Toil and trouble in deflating the debt bubble

Denis Kessler
CEO & Chairman - SCOR
SCOR, the 5th reinsurer in the world, is a fully operational Group optimally geared towards current & foreseeable economic and industry environments.

- **Financial strength ratings:**
  - “A+” from S&P, stable outlook
  - “A1” from Moody’s, stable outlook
  - “A+” from Fitch, stable outlook
  - “A” from AM Best, stable outlook

- **6 Hubs**
- **22,500** shareholders worldwide
- **€ 4.6 billion** Shareholders’ equity
- **€ 9.4 billion** expected growth written premiums in 2011
- **€ 3.3 billion** 2011 Life embedded value
- **€ 530 million** operating cashflow (as of 31/12/2011)
- **€ 32 billion** balance sheet
- **41 offices** across 5 continents
- **Strong global franchise** with approx. 4,000 clients

Denis Kessler: “Industry personality of the Year”

SCOR: “Reinsurance Company of the Year”
The Group has an extremely diversified activity between Life and Non-Life, by geography and by lines of business.
Both SCOR Global Life and SCOR Global P&C hold top tier positions in most reinsurance markets

Source: SCOR market study

1) Rankings in the targeted regional carriers segment
Toil and trouble in deflating the debt bubble

1. The crises that have followed on from each other since 2007 are the fruit of a debt bubble that has yet to burst
2. 5 ways to deflate a bubble
3. Companies in the face of deleveraging
Excessive leverage, subsidized by monetary policy

- Unprecedented credit subsidies, implemented by the central banks from the beginning of the 2000s, have led to massive, widespread debt
  - **Prolonged expansionist monetary policy** in a troubled geopolitical context (attacks of September 11, 2001, wars in Iraq and Afghanistan): late and slow rise of rates
  - **Record lowering of real interest rates** (average real US 10-year rate: 1.8% for the 2000s / 3.6% for the 1990s)
  - **Accelerated indebtedness of economies** for all agents throughout the decade: peak of 373% of GDP in the US (Q1 2009), and 388% of GDP in the Eurozone (Q2 2010)

- This subsidised leverage has favoured largely sub-optimal capital allocation
  - **Healthy and productive indebtedness**: purchase of assets generating future cash flows, which enable payment of original debt.
  - **The debt of the 2000s was essentially non-productive**: financing of real estate bubbles (USA, Greece, Ireland, Spain, etc.), of consumption and of public transfers.
  - Snowball effect: in the absence of cash flows to repay debt, more and more debt is needed (amount of loans due + interest)
The origin of the global financial crisis: post 9/11 monetary policy

From 2001 to 2006, central banks led an extremely loose monetary policy

Policy interest rates in real terms (%, CPI deflated)

Sources: Thomson Reuters, national statistics, SCOR
Inflating the bubble 1/2

During that period, debt increased dramatically thanks to cheap money

**Accumulated debt of all economic agents (% GDP)**

Sources: FED Flow of Funds, BCE, SCOR
Inflating the bubble 2/2

The debt bubble of the 2000’s was largely a private debt bubble

Outstanding debt, non financial corporations (% GDP)

Outstanding debt, households (% GDP)

On the contrary, until 2008, public debt remained under control

- Public debt in the Eurozone remained flat during that period, and even decreased just before the outbreak of the financial crisis
- Public debt in the US rose in 2003, then remained flat until 2008

Outstanding debt, general government (% GDP)

Sources: FED, ECB
The financial crisis of 2008 burst the asset bubble 1/2: the equity market example

**Equity markets collapsed in 2008-2009**

*Stock indices (January 2007 = base 100)*

Sources: Thomson Reuters, Datastream

- S&P 500
- FTSE 100
- Eurostoxx 50
- Nikkei 225
- Stock indices (January 2007 = base 100)
The financial crisis of 2008 burst the asset bubble 2/2: the US real estate market example

US households struggled to pay back mortgages...

