to risk measurement) deals with changing one's portfolio according to an ever-changing environment or changing rules that happened to have worked fine in the past.³ The future is uncertain. The only thing we really know for sure is that the status quo is going to change. Risk management, we believe, is the thought process that balances the investment opportunities with the probability of capital depreciation. This means that risk management is subjective by definition. (In Ineichen (2002, 2007) we thought the term "asymmetric returns" works well.)

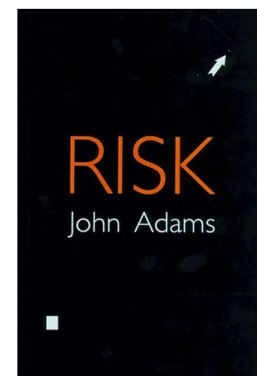
The front cover of John Adams' *Risk* depicts a black area, a small square in the lower left and an even smaller square in the upper right.⁴ Adams refers to a 1983 report from the National Research Council in the US. The report noted that about five million different chemical substances are known to exist and that their safety is theoretically under regulatory jurisdiction. Of these, about 7,000 had been tested for causing cancer (larger white square in the lower left), while fewer than 30 had been definitely linked to cancer in humans (small white square in the upper right pointed by white arrow). The proportion of the white square and dot to the black space is the same as the proportion of 7,000 tested substances and 30 discovered substances linked to cancer to the five million chemical substances. The black space Adams calls "darkness of ignorance." We just do not know the carcinogenic effects of most substances.⁵ Our knowledge is limited. The same is true in finance. We don't know much about the future. There is an extreme asymmetry between the little we know and what we don't. There is uncertainty. If you think about it

"I have always found that if I move with seventy-five percent or more of the facts that I usually never regret it. It's the guys who wait to have everything perfect that drive you crazy."

—Lee Iacocca

"Science cannot solve the ultimate mystery of nature. And that is because, in the last analysis, we ourselves are part of nature and therefore part of the mystery that we are trying to solve."

—Max Planck



¹ "Don't blame luck when your models misfire," John Kay, Financial Times, 1 March 2011.

² "Quantitative illiteracy is not acceptable in science. Although financial economics may never answer to the same standards as physics, nevertheless, managers in positions of responsibility should no longer be allowed to take perverse anti-intellectual pride in being quantitatively illiterate in the models and methods on which their businesses depend."

³ Because the world is changing every day, active risk managers are often colloquially branded "short-termist."

⁴ The idea for Chart 5 on page 12 we obviously got from John Adam's book cover.

⁵ Speaking of carcinogenic chemicals: There is an EU light bulb directive that phases out traditional incandescent lighting to be replaced with eco-friendly compact fluorescent lamps. German scientists have now discovered that several carcinogenic chemicals and toxins were released when these eco-friendly lamps were switched on, including phenol, naphthalene and styrene. (Our view is of course that it is the consumer who should be able to decide whether he wants to save the environment and die prematurely or not give in to eco-bureaucrats and live happily ever after.)

this way, equating risk with volatility of traded securities becomes a rather silly endeavour.

One important aspect of risk management is the term “unknown unknowns.” In finance, we tend to distinguish between “risk” and “uncertainty,” also known as Knightian Uncertainty, named after Frank Knight (1885-1972). When discussing matters related to risk, we assume we know the distribution from which destiny will pick future events (quite often a normal distribution is assumed). This is the reason why financial textbooks always discuss coin flipping games or examples with dice or roulette tables. In these instances, the probabilities can be exactly calculated. Uncertainty is not the same as risk. It is a term used in subtly different ways in a number of fields, including: philosophy, statistics, economics, finance, insurance, psychology, engineering and science. It applies to predictions of future events, to physical measurements already made, or to the unknown.

It goes without saying that for practical purposes, it is uncertainty that matters, not risk. We can apply rigorous quantitative analysis to matters related to risk, but not uncertainty. Many practitioners have moved away from normal distributions and pretentious mathematical precision, strongly influenced by Nassim Taleb’s work and the “learning by doing” experience that was the financial crisis. To deal with uncertainty requires thought and, most likely, common sense. Frank Knight argued that profits should be defined as the reward for bearing uncertainty. The relevance regarding Regulomics is that the authorities are determining the risk management objectives of the banks and insurers. And because the government agents and accounting boards are led by scientific orthodoxy with its physics-envy and urge to quantify the unquantifiable, many risks are left ignored, i.e. beyond the realm of the new rules and regulations. A misallocation of capital is the result. In essence, the new-and-improved regulations focus on the white square in the lower left hand corner of John Adams’ wonderful book cover shown on page 18. (One could argue, of course, that this is a great improvement from just focusing on the small dot in the upper right hand corner of John Adams’ wonderful book cover.) A. Gary Shilling on regulation:

Increased regulation may be the natural reaction to recent financial and economic woes, but it is fraught with problems. It’s a reaction to past crises and, therefore, comes too late to prevent them. And it often amounts to fighting the last war since the next set of problems will be outside the purview of these new regulations. That’s almost guaranteed to be the case since fixed rules only invite all those well-paid bright guys and gals on Wall Street and elsewhere to figure ways around them. A million-dollar-a-year Wall Street lawyer will beat a regulator with a \$100,000 annual salary on most days.¹

Regulomics could potentially force a wedge between proper investment objectives and politically-motivated, regulatory-induced accounting objectives. If investment and accounting objectives were perfectly aligned, all would be well in the world. However, they aren’t. Lo and Mueller (2010) recently made a good point regarding the alignment of politics with the real world that most likely will resonate very well with most practitioners:

Imagine how much more challenging it would have been to fix the Large Hadron Collider after its September 19, 2008 short circuit if, after its

¹ “Insight,” A. Gary Shilling, November 2010.

“There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we now know we don’t know. But there are also unknown unknowns. There are things we do not know we don’t know.”

—Donald Rumsfeld

“One of the greatest pieces of economic wisdom is to know what you do not know.”

—Kenneth Gailbraith

“Government regulators have never, as far as we know, stopped big bubbles or caught big crooks.”

—A. Gary Shilling

“Give a man a fish and he will eat for a day. Teach a man to fish and he will sit in a boat drinking beer all day.”

—Proverb, slightly modified, origin unknown

breakdown, Congress held hearings in which various constituents—including religious leaders, residents of neighboring towns, and unions involved in the accelerator’s construction—were asked to testify about what went wrong and how best to deal with its failure. Imagine further that after several months of such hearings, politicians—few of whom are physicists—start to draft legislation to change the way particle accelerators are to be built, managed, and staffed, and compensation limits are imposed on the most senior research scientists associated with the facility.

Arguably, one of the greatest achievements of modern portfolio theory is that the combination of risky assets with positive expected returns and different volatility levels can reduce portfolio risk if the correlation between them is less than one. As a result, analysts and risk measurers calculate correlation coefficients and matrixes. The correct (and objective) way to do this is by calculating the co-variance between log-returns of time series. The returns are either of daily frequency, weekly or monthly, and the period of observation varies depending on data availability and personal preference (which goes to show that there is even subjectivity in risk measurement). However, measuring correlation matrixes is a different task than managing risk, irrespective of the degree of sophistication of the model, modeller or model input variables. Risk measurement is just one tool for the risk manager.

The correlation matrix calculated using historical data is assumed to hold true for the future. However, we now know that it doesn’t. Econometric models have not come close to picking up the extreme level of correlation in capital markets over the past two years. Any correlation matrix is hindsight-biased. We recommended binning MPT in Ineichen (2010), replacing it with PPMPT (post-post-modern portfolio theory).

“Imagine how much harder physics would be if electrons had feelings!”

—Richard Feynman (1918-88),
American physicist

“It’s much easier after the event to sort the relevant from the irrelevant signals.”

—Roberta Wohlstetter, American
historian and writer on Pearl Harbour

Bottom line

A 1995 quote from Harry Browne, presidential candidate of 1996 and 2000 and libertarian writer, sums up the current situation in the US and elsewhere reasonably well:

The bad consequences of a government program usually don't show up immediately. And the delay may be long enough to hide the connection between the program and its result. So government never has to say it is sorry—never has to take responsibility for the misery it causes. Instead, it can blame everything on personal greed, profit-hungry corporations and the private sector. And the government's cure for the problems is to impose bigger programs, more regulation and higher and higher taxes.

The libertarian view is that it would be better to make a painful break than draw out the agony. However, there is no political will and/or energy for drastic painful decisions.¹ The Reagans² and Thatchers³ of this day and age are not in sight and strong-currency-enthusiast Axel Weber—often a rare voice of reason—has retired. The day of reckoning, as Bill Boner calls it, or the proverbial can is being kicked down the road until there is no more road for the can to be kicked any further. More regulation is part of the puzzle. It's a game changer. The issues of time diversification and risk management confusion are only minor details; small snowflakes in an avalanche. (Borrowing freely from Voltaire: "No snowflake in an avalanche ever feels responsible".) It is the avalanche that is changing the game.

Pop quiz: Who is most likely to benefit from all this governmental upsizing?

- the savvy investor
- the legal profession
- the investment banks
- the populace

Multiple answers are possible.

There is the libertarian view that coercive government programs almost always fail. On the way to failure they get bigger, more expensive, more intrusive, and more complex. Sounds familiar, doesn't it.

¹ One could easily argue that current Greek policy prescription to borrow its way out of debt is pure folly. A large slice of the EUR350 billion of Greek sovereign debt needs to be written off to allow the debt to be serviceable again, given current yields and growth prospects of the economy and tax revenues. However, selling a couple of its 3,000 islands might help.

² Note that Reagan actually raised taxes as a governor of California in the 1960s, then "the biggest state tax increase in history." While president, half of his 1981 tax cuts he subsequently clawed back. His presidency being considered a success is far from a consensus view. He ran for office promising smaller government and a balanced budget, yet by the end of his presidency, federal spending had risen by 25% and the federal workforce was no smaller. With his sunny disposition he had a "don't worry be happy" attitude. Thirty years on, not every American is happy about the debt; some even worry.

³ David Cameron finding more oil somewhere offshore would surely help in the current situation too.

"The first lesson of economics is scarcity: There is never enough of anything to satisfy all those who want it. The first lesson of politics is to disregard the first lesson of economics."

—Thomas Sowell

"It's better to burn out than to fade away."

—Neil Young

"Every advance in the complexity of the economy puts an added premium upon superior ability, and intensifies the concentration of wealth, responsibility, and political power."

—Will Durant

Complexity and the VAR vicious circle hypothesis

Regulation and a mob with no brains

One aspect of what we herein call Regulomics is making the world more complex. We have been advocating that we should be going the other way. (Not very successfully, one could add.) In a book called *Normal Accidents*, Charles Perrow (1999) examines failures of man-made systems (power plants, airplanes, etc.). He makes the point that it is human nature to find someone to blame for an accident. We want to know the “cause.” However, Perrow argues that the cause of an accident of a man-made system is to be found in the complexity of the system. An accident that results in a catastrophe is a series of small events that viewed by themselves seem trivial. It is the *interaction* of multiple failures that can explain the accident. Patient accident reconstruction often reveals the banality and triviality behind most catastrophes. In other words, great events have small beginnings. We find the parallels between Perrow’s work and systemic risk to the financial system both obvious and shocking.

Most businesses fail. Extinction is common in business and life. 99.99% of all biological species that have ever existed are now extinct. On a somewhat shorter timescale, more than 10% of US firms go extinct annually. Even large, successful, monopolistic corporations are not secure. Not only species and corporations fail; policies and governments fail too. Economist Paul Ormerod calls this the *Iron Law of Failure*.¹

The parallels between species, people, firms, governments and, of course, financial intermediaries are striking in terms of failure. They are all complex entities that try to survive in dynamic environments which evolve over time but eventually fail. Charles Darwin on the topic:

*All that we can do is to keep steadily in mind that each organic being is thriving to increase in a geometrical ratio; that each, at some period of its life, during some season of the year, during each generation, or at intervals, has to struggle for life and to suffer great destruction. When we reflect on this struggle we may console ourselves with the full belief that the war of nature is not incessant, that no fear is felt, that death is generally prompt, and that the vigorous, the healthy, and the happy survive and multiply.*²

Despite striking parallels between the social and economic world and the world of biology, there is a fundamental difference between the two: the process of evolution in biological species cannot be planned. Species cannot act with the intent of increasing their fitness to survive. A frog cannot do push-ups or *Tai chi chuan* every morning to improve its fitness and survival probability in the event of a frog-eating snake entering its habitat. In contrast, in human society, individuals, firms and governments all strive consciously to devise successful strategies for survival. They adapt these strategies over time and alter their plans as circumstances change. So there is a logical reason for regulation to potentially improve the system; irrespective of a government’s poor track record of intervention. As Ludwig von Mises put it:

“A man can fail many times, but he isn't a failure until he begins to blame somebody else.”

—John Burroughs (1837-1921),
American naturalist and essayist

“The reason lightning doesn't strike twice in the same place is that the same place isn't there the second time.”

—Willie Tyler, American ventriloquist,
comedian and actor

“The theory of evolution by cumulative natural selection is the only theory we know of that is in principle capable of explaining the existence of organized complexity.”

—Richard Dawkins, British
evolutionary biologist

“When circumstances change, I change my view. What do you do?”

—John Maynard Keynes

¹ See Ormerod (2006)

² Closing paragraph of “On the Origin of Species,” chapter “Struggle for existence”.

Reasons's biological function is to preserve and promote life and to postpone its extinction as long as possible. Thinking and acting are not contrary to nature; they are, rather, the foremost features of man's nature. The most appropriate description of man differentiated from nonhuman beings is: a being purposively struggling against the forces adverse to his life.¹

However, there are limits to planning. An early critic of conventional economic analysis was Austrian economist Friedrich August von Hayek. While most 20th century proponents of the dismal science suggest economics should be conducted in a similar fashion to physics, where theories depict mechanical systems and mathematics can precisely describe these systems, Hayek's views were much more rooted in biology. He believed individual behavior is not fixed, like a screw or cog in a machine, but evolves in response to the behavior of others. According to Paul Ormerod (2006), Hayek, unlike most modern-day economists, understood and admired the achievements of other intellectual disciplines, especially anthropology. The complex interactions between individuals, in Hayek's view, give rise to inherent limits to knowledge of how systems behave at the aggregate level. No matter how smart the planner or how much information he gathers, there are inescapable limits to how much can be known about the system.

The idea of economic equilibrium is central to economic thought. Equilibrium is thought of as a state of the world where economic forces are balanced and in the absence of external influences the (equilibrium) values of economic variables will not change. It has meaning in the abstract laboratory environment of rational agents, complete information and perfect competition. However, in (general) equilibrium theory, the notion of history has very little meaning. As Andrew Lo put it:

Economics in the real world owes more to history than to abstract theory.... This frustrates me to no end. Economics is not a science. History matters in trying to understand and apply it.³

None other than George Soros is—judging from an interview given at the WEF 2011 in Davos—after being “done” with managing money, currently on a mission to rectify what went wrong in economics. The state of the world is not one that is seeking equilibrium but rather the opposite, disequilibrium in form of instability, chaos and destruction. Rather than rational agents forcing prices to converge to fair value and equilibrium, there are feedback loops at work that move prices away from equilibrium. The economist Hyman Minsky reminded us, “Each state nurtures forces that lead to its own destruction.” All of history testifies to the truth of this observation. Greater liquidity leads firms to borrow more than before. But higher levels of debt mean increasing vulnerability to adversity and negative shocks in an ever-changing world. For these reasons, as Minsky put it, stability leads inevitably to instability. The practical relevance related to regulation is that regulatory regimes do not only seek to fight yesteryears battle but also that the scientific foundation upon which it is built is wrong.

“If you fail to transcend conventional thinking at a time when conventional thinking is losing touch with reality, then you will be more likely to fall prey to an epidemic of disorientation that lies ahead. Disorientation breeds mistakes that could threaten your business, your investments and your way of life.”

—James Dale Davidson and Lord William Rees-Moog, authors of *The Sovereign Individual*

“The concept of a general equilibrium has no relevance to the real world. In other words, classical economics is an exercise in futility.”

—George Soros²

“Politics is the gentle art of getting votes from the poor and campaign funds from the rich, by promising to protect each from the other.”

—Oscar Ameringer (1870-1943), American-German writer and socialist

¹ Von Mises (1996), p. 882. Emphasis in the original.

