

UK CONSTRUCTION CONSOLIDATION

2017-2022

Corporate Strategies

and

M&A Opportunities

APPENDICES







APPENDICES



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Carillion v Balfour Beatty



Think Big Partnership



Project Phoenix



Focus on Carillion



London Business School



Engineering News Record



George Wimpey



Get on with it!



"Perfectionism is often an excuse for Procrastination."



APPENDIX I

BIBLIOGRAPHY- LIST OF REFERENCES



Sources: Internet & Third Party Reports

This Report contains industry and company analysis, from an array of researched sources, including personal viewpoints expressed by others, and facts, figures, findings, and extracts from other experts' reports, and views and opinions of a range of third parties, focused on the subject matter of Merges and Acquisitions in the UK construction industry. Many Sources include Reports and Commentary extracts from within Reports and Third Party Publications, available on the internet. References and Sources of Information include the following:

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Focus on the Job



"I assume all this playing will lead to innovation."



"Things have a way of working out."



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APPENDIX II

**ANALYSIS & FINANCIALS
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-  [CIMIC GROUP LTD](#)
-  [SHIMIZU CORPORATION](#)

Change



**“What if we don’t change at all....
And something magical just happens?”.”**



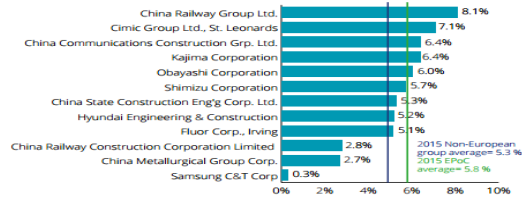
GLOBAL PEER GROUP RANKINGS

ENR Ranking

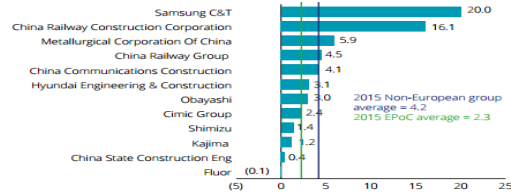
Company	Country	Ranking 2015 vs 2014
China Railway Group Limited	China	↑ 2
China State Construction Engineering Corporation	China	↑ (1)
China Railway Construction Corporation Limited	China	↓ (1)
China Communications Construction Company Limited	China	=
Vinci SA (**)	France	=
Activ. de Constr. y Serv. SA (ACS) (**)	Spain	=
Power Construction Corporation of China (*)	China	↑ 7
Bouygues SA (**)	France	=
Hochtief Ag (***)	Germany	↑ (2)
Metallurgical Corporation of China Limited	China	=
Bechtel Corporation (*)	Usa	↑ (2)
Shanghai Construction Group (*)	China	↑ (1)
Cimic Group (***)	Australia	=
Skanska Ab (**)	Sweden	↑ 1
Fluor Corporation	Usa	↑ (3)
Strabag Se (**)	Austria	=
Hyundai Engineering & Construction Corporation	S. Korea	↑ 3
Obayashi Corporation	Japan	=
Eiffage (**)	France	↑ (2)
Technip (***)	France	↑ 5
Samsung C&T Corporation	S. Korea	↑ 2
Construtora Norberto Odebrecht	Brazil	↑ (3)
Saipem (***)	Italy	N/A
Kajima Corporation	Japan	↑ (2)
Shimizu Corporation	Japan	↑ (4)

FINANCIALS

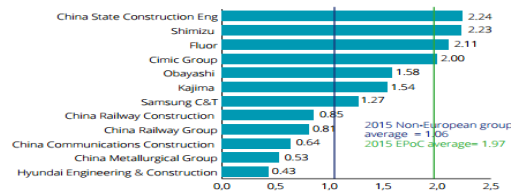
EBIT/SALES 2015



Net debt / EBITDA



MC/Book Value



Company	Country	Sales 2015 (€ M)	EBIT (€ M)	EBIT/ Sales (€ M)	EBITDA (€ M)	EBITDA/ Sales (€ M)	Market Cap. 2015 (€ M)	Market Cap. 2014 (€ M)	Var	Net Debt (€ M)	Equity (€ M)	Net Debt / (Net Debt + Equity)	Net Debt / Ebitda	
China Railway Group Ltd.	China	86,084	6,982	8.1%	7,479	8.7%	15,978	14,836	1%	33,362	19,720	53,081	63%	4.5
China State Construction Engg Corp. Ltd.	China	126,278	6,752	5.3%	8,062	6.4%	26,981	20,007	(7%)	31,53	12,020	15,172	21%	0.4
China Railway Construction Corporation Limited	China	86,120	2,382	2.8%	3,051	3.5%	15,496	12,949	-20%	49,268	18,244	67,512	73%	16.1
China Communications Construction Grp. Ltd.	China	57,880	3,700	6.4%	5,519	9.5%	15,212	16,032	(5%)	22,692	23,956	46,628	49%	4.1
China Metallurgical Group Corp.	China	31,165	852	2.7%	1,600	5.1%	5,310	5,238	1%	9,462	10,077	19,539	48%	5.9
Subtotal Chinese Groups		387,477	20,667	5.3%	25,712	6.6%	78,977	77,662	2%	117,936	83,997	201,933	58%	4.6
Cimic Group Ltd., St. Leonards	Australia	5,049	639	12.7%	1,014	20.1%	5,519	5,139	7%	2,347	2,762	5,110	46%	2.3
Fluor Corp., Irving	Usa	16,326	836	5.1%	1,007	6.2%	6,041	7,423	(19%)	(75)	2859	2,784	(3%)	(0.1)
Hyundai Engineering & Construction	Korea	15,218	785	5.2%	849	5.6%	2,488	3,444	(30%)	2,609	5,849	8,458	31%	3.1
Obayashi Corporation	Japan	13,409	802	6.0%	912	6.8%	4,353	3,932	11%	2,708	2,762	5,470	49%	3
Samsung C&T Corp	Korea	10,620	30	0.3%	247	2.3%	18,207	6,845	166%	4,914	14,299	19,241	26%	2.0
Construtora Norberto Odebrecht Sa*	Brazil	34,448	N/A	N/A	4,760	13.8%	N/A	N/A	N/A	N/A	4,660	N/A	N/A	N/A
Kajima Corporation	Japan	13,144	838	6.4%	886	6.7%	5,725	4,493	27%	1,068	3,706	4,775	22%	1.2
Shimizu Corporation	Japan	12,558	714	5.7%	801	6.4%	5,846	4,947	18%	1,159	2,623	3,781	31%	1.4
Subtotal Other Groups		124,772	4,643	3.7%	10,476	8.4%	48,179	36,323	33%	14,757	39,521	49,619	30%	2.6

* Since financial information for the year 2015 is not available, the figures detailed above refer to year 2014.

Source: Deloitte

Eight European groups are included in ENR's Top 25 global contractors ranking: Vinci, ACS, HOCHTIEF, Bouygues, Skanska, Strabag, Eiffage and Technip. The German HOCHTIEF group is not included in the EPC ranking as it has been part of the ACS Group since 2011. Technip, with sales of over EUR 12,000 million in 2015 and a market value of more than EUR 6,000 million, is not included in the EPC ranking since it is considered to be an engineering group rather than a construction company. Without taking into account the EPC companies and European engineering groups, the world's Top 25 is dominated by Chinese (seven) and Japanese (three) companies. It should be noted that six Chinese construction companies are in the Top 10 and just two US construction companies are in the Top 25. The Top 25 list also includes American, Australian, Brazilian and South Korean groups.



Vinci, S.A. is a global player in concessions and construction, employing more than 185,000 people in some 100 countries. Incorporated in 1899 by French engineers Alexandre Girois and Louis Loucheur, it remains the largest listed European construction group in terms of sales and market capitalisation.

Its main shareholders are institutional investors, both in France (16.2%) and outside France (56.2%). The remaining shares are controlled by individual shareholders (8.4%), employees (9.4%) and Qatar Holding LLC.

Company (4%). Treasury shares represent 5.8% of total shares.

Vinci, S.A. divides its business portfolio into two main segments: Concessions and Contracting.

Concessions

The Group's Concessions business generated revenue of EUR 5,804 million in 2015, up 3.9% from the previous year. This increase was due to the upturn in motorway traffic in France and the growth of airport passenger traffic in Portugal, Cambodia and France. VINCI Concessions generates 15.1% of the total revenue but two thirds of the Group's operating income.

Vinci Concessions develops and operates a solid portfolio of transport infrastructure and public facility concessions in some 22 countries. It is primarily active in airports, motorways and road infrastructure, rail infrastructure, stadiums and parking sectors. VINCI Concessions continues to broaden its scope, both in terms of activities and international reach. In this context, the recent developments at VINCI Concessions consist of the materialisation of the company's goal to expand internationally.

In the airport sector, the new contracts won in Chile, Japan and the Dominican Republic will make VINCI Airports the world's fifth-largest operator in terms of passenger traffic.

Additionally, there were several important milestones achieved in 2015 within the motorway sector: new contracts were won for the western Strasbourg bypass in France, the Regina Bypass in Canada and sections 7 and 8 of the M11 motorway between Moscow and St. Petersburg. Also, in July 2015 VINCI Highways finalised the acquisition of 50% of UTS (United Toll Systems), the Russian leader in motorway operation and toll management. UTS operates on 525 km of motorways.

2015 was also marked by the international expansion of VINCI Stadium, which at the beginning of the year was awarded a 25-year service concession contract for the operation of the Queen Elizabeth Olympic Park stadium in London.

Contracting

Vinci Energies, Eurovia and Vinci Construction represent a strong network of companies and expertise globally. In 2015 this division's total sales, which were obtained mainly in Europe, decreased by 1% to EUR 32,570 million. In this connection, the EBITDA margin fell from 4.9% in 2014 to 4.8% in 2015. This is attributable to VINCI Construction, due to lower earnings in France and a decline in business levels in the oil and gas sector.

Vinci Energies serves public authorities and business customers, helping them to deploy, equip, operate and optimise their energy, transport and communication infrastructure, industrial facilities and buildings. In 2015, VINCI Energies exceeded the EUR 10 billion revenue mark for the first time, recording a 9.4% increase on the previous year. In 2015 VINCI Energies increased its presence outside Europe with the acquisition of the Brazilian company

Orteng Engenharia e Sistemas. This company specialises in designing, building and maintaining electrical equipment and PLCs for the energy, manufacturing and infrastructure sectors. It generated revenue of around EUR 93 million in 2015.

Eurovia is a world leader in transport and urban development infrastructure. While continuing to nurture its strong roots in France, it now generates 40% of its revenue through international operations, primarily in Europe and North America. Eurovia's business activity was not uniform in 2015, with a significant contraction of the roadworks market in France partially offset by an upturn in other European and American markets. As a result, revenue fell by 3.5% to EUR 7.9 billion. Its EBIT margin was 3% in 2015.

Vinci Construction, France's leading construction company and a major global player, brings together 777 consolidated companies with 68,000 employees in some 100 countries and delivers a comprehensive array of capabilities in building, civil engineering, hydraulic engineering and contracting-related specialties. The division's sales amounted to EUR 14,491 million and represented 38% of total Group revenue.

In 2015 the division increased its presence outside France with the acquisition of HEB Construction (New Zealand) and Rodio Kronsa (Latin America, Spain, Portugal, Morocco).

Vinci Construction's business comprises three complementary components:

- A network of French subsidiaries, through Vinci Construction France, and internationally through Vinci Construction UK, Warbud, Prumstav, SMP, SMS in Central Europe, Sogea-Satom in Africa and HEB Construction in New Zealand.
- Specialist activities serving global markets: Soletanche Freyssinet (foundation and



About Us

Management Team
Brand
Heritage
Vision and Values
Policies
Supporters Of

VINCI is a world leader in concessions and construction.

The VINCI name symbolises the best in innovation, creativity and technological mastery, befitting for a Group that harnesses a culture of innovation to deliver technical expertise in tackling the most complex of projects.

VINCI companies in the UK turn over in the region of £2 billion per annum and employ circa 9000 employees. This represents 6% of VINCI's €38.7 billion turnover and 30% of VINCI's European turnover outside France. VINCI employs around 185,000 people in 100 countries around the world.

VINCI Construction UK is a national construction and facilities company and is the largest British subsidiary of VINCI. VINCI Construction UK has strong relationships with other VINCI companies and subsidiaries and, as a result, can leverage ideas, skills and entrepreneurial flair to deliver top-quality work in all sectors.



Source: Deloitte and Company Website



ground technologies, structures, nuclear activities) and Entrepouse Contracting (infrastructure for the oil and gas sector).

- A division engaging in the execution and management of complex projects, with Vinci Construction Grands Projets, Vinci Construction Terrassement and Dodin Campenon Bernard, which work on major civil engineering and building projects around the world.

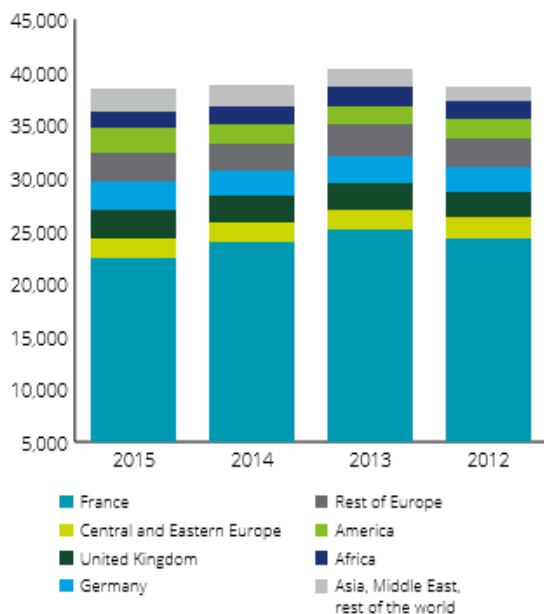
2015 performance

VINCI's revenue in 2015 remained in line with 2014 while EBITDA grew by almost 2%. The change in revenue was driven by a 6.4% decrease in domestic sales and a 9.1% increase in international sales, which currently represents 42% of total sales. Consolidated net income amounted to EUR 2,079 million, down EUR 437 million on 2014. The 2014 figure included a net contribution of EUR 581 million, mainly due to a gain on disposal resulting from the sale of a stake in VINCI Park.

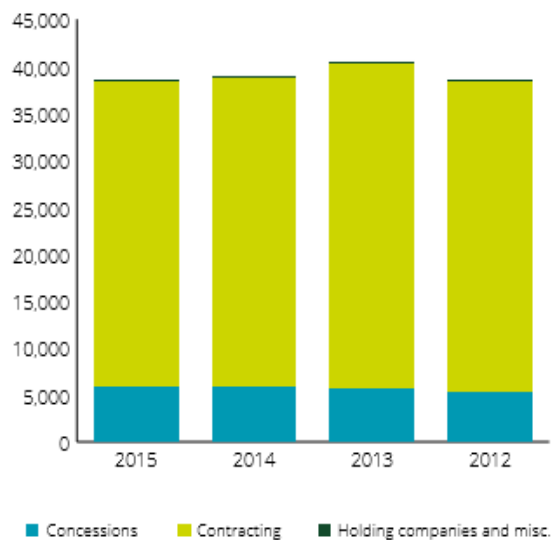
The order book stood at EUR 27,700 million at the end of 2015, similar to 2014, and represents approximately ten months of business activity.

Key Data (EUR Million)	2015	2014	2013	Varlatio 2015-201 %
Assets				
Non-current assets	39,267	39,254	40,385	0.0%
Current assets	22,880	23,776	22,691	(3.8%)
Total assets	62,147	63,030	63,076	(1.4%)
Liabilities and equity				
Equity	15,256	14,868	14,260	2.6%
Non-current liabilities	19,474	21,414	21,618	(9.1%)
Current liabilities	27,417	26,748	27,198	2.5%
Total liabilities and equity	62,147	63,030	63,076	(1.4%)
Statement of profit or loss				
Sales	38,518	38,703	40,338	(0.5%)
National sales	22,414	23,936	25,111	(6.4%)
International sales	16,104	14,767	15,227	9.1%
Construction sales	32,570	32,916	34,636	(1.1%)
Non-construction sales	5,948	5,787	5,702	2.8%
EBITDA	5,664	5,561	5,596	1.9%
EBIT	3,758	3,642	3,670	3.2%
Net income	2,079	2,516	2,046	(17.4%)
Net income attributable to the Group	2,046	2,486	1,962	(17.7%)
Other key data				
Net debt	12,436	13,281	14,104	(6.4%)
Order book	27,700	27,900	29,400	(0.7%)
Market capitalisation	34,801	26,851	28,704	29.6%

Sales by geographical area



Sales by segment



Source: Deloitte



Business Summary

Engages in integrated construction and concession operations



VINCI SA engages in the design, building, finance and management of facilities for transport systems, public and private buildings and urban development and water, energy and communication networks.

The company operates its business two segments: Concessions and Contracting segments.

The Concessions segment develops and operates motorway, transport infrastructures, and public facility concessions.

The Contracting segment includes electrical works and engineering, information and communication technology; heating ventilation and air conditioning engineering, insulation, building and maintenance of roads and motorways, production of road building materials, urban infrastructure, environmental work and demolition and recycling.

The company was founded by Alexandre Giros and Louis Loucheur in 1899 and is headquartered in Rueil-Malmaison, France.



Sales per Businesses

	2014		2015		Delta
	EUR (In Million)	%	EUR (In Million)	%	
VINCI Building	15,419	30.5%	14,491	37%	-6.02%
VINCI Energies	9,309	23.8%	10,180	20%	+9.36%
Eurovia	8,188	21%	7,899	20.2%	-3.53%
Concessions	6,408	16.4%	6,688	17.1%	+4.34%
VINCI Property and Holdings	587.00	1.5%	707.00	1.8%	+20.44%

Sales per Regions

	2014		2015		Delta
	EUR (In Million)	%	EUR (In Million)	%	
France	23,938	61.3%	22,414	57.2%	-6.36%
United Kingdom	2,524	6.5%	2,679	6.8%	+6.14%
Germany	2,505	6.4%	2,703	6.9%	+7.9%
Russia, Asia-Pacific and the Middle East	1,916	4.9%	2,295	5.9%	+19.78%
Central and Eastern Europe	1,757	4.5%	1,884	4.8%	+7.23%
Other European Countries	1,726	4.4%	2,699	6.9%	+56.37%
Africa	1,718	4.4%	1,479	3.8%	-13.91%
North America	1,283	3.3%	1,408	3.6%	+9.74%
Benelux	734.00	1.9%	-	-	-
Other	605.00	1.5%	-	-	-
Central America and of the South	-	-	966.00	2.4%	-

Financial Ratios

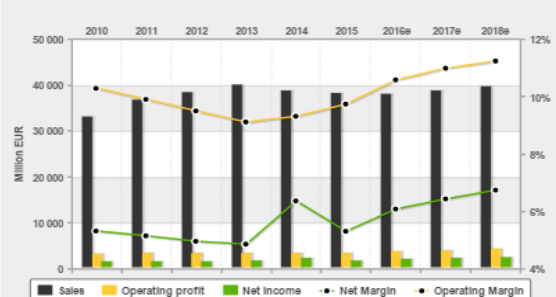
Size	2016e	2017e
Capitalization	38 913 M€	-
Entreprise Value (EV)	51 485 M€	50 139 M€

Valuation	2016e	2017e
P/E ratio (Price / EPS)	15,7x	14,6x
Capitalization / Revenue	1,02x	1,00x
EV / Revenue	1,35x	1,29x
EV / EBITDA	8,62x	8,01x
Yield (DPS / Price)	3,09%	3,34%
Price to book (Price / BVPS)	2,30x	2,14x

Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	10,6%	11,0%
operating Leverage (Delta EBIT / Delta Sales)	-	3,13x
Net Margin (Net Profit / Revenue)	6,09%	6,44%
ROA (Net Profit / Asset)	3,85%	4,50%
ROE (Net Profit / Equities)	14,8%	14,9%
Rate of Dividend	48,7%	48,7%

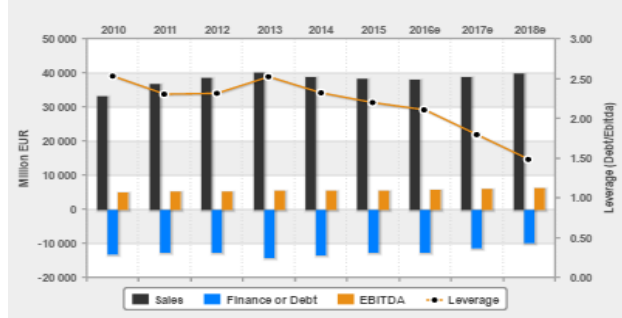
Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	3,76%	3,97%
Cash Flow / Sales	11,5%	12,1%
Capital Intensity (Assets / Sales)	1,56x	1,43x
Financial Leverage (Net Debt / EBITDA)	2,10x	1,79x

Income Statement Evolution



Source:4Traders.com

Finances - Leverage



CHINA STATE CONSTRUCTION ENGINEERING (CSCE)



Business Summary

Engages in commercial construction and real estate development
 中国建筑集团有限公司
 CHINA STATE CONSTRUCTION ENGINEERING
 China State Construction Engineering Corp.

Ltd. engages in the operations of housing construction, international contracting, real estate development and investment, infrastructure construction and investment, prospecting, and design.

The company was founded on December 10, 2007 and is headquartered in Beijing, China.

Number of employees : 241 474 persons.

Sales per Business

	2014		2015		Delta
	CNY (in Million)	%	CNY (in Million)	%	
Building Construction	544,586	89.0%	578,956	87.5%	+6.31%
Real Estate Development and Investment	124,345	10%	142,348	10.0%	+14.48%
Infrastructure and Investment	118,850	15.3%	141,366	10.5%	+18.94%
Survey and Design	7,100	0.0%	6,475	0.6%	-8.8%
Other	5,148	0.7%	11,432	1.3%	+122.07%

Sales per Regions

	2014		2015		Delta
	CNY (in Million)	%	CNY (in Million)	%	
China	778,807	100%	819,499	95.6%	+5.22%
Other Countries/Regions	-	-	61,078	7.1%	-

Managers

Name	Age	Since	Title
Qing Guan, PhD	52	-	Chairman, General Manager & Deputy GM
Xiang Ming Wang	53	-	President & Director

Financial Ratios

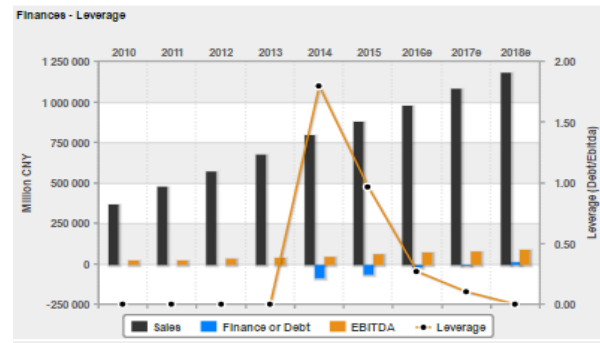
Size	2016e	2017e
Capitalization	185 100 M CNY	-
Enterprise Value (EV)	204 381 M CNY	193 423 M CNY

Valuation	2016e	2017e
P/E ratio (Price / EPS)	6,20x	5,48x
Capitalization / Revenue	0,13x	0,17x
EV / Revenue	0,21x	0,18x
EV / EBITDA	2,85x	2,39x
Yield (DPS / Price)	3,95%	4,44%
Price to book (Price / BVPS)	0,99x	0,86x

Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	5,95%	6,09%
operating Leverage (Delta EBIT / Delta Sales)	2,12x	1,23x
Net Margin (Net Profit / Revenue)	3,03%	3,09%
ROA (Net Profit / Asset)	2,84%	2,98%
ROE (Net Profit / Equities)	16,5%	16,4%
Rate of Dividend	24,5%	24,3%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	0,13%	0,14%
Cash Flow / Sales	4,17%	4,89%
Capital Intensity (Assets / Sales)	1,07x	1,04x
Financial Leverage (Net Debt / EBITDA)	0,27x	0,10x

Source:4Traders.com



China State Construction Engineering Corporation's business operations encompass building construction, international contracting, real estate development and infrastructure construction. Established in both domestic and international markets, China State Construction Engineering Corporation operates in more than 50 countries and regions around the world. In 2015, its revenue totalled EUR 126,278 million, up 10.1% on 2014. EBIT margin and EBITDA margin were 5.3% and 6.4%, respectively, in line with the average among the most representative Chinese construction groups. It should be noted that the net debt to EBITDA ratio (0.4) is low compared to other non-European groups and the EPoC companies. It has infrastructure construction contracts exceeding EUR 40,000 million and overseas orders in excess of EUR 13,000 million. The Chinese company is listed on the Shanghai Stock Exchange and its market value at the end of 2015 was EUR 26,981 million, which figure represents 2.4 times total equity, slightly higher than the average figure obtained by the EPC companies.

CHINA COMMUNICATIONS CONTRACTING (CCC)

Business Summary



Engages in the infrastructure construction, design, dredging, manufacturing of heavy machinery and other businesses

China Communications Construction Co. Ltd. engages in the design and construction of transportation infrastructure, dredging and heavy machinery manufacturing business..

It operates through the following segments: Construction, Design, Dredging, Heavy Machinery, and Others.

The Construction segment involves in infrastructure construction of ports, roads, bridges and railways.

The Design segment involves in infrastructure design of ports, roads and bridges.

The Heavy Machinery segment engages in manufacturing of heavy machinery.

The company was founded on October 8, 2008 and is headquartered in Beijing, China.

Number of employees : 115 179 persons.

Sales per Businesses

	2014		2015		Delta
	HKD (In Million)	%	HKD (In Million)	%	
Capital Construction Construction	371,362	82.3%	418,683	85.8%	+12.75%
Heavy Machinery	33,068	7.3%	28,742	5.9%	-13.08%
Dredging Operations	27,117	6%	18,375	3.8%	-32.24%
Design Business	25,835	5.7%	28,008	5.7%	+9.25%
Others	4,299	1%	5,039	1%	+17.21%

Sales per Regions

	2014		2015		Delta
	HKD (In Million)	%	HKD (In Million)	%	
China (except Hong Kong, Macao and Taiwan)	382,718	84.8%	408,244	83.3%	+6.15%
Other Countries and Regions	78,763	17.4%	92,801	19%	+17.58%

China Communications Construction Company, with sales of more than EUR 57,000 million, is a leading group in road, railway, port and bridge construction in China. The company has four divisions: Construction, Design, Dredging and Heavy Machinery. As with other Chinese groups, over 85% of total revenue came from construction activities. Revenue from the infrastructure construction business was EUR 49,000 million in 2015, up 13.9% on the EUR 43,000 million achieved in 2014. Additionally, as a result of the acquisition of John Holland Group (previously owned by CIMIC), an Australian company, China Communications Construction Company entered the Australian and New Zealand markets, as well as obtaining professional expertise in respect of water work engineering and railway construction and operation. As of December 2015, market capitalisation amounted to EUR 15,212 million, a similar level to that of other Chinese groups such as China Railway Group or China Railway Construction Corporation.

Financial Ratios

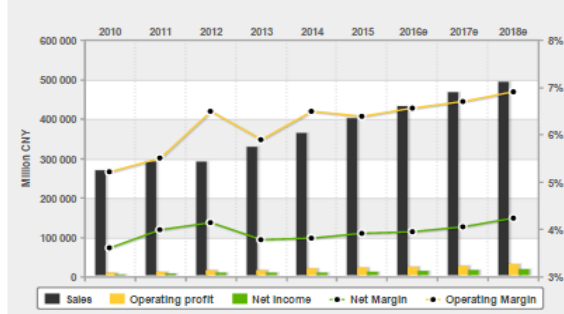
Size	2016e	2017
Capitalization	163 724 M CNY	
Enterprise Value (EV)	352 704 M CNY	370 307 M CN

Valuation	2016e	2017
P/E ratio (Price / EPS)	6,72x	6,06
Capitalization / Revenue	0,38x	0,35
EV / Revenue	0,81x	0,75
EV / EBITDA	9,20x	8,76
Yield (DPS / Price)	2,99%	3,31%
Price to book (Price / BVPS)	0,72x	0,66

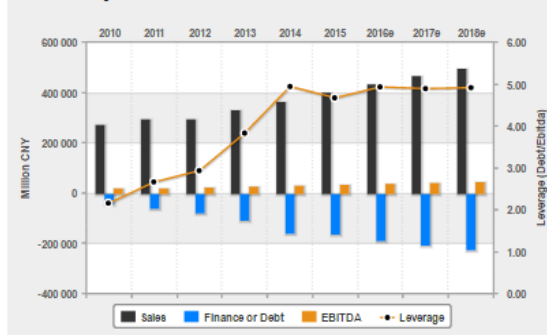
Profitability	2016e	2017
Operating Margin (EBIT / Sales)	6,57%	6,71%
operating Leverage (Delta EBIT / Delta Sales)	1,37x	1,25
Net Margin (Net Profit / Revenue)	3,96%	4,06%
ROA (Net Profit / Asset)	2,44%	2,51%
ROE (Net Profit / Equities)	11,3%	11,2%
Rate of Dividend	20,1%	20,0%

Balance Sheet Analysis	2016e	2017
CAPEX / Sales	8,67%	7,36%
Cash Flow / Sales	4,81%	6,05%
Capital Intensity (Assets / Sales)	1,62x	1,62
Financial Leverage (Net Debt / EBITDA)	4,93x	4,85

Income Statement Evolution



Finances - Leverage





CHINA RAILWAY GROUP

Business Summary

Provides infrastructure construction, survey, design and consulting and engineering equipment and component manufacturing services



China Railway Group Ltd. engages in the provision of engineering and construction services.

It operates through the following segments: Infrastructure Construction; Survey, Design and Consulting Services; Engineering Equipment and Component Manufacturing; and Other Businesses.

The Infrastructure Construction segment builds and repairs railways, highways, bridges, tunnels, ports, docks, airports, and irrigation works.

The Survey, Design and Consulting Services segment researches and develops feasibility studies and compliance certification of infrastructure projects.

The Engineering Equipment and Component Manufacturing segment designs, produces, and trades railway equipment, engineering machineries, and steel products.

The Other Businesses segment offers mining, merchandise trading, and financing services.

The company was founded on September 12, 2007 and is headquartered in Beijing, China.

Number of employees : 291 149 persons.

Sales per Businesses

	2014		2015		Delta
	CNY (In Million)	%	CNY (In Million)	%	
Infrastructure Construction	510,992	85.7%	538,868	88.7%	+5.42%
Other	49,901	8.4%	32,674	5.4%	-34.52%
Real Estate Development	29,255	4.9%	29,187	4.8%	-0.23%
Construction Equipment & Component Manufacturing	12,745	2.1%	13,391	2.2%	+5.07%
Survey, Design & Consulting Services	9,667	1.6%	10,187	1.7%	+5.38%

Sales per Regions

	2014		2015		Delta
	CNY (In Million)	%	CNY (In Million)	%	
China	585,537	98.2%	593,239	97.7%	+1.32%
Other Countries	28,199	4.4%	30,146	5%	+15.07%
Hong Kong & Macau	823.08	0.1%	719.01	0.1%	-12.84%

China Railway Group, one of the largest integrated construction groups in Asia in terms of total revenue, and ranked 71 in Fortune Global 500, jumped from third position in 2014 to first place in the ENR ranking in 2015. It also ranks 11th among the Top 500 Chinese Enterprises. The Group engages mainly in infrastructure construction, survey, design and consulting services, engineering equipment and component manufacturing and property development. In 2015, total revenue increased by 19% to EUR 86,034 million. Construction sales represent 91% of total revenue, including a greater presence in its domestic market. For this reason, China Railway Group could be classified as a "Domestic Construction Group". Operating margin, which remained in line with that of the previous year, was 8%, approximately 3 percentage points above the average margin obtained by the Chinese corporations analysed. Market value amounted to EUR 15,978 million.

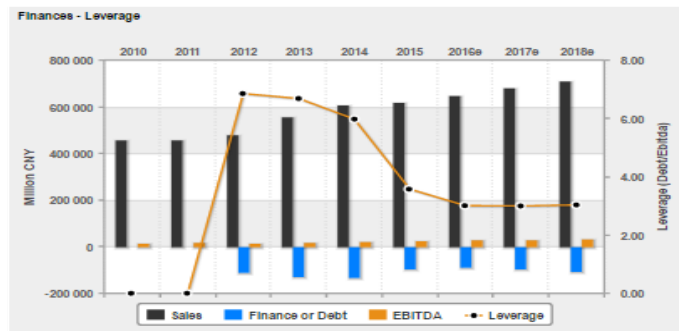
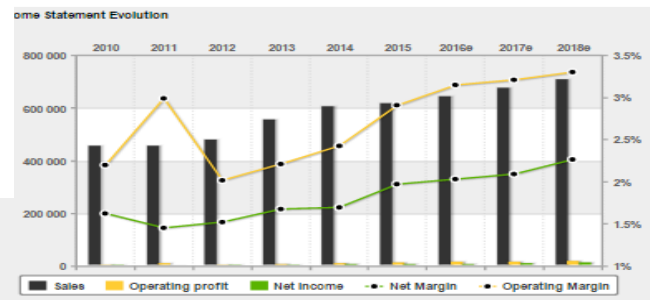
Financial Ratios

Size	2016e	2017e
Capitalization	155 512 M CNY	-
Enterprise Value (EV)	242 862 M CNY	249 328 M CNY

Valuation	2016e	2017e
P/E ratio (Price / EPS)	12,6x	11,7x
Capitalization / Revenue	0,24x	0,23x
EV / Revenue	0,37x	0,37x
EV / EBITDA	8,37x	7,96x
Yield (DPS / Price)	1,26%	1,36%
Price to book (Price / BVPS)	1,22x	1,12x

Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	3,15%	3,21%
operating Leverage (Delta EBIT / Delta Sales)	2,96x	1,40x
Net Margin (Net Profit / Revenue)	2,03%	2,09%
ROA (Net Profit / Asset)	2,02%	2,04%
ROE (Net Profit / Equities)	9,32%	9,75%
Rate of Dividend	15,8%	16,0%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	1,80%	1,71%
Cash Flow / Sales	1,77%	1,90%
Capital Intensity (Assets / Sales)	1,01x	1,03x
Financial Leverage (Net Debt / EBITDA)	3,01x	3,00x



Sources: Deloitte and 4-traders.com



LARSEN & TOUDRO

Business Summary



Operates as an investment holding company with interests in engineering, construction, infrastructure projects, and manufacturing

Larsen & Toubro Ltd. operates as an investment holding company.

Through its subsidiaries, it engages in technology, engineering, construction, manufacturing and financial activities.

It operates through the following segments: Infrastructure, Power, Metallurgical and Material Handling, Heavy Engineering, Electrical and Automation, Machinery and Industrial Products, Hydrocarbon, IT and Technology Services, Financial Services, Developmental Projects and Others.

The Infrastructure segment comprises of engineering and construction of building and factories, transportation infrastructure, heavy civil infrastructure, power transmission and distribution and water and renewable energy projects.

The Power segment comprises of turnkey solutions for Coal-based and Gas-based thermal power plants including power generation equipment with associated systems and balance-of-plant packages.

The Metallurgical and Material Handling segment comprises manufacture and supply of custom designed, engineered critical equipment and systems to core sector industries like fertilizer, refinery, petrochemical, chemical, oil and gas, thermal and nuclear power, aerospace and defense.

The Electrical and Automation segment comprises manufacture and sale of low and medium voltage switchgear components, custom built low and medium voltage switchboards, electronic energy meters protection systems and control and automation products.

The Machinery and Industrial Products segment comprises manufacture and sale of rubber processing machinery and castings, manufacture and marketing of industrial valves, construction equipment and industrial products.

The Hydrocarbon segment completes Engineering Procurement and Construction solutions for the global Oil and Gas Industry from front-end design through detailed engineering, modular fabrication, procurement, project management, construction, installation and commissioning.

The IT and Technology Services segment comprises of information technology and integrated engineering services.

The Financial Services segment comprises retail and corporate finance, housing finance, infrastructure finance, general insurance, asset management of mutual fund schemes and related advisory services.

The Developmental projects segment comprises development, operation and maintenance of basic infrastructure projects, toll collection including annuity based projects, power development, development and operation of port facilities and providing related advisory services.

The Others segment include realty, shipbuilding and integrated engineering services.

The company was founded by Hanning Holck-Larsen and Soren Kristian Toubro in 1938 and is headquartered in Mumbai, India.

Larsen & Toubro Limited, also known as L&T is an Indian multi-national conglomerate headquartered in Mumbai, Maharashtra, India. It was founded by Danish engineers taking refuge in India, as well as an Indian financing partner. The company has business interests in engineering, construction, manufacturing goods, information technology, and financial services, and also has an office in the Middle-East and other parts of Asia.

L&T is India's largest engineering and construction company. Described by NDTV in 2013 as a "bellwether of India's engineering & construction sector", L&T was recognised as the Company of the Year in Economic Times 2010 awards.

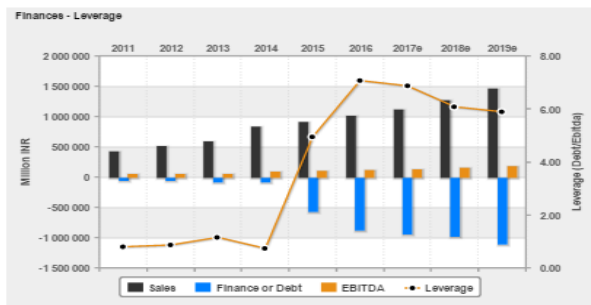
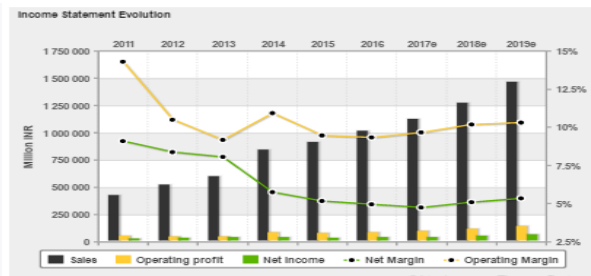
Financial Ratios

Size	2017e	2018e
Capitalization	1 351 885 M INR	-
Enterprise Value (EV)	2 283 685 M INR	2 332 590 M INR

Valuation	2017e	2018e
P/E ratio (Price / EPS)	25,2x	20,6x
Capitalization / Revenue	1,19x	1,06x
EV / Revenue	2,02x	1,82x
EV / EBITDA	16,8x	14,5x
Yield (DPS / Price)	1,31%	1,47%
Price to book (Price / BVPS)	2,80x	2,55x

Profitability	2017e	2018e
Operating Margin (EBIT / Sales)	9,67%	10,2%
operating Leverage (Delta EBIT / Delta Sales)	1,38x	1,46x
Net Margin (Net Profit / Revenue)	4,75%	5,10%
ROA (Net Profit / Asset)	3,73%	4,10%
ROE (Net Profit / Equities)	11,7%	13,1%
Rate of Dividend	33,0%	30,3%

Balance Sheet Analysis	2017e	2018e
CAPEX / Sales	4,43%	3,07%
Cash Flow / Sales	5,25%	4,19%
Capital Intensity (Assets / Sales)	1,27x	1,24x
Financial Leverage (Net Debt / EBITDA)	6,87x	6,08x





Business Summary



Provides railway infrastructure, highway construction, real estate development and road maintenance services

China Railway Construction Corp.

Ltd. engages in the construction business.

It operates through five segments: Construction, Survey, Design & Consultancy, Manufacturing, Real Estate and Other Business Operations.

The Construction Operations segment engages in the construction of infrastructure such as railways, highways, metropolitan railways and real estate projects.

The Survey, Design & Consultancy Operations segment engages in the provision of survey, design and consultancy services, as well as technology and equipment research and development service.

