Equities

The financial crisis and generation investment

Jonathan Mirrlees-Black

12 December 2008

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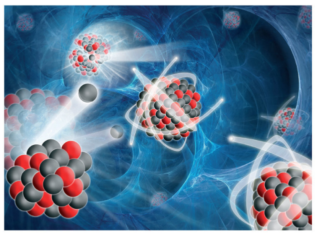
A selection of Ideas Team publications

Equity Research

What if the future is nuclear?



- A substantial increase in global investment in nuclear power is now likely because of its low CO_2 emissions, low cost, and contribution to security of energy supply.
- This report analyses the implications for sectors involved in the nuclear value chain including mining, capital goods, and utilities.
- Significant upside potential for Alstom, Areva, Assystem, Bouygues, EDF, E.ON, and RWE if our scenario plays out.

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Infrastructure

Duration, Duration, Duration

- Global private sector investment in infrastructure is set to grow at an 8.5% CAGR out to 2030. This is a unique secular growth story which European infrastructure companies are well placed to exploit.
- Our analysis of the relationship between EV/EBITDA and asset duration suggests that this opportunity is undervalued by the market, especially for those companies with medium duration assets.
- In addition, revenues for many infrastructure companies are indexed to nominal costs or to measures of inflation or both. In particular, the regulation of Spanish and Italian energy network companies provides a very effective hedge against growing inflationary risks.

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The Tide Goes Out

20 October 2008

Report

	Rating	Price* (EUR)	TP (EUR)	Upside (%)
BASF	-	24.5	34.0	39
Boliden (SEK)	-	21.6	10.0	(54)
British Airways (p)	-	127.1	115.0	(10)
Gas Natural SDG	-	23.8	35.4	49
Gecina	-	56.7	76.6	35
Grupo Ferrovial	+	25.0	52.0	108
Heidelberg Cement	-	67.8	69.0	2
Henkel Pref	-	22.9	29.5	29
Holcim R (CHF)	=	65.2	80.0	23
Lafarge	=	52.6	92.0	75
Logica Plc (p)	-	72.5	120.0	66
Michelin	-	41.5	40.0	(4)
Pernod Ricard	+	46.8	76.4	63
PPR	=	42.5	55.0	30
ProSiebenSat.1	-	3.0	1.0	(67)
Rallye	=	14.6	22.0	51
Rentokil Init. (p)	=	46.0	70.0	52
Rexel SA	-	6.8	8.0	18
Saint-Gobain	=	26.6	44.0	66
Seat Pagine Gialle	-	0.1	0.1	45
Sol Melia	-	4.1	5.0	21
Thomson	-	1.3	1.0	(25)
TomTom	-	7.1	11.0	56
Wienerberger	-	15.5	13.0	(16)
Yell (p)	=	81.8	90.0	10

** Priced at 17 October 2008*

This report has been prepared with the help and cooperation of the analysts responsible for each stock. However, the views expressed in this report are those of the Ideas team alone.

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Please refer to important disclosures at the end of this report.

Some consequences of the credit crisis

'It's only when the tide goes out that you learn who's been swimming naked'
Warren Buffett

► The credit crunch and its consequences are creating new challenges at every level of business. However well the various recently announced bank recapitalisation plans work, credit will be more difficult to obtain over the next few years and the cost will be higher. In this study we look at a sample of 25 companies with potential credit issues and examine the nature of the problems and the possible solutions.

► In the face of a shortage of credit companies will need to conserve capital. This will have an impact on dividends, share buy-backs, capital expenditure and the ability to invest in growth projects. We believe that rights issues and debt for equity swaps will become more common as the balance of power between shareholders and debt holders swings decisively in favour of the latter.

► We have studied the structure of the debt maturity profile of each company and at the resources available to meet refinancing requirements. We have detailed where available the covenants relating to the debt and modelled how far earnings need to fall before a breach occurs.

► We have also looked at some of the secondary effects of the non-availability of credit. Many companies will find themselves having to advance credit to their distributors or clients who cannot obtain bank finance. In this respect, companies with strong balance sheets will have a considerable competitive advantage over competitors who cannot offer such facilities to their customers. However, carrying higher amounts of stock and trade debtors will mean increasing levels of working capital, higher interest expenses and lower profitability.

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Equity Research

Pensions

28 October 2008

-

Ratings

	Rating	Price* (EUR)
Air France-KLM	+	11.5
Akzo Nobel	=	26.3
Alcatel-Lucent	+	1.6
Atos Origin	=	17.9
BAE Systems (p)	+	318.8
BASF	-	22.4
Barclays plc (p)	=	192.0
BMW	+	18.3
British Airways (p)	-	132.0
BT Group (p)	-	131.4
C&W (p)	=	116.4
Daimler AG	+	22.4
Deutsche Post	+	9.7
DSM	=	25.7
EADS	=	11.0
Fiat	=	5.8
Grupo Ferrovial	+	22.7
HBOS (p)	+	59.9
Heidelberger	-	58.2
Invensys (p)	-	136.5
Kingfisher (p)	-	100.0
Lloyds TSB (p)	+	165.8
Lufthansa	+	11.1
Michelin	-	34.9
National Grid (p)	=	635.5
Norsk Hydro (NOK)	-	23.5
Peugeot SA	+	17.6
Philips	-	13.7
Portugal Telecom	-	4.7
RBS (p)	+	60.8
Rentokil Init. (p)	=	38.5
Rolls-Royce (p)	-	279.3
Sainsbury J (p)	-	257.8
Saint-Gobain	=	25.2
Salzgitter AG	+	43.3
Siemens	=	40.8
Smiths Group (GBP)	-	7.0
Thales	+	31.5
ThyssenKrupp	=	14
TUI	=	8.7
UBS AG (CHF)	-	15.6
Valeo	=	12.3

** Priced at 24 October 2008*

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Shrinking assets, growing liabilities

► **Market conditions bring pension liabilities into focus again**
Gross pension liabilities now average 25% of market capitalisation of our large cap universe. Liabilities now exceed 50% of market capitalisation for 42 companies. In this report we highlight the key issues, and those companies most exposed.