Foreclosure rate in the US (% of mortgages)

Sources: Thomson Reuters, MBA, SCOR

... leading to a fall in US house prices

US Home Price index (S&P/Case-Shiller 20-city)

Sources: Thomson Reuters, MBA, SCOR
Public authority intervention led to debt being transferred to the central banks as of 2008

The injection by central banks of massive amounts of liquidity to try and bring some relief in 2008-2009 inflated their balance sheet

Sources: ECB, BoE, FED
Public authority intervention also led to debt being transferred to States…

In order to save the banks, and in the hope of saving the economy with a traditional Keynesian approach, governments decided to let their deficits increase further.

Outstanding debt, general government (% GDP)

Increased deficits and bulging public debts did not have the expected effect on the real economy.

Sources: FED, ECB, SCOR
The crisis that have followed on... | 5 ways to deflate a bubble | Companies in the face of deleveraging

WE WANT TO THANK OUR GRANDCHILDREN, WITHOUT WHOM THESE RESCUE PLANS WOULD NOT HAVE BEEN POSSIBLE
… culminating in the sovereign debt crisis…

Peripheral countries spreads in the Europe surged from 2010…

10 year government bond spreads against Germany (bps)

- Greece
- Ireland
- Italy
- France
- Portugal

…leading to a wave of sovereign downgrades…

- **April 2010**: S&P downgrades Greece to junk bond status, downgrades Portugal by 2 notches, and downgrades Spain from AA to AA-
- **January 2011**: Greece receives “junk bond” status from the 3 rating agencies as Moody’s and Fitch join S&P
- **August 2011**: the USA loses the AAA
- **September 2011**: S&P downgrades Italy
- **January 2012**: France and Austria lose their AAA, S&P downgrades Spain, Italy and 5 other Eurozone countries. EFSF is cut to AA+
- **June 2012**: Spain downgraded to BBB by Fitch.
- **July 2012**: Italy downgraded to Baa2 by Moody’s.

<table>
<thead>
<tr>
<th>Nb of issuers</th>
<th>In 2007</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>AA</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>A</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>BBB or below</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: SCOR, based on the lowest rating granted by Moody’s, Standard and Poors’ and Fitch, Merrill Lynch Global Sovereign Broad Market Index issuers.

…and to the “Eurozone crisis”

1) as of 18/10/2012
… and in further massive intervention by the central banks

By coming to the aid of States as of 2011, the central banks once again increased the size of their balance sheets

**Central Banks balance sheets**

- Bank of England
- Federal reserve
- European Central Bank

Sources: ECB, BoE, FED
In the end, deleveraging remains largely ahead of us 1/2

Deleveraging has already begun in the United States, but not yet in the Eurozone

**Accumulated debt of all economic agents (% of GDP)**

Source: BCE, FED, flow of funds

1) Footnote
The deleveraging to complete remains ahead of us 2/2

Eurozone companies have more debt than US companies...

Outstanding debt, non financial corporations (% of GDP)

...while US household debt is progressively converging on that of European households

Outstanding debt, households (% of GDP)

Source: BCE, FED, flow of funds
Toil and trouble in deflating the debt bubble

1. The crises that have followed on from each other since 2007 are the fruit of a debt bubble that has yet to burst

2. 5 ways to deflate a bubble

3. Companies in the face of deleveraging
5 ways to deflate a bubble

Surges in central government public debts and their historical resolution

Debt/GDP ratios have been historically reduced by:

1. **Strong and rapid economic growth**
2. **Austerity measures**
3. **Default and/or restructuring of public debt**
4. **Financial repression**
5. **Inflation**

In most cases, those debt reduction solutions take many years.

The debt cannot be absorbed by growth alone...