The Manufacturing Operations segment engages in the design, research and development, production and sale of large track maintenance machinery as well as the manufacturing of components for railway construction.

The Real Estate Operations segment engages in the development, construction and sale of real estate projects.

The Other Business Operations segment mainly comprises real estate development and logistics businesses.

The company was founded on November 4, 2007 and is headquartered in Beijing, China.

Number of employees : 254 386 persons.

Sales per Businesses

	2014		2015		Delta
	CNY (In Million)	%	CNY (In Million)	%	
Construction Operations	508,002	88%	513,877	87.8%	+1.16%
Other Business Operations	39,929	0.0%	34,145	5.8%	-14.49%
Real Estate Operations	24,630	4.3%	28,671	4.0%	+16.41%
Manufacturing Operations	10,458	1.8%	13,782	2.4%	+31.78%
Survey, Design and Consultancy Operations	8,950	1.0%	10,085	1.7%	+12.46%

Sales per Regions

	2014		2015		Delta
	CNY (In Million)	%	CNY (In Million)	%	
Mainland China	568,343	98.5%	572,901	97.0%	+0.8%
Outside Mainland China	23,625	4.1%	27,638	4.7%	+16.99%

China Railway Construction Corporation's businesses cover project contracting (railways, high-speed railways, highways, bridges and tunnels), survey design consultation, industrial manufacturing, real estate development, logistics, trade of goods and material and capital operation. Established in 2007 in Beijing, the company is under the administration of the State-owned Assets Supervision and Administration Commission of the State Council of China (SASAC). In 2015, the Company moved up to 79th in the Fortune Global 500 and was ranked 13th among China Top 500 Enterprises. Total sales rose 19% to EUR 86,120 million. The construction business is considered to be the core and traditional area of the Group, which achieved total construction sales of EUR 74,471 million in 2015, which represents more than 85% of total revenue. Compared to other Chinese groups, margins are lower and indebtedness is higher. The company is listed on the Hong Kong Stock Exchange and its market capitalisation amounted to EUR 15,496 million as of December 2015. Market capitalisation to book value ratio is below 1.

Financial Ratios

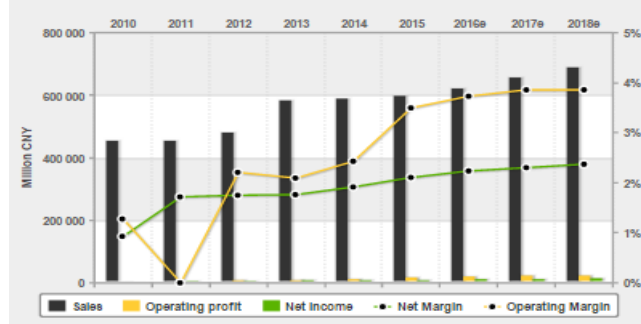
Size	2016e	2017e
Capitalization	121 789 M CNY	-
Enterprise Value (EV)	156 872 M CNY	160 534 M CNY

Valuation	2016e	2017e
P/E ratio (Price / EPS)	8,92x	8,17x
Capitalization / Revenue	0,19x	0,18x
EV / Revenue	0,25x	0,24x
EV / EBITDA	4,47x	4,20x
Yield (DPS / Price)	1,79%	1,97%
Price to book (Price / BVPS)	0,99x	0,89x

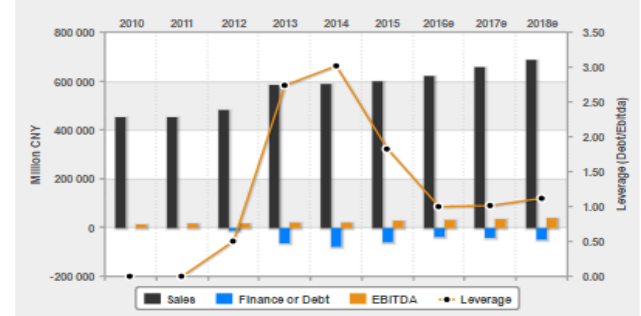
Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	3,73%	3,86%
operating Leverage (Delta EBIT / Delta Sales)	2,71x	1,65x
Net Margin (Net Profit / Revenue)	2,24%	2,30%
ROA (Net Profit / Asset)	2,80%	2,94%
ROE (Net Profit / Equities)	11,7%	11,5%
Rate of Dividend	16,0%	16,1%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	3,59%	3,42%
Cash Flow / Sales	3,07%	3,70%
Capital Intensity (Assets / Sales)	0,80x	0,78x
Financial Leverage (Net Debt / EBITDA)	1,00x	1,01x

Income Statement Evolution



Finances - Leverage





ferrovial

Ferrovial is one of the leading global providers of infrastructure and services, with a workforce of approximately 74,000 employees and operations in more than 25 countries. It is included in the prestigious Dow Jones Sustainability Index, FTSE4Good Index and the Carbon Disclosure Project.

The most significant current shareholder in Ferrovial, S.A. is Rijn Capital BV, owned by Ferrovial's Chairman, which holds a 20.3% interest. It is followed by Menosmares, S.L.U., Siemprelara, S.L.U. and Soziancor, S.L.U., which hold 8.2%, 4.2% and 2.5% of total shares, respectively, among other minority shareholders. All the aforementioned companies are controlled by the Del Pino family.

Two of the Group's main assets are Canada's 407 ETR highway and London's Heathrow Airport (both accounted for using the equity method).

Ferrovial also provides municipal services to more than 800 cities within Spain, and to the millions of users of the Madrid metro system. It also performs work on the hundreds of kilometres of streets and highways where Amey performs maintenance services and utilities services in the United Kingdom.

Ferrovial's activities are divided into four business lines:

Services

Ferrovial Services is an international leader in providing solutions in a range of services that include utilities, highways, waste management, rail, mining, justice solutions,

social housing, facility management and infrastructure maintenance.

The division is basically structured into three geographical areas: the UK (represented by Amey). Spain and other international activities (both headed by Ferrovial Services).

The division's total revenue grew by 11% to EUR 4,897 million, basically earned in the UK and Spain, which represent 63% and 34% of total Services sales, respectively. In both countries the Group ranks among the top three service providers.

The acquisition of two companies in Poland (Amest Kamiensk and Pro EKO Natura) and TPT UK, in the United Kingdom, allowed Ferrovial Services to increase its capabilities in different fields while able to expand its presence in Europe.

Construction

Ferrovial Agroman is the division of the Ferrovial Group that carries out civil engineering, construction, water-related and industrial projects. It has a consolidated presence in different markets such as the United States, Spain, Canada, the United Kingdom, Australia and Poland. Construction is the main activity of the Group due to its solid historical trend of growth and high profitability, but also because it is an excellent source for obtaining the required cash flows in the diversification and international expansion process.

Ferrovial has been a pioneer in the expansion of Spanish construction companies into stable international markets such as Poland and the United States, where they have established a solid presence through its subsidiaries Budimex, Ferrovial Agroman US and Webber.

In 2015 the segment experienced significant revenue growth, obtaining EUR 4,287 million due mainly to an increase in international sales, which represented almost 81% of total sales.

The construction order book amounted to EUR 8,731 million, with notable projects such as the Thames Tideway Tunnel (UK), the reconstruction of the I-285 (Georgia, US), a section of the S3 and S7 (Poland), Extension II of the 407ETR (Canada), and connectivity improvements at Northern Beaches Hospital (Australia).

Airports

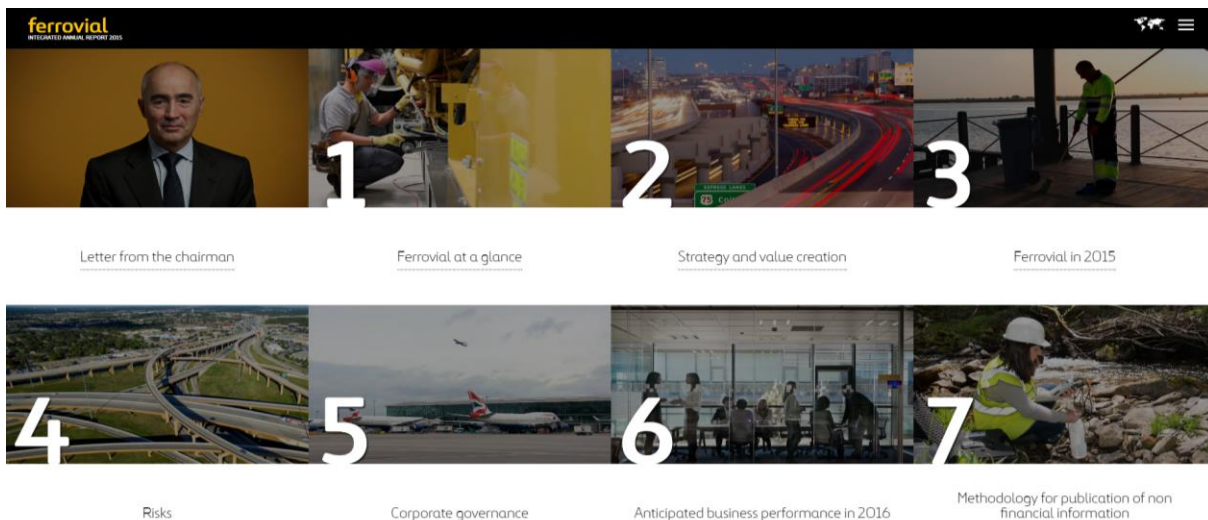
Ferrovial is one of the leading private operators in the world, with four operative airports in the United Kingdom. The Group is the largest shareholder in Heathrow Airport Holdings (HAH) over which it maintains a 25% stake. The company is also the industrial partner at the airports of Aberdeen, Glasgow and Southampton (AGS), with a 50% stake.

In 2015 Ferrovial Airports handled 89 million passengers, a 2.6% increase on the 2014 figure.

Highways

Through its subsidiary Cintra, Ferrovial is one of the leading private developers of transport infrastructure in the world in terms of number of projects (27 in total) and highway kilometers managed (1,877 kilometers). The Group is currently present in Canada, the United States, Spain, the United Kingdom, Portugal, Ireland, Greece, Colombia and Australia.

Total revenue grew by 18.9% to EUR 513 million due to the contribution from the USA Toll-Road and due to the overall traffic increase in the concession portfolio. The economic recovery and lower oil prices also contributed to this outcome.



Letter from the chairman

Ferrovial at a glance

Strategy and value creation

Ferrovial in 2015

Risks

Corporate governance

Anticipated business performance in 2016

Methodology for publication of non-financial information



2015 Performance

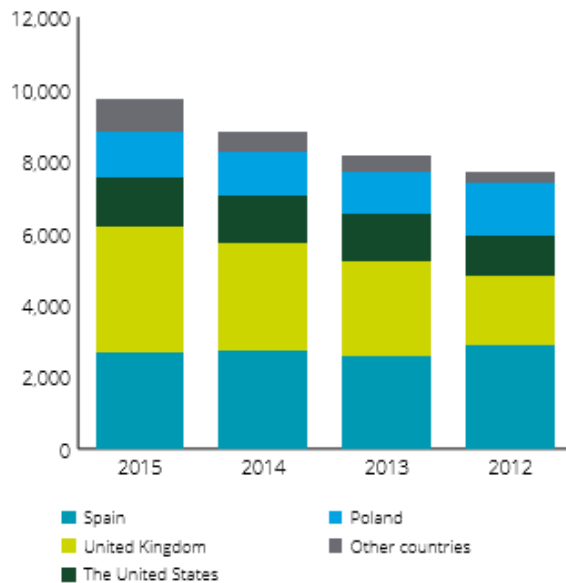
Group sales increased by 10% to EUR 9,701 million in 2015, principally explained by the growth recorded by its construction, services and highways divisions, positive operating performance and the strength of the pound sterling and the US dollar against the euro.

In 2015 net attributable income was EUR 720 million, up 79% compared to the previous year. This increase was caused by some non-recurring results related principally to divestments and taxes.

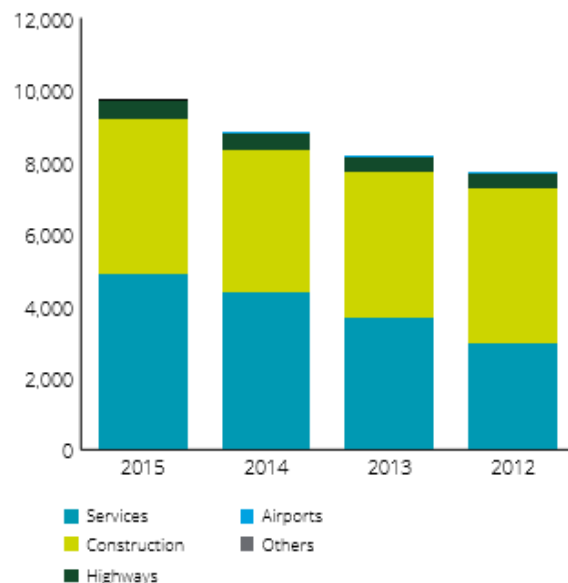
The Group's order book grew by 3.5% to EUR 31,531 million. In 2015 Ferrovial was awarded several significant contracts in key markets (the US and Canada), as well as in new emerging markets such as Australia and Colombia.

Key Data (EUR Million)	2015	2014	2013	Variation 2015-2014 %
Assets				
Non-current assets	16,821	19,426	17,142	(13.4%)
Current assets	8,563	6,047	5,678	41.6%
Total assets	25,384	25,473	22,820	(0.3%)
Liabilities and equity				
Equity	6,541	6,021	6,074	8.6%
Non-current liabilities	10,401	14,017	11,733	(25.8%)
Current liabilities	8,442	5,435	5,013	55.3%
Total liabilities and equity	25,384	25,473	22,820	(0.3%)
Statement of profit or loss				
Sales	9,701	8,802	8,166	10.2%
National sales	2,694	2,709	2,590	(0.6%)
International sales	7,007	6,093	5,576	15.0%
Construction sales	4,287	3,942	4,064	8.8%
Non-construction sales	5,414	4,860	4,102	11.4%
EBITDA	1,027	983	934	4.5%
EBIT	901	743	827	21.3%
Net income	631	352	701	79.3%
Net income attributable to the Group	720	402	727	79.1%
Other key data				
Net debt	4,524	6,230	5,352	(27.4%)
Order book	31,531	30,460	25,616	3.5%
Market capitalisation	15,270	12,029	10,317	26.9%

Sales by geographical area



Sales by segment





FERROVIAL

Business Summary



Designs, constructs, operates and maintenance of transport, urban and service infrastructure

Ferrovial SA engages in the investment and development of transportation infrastructures.

It operates through the following segments: Construction, Services, Toll Roads, and

Airports.

The Construction segment designs and performs public and private works such as roads, highways, airports, and buildings.

The Services segment involves in the maintenance and upkeep of infrastructures, facilities, and buildings; waste collection and treatment; and rendering of other kinds of public services.

The Toll Roads segment develops, finances, and operates tollways such as 407 ETR, North Tarrant Express, LB Express, Indiana Toll Road, Euroscut Azores, Madrid-Levante, and Ausol I. The Airports segment develops and runs the Heathrow, Glasgow, Aberdeen, and Southampton Airports.

The company was founded by Rafael del Pino y Moreno in December 1952 and is headquartered in Madrid, Spain.

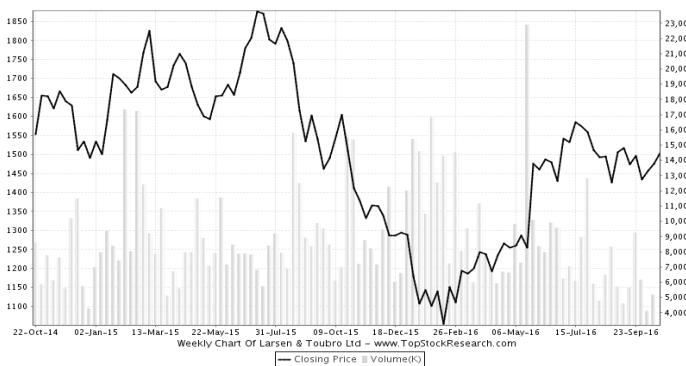
Number of employees : 74 032 persons.

Sales per Businesses

	2014		2015		Delta
	EUR (in Million)	%	EUR (in Million)	%	
Services	4,401	50%	4,897	50.5%	+11.27%
Construction	3,942	44.8%	4,287	44.2%	+8.75%
Toll Roads	432.00	4.0%	513.00	5.3%	+18.75%
Other	18.00	0.2%	-6.00	-0.1%	-
Airports	9.00	0.1%	8.00	0.1%	-11.11%

Sales per Regions

	2014		2015		Delta
	EUR (in Million)	%	EUR (in Million)	%	
United Kingdom	3,030	34.4%	3,471	35.8%	+14.55%
Spain	2,709	30.8%	2,694	27.8%	-0.55%
United States	1,310	14.0%	1,385	14.3%	+5.73%
Poland	1,203	13.7%	1,263	13%	+4.99%
Other	451.00	5.1%	714.00	7.4%	+58.31%
Canada	100.00	1.1%	173.00	1.8%	+73%



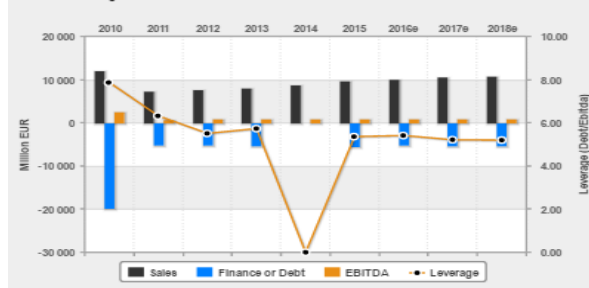
Financial Ratios

	2016e	2017e
Size		
Capitalization	13 217 M€	-
Enterprise Value (EV)	18 338 M€	18 458 M€
Valuation		
PE ratio (Price / EPS)	27,8x	28,4x
Capitalization / Revenue	1,31x	1,25x
V / Revenue	1,82x	1,74x
V / EBITDA	19,4x	18,4x
Yield (DPS / Price)	4,00%	4,18%
Price to book (Price / BVPS)	2,10x	2,05x
Profitability		
Operating Margin (EBIT / Sales)	7,30%	6,84%
Operating Leverage (Delta EBIT / Delta Sales)	-	-
Net Margin (Net Profit / Revenue)	4,99%	4,37%
ROA (Net Profit / Asset)	2,40%	1,85%
ROE (Net Profit / Equities)	7,06%	7,07%
Yield of Dividend	111%	119%
Balance Sheet Analysis		
APEX / Sales	5,23%	4,18%
Cash Flow / Sales	7,00%	8,04%
Capital Intensity (Assets / Sales)	2,08x	2,36x
Financial Leverage (Net Debt / EBITDA)	5,41x	5,21x

Income Statement Evolution



Finances - Leverage



Source: 4-traders.com



MARKET ANALYSIS

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Corporate Copy December 31st 2016

POWER CONSTRUCTION CORPORATION

Business Summary



Engagee in construction projects and provides engineering consultancy services

Power Construction Corp. of China Ltd. engages in planning, designing, consulting, civil works construction, installation, and manufacturing services in the fields of hydropower, thermal power, new energy, and infrastructure.

It also involves in real estate, investment, finance services.

Its services and products include hydropower, thermal power, new energy, transmission and distribution, infrastructure, equipment manufacturing, and real estate.

The company was founded on November 30, 2009 and is headquartered in Beijing, China.

Number of employees : 135 088 persons.

Sales per Businesses

	2014		2015		Delta
	CNY (In Million)	%	CNY (In Million)	%	
Survey Design and Engineering Contractor	149,236	91.3%	184,995	80.5%	+23.96%
Other	8,431	5.2%	13,888	6.7%	+64.73%
Real Estate Business	8,277	5.1%	12,658	6.1%	+52.93%
Power Investment and Operations	5,212	3.2%	6,808	3.3%	+30.62%
Equipment Manufacturing and Leasing Business	1,861	1.1%	1,691	0.8%	-9.13%

Sales per Regions

	2014		2015		Delta
	CNY (In Million)	%	CNY (In Million)	%	
China	124,909	76.4%	157,334	76.1%	+25.96%
International	40,732	24.0%	51,948	25.1%	+27.54%
Global	1,450	0.0%	-	-	-

Managers

Name	Age	Since	Title
Zong Lin Ma	59	-	President & Director
Ji Xiang Fan	62	2009	Chairman

Power Construction Corporation of China, which was founded in September 2011, was ranked 7th in 2015. The company, an industry leader in engineering and construction, performed 1,565 overseas projects in 110 countries in the year. Power Construction Corporation of China is present in markets in Asia & Pacific, Eurasia, Latin America, Africa and Middle East. The Group owns international brands with a high reputation worldwide, such as Sinohydro, Hydrochina, Sepco, Sepco III, and Hypec.

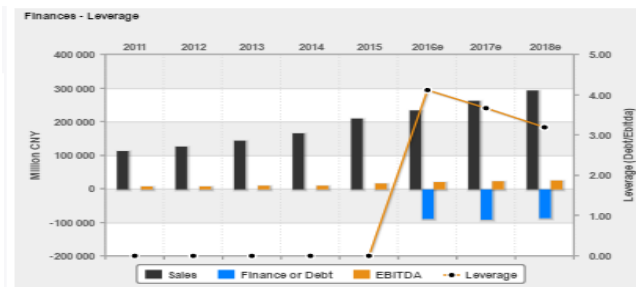
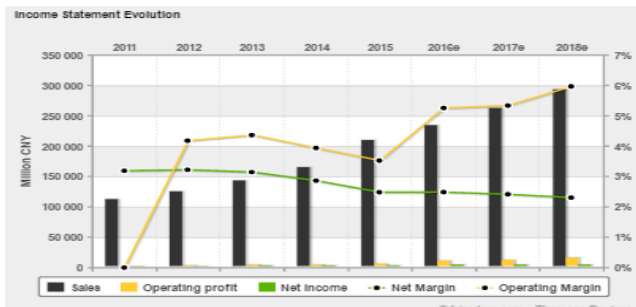
Financial Ratios

Size	2016e	2017e
Capitalization	83 903 M CNY	-
Enterprise Value (EV)	172 389 M CNY	173 318 M CNY

Valuation	2016e	2017e
P/E ratio (Price / EPS)	14,7x	13,0x
Capitalization / Revenue	0,36x	0,32x
EV / Revenue	0,73x	0,66x
EV / EBITDA	8,01x	7,10x
Yield (DPS / Price)	1,48%	1,72%
Price to book (Price / BVPS)	1,34x	1,23x

Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	5,26%	5,34%
operating Leverage (Delta EBIT / Delta Sales)	5,74x	1,14x
Net Margin (Net Profit / Revenue)	2,43%	2,41%
ROA (Net Profit / Asset)	1,40%	1,30%
ROE (Net Profit / Equities)	9,85%	10,2%
Rate of Dividend	21,6%	22,3%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	9,15%	7,11%
Cash Flow / Sales	4,90%	5,92%
Capital Intensity (Assets / Sales)	1,78x	1,86x
Financial Leverage (Net Debt / EBITDA)	4,11x	3,67x



Sources: Deloitte and 4-traders.com



Bouygues is a diversified industrial group whose corporate culture, shared by all of its subsidiaries, is distinguished by project management expertise and human resources management. The Group operates in over 100 countries and has a workforce of 120,254 employees.

Its main shareholders are foreign (37.3%). French shareholders control 20.9% of the Group, employees 21.4% and SCDM (a company controlled by Martin and Oliver Bouygues) represents 20.4% of total shares.

The Bouygues group operates in three sectors of activity: Construction, Media and Telecoms.

Construction

Bouygues Construction, Bouygues Immobilier and the listed subsidiary Colas represent the Bouygues Group's construction businesses.

Bouygues Construction designs, builds and operates structures including public and private buildings, transport infrastructure and energy and communication networks. Total sales grew by 3% to EUR 11,776 million, representing 36% of total Group sales. In line with 2014, the EBIT margin was 2.9% in 2015. In 2015 the order book stood at EUR 19.3 billion, 7% higher than in 2014, with international markets accounting for 58%.

As France's leading property developer, Bouygues Immobilier develops residential,

commercial and retail park projects from thirty-five branches in France and three international subsidiaries. In 2015, total revenue fell by 17% to EUR 2,291 million.

Colas is a listed transport infrastructure company in which Bouygues holds an ownership interest of 96.6%. It operates in all areas of transport infrastructure construction and maintenance. It has two main operating divisions: Roads (its core business, which accounted for 81% of sales) and complementary Specialised Activities. In 2015, total revenue fell by 3% compared to 2014 and amounted to EUR 11,896 million, representing 37% of total Group sales. The main factor was the sharp contraction in the roads market in France. At December 2015, Colas' market value amounted to EUR 4,597million.

The order book at December 2015 stood at EUR 7 billion, 2% lower than in 2014. The order book reflects the trends observed over the last two years: growth in international activity together with contraction in the domestic market, since orders in international and French overseas markets were 4% higher at EUR 4.3 million, while orders in mainland France were 11% lower at EUR 2.7 million.

Media

TF1 is the leading private media group in freeview television in France, whose mission is to inform and entertain via four freeview channels, several pay-TV special-interest channels and a number of digital offshoots. The Group confirmed its leadership with an average 27.7% total audience share of the TF1 Group's freeview channels in 2015. Sales in 2015 amounted to EUR 1,964 million, 10.5% lower than in 2014 due mainly to the deconsolidation of Eurosport International on 30 May 2014 and of Eurosport France on 31 March 2015.

the divestment of OneCast in the fourth quarter of 2014 and the discontinuation of the Stylla channel in late 2014.

Telecoms

A major player in the French electronic communications market for over 18 years, Bouygues Telecom constantly innovates in order to make digital life easier for its 14 million customers. Total sales increased to EUR 4,484 million in 2015, 1.6% higher than in 2014, as a result of robust commercial performance and the repricing of the mobile subscriber base. Bouygues Telecom's sales and EBITDA increased for the first time since 2010.

In 2015 Bouygues acquired the entire share capital of BTI Développement, an innovation and shareholding management consultancy firm, subsequently renamed as Bouygues Développement.

Other

Bouygues is the leading shareholder in Alstom (with a 29.2% interest). It was a global leader in power generation, power transmission and rail transport infrastructure. However, since the sale of its energy business it is now focused entirely on rail transport activities.

2015 Performance

In 2015 the Group's total revenue fell 2% to EUR 32,428 million, while EBITDA remained stable compared to 2014. The Group's order book grew by 4.6% to EUR 28,961 million. Bouygues Construction represents 67% of the total backlog, while Bouygues Immobilier and Colas represent 9% and 24%, respectively.

ABOUT US



Bouygues UK operates under the following Management Units; Construction, Housing and Thomas Vale, and our property development and regeneration company, Linkcity UK. In recent years, we have increased our presence in the UK through the acquisition of Warings, Thomas Vale, Leadbitter and Denne. These, together with our existing operations, position us as a major British player with a combined turnover of around £800 million, approximately 150 sites and 1500 people.

Together with our partners and clients, Bouygues UK delivers award-winning construction, development and regeneration projects to the most exacting standards across public and commercial private sectors. From mixed-used commercial developments and schools to luxury apartments and signature public buildings, Bouygues UK develops and builds innovative and sustainable projects, backed by intelligent management throughout the entire life-cycle of each project.

Bouygues UK has offices and sites across the UK and draws on the heritage and support of the Bouygues Group, which operates in over 80 countries spanning construction, civil works, energy, services, telecommunications and media.

Through a strategy of steady organic growth combined with targeted acquisitions, Bouygues UK has built the optimum team to deliver the construction and infrastructure assets of the UK. We have integrated best-in-class companies including Leadbitter, Denne, Warings and Thomas Vale – all respected specialists in their chosen markets and regions.

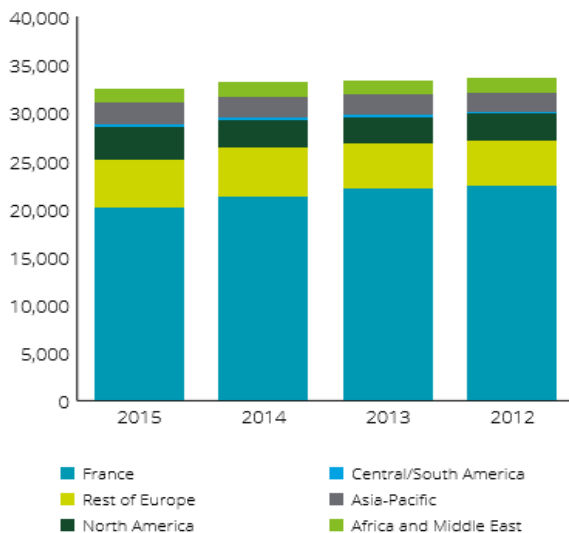
It is this local expertise and focus on intelligent, competitive delivery, twinned with the resources, reach and backing of our parent company that gives Bouygues UK the edge, delivering work with passion, flair and innovation. Building the future of the UK is our greatest adventure. Be part of it.

Sources: Deloitte and Company Website

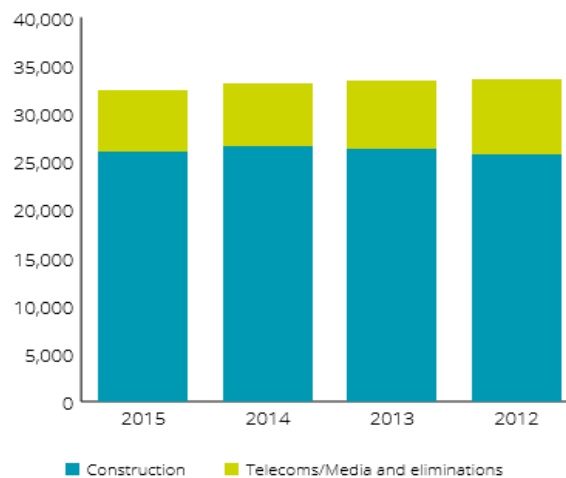


Key Data (EUR Million)	2015	2014	2013	Variation 2015-2014 %
Assets				
Non-current assets	18,210	18,504	17,684	(1.6%)
Current assets	15,590	16,364	15,469	(4.7%)
Held-for-sale assets and operations	35	-	1,151	100.0%
Total assets	33,835	34,868	34,304	(3.0%)
Liabilities and equity				
Equity	9,293	9,455	8,684	(1.7%)
Non-current liabilities	7,562	8,308	8,959	(9.0%)
Current liabilities	16,980	17,105	16,495	(0.7%)
Liabilities related to held-for-sale operations	-	-	166	100.0%
Total liabilities and equity	33,835	34,868	34,304	(3.0%)
Statement of profit or loss				
Sales	32,428	33,138	33,345	(2.1%)
National sales	20,058	21,271	22,118	(5.7%)
International sales	12,370	11,867	11,227	4.2%
Construction sales	25,963	26,515	26,275	(2.1%)
Non-construction sales	6,465	6,623	7,070	(2.4%)
EBITDA	2,411	2,418	2,835	(0.3%)
EBIT	941	888	1,344	6.0%
Net income	480	1,064	(648)	(54.9%)
Net income attributable to the Group	403	807	(757)	(50.1%)
Other key data				
Net debt	2,561	3,216	4,427	(20.4%)
Order book	28,961	27,700	27,510	4.6%
Market capitalisation	12,613	10,070	8,727	25.2%

Sales by geographical area



Sales by segment



Source: Deloitte



BOUYGUES

Business Summary



Provides commercial, highway and residential construction and mobile telecommunication services

Bouygues SA provides constructions for building, civil works, energy and services, property, roads and coals.

The company provides commercial, highway and residential construction, and mobile telecommunication services.

It provides construction businesses, bouygues construction bouygues immobilier and coles.

The company was founded by Francis Bouygues in 1952 and is headquartered in Paris, France.

Number of employees : 120 254 persons.

Sales per Businesses

	2014		2015		Delta
	EUR (in Million)	%	EUR (in Million)	%	
Roads	12,302	37.1%	-	-	-
Construction	11,442	34.5%	-	-	-
Telecoms	4,413	13.3%	-	-	-
Property	2,771	8.4%	-	-	-
Media	2,195	6.6%	-	-	-
Bouygues SA & Other	15.00	0%	17.00	0.1%	+13.33%
Coles	-	-	11,896	36.7%	-
Bouygues Building	-	-	11,776	36.3%	-
Bouygues Telecom	-	-	4,484	13.8%	-
Bouygues Property	-	-	2,291	7.1%	-
TFI	-	-	1,964	6.1%	-

Sales per Regions

	2014		2015		Delta
	EUR (in Million)	%	EUR (in Million)	%	
France	21,271	64.2%	20,058	61.0%	-5.7%
European Union	3,904	11.8%	3,835	11.8%	-1.77%
North America	2,873	8.7%	3,335	10.3%	+16.08%
Asia Pacific - Oceania	1,848	5.6%	1,939	6%	+4.92%
Africa	1,341	4%	1,279	3.9%	-4.62%
Rest of Europe	1,168	3.5%	1,207	3.7%	+3.34%
Oceania	322.00	1%	382.00	1.2%	+18.63%
Central & South America	217.00	0.7%	271.00	0.8%	+24.89%

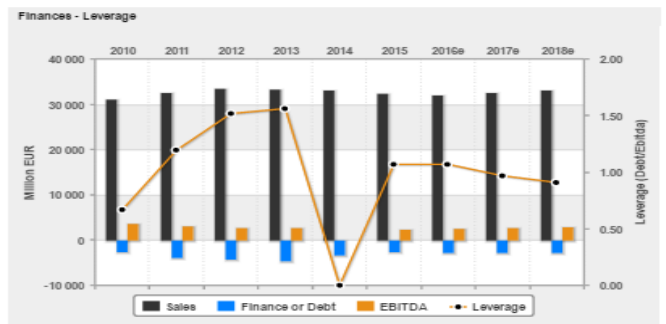
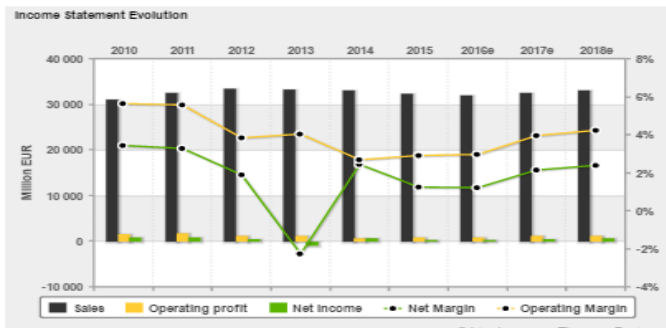
Financial Ratios

Size	2016e	2017e
Capitalization	10 246 M€	-
Entreprise Value (EV)	12 974 M€	13 000 M€

Valuation	2016e	2017e
P/E ratio (Price / EPS)	26,1x	14,3x
Capitalization / Revenue	0,32x	0,31x
EV / Revenue	0,40x	0,40x
EV / EBITDA	5,09x	4,57x
Yield (DPS / Price)	5,41%	5,42%
Price to book (Price / BVPS)	1,28x	1,30x

Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	2,96%	3,95%
operating Leverage (Delta EBIT / Delta Sales)	-	20,6x
Net Margin (Net Profit / Revenue)	1,21%	2,14%
ROA (Net Profit / Asset)	1,73%	2,70%
ROE (Net Profit / Equities)	5,90%	9,16%
Rate of Dividend	141%	77,6%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	4,95%	4,75%
Cash Flow / Sales	5,82%	6,48%
Capital Intensity (Assets / Sales)	0,70x	0,79x
Financial Leverage (Net Debt / EBITDA)	1,07x	0,97x



Sources: Deloitte and 4-traders.com

Bouygues UK operates under the Management Units; Construction, Housing and Thomas Vale, and its property development and regeneration company, Linkcity UK. In recent years, they have increased their presence in the UK through the acquisition of Warings, Thomas Vale, Leadbitter and Denne. These, together with existing operations, position Bouygues as a medium sized British player with a combined turnover of around £800 million, approximately 150 sites and 1500 people. The four key UK building businesses of French contractor Bouygues however fell into the red in 2015 after being hit by challenging market conditions. Bouygues (UK) ran up the largest loss at £19.4m with regional builders Thomas Vale and Denne Construction each suffering losses over £12m and J B Leadbitter running up a £9m loss.



METALLURGICAL CORPORATION

Business Summary

Engages in the metallurgical engineering and construction business

Metallurgical Corp. of China Ltd. engages in the metallurgical engineering and construction business.

It operates through five segments: Engineering and Construction, Equipment Manufacturing, Resources Development, Property Development, and Other.

The Engineering and Construction segment provides engineering, construction and other related contracting services for metallurgical and non-metallurgical projects.

The Equipment Manufacturing segment produces metallurgical equipment, steel structures and other metal products.

The Resources Development segment engages in the development, mining and processing of mineral resources.

The Property Development segment develops and sells residential and commercial properties.

The Other segment pertains to trading activities, consulting and finance services.

The company was founded on December 1, 2008 and is headquartered in Beijing, China.

Number of employees : 103 296 persons.

Sales per Businesses

	2014		2015		Delta
	CNY (in Million)	%	CNY (in Million)	%	
Contractor	176,261	83.4%	184,301	80.0%	+4.56%
Real Estate Development	22,778	10.8%	19,405	8.1%	-14.8%
Equipment Manufacturing	10,205	4.8%	8,502	4%	-16.68%
Resources Development	4,016	1.9%	2,923	1.4%	-27.22%
Other	2,528	1.2%	2,193	1%	-13.23%

Sales per Regions

	2014		2015		Delta
	CNY (in Million)	%	CNY (in Million)	%	
China	203,594	90.4%	201,182	84.5%	-1.18%
Other Countries	12,192	5.8%	16,142	7.0%	+32.4%

Managers

Name	Age	Since	Title
He Ting Shen	62	2008	President & Executive Director
Wen Qing Guo, MBA	52	2008	Chairman

China Metallurgical Group is a large conglomerate operating in various specialized fields, across different industries and countries, with engineering and construction contracting, property development, equipment manufacturing and resources development as its principal businesses. The company is one of the largest comprehensive engineering and construction companies in China and throughout the world. In 2015, total sales amounted to EUR 31,165 million, while EBIT margin was 2.7%, approximately 3 percentage points below the average profitability figures recorded by the Top 20 EPoC companies. Construction and engineering projects represent more than 85% of total revenue. In this context, and taking into consideration the other Chinese groups analysed above, it seems that diversification is not a major concern at these companies. Market value amounted to EUR 5,310 million, significantly lower than other groups such as ACS or Bouygues whose sales are similar to China Metallurgical Group's.