► **Asset falls**
The exposure of pension assets to equities fell by an average 5% to the last reporting date, but exposure to equity market falls remains large. In addition, investment in alternative assets such as corporate bonds, property, hedge funds and private equity have not provided protection.

► **High corporate credit spreads mask an increasing liability**
Corporate bond yields are currently used to value pension liabilities under IFRS, and the sharp increase in yields will partially offset asset falls in balance sheets. However, there is a wide discrepancy in real discount rates used, distorting comparison of companies. There is also potential for accounting standard setters to require the use risk-free rates which we think would better reflect the value of pension liabilities. We have estimated the impact both of standardising discount rates and moving to risk free rates.

► **Stock conclusions**
Companies where our analysis gives particular concern about pension liabilities include British Airways, Alcatel-Lucent, BT Group, Atos Origin, Lloyds TSB, Deutsche Post and TUI.

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Agenda

- Availability of finance for generation investment
- Other consequences of the financial crisis
- Investment scenarios
- Conclusions

Conclusions from our note - *The tide goes out*

It's only when the tide goes out that you learn who's been swimming naked. Warren Buffet

- Credit more difficult to obtain, and more expensive
- Weak balance sheet a big competitive disadvantage
- Expect equity of weakest companies to be wiped out
- Expect stronger companies to cut dividends, share buy backs and capital expenditure
- Expect companies which have driven growth through acqusitions and debt funded projects to stall and de-rate
- Beware seemingly clean or net cash year end balance sheets – they are not always what they might seem
  - Our proprietary analysis of need for refinancing needs and debt covenants shows that even apparently healthy companies can have refinancing problems

A fundamental shift in the balance of power from equity to debt holders

Equities

Large spread between different quality borrowers

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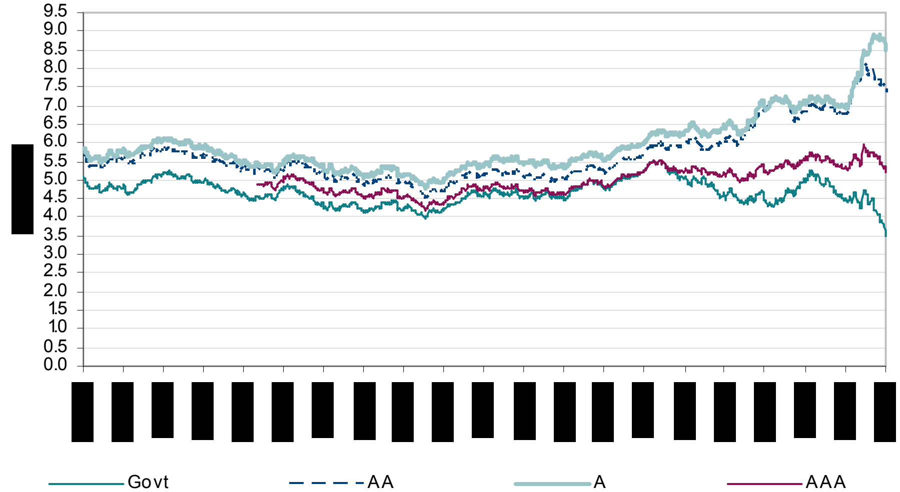
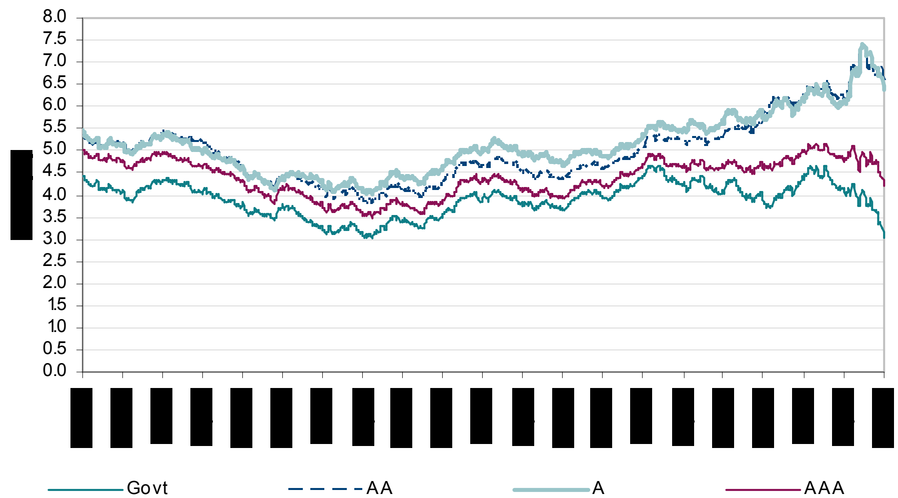
CDS Spreads – Itraxx Cross Over and European 5 and 10yr bonds