The growth rates required to absorb the debt seem out of reach for many countries

| Required GDP growth rates above trend growth to reduce debt ratios to 60% over 10 years |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Switzerland                   | Sweden                        | Finland                       | Germany                       | Netherlands                   | Canada                        | UK                            | France                        | Spain                         | USA                           | Italy                          | Japan                          | Portugal                       | Greece                        |
| -7.6%                         | -5.2%                         | 0.6%                          | 2.5%                          | 2.9%                          | 3.7%                          | 5.6%                          | 6.7%                          | 6.9%                          | 7.5%                          | 10.7%                         | 15.2%                         | 21.7%                         | 47.4%                         |

Note: the chart illustrate the sequential nominal growth above trend growth required to achieve 60% debt to GDP under the assumption of constant financing costs and a linear close of the primary balance over 10 years

Source: HSBC
The leading indicators point downwards for the vast majority of countries

- The main leading indicators are turning downwards across the globe, suggesting a structural slowdown with a possible double dip in the Eurozone:
  - in Europe, the Eurozone’s debt and banking crisis is generating stagnation or recession
  - in the US, the rebound has lost momentum
  - in the BRIC countries, the Euro crisis and the slowdown in the US will have a significant impact, probably leading to a return to growth rates in force before the pre-crisis boom

Source: OCDE
The US economy is struggling to recover

In the US, employment remains a long way from its pre-crisis level

- Job creation is a traditional barometer of the economic situation in the US
- Since the beginning of 2010, employment has been picking up very slowly: 130,000 jobs created per month on average
- The behaviour of the US employment market has more in common with a slow structural reconstruction than a standard economic recovery

Source: Thomson Reuters
Meanwhile, the Eurozone is in recession

Employment is showing no signs of recovery in the Eurozone...

... and growth is having a relapse

- GDP and employment in the Eurozone are far from catching up with their pre-crisis levels and are heading towards a new decline: this is the double dip.
- Employment evolution in the Eurozone is paradoxical: although job cuts were three times lower than in the US at the beginning of the crisis, US employment is now doing relatively better. This bears witness to the Eurozone’s inability to create jobs.
A new global regime of slow motion growth has settled in

- The progress of global trade has stabilised at a weak pace
- A new global growth regime is in place, which also impacts emerging countries
- During stagnation or recession periods, globalization turns the “international multiplier” - which positively leverages growth between the economies - into an “international divider”, which negatively affects all the interconnected economies at the same time
The absorption of debt by growth is all the more illusory given that the process of debt clearing is recessionary 1/2: the investment channel

Private investment remains far from its pre-crisis level

Investissement privé (Q3 2007 = base 100, vol.)

<table>
<thead>
<tr>
<th>Year</th>
<th>USA</th>
<th>Zone Euro</th>
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<tbody>
<tr>
<td>Mar-00</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>Mar-01</td>
<td>85</td>
<td>75</td>
</tr>
<tr>
<td>Mar-02</td>
<td>90</td>
<td>80</td>
</tr>
<tr>
<td>Mar-03</td>
<td>95</td>
<td>90</td>
</tr>
<tr>
<td>Mar-04</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Mar-05</td>
<td>105</td>
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<tr>
<td>Mar-06</td>
<td>100</td>
<td>95</td>
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<tr>
<td>Mar-07</td>
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<td>85</td>
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<tr>
<td>Mar-08</td>
<td>80</td>
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</tr>
<tr>
<td>Mar-09</td>
<td>70</td>
<td>60</td>
</tr>
<tr>
<td>Mar-10</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>Mar-11</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>Mar-12</td>
<td>40</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: BEA, Eurostat: comptes nationaux

Investment intentions are misguided, including in the US

Balance of opinion (USA, manufacturing industry)

