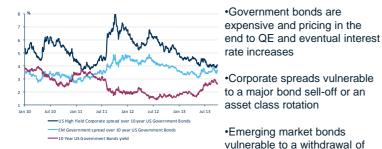


Fixed income markets in a new phase



global liquidity and political tensions Source: Datastream as at 30 September 2013. Past performance is not a reliable guide to future performa

The rotation from credit to equity is underway

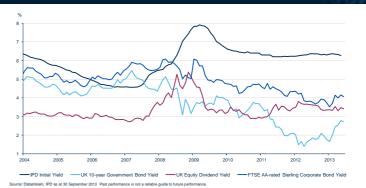
Markets pricing in good news



- •Global equity markets have priced in an optimistic outlook
- •US earnings growth has improved to about 5% pa although revenue growth remains mixed
- •Free cash flow and dividends must remain supportive for equities to make further progress

Equity markets expensive versus earnings trends

Sustainable yield is evolving



Key area of transition

Since the onset of the financial crisis, many countries carry significant levels of debt which has the potential to impair their economic prospects.

In addition, most major central banks adopted unconventional monetary policies such as liquidity facilities and asset purchase programmes in an effort to stabilise markets and mitigate risks.

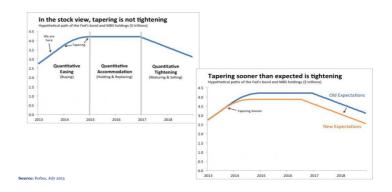
As the global growth outlook improves, what will the impact be on rates, levels of indebtedness and the emergence of developing economies on the global playing field?

Thematic long term drivers of change

Change is the constant, but opportunities exist

		Liabilities
Debt effects	Inflation threat could make equities more attractive; abnormally high savings at the corporate level needs to be run down	End of bull market for bonds which could mean the erosion of the real value of debt; acceleration of the appreciation of China's renminibi could raise concerns over lower demand for US Treasuries by Chinese (currently 1/3 of US treasury holding)
Shifting consumption / changing populations	Opportunity to gain exposure to energy, pharmaceuticals, healthcare, food, crop science, renewables in order to capitalise on trends	Strain on public resources could mean rising deficit
Increased connectivity	Increased margins as more tasks get automated; could lead to higher profitability for those firms who implement technology effectively	Traditional business models will be challenged
	Increased profitability of firms extracting raw materials could lead to creation of shareholder value (e.g. oil services, refiners, miners, cement manufacturers)	Rising price of raw materials and consequently the threat of inflation

What is tapering?



Unprecedented asset purchasing

Bond vields

Central banks entered into unprecedented asset purchasing which aided a global compression in yields 10 year government bond yields by sovereign



Source: Datastream as at 30 September 2013. Past performance is not a reliable guide to future performance

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Key area of transition

Shifting consumption / Changing populations

The global population is predicted to rise to 8 billion by 2025. With this will come increased levels of prosperity, but also, potentially, a growing disparity in income levels.

This has the potential to result in increased consumption of goods (e.g. food) but also in a structural shift in consumer trends. On the one hand, the luxury goods sector may benefit from higher rates of disposable income; on the other, however, value focused companies may benefit.

In addition, shifting dietary preferences may imply more strains on water resources; increased urbanisation, inefficient farming practices and climate change will impact land usage; and rising obesity may increase the market for certain drugs.

Title of document | Sub-title | Date

Forward Guidance

"A highly accommodative stance of monetary policy will remain appropriate for a considerable time after the asset purchase program ends." FOMC, June 18, 2013.

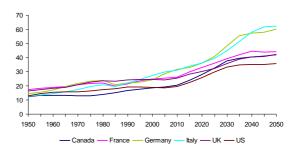


 Forward guidance can be risky – if markets assesses inflationary risks differently to central banks, credibility of policy makers will be damaged

Source: Federal Reserve and Standard and Poor's via Ecowin 24 July 2013. Past performance is not a guide to future performance

Populations are ageing

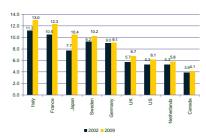
Across developed markets, populations are ageing...



Source: OECD, Fiscal Implications of Ageing: Projections of Age-Related Spending. UN Data. Dependency ratio is the population over 65 as a percentage of the working age population (20-64), 20 August 2013.

Constrained public pensions

Affordability at a time of austerity will constrain public pensions Old age social spending (public expenditures) as % of GDP



Source: OECD, Old Age Social Spending. 16 November 2012.

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Food consumption

Over then next decade, global food consumption is expected to rise by 17%

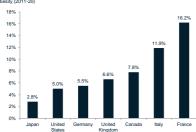


Source: Food and Agriculture Organization of the United Nations. 12 June 2013.

Growth in obesity

Rising trend expected to continue for at least the next decade.

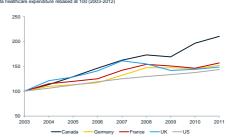
Percentage growth in obesity (2011-20)



Source: Euromonitor, Passport Survey. 12 June 2013.