10 yr Bond yields - Euro

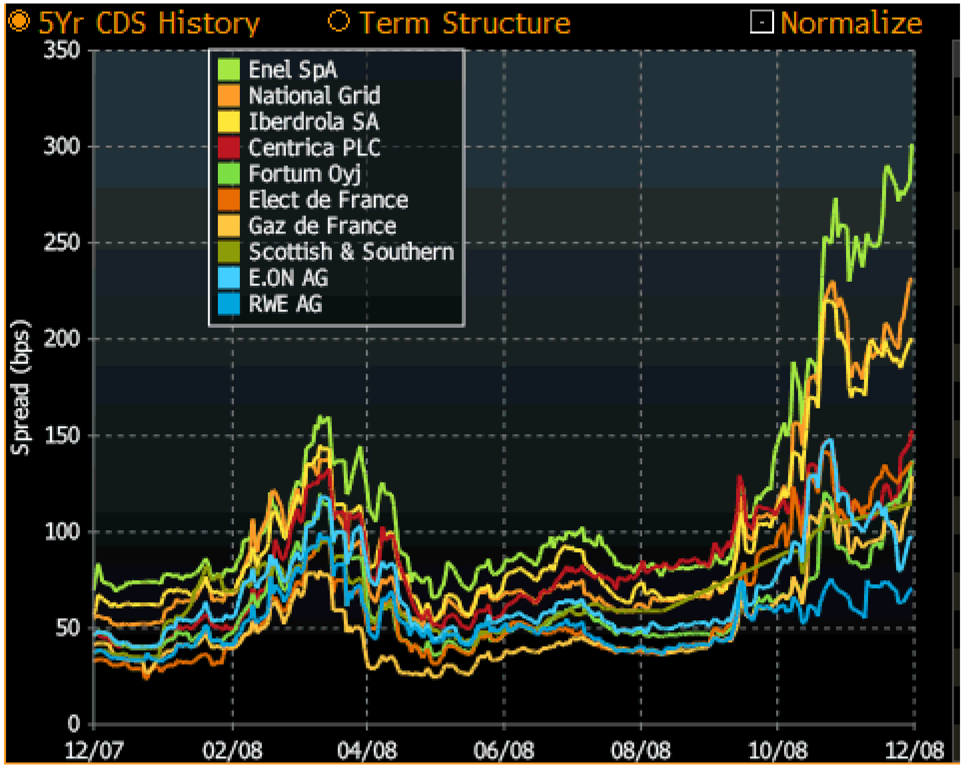


10 yr Bond yields - £



Utility CDS spreads

- Pre credit crunch spreads were 35-75bp for large utility companies
- Returned to close to these levels in summer 2008
- Credit crunch has increased these to unprecedented levels
- Price under 100bp for higher quality names



Financing difficult, expensive, but still available

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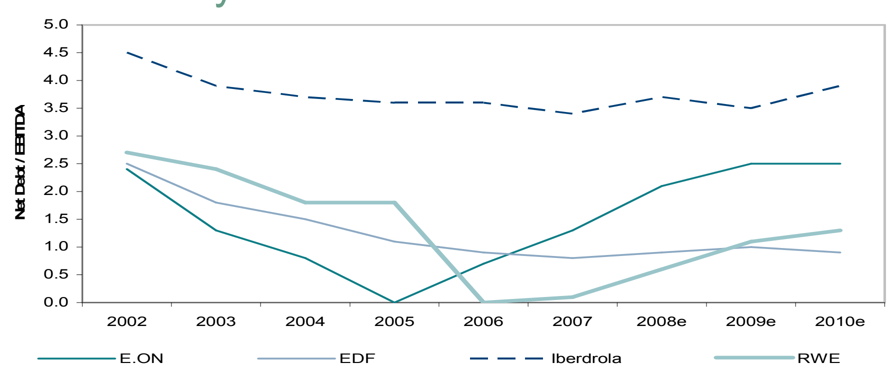
- Debt issuance is still possible in the sector:
  - GDF-Suez issued EUR2.54bn bonds on 17 and 22 October (EUR and £).
  - National Grid. Refinancing programme of £3bn year to date, with £0.5bn in September.
  - £11bn syndicated loan to EDF for British Energy acquisition. Further issuance by EDF expected
  - Several issues over last month (see table).
- Equity investment
  - Centrica rights issue for British Energy acquisition

Utility bond issuance, Nov 2008

Company	Currency	Size (m)	Maturity	Spread (bp)
EDF	£	400	2022	270
Gasunie	£	400	2013	256
National Grid	EUR	600	2014	406
GDF Suez	CHF	50	2012	
Centrica	EUR	750	2013	454
GDF Suez	EUR	300	2019	281
Centrica	EUR	400	2014	251
GDF Suez	CHF	900	2013	
GDF Suez	CHF	450	2012	
EDF	EUR	2000	2013	299
E.ON	CHF	250	2012	
E.ON	EUR	2000	2010	150
EnBW	EUR	750	2018	325
EnBW	EUR	750	2013	355
Iberdrola	EUR	1000	2011	290
Iberdrola	EUR	600	2015	365
RWE	EUR	1000	2013	215
RWE	EUR	1000	2018	255

Source: Bloomberg

Utility net debt / EBITDA 2002-10



Confidence in capital expenditure plans by some major groups

- E.ON:
  - “Despite the more difficult financing environment, we stand by our EUR63bn investment programme for 2007-2010”.
  - Statement by Wulf Bernotat, CEO, 27 November 2008 to Berlin conference
- RWE:
  - “Mid-term capex programme significantly stepped up”
  - “Current times are period of risk and opportunity”
  - Statements by Dr Rolf Pohlig, CFO, 1 December 2008 at presentation to Exane BNP Paribas
- EDF:
  - Acquisition of British Energy, planned investment in new nuclear, on top of existing power stations plans
  - Proposed acquisition of 50% stake in Constellation energy nuclear business