<table>
<thead>
<tr>
<th>Month</th>
<th>Balance of Opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep-10</td>
<td>30</td>
</tr>
<tr>
<td>Oct-10</td>
<td>25</td>
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<tr>
<td>Nov-10</td>
<td>20</td>
</tr>
<tr>
<td>Dec-10</td>
<td>15</td>
</tr>
<tr>
<td>Jan-11</td>
<td>10</td>
</tr>
<tr>
<td>Feb-11</td>
<td>5</td>
</tr>
<tr>
<td>Mar-11</td>
<td>0</td>
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<tr>
<td>Apr-11</td>
<td>-5</td>
</tr>
<tr>
<td>May-11</td>
<td>-10</td>
</tr>
<tr>
<td>Jun-11</td>
<td>-15</td>
</tr>
<tr>
<td>Jul-11</td>
<td>-20</td>
</tr>
<tr>
<td>Aug-11</td>
<td>-25</td>
</tr>
<tr>
<td>Sep-11</td>
<td>-30</td>
</tr>
<tr>
<td>Oct-11</td>
<td>-35</td>
</tr>
<tr>
<td>Nov-11</td>
<td>-40</td>
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<tr>
<td>Dec-11</td>
<td>-45</td>
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<tr>
<td>Jan-12</td>
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<tr>
<td>Feb-12</td>
<td>-55</td>
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<tr>
<td>Mar-12</td>
<td>-60</td>
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<tr>
<td>Apr-12</td>
<td>-65</td>
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<tr>
<td>May-12</td>
<td>-70</td>
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<tr>
<td>Jun-12</td>
<td>-75</td>
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<tr>
<td>Jul-12</td>
<td>-80</td>
</tr>
<tr>
<td>Aug-12</td>
<td>-85</td>
</tr>
</tbody>
</table>

Source: Empire State Manufacturing Survey, capital expenditure next 6 months

- General aversion to risk and expectations at half mast are causing a slowdown in investment
- In the Eurozone, there have been 5 consecutive quarters of reductions in private investment
- Consequences:
  - In the short term, a recessionary impact
  - In the long term, a decrease in potential growth
The absorption of debt by growth is all the more illusory given that the process of debt clearing is recessionary 2/2: the budgetary channel.

In the US, the “fiscal cliff” threatens growth from 2013 onwards:

- The support measures for the US economy adopted in 2010 and 2011 will end in 2012.
- If an agreement to extend this exceptional budgetary effort is not reached by the end of 2012, the US economy will have to absorb a negative shock equivalent to 5% of GDP, simultaneously linked to an increase in contributions and a fall in public spending: this is the “fiscal cliff”.

Source: BEA, Eurostat: comptes nationaux
The absorption of debt requires budgetary discipline, but austerity is creating fatigue in both camps of the Eurozone.

- Although many countries in the Eurozone have taken strong austerity measures, with unemployment on the rise, austerity fatigue and social unrest will slow down spending cuts among southern European countries.

- At the same time, bail-out fatigue is developing in the core Euro area (e.g. Germany, Finland).

- Risk pooling within the Eurozone is becoming the new debate, facing strong supporters on one side and increased resistance on the other side.

### Unemployment is rising fast in Spain and in Greece

![Graph showing unemployment rate as a percentage of the labor force](image)

### Main austerity plans in the Eurozone

<table>
<thead>
<tr>
<th>Country</th>
<th>Italy</th>
<th>Portugal</th>
<th>Spain</th>
<th>Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Spending</strong></td>
<td>- Significant reduction of employees in administration (10%) and health budget</td>
<td>- Reduction of social benefits (minimum salary -20%) and end of 13th and 14th month for civil servants and pensioners</td>
<td>- Public spending cut (about EUR 65bn by 2015)</td>
<td>- Significant cuts for civil servant wages</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Small military budget cut</td>
</tr>
<tr>
<td><strong>Labor market &amp; Pension reforms</strong></td>
<td>- Extension of retirement age and tighter conditions of calculation</td>
<td>- Retirement age in the public sector extended to 65 with a working period of 40 years</td>
<td>- Pension reform with increase in retirement age (from 65 to 67)</td>
<td>- Cost of labour to be lowered by 15% by 2015</td>
</tr>
<tr>
<td><strong>Taxes</strong></td>
<td>- Increase in taxes (property, capital)</td>
<td>- 2 pts increase in VAT up to 23%</td>
<td>- VAT and income tax increase</td>
<td>- Hiring of controllers to increase tax collection</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Anti-corruption plan</td>
</tr>
</tbody>
</table>
The markets believe there is a strong probability that the Eurozone will be reconfigured.