Financial Ratios

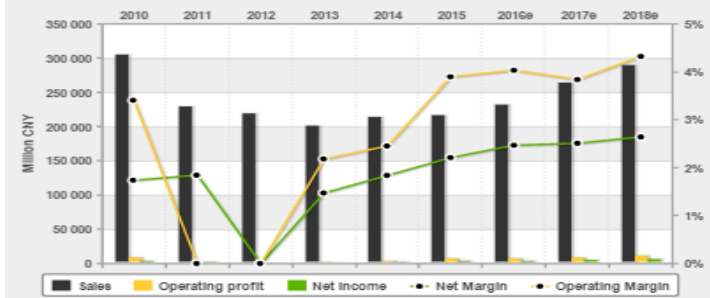
Size	2016e	2017e
Capitalization	72 918 M CNY	-
Enterprise Value (EV)	119 377 M CNY	113 252 M CNY

Valuation	2016e	2017e
P/E ratio (Price / EPS)	13,9x	11,9x
Capitalization / Revenue	0,31x	0,28x
EV / Revenue	0,51x	0,43x
EV / EBITDA	8,15x	7,29x
Yield (DPS / Price)	1,47%	1,59%
Price to book (Price / BVPS)	1,23x	1,13x

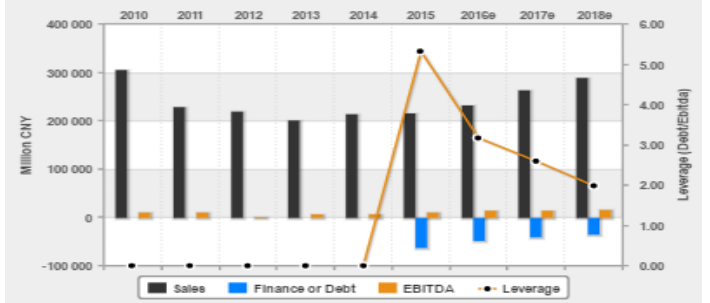
Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	4,03%	3,84%
operating Leverage (Delta EBIT / Delta Sales)	1,51x	0,59x
Net Margin (Net Profit / Revenue)	2,47%	2,51%
ROA (Net Profit / Asset)	1,50%	1,60%
ROE (Net Profit / Equities)	9,34%	10,3%
Rate of Dividend	20,3%	19,0%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	0,65%	0,61%
Cash Flow / Sales	3,74%	4,02%
Capital Intensity (Assets / Sales)	1,65x	1,57x
Financial Leverage (Net Debt / EBITDA)	3,17x	2,60x

Income Statement Evolution



Finances - Leverage



Sources: Deloitte and 4-traders.com



MARKET ANALYSIS

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Corporate Copy December 31st 2016

HOCHTIEF



Provides construction services to residential, industrial, municipal and commercial sectors

Hochtief AG is a holding company, which engages in the real estate business.

It operates through the following divisions: HOCHTIEF Americas, HOCHTIEF Asia Pacific, and HOCHTIEF Europe.

The HOCHTIEF Americas division refers to the firm's construction activities.

The HOCHTIEF Asia Pacific division deals with contract mining operations.

The HOCHTIEF Europe division develops and manages infrastructure and real estate projects.

The company was founded by Balihasar Helfmann and Philipp Helfmann in 1873 and is headquartered in Essen, Germany.

Number of employees : 47 129 persons.

Sales per Businesses

	2014		2015		Delta
	EUR (in Million)	%	EUR (in Million)	%	
Hochtief Asia Pacific	11,397	51.0%	8,948	42.4%	-21.51%
Hochtief Americas	8,615	39%	10,354	49.1%	+20.19%
Hochtief Europe	1,962	8.9%	1,656	7.6%	-15.61%
Corporate Headquarters/Consolidation	125.08	0.0%	140.59	0.7%	+12.4%

Sales per Regions

	2014		2015		Delta
	EUR (in Million)	%	EUR (in Million)	%	
Americas	8,817	39.0%	10,546	50%	+19.61%
Australia	8,493	38.4%	5,921	28.1%	-30.29%
Asia	2,983	13.4%	3,076	14.0%	+3.82%
Germany	1,256	5.7%	890.14	4.2%	-29.13%
Rest of Europe	589.39	2.6%	663.36	3.1%	+16.5%
Africa	0.628	0%	0.859	0%	+3.74%

Managers

Name	Age	Since	Title
Marcelino Fernández Verdes	61	2012	Chief Executive Officer
Pedro José López Jiménez, MBA	74	2011	Chairman-Supervisory Board
José Ignacio Legarburu	51	2014	Chief Operating Officer

Hochtief The UK arm of Hochtief saw profits slide as the cost of bidding for a slew of projects impacted on the business. Hochtief (UK) Construction saw pre-tax profits dive 45% to £918,000 as turnover also fell 11% to £130m. Added operational costs associated with bidding more work dented operating margins which slid to just 0.7% from 0.9% in the previous year.

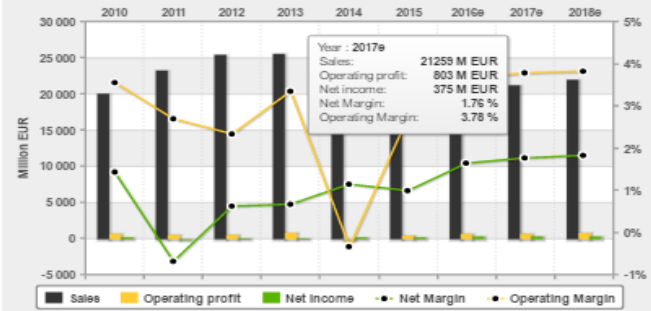
Hochtief continued to increase its tender activities in line with its three year business plan helping to keep a strong forward order book of £160m, although this was down from £185m in 2014

Sources: Deloitte and 4-traders.com

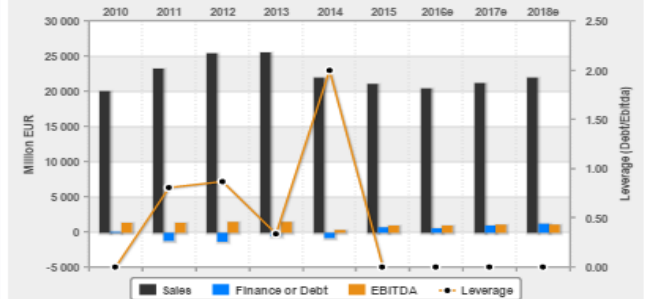
Financial Ratios

	2016e	2017e
Size		
Capitalization	8 411 M€	-
Enterprise Value (EV)	7 722 M€	7 409 M€
Valuation		
P/E ratio (Price / EPS)	24,1x	21,5x
Capitalization / Revenue	0,41x	0,40x
EV / Revenue	0,38x	0,35x
EV / EBITDA	7,10x	6,48x
Yield (DPS / Price)	1,94%	2,18%
Price to book (Price / BVPS)	3,16x	3,06x
Profitability		
Operating Margin (EBIT / Sales)	3,66%	3,78%
Operating Leverage (Delta EBIT / Delta Sales)	-	1,95x
Net Margin (Net Profit / Revenue)	1,64%	1,76%
ROA (Net Profit / Asset)	-	-
ROE (Net Profit / Equities)	14,6%	16,5%
Rate of Dividend	46,8%	47,0%
Balance Sheet Analysis		
CAPEX / Sales	1,65%	1,56%
Cash Flow / Sales	3,68%	3,67%
Capital Intensity (Assets / Sales)	-	-
Financial Leverage (Net Debt / EBITDA)	-0,63x	-0,88x

Income Statement Evolution



Finances - Leverage





Since its incorporation in 1983, the ACS Group has become a worldwide benchmark in the construction and services market, with a workforce of around 197,000 employees. ACS remains the second-largest European construction group in terms of revenue and the largest international contractor.

The Group's main shareholders are Spanish investors, Inversiones Vesan, a company owned by ACS' Chairman and CEO with 12.5% and Corporación Financiera Alba owned 11.7% at December 2015

The Group's portfolio is divided into the following segments:

Construction

The ACS Group's Construction segment is aimed at executing all kinds of civil engineering work projects, building works, concession projects and mining and property projects through an extensive group of companies.

This business was traditionally headed by Dragados until 2011, when the Group completed certain acquisitions. The integration of HOCHTIEF in 2011 matched the strategic objectives for the area, based on maintaining a leadership position in Spain through Dragados and Iridium, while consolidating and internationally expanding the Group through the German listed group. HOCHTIEF has a strong position in America through its subsidiaries Turner, Flatiron, Clark Builders and E.E. Cruz and in the Asia-Pacific area through the Cimic Group (formerly known as the Leighton Group).

In 2015 total construction sales decreased by almost 1.9% to EUR 25,319 million.

However, although sales fell, the total order book increased by 1.3% due to the positive performance of the infrastructure areas in the United States. .

On a smaller scale, Iridium manages concessions and public-private partnership contracts for transport infrastructures and public facilities. In 2015 total sales amounted to EUR 71 million.

Industrial Services

The ACS Group's Industrial Services area is focused on the development, construction, maintenance and operation of energy, industrial and mobility infrastructures through a large group of companies.

Due to the accelerated and successful process of evolution and internationalization of the Industrial Services area, the firm is becoming a world leader in applying industrial engineering and is already present on the five continents, especially in America, where the division obtained 47% of its total revenue in 2015.

In 2015 sales of the Industrial Services area amounted to EUR 6,501 million, representing a 3.7% decrease with respect to the previous year, mainly due to the sale of renewable assets in Spain in the first quarter of 2015. On the other hand, the Industrial Services order book increased by 5% in 2015, reaching EUR 8,421 million, driven by the increase in the national order book and the major contracts awarded in the international sphere, especially those related to the field of energy and the development of turnkey industrial plants in Latin America and countries like Saudi Arabia, India and Japan.

Environment

The Environment area is focused on urban services and waste treatment, facility management and logistics services. The Environment Services activity is mainly carried out by Urbaser, which is considered a leader in the management of urban solid

waste treatment plants in the Spanish market and is consolidating its position in the European market.

Total division sales increased by 34.2% to EUR 3,139 million. This is explained by the purchase of Clece in the second semester of 2014. EBITDA of the Environment area also grew to EUR 342 million, representing a 17.6% increase on 2014.

At the end of 2015, the order book of the ACS Group's Environment area stood at EUR 9,776 million, equivalent to 37 months of production.

2015 Performance

2015 revenue remained basically steady, driven by the performance of the Construction and Industrial Services divisions.

Net profit of the ACS Group amounted to EUR 725 million, representing a 1.1% increase compared to the previous year. This includes the different impacts of the restructuring processes being carried out by the Group in its various areas of activity, mainly in construction, as well as the lower contribution from Industrial Services due to the sale of renewable assets.

The Group's order book totalled EUR 67,072 million, which was slightly higher than in 2014. The Construction, Environment and Industrial Services divisions accounted for 73%, 12% and 15% of the total backlog at December 2015.

Grupo ACS
Civil engineering company



ACS, Actividades de Construcción y Servicios, S.A. is a Spanish company dedicated to civil and engineering construction, all types services and telecommunications. [Wikipedia](#)

Stock price: ACS (BME) €27.22 +0.13 (+0.48%)

24 Nov, 10:35 CET - Disclaimer

CEO: Florentino Pérez (1997-)

Headquarters: Madrid, Spain

Revenue: 34.06 billion EUR (2016)

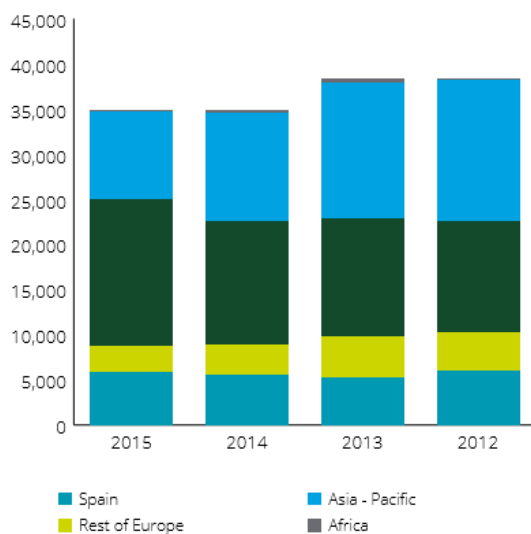
Owner: Florentino Pérez (12.7%)

Sources: Deloitte and Internet

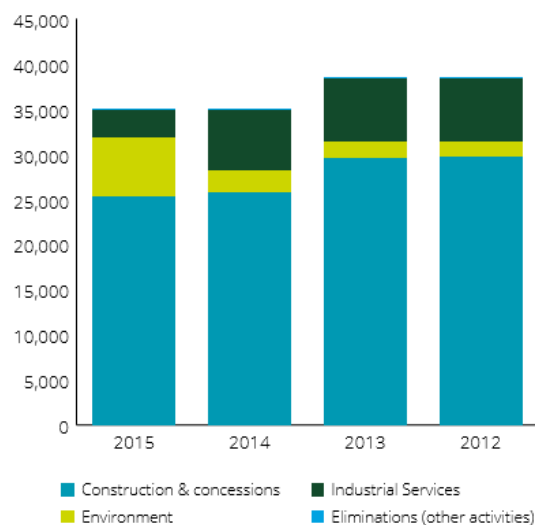


Key Data (EUR Million)	2015	2014	2013	Variation 2015-2014 %
Assets				
Non-current assets	13,779	14,001	14,390	(1.6%)
Current assets	21,501	25,320	25,381	(15.1%)
Total assets	35,280	39,321	39,771	(10.3%)
Liabilities and equity				
Equity	5,197	4,898	5,489	6.1%
Non-current liabilities	10,690	9,535	11,323	12.1%
Current liabilities	19,393	24,888	22,959	(22.1%)
Total liabilities and equity	35,280	39,321	39,771	(10.3%)
Statement of profit or loss				
Sales	34,925	34,881	38,373	0.1%
National sales	5,887	5,581	5,245	5.5%
International sales	29,038	29,300	33,128	(0.9%)
Construction sales	25,319	25,820	29,558	(1.9%)
Non-construction sales	9,606	9,061	8,815	6.0%
EBITDA	2,306	2,466	3,002	(6.5%)
EBIT	1,439	1,598	1,645	(9.9%)
Net income	1,054	928	1,247	13.6%
Net income attributable to the Group	725	717	702	1.1%
Other key data				
Net debt	2,624	3,722	4,235	(29.5%)
Order book	67,072	63,320	63,419	5.9%
Market capitalisation	8,501	9,116	7,873	(6.7%)

Sales by geographical area



Sales by segment





ACS

Business Summary



Provides civil engineering services

ACS Actividades de Construcción y Servicios SA engages in the construction and engineering services which specialize in civil work projects.

Its operates through the following segments: Construction, Industrial Services and Environment.

The Construction segment caters civil works, residential, and non-residential buildings.

The Industrial Services segment engages in the development of applied engineering services, installations and the maintenance of industrial infrastructures in the energy, communications and control systems sectors.

The Environment segment tenders integral building maintenance services.

The company was founded in 1997 and is headquartered in Madrid, Spain.

Number of employees : 200 813 persons.

Sales per Businesses

	2014		2015		Delta
	EUR (In MMilion)	%	EUR (In MMilion)	%	
Construction	25,820	74%	25,320	72.5%	-1.94%
Industrial Services	6,750	19.4%	6,501	18.8%	-3.69%
Environment	2,338	6.7%	3,139	9%	+34.23%

Sales per Regions

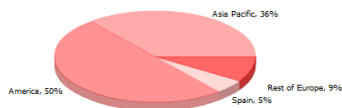
	2014		2015		Delta
	EUR (In MMilion)	%	EUR (In MMilion)	%	
United States	9,193	26.4%	11,272	32.3%	+22.62%
Australia	8,568	24.0%	6,033	17.3%	-29.59%
Spain	5,581	16%	5,887	16.9%	+5.48%
Other	4,826	13.8%	4,903	14%	+1.6%
Mexico	1,571	4.5%	1,597	4.6%	+1.68%
China	1,461	4.2%	2,073	5.9%	+41.9%
Germany	1,270	3.6%	894.38	2.6%	-29.58%
Canada	1,050	3%	1,080	3%	+0.97%
Indonesia	739.63	2.1%	632.17	1.8%	-14.53%
Poland	620.39	1.8%	571.68	1.6%	-7.85%

Managers

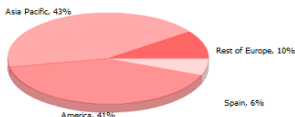
Name	Age	Since	Title
Florentino Pérez Rodriguez	69	2004	Chairman & Chief Executive Officer
José Zornaza Solo	-	-	Finance Manager

o as to maximise the operating efficiency and profitability of each and every project.
Group positions itself as a leading company globally in Construction, with projects in over 30 countries worldwide.

Revenue Breakdown by Geographical Areas



Order Book Breakdown by Geographical Areas



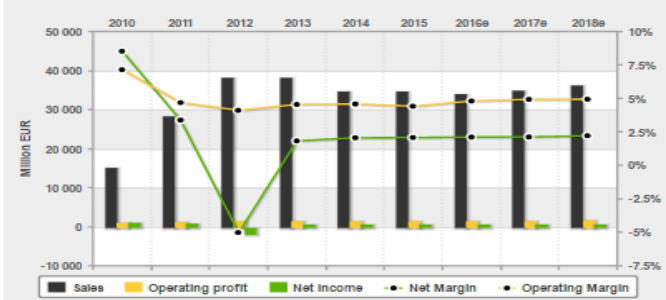
Financial Ratios

	2016e	2017e
Size		
Capitalization	8 356 M€	-
Entreprise Value (EV)	10 791 M€	10 394 M€
Valuation		
P/E ratio (Price / EPS)	11.7x	11.0x
Capitalization / Revenue	0.24x	0.24x
EV / Revenue	0.31x	0.30x
EV / EBITDA	4.51x	4.19x
Yield (DPS / Price)	4.30%	4.47%
Price to book (Price / BVPS)	2.18x	1.97x

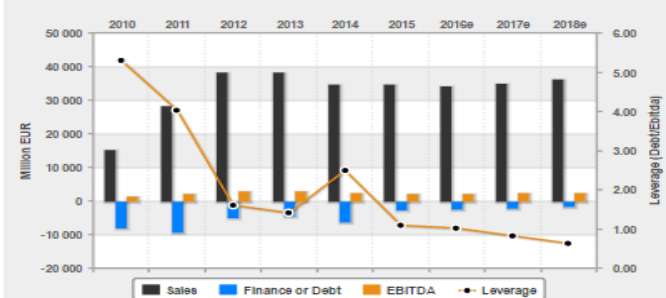
	2016e	2017e
Profitability		
Operating Margin (EBIT / Sales)	4.81%	4.93%
operating Leverage (Delta EBIT / Delta Sales)	-	2.10x
Net Margin (Net Profit / Revenue)	2.11%	2.12%
ROA (Net Profit / Asset)	-	-
ROE (Net Profit / Equities)	20.5%	19.1%
Rate of Dividend	50.2%	49.0%

	2016e	2017e
Balance Sheet Analysis		
CAPEX / Sales	2.44%	2.13%
Cash Flow / Sales	4.45%	4.82%
Capital Intensity (Assets / Sales)	-	-
Financial Leverage (Net Debt / EBITDA)	1.02x	0.82x

Income Statement Evolution



Finance - Leverage



Source: 4-traders.com



SKANSKA

Skanska is one of the world's leading project development and construction groups, with experience in construction, development of commercial properties and residential projects as well as public-private partnerships. The Group operates in 11 countries in the Nordic region, Europe and North America. With a workforce of approximately 43,000 employees, Skanska is the most important Swedish construction group in terms of revenue.

Skanska's main shareholders are Swedish financial and institutional companies and private Swedish individuals.

Skanska reported sales of EUR 16,363 million in 2015, 4% higher than in 2014, obtained mainly in Nordic countries and the USA.

Construction is Skanska's largest business segment in terms of revenue, representing 87% of the Group's total sales in 2015. The other businesses can basically be subdivided into residential development, commercial property development and infrastructure development.

Construction

Skanska's Construction business executes building, civil and residential construction works. Skanska is active in selected home markets in the Nordic region, Europe and North America, both in the private and public sector. It also performs service-related commissions, such as construction management services and facility operation and maintenance.

In 2015, the division's total sales rose by 9%. This segment represents 50% of the Group's total operating income. Performance was particularly strong in Sweden, Finland and Poland, while the US was negatively affected by cost increases in certain projects. In Latin America, all construction projects were concluded and most of the operations and maintenance units were divested in 2015.

The order book decreased by 7% to SEK 158.2 billion. Nevertheless, the overall construction market outlook is positive due to the strong Swedish market and the positive outlook in other European countries, with the exception of certain regions that are dependent on the energy sector.

Residential Development

Skanska develops modern homes in attractive and sustainable areas. Fiscal year 2015 saw strong residential development thanks to improved profitability and capital efficiency. In this year the number of homes sold and started totalled 4,093 and 4,000, respectively.

The main reasons behind these strong results were the favorable market and efficient project execution in Sweden and the Central European operations.

On the other hand, Boklok, which is a residential concept developed by Skanska and IKEA, had very good profitability and contributed to the improvement of this segment.

Commercial Property Development

Skanska's Commercial Property Development business segment focuses on healthy, green and efficient offices and properties. Skanska initiates, develops, leases and divests properties that

contribute to well-being and profitability, both for customers and their employees. This segment operates mainly in the Nordic Region.

Although 2015 sales were lower than in 2014, operating income from property divestments reached its highest ever level.

Infrastructure Development

Skanska Infrastructure Development focuses on three segments: roads, including bridges and tunnels; social infrastructure, such as hospitals and schools; and industrial facilities, such as power stations.

This business line is responsible for Skanska's project development within public private partnerships (PPP). This program continues to improve in the US and is also showing signs of improvement in Norway.

Operating income from Infrastructure Development amounted to SEK 863 million (2014: SEK 463 million). The operating income includes a capital gain of SEK 420 million on the sale of two hospitals in London, UK. Moreover, in the previous year, impairment losses of SEK 193 million were recorded on wind power projects in Sweden.

It must be highlighted that in 2015 Skanska was named the preferred bidder for the expansion of LaGuardia Airport in New York. In this context, in 2016 Skanska closed the financing and entered into a lease agreement with the Port Authority of New York and New Jersey. The Public-Private Partnership (PPP) includes the financing, design, construction, operation and maintenance of LaGuardia Airport Central Terminal B with a lease term running until 2050.



Our organisation

The senior management team consists of the most senior 20 or so executives in Skanska UK, who together manage the day to day operation of the business. Members are made up of the company's executive management team, plus managing directors of core business areas and the heads of support functions.

Skanska UK comprises eight operating units responsible for different sectors. Each has a managing director and leadership team. There are also a number of centralised support functions, called enabling functions.

The heads of the enabling functions and the managing directors of the operating units make up Skanska UK's 25-strong senior management team. This team is responsible for the day to day management of Skanska UK. They report into the executive management team – the group responsible for setting the strategic direction of Skanska UK, led by our UK President and CEO Mike Putnam.



Learn about Skanska's history >

Sources: Deloitte and Company Website



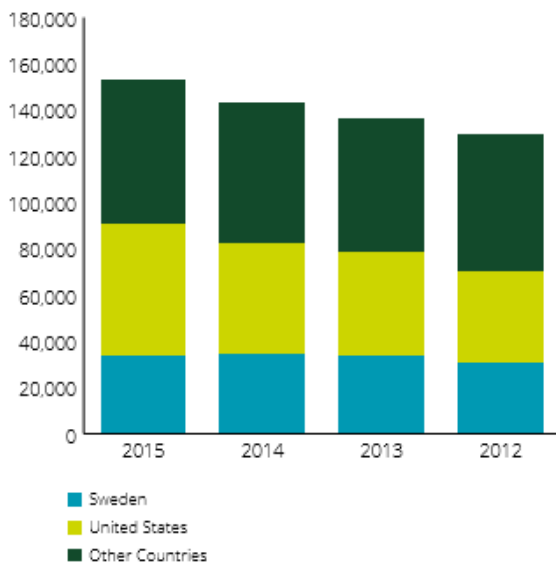
The total order book decreased by 17% to SEK 122,104 million in 2015, mainly due to an order cancellation combined with a significant number of postponed orders in the USA Building area.

2015 Performance

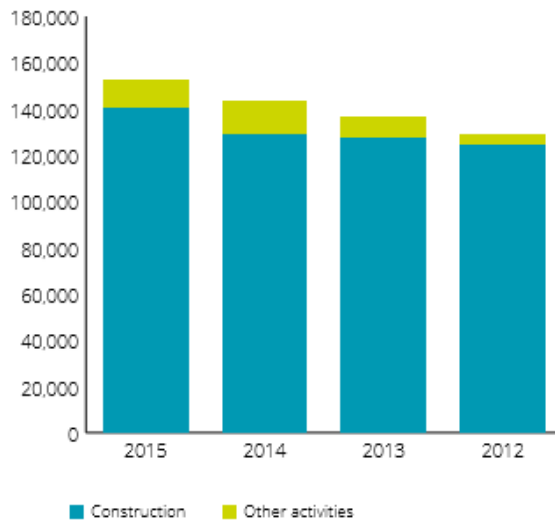
Total revenue increased by 6.8% to SEK 153,049 million, due to the positive performance of the Construction and Residential Development divisions. As a result, net income attributable to the Group rose by 24.4% to SEK 4,791 million in 2015.

Key Data (SEK Million)	2015	2014	2013	Variation 2015-2014 %
Assets				
Non-current assets	18,107	18,007	18,702	0.6%
Current assets	79,560	74,767	68,830	6.4%
Total assets	97,667	92,774	87,532	5.3%
Liabilities and equity				
Equity	24,206	21,405	21,339	13.1%
Non-current liabilities	9,129	12,733	10,920	(28.3%)
Current liabilities	64,332	58,636	55,273	9.7%
Total liabilities and equity	97,667	92,774	87,532	5.3%
Statement of profit or loss				
Sales	153,049	143,325	136,488	6.8%
National sales	34,124	34,311	33,567	(0.5%)
International sales	118,925	109,014	102,921	9.1%
Construction sales	140,648	128,890	127,501	9.1%
Non-construction sales	12,401	14,435	8,987	(14.1%)
EBITDA	7,971	7,282	7,443	9.5%
EBIT	6,290	5,409	5,555	16.3%
Net income	4,791	3,850	3,769	24.4%
Net income attributable to the Group	4,780	3,843	3,765	24.4%
Other key data				
Net debt	(1,411)	2,091	3,262	(167.5%)
Order book	122,104	147,424	119,968	(17.2%)
Market capitalisation	67,739	68,972	54,042	(1.8%)

Sales by geographical area



Sales by segment



Source: Deloitte



www.thinkbigpartnership.com

Corporate Copy December 31st 2016

SKANSKA

Business Summary



Provides construction and real estate development services

Skanska AB engages in the project development and construction business.

It operates through the following business segments: Construction, Residential Development, Commercial Property Development, and Infrastructure Development.

The Construction segment builds and renovates buildings, industrial facilities, infrastructure, and residences.

It also executes service-related assignments, in areas such as construction services and facility operations and maintenance.

The Residential Development segment develops residential properties close to services, recreational facilities and good transport links.

The Commercial Property Development segment focuses on healthy, green, and efficient offices and properties.

The Infrastructure Development segment deals with public private partnership which engages in developing, financing, building, operating and maintaining public facilities such as large hospitals, schools, airports and highways.

The company was founded by Rudolf Fredrik Berg in 1887 and is headquartered in Stockholm, Sweden.

Number of employees : 43 122 persons.

Sales per Businesses

	2014		2015		Delta
	SEK (in Million)	%	SEK (in Million)	%	
Construction	119,103	83.1%	129,993	84.0%	+9.14%
Commercial Property Development	10,143	7.1%	8,995	5.0%	-11.32%
Residential Development	9,551	0.7%	12,298	8%	+28.76%
Central	6,089	4.2%	3,543	2.3%	-41.62%
Infrastructure Development	163.00	0.1%	106.00	0.1%	-34.97%

Sales per Regions

	2014		2015		Delta
	SEK (in Million)	%	SEK (in Million)	%	
Other Areas	60,776	42.4%	62,086	40.0%	+2.16%
United States	48,238	33.7%	56,839	37.1%	+17.83%
Sweden	34,311	23.9%	34,124	22.3%	-0.55%

Managers

Name	Age	Since	Title
Johan Karlström	59	1983	President, Chief Executive Officer & Director

Skanska UK's construction and development businesses recorded a consolidated operating income (profit) of £38.4 million in 2015 on revenues of £1,430 million. This equates to an operating margin of 2.7 per cent. During this period, £1,493 million of orders were booked by Skanska UK.

During the year Skanska began work on a number of significant projects, including: the £140 million New Papworth Hospital in Cambridge, which will provide patients, staff and the local community with a world-class healthcare facility; three AMP6 (Asset Management Programme) projects for Thames Water, Welsh Water and Anglian Water, worth a total of around £454 million over five years; and a £32 million contract with Gloucestershire County Council to upgrade 55,000 streetlights across the county. In December 2015, Skanska's Bristol development, 66 Queen Square, was handed over to new owner Aviva Investors, completing Skanska's first speculative commercial development under the Workplaces by Skanska banner.

Financial Ratios

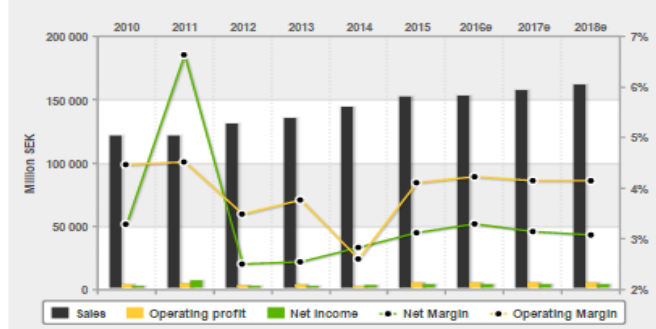
Size	2016e	2017e
Capitalization	78 452 M SEK	-
Enterprise Value (EV)	75 310 M SEK	75 437 M SEK

Valuation	2016e	2017e
P/E ratio (Price / EPS)	15,8x	16,0x
Capitalization / Revenue	0,51x	0,50x
EV / Revenue	0,50x	0,48x
EV / EBITDA	9,85x	9,66x
Yield (DPS / Price)	3,96%	4,13%
Price to book (Price / BVPS)	3,15x	2,93x

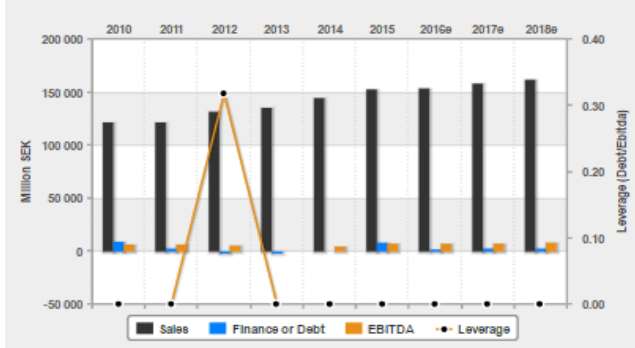
Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	4,23%	4,15%
operating Leverage (Delta EBIT / Delta Sales)	6,54x	0,37x
Net Margin (Net Profit / Revenue)	3,30%	3,15%
ROA (Net Profit / Asset)	5,60%	5,20%
ROE (Net Profit / Equities)	20,0%	18,7%
Rate of Dividend	62,4%	66,0%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	1,14%	1,12%
Cash Flow / Sales	3,80%	3,91%
Capital Intensity (Assets / Sales)	0,59x	0,61x
Financial Leverage (Net Debt / EBITDA)	-0,28x	-0,33x

Income Statement Evolution



Finances - Leverage



Source: 4-traders.com



MARKET ANALYSIS



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TAISEI

Business Summary



Constructs office buildings, hotels, plants, electric power facilities, warehouses, residential buildings and various facilities

TAISEI Corp. engages in the construction and engineering business.

It operates through the following segments: Civil Engineering, Construction Contracts, Real Estate Development, and Others.

The Civil Engineering segment covers infrastructure and engineering works such as tunnels, bridges, dams, and airports.

The Construction Contracts segment deals with the construction of housing and buildings.

The Real Estate Development segment develops, buys, and sells land and buildings.

The Others segment includes incidental businesses related to construction and leisure operations.

The company was founded by Kihachiro Okura in October 1873 and is headquartered in Tokyo, Japan.

Number of employees : 13 740 persons.

Sales per Businesses

	2015		2016		Delta
	JPY (In Million)	%	JPY (In Million)	%	
Building	974,539	01.9%	978,178	03.3%	+0.37%
Civil Engineering	448,727	28.5%	433,924	28.1%	-3.3%
Development	137,555	8.7%	121,305	7.8%	-11.81%
Other	12,448	0.8%	12,482	0.8%	+0.27%

Sales per Regions

	2015		2016		Delta
	JPY (In Million)	%	JPY (In Million)	%	
Japan	1,573,270	100%	1,545,890	100%	-1.74%

Managers

Name	Age	Since	Title
Yoshiyuki Murata	62	1977	President & Representative Director
Takashi Yamauchi	70	1989	Chairman

Taisei A domestic contractor.
No further research undertaken

Financial Ratios

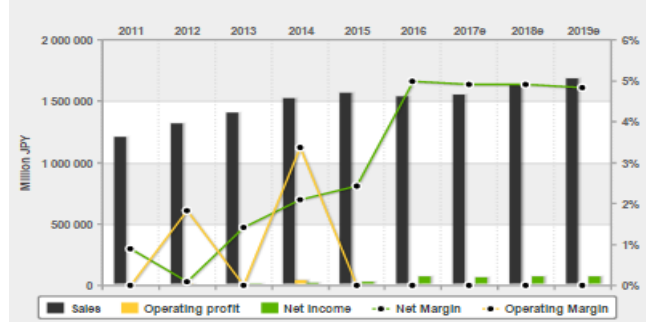
Size	2017e	2018e
Capitalization	864 652 M JPY	-
Enterprise Value (EV)	727 643 M JPY	688 576 M JPY

Valuation	2017e	2018e
P/E ratio (Price / EPS)	11.3x	10.8x
Capitalization / Revenue	0.55x	0.53x
EV / Revenue	0.47x	0.42x
EV / EBITDA	6.24x	5.64x
Yield (DPS / Price)	2.23%	2.45%
Price to book (Price / BVPS)	1.54x	1.41x

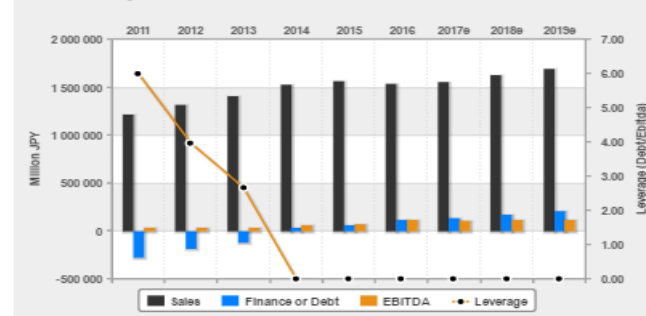
Profitability	2017e	2018e
Operating Margin (EBIT / Sales)	-	-
operating Leverage (Delta EBIT / Delta Sales)	-	-
Net Margin (Net Profit / Revenue)	4.91%	4.91%
ROA (Net Profit / Asset)	5.04%	5.22%
ROE (Net Profit / Equities)	14.0%	13.4%
Rate of Dividend	25.2%	26.4%

Balance Sheet Analysis	2017e	2018e
CAPEX / Sales	0.83%	1.08%
Cash Flow / Sales	4.33%	4.96%
Capital Intensity (Assets / Sales)	0.97x	0.94x
Financial Leverage (Net Debt / EBITDA)	-1.18x	-1.44x

Income Statement Evolution



Finances - Leverage





Since its incorporation in 1844, Eiffage has become a leading figure in the European concessions and public works sector. The culture of constant innovation, commitment and expertise among the Group's 64,000 employees helped Eiffage to generate revenue of EUR 14,060 million, of which 18% relates to international projects in around seventy countries.

Eiffage employees in France are also Group shareholders, representing 23.7% of total shares. The shares of the remaining shareholders mainly continue to be free float.

Eiffage operates through four business lines:

Concessions and public-private partnerships (PPPs)

In 2015 Eiffage Concessions continued to consolidate its status as a major player in the area of public-private partnerships (PPP). Through such partnerships, the Eiffage Group is able to finance, design, build and maintain complex facilities.

The division's total sales grew by 4% to EUR 2,731 million, representing 19% of total Group revenue. In 2015 Eiffage strengthened its position in the PPP area, mainly due to the signing of new contracts

(Metz University, Var Colleges and the biology and health campus of University of Nancy). Through its Eiffage Rail Express (ERE) division, the Group is constructing the high-speed "Bretagne-Pays de Loire" line.

Construction

Eiffage Construction is a major player in the sector, with a comprehensive range of businesses related to urban development, property development, construction and maintenance and services works. Eiffage's Construction division operates through its many regional divisions in France, Benelux, Poland and other locations in Europe.

In 2015 Construction division sales were slightly lower than in 2014. Nevertheless, since it was awarded several contracts throughout the year, the order book remained strong (EUR 4,762 million) and represents sixteen months of activity.

Infrastructures

Infrastructures' activities has expertise across the full spectrum of businesses relating to road and rail construction, civil engineering, earthworks, drainage and environmental works.

The division's sales went down to EUR 4,583 million due to new lower public sector orders at the roads business and to the drop of orders in the oil and gas sector. At the same time, note should be made of the growth in the international marketplace, with contracts in countries such as Angola and Madagascar.

Energy

Through its subsidiaries Clemessy and Eiffage Energie, the division provides comprehensive turnkey solutions including the design, construction, operation and maintenance of special purpose and multi-technical facilities for all sectors of activity.

Sales generated by the energy division reached EUR 3,298 billion in 2015, 17% higher than in 2014. Certain important projects were carried out in 2015, such as the Cestaas solar PV plant, the largest in Europe. It is also noteworthy that the Group has entered into significant contracts in Paris.

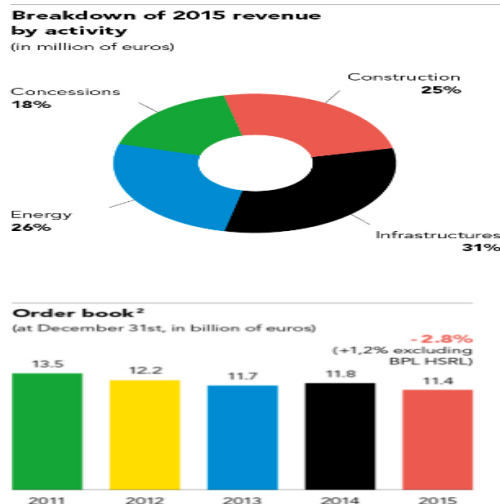
2015 Performance

Group revenue remained basically steady in 2015, with a slight decrease in domestic sales offset by a 6% increase in international sales.

The Group recognised another increase in earnings in 2015. The favourable operational performance enjoyed by the Concessions division and the debt refinancing arranged in 2015 contributed to the improvement in the Group's results. As a result, EBIT grew by 6.2%, while net attributable income rose by 13%, reaching EUR 312 million.

The Group's order book reached EUR 11,400 million in 2015, in line with the previous year, and it is equal to ten months of activity.