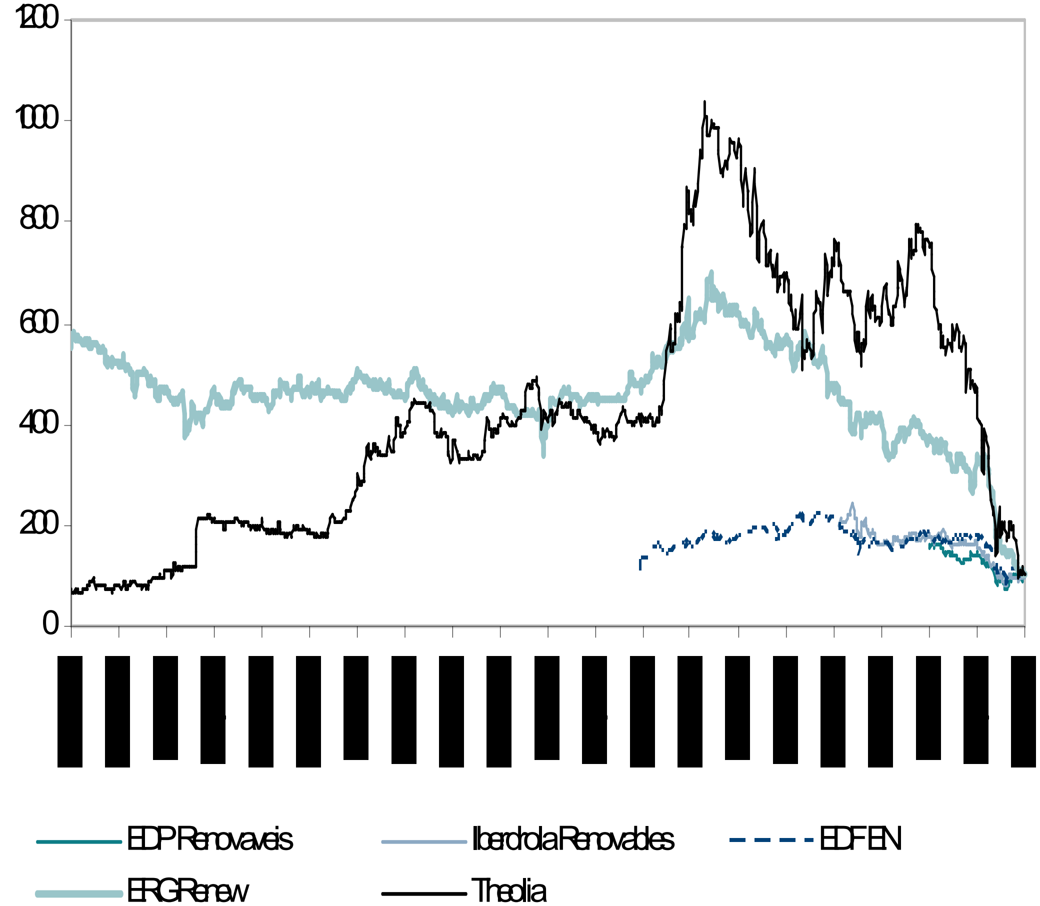
But this is not uniform

- ENEL:
  - EUR5-6bn in 2009-10 (previously 8bn)
- Gas Natural/Union Fenosa
  - Aggregate capex plan cut in half
- Iberdrola
  - Cutting by EUR2bn in 2009 (EUR1bn in core, EUR1bn in Iberdrola Renovables)
- GDF-Suez
  - “Economics of some plans could become questionable”
- Other anecdotal evidence suggests delay and cancellation to plans

Sharp fall in value of focused renewable companies

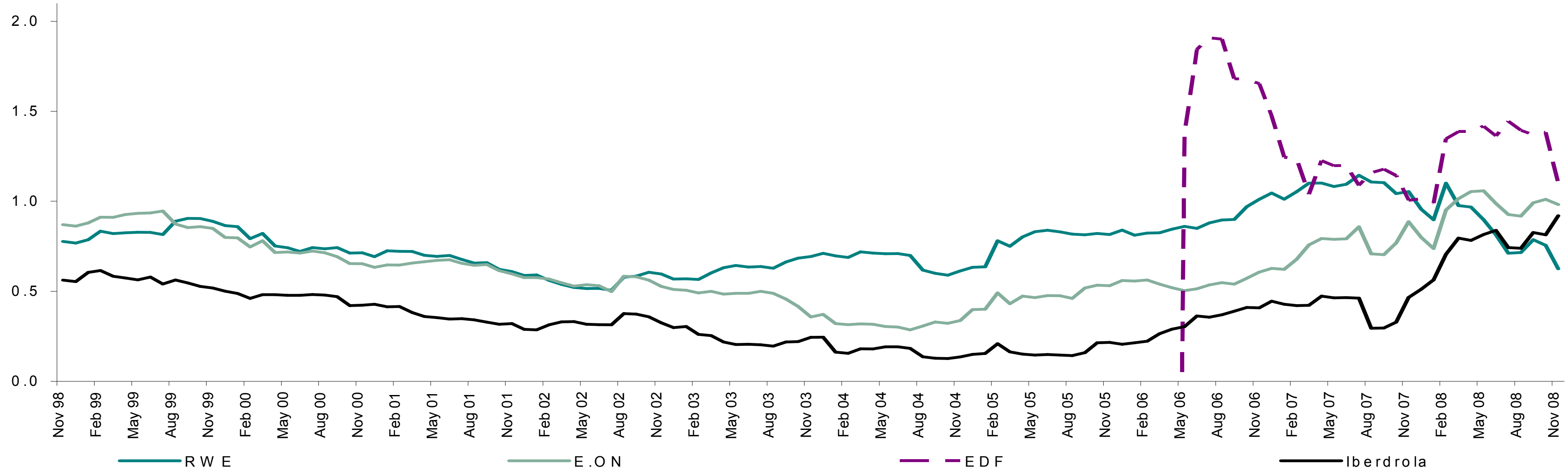
- Parent companies may provide financing for listed subsidiaries
- Capital harder to obtain
  - EUR500m capital increase at EDF EN successful but only slightly over-subscribed.
  - ERG Renew cancelled a planned increase.
- Decline in IRRs of new projects from increased capital costs and higher cost of capital.
- Limited value now placed on pipeline
- Expect capex cuts, particularly in smaller players
- Smaller players likely to sell assets to allow developments to be financed.

European listed renewable energy company share prices, Dec 2008=100



Increased cost of capital

Equity beta for European utilities with UK operations vs DJ STOXX

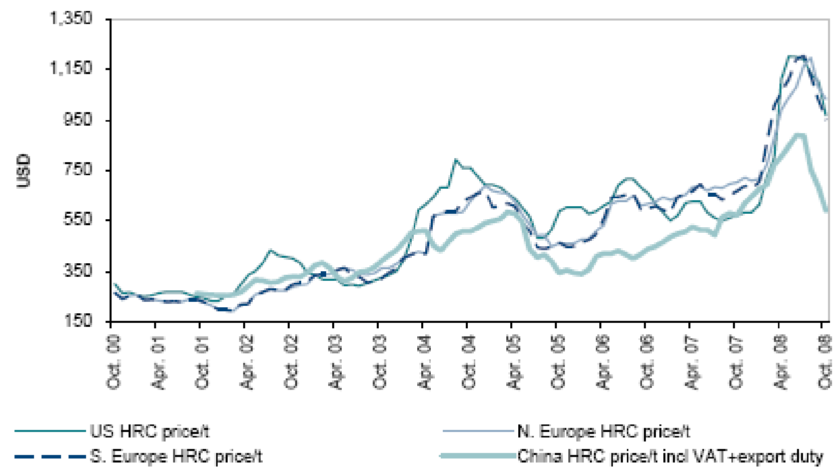


- Risk for pure generators higher than integrated utilities
- Weighted average cost of capital for European integrated groups is now 7.2-9.9% nominal, up from 6.5-8.0% 6 months ago.
- Risk for independent generators is higher.
- Required nominal returns even now are lower than is often suggested.
- But deflation expectations could mean expected real returns have increased dramatically.