**Concern remains high**

*Probability that at least one country will leave the Eurozone (according to a cross section of market operators)*

Source: Intrade prediction markets

- Breakup in 2013
- Breakup in 2014
3 The market is currently betting more on a Eurozone concentrated around core countries rather than on a full break-up

- On a short-term basis, given the massive intervention of the ECB and market expectations about the future of the Euro:
  - interest rates have already **massively increased in peripheral countries**
  - interest rates are at a **record low level in core countries**

- German, and sometimes French, short-term nominal interest rates are negative due to:
  - extremely **low policy rates** by the ECB
  - very **low risk premium** required by investors compared to GIIPS countries
  - **massive flight-to-quality** from bank deposits to short-dated govies issued by core countries
  - **potential break-up of the eurozone** and currency devaluation risk

- the fact that French short-term interest rates are very low, not to say negative from time to time, shows that the market is currently betting on **France being part of the core countries**
4 Financial repression is a cheap way for Governments to delay unpopular measures and to fund excessive debt

**Traditional definition of financial repression...**

- Financial repression is any of the measures that governments employ to channel funds to themselves

  - Explicit or implicit caps or ceilings on interest rates (e.g. regulation Q in the US)
  - Differentiated taxation on savings
  - Direct ownership of financial institutions
  - Creation and maintenance of a captive domestic audience (e.g. exchange controls)

**... has been “revamped” through modern tools / instruments**

- Very low cost of government borrowing (negative nominal rates)
- Basle III and Solvency II regulations allowing for the particularly favourable handling of public debts
- Central Banks buying public debts
- ESM/FESM buying public debts
- Credit crunch to the private sector freeing up funds to be lent to governments by banks
- Tax-exempt savings products when proceeds reinvested in public projects or public debt
- Transaction taxes on all financial securities except public debt
The lax monetary policy of the central banks is the main instrument of the current financial repression.

Real short-term interest rates reach even lower levels than in the 2000s

*Policy interest rates in real terms (%, CPI deflated)*

Sources: Thomson Reuters, national statistics, SCOR
In order to lower the level of interest rates and the cost of State borrowing, the central banks have taken unprecedented and unconventional measures.

- Since 2008, the FED, the BoE and the ECB have launched successive rounds of quantitative easing.

- In particular, after resisting for some time, the ECB has launched into fully-fledged quantitative easing since the end of 2011 via three-year operations at a 1% interest rate (the so-called Long-Term Refinancing Operations):
  - €489 billion in December 2011
  - €530 billion by the end of February 2012

- The FED and the ECB have just announced new, unconventional methods in September 2012:
  - ECB: unlimited sovereign bond purchase programme (“Outright Monetary Transactions”)
  - FED: QE 3 (open-ended purchases of $40 billion of mortgage-backed securities a month)
These unconventional measures are directly linked to the desire to improve the situation of countries in debt

- QE in the US, in the UK and in the Eurozone eases the financing of public deficits.
- In the Eurozone, **3-year LTROs lead to carry trade**, all the more so since Basel 3 encourages banks to buy sovereign bonds instead of financing businesses and households: banks borrow from the central bank at 1% and lend to governments at higher rates.
- The ECB’s announcement of its **OMT** programme on 6 September, which was partially anticipated by the markets, has had a significant impact on interest rates for the debts of countries in difficulty.

![Graph showing 10-year government rates](image.png)

**Sources:** BCE, Thomson Reuters
Inflation is currently repressed due to the contraction of economies, but should emerge in the medium or long term.

Unconventional monetary policies should lead to inflation in the medium or long term.

- Persistently negative real interest rates and the unprecedented swelling of central bank balance sheets provide the ideal climate for a sudden surge in inflation.
- In an economy where inflation surprises are possible, the agents that will fare best in the long term are those that remain vigilant in the face of inflation risk and take the appropriate measures to deal with such risk (short asset duration, high proportion of cash, etc.).
When inflation is on the rise again, interest rates are very likely to increase too – the question is “when” and “how”

### Big uncertainties

- **Timing**
  - short term?
  - medium term?
  - long term?

- **Pattern**
  - shock?
  - very gradual?