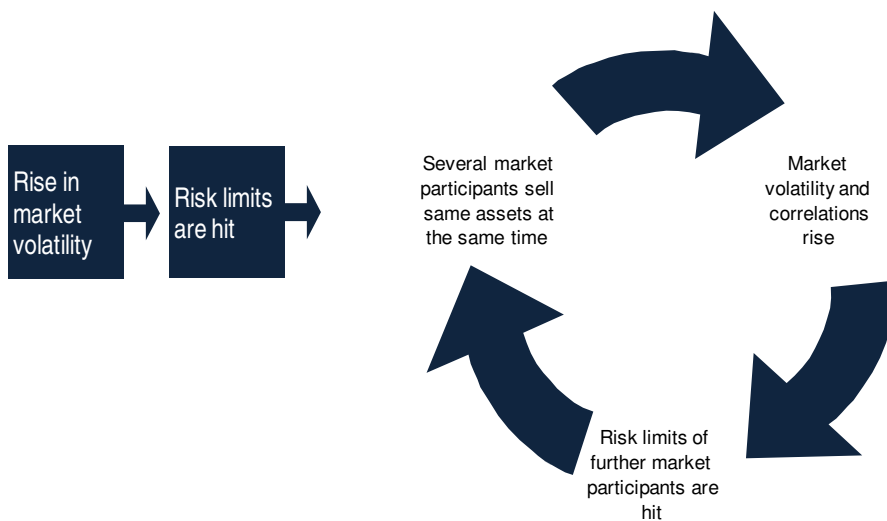
² From Soros (1987), p. 20.

³ From Bernstein (2007), p. 61. Emphasis in the original.

Many independently-run and smaller financial firms competing with one another would result in a heterogeneous market place thereby making the system more stable. At times we fear this point to be entirely lost on the cheerleaders of Regulomics (mainly the politicians) when criticising or blaming hedge funds for market volatility. However, as mentioned many times elsewhere, regulation also functions on the basis of “learning by doing.” The past financial crisis has shown that micro-prudential regulation is not enough. It examines how single entities address and respond to *exogenous* risks. However, its shortcomings are that it does not incorporate *endogenous* risk, and it neglects the systemic implications of harmonised market behaviour.¹ Following the errors of past regulation, counter-cyclicality has therefore gained momentum as a regulatory principle. Spanish banks, for example, have had a dynamic provision system in place that requires higher provisions when credit grows more than the historical average, thus linking provisioning to the credit cycle. More such dynamic provisions will certainly enter into future regulation, addressing pro-cyclicality on one hand but making the regulatory status quo even more complex on the other.

A critical part of micro-prudential regulation in the last decade was the increasing use of market prices in valuation and risk measurement. This was done in the name of transparency, risk-sensitivity and prudence, but what it achieved was increasing homogeneity of market behaviour and as a result increased systemic fragility. Market based measures of risk end up being highly pro-cyclical, falling in the build-up to booms and rising in the subsequent crashes.²

Chart 7: VAR vicious circle hypothesis



Source: IR&M, adapted and modified from Persaud (2000)

Chart 7 shows how regulatory harmonisation and normalisation (everyone having very similar models and risk limits) can result in synchronised action; thus destabilising the market place: the very aptly named the VAR vicious circle hypothesis. A rise in market volatility can end in a vicious circular loop. Further sources of homogenisation relate to funding and leverage. Regulators make little distinction between how assets are funded. This results in financial institutions relying on cheap, short-term funding, which increases interconnectedness and

¹ See also *The Warwick Commission on International Financial Reform: In Praise of Unlevel Playing Fields*, The University of Warwick, 2009.

² Ibid.

“Stability is unstable.”

—Hyman Minsky

**Micro-prudential behaviour
endogenously creates macro-
prudential risks**

**Harmonisation increases systemic
risk**

systemic fragility. This is of course even more pronounced if the asset purchases are highly leveraged and the drying up of funding requiring highly leveraged holders to try and sell before others do. If not the politicians, then at least the regulators have now woken up to these issues. The implementation of these new insights is years away, with more unknown consequences and further increases in complexity. It is safe to say that the mantra of “learning by doing” will survive a while longer. As Alan Greenspan—arguably an authority on unknown consequences—put it recently:

The financial system on which Dodd-Frank is being imposed is far more complex than the lawmakers, and even most regulators, apparently contemplate. We will almost certainly end up with a number of regulatory inconsistencies whose consequences cannot be readily anticipated.¹

Persaud (2000) applies this hypothesis to banks and the dangers that are introduced by normalizing risk management across the market (Basel accords) that can cause “herding.” According to Mr Persaud, the problem is that in a world of herding, tighter market-sensitive risk management regulations and improved transparency can, perversely, turn events from bad to worse, creating volatility, reducing diversification and triggering contagion. Mr Persaud uses DEAR (daily earnings at risk) limits where we alter his hypothesis and use “risk limits.” We also have replaced “several banks” with “several market participants.” Thus we apply Mr Persaud’s hypothesis more generally to the whole market place including any investor that has a quantitative risk assessment, rather than just banks.² The practical relevance is that regulation harmonises, i.e., makes the system more homogeneous and more complex and therefore—more often than not—more prone to accidents. Note here that there are some interest groups in Europe who want pension funds put under the umbrella of Solvency II, thus harmonising the market place even further.

Richard Bookstaber adds a further element to the mechanics described above, tight coupling:

The complexity at the heart of many recent market failures might have been surmountable if it were not combined with another characteristic that we have built into markets, one that is described by the engineering term tight coupling. Tight coupling means that components of a process are critically interdependent; they are linked with little room for error or time for recalibration or adjustment...

The tight coupling in financial markets comes from the nonstop information flow and unquenchable demand for instant liquidity. Information spurs trading, and the trades are entered and executed without a pause. Tight coupling is accentuated by leverage, itself a direct result of liquidity.⁴

We recommend re-reading Chapter 8 of Bookstaber (2007). He relates complexity mainly to financial innovation and systemic risk and adds that attempts to regulate can add more complexity; thus compounding the problem. It is worth pointing out

“A mob has heads enough but no brains.”

—Benjamin Franklin

“In the face of progress and technological advances that have resulted in stability on many fronts, financial markets, designed to provide a mechanism for managing and addressing economic risk, have developed a structure that has made them inherently more risky.”

—Richard Bookstaber³

¹ “Dodd-Frank fails to meet test of our times,” Alan Greenspan, Financial Times, 29 March 2011.

² Professor Philippe Jorion replaced DEAR with VAR and coined the term “VAR vicious circle hypothesis” in a 2002 paper.

³ Bookstaber (2007), p. 147.

⁴ Ibid., p. 144. Emphasis in the original.

that his book was written before the financial crisis occurred. He closes Chapter 8 as follows:

The point is simply this: Risk controls, putting on layers of regulation and organizational oversight, cannot always fix the problems that arise from the complexity and tight coupling we have designed into the markets. Indeed, it might just make matters worse. This is not to say we should throw all regulation out of the window. But a better approach for regulation is to reduce the complexity in the first place, rather than try to control it after the fact.¹

Unfortunately, the (industrialised) world seems to be going the other way.

Complexity, chaos and why Karl Marx should have listened to his mother

Chaos theory might be the better theory when thinking about human affairs, the Darwinian fight for survival among economic agents, financial markets and risk management. Small, trivial-seeming events can result in material changes in the course of events. This is apparent whether we choose to examine the shaping of the universe, the origin of species, market mayhem, or corporate defaults. Perhaps we could agree that some of our “first generation” theories in economics might help explain matters “under normal circumstances.” However, when we assess risk, it is the “non-normal” circumstances that require the closest examination. Here equilibrium theory is not much help. Chaos theory at least helps us to understand and acknowledge that anything can happen, and be caused by anything, as conditions are recognized to be nonlinear and unpredictable by definition. How does one regulate that?

Accidents do not just happen. In certain kinds of systems, large accidents, though rare, are both inevitable and normal. These accidents are a characteristic of the system itself. The coffeemaker or entertainment system of a commercial aircraft is not supposed to bring down the plane, but both have done so in the past, and it is within the realm of possibility that it could occur again in the future. An airliner is a perfect example of a complex system: a large mass containing explosive fuel, flying at high speeds, and operating along a fine boundary between stability and instability. As chaos theory suggests, small forces can upset the system, causing a chain of events that results in the destructive release of the large amount of energy stored in the system. Interestingly, sometimes efforts to make those systems safer, especially by technological means, can make the systems more complex and therefore more prone to accidents.² It does not take too much imagination to adapt this analogy to the world of finance.

The idea of chaos theory suggests that what appears to be a very complex, turbulent system (origin of life on Earth, weather, financial markets, etc.) can begin with simple components (amino acids, water, traders, etc.), operating under a few simple rules (photosynthesis, evaporation, buy low sell high, etc.). One of the characteristics of such a system is that a small change in the initial conditions, often too small to measure, can ultimately lead to radically different behaviour. Sensitivity to initial conditions is popularly known as the “butterfly effect,” so called because of the title of a paper given by Edward Lorenz in 1972 to the

“There are decades when nothing happens; and there are weeks when decades happen.”

—Vladimir Lenin

“Any intelligent fool can make things bigger, more complex and more violent. It takes a touch of genius - and a lot of courage - to move in the opposite direction.”

—Albert Einstein

Butterflies can “cause” tornados and vegetable vendors can “cause” a global recession

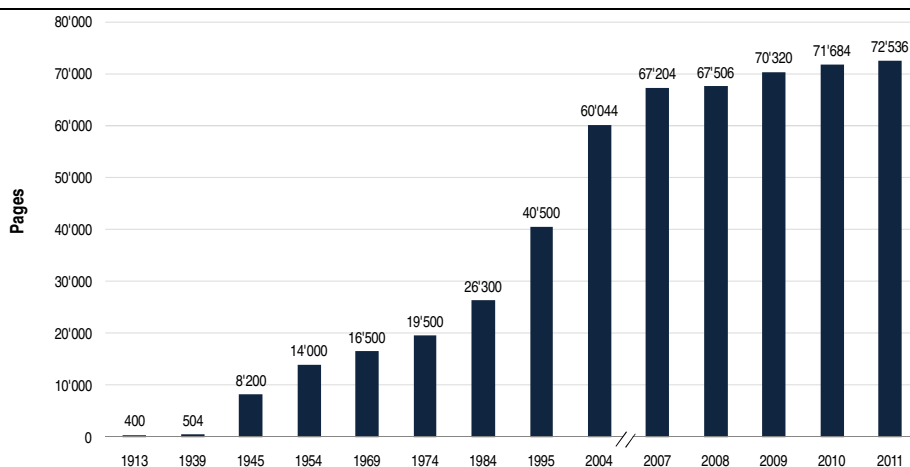
¹ Ibid., p. 164.

² From Gonzales (2003) referencing Perrow (1999)

American Association for the Advancement of Science in Washington, D.C. entitled *Predictability: Does the Flap of a Butterfly's Wings in Brazil set off a Tornado in Texas?*¹ The flapping wing represents a small change in the initial condition of the system, which causes a chain of events leading to large-scale phenomena. Had the butterfly not flapped its wings, the trajectory of the system might have been vastly different.

Chaos theory arose out of what was a huge vacuum in the disciplines and theories of the physical sciences: disorder.² We see disorder everywhere we look, from the origins of the universe to the market for Greek debt. Classical physics largely ignored disorder and used idealized systems to explain the world, but that left most of the real world unexplained. Similarly, traditional economics assumes perfectly rational agents and complete, frictionless and continuous markets. In both cases, classical physics and traditional economics, the assumptions and models do not reflect the messy real world. The difference between physics and financial economics is that the former had paradigm shifts whereas the latter has not yet had any. For example, the gaps in Newton's calculations of planetary motion were ignored until Einstein came along to explain them, but traditional economics still uses idealized models to explain the real world. We still use first generation tools (albeit refined).

Chart 8: Pages of US tax law



Source: www.cch.com

Albert Einstein was once quoted saying that “not everything that can be counted counts and not everything that counts can be counted.” As far as we can tell, Mr. Einstein was not referring to US tax law. (See Chart 8 above.) Economics and financial economics at the scholarly level have become purely mathematical and hardly assessable for any “experimentalists,” that is, practitioners. This is often referred to as “physics envy” that describes applying mathematical rigor to a science to make it look more like physics—the mother of all sciences—irrespective of whether it makes sense or not. The observation that the mathematical rigor that makes sense when examining the motion of planets or molecules might not apply to some of the social sciences was somehow overlooked. In his acceptance speech when picking up the Nobel Prize in 1974, Friedrich Hayek argued against the use of the tools of hard science in the social sciences. Potentially a case could be made

¹ Put differently: Does the self-immolation of a Tunisian vegetable vendor in protest over the confiscation of his fruit stand set off a global recession?

² See Gonzales (2003), p. 109.

“The high theorising of the present period in economics attains a degree of unreality that can be matched only by medieval scholasticism.”

—Robert Heilbroner (1919-2005), American economist and historian of economic thought

“Monstrously complex, unfair and inefficient, the code has fewer friends in Washington than Mahmoud Ahmadinejad.” [sic]

—The Fiscal Times, 11 Jan 2011

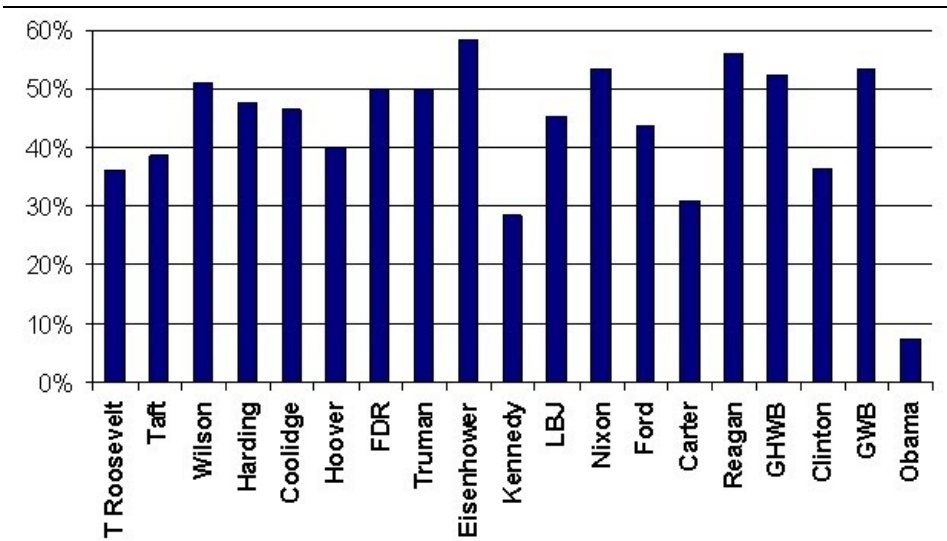
“Science gives us knowledge, but only philosophy can give us wisdom.”

—Will Durant (1885-1981), American historian

that financial economics is not only in need for an overhaul with respect to finding new ways of explaining the Darwinian fight for survival under competition but also a simplification of the theories for them to be of value to practitioners making decisions under uncertainty. We ought to simplify. However, Regulomics is going the other way.

The expansion of tax law in the US and elsewhere is a case in point. According to a Taxpayer Advocate Service (TAS) analysis¹ of IRS data, US taxpayers and businesses spend about 6.1 billion hours a year complying with the filing requirements of the Internal Revenue Code; and that figure does not include the millions of additional hours that taxpayers must spend when they are required to respond to IRS notices or audits. If tax compliance were an industry, it would be one of the largest in the United States. To consume 6.1 billion hours, the tax industry requires the equivalent of more than three million full-time workers. Compliance costs are huge both in absolute terms and relative to the amount of tax revenue collected. Based on Bureau of Labor Statistics data on the hourly cost of an employee, TAS estimates that the costs of complying with the individual and corporate income tax requirements for 2008 amounted to \$163 billion – or a staggering 11 percent of aggregate income tax receipts. There have been approximately 4,428 changes to the tax code over the past 10 years, an average of more than one a day.

Chart 9: Cabinet appointments: Prior private sector experience, 1900-2009



Source: "Obama's Business Blind Spot," Michael Cembalest, Forbes, 24 November 2009

The complexity of the Code leads to perverse results.² On the one hand, taxpayers who honestly seek to comply with the law often make inadvertent errors, causing them to either overpay their tax or become subject to IRS enforcement action for mistaken underpayments. On the other hand, sophisticated taxpayers often find loopholes that enable them to reduce or eliminate their tax liabilities.³ Whether the current political appointees are best qualified to deal with the current complexities in finance we don't know. Chart 9 suggests they may not. Simplifying things is difficult and requires creativity, down-to-earthness, wisdom, or genius and

¹ http://www.irs.gov/pub/irs-utl/2010arcmsp1_taxreform.pdf

² GE apparently employs roughly 1,000 people in the tax department. Given that GE is the largest corporation in the US but pays no taxes in the US, these 1,000 people are obviously adding a lot of value to shareholders. As a matter of fact (NYT, 24.3.11), with \$14.2bn profits (\$5.1bn in US), GE even claimed a tax benefit. This is Regulomics at its "best."