Falling capital costs

- Construction costs now under downward pressure
- Commodity price falls likely to lead to significant downward pressure on prices following sharp rise in 2007-08
- We estimate nuclear construction costs at EUR2200/kW (down from EUR2800/kW, but higher than EUR1900/kW a year ago).
- CCGT cost estimate down to EUR550/kW (previously EUR750/kW).
- Cancellations would lead to further downward pressure, but no evidence of this yet (Alstom reported 2.5 year backlog recently).

Steel prices, 2000-08



Source: SBB

Falling input commodity prices

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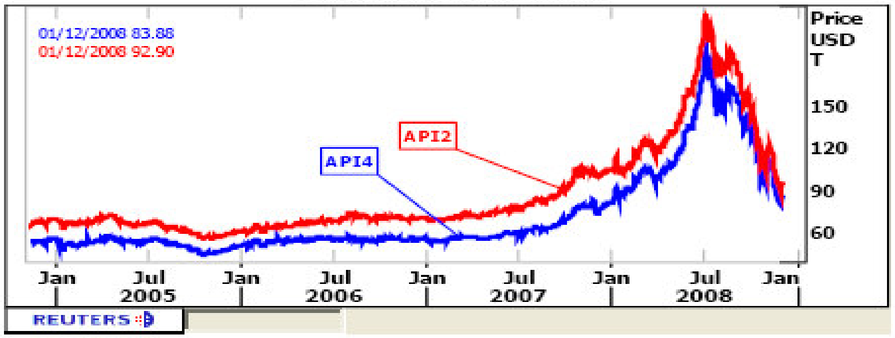
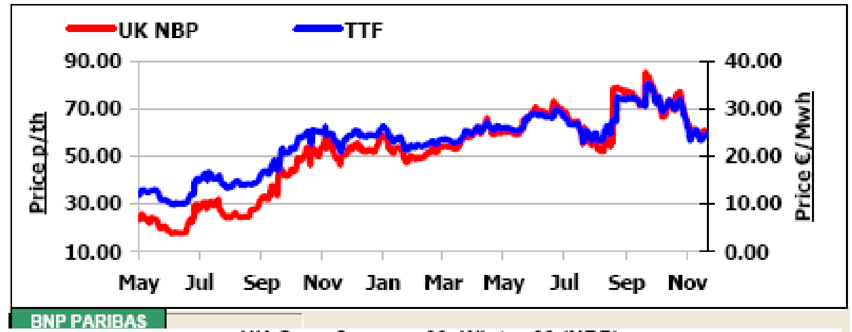
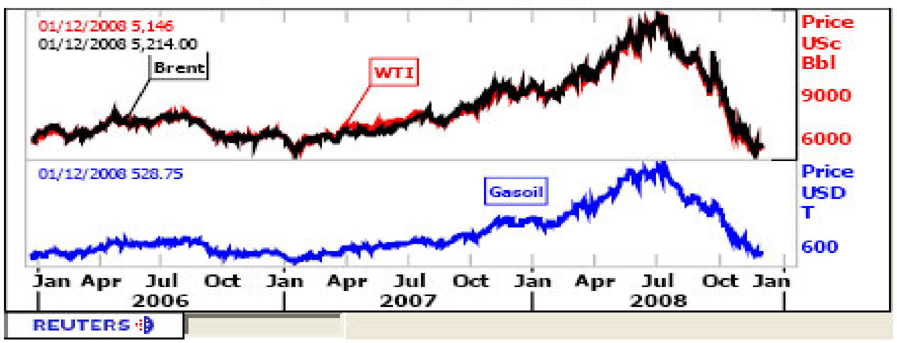
Coal : Front Year (API2, API4)



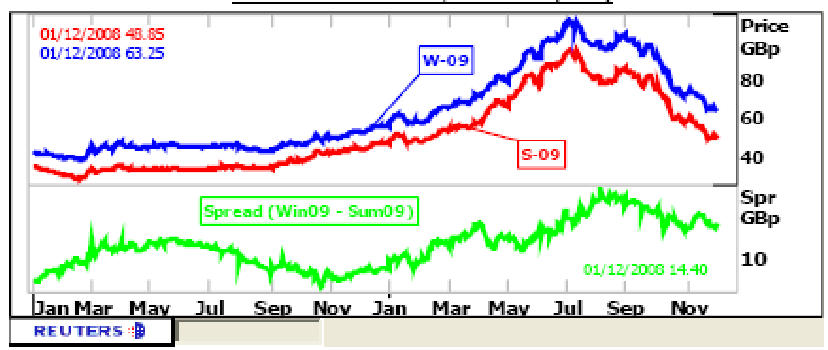
European Gas : Front Month (NBP, TTF)



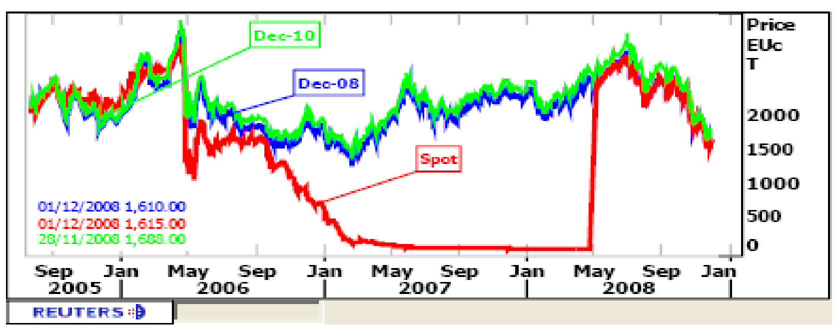
Oil : Front Month (Brent, WTI, Gasoil)



UK Gas : Summer-09, Winter-09 (NBP)



Emissions : Dec-08,Dec-10,Spot



Electricity price falls across the forward curve , with increased volatility from lower liquidity