- **Shape of the yield curve**
  - bear steepening?
  - bear flattening?

- **Size**
  - 100bps ?
  - 200/300bps ?
  - above 300bps?

### 4 potential interest rate scenarios

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Timing</th>
<th>Potential triggering events</th>
<th>Potential impact on interest rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond crash</td>
<td>Short term</td>
<td>Eurozone breakup?</td>
<td>Shock of at least 300bps on long-term yields</td>
</tr>
<tr>
<td></td>
<td>Medium term</td>
<td>Mitt Romney elected and replacement of Ben Bernanke by a very orthodox profile?</td>
<td></td>
</tr>
<tr>
<td>Bear steepening</td>
<td>Medium term</td>
<td>Calm down of the Euro crisis thanks to more fiscal integration and federalism</td>
<td>Gradual increase of long-term yields towards the 4.5% - 5.0% area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recovery of the US real estate market and US unemployment receding</td>
<td>Yield curves very steep with short/medium rates reacting less</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Central Banks “behind the curve” to ensure the sustainability of GDP growth, keeping short part of the curves at low levels</td>
<td></td>
</tr>
<tr>
<td>Bear flattening</td>
<td>Long term</td>
<td>Sharp increase in inflation created by Central Banks’ accommodative stance</td>
<td>Short-medium term part of the yield curves to react very sharply in the 5% area as soon as Central Banks sharply increase rates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Central Banks reacting quickly as soon as inflation targets exceeded, coming back to more orthodoxy and very hawkish policies</td>
<td>Long part of the curves to react less in the 6% area</td>
</tr>
<tr>
<td>Deflation</td>
<td>Long term</td>
<td>Euro crisis to be solved only in the very long run</td>
<td>Administered yield curves by Central Banks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Very low GDP growth in the US and in the rest of the world (including BRIC)</td>
<td>Yields maintained at very low levels over many years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Continued lax monetary policies by Central Banks</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Era of strong and lasting financial repression</td>
<td></td>
</tr>
</tbody>
</table>
SCOR’s prudent AM strategy maximizes potential upsides when interest rates rise

**Bond crash**
- Shock of at least 300bps on long-term yields

**Bear steepening**
- Gradual increase of long-term yields towards the 4.5% - 5.0% area
- Yield curves very steep with short/medium rates reacting less

**Bear flattening**
- Short-medium term part of the yield curves to react very sharply in the 5% area as soon as Central Banks sharply increase rates
- Long part of the curves to react less in the 6% area

**Deflation**
- Administered yield curves by Central Banks
- Yields maintained at very low levels over many years

---

1) Based on German bonds as of 17/09/2012
Whatever the scenario, the deleveraging process will last a long time

<table>
<thead>
<tr>
<th>Short/medium-term probability of success of deleveraging solutions</th>
<th>Previous deleveraging cycles were longer and bigger than initially expected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Rapid and strong economic growth</strong></td>
<td></td>
</tr>
<tr>
<td>Extremely low, if nil</td>
<td></td>
</tr>
<tr>
<td><strong>2. Austerity measures</strong></td>
<td></td>
</tr>
<tr>
<td>Uneven, but weakening</td>
<td></td>
</tr>
<tr>
<td><strong>3. Default and/or restructuring of public debt</strong></td>
<td></td>
</tr>
<tr>
<td>Increasing</td>
<td></td>
</tr>
<tr>
<td><strong>4. Financial repression</strong></td>
<td></td>
</tr>
<tr>
<td>Increasing</td>
<td></td>
</tr>
<tr>
<td><strong>5. Inflation</strong></td>
<td></td>
</tr>
<tr>
<td>Increasing in the long term</td>
<td></td>
</tr>
</tbody>
</table>

Source: Morgan Stanley

- The world has entered a long-lasting crisis and deleveraging era, probably leading to:
  - very limited GDP growth in mature economies and a return to lower growth levels in force before the pre-crisis boom in emerging countries
  - high volatility of financial markets, with unexpected shocks
  - an increase in interest rates
  - depressed financial asset prices
Toil and trouble in deflating the debt bubble

1. The crises that have followed on from each other since 2007 are the fruit of a debt bubble that has yet to burst

2. 5 ways to deflate a bubble

3. Companies in the face of deleveraging
Bank financing is drying up

The deleveraging period is marked by the difficulty of accessing credit for companies (rationed by quantity rather than price).