³ http://www.irs.gov/pub/irs-utl/2010arcmsp1_taxreform.pdf

"Government's view of the economy could be summed up in a few short phrases: If it moves, tax it. If it keeps moving, regulate it. And if it stops moving, subsidise it."

—Ronald Reagan

"Politics is the art of looking for trouble, finding it, misdiagnosing it, and then misapplying the wrong remedies."

—Groucho Marx

"I predict future happiness for Americans if they can prevent the government from wasting the labors of the people under the pretense of taking care of them."

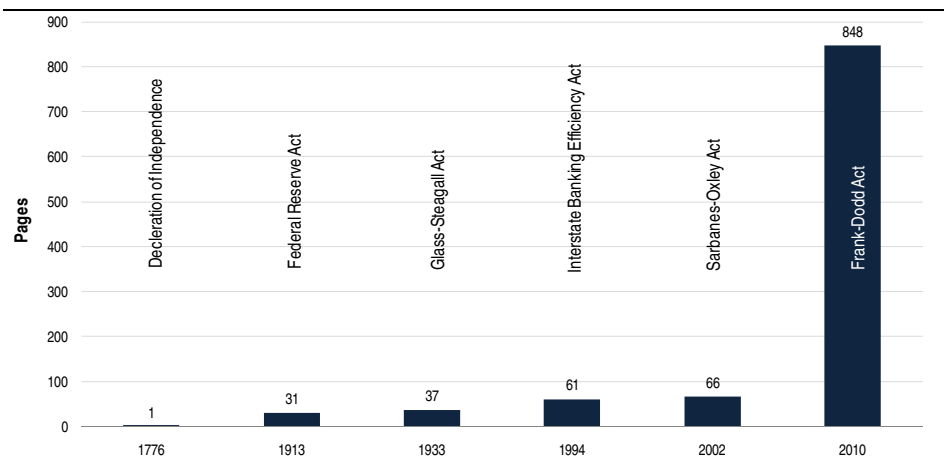
—Thomas Jefferson

courage, as Albert Einstein called it on page 26. The trick is to overlook what is unimportant. (As William James (1842-1910), American psychologist, put it: "The art of being wise is the art of knowing what to overlook.")

Leonardo da Vinci is quoted saying "simplicity is the ultimate sophistication." Potentially this quote is applicable not only to US tax law but to many other areas of legislation, regulation and accounting standards. There are strong arguments showing that it is often valid to be reckless with the details, and that the workings of outrageously oversimplified games really can offer legitimate explanations of very complicated things. When it comes to understanding something in a critical state, most of the details simply do not matter. The basic idea goes by the name "critical-state universality," and it represents one of the most profound discoveries in theoretical physics in the twentieth century.¹ However, regulation went the other way; it seems legislation/regulation went "parabolic:"

"The business schools reward difficult complex behavior more than simple behavior, but simple behavior is more effective."
—Warren Buffett

Chart 10: Pages of US legislation/regulation (selection)



Source: IR&M, adapted and modified from Dr. Mark J. Perry, University of Michigan

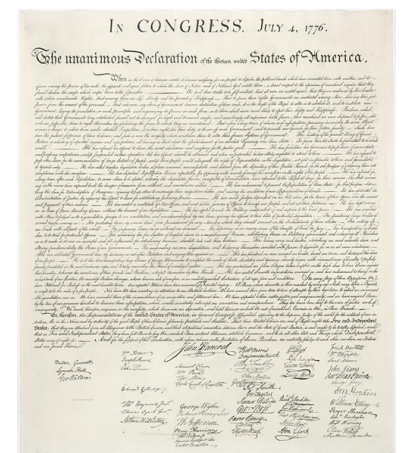


Chart 10 shows the number pages of US legislation/regulation, starting with—somewhat tongue-in-cheek—a one-pager dating from 1776. We have added the Declaration of Independence not to get rid of our British readers but to show that remarkable things can be achieved with a one page document. Roughly 17km from where these lines were written, in central Switzerland, there is another one-pager which some historians date to the year 1291; the Swiss Federal Charter shown on the right. The Swiss Federal Charter was designed by a group of bearded men who wanted foreign rulers out, peace and free trade in a "life, liberty and the pursuit of happiness" kind of way. That's all. It mentions public law, criminal law, international law, the suppression of fraud, judicial cooperation, etc. It seems a lot fitted on just one page. A lot of emphasis was placed on legal autonomy: the founding cantons didn't want foreign judges in a "no more taxation without representation" kind of way. This is of course quite similar to the 1776 one-pager with the difference being that the signees of the latter were not bearded.²



¹ From Buchanan (2000), p. 122 and 126.

² The reason for the 1291 one-pager being much better preserved than the 1776 one-pager is beyond the scope of this report.

It seems that the early Swiss—exaggerating a bit—anticipated Thomas Hobbes, John Locke, Voltaire, Benjamin Franklin, Thomas Jefferson, Adam Smith, Edmond Burke, the French Revolution, and the 1786 Déclaration des droits de l'Homme et du Citoyen (Declaration of the Rights of Man and of the Citizen; another remarkable one-pager) by a couple of hundred years. It seems further that Regulomics (or etatism) is worlds apart from the free spirit and motive force for free and open societies of both bearded and unbearded men from earlier times.¹

What the Swiss thought in the 13th century and—simplifying a bit—the Americans adapted in the 18th century was wonderfully summarised from a capitalist perspective by Walter Bigelow Wriston (1919-2005), banker and former chairman of then-called Citibank:

Capital will always go where it's welcome and stay where it's well treated. Capital is not just money. It's also talent and ideas. They, too, will go where they're welcome and stay where they are well treated.²

If there is an axiom in economics that also makes common sense, this is it. Karl Marx could have saved himself a lot of time had he understood the above prior to writing his four volume tomb⁴. (He also should have listened to his mother.)⁵ It seems to us that the current political climate in the US and EU is at odds with this common sense three-liner. This cannot be spun positively.

Immigration of business-savvy Continental Europeans into Switzerland has been moving from one all-time-high to the next over the past couple of years.⁶ Singapore has known the "axiom" all along. More recently, Canada also has become a magnet for international capital inflows, talent (human capital), and ideas. The common denominator between these three economies is an understanding of this important three-liner and the authorities governing accordingly.

Authorities who do not govern accordingly either do not understand the above, do not want to understand the above, or have an agenda that conflicts with the above. Even nice and (book-) smart people can get it wrong. One reason is that some of the basic economic principles are not obvious or are in conflict with well-intentioned, right-brain happiness economics. For example, intuition would suggest that if one wants to raise tax revenues one just need raising tax rates. However, this only works in the very short term, if at all. Authorities with a sound

"Me? Switzerland. Still the best. Got a healthy distrust for big government."

—Gordon Gekko, response to the question where he puts his money, *Money Never Sleeps*

"Communism is the longest path from capitalism to capitalism."

—Russian joke

"I wish Karl would accumulate some capital, instead of just writing about it."

—Mother of Karl Marx³

"The promotion of economic equality and the alleviation of poverty are distinct and often conflicting."

—Lord Bauer

¹ The irony here is that the socialists in Switzerland, after all representing roughly 20% of the population and most popular in the French-speaking part of Switzerland and among the very young, really felt rejuvenated after the financial crisis and reiterated that one of its main credos is the "overcoming of capitalism" to be replaced with what they call—parroting Marx—"democratic socialism." (The term "eco-socialism" is already taken by the Greens.) Regulomics is of course exactly their thing.

² Found in The Gartman Letter, 5 December 2008

³ The World's Greatest People, All Things Family, Audio CD, Volume 1, Disk 6

⁴ Spelling mistake was left as a politically insensitive pun.

⁵ *Das Kapital* was aimed at the worker but was too complex for the worker to understand. Sounds familiar, no? (Marx wrote only the first volume, the others were completed based on Marx's notes and unfinished manuscripts. He didn't finish volumes II-IV because he honoured his mother's advice. He died.)

⁶ In many well-fare-state-hugging economies in Europe one cannot let staff go. This is especially burdensome for start-ups. One way this is solved in Europe is to set up shop in Switzerland. One side effect of this is that in 10-15 years Switzerland, arguably a tennis nation, will be a football nation too. The reason is that the Swiss natives cannot play football, as the recent performance once again has demonstrated. However, the Germans, French, Italians, Dutch, etc can. This means the business-savvy entrepreneurs entering Switzerland are not only bringing along their capital and ideas; they are bringing their kids too. In 10-15 years these kids will have Swiss passports and bring football glory; surely.

fiscal household understand that lower taxes (in combination with some other factors, one of which being fiscal prudence) results in higher tax revenues (and more capital, talent, ideas, football-playing kids, etc).

Karl Marx must have smiled from wherever it is failed economists go when they die. (Many of his failed disciples, as shown in the picture on the right, must have been chuckling too. The financial crisis was arguably exactly their thing.) After all, Marx predicted that capitalism, like previous socioeconomic systems, would inevitably produce internal tensions which would lead to its self-destruction and replacement by a new system. His idea for a revolution—simplifying a bit—was just a speedy and efficient way to get to full governmental control; a fast track, so to speak.¹ The irony here is that where Marx had an impact economically, capitalism is now on the rise whereas where Marx had no or little impact economically, it isn't. There is no such thing as a Marxist who has experienced Marxism. (We have noticed that Marxists are typically well-fed.)

Table 3 on page 32 is an attempt to contrast the two largest economies of the world with different economic ideologies. One is tempted to argue that both ideologies are changing; albeit in different directions. (We have added some softer, societal factors to those economical. The table was not designed to offend. However, we concur with Kingsley Amis on page 9 that a moderate degree of annoyance is worth (nearly) everyone's while and truly believe that *political correctness* and *truth seeking* are antonymous; it's either or. We obviously aim for the latter.)



Source: Gut, Bilanz, 26 Sep 2008

“You know, doing what is right is easy. The problem is knowing what is right.”

—Lyndon B. Johnson

¹ Note that the influence and impact of Marx in the communist revolutions of the 20th century is still open to debate. Terry Eagleton, author of *Why Marx Was Right*, in defense of Marx: “Marxism is a theory of how well-heeled capitalist nations might use their immense resources to achieve justice and prosperity for their people... This is not to suggest for a moment that Marx considered capitalism as simply a Bad Thing, like admiring Sarah Palin or blowing tobacco smoke in your children's faces. On the contrary, he was extravagant in his praise for the class that created it, a fact that both his critics and his disciples have conveniently suppressed. No other social system in history, he wrote, had proved so revolutionary. In a mere handful of centuries, the capitalist middle classes had erased almost every trace of their feudal foes from the face of the earth. They had piled up cultural and material treasures, invented human rights, emancipated slaves, toppled autocrats, dismantled empires, fought and died for human freedom, and laid the basis for a truly global civilization. No document lavishes such florid compliments on this mighty historical achievement as *The Communist Manifesto*, not even *The Wall Street Journal*. That, however, was only part of the story... Every advance in civilization had brought with it new possibilities of barbarism. The great slogans of the middle-class revolution—“Liberty, Equality, Fraternity”—were his watchwords, too. He simply inquired why those ideas could never be put into practice without violence, poverty, and exploitation. Capitalism had developed human powers and capacities beyond all previous measure. Yet it had not used those capacities to set men and women free of fruitless toil. On the contrary, it had forced them to labor harder than ever. The richest civilizations on earth sweated every bit as hard as their Neolithic ancestors.”

(“In Praise of Marx,” *The Chronicle of Higher Education*, 10 April 2011)

Table 3: United States vs. China

	United States of America	People's Republic of China
Area, sq km (rank)	9.8m (3rd)	9.6m (4th)
Population, million, latest (rank)	~ 313.2 (3rd)	~ 1,336.7 (1st)
Age	~ 400-500 years	~ 4,000-5,000 years
Independent since	1776 AD	221 BC
Motto	In God We Trust	古为今用，洋为中用 *
Church attendance (once per week or more)	44%	9%
Political system: Freedom of speech	Yes	No
Incumbent president is a	Liberal ivy-league lawyer	Conservative pragmatic technocrat
Democracy Index, category, 2010 (rank)	Full democracy (17th of 167)	Authoritarian regime (136th)
Corruption (CPI; 1st=least, 180th=most corrupt)	17th (betw. Germ. and France)	78th (with Senegal, Marocco, ...)
Civil and political liberties (7=high, 0=low), (rank)	6 (1st with 15 other nations)	0.5 (124th of 132)
Hegemony	Yes	Not yet
Global Peace Index (GPI; 1=most peace), 2010 rank	85th of 149	80th
Military expenditure, USD billion, 2009 (rank, trend)	663 (1st, rising)	officially 99 (2nd, rising)
Manpower fit for military service, million	60.6	318.3
Active nuclear warheads, 2010 (Global: ~8,000)	1,950	~ 180
Air carrier in service (in reserve, under construction)	11 (1, 1)	0 (0, 1)
Economic ideology seems to be moving	away from capitalism	towards capitalism
Econ. Freedom, 2011, 1=free, 5=repressed (trend)	2. Mostly free (down)	4. Mostly unfree (up)
Gini Coefficient, 2007, low=more equal (rank)	45.0 (95th of 136)	41.5 (83rd)
GDP per capita, PPP, USD, 2010 (trend)	~ 46.1k (falling)	~ 7.5k (rising)
Human Development Index (HDI), 2010 est. (rank)	0.902 (4th)	0.663(89th)
Happiness, University of Leicester, 2006, rank	23rd of 178	82nd
Well-being, Happy Planet Index, 2009 (rank, 1st=best)	30.7 (114th of 143)	57.1 (20st)
Big Mac, USD, Oct 2010 (one-year change)	3.71 (+3.9%)	2.18 (+19.1%)
Public debt, % GDP, 2010 (rank, trend)	58.9 (37th, rising)	17.5 (113th, falling)
External debt, USD trillion, 2010 (rank, trend)	14.0 (1st, rising)	0.4 (23rd, rising)
Wants Rminmbi to free float when	in US' best interest	in China's best interest
Savings rate, %	~ 3	~ 30
Consumption, % GDP	~ 70	< 40
Highest corporate marginal tax, 2000 and 2009	30%, 25%	33%, 25%
Oil consumption, bbl/day, 2009 (rank, trend)	18.4 million (1st, falling)	8.5 million (2nd, rising)
Internet users (rank, penetration, growth 2000-2010)	240 million (2nd, 77%, 152%)	420 million (1st, 32%, 1767%)
Infrastructure	Tired	New
Roads, km, million (rank)	6.506 (1st)	3.584 (2nd)
Railways, km (rank)	226,427 (1st)	77,834 (3rd)
Average speed of fastest scheduled train, mph	79	194
High-speed rail network (120mph or higher), miles	0	~ 4,000
Airports with paved runways, latest	5,194	425
Public spending on education, % GDP	5.7	2.5
Universities in top 100 (rank)	31 (1st)	4 (5th with Switzerland and Netherlands)
Wins at Intern. Mathematical Olympiads (IMO)	4 **	15
Real estate	Distressed	Empty
Average down payment, %	~ 20	~ 50
Home equity loans	Yes	No
MSCI classification	Developed market	Emerging market
Female parliamentarians, lower house, % 2011 (rank)	16.5% (72nd)	21.3% (55th)
Fertility rate (TFR), births/woman, 2000 and 2010	2.06, 2.06	1.33, 1.54 (Hong Kong: 1.27, 1.04!)
# of boys born per 100 girl births, at birth, 2009	~105	~114-119
65 years old and over, 2011 est. (trend)	13.1% (rising)	8.9% (rising)
Crime: Getting a gun is	easy	difficult
Illicit drugs: heroin	Major consumer	Major transshipment point
Capital punishment	Yes	Yes
Documented executions, 2007 (rank)	42 (7th)	470 (1st)
Software piracy rate (stolen as % of legal)	~ 20%	~ 82%
Homicide per 100,000 of population, 2006	5.6	2.4 ***
Imprisoned per 100,000 of population****	743	120

Source: Ineichen Research & Management using various sources including Bloomberg, Reuters, CIA (World Factbook), UN, Amnesty International, World Bank, University of Leicester, heritage.org, sciencedaily.com, economist.com, energy.eu, transparency.org, internetworldstats.com, nationmaster.com, prisonstudies.org, happyplanetindex.org, globalissues.org and Wikipedia

* Gu Wei Jin Yong, Yang Wei Zhong Yong: "Past serve the present, foreign things serve China."

** Surnames of US 2009 team were: Berman, Larson, O'Dorney, Pan, Meng, and Cao

*** Hong Kong: 0.49, Singapore: 0.39

**** Stalin's Russia in 1936 had more than 3,000 imprisoned per 100,000 of population.

"China is a big country, inhabited by many Chinese."