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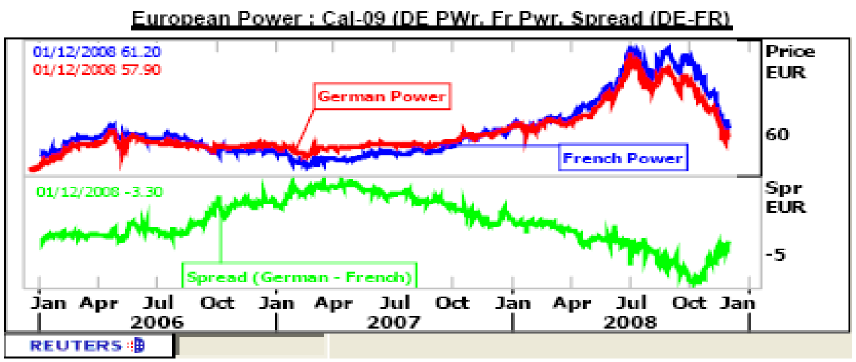
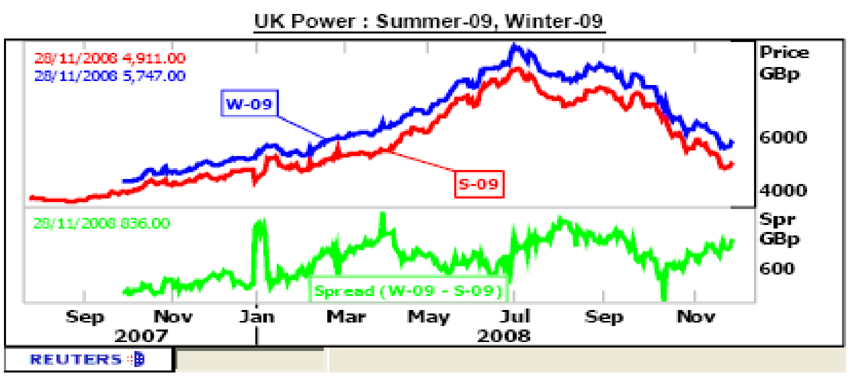
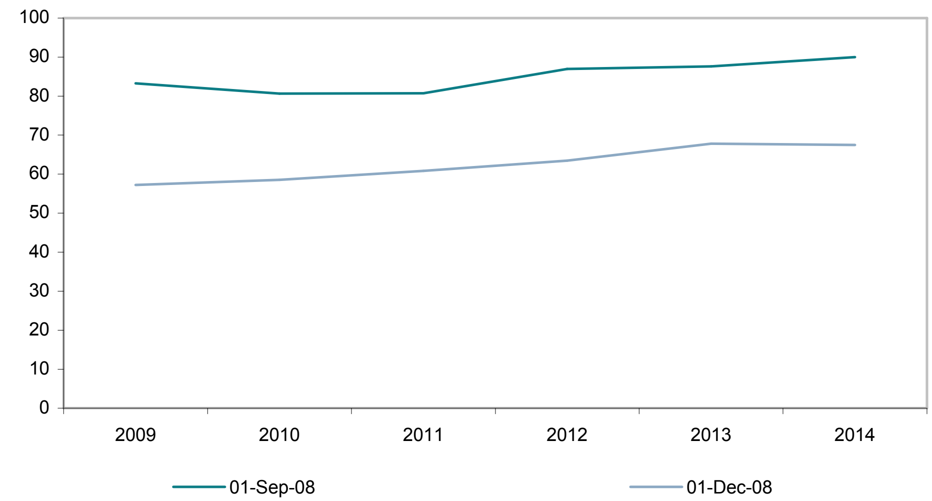




German Electricity Forward prices, EUR/MWh



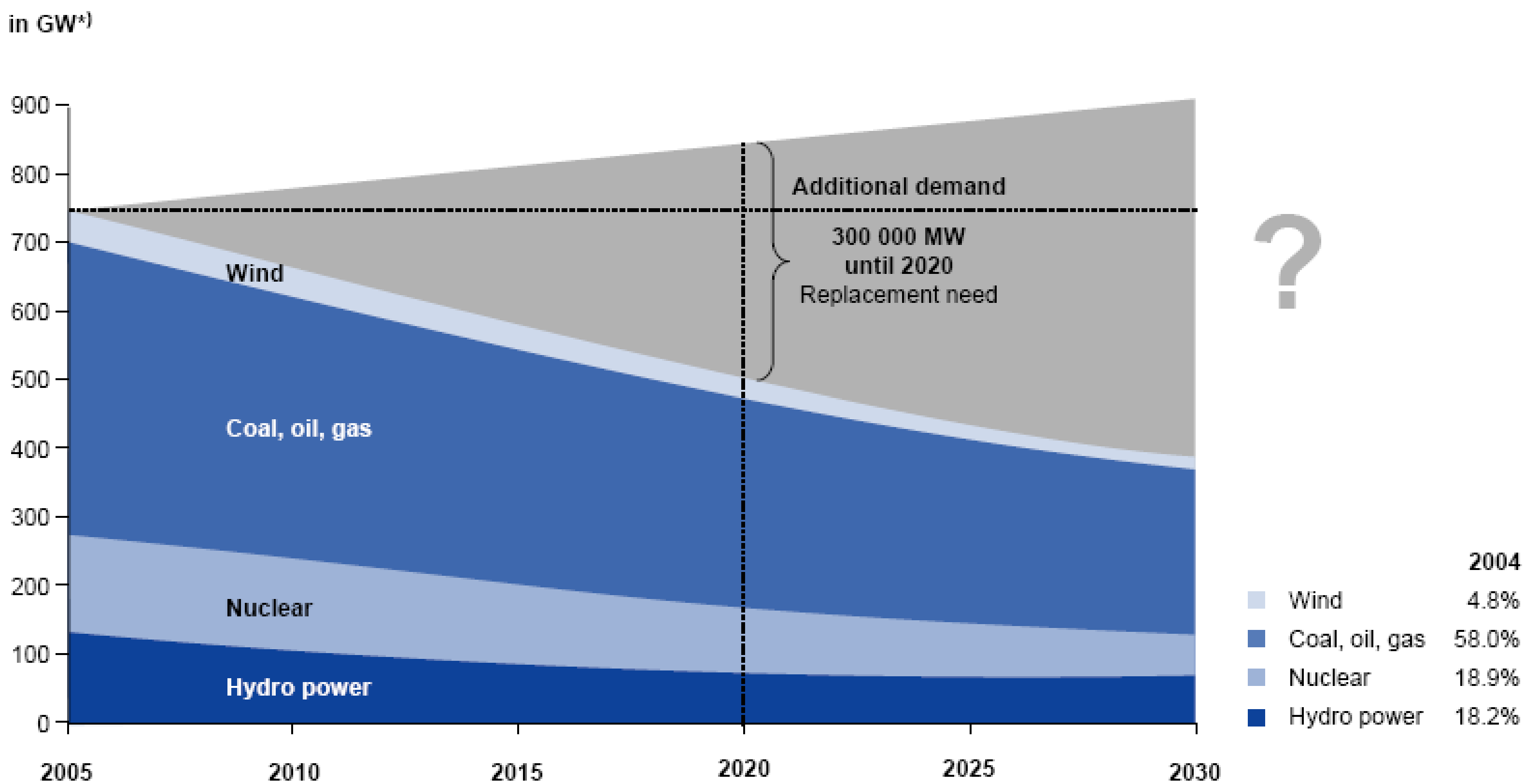
Summary of change in factors affecting new investment