Source: Deloitte

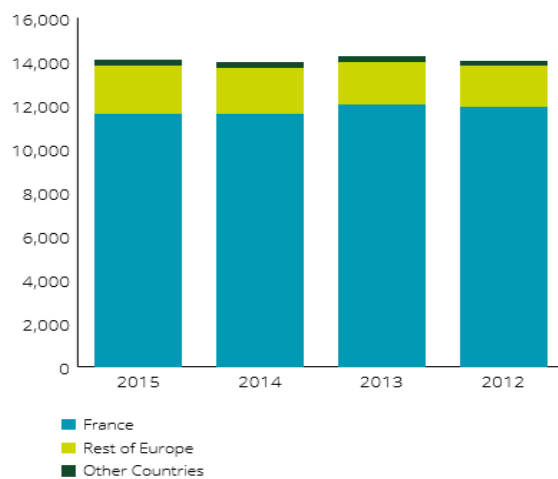


Source: Annual Report

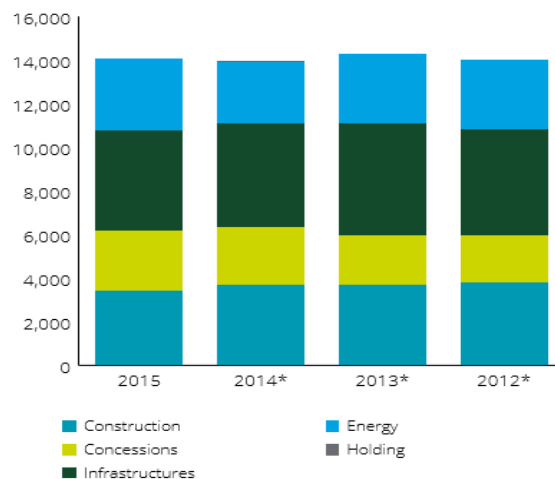


Key Data (EUR Million)	2015	2014	2013	Variation 2015-2014 %
Assets				
Non-current assets	18,634	18,668	18,973	(0.2%)
Current assets	9,480	10,200	8,403	(7.1%)
Total assets	28,114	28,868	27,376	(2.6%)
Liabilities and equity				
Equity	3,472	2,989	2,708	16.2%
Non-current liabilities	14,633	15,881	14,905	(7.9%)
Current liabilities	10,009	9,998	9,763	0.1%
Total liabilities and equity	28,114	28,868	27,376	(2.6%)
Statement of profit or loss				
Sales	14,060	13,948	14,264	0.8%
National sales	11,565	11,595	12,034	(0.3%)
International sales	2,495	2,353	2,230	6.0%
Construction sales	8,020	7,638	7,930	5.0%
Non-construction sales	6,040	6,310	6,334	(4.3%)
EBITDA	2,170	2,138	2,107	1.5%
EBIT	1,431	1,347	1,318	6.2%
Net income	458	354	322	29.4%
Net income attributable to the Group	312	275	257	13.5%
Other key data				
Net debt	11,665	12,014	12,579	(2.9%)
Order book	11,400	11,765	11,740	(3.1%)
Market capitalisation	5,493	3,886	3,743	41.3%

Sales by geographical area



Sales by segment



Source: Deloitte

EIFFAGE

Business Summary



Provides construction and civil engineering services

EIFFAGE SA is a holding company, which engages in the concessions and public-private partnerships, construction and public works through its subsidiaries.

It operates through six segments: Construction, Public Works, Energy, Metal, Concessions & Utilities Management and Holding.

The Construction segment engages in the building design and construction, property development and building maintenance.

The Public Works segment engages in the civil engineering, road construction, infrastructure maintenance and material production.

The Metal segment engages in the metallic construction and services to industry.

The Concessions & Utilities Management segment engages in the construction and operation of infrastructures under concessions and public private partnerships.

The Holding segment engages in the management of participating interests and services to Group companies.

The company was founded on June 12, 1920 and is headquartered in Paris, France.

Number of employees : 64 606 persons.

Sales per Businesses

	2014		2015		Delta
	EUR (in Million)	%	EUR (in Million)	%	
Public Works	3,930	28.2%	-	-	-
Construction	3,708	26.6%	3,437	24.4%	-7.31%
Energy	2,811	20.2%	3,298	23.5%	+17.32%
Concessions	2,636	18.9%	2,731	19.4%	+3.6%
Metal	834.00	6%	-	-	-
Holding	29.00	0.2%	11.00	0.1%	-62.07%
Infrastructures	-	-	4,583	32.6%	-

Sales per Regions

	2014		2015		Delta
	EUR (in Million)	%	EUR (in Million)	%	
France	11,695	83.1%	11,665	82.3%	-0.26%
Other Countries	2,353	16.9%	258.00	1.8%	-89.04%
Europe	-	-	2,237	15.9%	-



Annual Report 2015

Making the difference

FINANCIAL RATIOS

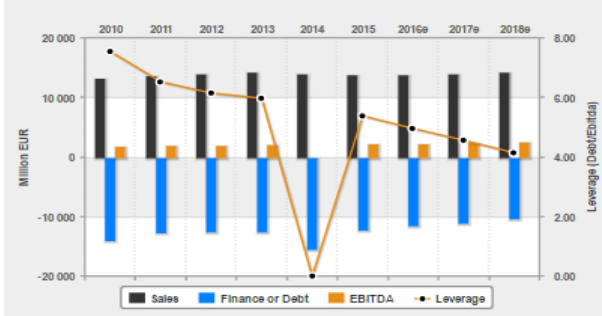
2016e	2017e	
Capitalization	6 526 M€	-
Enterprise Value (EV)	18 028 M€	17 521 M€

2016e	2017e	
Price / Earnings ratio (Price / EPS)	16,4x	14,3x
Capitalization / Revenue	0,47x	0,47x
V / Revenue	1,31x	1,25x
V / EBITDA	7,77x	7,27x
Yield (DPS / Price)	2,34%	2,60%
Price to book (Price / BVPS)	1,85x	1,70x

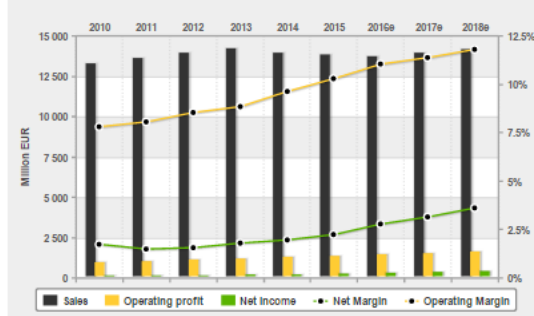
2016e	2017e	
Operating Margin (EBIT / Sales)	11,0%	11,4%
Operating Leverage (Delta EBIT / Delta Sales)	-	2,97x
Net Margin (Net Profit / Revenue)	2,79%	3,15%
ROA (Net Profit / Asset)	2,20%	2,40%
ROE (Net Profit / Equities)	11,8%	12,5%
Rate of Dividend	38,6%	37,2%

2016e	2017e	
APEX / Sales	5,84%	5,11%
Cash Flow / Sales	10,6%	11,2%
Capital Intensity (Assets / Sales)	1,27x	1,31x
Financial Leverage (Net Debt / EBITDA)	4,96x	4,56x

Finances - Leverage



Income Statement Evolution



Source: 4-tarders.com



KAJIMA

Business Summary



Designs and constructs industrial and commercial buildings and other public structures

Kajima Corp. engages in the construction, real estate development, architectural design, civil engineering and engineering businesses.

It operates through the following segments: Civil Engineering, Building Construction, Real Estate Development and Other, Domestic Subsidiaries and Affiliates, and Overseas Subsidiaries and Affiliates.

The Civil Engineering segment accepts civil engineering works and constructions.

The Building Construction segment receives building construction works.

The Real Estate Development and Other segment includes architectural, structural, engineering, and other design businesses.

The Domestic Subsidiaries and Affiliates segment deals with local construction material sales, contract specialized construction works, comprehensive leasing, and building rental activities done.

The Overseas Subsidiaries and Affiliates segment handles overseas construction and development projects.

The company was founded by Iwakichi Kajima in 1840 and is headquartered in Tokyo, Japan.

Number of employees : 15 810 persons.

Sales per Businessess

	2015		2016		Delta
	JPY (in Million)	%	JPY (in Million)	%	
Construction Business	776,838	45.9%	822,635	47.2%	+5.9%
Overseas Associated Companies	340,117	20.1%	367,941	21.1%	+8.18%
Civil Engineering Business	276,430	16.3%	307,964	17.7%	+11.41%
Domestic Associated Companies	219,288	12.9%	211,391	12.1%	-3.6%
Development Business, Etc.	80,983	4.8%	32,767	1.9%	-59.54%

Sales per Regions

	2015		2016		Delta
	JPY (in Million)	%	JPY (in Million)	%	
Japan	1,367,540	80.7%	1,366,820	78.4%	-0.05%
North America	193,373	11.4%	202,625	11.0%	+4.78%
Asia	128,637	7.6%	122,387	7%	-4.86%
Europe	23,073	1.4%	19,008	1.1%	-17.62%
Other	-18,968	-1.1%	31,859	1.8%	-

Source: 4-tarders.com

Kajima is one of the leading companies in the construction industry in Japan. The Group has a workforce of over 7,500 employees, and more than 150 years' experience in the business, including international projects in Asia, North America and Europe. Total sales in 2015 amounted to EUR 13,144 million, of which approximately 90% related to construction activities. Approximately 21% of the company's revenues came from international contracts, especially from North America, a higher ratio of international to domestic sales than the 2014 figure. At year end, the company had a total backlog of EUR 9,671 million. The net debt to equity ratio was 0.3, a company classified as a "Domestic construction group".

Source: Deloitte

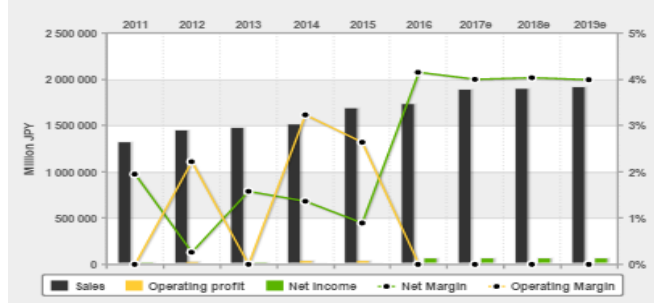
Financial Ratio

Size	2017e	2018e
Capitalization	735 889 M JPY	-
Enterprise Value (EV)	838 279 M JPY	784 902 M JPY
Valuation	2017e	2018e
PE ratio (Price / EPS)	9,46x	9,45x
Capitalization / Revenue	0,39x	0,39x
EV / Revenue	0,44x	0,41x
EV / EBITDA	6,64x	6,12x
Yield (DPS / Price)	1,92%	2,04%
Price to book (Price / BVPS)	1,37x	1,22x
Profitability	2017e	2018e
Operating Margin (EBIT / Sales)	-	-
Operating Leverage (Delta EBIT / Delta Sales)	-	-
Net Margin (Net Profit / Revenue)	4,00%	4,03%
ROA (Net Profit / Asset)	4,68%	4,67%
ROE (Net Profit / Equities)	15,0%	13,5%
Rate of Dividend	18,1%	19,3%

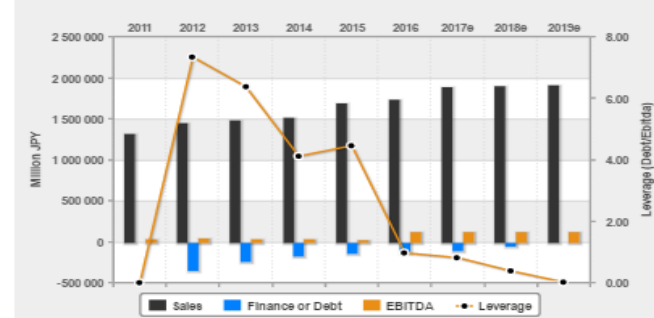
Balance Sheet Analysis

	2017e	2018e
CAPEX / Sales	1,41%	1,31%
Cash Flow / Sales	4,81%	4,76%
Capital Intensity (Assets / Sales)	0,85x	0,86x
Financial Leverage (Net Debt / EBITDA)	0,81x	0,38x

Income Statement Evolution



Finances - Leverage





www.thinkbigpartnership.com

FLUOR

Business Summary

FLUOR Provides engineering, procurement, construction and maintenance services

Fluor Corp. is a holding company engages in engineering and technology.

It operates through the following segments: oil and gas, industrial and infrastructure, government, global services, and power.

The oil and gas segment offers a range of services including design, engineering, procurement, construction, fabrication, and project management services to energy-related industries.

The industrial and infrastructure segment offers solutions in the field of transportation, commercial and institutional, manufacturing, life sciences, mining and metals, telecommunications, microelectronics, and water sectors.

The government refers to engineering, construction, logistics, base and facilities operations, maintenance contingency response, and environmental and nuclear services to the government and in abroad.

The global services segment provides integrated solutions that supports global operations such as site equipment, and tool services, industrial fleet services and staffing services.

The power segment provides services to the gas fueled, solid fueled, environmental compliance, renewable, nuclear and power services market which include engineering, procurement, construction, start-up commissioning, operations and maintenance and technical services.

The company was founded on by John Simon Fluor, Sr. in 1912 and is headquartered in Irving, TX.

Number of employees : 38 758 persons.

Sales per Businesses

	2014		2015		Delta
	USD (In Million)	%	USD (In Million)	%	
Oil & Gas	11,389	52.8%	10,040	55.4%	-11.69%
Industrial & Infrastructure	6,082	28.2%	4,071	22.5%	-32.85%
Government	2,512	11.7%	2,557	14.1%	+1.81%
Power	1,004	4.7%	948.70	5.2%	-5.72%
Global Services	585.00	2.7%	499.10	2.8%	-14.68%

Sales per Regions

	2014		2015		Delta
	USD (In Million)	%	USD (In Million)	%	
United States	7,466	34.7%	7,857	43.4%	+5.24%
Canada	4,133	19.2%	2,459	13.0%	-40.5%
Middle East & Africa	2,799	13%	1,857	10.3%	-33.65%
Asia Pacific (includes Australia)	2,588	11.9%	870.40	4.8%	-66.11%
Central & South America	2,495	11.0%	2,560	14.1%	+2.63%

Financial Ratios

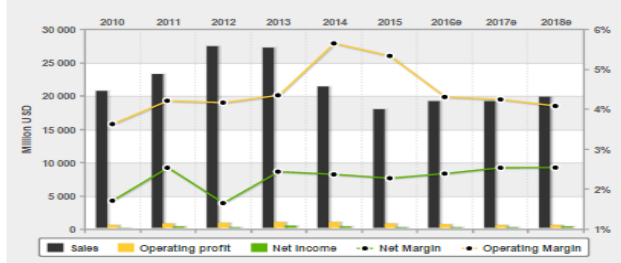
Size	2016e	2017e
Capitalization	6 962 M\$	-
Enterprise Value (EV)	6 907 M\$	6 853 M\$

Valuation	2016e	2017e
P/E ratio (Price / EPS)	15,2x	14,4x
Capitalization / Revenue	0,36x	0,36x
EV / Revenue	0,36x	0,35x
EV / EBITDA	6,76x	6,66x
Yield (DPS / Price)	1,58%	1,64%
Price to book (Price / BVPS)	2,05x	1,86x

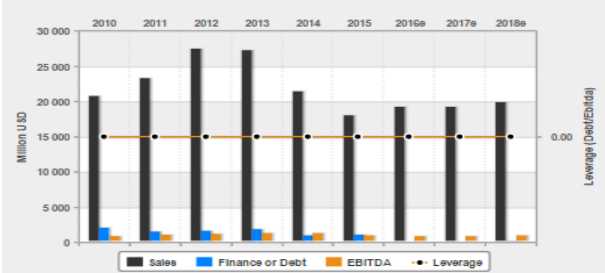
Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	4,31%	4,25%
operating Leverage (Delta EBIT / Delta Sales)	-	-
Net Margin (Net Profit / Revenue)	2,39%	2,54%
ROA (Net Profit / Asset)	7,39%	7,26%
ROE (Net Profit / Equities)	14,3%	14,1%
Rate of Dividend	24,1%	23,6%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	1,25%	1,39%
Cash Flow / Sales	3,32%	3,42%
Capital Intensity (Assets / Sales)	0,32x	0,35x
Financial Leverage (Net Debt / EBITDA)	-0,05x	-0,11x

Income Statement Evolution



Finances - Leverage



Fluor Corporation is one of the largest professional services firms, providing engineering, procurement, construction, fabrication and modularization, commissioning and maintenance and project management services on a global basis. With a workforce of almost 38,000 people, it operates in 60 countries in six continents. Total sales amounted to EUR 16.326 million in 2015, which is similar to some EPoC companies such as Skanska. While recording similar profitability levels to those of the average EPoC, the net cash position was a positive amount of EUR 75 million. Listed on the New York Stock Exchange, its market capitalisation in 2015 was EUR 6,041 million, representing 2.1 times total equity in 2015.

Source: Deloitte



OBAYASHI

Business Summary

Provides residential and commercial construction and civil engineering services



Obayashi Corp. engages in the construction and real estate business.

It operates through the following segments: Domestic Building Construction, Overseas Building Construction, Domestic Civil Engineering, Overseas Civil Engineering, Real Estate, and Others.

The Domestic Building Construction segment engages in building construction contracts and related businesses within Japan.

The Overseas Building Construction segment engages in building construction contracts and related businesses outside Japan.

The Domestic Civil Engineering segment handles civil engineering construction contracts and related businesses within Japan.

The Overseas Civil Engineering segment deals with civil engineering construction contracts and related businesses outside Japan.

The Real Estate segment handles the purchase, sale, and rent of real estate properties.

It also develops land parcels and engages in other businesses.

The Others segment includes the Private Finance Initiative (PFI), finance, and operation of golf courses.

The company was founded by Yoshigorō Obayashi in January 1892 and is headquartered in Tokyo, Japan.

Number of employees : 13 688 persons.

Sales per Businesses

	2015		2016		Delta
	JPY (In Million)	%	JPY (In Million)	%	
Domestic Building Construction	953,097	53.7%	932,997	52.5%	-2.11%
Overseas Building Construction	330,702	18.0%	337,956	19%	+2.19%
Domestic Civil Engineering	326,353	18.4%	353,909	19.0%	+8.44%
Real Estate	63,858	3.0%	47,020	2.0%	-26.37%
Overseas Civil Engineering	62,886	3.5%	70,889	4%	+12.73%
Others	37,082	2.1%	35,061	2%	-5.45%

Sales per Regions

	2015		2016		Delta
	JPY (In Million)	%	JPY (In Million)	%	
Japan	1,370,580	77.3%	1,365,800	76.8%	-0.35%
North America	238,450	13.4%	270,953	15.2%	+13.63%
	157,340	8.0%	133,689	7.5%	-15.04%

Obayashi Established around 120 years ago, Obayashi Corporation is one of the world's leading construction contractors and among Japan's leading listed companies. Its business encompasses domestic and overseas construction and engineering work and other construction-related businesses including real estate. In 2015, although orders from the public sector declined, orders from the private sector remained strong and the domestic construction market was generally good. Under these circumstances, the Company posted consolidated net sales of EUR 13,409 million for the year, a 1.5% increase on 2014. Almost 95% of total sales come from construction and engineering activities. Total market capitalisation increased by 11% to EUR 4,353 million as of December 2015. Obayashi's revenue and market value figures are similar to those recorded by the French Eiffage group.

Financial Ratios

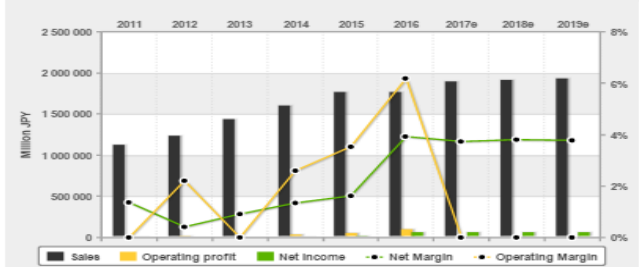
Size	2017e	2018e
Capitalization	712 130 M JPY	-
Enterprise Value (EV)	888 868 M JPY	847 069 M JPY

Valuation	2017e	2018e
P/E ratio (Price / EPS)	9,85x	9,71x
Capitalization / Revenue	0,37x	0,37x
EV / Revenue	0,47x	0,44x
EV / EBITDA	7,22x	6,72x
Yield (DPS / Price)	1,90%	2,11%
Price to book (Price / BVPS)	1,24x	1,13x

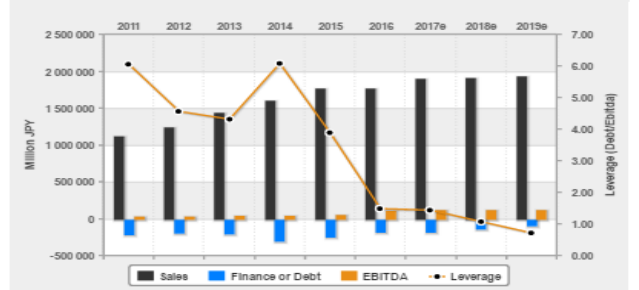
Profitability	2017e	2018e
Operating Margin (EBIT / Sales)	-	-
operating Leverage (Delta EBIT / Delta Sales)	-	-
Net Margin (Net Profit / Revenue)	3,73%	3,80%
ROA (Net Profit / Asset)	4,14%	4,20%
ROE (Net Profit / Equities)	13,0%	12,0%
Rate of Dividend	18,7%	20,5%

Balance Sheet Analysis	2017e	2018e
CAPEX / Sales	2,19%	1,93%
Cash Flow / Sales	4,35%	4,81%
Capital Intensity (Assets / Sales)	0,90x	0,90x
Financial Leverage (Net Debt / EBITDA)	1,43x	1,07x

Income Statement Evolution



Finances - Leverage





Business Summary



Operates as an investment holding company with interests in construction, project management, property development and contract mining services

CIMIC Group Ltd. engages in the provision of construction, mining, engineering, concessions, and operation and maintenance services to the infrastructure, resources, and property markets.

It operates through the following segments: Construction, Contract Mining, Public Private Partnerships, Engineering, Habor Leighton Group, Commercial and Residential, and Corporate.

The company was founded by Stanley Ellis Leighton in 1949 and is headquartered in Sydney, Australia.

Number of employees : 43 400 persons.

Sales per Business

	2014		2015		Delta
	AUD (In Million)	%	AUD (In Million)	%	
Construction	12,056	71.8%	9,320	70.2%	-22.69%
Contract Mining	3,843	22.0%	2,683	21.7%	-24.98%
Commercial & Residential	912.70	5.4%	1,024	7.7%	+12.19%
Corporate	64.30	0.4%	111.80	0.8%	+73.87%
Habor Leighton Group	-	-	32.20	0.2%	-

Sales per Regions

	2014		2015		Delta
	AUD (In Million)	%	AUD (In Million)	%	
Australia Pacific	12,431	74.1%	8,586	64.7%	-30.93%
Asia & Middle East	4,445	26.5%	4,785	36.1%	+7.66%

Managers

Name	Age	Since	Title
Marcelino Fernández Verdes	61	2012	Executive Chairman & Chief Executive Officer
Adolfo Valderas Martínez	46	2013	Chief Operating Officer & Deputy CEO

CIMIC Group, previously known as Leighton Holdings, is one of the world's leading construction companies and the world's largest contract miner. The company was founded in 1949, listed on the Australian Securities Exchange in 1962 and has been part of the ACS Group since 2011. It operates in 20 countries, mainly in the Asian, Middle East and African regions. Total sales amounted to EUR 9,049 million in 2015. Non-construction sales represent 32% of total income, 8 percentage points higher than the average diversification of EPoC companies 2015. Both the EBIT and EBITDA margins grew in 2015, to 7.1% and 11.2%, significantly above the average. Recently, the company has made significant divestments such as John Holland and 50% of the services business (Ventia).

Financial Ratios

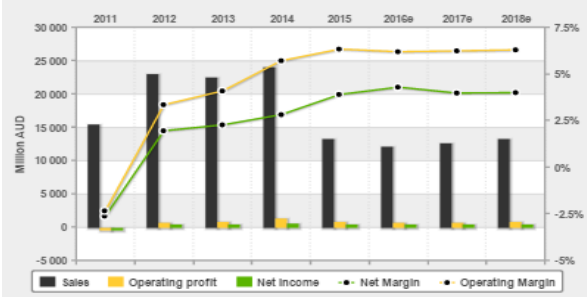
Size	2016e	2017e
Capitalization	9 034 M AUD	-
Enterprise Value (EV)	8 314 M AUD	8 053 M AUD

Valuation	2016e	2017e
P/E ratio (Price / EPS)	18,0x	18,0x
Capitalization / Revenue	0,74x	0,71x
EV / Revenue	0,68x	0,63x
EV / EBITDA	7,45x	6,95x
Yield (DPS / Price)	3,54%	3,74%
Price to book (Price / BVPS)	2,42x	2,27x

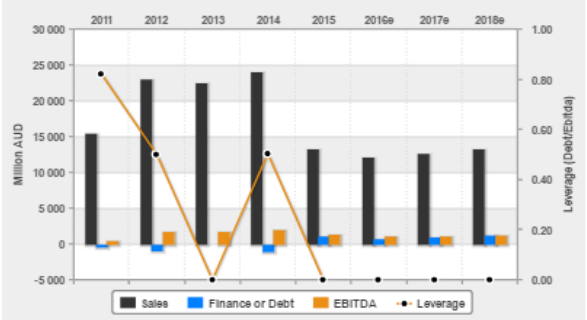
Profitability	2016e	2017e
Operating Margin (EBIT / Sales)	6,18%	6,23%
operating Leverage (Delta EBIT / Delta Sales)	-1,23x	1,16x
Net Margin (Net Profit / Revenue)	4,29%	3,97%
ROA (Net Profit / Asset)	6,17%	6,59%
ROE (Net Profit / Equities)	12,7%	13,0%
Rate of Dividend	63,9%	67,5%

Balance Sheet Analysis	2016e	2017e
CAPEX / Sales	2,28%	2,74%
Cash Flow / Sales	6,32%	7,66%
Capital Intensity (Assets / Sales)	0,69x	0,60x
Financial Leverage (Net Debt / EBITDA)	-0,65x	-0,85x

Income Statement Evolution



Finances - Leverage





SHIMIZU

Business Summary

Provides construction, architecture, engineering, industrial support and property services



Shimizu Corp. engages in the business construction, architecture, engineering and property services.

Its operations are carried out through the following segments: Construction, Real Estate Development and Others.

The Construction segment engages in building construction and civil engineering services.

The Real Estate Development segment includes sales, purchases, and rentals of property.

The Others segment includes sale of construction materials, leasing, and financing.

The company was founded by Kisuke Shimizu in 1804 and is headquartered in Tokyo, Japan.

Number of employees : 15 640 persons.

Sales per Businesses

	2015		2016		Delta
	JPY (In Million)	%	JPY (In Million)	%	
Construction Company	1,291,000	82.3%	1,344,470	80.8%	+4.14%
Other	255,898	16.3%	288,830	17.3%	+12.87%
Investment Development	20,940	1.3%	31,635	1.9%	+51.07%

Sales per Regions

	2015		2016		Delta
	JPY (In Million)	%	JPY (In Million)	%	
Japan	1,396,840	89.1%	1,492,800	89.6%	+6.86%
Asia	154,752	9.9%	147,188	8.8%	-4.89%
Other	16,248	1%	25,142	1.5%	+54.78%

Financial Ratios

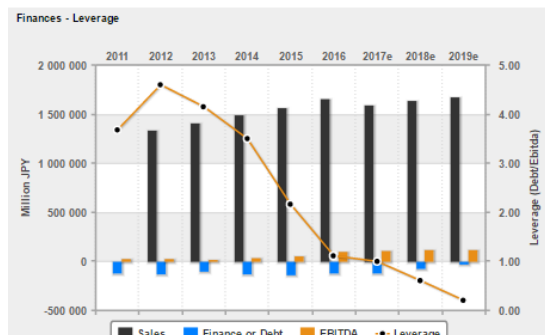
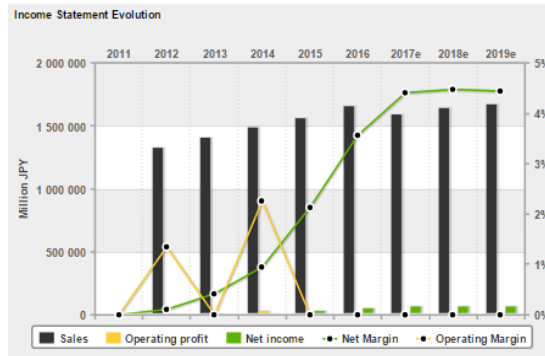
Size	2017e	2018e
Capitalization	705 721 M JPY	-
Enterprise Value (EV)	819 641 M JPY	777 471 M JPY

Valuation	2017e	2018e
P/E ratio (Price / EPS)	10,0x	9,54x
Capitalization / Revenue	0,44x	0,43x
EV / Revenue	0,51x	0,47x
EV / EBITDA	7,18x	6,58x
Yield (DPS / Price)	1,91%	2,09%
Price to book (Price / BVPS)	1,31x	1,18x

Profitability	2017e	2018e
Operating Margin (EBIT / Sales)	-	-
operating Leverage (Delta EBIT / Delta Sales)	-	-
Net Margin (Net Profit / Revenue)	4,41%	4,48%
ROA (Net Profit / Asset)	4,60%	4,76%
ROE (Net Profit / Equities)	13,3%	12,6%
Rate of Dividend	19,1%	19,9%

Balance Sheet Analysis	2017e	2018e
CAPEX / Sales	1,44%	1,18%
Cash Flow / Sales	1,99%	4,73%
Capital Intensity (Assets / Sales)	0,96x	0,94x
Financial Leverage (Net Debt / EBITDA)	1,00x	0,61x

Shimizu Corporation, a company with over 210 years of history, is a leading architectural, civil engineering and general contracting firm that offers integrated, comprehensive planning, design and building solutions for a wide range of international construction and engineering projects. In 2015, total sales amounted to EUR 12,558 million, with an EBIT margin of 5.7%, a higher percentage than the average recorded by both our EPoC and Chinese groups analysed. The construction business, which encompasses civil engineering and architectural construction activities, accounts for more than 91% of total sales. Total backlog amounted to EUR 10,815 million. Shimizu's positive performance resulted in market capitalisation growth of 18% to EUR 5,846 million. The net debt to EBITDA ratio was 1.4, whereas other Japanese companies like Obayashi recorded 3.0.



Intent



"Joint- Chairmanship?"



APPENDIX III

POWER POINT PRESENTATION & EDITORIAL (Feb 2016) BALFOUR-CARILLION MERGER OPPORTUNITY



POWER-POINT PRESENTATION

Source: Think Big Partnership

- Issued to Carillion Plc CEO- February 2016
- Issued to Balfour Beatty Plc NED- April 2016.

EDITORIAL

(Sources: Financial Times and Telegraph)

"Whether the two companies should have buried their differences and reconsidered their opportunities to reopen discussions after 6 months is a question unanswered. Several analysts described the abortive merger talks as a missed opportunity. The two chairmen were likely still not talking after the Takeover Panel's six-month cooling period. However, with the change in leadership at Balfour Beatty, maybe it's time to repair relations, and re-open dialogue."

The merger will be a mutual decision of the two companies to combine and become one entity; a decision made by two "equals". The combined business, through structural and operational advantages secured by the merger, will cut costs and increase profits, boosting shareholder values for both groups of shareholders becoming one legal entity worth more than the sum of its parts, and a Global contender in its sectors.

© 2016 British Infrastructure Group



17

MERGER or ACQUISITION

Industry players and Analysts had mixed feelings about the failed takeover of Balfour Beatty by Carillion in 2014. The "Battle of the Hard Hats" became a high profile contested bid, but with the consensus of Analysts at the time stating that synergistic savings were probably higher than Carillion had declared in its company statement at the time of the bid.

The account of events and dialogue between the two Chairmen/CEO and the reasons behind the move from agreed merger to contested bid were reported in the Financial Times and Telegraph editorials enclosed. The accounts of clashes of opinion, events and the fatal flaws which caused the breakdown in negotiations, seemed to revolve around some key issues:

- Carillion pitched a straight forward Merger that would give Balfour shareholders 51 per cent of the combined company, though the line-up of top management made it clear it was a takeover.
- Balfour Beatty had the sense that Carillion had been disingenuous and was moving the goalpost over the Brinkerhoff sale at the last stage and didn't feel they had acted in good faith.
- To add to the anger, Balfour's executives learnt that Carillion had already approached banks some weeks prior to ask for a debt deal (ie. A Takeover) that included Parsons Brinkerhoff in the combined business.
- But Balfour was to reject the third and final offer, which represented a 36 per cent premium to the average price of Balfour shares in the month before news of the takeover deal leaked
- However, it is a fact that it was Balfour's board, rather than its shareholders, who decided the fate of the merger.



POWER-POINT PRESENTATION
(Issued for discussion purposes only)

Source: Think Big Partnership

- Issued to Carillion Plc CEO- February 2016
- Issued to Balfour Beatty Plc NED- April 2016.

BRITISH INFRASTRUCTURE GROUP
BIG PLC

www.britishinfrastructuregroup.com
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BIG IS BEAUTIFUL IN GLOBAL INFRASTRUCTURE?
Investment, Engineering, Procurement, Construction Operations & Maintenance of Global Infrastructure.

1. INFRASTRUCTURE IS GLOBAL
2. THE UK REPRESENTS 3% OF GLOBAL OUTPUT
3. UK CONTRACTORS RANKED OUTSIDE GLOBAL TOP 50 BY INTERNATIONAL TURNOVER AND REGIONALITY
4. A IDEA OF A GLOBAL BRITISH INFRASTRUCTURE GROUP TO PARTICIPATE IN FUTURE REGIONAL GROWTH
5. THE TOP UK CONSTRUCTION & HOUSING GROUPS IN 2015 ARE THE LEGACIES OF THE SIEGHEURS OF LARGE INTERNATIONAL CONSTRUCTION GROUPS IN THE 1960-1990S
6. THE OBVIOUS CHOICE- CARILLION/ BALFOUR BEATTY MERGER, BUT FAILED TAKE-OVER ATTEMPT IN AUGUST 2014
7. WHICH GROUPS SHOULD ALIGN TO FORM A FUTURE GLOBAL BUSINESS IN SELECTED MARKETS & SECTORS
8. THE UK'S FOCUS ON PPP'S LEADS THE REFORMS FOR DELIVERING GLOBAL INFRASTRUCTURE
9. AND THE THREE KEYS TO SUCCESS- FINANCE, FINANCE, FINANCE
10. BRITAIN MUST NOT JUST BE A PARTNER IN EUROPE BUT BE A LEADER IN THE WORLD.
11. POTENTIAL FUTURE OF THINKING "big"

INFRASTRUCTURE IS GLOBAL
but LARGE UK CONSTRUCTION GROUPS ARE NOT

US\$ **57** trillion
Global Infrastructure Investment worldwide 2015-20

- GLOBAL INFRASTRUCTURE INVESTMENT TO REACH FOUR TRILLION DOLLARS BY 2017
- MAJOR BRITISH INFRASTRUCTURE COMPANIES FOCUS OVERSEAS PRINCIPALLY ONLY ON MAINLAND EUROPE, NORTH AMERICA, MIDDLE EAST & SELECTIVE ASIA PACIFIC MARKETS
- MAJOR BRITISH INFRASTRUCTURE COMPANIES LAG THEIR EUROPEAN, CHINESE & US COMPETITORS IN SIZE AND INFLUENCE

The UK leads the Global initiative in terms of advice and know-how for Infrastructure Investment & Procurement (eg. PPP), but lags its European, Chinese and US owned competitors in terms of Implementation of Global Infrastructure Projects.

THE UK REPRESENTS JUST 3% OF GLOBAL OUTPUT

THE FASTEST GROWING MARKETS - PREDICTED FOR 2020

Total value of output (%)

Region	Value (%)
China	21.1
USA	18.5
India	8.1
Japan	5.2
South Korea	3.2
Germany	2.8
UK	3.2

2020 (Predicted) THE FASTEST GROWING MARKETS

Nigeria	Russia	Indonesia	Morocco
India	Vietnam	Romania	

TOP 10 LARGEST CONSTRUCTION MARKETS IN 2009 AND 2020

Year	Value	Present Share of World Market (%)	Predicted Top 10 by 2020
2009	1,122	10.9	USA
2009	1,036	10.1	UK
2009	859	8.3	CHINA
2009	503	4.9	JAPAN
2009	492	4.8	SOUTH KOREA
2009	278	2.8	FRANCE
2009	262	2.6	GERMANY
2009	248	2.4	RUSSIA
2009	187	1.8	INDIA
2009	155	1.5	CANADA

The Fastest Growing Markets of the future are in Emerging Markets, while China and USA represent 36% of the Global Market Output. Long Term Growth Strategies for Infrastructure Companies should address Global Trends or retrench to domestic markets. US Companies for example, are already Global in the Provision of Programme and Project Management Services.

UK COMPANIES NOT RANKED IN TOP 50 CONTRACTORS

ENR THE TOP 500 GLOBAL CONTRACTORS | ENR THE TOP 200 INTERNATIONAL CONTRACTORS

(Based on global or non domestic turnover)

2015 Rank	2016 Rank	Company Name	2016 Revenue (\$M)	% Chg
1	1	CHINA RAILWAY GROUP LTD, Beijing, China	73,987.7	15.6%
2	2	CHINA STATE CONSTRUCTION ENGR CORP LTD, Beijing, China	19,229.4	2.2%
3	3	CHINA RAILWAY CONSTRUCTION CORP LTD, Beijing, China	17,249.0	1.0%
4	4	CHINA COMMUNICATIONS CONSTRUCTION GRP LTD, Beijing, China	16,214.6	13.0%
5	5	SHINJI, Suita, Osaka, Japan	11,268.9	16.7%
6	6	HCC, HONGKONG SAR OF CHINA, HONGKONG SAR, HONGKONG	10,467.0	10.0%
7	7	POWER CONSTRUCTION CORP OF CHINA, Beijing, China	10,388.0	11.8%
8	8	BEYHOLD SA, Paris, France	10,250.0	12.0%
9	9	HOCHTIEF AG/INFRASTRUCTURE, Essen, Germany	10,118.0	20.9%
10	10	CHINA METALLOGURGY ENGR CORP, Beijing, China	10,060.0	12.0%
11	11	BEYHOLD SA, Paris, France	10,000.0	12.0%
12	12	SHANGHAI CONSTRUCTION GROUP, Shanghai, China	9,827.0	7.6%
13	13	CHINA RAILWAY LTD, Beijing, China	9,800.0	14.0%
14	14	SKIDMORE OWINGS & MERRILL LLP, New York, NY, USA	17,047.2	15.0%
15	15	FLUOR CORP, Irving, Texas, USA	15,000.0	15.0%
16	16	STANTEC INC, Toronto, Canada	14,910.0	15.0%
17	17	HYUNDAI CONSTRUCTION & CONSTRUCTION CO. LTD, Seoul, S. Korea	14,810.0	14.0%
18	18	BEYHOLD SA, Paris, France	14,700.0	12.0%
19	19	SPINNAKER GROUP, London, UK	14,670.0	2.0%
20	20	BEYHOLD SA, Paris, France	14,600.0	12.0%
21	21	BEYHOLD SA, Paris, France	14,500.0	12.0%
22	22	BEYHOLD SA, Paris, France	14,400.0	12.0%
23	23	BEYHOLD SA, Paris, France	14,300.0	12.0%
24	24	BEYHOLD SA, Paris, France	14,200.0	12.0%
25	25	BEYHOLD SA, Paris, France	14,100.0	12.0%
26	26	BEYHOLD SA, Paris, France	14,000.0	12.0%
27	27	BEYHOLD SA, Paris, France	13,900.0	12.0%
28	28	BEYHOLD SA, Paris, France	13,800.0	12.0%
29	29	BEYHOLD SA, Paris, France	13,700.0	12.0%
30	30	BEYHOLD SA, Paris, France	13,600.0	12.0%

But CAUTION PREVAILS... in the short term UNCERTAINTY CLOUDS MARKET. Falling oil prices, political turmoil and economic disruptions from Europe to China have international firms worried.



The Top 10 by Region

Rank	Region	Company	2014/15 Revenue (\$B)
1	ASIA	China Railway Group Ltd	10.0
2	EUROPE	Skanska AB	8.0
3	UNITED STATES	HDR Inc	7.0
4	MIDDLE EAST	Bechtel Group Inc	6.0
5	LATIN AMERICA / CARIBBEAN	Skanska USA Building Inc	5.0
6	CANADA	FLOR Corp	4.0

UK COMPANIES ALSO RANKED OUTSIDE TOP 10 BY REGION



THE TOP UK CONSTRUCTION & HOUSING GROUPS (SOURCE: BUILDING.CO.UK)

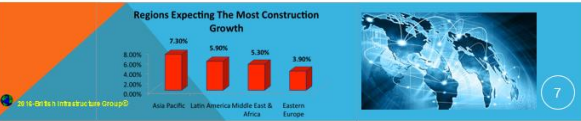
2014/15 Rank	Company	2014/15 turnover	Pre-tax Profit	Contracting	Housing	Property	Services	Other
1	Balfour Beatty Group Limited	5,793,000,000	304,000,000	5,597,000,000			1,273,000,000	370,000,000
2	Carillion Plc	4,071,900,000	172,900,000	1,800,000,000			2,412,100,000	162,500,000
3	Leiqin O'Rourke	3,574,300,000	51,900,000	3,574,300,000				
4	Interserve Plc	3,205,300,000	61,900,000	1,176,300,000			1,913,300,000	215,700,000
5	Barrett Developments	2,157,000,000	390,800,000		3,142,000,000		14,400,000	
6	Kier Group PLC	2,985,000,000	73,100,000	1,597,000,000			284,000,000	1,104,000,000
7	Taylor Wimpey	2,856,100,000	450,100,000		2,856,100,000			

UK Contractors cannot compete on price in many markets, and either focus on innovative services, or quality in niche overseas markets.