—Charles de Gaulle

"In China, when you're one-in-a-million, there are 1,300 other people just like you."

—Bill Gates

"He who goes borrowing, goes sorrowing."

—Cheng Siwei (former Vice chairman of the Standing Committee of the China's National People's Congress and now head of China's green energy drive) quoting Benjamin Franklin

"Despite the investment of over a billion pounds of Western funds, the promise of Victorian globalization went largely unfulfilled in most of Asia, leaving a legacy of bitterness towards what is still remembered to this day as colonial exploitation."

—Niall Ferguson¹

¹ Ferguson (2008), p. 287

Box 1: A short story from The Gartman Letter, 14 April 2011

"I asked my friend's little girl what she wanted to be when she grows up. She said she wanted to be Prime Minister of Canada some day. Both of her parents, NDP [social-democratic party in Canada, ed. note] supporters, were standing there, so I asked her, "If you were Prime Minister what would be the first thing you would do?"

She replied, "I'd give food and houses to all the homeless people." Her parents beamed, and said, "Welcome to the NDP Party!"

"Wow... what a worthy goal!" I told her. I continued, "But you don't have to wait until you're Prime Minister to do that. You can come over to my house, mow the lawn, pull weeds, and sweep my yard, and I'll pay you \$50. Then I'll take you over to the grocery store where the homeless guy hangs out. You can give him the \$50 to use toward food and a new house." She thought that over for a few seconds, then she looked me straight in the eye and asked, "Why doesn't the homeless guy come over and do the work, and you can just pay him the \$50?" I smiled and said, "Welcome to the Conservative Party." Her parents still aren't speaking to me."

We regularly come across two historical comparisons in relation to the US passing on the baton to China as sole political and economical (and cultural?) hegemony.² (1) the fall of Rome, and (2) the US taking over from the British, economically in the 19th century, politically after WWII.³ The US hegemony might or might not decline during our lifetime. Whatever the case might be, we found Fareed Zakaria's (2008) take on this topic most realistic; certainly for the immediate future, i.e. the next 20-40 years. His view of the "post-American world" is not necessarily a decline of the United States but "the rise of the rest". Innovation and wealth are not as concentrated in the West anymore as it once was. The "rest" are catching up. The "rest" seem to have understood Walter Wriston's axiomatic capitalist three-liner quoted above (page 30). The economic growth of the "rest" is slowly generating a new global landscape where the power is shifting too. Even if China and India never get past middle-income status, they are likely to be the second- and third largest economies in the world for much of the twenty-first century. It is not that the US is becoming less powerful; it is the rest becoming more powerful economically and politically. As Jim Rogers put it:

"Throughout history, the center of the world has shifted to where the capital is, where the assets are. You don't see any period in history where things are shifting to the debtors, and America's the largest debtor nation in the history of the world. Unless something's different this time, unless the world's changed very very dramatically, the center of the influence, the center of the power, the center of the earth, the center of the globe, is going to be shifting towards Asia, because that's where all the money is. Have you ever heard of anybody saying, 'Let's go to where all of the debtors are'? It just doesn't happen that way."⁴

"History is not immutable. But there is one pattern that comes very close to being a law of history: in the long run, the rise and fall of great nations is driven primarily by their economic strength. Rome, Imperial China, Venice, France, the Netherlands, Portugal, the United Kingdom – all had their day, and their international decline followed inexorably from their economic decline."

—Richard Holbrooke¹

¹ "The Next President: Mastering a Daunting Agenda," Richard Holbrooke, Foreign Affairs, September/October 2008.

² The IMF is the most recent in banging the US vs China drum. In late April 2011, for what it's worth, the IMF predicted that the "Age of America" will end in 2016, i.e. the US economy will be overtaken by China's economy in real terms by then. This is roughly ten years earlier than many other market pundits predict the overtaking manoeuvre to take place.

³ The British government faced political and economic pressure somewhat along the lines of "he who pays the piper calls the tune." The US government held Gilts in part to aid post war Britain's economy, and as partial payment of Britain's enormous WWII debt to the US government, American corporations, and individuals. There is arguably a parallel here.

⁴ Interview with Time magazine, 28 April 2009

Note here that the United States have been declared economically “finished” before, namely in the 1980s during the economic reign of Japanese manufacturing prowess. The US came back and Japanese manufacturing prowess today is arguably less prowessful than as it once was. So the idea of Asia or China taking over has a somewhat familiar ring to it. It is worth remembering that the US has some “issues” but also has sound demographics (see Table 3). China, and nearly everyone else on the planet, has issues too; but not the sound demographics. The US is still a magnet for young people who want to work hard. (The EU is a magnet too, and hard work might or might not be a top priority of the people being pulled in.)

“Opportunity is missed by most because it is dressed in overalls and looks like work.”

—Thomas Edison

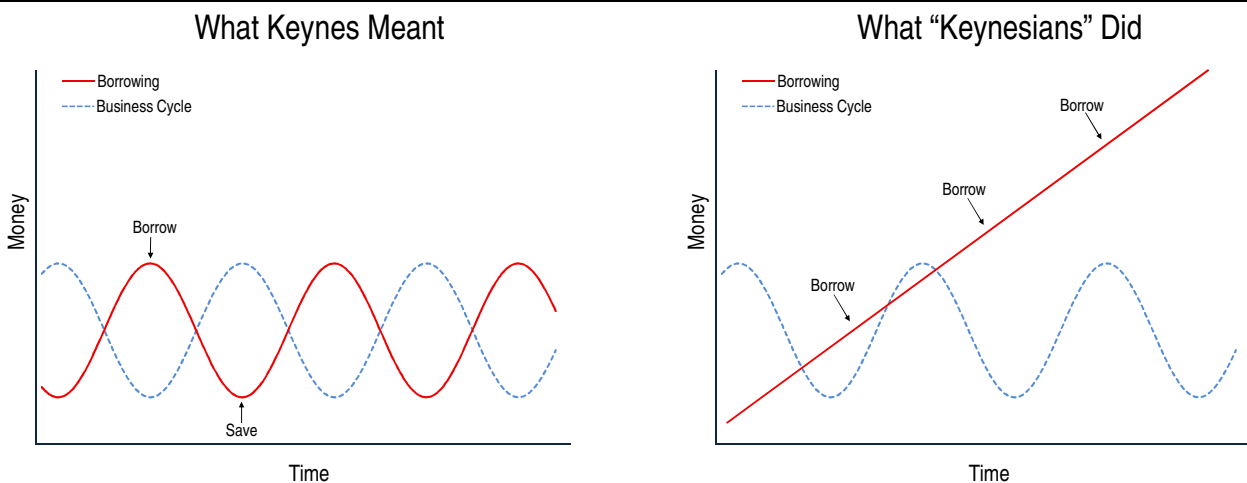
According to Jim Chanos, short-seller of Enron fame, China is a bubble: In a CNBC broadcast in January 2010 he argued that China was “Dubai times 1,000 – or worse.” This quote was quoted and re-quoted in the international press for weeks. This prompted China bull Jim Rogers to comment on Chanos’ spelling skills; a quote that also did the rounds.¹

“I find it interesting that people who couldn’t spell China 10 years ago are now experts on China.”

—Jim Rogers

Chart 11 below is a take on what went wrong in the industrialised economies.

Chart 11: What went wrong in the West



Source: Protégé Partners 4Q 2009 quarterly letter

Keynes idea was about counter-cyclical fiscal stimulus, i.e. boosting aggregate demand by expanding debt to weather the trough of the business cycle and correspondingly shrinking demand by retiring debt during the ensuing boom.² However, this latter point was sort of ignored. The next chart puts some numbers behind the upward sloping line in the second exhibit in Chart 11.

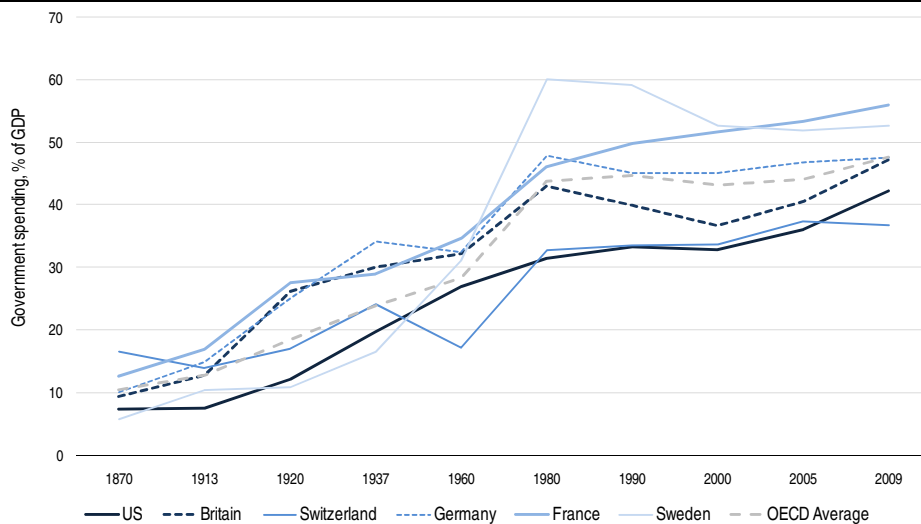
“None of us can have as much as we want of all the things we want.”

—Oliver Wendell Holmes (1809-1894), American writer

¹ On 8 January 2010, the New York Times ran a piece on Jim Chanos and his big bet against China. In the article, long time China bull Jim Rogers was quoted as saying: “I find it interesting that people who couldn’t spell China 10 years ago are now experts on China... China is not in a bubble.” The NYT used the headline: “Jim Rogers: Jim Chanos Couldn’t Spell China 10 Years Ago.” Rogers intervened and argued that the quote was used “out of context” and that it was a “general statement” about the sudden influx of “China experts,” not Chanos himself. The NYT wrote a correction the next day and apologized to Rogers for the error. Apparently they “also reached out to Chanos to see whether, in fact, he knew how to spell China 10 years ago, but he was smart enough not to have a comment and get involved.”

² From Protégé Partners 4Q 2009 quarterly letter

Chart 12: Government spending, % of GDP



Source: IR&M, raw data from The Economist 19 March 2011, sourced to: Vito Tanzi and Ludger Schuknecht, IMF, OECD

Capitalist by name is not necessarily capitalist. Chart 12 shows government spending as a percentage of GDP from three countries that are perceived to have a more capitalist bent and three countries that are perceived to be more socialist or welfare state builders. Note that the differentiation between “capitalist bent” and “welfare state builder” is becoming blurred. Alan Greenspan on the topic of fiat money, gold, welfare state, and the government’s involvement; *before working for the government:*

In the absence of the gold standard, there is no way to protect savings from confiscation through inflation. There is no safe store of value. If there were, the government would have to make its holding illegal, as was done in the case of gold. ... The financial policy of the welfare state requires that there be no way for the owners of wealth to protect themselves.

This is the shabby secret of the welfare statist's tirades against gold. Deficit spending is simply a scheme for the confiscation of wealth. Gold stands in the way of this insidious process. It stands as a protector of property rights. If one grasps this, one has no difficulty in understanding the statist's antagonism toward the gold standard.¹

On a more positive note, it seems that authorities in Europe and the US have woken up to the fact that economic misery is not due to hedge funds running amuck, but could be related to debt and deficits. US Congress in early April 2011 for example signed an agreement on the 2011 budget compromise. The \$38.5 billion spending cuts were announced—spasmodically trying to keep a straight face in the process, we’re sure—that this was “the largest spending cut in U.S. history.” (What wasn’t mentioned is that during the eight days preceding the negotiations, the federal debt increased by \$54.1 billion to \$14.3 trillion.) Chart 13 puts the “draconian” cuts into perspective.

¹ Gold and Economic Freedom, *The Objectivist*, 1966, reprinted in Ayn Rand’s *Capitalism: The Unknown Ideal*, 1967.

² Von Mises (1953), p. 418.

“The state’s growth has been encouraged by the right as well as the left, by favour-seeking companies as well as public-sector unions, by voters as well as bureaucrats. Indeed, given the pressures for ever larger government, many reformers feel they will have to work hard just to keep it at its present size.”

—*The Economist*, A special report on the future of the state, *Taming Leviathan*, 19 March 2011

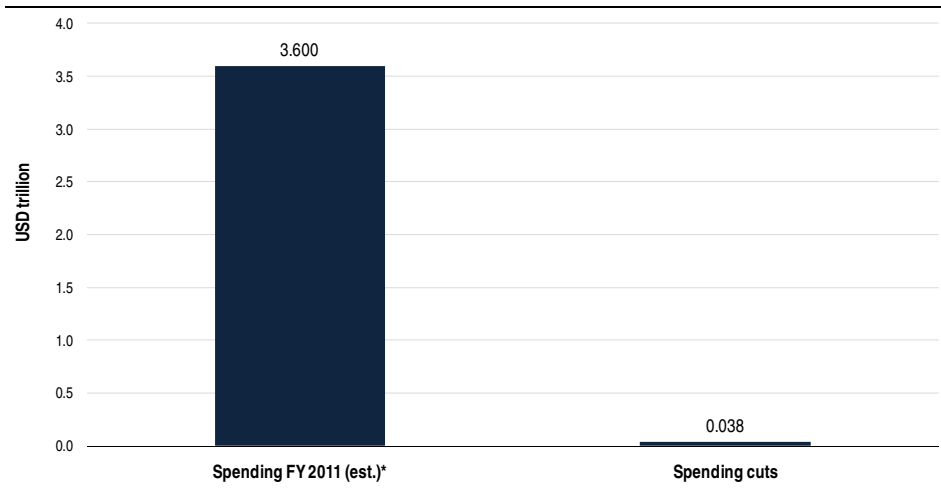
“Socialism is a philosophy of failure, the creed of ignorance, and the gospel of envy, its inherent virtue is the equal sharing of misery.”

—*Winston Churchill*

“How pale is the art of sorcerers, witches, and conjurers when compared with that of the government's treasury department! The government, professors tell us, ‘can raise all the money it needs by printing it’.”²

—*Ludwig von Mises*, early reference to monetary helicopters

Chart 13: Budget and largest spending cut in U.S. history



Source: IR&M

* Estimated FY 2011 CR (Continuing Resolution) deficit plus estimated Federal spending FY 2011 CR.

- The relationship between the estimated 2011 budget of \$3.6 trillion and the proposed spending cuts of \$38.5 billion is approx. the same as between US nominal GDP per capita (or US national debt per capita) and the new iPad retailing at \$499.

Something that seems to grow indefinitely but cannot grow indefinitely resembles a Ponzi scheme.

Complexity and Ponzi schemes

Whenever there is a financial crisis of some sort there is regulatory change, i.e. an increase of regulatory code that would have prevented the accident from occurring had the regulatory code just been introduced prior to the accident. In earlier reports we argued that not only does active risk management function on the premise of “learning by doing,” regulation also functions on that basis. So it is fair to say that Basel III is an improvement over Basel II and Solvency II is an improvement over Solvency I; as the new code includes the “learning experience” from the 2008 credit crisis. It is unfortunate; however, that the next crisis will have different characteristics and the most recent learning experience might or might not apply. (The unfolding of a liquidity crisis is vastly different from the unfolding of a sovereignty crisis. The good news is of course, that Basel IV and Solvency III will incorporate the pinpricks of the next crisis.)

There seems to be an element of cyclicity in going from deregulation to regulation and back again. While the “learning by doing” premise is both very natural and essential to survival, there are factors at work that are not cyclical but structural. One of these structural changes is the ever increasing degree of complexity in the financial landscape. While the increase in complexity is of course well intended and—in a democratic system—is supposed to benefit the populace, there is this notion that the increase in complexity makes the system less transparent for all agents and increases, rather than decreases, the probability of

“The ‘ruling class’ hasn’t done a good job of balancing the checkbook for quite some time. And they ‘wonder’ why some of their constituents have taken to having parties where tea is the featured beverage.”

—Ron Griess¹

“Experience is inevitable. Learning is not.”

—Paul J.H. Schoemaker, author and expert on strategic management and decision making

“The government that’s strong enough to give you what you want by taking it from someone else is strong enough to take everything you have and give it so someone else.”

—Harry Browne²

¹ Thechartstore Blog, 27 March 2011

² From Browne (1995). This quote and variants thereof (“big enough” instead of “strong enough”) have been attributed to Ronald Reagan, Gerald Ford, Barry Goldwater and Thomas Jefferson.

an accident. In essence, the continuous, seemingly unstoppable increase in complexity resembles—at least approximatively—a Ponzi scheme.