Factor	Short term impact	Comment
Availability and cost of finance	Negative	Finance still available for high quality names. For other companies, capital available but at much higher price.
Cost of capital	Negative	
Capital costs	Positive	Evidence of impact of falling commodity prices beginning to have an effect on prices
Prices	Negative	Prices could be higher in the medium term if generation investment postponed.
Demand destruction	Negative	Depends on depth and duration of recession. Cumulative impact of 2 year recession 7% of GDP compared to previous “Business as usual” scenarios.

What hasn't changed?

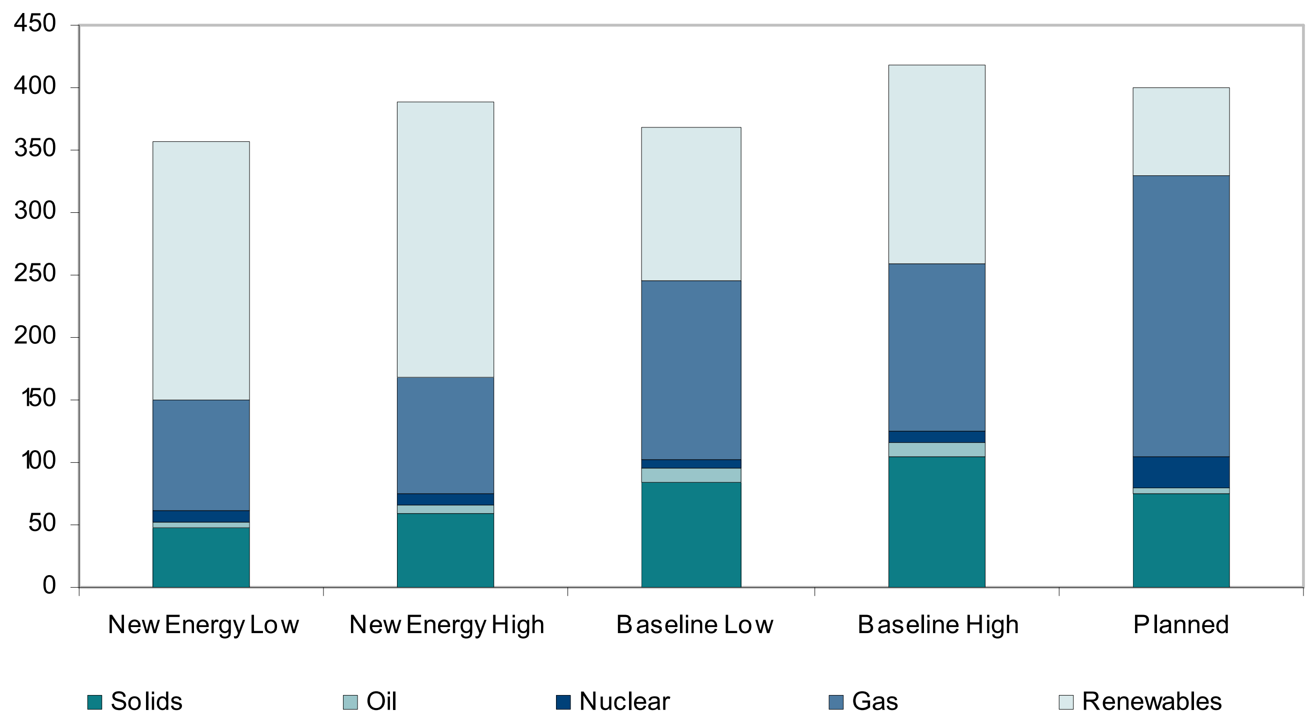
- Long term oil prices (?)
  - Exploration activity has collapsed as has development spending.
  - Supply constraints likely to be met quickly when there is an upturn
- Need for new investment in power generation to replace retiring capacity
- Stated desire by governments to meet CO2 reduction targets
  - Affordability of current policy not questioned by government today…
  - …but is current suite of policies sustainable?