This rationing of credit is further reinforced by Basel 3.

We are tipping towards an economy of preliminary savings.

Consequences:

- A fall in investment
- Sectors with an inverse capital cycle are at an advantage.
Rather than lending, banks, like other economic agents, prefer to accumulate cash.

**US banks accumulate cash deposited at the FED**

- **Bank sight deposits and reserves (USA)**

Source: FED, flow of funds

**Economic agents prefer to hold on to cash rather than reinvest it**

- **Cash retention rate as a percentage of the assets of all economic agents (USA)**

Source: FED, flow of funds
Bank financing is drying up just as European companies are about to face a wall of debts

**European companies will have to refinance a large amount of debt in 2013-2014**

- In US$ billion

2013 – 2014: refinancing needs of “investment grade” non-financial companies in the Europe/Africa/Middle-East region

- Total: 665
- Italy: 41
- Spain: 46
- UK: 91
- France: 102
- Germany: 136
- Others: 248

- The insufficient development of capital markets and the socio-fiscal pressure weighing on the margins of European companies have pushed the latter into massive debt

- Companies will have to refinance very high amounts of debt in 2013 and 2014

The impact on European companies is even greater because they are particularly dependent on bank financing.

- **Non-financial companies** in the Eurozone finance themselves more through debt than in the US.

- **This debt is very largely bank-based**, as demonstrated by the very low proportion of bonds in the overall debts of non-financial companies.

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**The proportion of equities in the liabilities of European companies is lower than in the US**

![Equities and other title deeds in the liabilities of non-financial companies](chart1)

- Source: OCDE, Financial National Accounts

**The proportion of bonds in the debts of European companies is lower than in the US**

![Securities other than equities in the debt (other than commercial credit) of non-financial companies](chart2)

- Source: OCDE, Financial National Accounts
Companies that gambled on leveraging are now being penalised

The share performance of CAC 40 companies since 2011 is negatively correlated to their debt level

Since the beginning of 2011, a new phenomenon has appeared that is unique to the deleveraging era:
- Valuation loss is proportionate to the debt/asset ratio (measured at the end of 2008) amongst CAC 40 companies
  - Thus, for each extra point of debt, an average of 0.34 share points are lost by the company
- Companies with strict covenants will suffer particularly badly. Cash flow management will become a key issue
- Goodwill also risks being crushed
- Consequently: payment incidents and company defaults are already beginning to rise, particularly for companies of a certain size.
- This is a vicious circle: 25% of company bankruptcies are due to payment defaults by business partners.

Source: annual reports of CAC 40 companies
Capital equity is struggling to take over from bank financing

IPOs remain un-dynamic

<table>
<thead>
<tr>
<th>In € billion</th>
<th>IPOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>27.2</td>
</tr>
<tr>
<td>2005</td>
<td>32.8</td>
</tr>
<tr>
<td>2006</td>
<td>36.8</td>
</tr>
<tr>
<td>2007</td>
<td>41.6</td>
</tr>
<tr>
<td>2008</td>
<td>5.6</td>
</tr>
<tr>
<td>2009</td>
<td>5.6</td>
</tr>
<tr>
<td>2010</td>
<td>21.6</td>
</tr>
<tr>
<td>2011</td>
<td>21.6</td>
</tr>
</tbody>
</table>