THE IDEA OF A GLOBAL BRITISH INFRASTRUCTURE GROUP TO PARTICIPATE IN FUTURE REGIONAL GROWTH

ANew STRATEGY?

- SHOULD UK COMPANIES FOLLOW EUROPEAN COMPETITORS BY SEEKING MERGER OPPORTUNITIES TO STRENGTHEN BALANCE SHEETS & SUSTAIN ONE-OFF PROJECT LOSSES & LEVERAGE INTERNATIONAL OPPORTUNITY FOR LONG TERM GROWTH
- THERE ARE A LIMITED NUMBER OF UK COMPANIES WHO ARE CANDIDATES FOR MERGER TO FORM A CONSTRUCTION GROUP OF SIZE ON THE EUROPEAN OR GLOBAL ARENA.



Battle of the hard hats

Market cap: £1.49bn, Annual turnover: £4.5bn (2013), Major projects: 228 schools, 14,470, Ashfield expansion, 40,000.

Market cap: £1.66bn, Annual turnover: £30.5bn (2013), Major projects: 400,000 sq ft, Blackfriars station, 40,000.

THE LOST OPPORTUNITY- FAILED TAKE-OVER ATTEMPT OF BALFOUR BEATTY BY CARILLION IN AUGUST 2014

INDUSTRY COMMENTS AFTERWARDS:

- BALFOUR BEATTY LEFT WEAK AFTER REJECTING CARILLION BID
- GULF WIDENS BETWEEN BALFOUR BEATTY AND CARILLION
- CARILLION ISSUES REASSURINGLY DULL TRADING STATEMENT JUST DAYS AFTER BB REVEALS A £75M BLACK HOLE IN ITS PROFITS
- AFTER SEVEN PROFIT WARNINGS, BALFOUR BEATTY'S RECOVERY BEGINS NOW, BUT THE OPPORTUNITY IS LOST.

Balfour Beatty profit warnings

Apr 13 £50m, May 14 £30m, Jul 14 £35m, Sep 14 £75m

THE NEW BBC? £3.3bn Combined value of Balfour Beatty Carillion, £1.4bn Combined revenues, 9.2pc Rise in Balfour shares, 7.3pc Rise in Carillion shares.

THIS IS A TAKEOVER, NOT A MERGER OF EQUALS.

THE TOP UK CONSTRUCTION & HOUSING GROUPS IN 2015 ARE THE LEGACIES OF THE BREAK-UPS OF LARGE DIVERSIFIED INTERNATIONAL CONSTRUCTION GROUPS IN THE 1980-1990s

Firms in the construction industry have always had to deal with the challenges of the economic cycle and develop strategies to deal with the resulting fluctuations in their business environment. The result has been M&A activity resulting in de-mergers, insolvencies, sales, reverse take-overs, and asset swaps, leading to diversified asset based businesses becoming predominantly support services groups.

Trends

WHICH GROUPS COULD ALIGN TO FORM A FUTURE GLOBAL BUSINESS IN SELECTED MARKETS & SECTORS

JUST A FEW CANDIDATES

Public Private Partnerships	Healthcare	Carillion	Balfour Beatty	Turner & Townsend
UK Export Finance	Energy			ATKINS
Support Services & Facilities Management	Education			WSP
Investment, Mergers & Acquisitions	Infrastructure	KIER		CAPITA
	Sanitation			imace
	Defence & Security	Interserve	serco	Biwater

The "BIG" GROUP SHOULD BE DIVERSIFIED IN MARKETS & SECTORS & DISCIPLINES





THE UK'S FOCUS ON PPP'S LEADS THE REFORMS FOR DELIVERING INFRASTRUCTURE

PPP - life cycle approach
Change, finance, construction and operation for about 20-30 years

British Consultants are helping introduce Institutional Change, but British owned Designers, Constructors, Operators, Support Services Providers and Investors are under-represented in many Emerging Markets.

Public-Private Partnerships
How can PPPs deliver better services?

THE MAIN LISTED MERGER CANDIDATES

Company	Market Cap	Turnover
Interserve	£583m	£2.9bn
carillion	£1148m	£3.5bn
Balfour Beatty	£1647m	£7.3bn
KIER	£1240m	£3.3bn

AND THE THREE KEYS TO SUCCESS- FINANCE, FINANCE, FINANCE

PREFERRED MERGER IN TERMS OF BUSINESS & GEOGRAPHICAL MIX- A FUTURE GLOBAL INFRASTRUCTURE GROUP

BRITAIN MUST NOT JUST BE A PARTNER IN EUROPE BUT BE A LEADER IN THE WORLD

THE LOGIC: There may be some strict conditions on the merger, but nothing that's going to make anyone rethink the logic of putting these two companies together. It will be a great combination.

AFTER THE IMPLEMENTATION: Because of this merger, we've become a much bigger and financially stronger company.

BIG Balfour Infrastructure Group Plc.

The merger will be a mutual decision of the two companies to combine and become one entity, a decision made by two "equals". The combined business, through structural and operational advantages secured by the merger, will cut costs and increase profits, boosting shareholder values for both groups of shareholders becoming one legal entity worth more than the sum of its parts, and a Global contender in its sectors.

THE MERGER APPRAISAL

A SECOND CHANCE
THINK BIG IN FORMING A GLOBAL BRITISH INFRASTRUCTURE GROUP

BUSINESS MIX

Carillion

Group income statement	2014	2015	2016	2017	2018
	£m	£m	£m	£m	£m
Total revenue	4,071.9	4,080.9	4,402.8	5,051.2	5,039.0
Analysed between:					
Support services	2,323.9	2,300.9	2,199.7	2,343.2	2,508.6
Public Private Partnership projects	162.5	236.9	287.7	309.8	319.9
Middle East construction services	900.7	483.5	473.6	548.9	493.0
Construction services including the Middle East	1,084.8	1,056.6	1,288.8	1,847.3	2,225.5

Balfour Beatty

	2013	2012	2011	2010	2009
	£m	£m	£m	£m	£m
Income					
Revenue including share of joint ventures and associates	10,118	9,966	10,036	9,519	9,385
Share of revenue of joint ventures and associates	(1,372)	(1,310)	(1,302)	(1,080)	(1,148)
Group revenue from continuing operations	8,746	8,656	8,734	8,439	8,237

Income statement - performance by activity from continuing operations

	Professional Services	Construction Services	Support Services	Infrastructure Investments	Corporate activities	Total
	2013	2013	2013	2013	2013	2013
	£m	£m	£m	£m	£m	£m
Revenue including share of joint ventures and associates	1,661	6,573	1,265	608	11	10,118



POTENTIAL FUTURE OF THINKING "BIG"

- THE BALFOUR INFRASTRUCTURE GROUP SHOULD HAVE LONG TERM AMBITIONS FOR GENERATING INFRASTRUCTURE RELATED BUSINESSES ACROSS THE DEVELOPED WORLD AND IN EMERGING MARKETS THROUGH PARTNERSHIP, INVESTMENT, ENGINEERING, PROCUREMENT, CONSTRUCTION, OPERATIONS AND MAINTENANCE, AND SUPPORT SERVICES IN THE PUBLIC AND PRIVATE SECTORS AND THROUGH PUBLIC PRIVATE PARTNERSHIPS.



THE OPPORTUNITY

- INFRASTRUCTURE IS GLOBAL
- THE UK REPRESENTS 3% OF GLOBAL OUTPUT
- UK CONTRACTORS RANKED OUTSIDE GLOBAL TOP 50 BY INTERNATIONAL TURNOVER AND REGIONALLY
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- BRITAIN MUST NOT JUST BE A PARTNER IN EUROPE BUT BE A LEADER IN THE WORLD.
- POTENTIAL FUTURE OF THINKING "big"

REQUIRED ACTION

- MEETING OF CEOs & BOARD REVIEWS
- FINANCIAL APPRAISAL & ORGANISATION DISCUSSIONS
- APPOINTMENT OF ADVISERS
- DECISION TO PROCEED



Comment:

KEY ISSUES (ref FT/ Telegraph Articles)

MERGER or ACQUISITION

"Industry players and Analysts had mixed feelings about the failed takeover of Balfour Beatty by Carillion in 2014. The "Battle of the Hard Hats" became a high profile contested bid, but with the consensus of Analysts at the time stating that synergistic savings were probably higher than Carillion had declared in its company statement at the time of the bid.

The account of events and dialogue between the two Chairmen/CEO and the reasons behind the move from agreed merger to contested bid were reported in the Financial Times and Telegraph editorials enclosed. The accounts of clashes of opinion, events and the fatal flaws which caused the break-down in negotiations, seemed to revolve around some key issues:

- Carillion pitched a straight forward Merger that would give Balfour shareholders 51 per cent of the combined company, though the line-up of top management made it clear it was a takeover.
- Balfour Beatty had the sense that Carillion had been disingenuous and was moving the goalpost over the Brinkerhoff sale at the last stage and didn't feel they had acted in good faith.
- To add to the anger, Balfour's executives learnt that Carillion had already approached banks some weeks prior to ask for a debt deal (ie. A Takeover) that included Parsons Brinkerhoff in the combined business.
- But Balfour was to reject the third and final offer, which represented a 36 per cent premium to the average price of Balfour shares in the month before news of the takeover deal leaked
- However, it is a fact that it was Balfour's board, rather than its shareholders, who decided the fate of the merger.

Whether the two companies should have buried their differences and reconsidered their opportunities to reopen discussions after 6 months is a question unanswered. Several analysts described the abortive merger talks as a missed opportunity. The two chairmen were likely still not talking after the Takeover Panel's six-month cooling period. However, with the change in leadership at Balfour Beatty, maybe it's time to repair relations, and re-open dialogue."



THANK YOU

"The Opportunity for a Carillion Balfour Beatty Merger passed us by in 2014. New focus is on independence and The Risk Reward Assessment and focus on short term shareholders' return are always priorities for Publicly Listed Companies. The option that interests me is that of involvement in long term international Infrastructure Development, Public Private Partnerships, and Global Business Development. That leads me to promote to you the Think Big idea of forming a future Global British Infrastructure Group, maybe initially just as a Joint Business Development Initiative in New Markets, but eventually as an integrated Global Infrastructure Investor, Designer & Constructor, and Support Services and Facilities Management Company. The route to do so will be through a Merger of the UK's largest Construction Groups which offer synergy, complimentary skills & business strengths, and resource to put the combined Group on the World Stage to compete with its European, US, Chinese and other Global Competitors."

Greg Malpass
February 2016





EDITORIAL

Telegraph.co.uk**TELEGRAPH ACCOUNT**By [James Quinn](#), and [Ashley Armstrong](#)
02 Aug 2014

A couple of minutes before 7pm last Wednesday evening, Steve Marshall arrived at the offices of investment bank Lazard, on London's Stratton Street, less than a minute's walk from Green Park Underground station.

Flanked by a small number of senior colleagues and his own adviser, in the form of senior Goldman Sachs banker Anthony Gutman, the Balfour Beatty executive chairman was there for what he thought was to be a meeting to discuss a joint business plan if the construction company's planned merger talks with Carillion were to proceed.

"But when we got there, the subject was slightly different," explains Marshall. The 57-year-old boardroom veteran – the former chief executive of Thorn and Railtrack – was presented with a request that triggered, precisely 12 hours later, a statement from Balfour which would end two months of merger talks between the two FTSE 250 companies, and knock both companies' shares by more than 5pc as investors questioned what had happened to trigger such an abrupt end to what appeared to be relatively cordial discussions.

From Marshall's perspective, what happened at the meeting – where Carillion was represented by chairman Philip Green, chief executive Richard Howson and Lazard banker Nicholas Shott among others – was relatively simple. "It was a request that we don't sell Parsons Brinckerhoff [PB], which was obviously a major surprise."

During the short meeting, Richard Adam, Carillion's finance director, explained that following due diligence carried out by his team and external accountants, PB's earning stream was critical to making the two companies work together.

That is, at least, what Marshall remembers. Those present from Carillion remember a slightly different explanation. "It was not a U-turn," says a senior source who was at the fraught meeting, referencing the fact that the original statement confirming merger talks, released 10 days ago following media speculation, spelt out that the PB sales process would continue.

"The due diligence confirmed that PB is their one reliable, dependable income stream. We asked him to carry on with the process; we didn't tell him he had to stop the process," the source continued.

Carillion is said to have suggested the PB sale be slowed, until 2015, to allow the merger of the two companies to take place, and bed in.

The abrupt timing of the message was because Adam's team had not been able to assess Balfour's books until that point, the source went on. Whatever was said in that meeting room, the outcome was a rushed Balfour board meeting later that night, and a 7am statement detailing the end of the talks.

Marshall called Green at five minutes to seven on Thursday morning to let him know, but Green's phone was switched to silent, and so Marshall left a voice message. The collapse in

relations between the two men – who would have been working together, Green as chairman, Marshall as deputy chairman, had the deal gone through – is somewhat remarkable.

But those who watched the process play out over the two months since Carillion first approached Balfour on May 26 are convinced that Balfour's decision to end the talks is not the final step.

Carillion followed up Balfour's abrupt statement with a non-committal statement saying that it would consider its options. A hostile takeover is thought unlikely, due to cash requirements, and the fact that Carillion is a smaller entity in market capitalisation terms.

However, given the two companies' boards had already agreed the majority of terms – which included Marshall and colleagues negotiating from an original 51/49pc split in favour of Balfour to a greater outright majority for the larger company's investors – and who would fill which roles, to stumble on such a seemingly minor point seems perplexing to many investors. Marshall says that many of the conversations he had last Thursday and Friday with shareholders centred on Carillion's change of heart on PB.

PB is a US-based consultancy business which advises clients on major engineering projects. When the 2009 deal to buy PB was being proposed to Balfour shareholders, a slide deck at the time boasted it would help the company become "a global integrated leader in infrastructure services." Five years on, however, and that has not proven to be the case.

Balfour sources argue that the business actually creates dis-synergies, and works against the rest of the business as its presence does not sit well with clients, who would rather use third-party consultants. As such, Marshall and the rest of the Balfour board are intent on its disposal. But, from Carillion's perspective, without the business the merger does not add up financially. "All we said was, because of the visibility of their numbers, we can see how fragile it is, and how dependent on PB Balfour has become," says a source close to Carillion.

What is frustrating the erstwhile suitor, however, is the fact that it is Balfour's board – rather than its shareholders – who have decided the fate of the merger. It is understood the projections for the combination involve 50pc earnings accretion for Balfour investors, based on what are said to be relatively conservative assumptions. This is based on synergies understood to be north of £100m. But it is just not from a financial standpoint that Balfour stood to benefit.

Critics of Balfour point to Marshall's long reign over the company. He has been chairman for five and a half years, and a non-executive director for nine, and, having dispensed with the services of Andrew McNaughton in March, following the company's third profit warning in less than two years, is now executive chairman. The 105-year-old company is run on federal lines, by geography and business, with what is said to be little integration between the two.

Conversely Carillion is run on a more integrated basis, with a centralised management team, strong systems and considerable visibility on earnings from long-running projects, which are the lifeblood of the construction and engineering sectors. It also, unlike Balfour, has a respected chief executive in Howson, who was due to take on the same role had the merger gone to plan.



Investors spoken to this weekend are unimpressed by the collapse in talks. Some, as reported, are unhappy that Carillion appeared to be insisting on holding on to PB for the merger to continue. Others, however, are unhappy that Marshall and Balfour's board seemed to take the possible end of the PB sale process as a personal affront.

A number spoken to indicated they will try to get the two sides back around the table ahead of the August 21 Takeover Panel deadline which remains in place. It may be that Balfour's board will prefer to remain silent until August 13, when it is due to publish half-year results, which Marshall said in an interview on Friday would see strong revisions to the holding value of part of its investment arm.

"To walk away from the talks in such a manner suggests that management may not realise the delicacy of its position," says analyst Stephen Rawlinson at Whitman Howard with regards to Balfour. "Of the circa £150m profit before tax this year, around £60m will come from operating profit at Parsons and circa £80m will come from PPP/PFI disposal gains. Parsons' sale makes a big hole in the operating profit when there is little certainty that turnaround can be achieved in the UK or that a new CEO will not take a much more cautious view of the profitability of the operations outside the UK."

Although Marshall insists he is talking to potential chief executives of a high calibre, how the abrupt cessation to the bid talks will be viewed by those in the process is unclear.

Certainly there are those close to the situation who believe it is possible that Carillion may come back, but a hostile cash bid would seem unlikely at this stage. "We believe PB to be the jewel in the crown and believe that Balfour Beatty should be sold as the sum of its parts rather than in parts," argues analyst Anthony Codling at Jefferies. "We would not be surprised if Carillion made a play for the whole of Balfour Beatty. However, due diligence during a hostile bid adds a level of complexity." The resumption of merger talks will also be aggravated by the PB disposal process which, as this newspaper reports, has four or five very active bidders.

Given the company's two chairmen are not understood to have spoken since Marshall's 6.55am voicemail to Green on Thursday morning, an early thawing of relations seems unlikely. But that does not mean that a fully fledged frost has yet set between the boardrooms of two of the UK's best known construction companies.



Carillion courtship that ended in tears

By: Gill Plimmer, Arash Massoudi.

Since May, Balfour Beatty has looked like an obvious bid target. That month, the FTSE 250 construction group issued its third profit warning and showed the door to Andrew McNaughton, its second chief executive in less than 18 months, sending its shares to an 11-year low.

So when Philip Green, chairman of its smaller rival Carillion, picked up the phone a fortnight later and suggested a coffee, Steve Marshall, Balfour's executive chairman, quickly agreed.

A discrete and amicable coffee between the two industry veterans was followed by a wider discussion at Carillion's

Mayfair townhouse a few days later, along with Richard Howson, Carillion's chief executive, back from skiing in the French alps.

There was no sign of the acrimony that would come to characterise the explosive talks between the boardrooms of two of Britain's biggest building companies over the next few weeks.

Initially, a merger between the two companies appealed to Balfour as a way out of its troubles after it had been forced into competing for low-margin, smaller scale building contracts during the recession.

Carillion was attracted to Balfour's expertise in complicated projects, such as the construction of the new train station at London's Blackfriars bridge. Carillion's fortunes had improved in recent years at it moved away from building projects. It now draws just over two-thirds of its sales from service contracts, including from the Ministry of Defence.

"Carillion pitched a straight forward merger that would give Balfour shareholders 51 per cent of the combined company, though the line-up of top management made it clear it was a takeover. Mr Green would become chairman of the combined group, while Mr Howson and Richard Adams would retain their positions as chief executive and chief financial officer respectively in the new group."

An experienced negotiator, Mr Marshall rang his board with the offer. This was not his first attempt to get a better deal for shareholders, having extracted compensation from the government when it sought to nationalise his former company Railtrack.

Discussions were friendly but Balfour made it clear that its planned sale of its US design consultancy Parsons Brinckerhoff, with an estimated price tag of £700m, would proceed.

The two companies would meet several times over the next few days at the offices of Carillion's adviser Lazard in London's Mayfair district to agree terms of a deal.

Accepting that his nine-year tenure on the board was nearing an end, Mr Marshall also agreed to step down to deputy chairman and Balfour was allowed to nominate two non-executive directors.

On July 24, the story leaked and the two companies issued a joint statement saying discussions were continuing. The City reacted positively towards the prospect of a deal, with shares in both businesses surging and analysts enthusing about the benefits of a merger. But the friendly tone between the two companies was about to change markedly.

On the evening of July 31, Carillion summoned Mr Marshall to an urgent meeting at Lazard's offices where Mr Green insisted that Parsons Brinckerhoff should remain within the enlarged group to increase the earnings profile of the Balfour business.

To Balfour, this contradicted everything that had been agreed so far. Mr Marshall stormed out of the room to call an emergency phone meeting with board members that night. The board agreed. They were concerned the merged company would have £1bn debt and that should the deal fall through, Balfour's position would have been further weakened.

"It was a deal-breaker on so many levels," said one person close to the talks. "We had the sense that Carillion had been disingenuous and was moving the goalpost at the last stage when it had planned to move them along. We didn't feel they had acted in good faith."



The bid battle had turned toxic. Carillion launched a second offer and turned to Balfour's major shareholders in an attempt to destabilise its rival's board as the two sides became involved in an escalating war of words – publicly disputing the level of possible savings and synergies that a merger might produce.

To add to the anger, Balfour's executives learnt that Carillion had already approached banks some weeks ago to ask for a debt deal that included Parsons Brinckerhoff in the combined business.

Carillion's case was helped when Balfour brought forward its release of its financial results on 30 August, reporting a 30 per cent slump in underlying operating profits to £37m in the period to June 27 – of which £26m came from Parsons Brinckerhoff.

But Balfour was about to reject the third and final offer. This represented a 36 per cent premium to the average price of Balfour shares in the month before news of the takeover deal leaked, valuing Balfour at £2.09bn compared with £1.87bn. The abandonment of the deal has left Mr Marshall with six months to prove that Balfour can survive as an independent business.

Appointing a new chief executive and pulling off a sale of Parsons Brinckerhoff to WSP are top of the list. Several analysts have described the abortive merger talks as a "missed opportunity". But with the two chairmen still not talking, it could take a lot longer than the Takeover Panel's six-month cooling period to repair relations.

The battle between UK construction groups Carillion and Balfour Beatty has pitted a member of the old guard of City investment bankers against a rising star, *writes Arash Massoudi*.

Nicholas Shott- Representing Carillion was Nicholas Shott, 62, a City veteran and head of the UK investment banking at advisory firm Lazard. With coiffed silver hair and blue eyes, Mr Shott has reportedly earned the nickname "Blake Carrington" – a reference to the fictional oil tycoon from the 1980s US TV series *Dynasty*.

The sobriquet is also a reference to his roots in media banking. He has longstanding relationship with clients such as ITV and Pearson, the parent company of the Financial Times. Those media ties have helped serve him well in working on deals involving the ownership of broadsheets like the Daily Telegraph and the Evening Standard.

Before becoming a banker, Mr Shott worked in the newspaper business including as chief executive of the defunct Sunday Correspondent. A prominent Tory, Mr Shott turned his political connections into a role overseeing a 2010 review of the commercial viability of Local TV commissioned by then culture secretary Jeremy Hunt.

More recently, he has shown up on deals in and out of the media sector. He worked on BSkyB's acquisition of its German and Italian sister companies. He also spent this summer trying to keep a bid by Lazard's client Fyffes, the Irish fruit company, for Chiquita, a US rival, on track. Those merger plans have come under pressure after a bid by Brazilians seeking to acquire Chiquita at a premium.

Anthony Gutman- In Balfour's corner was Anthony Gutman, 40, a co-head of UK investment banking at Goldman Sachs.

Mr Gutman is identified by contemporaries as a "rising star" in the City, known for his polite manners and ability to work across a wide range of industry clients.

He started his career as an attorney at law firm Freshfields Bruckhaus Deringer before moving to Citigroup. There he trained under high-profile London bankers such as David Wormsley and Karen Cook. Despite being fast-tracked at Citi, Mr Gutman left for Goldman Sachs in 2007. By 2011, he was named co-head of UK investment banking with Mark Sorrell. He became a partner in 2012.

His recent work includes initial public offerings of private equity backed companies such as SSP and B & M. He has advised on some of the year's biggest mergers and acquisitions, working with Shire, the UK pharmaceutical company, on its £32bn deal with AbbVie, the US drugmaker. Mr Gutman also advised Imperial Tobacco on its deal to buy a portfolio of brands from its rival Lorilla



APPENDIX IV

HISTORIC COMPETITOR ANALYSIS THE 2007 CRASH "CASH IS KING"



Source: Analysis by G J Malpass

- The 2007 crash & lessons for M&A
- The Economic Cycles
- Work in Progress Valuation.
- Cash is King
- 2007 Competition Analysis
- 2010 Competitor Analysis
- The Analysis 10 years on (2017)

THE 2007 CRASH & LESSONS FOR M&A

2007 was a pivot year, and worthy of historic analysis, due to three phenomena:

- The Global Financial Crisis was about to have a heavy impact on the Global Construction market, and the access to Debt Finance in the market.
- There was a wave of Mergers & Acquisitions going on which was starting to lead to Consolidation in the Industry.
- The Liquidity and Cash reserves of some of the Major Construction companies was weak, and they were vulnerable as a result.

Due to the latter, some companies faltered and some companies divested their business or were acquired (eg. ROK went into liquidation as predicted by analysis over the page; Amec sold its Construction business to Morgan Sindall; Carillion acquired Alfred McAlpine; Taylor Woodrow Homes merged with Wimpey Homes; and Costain had yet another Rights Issue to replenish its cash shortfall).

Some companies currently have low reserves, and these weaknesses are coming to bear. Balfour Beatty is a case in point. Its problems are centred around operating losses in its core UK contracting business. Previously work had been won at wafer thin margins, and profits had been taken on projects before they ought have been.

The problem of accounting for Work-in-Progress is the Contractor's achilles heel. It is also so prevalent in the history of contractors that it is worthy of a Chapter on its own, because many Mergers and Acquisitions, or company liquidations are a result of Management not accounting properly for incomplete projects. Not even external auditors are able to assess true positions on hundreds of projects on a company's books. The way companies account for project cashflow and profits is a dark secret to many outside a company. The difficulty in valuing WIP has been, in the past, a "poison pill" for would-be acquirers of diversified groups with a construction division.

With the difficulties of predicting economic cycles and making sure there are sufficient reserves in the business, makes difficult work for acquirers and their due diligence.

THE ECONOMIC CYCLES

With respect to Balfour Beatty's recent dilemma and losses, an Analyst commented. "Construction can be the exact opposite to other industries and business models. New building projects are sensitive to changes in the economy which makes the workflow lumpy and difficult to predict. Contracts also tend to operate on wafer-thin profit margins at the best of times. A mistake on budgeting for building costs can blow a big hole in a company's profits. There is also considerable scope for aggressive accounting - particularly in terms of when profits are recognised. This makes them hard to understand which has led many investors to be wary of construction companies over the years."

During down-turns contractors call upon reserves to survive. A fall in Revenues can be hurtful in loss of staff, and a further cash outflow as a result. That is why companies sometimes bid so lowly to maintain turnover in recession. While interest rates were so high in the early 1990's playing the cash game was more important than operating profits.

The full analysis over the pages, draws a picture of an industry on the move in 2006 with another year of growth before a serious 2007 crash, just when some companies were low on cash, and quite simply some were cheating on the numbers then too.

The chickens came home to roost for a few. ROK went bankrupt, and was always a boom bubble about to burst, as all acquisitions were based on raiding Working Capital of acquired businesses to move onto the next - a flawed Acquisition Strategy. Costain did complete a Rights Issue and again diluted its Strategic Shareholders positions as they got tired of stumping up more cash. McAlpine got acquired by Carillion, and the industry rumbled on without any large company mergers at the top.



Accounting for reserves does not always provide the buffer. ACS of Spain declared a €2bn loss in 2012, due to losses in its contracting business and Iberdrola subsidiary. Had it not been a company of such scale it could have faltered. But it too, has been accused recently of accounting discrepancies in declaring profits, as well as corruption related accusations concerning government clients. It seems the industry always has more than its fair share of bad news.

Work in Progress Valuation.

Cash does not lie. Profits are an accounting term for dealing with cash flows to derive Profit which is subject to taxation, after relief for interest and depreciation.

The tell-tale signs for problems in a cash model must be understood, before embarking on an acquisition of a contractor. At due diligence stage they include:

- Comparing Operating Profits with operating Cash Flow. (Any large discrepancies need explaining).
- Monitoring (in the Notes to the Accounts) what the "Net Amounts due on Long Term Contracts" are.

The value of WIP and Working Capital is where the reserves are held, or where less conservative management have taken early profits. In some exaggerated cases, like Costain in the early 2000's even large outstanding Claims were taken to value on incomplete projects. In the case of Costain it precipitated a subsequent £75m declared loss when all was revealed in 2005.

Conservatism is always the prudent route to survival. Gross margins should not be recognised on newer projects, as businesses begin to be more conservative and robust, and not recognising margin until sufficiently through the life of the project is the hallmark of a wisely accountable contractor. What usually happens is a CEO will over-trade the project portfolio's profit position, then his (or her) successor will take write-downs and make provisions, so that positions are looked upon favourably when profitability returns, and some provisions written back also to the P&L account. It's not an honest game, and often goes on below the radar in the industry.

Costain was by no means alone. Many contractors have been caught or come under suspicion. Amey's demise in the 1990s was due to large over-declared profits; interserve was investigated over accounting irregularities, ACS of Spain, as mentioned was also reported. Balfour Beatty clearly has had to deal with either loss making projects, or projects where profits were taken too early. Amec's Construction business, after declaring record profits, swung quickly into free fall, as its CEO left, and the business sold off to Morgan Sindall. The list goes on.

The Audit risk in valuing WIP is also one of determining the amount of revenue to be recognised on projects. It requires management to make significant judgements and estimates including the cost to complete, and the identification of, any other costs that might arise, the impact of any changes in scope of work and the recoverability of work-in-progress and receivables balances.

Revenue recognition and contract accounting is a significant risk for all contractors. Interserve Risk Register (see below) rates this the highest risk in terms of impact and probability.

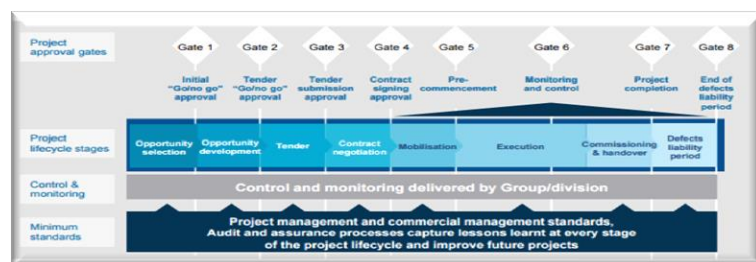
Balfour Beatty has implemented new Management Accounting procedures during a project's life span (see above) as did Costain under its new CEO in the mid 1990s

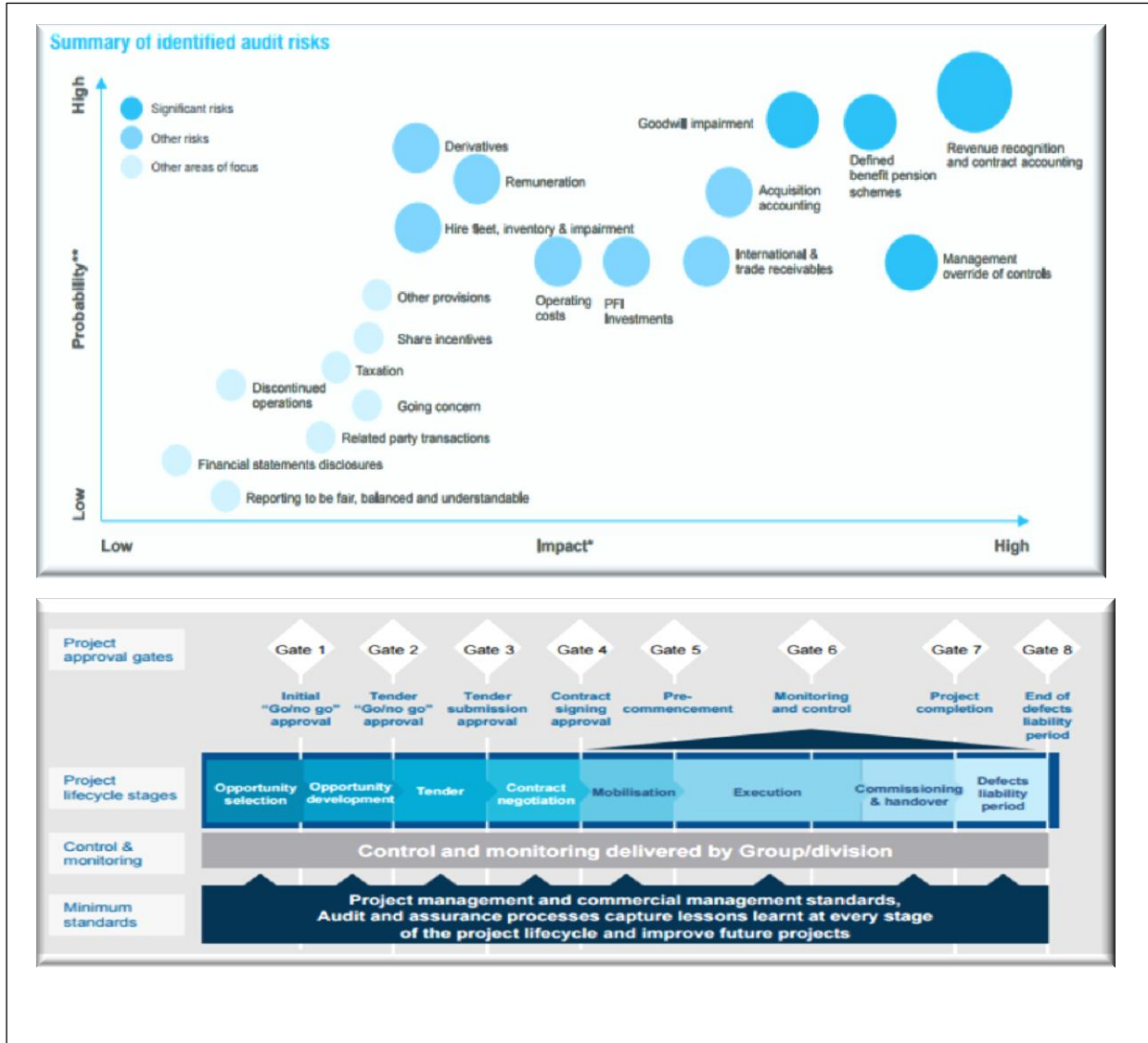
The systems differ, but are the same in their aim- to predict the final cash position on yet to be completed projects. Project Managers will tend to hide problems, and understate valuations when there are reserves. The envelope in valuing a large contractors' working capital and specifically its WIP can run into tens of millions of pounds.

Cash is King

Some of the key issues/ items to watch:

- Over focus on top-line growth (and more generally EBITDA) at the expense of cash; which has led to lack of gearing
- need to view profit as secured once realised in cash
- Working capital stress through the supply chain is leading to businesses taking active steps to resist and/or pass down cash pressure to subcontractors
- Importance of evaluating and managing working capital profile across contract portfolios and tender pipeline
- Pressure on balance sheets to support bonding requirements, and liquidity levels to cope with lumpy cash flows (upfront costs/deferred receipts)
- Absence of a cash culture reflecting the historic lack of gearing





Sources: Interserve and Balfour Beatty Annual Reports, and Presentatio



MARKET ANALYSIS

www.thinkbigpartnership.com

**Analysis
G Malpass
2007**

Balfour Beatty

carillion

amec

KIER

MORGAN
SINDALL

GallifordTry

ROK

alfred
malpine

COSTAIN

YEAR	VALUATIONS					SALES		PROFIT / EARNINGS					OPERATING CASH FLOW		
	June 2007 Mkt Cap	2006 Net Assets	Goodwill in Mkt Valn (Mkt Cap- Net Assets)	NPV Post Tax OCF (Av 3 Yr Op Cash Flow x 15)	PE 07 Mkt Cap/ 06 Post Tax OCF	Turnover	Growth in Turnover	PBT	PBT Margin	Operating Profit	Inv Income	Fin Costs	Net Op Cash Flow Before Tax	Difference (Op Cash Flow-Op Profit)	Average Annual Difference (3 Yr Op Cash Flow- 3 Yr Op Profit)
2006	1,955	387	1,568	2,195	10	5,852	19%	125	2.1%	124	26	-25	217	93	62
2005						4,938	17%	141	2.9%	131	56	-46	167	36	
2004						4,238		120	2.8%	92	56	-28	148	56	
TOTALS							38%	386		347	138	-99	532	185	
2006	1,176	434	742	754	46	3,593	57%	68	1.9%	41	25	1	24	-17	13
2005						2,284	15%	52	2.3%	48	0	4	69	21	
2004						1,985		67	3.4%	53	10	4	88	36	
TOTALS							81%	186		141	35	10	181	40	
2006	1,887	495	1,392	579	25	3,229	-35%	-109	-3.4%	-7	-98	-4	65	72	-29
2005						4,943	6%	26	0.5%	100	-53	-22	98	-2	
2004						4,658		91	2.0%	124	-14	-19	-34	-157	
TOTALS							-31%	8		217	-164	-45	129	-88	
2006	809	109	701	821	9	1,838	13%	59	3.2%	59	0	-0	102	43	16
2005						1,623	10%	55	3.4%	49	7	-1	90	41	
2004						1,477		42	2.9%	43	0	-0	8	-35	
TOTALS							24%	156		151	7	-2	200	49	
2006	647	142	505	664	14	1,496	15%	48	3.2%	46	4	-2	63	17	17
2005						1,296	6%	42	3.2%	40	4	-2	27	-13	
2004						1,219		34	2.8%	33	3	-2	80	47	
TOTALS							23%	123		119	11	-7	169	50	
2006	610	120	490	83	185	852	19%	34	4.0%	38	2	-5	12	-26	-17
2005						719	3%	27	3.8%	31	0	-4	12	-19	
2004						695		23	3.3%	25	1	-3	17	-8	
TOTALS							22%	84		93	3	-12	41	-52	
2006	413	100	313	177	12	689	24%	20	2.9%	24	-1	-3	39	15	-3
2005						556	12%	16	2.9%	20	-0	-3	8	-12	
2004						495		12	2.4%	14	0	-2	2	-12	
TOTALS							39%	48		58	-2	-9	49	-10	
2006	454	263	191	233	27	1,123	5%	19	1.7%	16	2	1	19	3	-4
2005						1,072	15%	25	2.3%	11	17	-3	12	1	
2004						931		8	0.9%	29	-17	-4	13	-16	
TOTALS							21%	52		56	1	-5	44	-12	
2006	171	-55	226	-98	na	886	15%	-62	-7.0%	-58	-6	3	-32	27	1
2005						773	11%	25	3.2%	9	17	-1	16	8	
2004						695	7%	11	1.5%	10	-1	1	-9	-19	
2003	4YR ANALYSIS					650		16	2.5%	5	10	1	-6	-11	
TOTALS							36%	52			20	4	-30	4	

WORKING CAPITAL					CASH FLOW DETAILS					NET CASH		Acquisition Details
Working Capital (C-A-CL)	Working Capital as % T/O	Changes in Working Capital	Net Amounts Recoverable on Contracts WIP	Changes in Net Amounts Recoverable on Contracts WIP	Net Op Cash Flow After Tax	Net Cash Flow from Investmt	Net Cash Flow from Financing	Overall Annual Net Cash Flow	Overall Last 2 Years Net Cash Flow	Forex Adjusted Cash & Cash Equivs		
-321	-5%	-187	-13	44	193	-117	-78	-2	-95	308	2007-Centex (184m); Birse(32m);Pennine; Charter; Edgar Allen	
-134	-3%	-111	-57	na	139	-71	-161	-93		313	SBB; Exeter Airport	
-23	-1%		na		107	145	-43	209		406		
		-298			439	-43	-282	114				
-165	-5%	-196	393	240	25	-63	10	-27	-48	143	Mowlem (350m) Citex Professional Svcs	
31	1%	-50	153	15	50	-51	-20	-21		170	Planned Maintenance	
81	4%		138		76	22	-24	74		190		
		-246			151	-91	-34	25				
220	7%	15	9	-2	74	626	-584	117	177	406	ATM; FAST; Game Nuclear NCC; PK SAS	
205	4%	-19	11	na	102	-94	52	60		330	Domec; Environ Advice, Paragon (34m)	
224	5%		na		-60	19	-25	-66		270	Pheonix Imperat	
		-4			116	551	-556	111				
104	6%	34	19	-10	91	-27	-11	53	104	141	Hugh Bourn Homes	
70	4%	-1	29	4	77	-18	-9	51		88	Aswood Homes	
71	5%		25		-4	-52	1	-54		37	Op CF v Op Profit reflects inv in Tudor Homes/ £52m in Land Bank	
		34			164	-96	-19	49				
49	3%	13	119	-1	48	-10	-14	23	22	95	2007- Amec Const (26m); 2006- Gleeson Rail (22m)	
35	3%	13	119	32	15	-5	-11	-1		72	Benson Construction	
23	2%		87		70	-4	-8	59		73		
		26			133	-19	-33	81				
137	16%	60	65	35	3	-17	45	32	28	18	2007- Linden Hdgs (109m) 2006- Morrison (42m); Charldale (67m)	
77	11%	14	30	7	4	0	-7	-4		-14	Pentland	
64	9%		22		10	-1	-11	-3		-10		
		74			17	-18	27	26				
43	6%	-13	47	5	34	1	-21	14	38	45	2007- SOL(19m) 2006-EMB; Tulloch (32m); Kingfisher	
56	10%	25	42	-6	6	-10	30	25		32	Top Constrn; Durose & Gourland(11m)	
31	6%		48		-4	7	2	5		7	Team; John Dickie	
		12			35	-2	10	43				
49	4%	-23	53	-22	17	-9	-11	-3	-3	38	2007- Enviros Group	
72	7%	13	75	-28	14	-2	-12	0		41		
58	6%		102		16	-21	-20	-26		41	UK Power Constrn	
		-10			47	-32	-44	-29				
-61	-7%	-66	36	-29	-24	3	1	-20	-9	55		
5	1%	4	65	-2	15	-5	1	11		75		
1	0%	-1	66	35	-11	2	1	-8		64		
2	0%		31		-6	0	1	-5		72	extra 30% CWA Plc	
		-62			-26	1	4	-21				

Balfour Beatty





2007 COMPETITION ANALYSIS

Commentary on Company Performance
& Critical Analysis Of Acquisition Strategy

(Based on Attached Cash Flow Analysis July 2007)

BALFOUR BEATTY
"Industry Star or Hairy Bottomed Bully ?"