Generation capacity needs



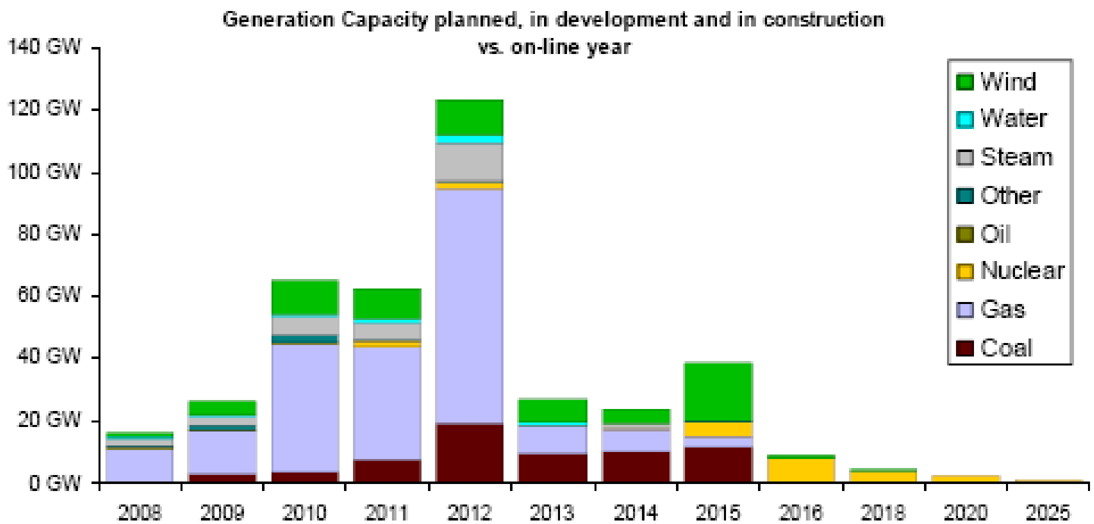
Source: RWE

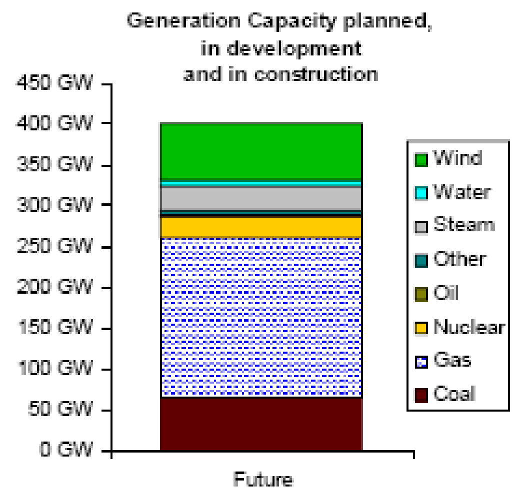
Generation capacity needs in Europe to 2020



Source: European Commission, Platts

Plans for generation investment in Europe





Source: European Commission, Platts

Investment scenarios

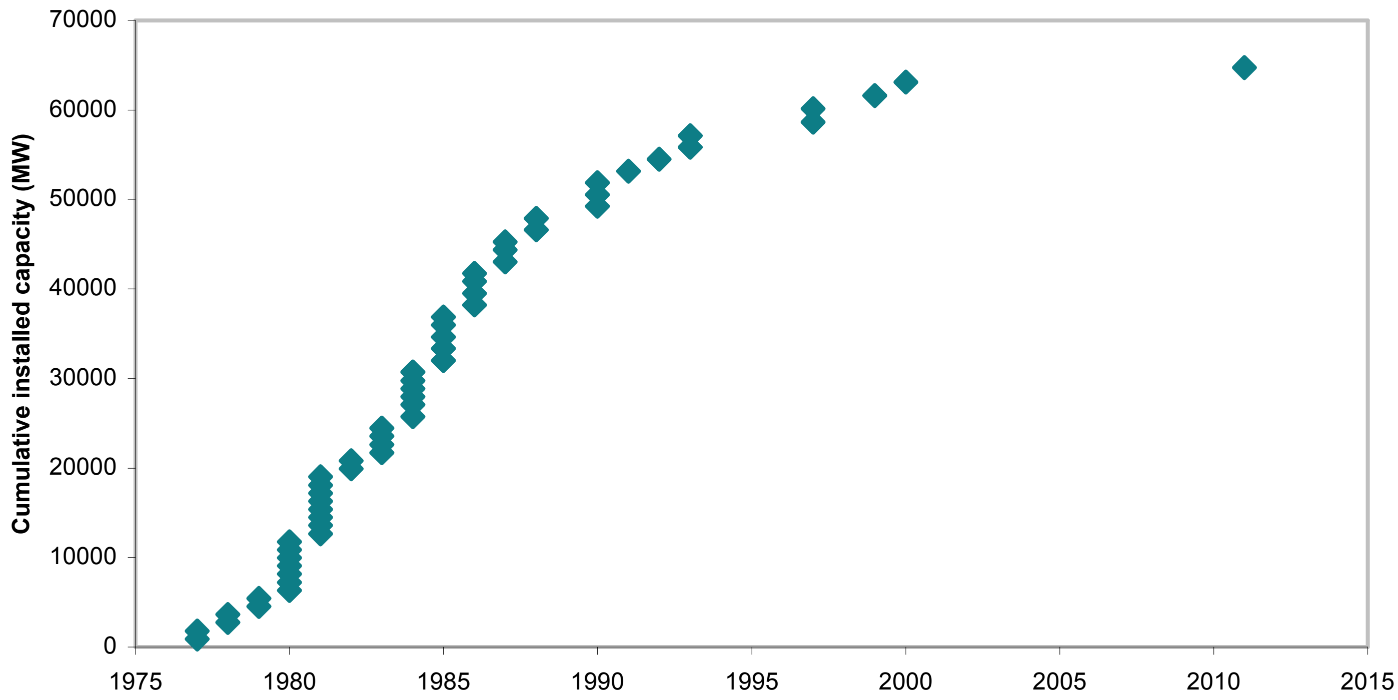
Scenario	Major international groups	Other / independent
Benign	Increase with capacity mix as envisaged by EC exploiting lower capital costs	Increase with capacity mix as envisaged by EC
No impact	Proceed as planned	Proceed as planned
Limited cancellations	Proceed as planned	Some postponement / cancellations
Significant cancellations	Some postponement / cancellations of later projects	Significant postponement / cancellations
Severe Crisis	Postponement / cancellation of early and later projects	Sustained limited availability of capital forces significant level of cancellations

Likely implications

- Investment is needed and capital is available from well financed companies
  - When capital markets open continuously, utilities likely to be the first to benefit
- Financially stretched companies will:
  - Cut capex
  - Or make asset disposals to allow necessary capex to proceed
- Opportunistic M&A activity
  - Acquisition of financially distressed companies
  - Acquisition of non-strategic assets
- Aggregate investment in physical assets to fall or be postponed
  - Likely to affect all fuels, especially given uncertain policy environment
  - Except for nuclear when capex spend is either committed or currently in early planning stage
- Electricity market to become more concentrated
  - Major utilities will grow organically at expense of smaller players
- Policy environment
  - Increase focus on evidence?

A rapid expansion of nuclear?

Cumulative nuclear capacity in France, 1977-



Source: Exane BNP Paribas analysis of company data

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