Europe      | USA
---|---
24  | 32

Source: Ernst and Young, Global IPO trends 2012

Venture capital is falling in the European Union

<table>
<thead>
<tr>
<th>In € billion</th>
<th>Amounts invested in venture capital in the EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>20</td>
</tr>
<tr>
<td>2001</td>
<td>18</td>
</tr>
<tr>
<td>2002</td>
<td>16</td>
</tr>
<tr>
<td>2003</td>
<td>14</td>
</tr>
<tr>
<td>2004</td>
<td>12</td>
</tr>
<tr>
<td>2005</td>
<td>10</td>
</tr>
<tr>
<td>2006</td>
<td>8</td>
</tr>
<tr>
<td>2007</td>
<td>6</td>
</tr>
<tr>
<td>2008</td>
<td>2</td>
</tr>
<tr>
<td>2009</td>
<td>2</td>
</tr>
<tr>
<td>2010</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: European Venture Capital Association, Yearbook 2012

- The Eurozone economy is even more affected because it is a debt economy rather than a capital equity economy. Since 2008, the amount of IPOs has been divided by 3 in Europe.
- Since the crisis, there has been a very significant fall in the amounts invested by venture capitalists in Europe in the preliminary development phases of companies. Investors are wary of the riskiest investments, but these are essential for future growth.
- In France, the absence of pension funds and the announced heavier taxation of capital will make this problem particularly acute.
In this context, SCOR continues to anticipate potential risks ahead in order to immunize itself from macroeconomic turmoil.

<table>
<thead>
<tr>
<th>SCOR anticipates the risks of:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduced access to credit</strong></td>
</tr>
<tr>
<td>- Leverage ratio at 20.4% following the issuance of the CHF 250 million on 10/09/2012</td>
</tr>
<tr>
<td>- Active management of refinancing agenda: <strong>no reimbursement of principal due before 2016</strong></td>
</tr>
<tr>
<td>- Optimization of LOC needs following ex-TaRe acquisition</td>
</tr>
<tr>
<td>- Considering making <strong>corporate loans</strong> to take advantage of the situation</td>
</tr>
<tr>
<td><strong>Reduced access to capital markets</strong></td>
</tr>
<tr>
<td>- Optimal management of capital through <strong>diversification</strong></td>
</tr>
<tr>
<td>- <strong>Optimal capital allocation</strong> to minimize capital needs (short vs. long tail, etc.)</td>
</tr>
<tr>
<td>- Guaranteed ability to restore capital in case of extreme Nat Cats: contingent capital</td>
</tr>
<tr>
<td>- <strong>Societas Europaea</strong> and branch network leading to high capital and <strong>cash fungibility across the Group</strong></td>
</tr>
<tr>
<td><strong>Liquidity tensions</strong></td>
</tr>
<tr>
<td>- Large amount of <strong>cash</strong> and rollover strategy</td>
</tr>
<tr>
<td>- <strong>Credit facilities</strong> available</td>
</tr>
<tr>
<td>- Strong <strong>operating cashflow</strong> generation</td>
</tr>
<tr>
<td><strong>Exchange rate fluctuations</strong></td>
</tr>
<tr>
<td>- Strict currency matching policy</td>
</tr>
<tr>
<td>- <strong>Group-wide balance</strong> between currencies (39% USD, 28% EUR, 10% GBP, 23% others) 1)</td>
</tr>
<tr>
<td>- <strong>Swap</strong> of CHF perpetual debt</td>
</tr>
<tr>
<td><strong>Regulatory evolutions</strong></td>
</tr>
<tr>
<td>- On track to <strong>Solvency 2</strong> compliance</td>
</tr>
<tr>
<td>- Cutting-edge <strong>internal model</strong> already submitted to regulators</td>
</tr>
<tr>
<td><strong>Eurozone breakup</strong></td>
</tr>
<tr>
<td>- No exposure to the <strong>sovereign debt</strong> of peripheral countries</td>
</tr>
<tr>
<td>- <strong>Favourable asymmetry</strong> between assets and liabilities: <strong>assets and capital</strong> in strong countries/currencies</td>
</tr>
<tr>
<td>- Indirect effects difficult to assess, but <strong>not sizeable</strong></td>
</tr>
<tr>
<td>- H1’12, 74% of total SCOR GWP is non-Euro denominated</td>
</tr>
</tbody>
</table>

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1) Reserves split Q1 2012: 25% USD, 49% EUR, 11% GBP, 15% others