Master Contractor, Industry traditional Raper & Pillager with aggressive Commercial Teams; Late Payers; Strong Op Cash Flow & 24 PFI Trophies. But after acquiring Centex in 2007 depleting its Cash Pile it now has Enormous Negative Working Capital & is committed to continued Turnover Growth to maintain Cash Flow. Centex maybe a good buy but may turn out to be Cemtex for Balfours! Having paid \$350m for it let's hope the Work-in-Progress was conservatively valued or Balfours Chairman Sir David might be getting a 'Dear John' letter from Centex's Finance Director. Any hidden losses in Centex will impact on BB's strong future cash flow.

CARILLION
" Acquisitive Mr Gullible or CEO chasing Earnings Growth (his own!)"

With its price driven up by Balfours counter bid ploys and battling egos, Carillion paid too much for Mowlem incl 400m goodwill, inherited losses & negative Cash Flow. Post Acqn Op Cash Flow is weak, & now there's High Neg Working Capital & 563m questionable Gross Receivables on live Contracts. As a result the Group is Volume driven and either Margins will suffer or combined T/Os will fall with resultant Cash Outflow. Carillion is Tarmac gone soft, but may now need to re-recruit some old Claims QSS. PFI maybe the

AMEC
"Disposals are Order of the Day as The Chickens come home to Roost"

Sir Peter Mason was already knighted so it was unnecessary & arguably criminal to have declared record profits in 2004 when the Business was haemorrhaging cash from Operations. The Provisions made were inadequate and the company was forced to sell Core businesses to pay back debt & survive. ADL asset backed Development business had to go with the DPS 'Old Dog' (Negative Profit/Cash Flow/Net Asset business) in order for Morgan Sindall to take the combined businesses on. The Rump left after these sell-offs does have Cash to invest but is Over Valued at 1.9bn. Depends what is done with the money. Watch tis space.

GALLIFORD
"Good Performer Upping Stakes to acquire Morrison & Linden Holdings"

Difference in Operating Cash Flow and Operating Profit is again misleading here because Galliford is a housebuilder and Land is not accounted for as an investment but as Work in Progress. Land purchases accounted for WIP increase of 60m and 20m in 2006 & 05 respectively. 2006 Working Capital changes included 16m decrease in Creditors. A New Shares issue helped fund the acquisitions of Morrison (42m) and Linden (109m). A good company but its move from 30m to 65m of declared Net Amounts Recoverable on Contracts represents the risk in Morrison WIP. Morrison will also dilute Galliford's high Margins. Lets hope Galliford did its Due Diligence because just to be acquired companies do not generally have the most conservative accounts.

MORGAN SINDALL
"Champagne Charlie talks up Share Price & AMEC buy causes Indigestion"

Strong Op Cash Flow in 04 & 06 suggests a level of reserves & declared Recoverables on Contracts in WIP credible. Augmented by new Funding has since acquired Gleeson Rail & now Amec Developments & Design & Project Services, novating 150 projects which doesn't come without risk; not to speak of 55m Goodwill, Neg Assets of 29m & Neg Cash Flow of -18m expected in 2007. It will take more than alka-selzer to settle these tummy rumblings; and my money is on lasting migraines & ulcers rather than a short term hang-over after this party. Gleeson Rail Acqn was strategic with London spend, and so was Carillion Social Housing in 2001, but Amec acqn is a risky strategy driven by testosterone not logic, and I'm puzzled the City didn't agree. What was an under-priced stock is so no longer, until Amec WIP is proven trouble-free.

KIER
"This Cash Cow is getting Fat & should Invest More!"

Maintains High Level of Cash & Cash Flow; Good Steady Margins; a Strong Working Capital, as well as funding small bolt-on Housing Company Acquisitions. Land accounted for in WIP so 04's 50m purchase distorts Op CF v. Op Profit comparison analysis. Company has had 25 years Profit Growth & 23% EPS Growth. Ex MBO companies are often cautious in their spending & Colin Busby was a Past Master but Kier is now a PLC Cash Cow & this is one company that should be more Acquisitive or aggressive in its investment portfolio, I estimate its Future Cash Generating Value is worth more than Market Cap, so it is perhaps vulnerable.

ANALYSIS OF 3 YEAR CASH FLOW , MOVEMENTS IN WORKING CAPITAL, WORK-IN-PROGRESS & CONTRACT RESERVES

Source:: Analysis by G Malpass, 2007

**COSTAIN****"Urgent need to Strengthen Balance Sheet as Cash Crisis Looms"**

Difference in Op Profits and Op Cash Flow was cum 32m in 03&04 and a 35m increase in Value of Net Amounts due on Contracts a 'Poisoned Chalice' from Stuart Doughty in 2004. The 2006 61m Negative Working Capital & 20m Net Cash Outflow means Costain must now avoid any further Operating losses or fall in Volume to avoid further Cash Outflow and potential Cash Crisis/Demise. A 250m fall in Order Book over 18 months if not replenished could result in 18m Cash Outflow. It cannot grow by Major Projects as Bonding Requirements will exceed Facilities; It is not Vulnerable to Take-Over while its Shareholders stand firm and the Pension Deficit remains a Poison Pill, but it may be forced to sell its Spanish & PFI assets to survive, or be held to ransom by its Banks or its Mexican EPC Client imposing LADs. Alternatively it could Issue New Equity. To convince Shareholders of the Value and Non Diluting effect of doing so, it should plan to use the proceeds to acquire a Business (paying min Goodwill) with Cash & Tangible Assets to prop up the Balance Sheet as well as Synergy to provide the platform for growth of core Civils, and investment in PFI/Land Asset businesses. Problem is getting the Share Issue under-written. Hitherto Key Shareholders have been reluctant to dilute; and may see a Take-Over of Costain as best way to realise short term Shareholder Value and exit the stock. For Costain to stay outside M&A activity now seems unlikely. Understanding Main Strategic Shareholders aspirations is key to Forward Strategy.

ALFRED McALPINE
"Dear Old Uncle Alf"

Caught with his Fingers in the Till at Slate subsidiary which knocked 200m off its Market Cap and will impact 2007 Results by up to 30m in cash. Before that Alf lost time and money defending a court injunction from Brother Bob about using Dad's name, and before that he sold the family silver (A McAlp Homes) to Wimpey. All this before Alzheimers was diagnosed. The illegalities/ in-competences seem to have attracted the attention of would-be Acquirer Russian Racketeer Businessman Oleg Deripaska. Beneath all this underlying PBT, and Cash Flow are good; WIP Net Amounts due from Contracts is down 50m & probably conservatively valued. 06 Change in Working Capital is a prudent 21m of 'Accruals & Deferred Income'. With 30+m in Cash, PFI's valued at 40m, & Net Assets 260m life goes on and could get better.

ROK**"Darling of Small Cap Mkt with an Insatiable Appetite for Acquisitions or a Pyramid Buyer?"**

Seems an Enigma, but when things look too good to be true they normally aren't. CEO Garvin Cr/Snook is clearly talented. But habitually raiding Working Capital Cash from Acquired businesses to pay off Loans, or diluting Shareholdings with New Share Issues to Vendors to place- is NOT cricket! Over-priced & Over-Sexed up by Analysts helps feed the frenzy (Sol 21m, Tulloch 31m, Kingfisher, TopCon, Durose, Team, Dickle & now in 2007 Linden 108m). Maybe ROK should assume its new subsidiary's name TopCon? Balance Sheet Net Assets of 100m include 83m Goodwill/Intangibles; Negative Liquid Assets/Net Debt up to -15m through 2002-05; 20% Trade Debtor/Creditor imbalance; poor Operating Cash Flow until 2006 Acquisitions. Newly acquired businesses are all going to have to maintain volume or grow organically or the Acquisition Bubble will burst.

Post Mortem Comment(2016):

- Balfour Beatty did eventually fall foul of bad valuation of WIP, and project profit taking.
- Kier did start investing in Acquisitions finally, with mixed success.
- Costain did have a Rights issue to deal with its Cash Crisis.
- Alfred McAlpine did end up getting taken over by Carillion.
- ROK did go Bankrupt.



Competition in 2006/2007

Consolidation in the industry was continuing apace with further Mergers & Acquisitions during 2007 before the economic crisis. Acquisitions had been made in expanding Regional Presence and in diversification into new specialist businesses such as Nuclear Solutions or Maintenance. Generally Acquirers had received widespread investor/analysts support up until then.

The trend in the UK Industry for a small number of Larger Firms dominating in a rising Market was already resulting in Polarization with the smaller firms finding it harder to compete on large projects and PFI.

M&A Deals (2006-2007 Prior to Financial Crisis)

Company		Size			
Seller	Buyer	(£m)	Year	Comment	
Accord	Accord	Enterprise	undisclosed	2007	Maintenance/Highways
Cowin Group	Cowin	Balfour Beatty	52	2007	Regional Builder S West
Jabez Holdings	Jabez	MITIE	36	2007	Maintenance Business
Keep Moat	Keep Moat	HBOS / MBO	800	2007	Large Social Housing Bldr
International Nuclear Solns	International Nuclear Solns	Babcock Intn	39	2007	Nuclear Solutions Specialist
Crest Nicholson	Crest Nicholson	Castle Bidco	710	2007	General Contractor
Nukem	Nukem	Vinci	120	2007	Nuclear Services Provider
Sol	Sol Construction	Rok	19	2007	Midlands Regional Builder
Enterprise	Enterprise	Si	387	2007	£500m T/O Maintenance Comp
Barbury Holdings	SOL Construction	ROK	21	2007	Midlands Regional Builder
Plc Merger	Wimpey	Taylor Woodrow	4,700	2007	UK No. 1 House Builder
Centex Inc	Centex (USA)	Balfour Beatty	184	2007	US\$2.2bn T/O House Builder
Amec Plc	Amec Controc	Morgan Sindall	26	2007	£720m T/O Civils & Urban Dev
Linden Holdings	Linden Holdings	Galliford Try	109	2007	£290m T/O Urban House Bldr
McNicholas Plc	McNicholas Plc	Skanska UK	50	2006	£170m T/O Utilities Contractor
Carillion Plc	Barclay Mowlem	Laing O'Rourke	30	2006	£400m Australian Contractor
Mowlem Plc	Mowlem Plc	Carillion Plc	350	2006	£1.6bn UK PFI/Gen Contractor
AWG Plc	Morrison Constrn	Galliford Try	42	2006	£340m UK Regional Civils
Birse Plc	Birse	Balfour Beatty	32	2006	£330m UK General / Civils
Various	Tulloch & Kingfisher	ROK	50	2006	Mid Social Hsg + Scottish Bldr
Gleeson Plc	Gleeson MCL	Morgan Sindall	23	2006	Rail Infrastr Divof Gleeson
Gleeson Plc	Gleeson MCL Ltd	Black & Veatch	19	2006	Property & Constn Gleeson

Global Competition

With expanding markets home and abroad and cross-border acquisitions the ENR's Top 225 Global Contractors list for 2006 included 21 companies with more than US\$10 billion in revenue in 2006, 131 firms over US\$1 billion. Balfour Beatty ranked Number 1 in UK was ranked 23rd in the ENR Rankings

Vinci (France)	\$32.7bn
Bouygues (France)	\$25.0bn
China Railway Engineering Corp (China)	\$21.3bn
Hochtief (Germany)	\$19.8bn
Grupo ACS (Spain)	\$18.5bn
China Railway Construction (China)	\$17.3bn
China State Construction (China)	\$16.1bn
Skanska (Sweden)	\$15.7bn
Bechtel (USA)	\$15.4bn
China Communications CHEC (China)	\$14.7bn

Source: ENR

Of the Total Revenue of Top Ten of c. US\$ 200bn, 36% was outside companies' home markets. Bouygues, Skanska and Hochtief then rumoured to be seeking new acquisition targets in the UK, and ACS having recently acquired a 25% equity stake in Hochtief which also owns Leightons of Australia (now named CIMIC).

2006 UK Rankings

The Top Ten companies in the UK Rankings enjoyed an average Growth in Turnover of 23% on the previous year and an average Growth in Pre-Tax Profits of 23%, indicating a strong growth trend without dilution of Profit Margins, up until the financial crisis.

	COMPANY	TURNOVER		TURNOVER GROWTH	PRE-TAX PROFITS £ m		PRE-TAX GROWTH	PRE-TAX MARGIN	EMPLOYEES	
		Latest	Previous		Latest	Previous			Latest	Previous
1	Balfour Beatty	5,852.0	4,938.0	18.51%	125.0	141.0	-11.35%	2.14%	28,862	27,592
2	Carillion	3,593.4	2,284.0	57.33%	67.6	51.9	30.25%	1.88%	31,576	15,628
3	Laing O'Rourke	3,037.3	2,271.6	33.71%	44.5	34.3	29.85%	1.47%	24,837	22,453
4	Kier	1,838.3	1,623.2	13.25%	59.1	47.8	23.64%	3.22%	8,716	8,299
5	Morgan Sindall	1,497.0	1,297.0	13.11%	47.6	41.7	14.15%	3.18%	5,552	5,250
6	HBGNuttall	1,454.1	1,246.3	16.67%	61.6	48.1	28.07%	4.24%	5,280	4,828
7	Interserve	1,408.5	1,214.5	15.97%	15.1	36.2	-58.29%	1.07%	18,386	11,587
8	Newarthill	1,317.6	1,110.5	18.64%	53.1	23.6	125.10%	4.03%	2,543	2,278
9	Arney	1,309.6	1,219.2	7.42%	88.7	54.0	64.33%	6.77%	9,323	8,374
10	Mitie	1,228.8	935.6	31.34%	56.6	50.5	12.08%	4.61%	42,367	32,421
11	Bovis Lend Lease	1,135.0	1,040.5	9.08%	-51.7	-23.9	-116.64%	-4.56%	2,315	2,084
12	Alfred McAlpine	1,123.2	1,072.2	4.76%	18.7	24.7	-24.29%	1.66%	8,613	8,878
13	Vinci / Ringway	1,031.2	989.9	4.18%	41.6	27.3	52.37%	4.04%	4,089	3,930
14	Morrison plc	1,017.9	897.6	13.40%	39.9	10.2	391.18%	3.92%	7,655	6,880
15	Babcock	988.3	836.7	18.12%	57.0	41.3	38.01%	5.77%	9,643	8,763
16	Skanska	920.8	800.9	14.97%	38.8	36.2	7.20%	4.22%	3,636	3,390
17	Keller	920.2	731.0	25.88%	83.7	48.8	71.50%	9.09%	5,698	5,110
18	Costain	886.3	773.2	14.63%	-61.7	25.0	-346.80%	-6.96%	3,319	3,186
19	Wates	885.6	697.6	26.95%	48.5	10.6	358.95%	5.47%	2,002	1,763
20	Galliford Try	851.5	718.5	18.51%	34.5	27.4	25.96%	4.05%	2,436	1,956

Source: Construction News Top 100



The Gravity of the Situation



"What goes up must come down"

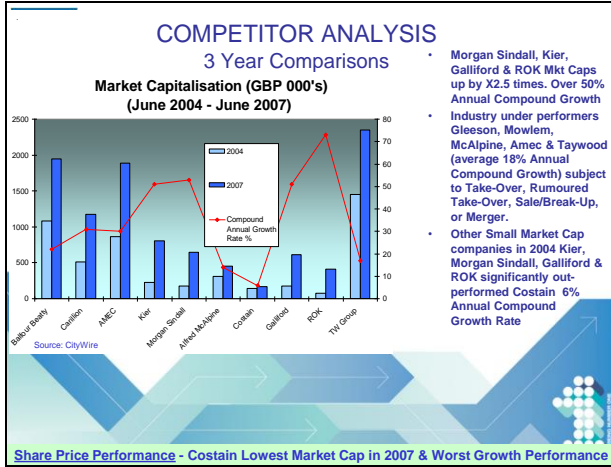
Management Style



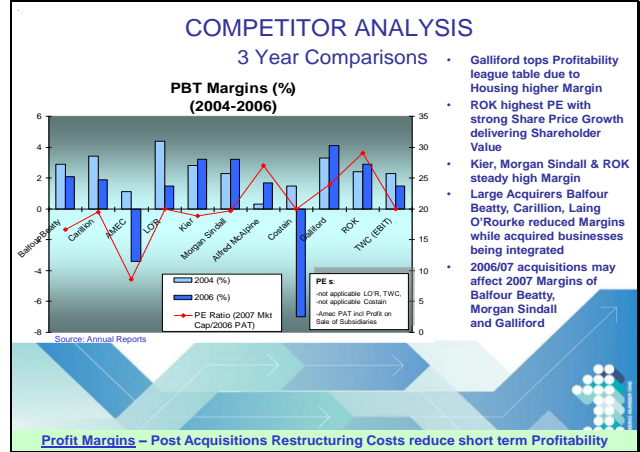
"The role of HR"



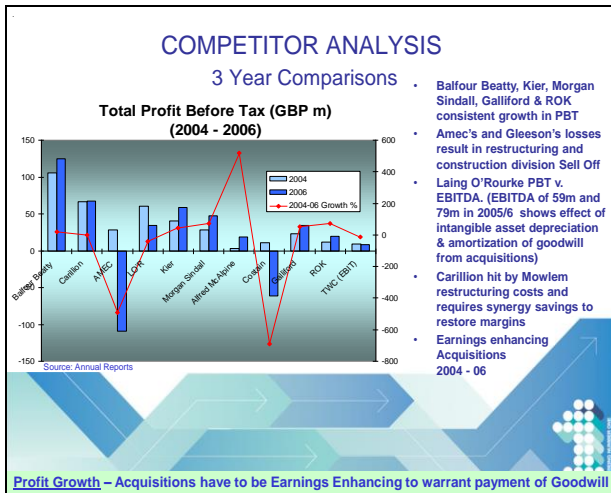
COMPETITOR ANALYSIS (2007)



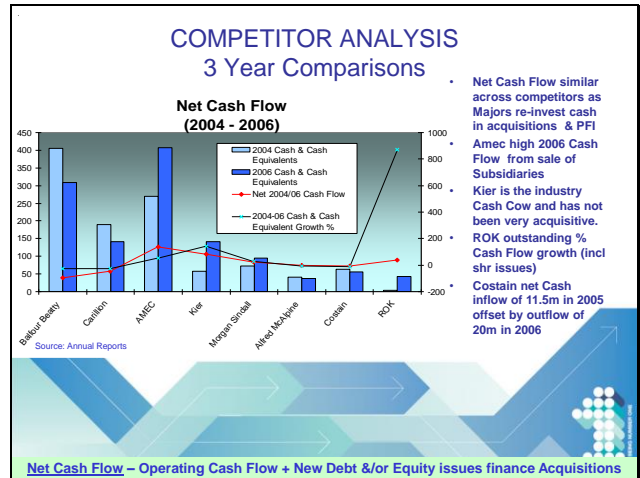
- Morgan Sindall, Kier, Galliford & ROK Mkt Caps up by X2.5 times. Over 50% Annual Compound Growth
- Industry under performers Gleeson, Mowlem, McAlpine, Amec & Taywood (average 18% Annual Compound Growth) subject to Take-Over, Rumoured Take-Over, Sale/Break-Up, or Merger.
- Other Small Market Cap companies in 2004 Kier, Morgan Sindall, Galliford & ROK significantly out-performed Costain 6% Annual Compound Growth Rate



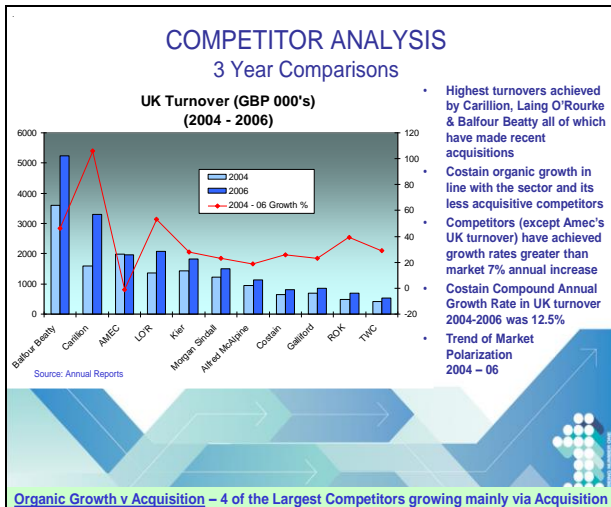
- Galliford tops Profitability league table due to Housing higher Margin
- ROK highest PE with strong Share Price Growth delivering Shareholder Value
- Kier, Morgan Sindall & ROK steady high Margin
- Large Acquirers Balfour Beatty, Carillion, Laing O'Rourke reduced Margins while acquired businesses being integrated
- 2006/07 acquisitions may affect 2007 Margins of Balfour Beatty, Morgan Sindall and Galliford



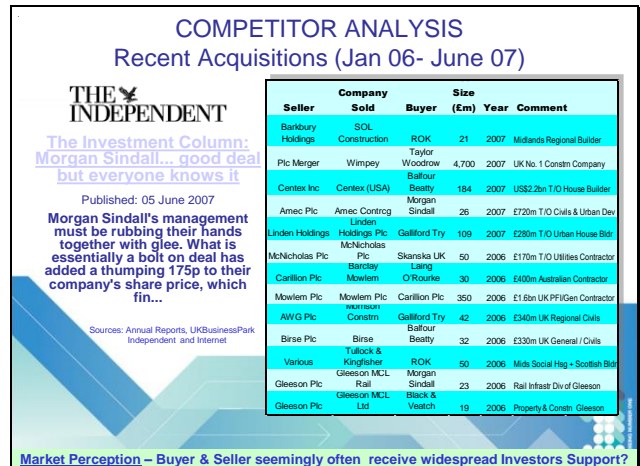
- Balfour Beatty, Kier, Morgan Sindall, Galliford & ROK consistent growth in PBT
- Amec's and Gleeson's losses result in restructuring and construction division Sell Off
- Laing O'Rourke PBT v. EBITDA. (EBITDA of 59m and 79m in 2005/6 shows effect of intangible asset depreciation & amortization of goodwill from acquisitions)
- Carillion hit by Mowlem restructuring costs and requires synergy savings to restore margins
- Earnings enhancing Acquisitions 2004 - 06

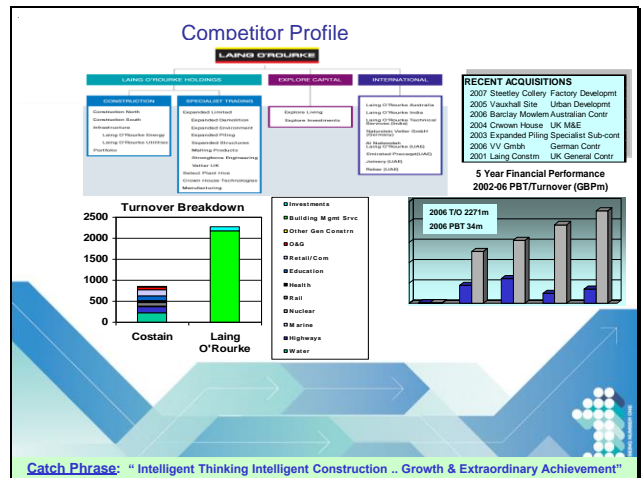
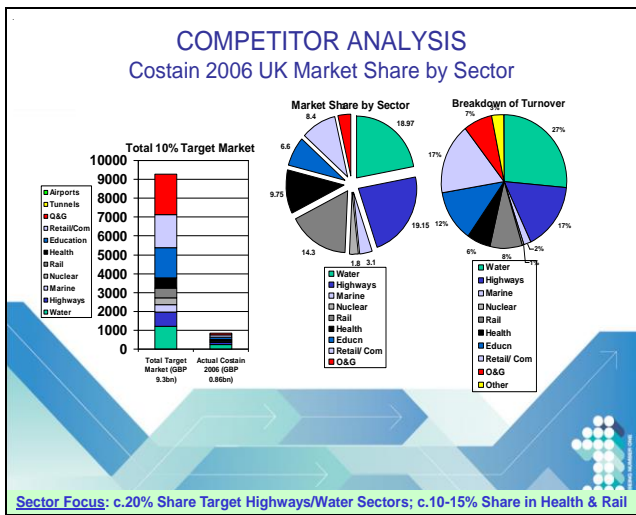
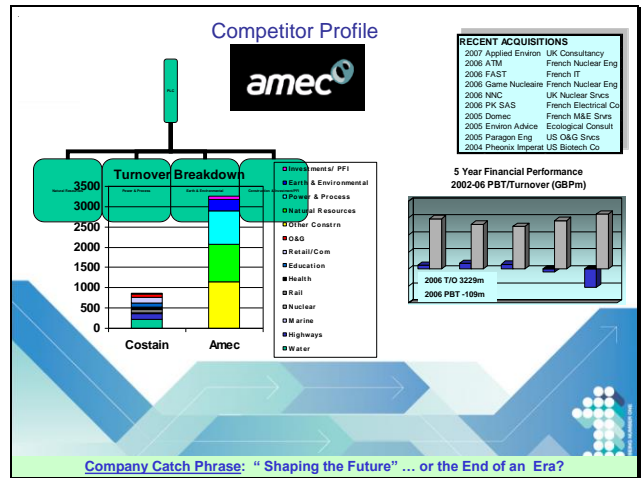
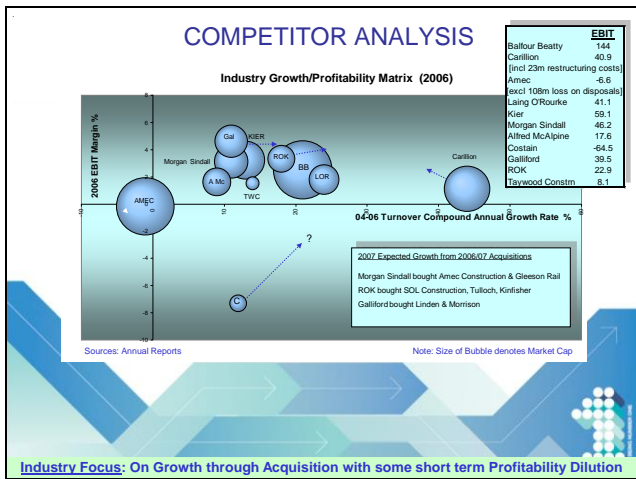
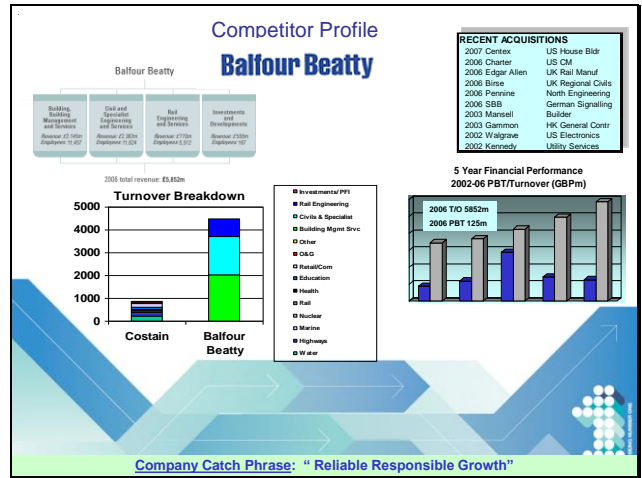
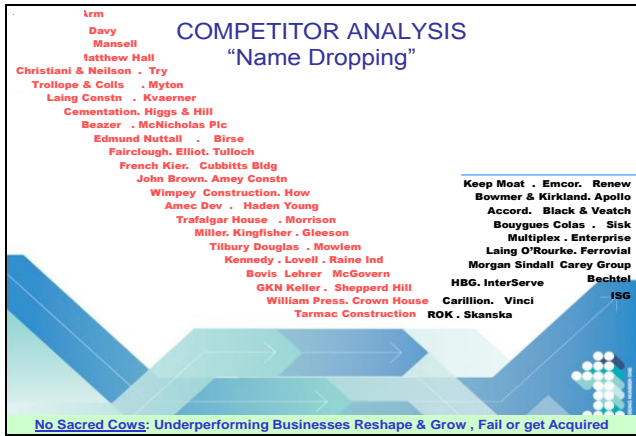


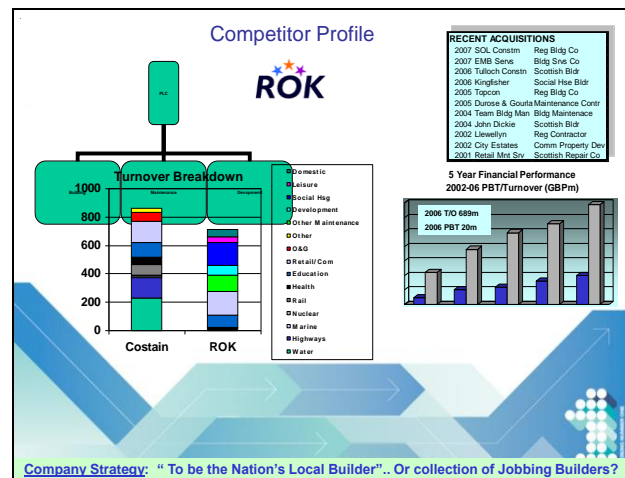
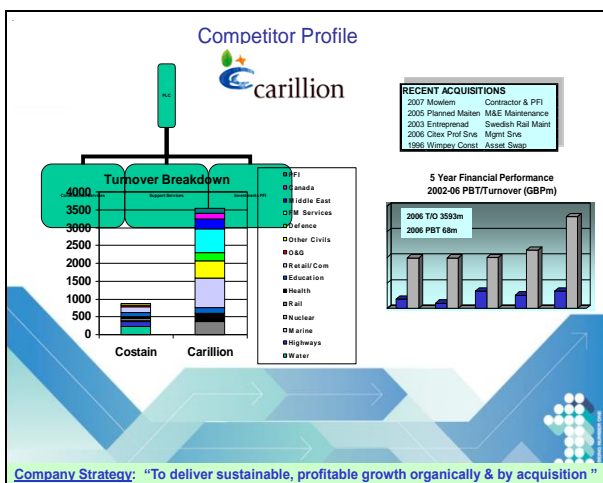
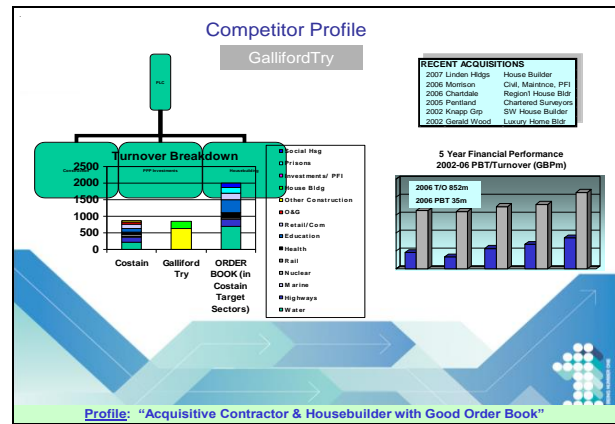
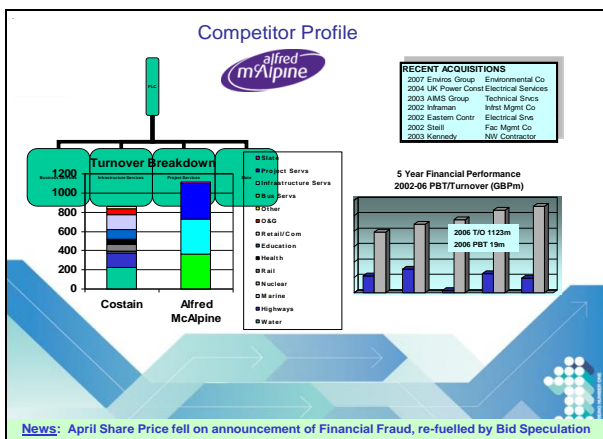
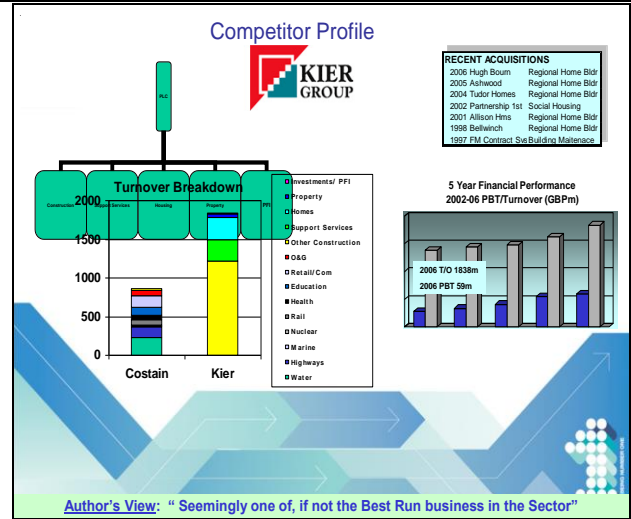
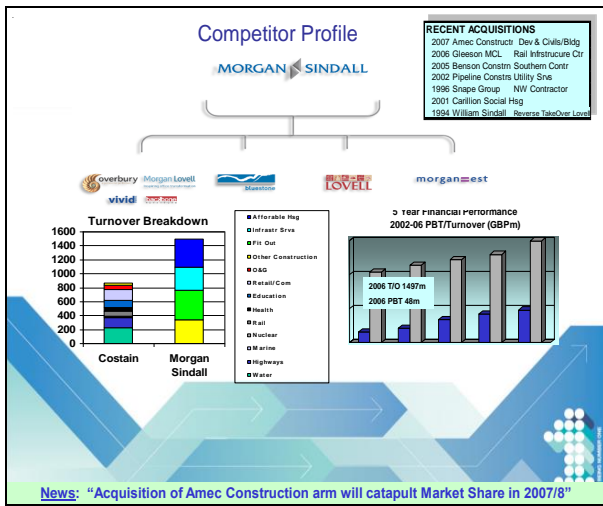
- Net Cash Flow similar across competitors as Majors re-invest cash in acquisitions & PFI
- Amec high 2006 Cash Flow from sale of Subsidiaries
- Kier is the industry Cash Cow and has not been very acquisitive.
- ROK outstanding % Cash Flow growth (incl shr issues)
- Costain Net Cash inflow of 11.5m in 2005 offset by outflow of 20m in 2006



- Highest turnovers achieved by Carillion, Laing O'Rourke & Balfour Beatty all of which have made recent acquisitions
- Costain organic growth in line with the sector and its less acquisitive competitors
- Competitors (except Amec's UK turnover) have achieved growth rates greater than market 7% annual increase
- Costain Compound Annual Growth Rate in UK turnover 2004-2006 was 12.5%
- Trend of Market Polarization 2004 - 06









2010 COMPETITION ANALYSIS

Global Competition in 2010

With expanding markets home and abroad and cross-border acquisitions the ENR's Top 225 Global Contractors list included 21 companies with more than US\$10 billion in revenue, 130 firms over US\$1 billion. Balfour Beatty ranked Number 1 in UK and was ranked 23rd in the ENR Global Rankings (prior to its purchase of Parsons Brinckerhoff). The Top Ten were:

Vinci (France)	\$32.7bn
Bouygues (France)	\$25.0bn
China Railway Engineering Corp (China)	\$21.3bn
Hochtief (Germany)	\$19.8bn
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China Railway Construction (China)	\$17.3bn
China State Construction (China)	\$16.1bn
Skanska (Sweden)	\$15.7bn
Bechtel (USA)	\$15.4bn
China Communications CHEC	\$14.7bn

Source: ENR

Some of the larger European Companies have grown via Merger and Acquisition during the last Economic downturn in the early 1990's. Examples are ACS of Spain formed from the amalgamation of construction groups OCISA, AUXINI, Huarte, Abertis, Dragados. Ferrovial, Cubiertas, Entrecanales, Agroman were all medium sized contractors in the late 1980's and early 1990's which became part of leading Spanish/European Groups through M&A. ACS itself now also holds a 25% stake in Hochtief. China Railway & Bridge and CHEC also merged to form China Communications Company, now ranked Number 2 in terms of Turnover. The message..was..one..of..consolidati

Competitor Trends 2009/10

(Please see over the page)

The trends show clearly how Carillion and Balfour Beatty over the 5 years to 2010 had achieved Turnover, Market Capitalisation and Compound Annual Profit Growth without diluting Margins. Furthermore Cash Flow and Cash Balances remained strong despite investment in Acquisitions and PFIs.

Kier Group remained a cash generator but has not invested aggressively in acquisitions. Galliford Try had a profit hit in 2009 linked to Land Bank write-downs, but then had substantial cash balances, post its 2009 Rights Issue, to re-invest in its House Building operations as the market began to rise.

Some companies had strong Oder Books but Market Capitalisations remained depressed given the public spending outlook and market sentiment.