A Ponzi scheme is a fascinating phenomenon. It can go on for a long time, not unlike the page count in Chart 10 on page 29. It grows until the proverbial music stops. Bill Gross of PIMCO recently related quantitative easing to a Ponzi scheme.² As John Hussman put it last year:

The global financial system continues to be unsound in the same way that a Ponzi scheme is unsound: there are not enough cash flows to ultimately service the face value of all the existing obligations over time. A Ponzi scheme may very well be liquid, as long as few people ask for their money back at any given time. But solvency is a different matter – relating to the ability of the assets to satisfy the liabilities.³

We are not conspiracy theorists here at IR&M. However, a case can be made that increased complexity through the governmental upsizing are smokescreens camouflaging past mistakes and adjourning the day of reckoning. Unfortunately, this is a characteristic of a Ponzi scheme. This was known to signees of great one-pagers; Thomas Jefferson:

I place economy among the first and most important virtues and public debt as the great danger to be feared. To preserve our independence, we must not let our leaders load us with perpetual debt. We must make our choice between economy and liberty, or profusion and servitude.

Potentially Alexander Fraser Tytler (1747-1813), Scottish-born lawyer, writer, and professor of history at the University of Edinburgh, was onto something:

A democracy cannot exist as a permanent form of government. It can only exist until the voters discover that they can vote themselves largesse (money-benefits) from the public treasury. From that moment on, the majority always votes for the candidates promising the most benefits from the public treasury with the result that a democracy always collapses over loose fiscal policy followed by a dictatorship. The average age of the world's greatest civilizations has been 200 years.⁴

A pragmatic risk management strategy is to hope for the best but be prepared for the worst.

“The whole new regulatory reform is a joke. The whole government is a Ponzi Scheme.”

—Bernard Madoff, convicted expert on the topic¹

“Economists agree this can’t go on. We can borrow and borrow, but eventually there will be a day of reckoning.”

—Joseph Stiglitz

“Democracy is the road to socialism.”

—Karl Marx

¹ Telephone interview with New York magazine, CBS News, 27 February 2011

² Investment Outlook, PIMCO, William H. Gross, March 2011

³ Weekly comment, October 2010, www.hussmanfunds.com

⁴ Found in The Gloom, Boom & Doom Report, A Depressive Optimist, 1 September 2009.

Bottom line

Pending regulation is extremely complex. This complexity could well result in the opposite of what is intended: a financial system that is less transparent and runs less smoothly.

The VAR vicious circle hypothesis is one example of how an exogenous shock to the system can result in synchronised behaviour of many regulated investors, triggering a feedback loop that feeds on itself in a vicious downward spiral. Encouragingly, regulators have now woken up to the limitations of micro-prudential regulation. However, the introduction of macro-prudential regulation will result in further experimentation. This means the “learning by doing” (essentially going “from failure to failure”) mantra continues to hold, regulatory uncertainty will remain high, and complexity will almost certainly continue to rise. The Warwick Commission summarised some of the issues addressed above as follows:

Systemic resilience requires heterogeneity of views and behaviour. When assets fall from 100 cents in the dollar to five cents in the dollar, why are speculative long-term investors not buying them up? They do not because micro-prudential standards on valuation, risk and solvency limits make it hard for them to do so, yet these limits make little sense for long-term investors with their superior capacity for holding liquidity and market risk. In the pursuit of standards, ‘best-practices’ and micro-prudence, regulation has artificially created homogeneity and systemic fragility. Where possible we must design micro-prudential regulations in a way that minimises their macro-prudential consequences and given that this will not always be possible we must complement micro-prudential regulation with macro-prudential regulation.¹

Entrants into finance are recommended to study law, not finance. A trading floor where compliance officers outnumber traders might or might not be a blessing.

The next section examines briefly the Swiss experience with the introduction of Solvency II like regulation for insurers. This is followed by a discussion of Solvency II related to hedge funds and the industry.

“Complexity cloaks catastrophe.”

—Richard Bookstaber

“Success is going from failure to failure without a loss of enthusiasm.”

—Winston Churchill

¹ *The Warwick Commission on International Financial Reform: In Praise of Uneven Playing Fields*, The University of Warwick, 2009.

The Swiss experience

Swiss insurers already had their “Solvency II.” Discussions of the so-called Swiss Solvency Test (“SST”) started in spring 2003 and the test was introduced in January 2006. All Swiss insurers need to comply since January 2008.

Swiss insurers caught the “equities for the long run” bug relatively late, i.e. in the second half of the 1990s. (There were other institutional investors in Europe who increased their equity allocations even closer to the equity bull market peak of 2000.) Equity allocations were increased up to 30%. The main reason for increasing allocation to equities (and therefore return-chasing behaviour) was government intervention, i.e. a high actuarial (technical) target rate of 3.5% that was unachievable with bonds alone and peer pressure relative to autonomous pensions funds that had higher equity allocations and therefore higher returns. The popping of the TMT bubble caused losses and the insurers needed to be recapitalised. The general perception of the time was—similarly to banks less than ten years later—that something on the regulatory front needed to be done; hence the idea of the solvency test.

Chart 14 shows the nominal share price of a selection of Swiss insurers as a percentage of their all-time-high. This is just one example to show how regulation follows market mayhem.

Chart 14: Swiss insurers (share price as a percentage of all-time-high)



Source: IR&M, Bloomberg
28 April 2011 inclusive

- Could share holders have fared worse in 2008 without SST?
- As of February 2011 no internal models have been approved by regulator (FINMA).² Some internal models have been approved on a provisional basis which leaves insurers with a form of regulatory or planning uncertainty.

¹ Note that the first cuckoo clock (a clock whereby full hours are acoustically announced by the sound of a bird) is actually credited to the Greek inventor and mathematician Ctesibius of Alexandria (ca.285-222 BC). The first modern cuckoo clocks appeared in 17th century Germany, not Switzerland. It is the “Chalet” style cuckoo clock that originated at the end of the 19th century in Switzerland. Who knew?

² Do regulators really understand these risk models? We’re just asking. The regulators are the bureaucrats. The bureaucrats are advised by the technocrats who come up with the complex models. If something goes wrong, the

“You know what the fellow said – in Italy, for thirty years under the Borgias, they had warfare, terror, murder and bloodshed, but they produced Michelangelo, Leonardo da Vinci and the Renaissance. In Switzerland, they had brotherly love, they had five hundred years of democracy and peace – and what did that produce? The cuckoo clock.”¹

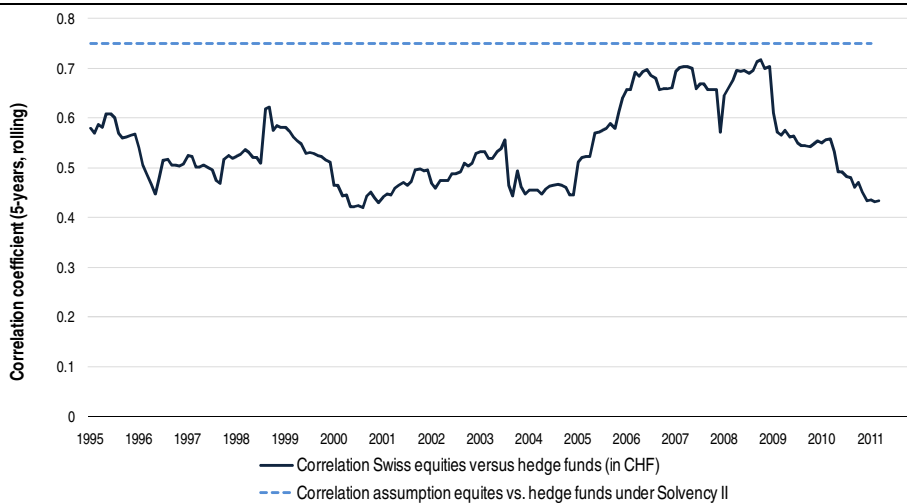
—Scene from the 1949 British film noir “The Third Man”

- Is it possible that chief risk officers of insurance companies spend so much time getting their arms around the complexities of regulation, that there is no time and energy left to think about market risk? Solvency II, Ucits IV, MiFID, AIFMD, MAD¹, and, yes, we could go on quite a while longer. See the glossary at the end of this document for a flavour of European legalese and a potpourri of acronyms.

The main market event of SST was essentially selling equities. So yes, share holders could have fared worse in 2008. The allocation to equities fell in the bursting of the TMT bubble due to falling prices and due to selling in anticipation of regulatory change. In the bull market of 2003-2007 a combination of further selling and rising prices resulted, generalising a bit, in flatish to only marginally higher allocations to equities. Listed equity allocations are generally believed to be around three to five percent. The allocations to private equity and hedge funds could currently be around five percent on average.²

SST assumes high correlation between equities and hedge funds unless an insurer can prove otherwise, which, after 2008, is arguably a challenge. (Solvency II assumes correlation coefficient of 0.75 between “global equity” and “other equity”.) Chart 15 shows rolling 5-year correlation between equities and hedge funds.

Chart 15: Rolling 5-year correlation between Swiss equities and hedge funds



Source: IR&M, Bloomberg

Swiss equities: Swiss Market Index; hedge funds: HFRI Fund Weighted Composite Index in CHF. March 2011 inclusive.

Whether or not Swiss insurers have an advantage over European insurers due to a head-start in risk-sensitive regulation or a disadvantage due to tougher risk-sensitive regulation is yet unclear. So far it made no big difference from a shareholder’s perspective. See Chart 16 below. (Note that the EUR fell by 20% relative to CHF in the period shown in the graph, i.e. from CHF1.60 to CHF1.28. Swiss insurers therefore did indeed outperform on a currency neutral basis. This of course has nothing to do with regulation. It’s just because the Swiss are not into

bureaucrats don’t blame the technocrats but the hedge funds, or, in the more recent past, the banks. (We *do* understand the seriousness of all of this even if it doesn’t come through at all times. However, at least at one level it is comical.)

¹ MAD here stands for Market Abuse Directive and we assume it has nothing to do with Alfred Neuman; although at this juncture we cannot be sure, of course.

² “Versicherungsmarkt Schweiz – Marc Chuard: “Lernen von den Schweizern,” Institutional Money, Ausgabe 3/2010.

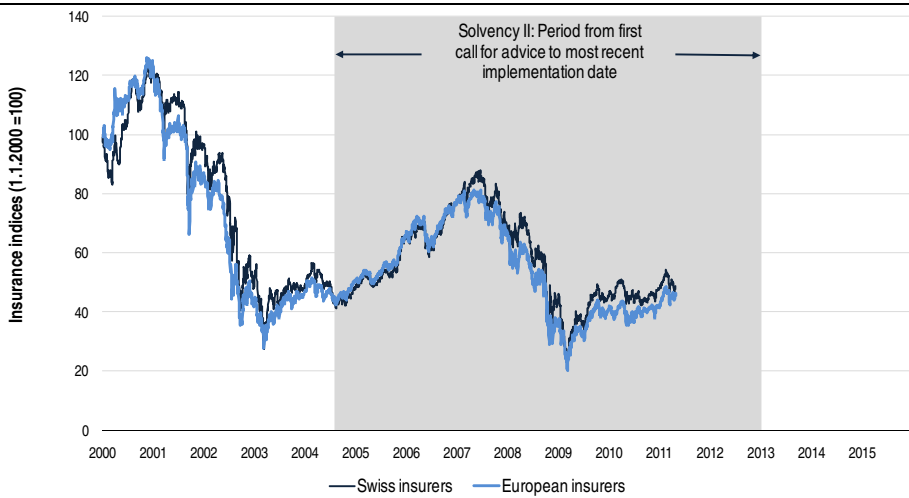
“The French work to live, but the Swiss live to work.”

—French proverb

Advantages of head start in tougher regulation unclear

monetary experiments at the moment; assuming Swiss central bank intervention on behalf of a strong home currency in 2010 was not an experiment but just—borrowing casually from Pink Floyd—a *momentary lapse of reason*.)

Chart 16: Swiss versus European insurers

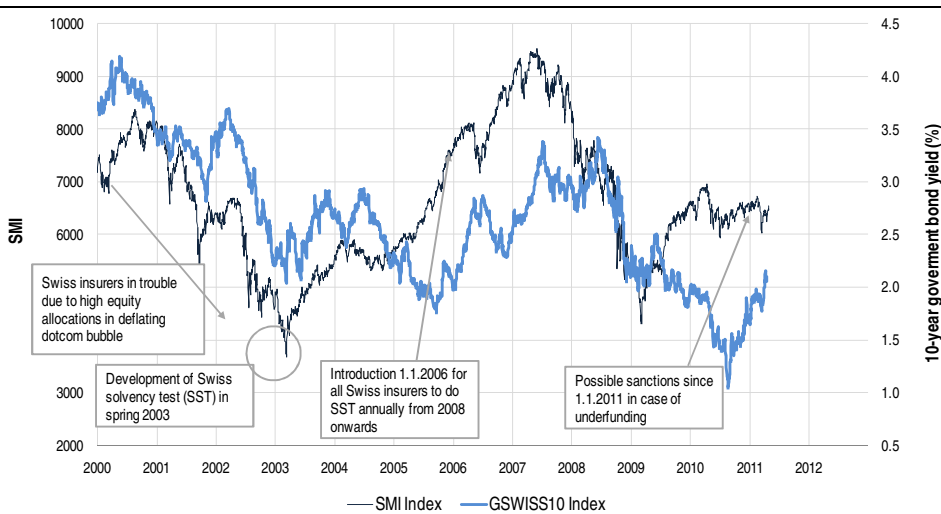


Source: IR&M, Bloomberg
 Swiss insurers: SPI Insurances Index (Jan – Jul 2000), SWX SP Insurance Index (Aug 2000 forward); European insurers: STOXX Insurance 600 Index. 28 April 2011 inclusive

Overall both SST and Solvency II mean less equities and hedge funds and more bonds. In the case of Switzerland this includes foreign bonds as the home market is too small relative to the size of the insurer’s assets. Chart 17 puts the main steps of SST in relation to equities and bond yields.

Higher allocation to bonds

Chart 17: Swiss shares and government bond yields



Source: IR&M, Bloomberg
 28 April 2011 inclusive

Bottom line

In the tinniest of nutshells, the introduction of risk-sensitive regulation resulted in, well, less risk. This bears the risk of de-risking the wrong risks.

“In the end, everything is a gag.”
 —Charlie Chaplin

Hedge funds and Solvency II

*Solvency II in a nutshell*¹

The main idea is for European insurers to move from a risk-insensitive to a risk-sensitive reporting based on market values. Solvency II will introduce economic risk-based solvency requirements across all EU member states. These new solvency requirements are anticipated to be more risk-sensitive and more sophisticated (read: more complex) than current local requirements. These requirements are intended to provide better coverage of the real risks run by any particular insurer. Solvency II adopts a three-pillar approach akin to Basel II and is expected to be implemented by January 2013.

Solvency II will solve a number of serious shortcomings of the current (Solvency I) regulations. (As in “learning by doing.”) Under Solvency I, only liability driven risk is taken into account (and also in a rather simplified way). Investment risk is completely ignored: the required capital for an 80% equity and 20% bonds asset allocation is the same as for a 20% equity and 80% bonds asset allocation, while the corresponding balance sheet risks are obviously completely different.²

It is not entirely clear which pension funds will fall under Solvency II. The borderline between European insurers and pension funds is blurred. In some countries (e.g. Denmark) pension funds are considered life insurance companies and are regulated as such. In other countries (e.g. Germany) separate pension funds like in the UK or the Netherlands do not even exist, and pension products are provided by insurance companies.³

Solvency II is very complex. When researching the topics of this document we’ve started a glossary which we printed at the end of this document to get familiar with the most basic terms. The number of commissions and committees involved is mind boggling. (One market observer estimated compliance costs to be around \$4 billion.⁴) Many insurers seem to be taking the view that using the standard formula rather than trying to apply for an internal model is a preferable path to take. Applying for an internal model is too complex a task for many insurers. Some smaller and medium-sized insurers further argue that the standard model is too complex too.⁵

Note that the European AIFMD (Alternative Investment Fund Management Directive), expected for 2014, is very complex too. As is most regulation, it was born from the financial crisis and propagated by politicians bent on reining in hedge funds, whose activity purportedly contributed to the financial market melee.⁶ What it degenerated into was a nearly two year-long political battle that almost led to a shut-out of hedge fund and private equity capital from Europe. Switzerland was hyped as the main beneficiary from a shut-out. However, the overhyped exodus from London has not materialised.

“I’ve learned if the Queen asks you to a party, you say yes. And if the Italian prime minister asks you to a party, it’s probably safe to say no.”

—David Cameron

“There is only one thing more painful than learning from experience, and that is not learning from experience.”