Rising healthcare costs

... which has contributed to rising healthcare costs
Per capita healthcare expenditure rebased at 100 (2003-2012)



Source: World Bank, World Development Indicators. Data in current US dollars. December 2012.

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Key area of transition

Increased connectivity

A range of technologies are making networks, systems, processes and products of all kinds increasingly responsive while making individuals, firms and nations more connected.

The enormous leaps in the capabilities of the technologies behind this advance enable the creation, capture and analysis of unprecedented amounts of data. This is transforming life styles and traditional business models.

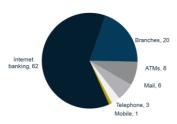
Innovative companies are using this connectivity and data to continuously adapt their business practices, create sustainable competitive advantages, and challenge less agile incumbents across diverse sectors.

As such, as well as generating new opportunities, the pace and extent of change that is occurring can create significant risks for established companies across many sectors.

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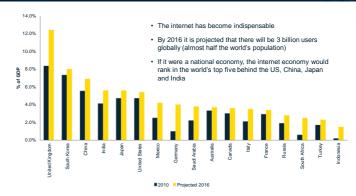
Internet banking

The majority of customers already prefer internet banking... Channel preferences of global users surveyed



Source: American Bankers Association, 3 October 2013.

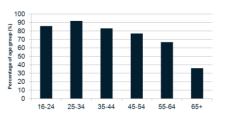
The internet economy



Source: Boston Consulting Group, "The \$4.2 Trillion Opportunity: The Internet Economy in the G-20." March 19, 2012. https://www.bcgperspectives.com/content/articles/digital economy internet economy keeps growing/

Internet age

...while younger generations are more likely to make purchases on the internet $_{\mbox{\scriptsize Age preferences}}$



urce: Office of National Statistics, Opinions and Lifestyle Survey 2013. August 2013.

Key area of transition

Shifting resource constraints

The end of the era of cheap energy points to a potentially volatile transition towards more energy-efficient models of economic activity. Higher energy costs are stimulating investment opportunities in both complementary and alternative forms of energy.

Furthermore the prospect of pricing parity of certain alternative energies in the years ahead is making the adoption of these technologies more likely.

Substantial improvements in productivity, technology, infrastructure, efficiency and conservation are required to offset the drag on economic growth and investment returns.

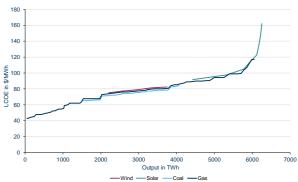
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High Energy Costs

Electricity costs (MWh per hour)			
	Industry	Households	
Denmark	104.26	383.43	
France	103.89	194.87	
Germany	148.71	338.75	
Japan	194.27	276.76	
Norway	57.56	135.98	
Sweden	89.19	223.96	
UK	134.17	220.74	
USA	66.98	118.83	

Source: international Energy Agency 2013: Energy Prices and Taxes (Ed. 2013-09). 17 October 2013.

Higher Energy Costs



Source: Citi. LCDE (the levelised cost of energy) is the constant unit cost (per kWh or MWh) at which electricity must be generated from a specific source to break even over the lifetime of the project. TWh = TerraWatt Hour; 1 terrawatt = 1 trillion watts of energy.

Frack to the future?

- Clean fuel
 Massively abundant
 Lower risk versus: nuclear power (leaks), coals (explosions), oil (numerous risks)
- Earthquake risk: land subsidence – is this any different than coal mines?
 Volume of water usage
 Speculation about water pollution

Who could benefit?

- · Energy security: David Cameron 'we will be more energy secure'
- Consumers: a possible reduction in energy costs
- · Job creation: '600,000 jobs by the end of the decade' says Obama
- Landowners in the US vs the Crown in the UK

Global energy demand is forecast to grow by 35%, as the world's population expands from 7 billion today to 9 billion in 2040, led by growth in India and Africa

Source: "The Outlook for Energy: A view to 2040." Exxon Mobil., 20 March 2013.

Case Study Denmark's wind farms

- In 1980 the Danish government was Europe's first to bring in large-scale subsidies to alternative energy providers (specifically wind farms)
- The aim by 2020 is to produce 35% of its energy needs from renewable sources (half of which will come from wind power)
- The progress so far has been dramatic:
 - There are more than four thousand onshore turbines (2/3 more than the UK)
 - · Denmark is now the global centre of wind turbine manufacturing
- However Danes do pay some of the highest energy tariffs in Europe (more than double that of the average UK home)
- · Subsidy cuts are possible and wind farms are moving offshore

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Conclusions

What the future may bring:

Unconventional monetary policies cannot continue ad infinitum

The pace of change remains rapid and is likely to accelerate

The end of cheap energy may mean a volatile transition towards more energy-efficient models Shifting consumption of goods and services will have huge impacts on resources Technology is increasing responsiveness, transforming lifestyles and business models

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Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.

11 November 2012

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