UK Civil Engineers Rankings in 2009/10

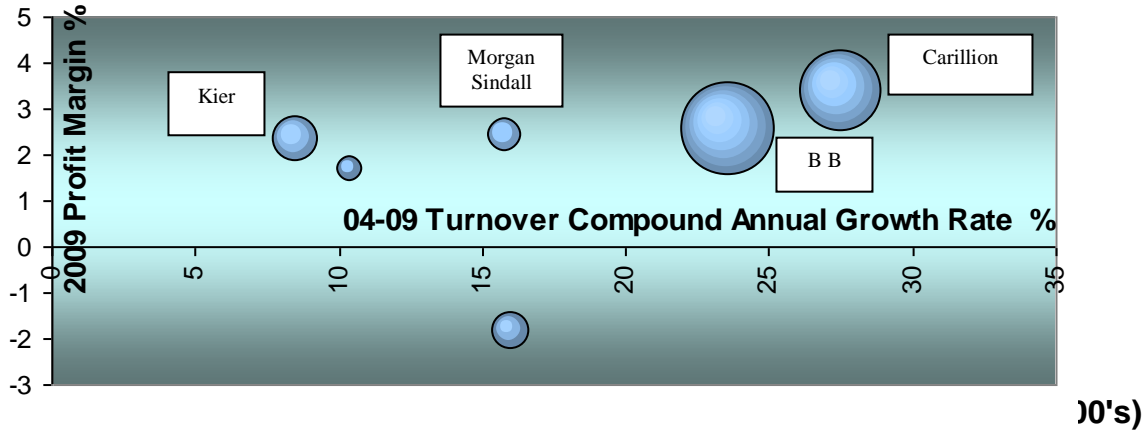
	Firm	Civils Turnover 2009 (Em)	Total Turnover 2009
1	Balfour Beatty	2,576	n/a
2	Leing O'Rourke	2,149	4,236
3	Carillion	1,400	5,206
4	AMEX	1,174	1,493
5	Galliford Try	1,136	1,832
6	Morgan Est	799	799
7	BAM Nuttall	650	650
8	Costain Group	620	998
9	Skanska UK	575	1,481
10	J Murphy & Sons	433	455
11	VINCI Construction	393	1,962
12	Kier Group	381	2,374
13	Black & Veatch	347	2,237
14	Tarmac Limited National Contracting	312.5	312.5
15	Birse Civils	255.09	255.09
16	Yates Fitzpatrick	223	448
17	Clancy Brown	202	202
18	Colas Limited	201	242
19	Sir Robert McAlpine	200	1,187
20	Interserve Project Services	183	770.7

Source: NICE

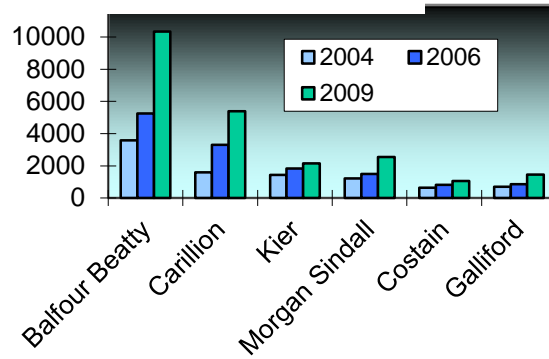
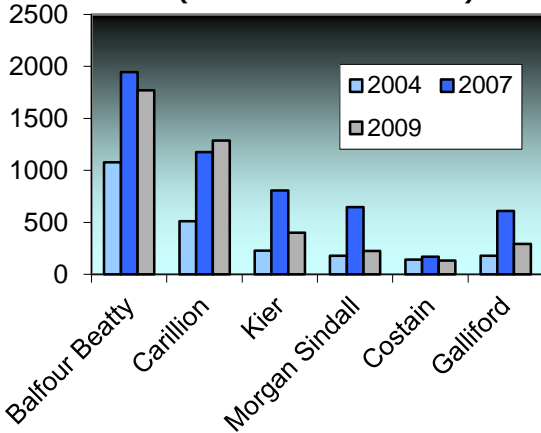


Competitor Trends 2009/10

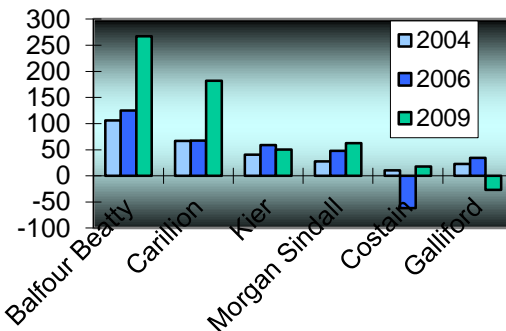
Industry Growth/Profitability Matrix (2009)



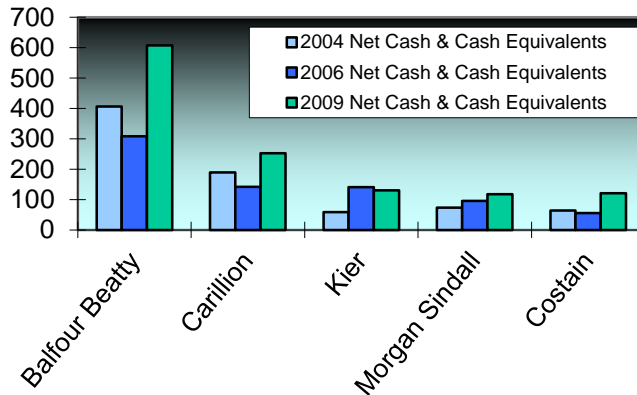
Market Capitalisation (GBP 000's) (June 2004 - June 2009)



Total Profit Before Tax (GBP m) (2004 - 2009)



Net Cash Flow (GBP) (2004 - 2009)





Competitor Financials 2009/10

“Morgan Sindall seems very fairly priced.”

Competitor Listed Plc's (all figures as available 12/05/2010)	Market Capitalisation source: annual reports	Enterprise Value (Mkt Cap -Cash +Debt) source: annual reports/ statements
Balfour Beatty	1,772	1,448
Costain	135	14
Morgan Sindall	226	195
Kier	402	271
Carillion	1288	1,263
Galliford Try	293	259
Interserve	264	301

Competitor	Balance Sheet- Net Assets source: annual report	Balance Sheet- Pension Deficit source: annual reports
Balfour Beatty	1,006	586
Costain	-4 (Excludes NPV of PFI)	105
Morgan Sindall	209	3
Kier	76	113
Carillion	777	294
Galliford Try	408 (Recent Rights Issue)	28
Interserve	222	95 (Recent transfer of PFI Assets)

Competitor	Cash Flow- Operating CF source: annual report	PFI- Directors' Valuations source: annual reports			
Balfour Beatty	294	610			
Costain	-17	44			
Morgan Sindall	25	38			
Kier	25	56			
Carillion	268	115 (Recent £100m+ disposals)			
Galliford Try	47	19			
Interserve	25	62 (Transferred to Pension Fund)			
Ratios %	Order Book/ Enterprise Value <i>Future Cash Flow/ PayBack</i>	Op Cash Flow/ Enterprise Value <i>Historic Cash Flow/ PayBack</i>	(Mkt Cap – Net Assets) / Net Assets <i>% Goodwill</i>	Pension Deficit/ Net Assets <i>Relative Pension Burden</i>	PFI/ Net Assets <i>Understated Balance Sheet</i>
Balfour Beatty	973.76%	20.30%	76.14%	58.25%	60.64%
Costain	18571.43%	na	na	na	na
Morgan Sindall	1846.15%	12.82%	8.13%	1.44%	18.18%
Kier	1660.52%	9.23%	428.95%	148.68%	73.68%
Carillion	1401.43%	21.22%	65.77%	37.84%	14.80%
Galliford Try	694.98%	18.15%	na	6.86%	4.66%
Interserve	1993.36%	8.31%	18.92%	42.79%	27.93%



ACQUISITION OPTIONS (2010)

Firm	Order Book (£m)	Mkt Cap (£m)	Net Assets (£m)	Yr End Net Cash (£m)	Pension Deficit (£m)	Oper Cash Flow (£m)
Galliford Try	1,800	293	408	133	28	47
Morgan Sindall	3,600	226	209	118	3	25
Costain Group	2,600	135	-4	121	105	-1

2010 ANALYSIS

"Galliford Try (Undervalued Share price/ Merger Option)

Galliford Try has a similar profile to some competitor Groups, albeit its strategy is to keep investing in Housing Land acquisitions. It has recently secured £119m via a Rights Issue to do so. Its recent trading performance was hit by a write down on existing land banks, rendering an accounting loss of £26.9m in 2009. However, its Market Capitalisation (£293m) seems not to reflect its new Asset Base (£408m net Assets) including £133m of Cash(although it also includes £115m of goodwill). Rather like Morgan Sindall, Galliford Try is not an attractive acquisition prospect for some buyers, because of its low exposure to heavy civil engineering sectors. Nevertheless, with Net Assets at a premium to Market Capitalisation, free cash in the business, and considerable synergies with an acquirer of similar size, the company is an attractive acquisition opportunity to consider. The company's Enterprise Value is currently £149m less than its Market Capitalisation. Given Galliford's depressed share price, either an acquisition or Merger might be favoured acquisition strategies. Pension deficit is a modest £19m. the Balance Sheet however includes £115m of Goodwill yet to be amortised.

Morgan Sindall (Low Goodwill, Asset backed Acquisition Option)

Year End Cash was not maintained throughout the year, averaging £31m, as contracting struggled. However its Market Capitalisation is at a small £17m premium to Net Assets, and the Enterprise Value is at a £14m discount to Net Assets. It did not inherit a large Pension Deficit which stands at just 33.2m in the accounts. The Order Book is strong at £3.6bn, but the Product Mix of Morgan Sindall is not attractive to those who might seek heavy civils sector strengths, not Fit-Out and Affordable housing (Lovell). Nevertheless, the company is a potential target for a competitor Group. Operating Cash Flow as a percentage of the current Enterprise Value is 13%, suggesting a 8+year payback, depending on the bid premium, and growth and synergy potential.

Costain Group (Good Cash & Order Book, Cheap Cash Purchase- 3 Shareholders control majority)

Costain offers strong positions in Water, Roads, Waste, Nuclear and Oil & Gas/Process. Its Building Business has been haemorrhaging cash (but has since been moth-balled). Operating Cash Flow should improve. Of most interest is its Order Book of £2.6bn and minimal net cash requirement to acquire. The company's Enterprise Value (Market Capitalisation less Net Cash) is just £14m, making it a cheap net cash purchase. Kharafi Group would probably take shares off an acquirer as its shareholding in Costain is not strategic; and UEM recently "swallowed its tail" on the 2007 Rights Issue reducing its shareholding to less than 22% and relinquishing a place on the Board. Costain has an understated Balance Sheet because of its £44m of PFI Assets and Spanish Land Bank, and its Pension Fund deficit remains at £105m. Costain is an attractive opportunistic acquisition option for a foreign buyer because of its brand and product mix and Order Book, subject to due diligence on the position within its Building Division."

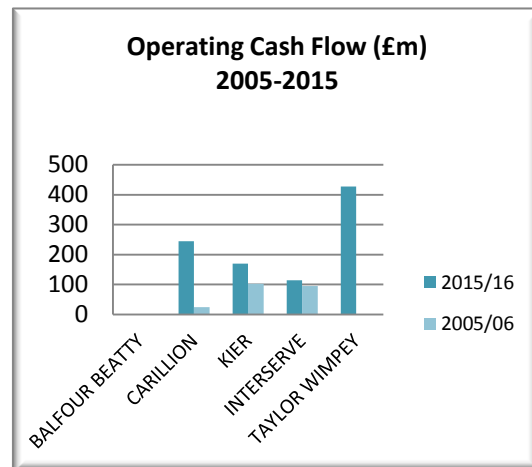
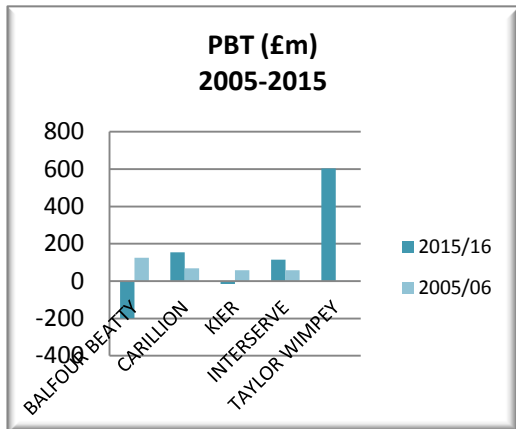
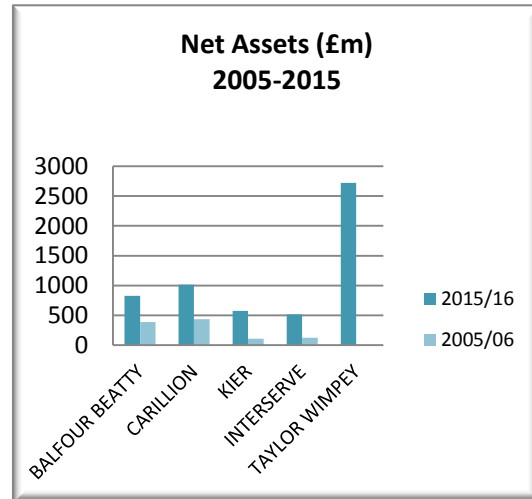
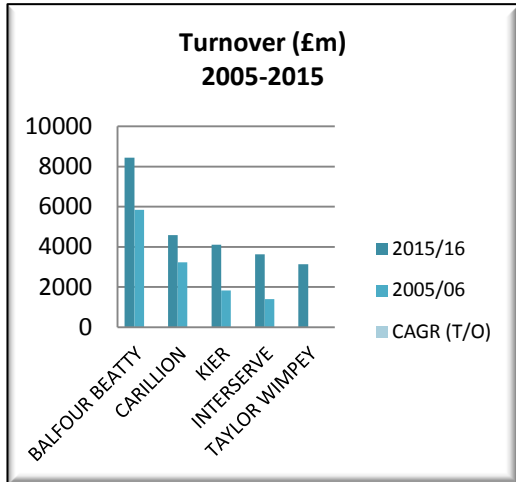
Note: This Analysis was based on Account Information in 2010



THE ANALYSIS NOW , TEN YEARS ON (2017)

struggled to increase its worth much in terms of Market Capitalisation up from £576m to £656m

Taylor Wimpey was formed by the merger of Taylor Woodrow and Wimpey Homes in 2006 and has gone on, after the struggles in a depressed market and high debt at the time of merger to attain a Market Capitalisation of £5bn (cf. with Taylor Woodrow Group at £2.4bn in 2005). Taylor Wimpey has Net Assets of £2.7bn, PBT at £604m (19.2% Margin), and a Turnover of £3.1bn in 2015/16.



Comment

Balfour Beatty maintained growth at a Compound Annual Growth Rate of 4.2%, more than doubled its Net Assets, but has suffered from Operating Losses

Carillion also grew steadily at CAGR of 4%, despite acquisitions, and increased Market Capitalisation and Net Assets, albeit has raise Equity at the time of Acquisitions. Carillion's Net Assets figure of £1bn in 2015 includes a large 'Intangible Assets' figure being the Goodwill paid for its acquisition investments. Cash Flow is strong at £245m

Kier increased its Turnover at CAGR of 9.4% by both organic and inorganic means, and Net Assets risen five fold, but has also fallen foul to write-downs, some associated with acquired businesses.

Interserve grew admirably at 11.1% CAGR and grown PBT from £58m to £115m while maintaining healthy PBT Margins at 4.1% and 3.2% respectively. However the company

Note: Potential Mergers & Acquisition Scenarios in 2017-2022 are explored in Chapter V of the Report



APPENDIX V

ABOUT THE AUTHOR & THE THINK BIG PARTNERSHIP



www.thinkbigpartnership.com

OUR APPROACH



We undertake in-depth Company Research, Financial & Market Analysis. Working with world-class clients, and bringing the best global experience, we focus working with Group Chief Executive Officers to help them deliver positive impact, and generate sustainable profitable growth for their companies.
 We focus on 'Big Ticket' items delivering Quantum Business Change with new strategic thinking, often via radical M&A.
 The Partnership has bases in London and Miami with Affiliates in Spain, Peru, UAE, and Singapore, and special focus on M&A and Investment in the UK and USA, Iberia and South America.

WHAT WE DO

- ✓ **PLC CORPORATE ADVICE TO GROUP CEO**
CORPORATE DEVELOPMENT & NEW "OUTSIDE-THE-BOX" THINKING AND M&A SOLUTIONS.
- ✓ **COMPANY REVIEWS AND NEW BUSINESS DEVELOPMENT**
WORKING WITH COMPANY OFFICIALS, KEY EMPLOYEES AND CUSTOMERS TO HELP CREATE NEW STRATEGIES AND BUILD MARKET SHARE & PROFITABILITY IN PRIORITY SECTORS
- ✓ **CORPORATE GOVERNANCE**
MINIMIZING YOUR RISKS ALONG THE WAY IN GLOBAL BUSINESS DEVELOPMENT

- **MANAGING PARTNERS**
- **THINK BIG PARTNERSHIP**
- PARTNER RESUMES
- ALEKSANDAR PETROVICH
- **GREG MALPASS**
- **40 YEARS IN GLOBAL CONSTRUCTION**



**MANAGING PARTNERS
"THINK BIG PARTNERSHIP"****MANAGING PARTNERS****A CURRENT PROJECT (London Office)**

- Study of Corporate Strategies and M&A Opportunities in UK Construction Consolidation 2017-2022

GREG MALPASS

MBA | Civil Engineer

International Strategy & Business Development Executive- Greg has a Bachelor of Science Degree in Civil Engineering from City University London and an MBA from London Business School and New York Graduate School of Business Administration. He has 40 years experience working for Plc Groups and their CEOs in Corporate Strategy, Mergers & Acquisitions, International Trade and Investment, with particular focus on Infrastructure Sectors having worked with both International Construction Companies and The British Government's UK Trade & Investment as an International Trade Adviser. He has experience working in the UK, Mainland Europe, the Americas, the Middle and Far East. Greg heads up Client Relationships and Assignments in the UK and Spain, and Lead Partner for Construction Industry Clients worldwide.

[LinkedIn Profile](#)**A CURRENT PROJECT (Lima Office)**

- Reviewing the Potential for a British Infrastructure PPP Group in PERU

ALEKSANDAR PETROVICH

Abogado | Attorney at Law

International Lawyer, an FLC Florida Bar Member and Member of the Florida Bar International Law Section, Member of the Madrid and Lima Bars; with practices in Latin America, Spain and the United States. He has a Doctorate in Law from Universidad Carlos III de Madrid; and has a strong International Litigation and International Trade & Business background. He has wide experience of Corporate Advice and Business Development in USA, Spain and Latin America. Aleks heads up Client Relationships and Assignments in the US and Latin American, and acts as the Partnership's Attorney.

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MARKET ANALYSIS

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“You must be the change you wish to see in the world . . .” - Mahatma Gandhi

Governance Quotes



Think BIG Partnership

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SERVICES
CORPORATE ADVISORY SERVICES ARE PROVIDED USUALLY DIRECTLY TO THE GROUP CHIEF EXECUTIVE, ON TERMS OF CONFIDENTIALITY, WITH A MANAGING PARTNER ACTING AS A "RETAINED CONSULTANT", CHARGED ON A MONTHLY PROFESSIONAL SERVICES FEE BASIS, PLUS EXPENSES AND COMPLETION SUCCESS FEE WHERE APPROPRIATE, UNDER CONTRACT WITH THE CLIENT, AND TO AN AGREED BRIEF AND TIMESCALE.

MANAGING PARTNERS

GREG MALPASS
MBA | Civil Engineer
International Strategy & Business Development Executive. Greg has a Bachelor of Science Degree in Civil Engineering from City University London and an MBA from London Business School and New York Graduate School of Business Administration. He has 40 years experience working for PwC Groups and their CEOs in Corporate Strategy, Mergers & Acquisitions, International Trade and Investment, with particular focus on Infrastructure Sectors having worked with both International Construction Companies and The British Government's UK Trade & Investment as an International Trade Adviser. He has experience working in the UK, Mainland Europe, the Americas, the Middle and Far East. Greg heads up Client Relationships and Assignments in the UK and Spain, and Lead Partner for Construction Industry Clients worldwide.

Philipp Corvino
Audit/ Economic Consulting, M&A Integration and Valuation Consultant, USA
"Greg has a great understanding of how to navigate the waters of international M&A. He has extensive skills in the evaluation of international construction, and its economic sensitivity to the business cycle. He is an effective and trustworthy professional." (LinkedIn)

ALEXSANDAR PETROVICH
Abogado | Attorney at Law
International Lawyer, an FLC Florida Bar Member and Member of the Florida Bar International Law Section, Member of the Madrid and Lima Bars, with practices in Latin America, Spain and the United States. He has a Doctorate in Law from Universidad Carlos III de Madrid, and has a strong international litigation and international trade & business background. He has wide experience of Corporate Advice and Business Development in USA, Spain and Latin America. Aleks heads up Client Relationships and Assignments in the US and Latin American, and acts as the Partnership's Attorney.

CURRENT PROJECTS

- Reviewing the Potential for a British Infrastructure Group in PERU
- Reporting on Corporate Strategies and M&A Opportunities in the UK Construction Consolidation 2017-2022

BRITISH INFRASTRUCTURE GROUP
Peru
Corporate Strategies and M&A Opportunities

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LOCATIONS
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A FREE PDF COPY OF OUR INDUSTRY REPORT ON: CONSOLIDATION AND M&A OPPORTUNITIES – IS AVAILABLE ON-LINE AT OUR WEBSITE

WE ARE BASED IN LONDON WITH PARTNERS IN UK, SPAIN, USA AND PERU; AND ASSOCIATES IN UAE AND SINGAPORE. WE CAN BE CONTACTED VIA OUR ON-LINE CONTACT FORM ON THE WEBSITE

Think BIG Partnership

HOME ABOUT SERVICES CONTACT

Messages can be left at the Client's Office, or various locations in London, UK, London, Lima, Lima or Singapore.

Based in UK, SPAIN, USA, PERU, UAE and SINGAPORE.

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LinkedIn

**ALEKSANDAR PETROVICH**

Attorney-at-Law | FLC Florida Bar Member Certified 222067
 Member of The Florida Bar International Law Section
 Member of The Madrid and Lima Bar | Abogado | Spain &
 Latin America Practice

Primary telephone: (954) 410-9079
 E-mail: info@petrovichlaw.com

**SUMMARY**

Aleksandar Petrovich is an attorney with studies and practice in Latin America, Spain and the United States. Versatile and effective bilingual attorney with strong International Litigation and International Trade and Business Law background and experience. Areas of strength include successful negotiations, business development, as well as providing clients with innovative solutions to challenging situations. Practice with solid legal base, knowledge of the market and capacity to lead a project from beginning to end. Practical and assertive, and gives efficient solutions.

CORE COMPETENCIES

International experience in Spain, United States, and Latin America • Litigation • Due Diligence • Drafting legal contracts, agreements, stipulations and others • Legal research & memoranda • Business development • Client relations Management • Strategic planning & execution • Favorable settlement negotiations • Executive collaboration • Mediation participation • Highly strategic & analytical • Dynamic thinker • Streamlining processes • Financial proficiency • Geopolitics & economics vision.

ADMITTED TO PRACTICE LAW

- ◆ Affiliate Florida Bar Association - Counsel Legal Foreign (US). Registration 222067.(2004)
- ◆ Member of Ilustre Colegio de Abogados de Madrid (Spain). Registration 61387.(1997)
- ◆ Member of Ilustre Colegio de Abogados de Lima (Peru). Registration 16489.(1991)

MEMBERSHIPS

- ◆ Member of the Florida Bar International Law Section (USA) (2015 to date).
- ◆ Member of the History of Law, Studies Committee of Colegio de Abogados de Lima (Peru). (1998).
- ◆ Member of the Special Committee for the Defense of Fundamental Rights for the Colegio de Abogados de Lima (Peru). (1991-1992).
- ◆ Member of the Editorial Board Law Review *Ius et Praxis* published by the Faculty of Law and Political Sciences of the University of Lima (1987-1991).

PROFESSIONAL CREDENTIALS

- ◆ Doctorate in Law from Universidad Carlos III de Madrid (Spain) 1991-1994
- ◆ Professional Law Degree (J.D.), Summa Cum Laude, at the Faculty of Law Universidad de Lima (Perú) July 1991
 Validated and ratified in US as equivalent to Juris Doctor (J.D.)
 Validated and ratified in Spain as Licensed Attorney-at-Law (Licenciado en Derecho).
- ◆ Bachelor's degree in Law and Political Science (LL.B.), Summa Cum Laude, at the Faculty of Law Universidad de Lima (Peru) May 1991
 Validated and ratified in US as equivalent to BA in Law and Political Science (LL.B.).
 Validated and ratified in Spain as equivalent to BA in Law.

POSTGRADUATE DEGREES

- ◆ Postgraduate degree in National Security, National Defense, Strategic intelligence on global business, economic, security and geopolitical affairs by the Centro de Altos Estudios Nacionales, CAEN (Peru). July 1998.
- ◆ Postgraduate degree in Fundamental Rights Law by the «*Institut International des Droits de l'Homme*», Strasbourg (France). July 1994.
- ◆ Postgraduate degree in Computer Law, Law Office Automation, Law Data Base, Computers in judicial work, Artificial Intelligence & Case-based reasoning (CBR) by the *Intergovernmental Bureau for Informatics* - IBI and the College of Law of Universidad de Zaragoza (Spain). July 1988.

ACADEMIC EXPERIENCE

- ◆ *Adjunct Law Professor of Comparative Legal Profession*. Florida International University, College of Law, Miami, Florida, United States, 2012 – 2014.
- ◆ *Researcher Associate ad tempus*. Instituto de Metodología e Historia de la Ciencia Jurídica at the Faculty of Law of the Universidad Complutense de Madrid (UCM), Spain, 2003 – Present.
- ◆ *Researcher of Fundamental Rights*. Instituto de Derechos Humanos Bartolomé de Las Casas, at the Faculty of Law and Social Sciences of Universidad Carlos III de Madrid, Spain, 1992-1996.



GREG MALPASS

CAREER HISTORY [1975-2015]



OBJECTIVE

This is not a CV. It is a narrative of my career, and my roles and achievements at companies, during 40 years of changes in the UK and Global Construction Industry. My Objective now is to secure a role as a "Retained Consultant", reporting to a Leading Industry figure who wishes to explore new Corporate Strategies and M&A/finance options for growth of a Major UK Construction Group.

EXPERIENCE

Corporate Strategy
International Business Development
Mergers & Acquisitions
Export Finance & Public Private Partnerships
Project & Commercial Management

SKILLS

- Corporate Planning Adviser to Chairman, CEO
- Key Client & Strategic Partner - Relationship Building
- Research & Financial Analysis
- Contract Negotiation
- New Business Development & Entrepreneurial Start-Ups.

EMPLOYERS

Pell Frischmann Group Ltd [2013-15]
Kier Plc [2010-12]
Costain Plc [2006-09]
Bewater Ltd [2001-04]
UKTI [1999-2001]
Wimpey Plc [1975-84], [1995-97]
Tarmac Plc [1989-1995]
Taylor Woodrow [1987-89]

EDUCATION

- King Edward VI Grammar School, Stourbridge (10 GCSE 'O' Levels; 3 GCSE 'A' Levels)
- The City University, London (BSc, 2/1 in Civil Engineering) [1975-80]
- London Business School (MSc Business Administration) [1984-86]
- New York University (MBA Exchange Programme) [1985]

PROFESSIONAL MEMBERSHIPS & DIRECTORSHIPS

Chartered Civil Engineer – C Eng [1984]
Member of Institution of Civil Engineers- MICE [1980-2011]
Member of National Contractors Economics Committee [1991-1994]
Member of UK Construction Industry Forecasting Committee [1992-1994]
Member of Technical Marketing Society of America [1986-1987]
Member of British Peruvian Trade & Investment Group [1999-2002]
Director of British Colombian Chamber of Commerce [2000-2002]
Director of TermoPacífico SA (Colombia) [1998-1999]
Director of International Project Developers Ltd (Isle of Man) [1989-1999]
Director of Brazilian Water Works SA (Sao Paulo) [1997-1999]
Director of IPCO Contractors Ltd (Hong Kong) [1998-1999]

Studio 4, The Carltons, 32 Carlton Drive, London SW15 2BL
• Tel: +44 7850230692; +34 608199841 • E-Mail: Malpass.Greg@gmail.com



40 YEARS IN GLOBAL CONSTRUCTION (CORPORATE STRATEGY; BUSINESS DEVELOPMENT; MERGERS & ACQUISITIONS).

The Past

I joined George Wimpey as a young Indentured Civil Engineer in 1975, when the company hailed itself as the clear Industry Leader and "Contractor to the World". Driven by the charismatic leadership of Sir Godfrey Mitchell, it afforded many directly employed staff and construction workers a job for life, and for me training and exciting experience in Project and Commercial Management across the UK, The Middle East, and appointment as one of the Company's youngest Project Managers on a Port Project in Peru, South America at 26.

Career ambition and the need to progress led me to study for an MBA, at two of the leading Business Schools in the world, London Business School and New York Graduate School of Business Administration. New York also introduced me to a new form of Construction Procurement and Delivery in my industry ("Construction Management") which would dominate in the world in the years of fast economic growth and "Fast Track" construction that followed- and Lehrer McGovern, two entrepreneurs (ex-Morse Diesel- the NY God Father of CM) who had taken New York by storm with high profile renovation and fit-out projects including the Statue of Liberty and New York Stock Exchange. As the first 'Brit' recruited by the Company to sell an American Solution, the Job and shared Mission was to help introduce the UK and Europe to the new idea, and with "Big Bang" looming the City of London was impatient to build new Offices and Trading Floors, as they were just in the design stage. Lehrer McGovern's flamboyant form of Aggressive Marketing ("We build for a \$ what Brits build for a £, in half the time!") helped secure \$6bn of Managed Projects including London Bridge City, Chelsea Harbour, Broadgate, and the whole of Canary Wharf from the Reichmann Brothers and Euro Disney in Paris. The incredible success led to a flurry of further awards, and my total immersion in the US Construction Management ("Can-do, Client-always-comes-first") culture; ...and for its proprietors, Gene McGovern and Peter Lehrer, the sale of their company to Bovis of the P&O Group for circa \$20m. But Property inflation and the Yuppie frenzy had led to speculative projects in Canary Wharf like Cascades and 'The Circle', both of which exposed investors, and my career progression to the market bubble. Focus moved from Construction to Property Futures and tracking the Property Index; to Off-Plan Sales & Marketing Strategies being adopted by Developers and Investors. Construction Management thrived, but when the property market crashed, Funders sought Guaranteed Maximum Prices of completion from Developers, and the CM market effectively died, while its UK copycat Management Contracting continued, albeit in a diminished way.

While I enjoyed exposure to these new markets and the Financial Instruments and Strategies employed, and Analysis of Companies involved, I left to join Taylor Woodrow by late 1987, when the focus of its own undervalued Property Portfolio and St Catherine's Dock, its jewel in the crown, had led to an

aggressive Take Over Bid threat from P&O Group. Lord Taylor had taken it as a personal onslaught from Sir Jeffrey Strirling. I participated in the development of a successful Defence Strategy led by Schroeder's and Lord Taylor. He was a smaller, humbler character than Godfrey Mitchel of Wimpey's, but used to jibe in front of Middle East Clients that he ran 'the best construction company in Britain, not the biggest!' But his obsession with conservative accounting, understated 'not unsatisfactory' profits, and under-valued property assets had exposed the Group in a market where Property Developers and Contractors were capitalizing interest and booking profits on un-completed projects. Taylor Woodrow re-valued its assets, and I went onto new areas of business development, promoting in the EU (1992 was looming) several small European Acquisitions and two large high profile PPP London based Infrastructure Projects, with Morgan Grenfell, as Corporate Advisers.

But by 1990 the 1987 Stock Market Black Wednesday Crash had turned the Economy into recession and with personal misgivings about the obsession the companies in my industry had with Property Speculation, I had moved to Tarmac, (and moved from London to Wolverhampton) when Headhunted to do so. The 1992 European Infrastructure Bonanza was on the horizon, and Tarmac was the leading Construction Group, enjoying several years of unprecedented growth, as a diversified decentralized asset backed "SBU Portfolio" business, reorganized by McKinsey's Management Consultants, after near bankruptcy in the late 1970s following large project losses in Nigeria, following the acquisition of Cubbitts (which had received down-payments for aborted projects in the country).

The Tarmac Construction Ltd Division became an Industry Leader in its own right in the UK and Europe in following years, under the leadership of Neville Simms, who became one of the most experienced and distinguished figures in the industry of his generation. I was privileged to have worked as his adviser for 5 years, and he became a mentor for me. His leadership and vision was inspirational and culminated in him assuming the Group CEO Role, and subsequent Chairmanship. During his leadership, Tarmac Construction became a £40m profit centre within the £2bn Turnover £400m Profit Group, with a £100m cash balance and Negative Working Capital. Not insignificant when interest rates were rising to 12%. Tarmac had recognized and consolidated on the Construction Management boom via the early acquisition of Schal from Chicago; had become the lead contractor in Department of Transport Motorway Construction programme; recognized the trend to offer a "Total Build" service and made horizontal integration acquisitions in M&E contracting (Crown House), Design & Project Management Consulting (PSA); and led the Industry in the Changes towards Client Life-Cycle Term Contract arrangements with new businesses in Support Services and Maintenance and Facilities Management of Buildings. I was a member of the Group European Task Force and led an International Business Review which also appraised large M&A targets including Volker Stevin (Netherlands) and Dragados (Spain), [A Potential Group Merger as Dragados was under threat of Take-over by Bouygues/Banco Central]; under the stewardship of Non-Executive Director Lt. General Sir Derek Boorman. I also led the Acquisition Team for the Privatisation of the Government's 1,200 strong Property Services Agency



(PSA), which was successfully negotiated over a 12 month period, and secured a £134m Dowry. I worked with advisers including Merchant Bankers (Lazard), Corporate Lawyers (Linklaters & Paine), Actuaries (Mercer Fraser), Cost Consultants (Curries), and Accountants (Coopers & Lybrand). I refined my skills in team leadership and negotiation and analysis in complex financing structures, with a highly successful conclusion to the M&A negotiations.

The birth of Public Private Partnerships was also embraced by Tarmac, with pioneering proposals (eg. the Birmingham Northern Relief Road), and ended up with protracted dialogue with Government on Procurement Structures, throughout the John Major PFI Initiative...on countless schemes as Neville went on from leading the TML negotiations with Eurotunnel, to heading up the Tarmac Group. I was also involved in Industry Think Tanks including "Reading University led Building 2001" to help imbed and implement forward thinking building industry changes. But Neville Simms' successor at Tarmac Construction did not share his conservatism to profit taking, nor "internal affairs". Most of the PSA provisions were written back as contracting profits, to cover overtraded positions in the Major Projects Division, as he moved on to run his own Water Company PLC. The "Strife of Brian" was well documented by the Telegraph in 2003 concerning his two Corporate CEO roles and sackings subsequent to Tarmac. Questionable business ethics and his private life ("mixing the bedroom with the boardroom") had caught up with him, and his position was said to have become "untenable" over accounting issues. At Amey £55m of profits turned to £18m losses, and there was a £100m asset write-down on a restatement of accounts. The main dilemma apparently appeared to have been the capitalization of £m's on PFI development projects that never reached financial close and required write-downs as a consequence.

He and I had negotiated the £134m dowry for Tarmac from HMG for PSA, but we clearly didn't see eye to eye thereafter. The cushion provided by my Service Contract and a 12 month pay-off, gave me time to secure a new role. I turned down Board Level job offers at Christiani & Nielsen plc after their Reverse Takeover in Bangkok (declined because my wife wouldn't relocate), Morrisons in UK (a directorship and share scheme that would have been worth £18m when Morrison subsequently sold out to Anglian Water), and a senior role at Coopers & Lybrand (Advisor on PSA deal to HMG). I elected instead to return to Wimpey in 1995, as the prodigal son after 10 years away, in a more senior position as Construction Head of the "Group's Corporate Planning Unit". The new remit was to put in place strategies to aggressively grow the Construction Division, off the back of a strengthened Balance Sheet following a Rights Issue. The Rights Issue had, scandalously for some, diluted the Tudor Charity Trust Fund (set up by Sir Godfrey Mitchell) to just 5%, down from its original 50% which had protected the company from take-over.

As I developed new ideas and strategies -including a trip to Canada to negotiate a potential merger with SNC Lavalin of Canada to form a Global EPC Group, and acquisition of Soft Facilities Management Businesses (eg Gardner Merchant) - the City of London Analysts began to criticize the models of Diversified Construction Conglomerates (eg. Trafalgar House, Tarmac) which were hard, they claimed, to value fairly as "sums-of-the-parts" businesses. At Wimpey new forms of

Contracting (eg. DBO, DBFO) were also leading to changed Risk and Cash Flow profiles in Construction, and focus was shifting back to developing asset backed businesses (eg Minerals) and land banks for Private Housing Development.

I was asked by the CFO to lead a new Strategy Review for Construction, with a view to market exit. I undertook this study internally with a brief of maintaining strict confidentiality, due to fears of the repercussions of leaks to the market and staff. Sale of parts and the whole of the business to European Groups were considered as well as MBO options. Two Recommendations were forwarded by myself involving Tarmac; firstly a Group Merger, and secondly an innovative Asset Swap of Wimpey Minerals and Construction Businesses for Tarmac's Housing Business (named "Project Blacksmith"). The latter maximized the combined value of the Wimpey Businesses, and analysis determined that the Combined Tarmac UK regional Minerals Businesses would avoid Monopolies and Mergers/Office of Fair Trading attention based on national market dominance. The option received Board Approval.

The subsequent Wimpey reliance on the cyclical Housing Market was highlighted by me, and others, as risky, but the Board preferred the Asset Swap rather than the synergistic Group Merger Option which I favoured. Frankly Directors feared for their jobs. An industry recession subsequently led to a defensive merger of Wimpey and Taylor Woodrow Housing Businesses, within a few years of the Asset Swap being completed. Tarmac also ended up demerging its Minerals and Construction businesses in due course, leading to the launch of a newly listed and cash rich Construction and Services Business, namely "Carillion".

I moved to IPCO after the Asset Swap, as an expected senior role was not forthcoming at Tarmac, and cuts were the order of the day. I had given birth to Project Blacksmith, but had become the 'Turkey who had voted for Christmas'. IPCO (a maverick small but Global Investor, Developer, and EPC Contractor in Infrastructure) in Singapore was always seeking new challenges, in difficult markets (eg. Indonesia, Nigeria, Colombia) and introducing BOT around the world. I became Director of two IPP and Concession Businesses in Power and Water in Colombia and Brazil, and chased work in Iran, Yemen, Venezuela, Panama, and South Africa. But the Asian Capital Flight crisis in 1998 led to the crash in local currencies, and together with money laundering related project losses in Nigeria, Company dissolution in Colombia over a Board dispute, and death threats, over a corrupt land deal, and a devalued Private Port Concession in Labuan, Malaysia due to the currency crash after the flight of capital from Asian Markets- IPCO finally broke its Banking Covenants and led to the demise of the Singapore PLC, which was taken over by an Indonesian businessman, just after the Malaysian Stakeholder Shareholder Promet had stepped in to support the company. Promet itself didn't survive the crash, and neither did the ex US Marine, Vietnam veteran CEO of IPCO, always suspected of being CIA linked, who left to join Kvarner, to cause havoc there instead. IPCO proved for me to be another lesson in the virtue of good Corporate Governance, and that fortune favours the brave.



In 1999 I was seconded to HMG (on a fixed 2 year term, extended to 3 years) to act as an Industry and Regionally focused International Trade Advisor (Infrastructure and Latin America respectively). I worked with the UK's Department of Trade & Industry, Foreign and Commonwealth Office, UK Export Finance (ECGD), Overseas Embassies, and Ministers and Industry leaders in Target Countries in the Andean Region of South America.