—Laurence Johnston Peter (1919-1990) of Peter Principle fame

Borderline between insurers and pension fund industry is blurred

“The further one goes, the less one knows.”

—Lao Tzu, philosopher in ancient China and author of the Tao Te Ching

“I have no regret whatsoever. It is a nice image, locusts that move into a field, eat it to the ground, and move on to the next without looking back. I think it was quite apt...”

¹ Solvency II is actually far too complex to fit in a nutshell.

² From Montulet and Hooghwerff (2010)

³ From Jensen (2010)

⁴ “Potential Solvency II Insurance Regulations Ramifications,” Claude Penland, www.claudepenland.com, 25 February 2011.

⁵ Clifford Chance, Solvency II Update, February 2011.

⁶ Allaboutalpha.com, A funny thing happened on the way to the Directive..., 10 April 2011

It goes without saying that AIFMD is well intended and aims to harmonise and increase transparency; trying to keep everything—in comrade Münteferings ideological terms in the side text—“under control.” However, through costly complexity, bureaucratic lunacy and legal and regulatory ambiguity the system is likely to become less transparent and run less smoothly as the misallocation of capital is intensified, not reduced. It’s great for the legal profession though.

Tail risk and VaR under Solvency II

Many books have been written criticising VaR and many books have been written criticising the use of a normal distribution. The criticism was only partially lost on legislators and regulators. Table 4 below briefly addresses tail risk and VaR in relation to Solvency II.

Table 4: Tail risk and VaR

	Critique	Solvency II
Tail risk	Some natural phenomena are explained by a normal distribution; social phenomena, such as financial markets, are not. Nassim Taleb has been arguing for many years that whenever a normal distribution enters any form of risk assessment/model, the true risk is underestimated. Today, we believe this to be the consensus among people who—every now and then—want to be taken seriously on matters related to risk.	CEIOPS ³ (Committee of European Insurance & Occupational Pensions Supervisors) has taken this critique into account when stress testing equities. ⁴ Hence, an empirical distribution is used. This is a positive. However, an empirical distribution is what it is: past. Assuming the accidents in the past resemble the accidents in the future is dangerous too; not to say financially suicidal. Furthermore, what about all the investments that have no history. How do we model the risk of an investment in a wind park? Potentially it is the investments that have no history which are the most attractive long-term investments and are the most inefficiently priced.
VaR	<ol style="list-style-type: none"> 1. VaR implies precision in matters related to risk and uncertainty. The result can be that one confuses risk measurement with risk management, the latter being a thought process, not an econometric exercise. 2. Defining and enforcing one approach results in harmonising the whole market and results in lemming like behaviour during stress. 	CEIOPS has decided that a one in 200 year event is the magic number and that a Value-at-Risk approach is the way to go (99.5% VaR versus 99% in SST). Each source of risk is evaluated on an empirical distribution rather than a normal distribution. This is an important amendment and a direct result from the 2008 financial crises.

Source: Ineichen Research and Management

John Kay from the FT elegantly summed it up as follows:

Techniques such as value at risk modelling – the principal methodology used by banks and pressed on them by their regulators – may be of help in monitoring the day-to-day volatility of returns. But they are useless for understanding extreme events, which is, unfortunately, the main purpose for which they are employed. ...

Yet the use of risk models of this type is one of many areas of finance in which nothing much has changed. The European Union is ploughing ahead with its Solvency II directive for insurers, which – incredibly – is explicitly modelled on the failed Basel II agreements for monitoring bank solvency.⁵

... We have rules governing the social market economy here, and I would like them extended to Europe and, if possible, to the world. So let us develop rules, create transparency, and keep all this under control...

The economy is here for the people and not the other way round.”¹

—Franz Müntefering in 2007 defending his “locusts” statement from 2005²

“Solvency II is not just about capital. It is a change of behaviour”.

—Thomas Steffen, former Chairman of CEIOPS

¹ This sounds similar to the quote from an intellectual comrade of Müntefering (you-know-who): “Workers of the world unite; you have nothing to lose but your chains.” According to the capitalist-manifesto-quote from Walter Bigelow Wriston on page 30, it’s not about losing chains; it’s about losing brains.

² “German vice-chancellor stands by his call to tackle ‘locusts’,” Financial Times, 15 February 2007.

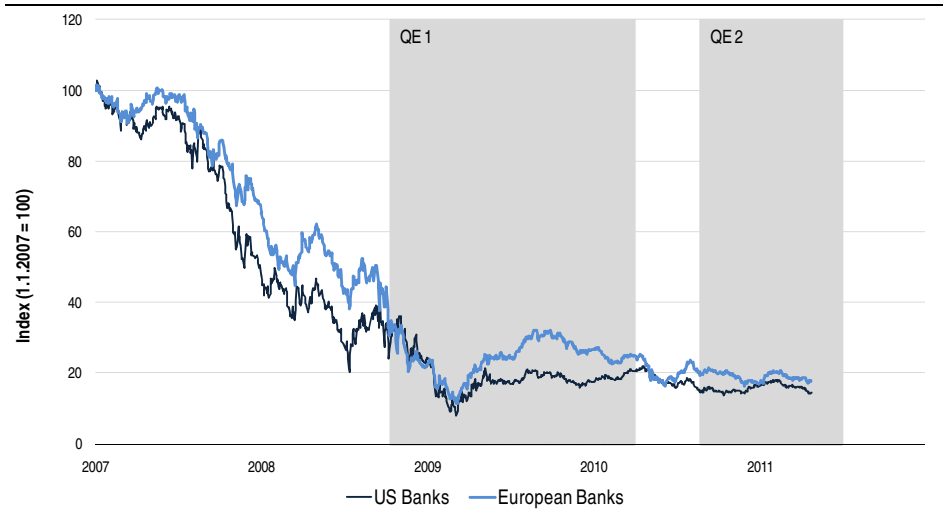
³ CEIOPS was replaced with EIOPA in January 2011.

⁴ This very important point was picked up in CEIOPS’ third wave of consultation papers.

⁵ “Don’t blame luck when your models misfire,” John Kay, Financial Times, 1 March 2011.

Chart 18 shows US and European Banks in common currency terms (in this case in Gold) whereby 1 January 2007 was set to 100. (Note that the topic of money illusion is a part of Regulomics but not part of this publication. The remarks on fiat money earlier on and Alan Greenspan's quote on page 35 must suffice for now.)

Chart 18: US and European Banks in common "currency" terms



Source: IR&M, Bloomberg

US Banks: S&P 500 Banks Index; European Banks: STOXX 600 Banks Index. Both indices are shown in Gold whereby 1.1.2007 was set to 100. 28 April 2011 inclusive.

- One "funny" aspect of Basel II is that the US was instrumental in initiating international bank regulation and then went on not ratifying it. (The US has not ratified Basel II.) Perhaps we should call this the "Kyoto Protocol Effect."
- Whatever the case might be, the ratification of Basel II didn't make much of a difference in the financial crisis from a share holder's perspective. See Chart 18. Whoever the Basel Accords is protecting, it ain't shareholders.¹

The management of tail risk or the avoidance of negative compounding over a long period of time matters greatly to most investors. It is the common sense to risk management that financial accidents and negative compounding of capital are not good for ones' financial and mental health. However, scholarly finance and, as a result, legislators and regulators are focussed on other metrics.² Applying normal distributions with precision was too elegant a solution to be ignored: As Markowitz put it in *Portfolio Selection* the 1950s:

Portfolios selected on the basis of expected loss, expected absolute deviation, or probability of loss are not to be trusted. They can be foolishly speculative even when apparently conservative. The assumption that a utility function exists rules out maximum loss as a measure of risk.

"If you are out to describe the truth, leave elegance to the tailor."

—Albert Einstein

¹ One could easily argue that, citing the Madoff affair, certain regulatory bodies are not equipped to protect buyers of financial products either.

² There are exceptions to everything of course. Roy's 1952 paper for example discussed shortfall probability and was published only months after Markowitz consensus-building and investment management-defining 1952 paper was published in the *Journal of Finance*. However, it is Markowitz's paper that made the "consensus cut" while Roy's paper did not.

The mistake here is obviously that utility functions are assumed to have no kink. But they do. Investors are loss averse and losses below a certain threshold really hurt.¹ We believe it is this realisation of institutional investors over the past ten+ years that, next to other changes, put hedge funds on the institutional investment map. We continue to believe that strategic asset allocation and the idea of the policy portfolio is going through some material change. David Swensen (2000) and Peter Bernstein (2003) were early in this regard.² More recently Wall Street legend Byron Wien (2010) has been blowing into a similar horn: What worked well in the 1980-1999 bull market might be—putting it mildly—ill-advised in the current regime.

“The difficulty lies, not in the new ideas, but in escaping the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.”

—John Maynard Keynes

¹ As Kahneman and Tversky pointed out in 1979.

² Note that the institutional euphoria in regard to the alternatives-heavy asset allocation of the ivy league endowment fund's asset allocation—putting it mildly—cooled off a bit during the financial crisis due to abnormally high losses from those “most ivy” within only a couple of months.

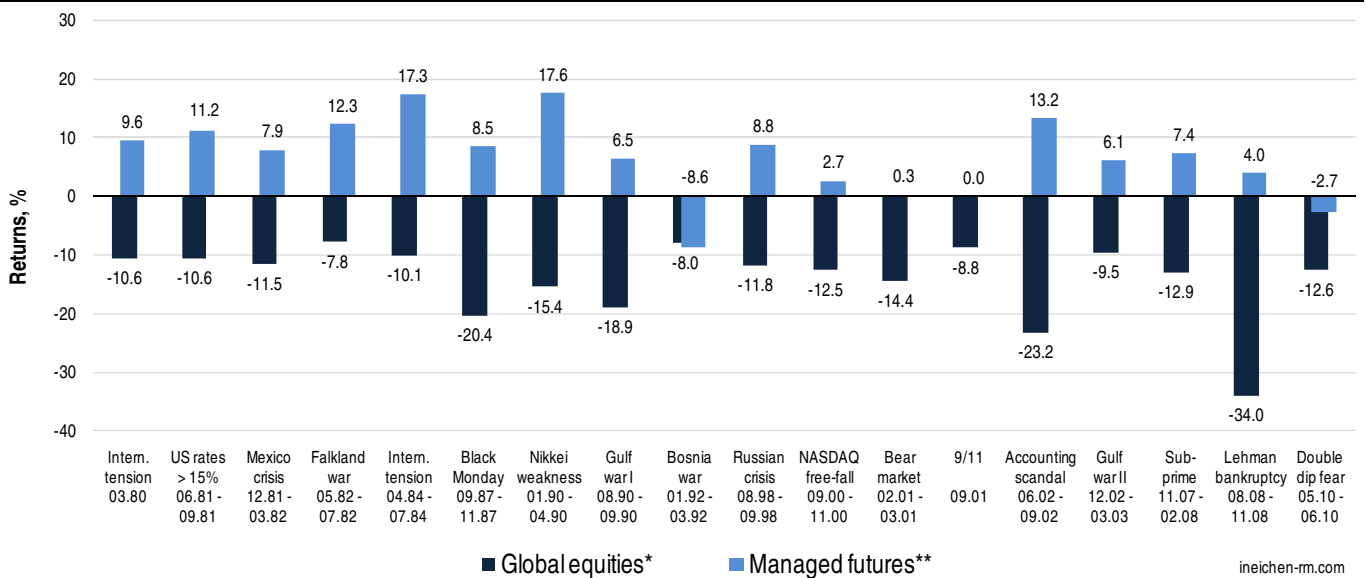
Punitive capital requirement for alternative investments

QIS¹ provided two different approaches to stress test an insurer’s equity stake. In the first approach, equity is divided into “global equity”, i.e. listed equities in OECD and EEA countries, and “other equity”. Hedge funds, as well as equities listed in countries other than EEA and OECD countries, non-listed and listed private equity, commodities, infrastructure, and other alternative investments are classified as “other equity.” The basic capital charge for “other equity” was determined at 49%. This means that a European insurer needs to hold 49 cents of capital for every Euro invested in “other equity.”

“I don’t want to kill the animal spirits that necessarily drive capitalism — but I don’t want to be eaten by them either.”
 —Thomas Friedman

The correlation between “global equity” and “other equity” is set at 0.75. This obviously ignores the extreme observation of managed futures having a negative correlation with equities when equities tank.²

Chart 19: Managed futures in difficult market environments (1980 – 2010)



Source: IR&M, Bloomberg, updated from Ineichen (2010)

* MSCI Daily TR Gross World USD Index;

** CISDM CTA Asset Weighted Index formerly known as CISDM Trading Advisor Qualified Universe Index

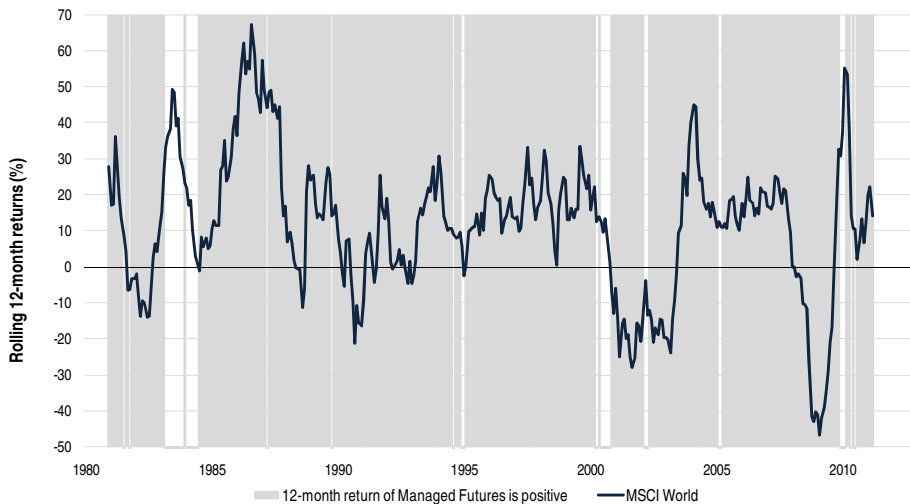
Chart 19 compares managed futures with global equities and the graph speaks more or less for itself. The graph shows all occurrences where the MSCI World lost more than 7% of its value within one, two, three, or four months from 1980 to 2010 on a month-end basis. The negative equities event was then compared to a proxy for managed futures over the same period. The correlation is negative when investors need the negative correlation. The negative correlation properties seem to work roughly 16 out of 18 times. Chart 20 shows rolling 12-month return of the MSCI World total returns index. The gray areas mark the period when managed futures have been delivering a positive 12-month return.

Managed futures compound positively when equities compound negatively

¹ QIS stands for Quantitative Impact Studies. The QIS exercises test the financial impact and suitability of proposed Solvency II requirements on firms. QIS1 was launched in autumn 2005. The fifth and, most likely, final QIS before implementation was published in March 2011.

² See Absolute returns revisited, Ineichen Research and Management, April 2010 for details.

Chart 20: MSCI World (12-month returns)



Source: IR&M, Bloomberg

MSCI Daily TR Gross World USD Index; CISDM CTA Asset Weighted Index until October 2010, then Dow Jones Credit Suisse Managed Futures Hedge Fund Index. March 2011 inclusive.

When equity long-only investments compound negatively, managed futures tend to compound positively. Note here that Solvency II is complex. However, complex is not synonymous with sophisticated. A high degree of sophistication means knowing the simple empirical fact discussed above. A high degree of complexity means a lot of science, hideous amounts of pages with legal code, and numerous commissions and committees populated with book-smart bureaucrats and technocrats with little or no investment experience. Sophisticated investors focus on the upper part of the knowledge pyramid, legislators and regulators on the base.¹

Market impact

There is little doubt that regulation makes the financial system more homogeneous. (See also discussion of VAR vicious circle hypothesis on page 24.) It is market heterogeneity that is healthy from a systemic risk point of view, not homogenisation and normalisation through governmental intervention. Regulation makes lemmings out of otherwise intelligent people. The impact of regulatory change, in this case Solvency II, is synchronised behaviour of economic agents and a system that is—due to homogenisation—more prone to accidents.

Note that the problem of pro-cyclicality has been recognised. The capital charge will be adjusted periodically in a symmetrical fashion, i.e. plus or minus 10% of the basic capital charge. The most recent adjustment factor we came across was -9%, which would result in a capital charge of 40% instead of 49%. This adjustment was designed to take into account the pro-cyclical behaviour in—mainly—falling markets. The positive spin on this recognition is that one of the problems of regulation and market homogenisation has been addressed. The negative spin of this adjustment is that the authorities' intervention and involvement in micro-

“The young man knows the rules, but the old man knows the exceptions.”

—*Oliver Wendell Holmes*

“The reasonable man adapts himself to the world; the unreasonable man persists in trying to adapt the world to himself.”

—*George Bernard Shaw*

Some of the quirks of regulating financial institutions via quantitative models have been recognised

¹ IR&M's logo symbolises the five layers of the knowledge pyramid. (See Ineichen (2010) for details.) The five layers are: data, information, knowledge, understanding (and applicability of the knowledge), and wisdom. The value and therefore the price increases when moving from bottom to top. Complexity means amassing data and information. Sophistication means knowing what works and what doesn't and, ideally, getting as close to the apex of the pyramid as possible.

managing the investment portfolios of institutional investors will become even more extreme.

Under Solvency II, a low solvency ratio can be improved by reducing the risks in the current policy. The balance sheet can for example be de-risked by exchanging risky assets for fixed income when the solvency ratio is too low. As alluded to when discussing the VAR vicious circle hypothesis it is important to realize that risk reductions must often take place during unfavourable economic circumstances, e.g. selling equity after sharp drops in value, hedging interest rate risk when interest rates are low, reinsuring insurance risk when reinsurers are also struggling with their financial position, raising capital from investors during economic turmoil, etc.¹ Regulation can make forced sellers of already distressed investors.

Solvency II is already affecting investment behaviour. Solvency II changes required regulatory capital, elements of the liability benchmark, and the way in which risk is treated between risk categories and between and within asset classes. New hedge fund allocations from European insurers have been miniscule over the past two years. This is most likely at least in part due to the anticipated punitive regulatory treatment of alternatives. (Another reason is of course disappointment re Madoff and with hedge funds returns, especially among those institutional investors who made the big leap of faith into hedge funds in the 2007 to early 2008 period.) Whether Solvency II will result in synchronised mass redemptions from hedge funds and private equity funds is unknown. It's a possibility.

Table 5 on the next page looks at a selection of investments and the potential impact the regulatory Pandora box² might have. The impact of Solvency II will most likely be more accentuated on the assets side of the balance sheet rather than on the liabilities side. Both, raising equity and changing ones' liabilities is difficult. In a nutshell, bond holdings are strongly encouraged, and equities, real estate and alternative assets are discouraged due to increased surplus capital requirements if one holds risky assets. The result could be market mayhem due to synchronised selling, artificially low bond yields, and wide ranged depletion of European risk capital. Furthermore, the more the well-fare-state building government gets easy money, the more profligate it is likely to be.

"In individuals, insanity is rare, but in groups, parties, nations and epochs it is the rule."

—Friedrich Wilhelm Nietzsche

Solvency II is already affecting investor behaviour

Solvency II could result in synchronised selling of equities and buying of government bonds

¹ From Montulet and Hoogwerff (2010)

² A UK insurer stated it might need to redomicile because of Solvency II in its current form. The UK would probably be hit hardest from Solvency II due to larger equity allocations and long duration liabilities.

Table 5: Potential impact by asset class

Investment	Potential impact
Equities	<p>While in some countries (e.g. Germany) the allocation to equities is in low single digits of assets, the European insurance sector is still a large holder of equities in absolute \$ terms. The average portfolio weight is around 7% according to Deutsche Bank.¹ And 7% of \$10.4 trillion is a lot of money. Solvency rules caused life insurers to dump GBP30 billion worth of equities (at the time the allocation to equities was around 70% of the portfolio) in the UK at roughly the same time during 2002 (close to market lows) as the Swiss insurers were selling equities in anticipation of SST.² There is of course the potential that history repeats itself, just this time on a much larger scale. (We came across research and commentary suggesting that there will be massive selling of equities due to various regulatory changes as well as the other extreme, i.e. that all is well in the world.)</p> <p>If pension funds are brought in under the Solvency II regulation then selling of equity could be even more extreme. European pension funds hold 45% in equities according to Goldman Sachs.³ Again, 45% of a \$6-7 trillion (more than \$2.5 trillion in the UK) is a lot of money.⁴</p>
Sovereign debt	<p>Sovereign debt in local currency gets preferential treatment. Solvency II does not require any capital against EEA government bonds. A conspiracy theory is easily spun by arguing that at the end of the day "someone" needs to buy the PIIGS's debt. A further bone of contention is that the West could be at the end of a multi-decade bond bull market and long-term interest rates are set to rise. It is not too surprising, therefore, that pension funds are fighting for not being included under Solvency II in the countries where this is a debate.⁵ On the positive side, yields on PIIGS debt are high. Even if the general long-term interest rates levels should rise going forward, the contraction of the spreads could over-compensate and bonds rise. If all goes well in the Eurozone, which is—at least in theory—a possibility.</p> <p>Deutsche Bank notes that there actually could be forced buying. A risk which was never captured under Solvency I was duration mismatch risk, whereas this is likely to be heavily penalised under Solvency II. It is therefore possible that some companies become forced buyers of longer dated assets, like government bonds, if interest rates move against them, or if the capital position becomes tight.⁶</p>
Credit	<p>More credit exposure at the shorter end where risk adjusted return is higher.⁷ Long credit will become more "risky." Instead of buying bonds to match the duration of the liabilities, insurers may purchase shorter-dated debt and use interest-rate swaps to hedge out the duration.</p> <p>Credit derivative net long or short positions bear much higher capital charges than equivalent duration positions in the underlying bonds.⁸ The observation that banks and insurers are long PIIGS bonds while hedge funds are long the protection in those bonds could become more accentuated.</p> <p>The inclusion of an illiquidity premium within the Solvency II framework can act as a counter to spread risk, since one would expect the observed illiquidity premium to rise in a financial crisis as spreads are rising, and vice versa. Hence, just as spreads are rising and asset market falling, so the rate at which companies discount their liabilities will increase.⁹</p>

¹ From Jensen (2010)

² Hedge funds, anticipating the flows, sold stocks short early and provided liquidity to the market place close to the lows by buying back what was sold short. We remember an article in the FT by a CEO of an insurance company blaming—the reader will have guessed—hedge funds for tumbling stock prices.

³ From Jensen (2010)

⁴ We believe the 45% figure for equity allocation among European pension funds is too high. The equity allocation in the UK fell from 75% in 1999 to 54% in 2009. Whatever the correct current equity allocation is, it's still a large \$ figure that can move markets.

⁵ Insurance representative groups such as the CEA have argued for a harmonisation of approach between the insurance and pension funds in Europe.

⁶ "Solvency II – Everything in Moderation," Deutsche Bank, September 2010.

⁷ "Solvency II – A briefing for the Chief Investment Officer," J.P. Morgan Asset Management, September 2010.

⁸ Ibid.

⁹ "Solvency II – Everything in Moderation," Deutsche Bank, September 2010.

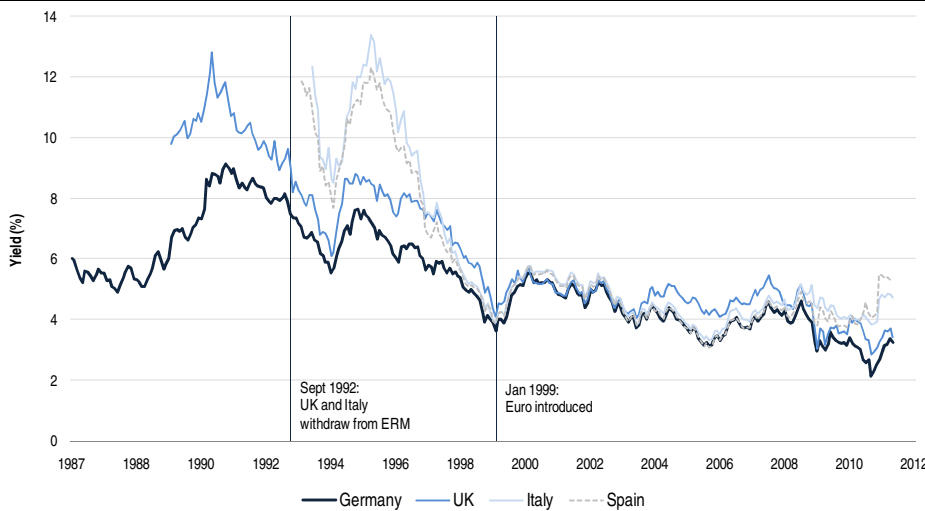
Investment	Potential impact
	Basel III's liquidity rules mean European banks may need to raise as much as \$3.2 trillion in long-term funding, according to McKinsey & Co. Insurers are normally the biggest buyers of such debt. However, European insurers are being dissuaded from buying long-term bonds under Solvency II. The two bits of regulation are at tension with each other. ¹
Structured credit, ABS, RMBS, etc	Structured credit is expected to become significantly curtailed except for some AAA issue due to a major fault in the way the Standard calculation is specified. ² In anticipation of Basel III and Solvency II both banks and insurers are in the process of becoming "regulatory-induced forced sellers." ³ This is of course a great opportunity for the savvy investor who can benefit from artificially distressed prices in a sector already in distress.
Property	Higher capital charges could result in some selling. Investments in managers, developers and leveraged property investors are treated as equity risk. ⁴

Source: Ineichen Research & Management, Jensen (2010), Deutsche Bank, JP Morgan Asset Management

Chart 21 shows a selection of government bond yields in Europe. Yields in Europe have been fallings similarly to many other "developed" economies as the battle with inflation has been won. The trend in yields has been lower. In Germany, bond buying in anticipation of regulatory changes could have had an impact on pressing yields even lower. However, trends can reverse. It is not entirely unthinkable that a multi-decade bond bull market is coming to an end. This means that—potentially—this is the worst moment to move from risky assets into bonds.

Decade-long bond bull market potentially ending here

Chart 21: Selection of European government bond yields (1987 – 2011)



Source: Bank of America Merrill Lynch, Bloomberg
 BAML: German Federal Governments (1987-1988), Bloomberg: GDBR10, GUKG10, GBTPGR10, GSPG10, April 2011 inclusive.

■ Yields arguably could go higher.

¹ "European Bank Funding Threatened as Basel III Rules Clash with Solvency II," Bloomberg, 29 March 2011.
² "Solvency II – A briefing for the Chief Investment Officer," J.P. Morgan Asset Management, September 2010.
³ Note there is a concept of an "equity dampener" under Solvency II, i.e. reducing the capital charge for equities when they have already fallen, and increasing it when they rapidly rise.
⁴ "Solvency II – A briefing for the Chief Investment Officer," J.P. Morgan Asset Management, September 2010.

Keynes, making reference to Lenin (which in itself telling), made the point in 1919 that if a government wants to —putting it far too colloquially and unsophisticated—rip off its populace, it will find a way. This is of course not a new concept. Nationalisation is the most straight-forward way for the government to “tap” into the citizens’ wealth, as for example, in the more recent past, Argentina nationalising private pensions in 2008 or Venezuela more or less everything else. A more “subtle” or clandestine way to crack the populace’ piggybank is through inflation. It sounds like Keynes had said this just recently:

Lenin is said to have declared that the best way to destroy the capitalist system was to debauch the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. ...

As the inflation proceeds and the real value of the currency fluctuates wildly from month to month, all permanent relations between debtors and creditors, which form the ultimate foundation of capitalism, become so utterly disordered as to be almost meaningless.¹

The idea is very old; it’s just the execution of the “trade” that changes over time. The introduction of risk-sensitive regulation for banks and insurers and soon perhaps for pension funds results in de-risking, i.e. in a nutshell, more government bonds. While we believe the textbook term “risk-free rate of return” is an oxymoron, most legislators and regulators and scholastic advisors to legislators and regulators seem not to.

Bottom line

The capital requirements for alternative investments are best described as punitive. If history is any guide, the market place will put its creative energy to work to find pragmatic solutions for investors operating in an uncertain but real world.

The final impact from Solvency II is of course unknown. A potential market-disruptive impact is synchronised and forced selling of equities at one stage prior to implementation in January 2013. Synchronised forced selling typically occurs not towards the end of a bull run but towards the end of a bear run.

“The budget should be balanced, the Treasury should be refilled, public debt should be reduced, the arrogance of officialdom should be tempered and controlled, and the assistance to foreign lands should be curtailed lest Rome become bankrupt. People must again learn to work, instead of living on public assistance.”

—Marcus Tullius Cicero (106-43 BC), Roman politician, orator and philosopher

“The first panacea for a mismanaged nation is inflation of the currency; the second is war. Both bring a temporary prosperity; both bring permanent ruin.”

—Ernest Hemingway

¹ *The Economic Consequences of the Peace*, 1919

Closing remarks

Government authorities in the industrialised economies are getting bigger, more expensive, more intrusive, and the legal and regulatory code less transparent and more complex. This cannot be spun positively. Herein we called this Regulomics, mainly as a pun on Reagonomics but also because the term *etatism* has a somewhat suicidal ring to it. We believe government authorities should be going the other way. If there is an axiom in economics, it is this: “Capital will always go where it’s welcome and stay where it’s well treated. Capital is not just money. It’s also talent and ideas. They, too, will go where they’re welcome and stay where they are well treated,” as Walter Bigelow Wriston put it. Government authorities should be business-friendly, i.e. lean, run smoothly, not intrusive, and the legal and regulatory code should be decipherable, understandable, transparent, and efficiently implementable:

- A leaner government is superior to a big government because it is quicker and more flexible to adapt and respond to change.
- A less expensive bureaucratic apparatus is superior to a more expensive bureaucratic apparatus for—one would think—obvious reasons.
- Less intrusive authorities are superior to intrusive authorities not because the sharks nearly always outsmart the fish *and* the authorities, but because it creates perverse incentives and favours irresponsible behaviour over diligent behaviour.
- Simple legal and regulatory code is superior to complex legal and regulatory code because simple code is understood and more transparent, allows capital to flow more efficiently, is easier enforceable and is less costly to implement. Complex code is the opposite: it is difficult to decipher, ambiguous and often not really understood by the economic agents involved, results in misallocation of capital, is more difficult to enforce and costly to implement.

We do not know exactly how the introduction of risk-sensitive regulation (Solvency II for European insurers and potentially pension funds) and tighter capital and liquidity requirements (Basel III for European banks as ratification by the US is—and this is putting it very nicely—yet uncertain) will play out. However, a pragmatic, financial-history-sensitive assessment allows making at least some points:

- More risk-sensitive regulation results in less risk. Some of the risk reappears off-balance sheet or somewhere else; invisible to the authorities and most market participants. The savvy benefit; the unsavvy don’t.
- More regulation harmonises the market places and thereby synchronises market behaviour which is most accentuated in non-normal times. Synchronised unloading of risk is done during market stress.
- Regulation is—one needs to assume—always well intended. However, the ignorance towards basic capitalist principles, and the sheer volume and complexity results in unintended consequences, an overall weaker financial system, an enrichment of the savvy at the expense of the populace, and an increase in regulatory and planning uncertainty for business.

* * *

The next section is a guest article by Dr. Thomas Keller on the reflections of an insurance policy holder, the fictional Gunter Kayser.

¹ “Geithner Downgrades His Own Credibility to Junk,” Johnathan Weil, Bloomberg, 21 April 2011, based on televised interview with Peter Barnes, Fox News, 18 April 2011.

“No risk.”

—Tim Geithner’s response to the question whether the US could lose its AAA credit rating¹

Economic reflections of a policyholder

By Dr. Thomas Keller



Veritas et Falsitas: Zeno of Elea shows Youths the Doors of Truth and False (Fresco in the Library of El Escorial, Madrid)

Solvency II – the reduction of the insurance industry to a filtered probability space?

“Member States shall ensure that the supervisory authorities are provided with the necessary means to achieve the main objective of supervision, namely the protection of policyholders and beneficiaries. Other objectives such as financial stability and fair and stable markets should also be taken into account but should not undermine that main objective.”

Gunter Kayser was drinking a relaxed cup of coffee when he read these sections of the “Directive of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II)”. “Thank you Europe – the protection of the policyholders is set above the stability of the financial system!” he thought, being himself a policyholder long-acquainted to paying a considerable amount as premia for his life insurance every month. Reading on he even began to feel mildly euphoric: Supervision shall be based on a prospective and risk-oriented approach. Solvency II therefore adopts an economic risk-based approach which allows for a system that reflects the true risk profile of (re)insurance undertakings. That system should rely on sound economic principles and make optimal use of the information provided by financial markets. Prospective, risk-oriented, true risk profiles, sound economic principles – how wonderful these words sounded in light of the financial crisis in the ears of a policyholder fearing for his retirement provisions: “The supervision starts concentrating on the essentials! For aren’t these terms the exact opposite of reactive, populist, politically motivated, bureaucratically over-sized and formalistically driven?”

Gunter Kayser read on: “Particular care has been taken to ensure that the new solvency regime is not too burdensome for small and medium-sized (re)insurance undertakings. Importance is therefore attached to the principle of proportionality, which applies to all requirements of this Directive but which is particularly relevant for the application of the quantitative and qualitative requirements of the solvency regime and – “Stop! How was this in line with the earlier sections? Did economic principles not require the identity of risk orientation and proportionality? Did supervision no longer orientate itself on true risk profiles for small and medium-sized companies, but instead sacrificed risk orientation on the altar of

proportionality? Not that he wanted to bestow undue time and effort upon these companies; however, his euphoria gave way to doubts about the consistency of these apparently laudable sections. Did the quantitative requirements, as laid down in the technical specifications¹, at least display the sound economic principles? After 399 more directive pages and 330 specifications pages, Gunter Kayser's assessment was far more sober. His conclusion², however irrelevant for those responsible for the Directive, was: "Supervision tries to evade the indeterminableness of a complex situation – in this case the protection of the policyholder – through meticulous and detailed prescription in combination with an overriding attachment to high complexity and formal means. In other words, Solvency II abstracts ecological contexts until they fit into the formal framework of a financial-mathematics technocrat." His diagnosis: "Obviously a case of mathematicalized incompetence."

The basis for this somewhat alarming diagnosis are reflected in the following economic reflections, which surfaced again and again during his long reading of the Directive's stipulations and an excess of coffee consumption:

Regarding the ability to liquidate & abstract insurance companies

The Solvency Capital Requirement shall be calculated on the presumption that the undertaking will carry on its business as a going concern. ... The Solvency Capital Requirement is calculated using Value-at-Risk techniques ...: all potential losses, including adverse revaluation of assets and liabilities, over the next 12 months are to be assessed.

Why is the Solvency Capital Requirement based on the liquidity principle of the Value-at-Risk paradigm, when it is about going concern to ensure long-term payment obligations? Shouldn't the assurance of solvency at any time under the paradigm of going concern be the primacy of a solvency requirement? – After all, solvency means the ability to meet financial obligations, i.e. to be able to comply with the ongoing obligations in the course of business and not the ability to make an early, present value repayment of all obligations on the basis of exemplary market values at an artificial liquidation after 12 months. Should it be possible to reduce the multi-period going concern concept consistently to the one period value-at-risk model?³ If so, was this necessary conclusion not based at least on the hidden assumption of an ideal capital market, namely the complete transferability of cash flows at the time axis taking into account the preservation of the present value? Was it not exactly this assumption that was implicitly dismissed in many descriptions of the stipulations regarding the so called liquidity risk? If an assumption that is necessary to achieve the consistency of the value-at-risk method and going concern was dismissed, how could the solvency requirement, meticulously formalised in the succeeding stipulations, accomplish the protection of the policyholders and the beneficiaries of insurance payments? Should the main focus of supervision not be put on liquidity management, since a sufficient liquidity management could ensure the solvency? – Would phrasing the requirement of a sufficient liquidity management taking into consideration possible cash losses of

¹ Currently specified in the technical specifications of QIS 5.

² Inspired by the explanations of Dietrich Dörner in *Die Logik des Mißlingens - Strategisches Denken in komplexen Situationen*; 2003; 9. Auflage.

³ Didn't Zeno of Elea fail on the assumption that you need to overcome many (indefinite) sections to overcome a longer (definite) distance when he analyzed the race between Achilles and the Tortoise or the flight of an arrow?

the investments still offer financial theorists enough space for formalisms and abstractions? However, apart from the aesthetic beauty of formal abstractions, was it – in view of the main objective – actually necessary to reduce the European insurance industry to a filtered probability space?

About the hyper-cyclicity of standardising systems

Long-term investments equate to danger – they bear a high credit spread risk! All long-term investments? No – not EEA government risks because they had no credit spread risk. All EEA government risks? No – only bonds of EEA states. – Credit Default Swaps referencing EEA government risks bear a high credit spread risk and are therefore dangerous! Unlisted shares are far more dangerous than listed shares. How easy was it to make everything that did not fit into the formalised scheme of the standard model dangerous per definition, as for example opaque alternative investments! EEA government securities as well as short-term, interest bearing titles of non-states seemed to be safe – as long as they received positive ratings from US rating agencies!

Actually, why does the European supervision still put so much trust into these US rating agencies after all the experiences from the financial crisis? And why doesn't it derive the credit rating, eliminating the risk aversion premia, from traded credit spreads – making optimal use of the information provided by the financial markets? Was supervision unable to do so because in consequence EEA government risks would no longer be safe and for reasons of risk orientation there would be no difference between bonds and credit derivatives? Did the stipulations regarding the calibration of the standard model not especially discriminate good and bad investments – completely independent from their risk profile based on economic principles? Was this discrimination between good and bad not legitimised by a formal apparatus of technocrats espousing economic principles and risk orientation but was in the end only an abstract realisation of an apparently populist objective? How could internal models provoke a renunciation of the seemingly politically intended investment behaviour and furnish a contribution to risk orientation and economic principles when supervision could counter with additional capital charges if the results of the internal models positively deviated too much from those of the standard model? Does Solvency II as a result not lead to a standardised investment behaviour among all insurance companies – all companies invest in government risks and short-term titles of issuers with a good credit standing? – No, not a good credit standing – a good rating! Does the politically standardising system not provoke the abandonment of variety, an essential characteristic of economic principles? When the Directive encourages the reduction of diversification and the loss of variety and therefore – as formulated in the abstract language of directives – the default correlation of the European insurance business rises system-induced to one, would we all experience a collapse of the system within 200 years? – And if so, hopefully only in 200 years from today on! What consequences would this investment behaviour ordered by supervision have on the financial markets? Does Solvency II not create a hyper-cyclicity, because all companies are urged by their capital regulation to buy and sell the same titles at the same time like lemmings? What does this mean in light of the protection of the policyholders?

Regarding possible options of the insurance business

“Solvency reduces the insurance business to a filtered probability space – sound economic principles as well as the protection of the policyholders are sacrificed; companies are forced into a uniform investment behaviour – the Directive in its execution turns out to be a marketing program for government securities and a campaign against credit derivatives and alternative investments.” Such would be his conclusions regarding Solvency II. “Consequently, extensive misallocations regarding the strategic asset allocation seem to be fixed in the program.” For a short moment, Gunter Kayser rephrases the main objective of the Directive: “Member States shall ensure that the responsible people within insurance companies are provided with the necessary means to achieve the main objective of the companies, namely the protection of policyholders and beneficiaries. Other objectives such as a sound return on equity should also be taken into account but should not undermine that main objective.”

Unfortunately, Gunter Kayser, who was extremely worried about his retirement provisions after reading the text of the Directive, was only too aware that the political process was already far too advanced and the populist motives were too strong. He was left to muse on whether he as a policyholder or indeed the insurance sector at large could instead rely upon instituting modifications to the so-called calibration of the parameters for the standard model. What possibilities did insurance companies still have to step out of line of the lemming attitude without being guilty of the regulatory arbitrage which in the medium to long term would be almost useless anyway? What sustainable options would be possible and/or advisable for an insurance company such as the one to whom he has entrusted his entire retirement future?

The contribution of the participation in an SPV is calculated following the IFRS consolidation rules.... In particular, the principle of substance over form should be followed for the allocation. In other words, the segmentation should reflect the nature of the risks underlying the contract (substance), rather than the legal form of the contract (form).

Were the classic wrapper and structuring offers as distributed by investment banks simply useless and thus only expensive due to the consolidation principles according to IFRS as well as the need for a look through? Do companies not need to break new ground by exploring new options?

If it showed – regardless of the “principle of substance over form” – substantially different equity charges depending on the choice of the investment structure, could an active management of the look through principle not help to avoid misallocations? Would an active management of the look through principle, based upon the underlying risk profile, determine whether a transparent or opaque investment format (with or without hard coded guidelines) should be the preferred investment. Is it always the case – as regulation invariably presumes – that the transparent investment form is often but not always the optimum? In addition, weren't there robust approaches how to control the credit spread duration? Should the options not also include a possibility to become insensitive to rating migration? Should classic risk profiles of asset classes beyond EEA government risks like private equity, real estate, infrastructure, renewable energies but also long-term bonds not be modified to be able to be included to an economically

reasonable extent – regardless of Solvency II and on the background of going concern – into the strategic asset allocation? Such modifications require as a precondition long-term relationships with new business partners based on co-investments and risk taking and not only on the execution and arrangement of financial transactions. Would these business partners not necessarily have to be able to become a joint investor, able and willing to consolidate? Would a pure co-investor able and willing to consolidate be sufficient or should this partner not also have an extensive risk management expertise and systems available, enabling him to support the administrative part in terms of asset pooling?

The financial crises had not been able to push the insurance business into the abyss – will this also be true for Solvency II? Gunter Kayser could only hope that the responsible people within the insurance companies could defy the regulatory inspired lemming behaviour due to their economic expert knowledge making clever investments through the right investment forms by tying new business connections with a reliable partner¹, equally long-term oriented and to act with expert knowledge regarding risk as co-investor and not as a partner for transactions and by testing every asset class for options before conducting a strategic asset allocation true to the motto: first the opting then the allocating.

¹ Coquin soit qui Prime Capital y pense.

Glossary

AIFMD (Alternative Investment Fund Managers Directive) is a proposed European Union law which will put hedge funds and private equity funds under the supervision of an EU regulatory body. The AIFMD proposal includes the following reforms: a private equity fund must appoint an independent valuer and an independent custodian; private equity fund with EU investors must disclose its business plan for a portfolio company to that company, its other shareholders and employees and make that information public; investors would not be able to invest outside the EU unless it was under an "equivalent" regime; and imposes limit to leverage for one time the amount of capital across a fund.

BSCR: Basic SCR.

CEA: European insurance and reinsurance federation. Its members are the European national insurance associations. www.cea.eu

CEIOPS (Committee of European Insurance & Occupational Pensions Supervisors): Referred to as the Level 3 committee for the insurance and occupational pensions sectors. CEIOPS is composed of representatives from the insurance and occupational pensions supervisory authorities of the European Union Member States. The authorities of the Member States of the European Economic Area also participate in CEIOPS. CEIOPS has the role of advising the Commission on matters in insurance regulation (including implementing measures for the Solvency II Directive), contributing to the implementation of Directives and facilitating co-operation between supervisors. CEIOPS was replaced with EIOPA in January 2011.

CESR: Committee of European Securities Regulators

CNHR: Cost of Non-Hedgeable Risk. Principle 9 of the MCEV Principles states an allowance should be made for the CNHR. These include risks due to illiquid or nonexistent markets where the financial assumptions used are not based on sufficiently credible data. The MCEV Principles do not dictate the methodology to calculate the CNHR. CNHR values, therefore, vary significantly.

EBA: European Banking Authority.

EC (European Commission): The European Commission acts as the EU's executive arm and is responsible for initiating legislation and the day-to-day running of the EU. They draft and publish proposals for new European legislation. The European Commission is directly accountable to the European Parliament/Council.

EIOPA (European Insurance and Occupational Pensions Authority): EIOPA is the new European authority that replaced CEIOPS. The reorganisation of macro and micro-prudential supervisory authorities led to the creation of three new European watchdogs (The European Banking Authority, EBA; the European Insurance and Occupational Pensions Authority, EIOPA; and the European Securities and Markets Authority, ESMA) have replaced the previous EU committees responsible for financial market services, having had only consultative competences.

EIOPC (European Insurance and Pensions Committee): Consists of experts from the Member State finance ministries. The Committee scrutinise the implementing measures in order to develop the legal text that will operationalise the regime.

ESAs: European supervisory authorities.

ESMA: European Securities and Markets Authority.

ESRB: European Systemic Risk Board.

European Council: The EU receives its political leadership from the European Council, which usually meets four times a year. It comprises one representative per member state—either its head of state or head of government—plus its President as well as the President of the Commission. The European Council uses its leadership role sets the direction of travel of European policy but does not have legislative powers.

European Parliament: The European Parliament is made up of Members of the European Parliament (MEPs) directly elected by EU citizens every five years. The Parliament and the Council of Ministers pass legislation jointly in nearly all areas. The Commission is directly accountable to Parliament. The Parliament adopted the Solvency II framework directive and will formally adopt the implementing measures for Solvency II.

EEV: European Embedded Value. The CFO Forum was formed to consider in general the issues around measuring the value of insurance companies. The EEV was the output of this forum, and allows greater consistency in such calculations, making them more useful. See also MCEV.

FASB (Financial Accounting Standards Board) is a private, not-for-profit organization whose primary purpose is to develop generally accepted accounting principles (GAAP) within the United States in the public's interest. The Securities and Exchange Commission (SEC) designated the FASB as the organization responsible for setting accounting standards for public companies in the U.S.

FRM: Financial Risk Mitigation.

FSAP (Financial Services Action Plan) is a key component of the European Union's attempt to create a single market for financial services. Created in 1999 and to last for a period of six years, it contained 42 articles related to the harmonization of the financial services markets within the European Union. It was scheduled to be completed by the end of 2004.

IASB: International Accounting Standards Board.

ICAS (Individual Capital Adequacy Standards): the current capital adequacy requirements regime applicable to UK insurance firms that will be replaced upon adoption of Solvency II on 1 November 2012.

IAIS (International Association of Insurance Supervisors): Issues global insurance principles, standards and guidance papers, provides training and support on issues related to insurance supervision, and organises meetings and seminars for insurance supervisors. The IAIS was established in 1994 and now represents insurance regulators and supervisors of some 190 jurisdictions.

IFRS (International Financial Reporting Standards) are principles-based standards, interpretations and the Framework (1989) adopted by the IASB. Many of the standards forming part of IFRS are known by the older name of International Accounting Standards (IAS). IAS were issued between 1973 and 2001 by the Board of the International Accounting Standards Committee (IASC). On 1 April 2001, the new IASB took over from the IASC the responsibility for setting International Accounting Standards.

ISD: Investment Services Directive.

ISG (Insurance Standing Group): regular pre-consultation forum for discussing a number of issues relating to Solvency II and any ad-hoc domestic prudential policy issues between the Industry and the FSA.

IRB: Ratings Based Approach

MAD: Market Abuse Directive.

MCEV (Market Consistent Embedded Value): MCEV requires insurers to use a standardised measure that allows comparisons of their balance sheets. It also requires investment profits to be recorded as they occur, rather than estimating their future returns. It is seen as more conservative than the current European Embedded Value (EEV) standard, which allows companies to choose how they calculate the value of their investment portfolios.

MCR (Minimum Capital Requirement): Key quantitative capital requirement defined in the Solvency II Directive. The MCR is the lower of the two capital levels required in Solvency II and provides an approximate 1 in 6 year level of protection. The MCR is considered to be the minimum capital an insurer will need if it is to continue operating as a going concern. The MCR is calibrated to a one-year VaR with a confidence level equal to 85%.

MIFID (Markets in Financial Instruments Directive) is a European Union law that provides harmonised regulation for investment services across the 30 member states of the European Economic Area (the 27 Member States of the European Union plus Iceland, Norway and Liechtenstein). The main objectives of the Directive are to increase competition and consumer protection in investment services. As of the effective date, 1 November 2007, it replaced the Investment Services Directive.

ORSA (Own Risk and Solvency Assessment) is the name given to the entirety of the processes and procedures employed by a (re)insurance undertaking to identify, assess, monitor, manage and report the short and long term risks it faces or may face and to determine the own funds necessary to ensure that the undertaking's overall solvency needs are met at all times.

PVFP: Present Value of Future Profits.

QIS (Quantitative Impact Studies): The QIS exercises test the financial impact and suitability of proposed Solvency II requirements on firms. The fifth and final QIS before implementation will be published in April 2011.

RSR (Report to Supervisors) is a report submitted solely to the supervisor and contains the information considered necessary for the purposes of supervision.

SCR (Solvency Capital Requirement): Key quantitative capital requirement defined in the Solvency II Directive. The SCR is the higher of the two capital levels required in Solvency II and provides an approximate 1 in 200 year level of protection. The SCR reflect more the economic capital requirements and is designed to be a target level of capital which will cover all risks an insurer faces. The confidence level is proposed to be 99.5% over a one-year period and allows for risk mitigation techniques and diversification effects-calibrated as a VaR measure.

SFCR (Solvency and Financial Condition Report) is the public disclosure report which is required to be published annually by all undertakings and will contain detailed quantitative and qualitative elements.

SST: Swiss Solvency Test

Standard Formula: a non-entity specific risk-based mathematical formula used by insurers to calculate their Solvency Capital Requirement under Solvency II.

TP (Technical Provisions): Technical Provisions are the amount that an insurer needs to hold in order to meet its expected future obligations on insurance contracts. The TP are required to be evaluated on a best estimate plus a risk margin discounted using the risk-free yield curve.

Source: IR&M, FSA, wikipedia

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