Following that I used my senior Latin contacts and Spanish language skills to secure a role in Regional Business Development for Biwater. It too, was "entrepreneurial" in its approach to Business Development, and a leader in introducing the BOT model to the International Water Industry, and listed a subsidiary Cascal on the New York NASDAQ Stock Exchange to raise funds to do so. I was involved in Business Development in the Caribbean and Central America region, where the Company owned the World's first Privately Financed Waste Water Treatment Concession, with a Take-Off Agreement to the Regional Government/ Water Authority in Puerto Vallarta, Mexico. But development of PPP and Export Financed Projects in territories where Corporate Governance and Transparency became difficult to control, and project losses in Panama, eventually led to retrenchment to familiar markets, and sale of a core UK subsidiary in the early 2000s to MWH of USA to re-finance the Group. Complications with the corrupt local Sponsor thwarted a \$188m US Exim Financed Project I had negotiated with the Government in the Dominican Republic, and my career progression at Biwater. The highly successful Entrepreneurial Founder, Adrian White, re-assumed management control of the business, and set about re-building the International Water Contracting business, focused on Government Export Guarantee Financed, to avoid payment difficulties on projects with Overseas Governments. I helped the Chairman Sir Adrian White to build strategies to secure implementation of good corporate governance, who subsequently became a signatory and member of the World Economic Anti-Corruption Forum, in Davos Switzerland.

I took time out, and my knowledge of UKTI network, to set-up a new entrepreneurial on-line supply-chain procurement/ tendering start-up business promoting Coalition Country Suppliers to the Rebuilding Iraq Programme, firstly in Washington and London then to the 52 Coalition Countries across the world. Interviewed by CNN and BBC World and Guest Speaker in Washington at the first Rebuilding Iraq Conference, the business took off well. It won an award from the US Federation of International Trade Associations, and secured over 3,000 suppliers and buyers from across the world. It faltered when Iraq was ravished by insurgency and companies, other than security firms, took a revised view on the Iraq opportunity.

In 2005 I was asked by a life time career business colleague to join Costain to help with several issues. Costain was an injured dinosaur in the early 1990s after it had avoided bankruptcy from \$500m losses on an ill-advised investment in Deep Shaft Coal Mining in the USA in the late 1980s. Having sold off all peripheral businesses to survive, it was struggling to re-establish itself as a Civil Engineering Contractor, diversifying into the UK Water Framework Businesses. The support of White Knight Stake Shareholders Kharafi of Kuwait and UEM (which became part of the State Sovereign Fund

Khazanar after the currency crash in Malaysia) of Malaysia had been tested with extraordinary losses and subsequent diluted ownership and value, due to a series of Rights Issues. The new CEO had inherited a business with overseas losses, and overtraded UK businesses, with declared profits, claims to value, and no operating cash flow to support them. I undertook a full financial and operational review of the Company (going back 15 years) to help uncover the trace of cash outflows, and reported back to the Chairman, CEO and Board the need for re-financing (via a yet further Rights Issue) and strategies for business development and M&A options, despite constraints, including an innovative Convertible Bond Issue to Kharafi to fund growth. But Costain was "shackled" to a "stick-to-its-knitting" strategy with several Group Acquisition Proposals being rejected by its Board, including reluctance on the part of the bruised Stakeholder shareholders. It is an interesting point, that when minority shareholders have a representative Director on the Board, they clearly have more influence over strategy and decision making than most Plc minority shareholders do. Shareholder activism is on the increase, but generally speaking an institutional investor will abide by what the management says- all too much some will say. Therein lies perhaps the role of Supervisory Boards in Mainland Europe, where UK Non-Executive Directors maybe fall short, in challenging a dictatorial CEO and Executive Board. Ultimately, I predict, Costain will be acquired, because it's still not back to being a Tier 1 contractor, but has the potential. Maybe a UK tie-up with someone like Babcock, or a foreign suitor such as an old sparring partner Skanska.

I worked from bases in Hong Kong and Abu Dhabi and was initially located in Lagos, involved in the successful exit from Nigeria through sale of the company's shares there. Under a strategy set by the CEO to exit overseas markets, I worked with Partners China Harbour (CHEC) to exit from loss making contracts in Hong Kong, following a full Project Audit and Identification of Tender Errors, undertaken by myself on behalf of the Joint Venture. I also promoted Water Industry Reforms in Malaysia and India, as a Speaker on Water Privatisation and PPPs at Seminar Missions across both countries. I also spent 6 months in the UAE trying to develop relationships with Members of the Ruling Royal Families, as potential new Sponsors, especially Sheik Khalid Al Qassimi, the cousin of the Ruler of Sharjah, a true gentleman who became a close colleague. I left the Company after the 2007/2008 Global Economic crash effect on the Middle East, to join Kier, and the incumbent CEO, Andrew Wyllie, went onto successfully build up Costain's Civil Engineering businesses organically, via Sector Management, and Client focus. The long suffering Strategic Shareholders however undoubtedly lost out over the period of their loyalty as White Knight investors. A trade sale of Costain, once Wyllie had turned it around, might have given them some return, but construction egos prevail, and Costain spent too many strategic hours and substantial money on fees reviewing M&A options including Taylor Woodrow Construction, May Guerny and others, all to no avail. The matter was the subject of some very telling P&C letters between me and the Chairman. But these shareholders have since reduced their holdings further, and while the shackles are off, and Wyllie comes to the twilight hours of his stewardship of Costain, M&A in my view should entail finding the right buyer to back Costain into, probably maintaining its brand and returning in



time to the glory days when Costain was a major force in the industry.

In 2010 I joined Kier. Kier was a successful Group with strong cash flows and sustained compound earnings growth since its MBO from Beazer via Hanson after its takeover of Beazer's Assets, and Stock Market Flotation. As a "Cash Cow" its organic growth strategy was primed for additional growth via acquisition led diversification. Several strategies were explored, but Kier was traditionally cautious about Acquisitions, not unusual for a previously "management owned" business. However I undertook a full Acquisition study for purchase of Costain Group which I undertook for the CEO as Kier's Infrastructure Business was small in Group terms. The Proposal was rejected by the leaving and risk-averse CFO in 2011. In the Middle East, Kier had struggled to maintain its market share after the crash in 2007/2008 in Dubai. Managing client relationship based businesses in Saudi Arabia also had its frustrations, and Corporate Governance issues, and Regional Senior Management had moved to Hong Kong to explore opportunities on the Hong Kong MTR where transparency and engineering solutions prevailed as a means of securing and delivering projects. I aligned the business with an old IPCO partner in Saudi Arabia, HE Amr Dabbagh, Governor of the Saudi Arabia General Investment Authority, a forward thinking reformer; and HH Faisal bin Salman bin Abdulaziz Al Saud, son of the King of Saudi, introduced by UKTI and Prince Andrew's office acting as Global Business Ambassador- to co-develop 3 ECGD backed Teacher Training Academies in Saudi. But when a new Management appointment of an Overseas MD based in the Middle East which undermined my role, was followed by appointment by him, of a new Ruling Family Member Regional Sponsor from the wrong side of the Khalifa family in the UAE, my influence to make my mark had significantly waned. My long research and understanding of the nuances of the UAE Ruling Family Members' influences themselves went back to the roots of the BCCI Banking scandal where Drug money from Colombia and Panama, funding for the Mujahideen in Pakistan, and Abu Nidal in the Middle East all flowed through the bank's coffers, and Sheikh Zayed, the UAE Ruler had to write off \$2bn to sweep all under the carpet. Those family members tarred with the prostitution and gambling rackets which had enticed them in, and started the rot, were well known in the Rulers' Bedouin tents as the bad blood. The 5 sons of Sheikh Zayed's favourite wife Fatima, subsequently ran UAE and its newly formed independent Sovereign Wealth Funds, particularly Sheikh Mohammad, the highly respected Crown Prince, whose circles I had managed to start to infiltrate (with a personal invite to His Excellency's regular Business Receptions), before the new MD's outside appointment had stolen my thunder.

Most of the above went on over so many heads at Kier's Regional business. So I left, and I moved to new challenges at Pell Frischmann in London. Kier subsequently took a far more M&A led route after I left. The departure of John Dodds and his wife the CFO, had opened a new era. Stephen Bowcott was an advocate of acquisitions, and the rapid acquisitions of May Guerny and Mouchel, albeit "strategic", created some indigestion, and it maybe coincidental that Paul Sheffield left the Group around that time (albeit before the Mouchel Buy), to join Laing O'Rourke, "where construction comes before spreadsheets." As a softly spoken, humble company man, he

maybe lacked skills with spreadsheets, but also lacked the nasty psychopathic traits of so many CEOs I had encountered over the years. The Board Room of major Construction Groups is not always a safe home for gentlemen, especially when key numbers on spreadsheets turn red.

At Pell Frischmann I worked as a "Retained Consultant" on a Retainer & Success Fee basis, and looked for new Design-Build Joint Ventures in Health, Water, Infrastructure, and one-off Acquisitions (eg. Carillion's Consulting Subsidiary TPS); and also business development for its Water Treatment Technology Business (Aqua Dynamics) in markets in South America. And made country visits to Peru and Colombia. However my main focus, and motivation, was on seeking the right strategic way forward for the group. I became a confidant of the Group Chairman, and I did this by undertaking a very detailed, but discretely undertaken, 15 year Financial and Operational Review of the Group's activities, and concluded that the business needed to address Succession Planning Issues and its Ownership Structure moving forward. The core Consulting Business was lack-luster and below critical mass, while the Group was supported by successful PFIs and a large Cash Balance from a wind-fall PSA Privatisation deal in the early 1990s. Family interests and the ages of the Principals/Directors also complicated implementation of the best forward strategy. A Divestment Proposal & Company Valuation was developed in confidence for the Group Chairman, and introduction made to Capita Plc as prospective purchaser. The Sale negotiations fell apart when Capita's Due Diligence identified poor payment performance and disputes on an Iraqi Project, and a perceived reluctance on the part of the Chairman to consider a sale on acceptable terms. Dr Frischmann is a formidable industry figure, renowned engineer and businessman, but his single-minded authoritarian and sometimes ill-advised dogma, became his Achilles heel in later years. With immense personal wealth, he felt his firm was both his life and his hobby, and it appeared both his business partner of 45 years and his employees came second to that passion. The Consulting Subsidiary was subsequently sold to a German Investment Company, together with a £30m Pension Deficit, guaranteed by the Group's cash deposits and PFI Assets. I received no Success Fee for the transaction as I had left the Company, and not made the prior introduction to the said Group. I had been offered a continued role with the Group on less favourable terms by the Chairman, but elected to leave without the quite considerable financial reward I had been incentivised to pursue.

I had had several meetings with the CEO and Corporate Development Directors of Carillion over recent months; and had been verbally offered the MD role for a new posting in Kuala Lumpur by Carillion, and completed the formal "Accelerated Leadership Programme Assessment", only to hear at the eleventh hour that the Carillion Board had rebuked the idea of establishing a Far East operation at the time.

With *all* riding on that appointment, the lost (\$2m) commission from the failed sale of Pell Frischmann, and resignation therefrom- I sold my home at a distressed price, and informed my estranged Asian wife who had only skeptical hope that my appointment to Malaysia was a done deal and would result in a reconciliation. Carillion's own adviser at the Accelerated Leadership Programme expressed dismay at how the matter of



the U-Turn had been dealt, as “not being an example of how Carillion behaves.” I moved to my second home in Spain, with my step-daughter to seek a soft-landing to all of the above, and reflect on new career direction.

Note: Following Text withheld from Distributed Copies.

The Future

Greg Malpass
London October 1st, 2016



**APPENDIX VI****LIST OF INDUSTRY CONTACTS**

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Note: Names and E Mail addresses withheld from Distributed Copies

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Stakeholders/ Advisors/ Media/ Analysts


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D	CORPORATE CEOS CONTRACTORS UK (TOP 15)
E	CORPORATE CEOS CONSULTANTS UK & INTLN (TOP 15)
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G	KEY CITY SECTOR ANALYSTS (TOP 40)
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J	MEDIA CORRESPONDENTS TRADE
K	MEDIA CONSTRUCTION CORRESPONDENTS NATIONAL PRESS
L	INDUSTRY PROFESSIONAL AND TRADE ASSONS
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N	PRIVATE EQUITY FIRMS
O	SOVEREIGN WEALTH FUNDS
P	CONTINENTAL EUROPEAN COYS/ INVESTORS
Q	CHINESE CONSTRUCTION COMPANIES

Audit



"Year-End review in a festive mood."



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Deal Review and Advisor League Tables United Kingdom

2015	2014	Legal Advisor	Volume
1	3	GATELEY	148
2	2	SHOOSMITHS	148
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4	1	DLA PIPER	116
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2015	2014	Legal Advisor	Value (£m)
1	2	FRESHFIELDS BRUCKHAUS DERINGER	159,860
2	4	SLAUGHTER AND MAY	126,124
3	-	CRAVATH SWAINE & MOORE	124,642
4	5	CLIFFORD CHANCE	114,982
5	6	LINKLATERS	113,919
6	-	SULLIVAN & CROMWELL	108,198
7	1	HERBERT SMITH FREEHILLS	106,289
8	3	ALLEN & OVERY	82,865
9	10	SIMPSON THACHER & BARTLETT	81,919
10	8	HOGAN LOVELLS	77,914
11	25	ASHURST	69,307
12	13	A & L GOODBODY	61,832
13	11	SKADDEN ARPS SLATE MEAGHER & FLOM	42,629
14	-	ROPES & GRAY	30,560
15	21	NORTON ROSE FULBRIGHT	21,659
16	20	DAVIS POLK & WARDWELL	20,614
17	15	SHEARMAN & STERLING	18,381
18	26	TRAVERS SMITH	18,379
19	23	WEIL GOTSHAL & MANGES	17,326
20	29	MACFARLANES	16,238

2015	2014	Financial Advisor	Value (£m)
1	1	MORGAN STANLEY	189,035
2	5	GOLDMAN SACHS	170,535
3	4	BANK OF AMERICA MERRILL LYNCH	102,266
4	7	JP MORGAN	124,350
5	2	LAZARD	87,949
6	6	ROTHSCHILD	87,253
7	8	CITIGROUP	43,499
8	16	EVERCORE PARTNERS	42,590
9	3	EY	28,156
10	13	HSBC	22,717
11	21	UBS	20,113
12	11	DEUTSCHE BANK	16,278
13	9	BARCLAYS	13,680
14	12	CREDIT SUISSE	12,483
15	27	MOELIS & CO	12,286
16	18	PWC	7,430
17	20	NUMIS SECURITIES	7,167
18	14	CANACCORD GENUITY	5,102
19	-	NOMURA	5,834
20	22	CENKOS SECURITIES	5,196

Deal Review and Advisor League Tables United Kingdom

2015	2014	Financial Advisor	Volume
1	2	GRANT THORNTON	128
2	6	PWC	122
3	11	JP MORGAN	121
4	1	BDO	120
5	-	RSM	105
6	8	NUMIS SECURITIES	99
7	3	EY	98
8	5	KPMG	94
9	4	ROTHSCHILD	88
10	10	CENKOS SECURITIES	74
11	7	CANACCORD GENUITY	69
12	12	DELOITTE	63
13	13	FINNCAP	59
14	15	N+1 SINGER	59
15	31	PEEL HUNT	57
16	19	MAZARS	56
17	29	BCMS CORPORATE	53
18	18	GOLDMAN SACHS	52
19	17	CANTOR FITZGERALD	48
20	51	BENCHMARK INTERNATIONAL	47

20 Largest Private Equity Firms

Rank	Name of the firm	Capital Raised as of Apr 2011 (billions of USD)
1	TPG Capital	\$50.55
2	Goldman Sachs Capital Partners	\$47.22
3	The Carlyle Group	\$40.54
4	Kohlberg Kravis Roberts	\$40.21
5	The Blackstone Group	\$36.42
6	Apollo Management	\$36.42
7	Bain Capital	\$33.81
8	CVC Capital Partners	\$29.40
9	First Reserve Corporation	\$25.07
10	Helman & Friedman	\$19.06
11	Apax Partners	\$17.20
12	General Atlantic	\$16.60
13	Warburg Pincus	\$15.00
14	Cerberus Capital Management	\$14.90
15	Advent International	\$14.52
16	Pemira	\$13.67
17	Oaktree Capital Management	\$13.05
18	Terra Firma Capital Partners	\$12.25
19	Providence Equity Partners	\$12.10
20	Clayton, Dubilier & Rice	\$11.40



C. CORPORATE FINANCIAL ADVISERS (Top 30)	
31. WK CORPORATE FINANCE	
1. GRANT THORNTON	
2. PEEL HUNT	
3. JP MORGAN	
4. BDO	
5. RSM	
6. NUMIS SECURITIES	
7. GOLDMAN SACHS	
8. ROTHSCHILD	
9. CENKOS SECURITIES	
10. CANACCORD GENUITY	
11. FINNCAP	
12. BENCHMARK INTERNATIONAL	
13. MAIN FIRST	
14. BCMS CORPORATE	
15. CANTOR FITZGERALD	
16. MORGAN STANLEY	
17. BANK OF AMERICA MERRILL	
18. COMMERZBANK	
19. LAZARD	
20. CITIGROUP	
21. EVERCORE PARTNERS	
22. HSBC	
23. UBS	
24. DEUTSCHE BANK	

25. BARCLAYS	
26. CREDIT SUISSE	
27. ROYAL BANK CANADA	
28. CANACCORD GENUITY	
29. CENKOS SECURITIES	
30. BCMS CORPORATE	

D. CORPORATE CEOs (Top 15 UK & European Contractors)	
1. Balfour Beatty, Leo Quinn CEO	
2. Carillion, Richard Howson, CEO	
3. Interserve, Adrian Ringrose, CEO	
4. Laing O'Rourke, Ray O'Rourke, Chairman	
5. Kier Group, Haydn Mursell, CEO	
6. Taylor Wimpey, Peter Redfern, CEO	
7. Morgan Sindall, John Morgan, CEO	
8. Vinci/Taylor Woodrow	
9. Amey Uk/ Ferrovial Andy Miller	
10. Galliford Try, Peter Truscott, CEO	
11. BAM Graham Cash Steve Fox, MD BAM Nuttall	
12. Bouygues, Lionel Christolomme, CEO UK	
13. Skanska, Mike Putnam (Skanska UK)	
14. Costain Andrew Wyllie, CEO	
15. Dragados/ Hochtief/ ACS	
16. Barrat Dev	
17. Persimmon	

Neil.cooper@barratplc.co.uk
 Chloe.barnes@barratplc.co.uk
 Jeff.fairburn@persimmonhomes.com



23. Babcock	http://www.babcock.com	http://www.babcock.com
18. Berkeley Group	http://www.berkeleygroup.com	http://www.berkeleygroup.com
20. Keller	http://www.keller.com	http://www.keller.com
21. Willmott Dixon	http://www.willmott-dixon.com	http://www.willmott-dixon.com
22. MACE	http://www.mace.com	http://www.mace.com
E. CORPORATE CEOs (Top 15 Intl & UK Design & EC Consultants)		
1. Aecom, Mike Burke, CEO	http://www.aecom.com	http://www.aecom.com
2. Worley Parsons	http://www.worleyparsons.com	http://www.worleyparsons.com
3. Arcadis	http://www.arcadis.com	http://www.arcadis.com
4. Fugro	http://www.fugro.com	http://www.fugro.com
5. Jacobs	http://www.jacobs.com	http://www.jacobs.com
6. WSP Parsons Brinkerhoff	http://www.wsp.com	http://www.wsp.com
7. Fluor	http://www.fluor.com	http://www.fluor.com
8. Amec	http://www.amec.com	http://www.amec.com
9. CH2MHill	http://www.ch2mhill.com	http://www.ch2mhill.com
10. Technip	http://www.technip.com	http://www.technip.com
11. SNC-Lavalin, Neil Bruce, CEO	http://www.snc-lavalin.com	http://www.snc-lavalin.com
12. Bechtel	http://www.bechtel.com	http://www.bechtel.com
13. Mott MacDonald	http://www.mottmacdonald.com	http://www.mottmacdonald.com
14. Tecnicas Reunidas	http://www.tecnicas.com	http://www.tecnicas.com
15. Arup	http://www.arup.com	http://www.arup.com
16. Petrofac	http://www.petrofac.com	http://www.petrofac.com
17. Lendlease	http://www.lendlease.com	http://www.lendlease.com
18. Wood Group	http://www.woodgroup.com	Tony.tmozzi@woodgroup.com

19. WS Atkins	http://www.wsatkins.com	http://www.wsatkins.com
F. CORPORATE CEOs (Top 15 Intl PEER Groups)		
1. VINCI	http://www.vinci.com	http://www.vinci.com
2. CSCE (CHINA)	http://www.csce.com	http://www.csce.com
3. CCC (CHINA)	http://www.ccc.com	http://www.ccc.com
4. LARSEN & TOUBRO	http://www.larsentoubro.com	http://www.larsentoubro.com
5. CHINA RAILWAY	http://www.chinairailway.com	http://www.chinairailway.com
6. FERROVIAL Inigo Meiras	http://www.ferrovial.com	http://www.ferrovial.com
7. POWER CONSTN (CHINA)	http://www.powerconstn.com	http://www.powerconstn.com
8. BOUYGUES	http://www.bouygues.com	http://www.bouygues.com
9. METALLURGICAL CORP (CHINA)	http://www.metallurgical.com	http://www.metallurgical.com
10. HOCHTIEF & CIMIC	http://www.hochtief.com	http://www.hochtief.com
11. ACS	http://www.acs.com	http://www.acs.com
12. FCC	http://www.fcc.com	http://www.fcc.com
13. SKANSKA	http://www.skanska.com	http://www.skanska.com
14. SKE&C	http://www.skeandc.com	http://www.skeandc.com
15. STRABAG	http://www.strabag.com	http://www.strabag.com
16. Manuel	http://www.manuel.com	http://www.manuel.com
17. EIFFAGE	http://www.eiffage.com	http://www.eiffage.com
18. KAJIMA	http://www.kajima.com	http://www.kajima.com
19. FLUOR	http://www.fluor.com	http://www.fluor.com

RANK 2015	RANK 2014	FIRM	FIRM TYPE	IN \$ MIL	% OF TOTAL REV.
1	4	AECOM, Los Angeles, Calif., U.S.A.	EA	4,991.7	48
2	1	WORLEYPARSONS, North Sydney, NSW, Australia [†]	EC	3,945.2	83
3	6	ARCADIS NV, Amsterdam, The Netherlands [†]	E	3,561.0	89
4	5	FUGRO NV, Leidschendam, The Netherlands [†]	GE	3,002.0	88
5	2	JACOBS, Pasadena, Calif., U.S.A.	EAC	2,915.3	49
6	14	WSP/PARSONS BRINCKERHOFF, Montreal, Quebec, Canada [†]	E	2,908.1	81
7	3	FLUOR CORP., Irving, Texas, U.S.A. [†]	EC	2,674.0	67
8	8	DAR AL-HANDASAH CONSULTANTS (SHAIR AND PARTNERS), Cairo, Egypt [†]	EA	2,373.0	100
9	7	AMEC PLC, Knutsford, Cheshire, U.K. [†]	EC	1,950.6	47
10	11	CH2M HILL, Englewood, Colo., U.S.A. [†]	EAC	1,517.2	43
11	12	TECHNIP, Paris, France [†]	EC	1,431.9	99
12	10	SNC-LAVALIN INT'L INC., Montreal, Quebec, Canada [†]	EC	1,428.5	49
13	9	BECHTEL, San Francisco, Calif., U.S.A. [†]	EC	1,428.0	65
14	13	MOTT MACDONALD GROUP LTD., Croydon, Surrey, U.K. [†]	E	1,427.3	69
15	17	TECNICAS REUNIDAS, Madrid, Spain [†]	EC	1,316.1	96
16	18	ARUP, London, U.K. [†]	E	1,130.3	71
17	15	KBR, Houston, Texas, U.S.A. [†]	EC	1,112.0	73
18	20	ATKINS, Epsom, Surrey, U.K. [†]	EA	1,105.4	44



	VINCI
	CHINA STATE CONST. ENG..
	CHINA COMMUNICATIONS C..
	CHINA RAILWAY GROUP LT..
	LARSEN & TOUBRO LIMITE..
	CHINA RAILWAY CONSTRUC..
	FERROVIAL SA
	POWER CONSTRUCTION COR..
	BOUYGUES
	METALLURGICAL CORPORAT..
	HOCHTIEF AG
	ACS ACTIVIDADES DE CON..
	SKANSKA AB
	TAISEI CORP
	EIFFAGE
	KAJIMA CORP
	FLUOR CORPORATION (NEW..
	OBAYASHI CORP
	CIMIC GROUP LTD
	SHIMIZU CORPORATION

	Sales (US\$ million)	Company	Country
1	107765	China State Construction & Engineering (CSCEC)*	China
2	93084	China Railway Construction Corporation	China
3	88741	China Railway Group	China
4	54098	Vinci	France
5	52867	China Communications Construction	China
6	50954	ACS	Spain
7	39400	Bechtel	US
8	34890	Bouygues' Construction Divisions	France
9	34117	Hochtief	Germany
10	31517	China Metallurgical Group (MCC)*	China
11	27657	Daiwa House	Japan
12	27351	Fluor	US
13	21707	Leighton Holdings	Australia
14	20944	Skanska	Sweden
15	20117	Sinohydro*	China



2015 rank	2014 rank	Engineering Consultant	Total UK chartered
1	1	Atkins	2,988
2	3	Aecom	2,295
3	2	Mott MacDonald	2,847
4		Arcadis	2,010
5		WSP Parsons Brinckerhoff*	N/A
6	6	Arup	1,458
7	5	Capita	1,462
8	7	Mace	1,317
9	8	Turner & Townsend	1,282
10	9	CBRE	1,125
11	12	Faithful & Gould	693
12	13	Waterman	549
13	14	Ramboll UK	498
14	16=	Gardiner & Theobald	443
15	16=	Gleeds	443

Rank 2014	Rank 2015	Construction Company UK (including Housing)	2014 T/O (\$m)
1	1	Balfour Beatty Plc	8,793
2	2	Carillion Plc	4,072
3	3	Laing O'Rourke	3,574
4	6	Interserve Plc	3,305
5	5	Barratt Dev's	3,157
6	4	Kier Group PLC	2,985
7	7	Taylor Wimpey	2,686
8	10	Persimmon	2,574
9	11	Amey Group	2,416
10	8	MITIE	2,266
11	9	Morgan Sindall	2,220
12	13	Berkeley Group	2,120
13	12	Galliford Try	1,768
14	14	BAM UK	1,600
15	16	Bouygues UK	1,600



G. KEY SECTOR CITY ANALYSTS (Top 40 Construction Analysts)				
1. J P Morgan Cazenove, Emily Biddulph	Em Biddulph Emily Cazenove Emily Biddulph			Colin Sheridan@davy.ie
41. Alpha Value	f.bj			
2. Berenberg Bank	Ro Mi			
3. Peel Hunt Ltd	Cly +44 +44 cly Gav +44 gavi And +44 and Chri +44 chri Hen +44 hen Keit +44 keit Kate +44 kate Jam +44 jam			
4. Liberum Capital, Charlie Campbell	Ryc			
5. Shore capital	Ro			
6. Beaufort Securities	mil m			
7. Numis Securities, Chris Millington Christen hjorth	cm hse chj			
8. Progressive Research, Alistair Stewart	Alic res			
9. Building Value, Tony Williams	Ton			
10. Cenkos , Kevin Cammack	kca			
11. WH Ireland, Nick Spoliar	Nic			
12. Bernstein Research, Chirantan Barua	Phi m Chi cor			
13. Redburn Partners, Will Jones	Jar Wi Joh			
14. Citi Bank, Aynsley Lammin	Ayi Am Kla ber.gsm@citigroup.com			
15. Goldman Sachs, Eshan Toorabally	Eshan.toorabally@gs.com			
16. Davy	Barry.dixon@davy.ie			
			Stockbrokers, Colin Sheridan	F
			17. Credit Suisse, Harry Goad	H
			18. Jefferies International, Anthony Codling	se an m
			19. Northland Capital Partners Limited, Simon Brown	si
			20. Stifel	St
			21. Goodbody	R
			22. UBS, Gregor Kuglitsch	D G
			23.	
			24. Panmure Gordon & Co, Mark Hughes	A M
			25. Cantor Fitzgerald	ic
			26. Ian Osburn	
			27. Deutsche, Glynis Johnson	G P
			28. HSBC , Jeff Davis	Je M Jc
			29. Investec Securities, Andrew Gibb	A G
			30. Altium Securities	
			31. Oriel Securities	
			32. Pantheon Macroeconomics Samuel Tombs, Chief UK economist	Se m
			33. Barclays/ Gain Capital Ltd, Jon Bell	Jc la
			34. Weston House, Alastair Stewart	
			35. Deloitte Paul Trickett Stephen Craig Makhan Chahal	p st m
			36. Bank Vontobel Christian Arnold	C
			37. Cantor Fitzgerald Ian Osburn	
			38. Sharescope Phil Oakley	a
			39. Beaufort Securities, Mike Franklin	M m
			40. Construction Enquirer Grant Prior, Aaron Morby	G A
			41. Bank Yontobel, Christian Arnold	
			42. Cantor Fitzgerald,	



Andy Botton	A			L. INDUSTRY TRADE ASSOCIATIONS &UKTI	
Nadine Buddoo	N			ICE	
Robert Henson	R			BRITISH EXPERTISE	B
Michaila Hancock	M				
CONSTRUCTION INDEX					
CONSTRUCTION NEWS					
Rabeca Evans, Editor	R				
Charlie Schouten, Editorial Analyst	C				
Daniel Kemp, Features Editor	D			ACE	
Damon Schumann	D			IOB	
Robyn Wilson	R				
Jack Simpson	J			CONSTRUCTION PRODUCTS ASSOCIATION	
Lucy Alderson	L				
Tom Fitzpatrick	T			RICS	
CONSTRUCTION ENGINEER				UKTI	
Aaron Morby	A		om		
ENR					
Peter Reina, London	P				
Janice L Tuchman, Editor	J				
Richard Korman	R				
CONSTRUCTION MEDIA					
Matt Brown	M		uk		
					
K. MEDIA CORRESPONDENTS (NATIONAL PRESS)				M. MINORITY SHAREHOLDERS	
TELEGRAPH/ SUNDAY				BALFOUR BEATTY	
Tim Wallace	T			Causeway Capital Management LLC	
Peter Spence	P			M&G Investment Management Ltd.	
Tara Cunningham	T		uk	Schroder Investment Management Ltd.	
				Norges Bank Investment Management	
				Newton Investment Management Ltd.	
FINANCIAL TIMES				Invesco Asset Management Ltd.	
Catherine Goacher	C			UBS Asset Management (UK) Ltd.	
Lionel Barber	L			Kames Capital Plc	
GUARDIAN				CARILLION	
Phillip Inman	P			DFA International Small Cap Value	
TIMES				Templeton Foreign Fund A	
				Standard life Invts	
MAIL ON SUNDAY				Blackrock inc	
				Templeton World Fund A	
OBSERVER				Vanguard Total Intl Stock Inde	
				Templeton Intl Foreign Equity Fund	
DAILY MAIL					
DAILY EXPRESS					



INTERSERVE
Standard Life Investments
Henderson Group Plc
Old Mutual plc
Mondrian Investment Partners
KIER
Schroder Plc
Standard Life Investment Ltd
Norges Bank
TAYLOR WIMPEY
VA CollegeAmerica Cap Inc Bldr
Vanguard Total Intl Stock Inde
Principal Diversified Intl R2
Pear Tree Polaris Foreign Value Ord
DFA International Small Cap Value I
Blackrock Inc
FMR LLC
Schroder Plc
JP Morgan Asset Management Holding Inc
Schroder Plc
Schroder Investment Management
GALLIFORD TRY
Standard Life Investments
Brewin Dolphin
Aberforth Partners
Hargreave Hale
Henderson Global Investors
FERROVIAL
Rijn Capital BV (del Pino)
Menosmares SLU
Siemprelara SLU
Scziancor SLU
ACS
Inversiones Vesan
Corporacion Financiera Alba

N. PRIVATE EQUITY FIRMS (Top 15)	
TPG (US)	
Strategy and	PER
Golman Sachs (US)	
Carlyle Group (US)	
Kohlberg Kravis Roberts (US)	
Apollo (US)	
Bain Capital (US)	
CVC Capital (UK)	
Apax (UK)	
First Reserve Corp (UK)	
3i (UK)	PER
Aberdeen Asset Mgm	
OMERS	
Qatar Holdings	

Top 10 sovereign wealth funds				
Country	SWF name	Assets (\$ bn)	Inception	Drift
Norway	Government Pension Fund Global	\$838	1990	Oil
UAE (Abu Dhabi)	Abu Dhabi Investment Authority	\$773	1976	Oil
Saudi Arabia	SAMA Foreign Holdings	\$675.9	N/A	Oil
China	China Investment Corporation	\$575.2	2007	Non-commodity
China	SAIF Investment Company	\$367.9*	1997	Non-commodity
Kuwait	Kuwait Investment Authority	\$410	1953	Oil
China (Hong Kong)	Hong Kong Monetary Authority Investment Portfolio	\$326.7	1993	Non-commodity
Singapore	Government of Singapore Investment Corporation	\$285	1961	Non-commodity
Singapore	Temasek Holdings	\$173.3	1974	Non-commodity
Qatar	Qatar Investment Authority	\$170	2005	Oil & gas



O. SOVEREIGN WEALTH FUNDS	
Norwegian Government Pension Fund	
Abu Dhabi Investment Authority/ Mubadala	
SAMA Foreign Holdings	
China Investment Corporation	
SAFE Inv Company	
Kuwait Inv Authority	
Hong Kong Monetary Authority	
Gov of Singapore Investment Corp	
Temasek Holdings	
Qatar Inv Authority	
Oman Investment Authority	
Saudi PIF	
P. CONTINENTAL EUROPEAN CONSTRUCTION COMPANIES	
Vinci (Taylor Woodrow)	
ACS (Dragados/Hochtief)	
Bouygues	
Skanska	
Strabag	
Eiffage	
FCC	
Acciona	
BAM (Nuttall)	
Ferrovial (Amey)	
Q. CHINESE CONSTRUCTION GROUPS	
Chinese State Construction & Engineering Co (CSEC)	
China Railway Group China Railways Construction Corp	
China Communications Construction (CCC)	
Metallurgical Corp of China (MCC)	
R. OTHERS	
Sheikh Khalid	
HE Amr Dabbagh	
Baroness Symons	



Corporate Advice

Think Different.
But not different from me.



"Advisers advise, Managers Decide."



APPENDIX VII

M&A HISTORY-CONSULTANTING ENGINEERS



Source: ACE

Former practice	Subsequently
Acer Group	Hyder Consulting (1996)
Adams Kara Taylor	Acquired by White Young Green (2006), management buyout with Tyréns to form AKT II (2011)
Allott & Lomax	Babtie (2000), retained name for some time
Allott, C S & Son	Allott & Lomax, then Babtie (2000), then Jacobs Babtie (2004)
Andrews, Kent & Stone	Merged with Anthony Ward partnership to become AKS Ward (2005)
Andrews, Walter C	Andrews Associates
Anemos	RWDI Anemos (2004)
Applied Geology	Rust (a subsidiary of Rust International), then Rust Environmental, then Parsons Brinckerhoff
Aspen	Waterman Aspen
Atelier One	SMP Atelier One (1994, with Stephen Morley Partnership)
Babcock Water Engineering	Earth Tech Engineering (1998)
Babtie	Jacobs Babtie (2004), then Jacobs (2006)
Babtie Shaw & Morton	Babtie (qv), then Jacobs Babtie (2004), Jacobs (2006)
Baguley, Maurice & Partners	Hurley Palmer Flatt (c. 2004?)
Baker and Mott	Mott MacDonald
Baker and Shelford	
Balfour	D Balfour, then Faber Maunsell
Barclay Dowds	merged with JMP Consultants (1989)

Barry & Brunel	see Wolfe Barry
Barry & Leslie	see Wolfe Barry
Barry, A J	see Wolfe Barry
Barry, A J, Cochrane	see Wolfe Barry
Bateman, J F	G H Hill (c1890)
Bay Associates	Acquired by Supporta plc (2006)
Beer, A E & Partners	Beers (1981)
Benaim	Acquired by Scott Wilson (2008)
Bertlin	Scott Wilson Kirkpatrick (late 1980s), initially as Scott Bertlin. Bertlin name disappeared c1995
Bettridge Turner	Acquired by Hyder (2006)
Bianco, J C	
Billington, Roy Associates	Merged with T D Bingham (2005); T D Bingham merged with Nixon Davis to become Bingham Davis (2006)
Bingham Blades	Bingham Hall O'Hanlon (the Welsh offices, 1981), then Bingham Hall Partnership, Bingham Yates (Edinburgh office (1978)). Merged with BMMK Cotterell to form Bingham Cotterell (1988), acquired by Mott MacDonald (1998)
Bingham Cotterell	Acquired by Mott MacDonald (1998, former name retained for a while)
Bingham, T D	merged with Nickson Davis to become Bingham Davis (2006)
Binnie & Partners	Binnie Black & Veatch (1995), then Black & Veatch (2003)
Birkett Stevens Colman Partnership	Merged with GHA Livgunn (2009, both retain name)
Blair, J F	Crouch and Hogg (19th century)
Blyth & Blyth	[Management takeover (2004)]
BMMK Cotterell	Merged with Bingham Blades to form Bingham Cotterell (1988),

BMMK Cotterell	Merged with Bingham Blades to form Bingham Cotterell (1988), acquired by Mott MacDonald (1998)
Bobrowski, Jan	NRM Bobrowski (2004), NRM Bobrowski acquired by Capita Symonds to become Capita Bobrowski (2008)
Bolsover, Roy	Dissolved 1999
Bowden Sillett	Train & Kemp (c. 2001)
Bradshaw, Buckton and Tongue	Waterman BBT (1989)
Brakenridge & Miller	MCMK, then ZMCK (1982)
Brand, Frederick	Brand Leonard (1994)
Brierley Lovell Partnership	Separated into Brierley & Co and AGL Consulting (1996)
Brimer & Martin	see Brimer, Andrews & Nachsen
Brimer, Andrews & Nachsen	Merged with Brimer & Martin and Maggs and Keeble to form Brimer, Martin, Maggs, Keeble and Partners (1962), BMMK & Partners merged with A P I Cotterell & Son to form BMMK Cotterell (1981), merged with Bingham Blades to form Bingham Cotterell (1988), acquired by Mott MacDonald (1998)
Brimer, Martin, Maggs, Keeble & Partners	BMMK & Partners, merged with A P I Cotterell & Son to form BMMK Cotterell (1981), merged with Bingham Blades to form Bingham Cotterell (1988), acquired by Mott MacDonald (1998)
Broad and Gloyens	Merged with CCP to form HAP (2001), then HAC (2006)
Brooke, Richard	Taken over by Mason Clark (2005)
Brown Crozier and Wyatt	Humphries and Brown. A Caton Crozier left partnership in 1980
Brown, Kenneth and Partners	KB2 Consulting Civil and Structural Engineers LLP (2008)
Buchanan Consulting Engineers	Capita (2005) but retains name
Buck, D V	Parkman Buck, then Parkman, then Mouchel Parkman
Building Performance Group	Acquired by BRE (2006)
Bullen	Faber Maunsell (2005)



Burgess Associates	Dissolved 2004
Burks Green	Acquired by RPS Group, now RPS Burks Green (2006)
Burns, T F	see Posford Duvivier
Burrow, John	Burrow Crocker, then DHV Consulting (c. 1991-2), then Aspen Burrow Crocker, then Waterman Burrow Crocker
Bush Booth	Dissolved 2006
Bylander Waddell	Liquidation (1999), then Bylander 2000 Ltd (2000)
Cairns & Byles	WSP Group plc (1988)
Caldwell Consulting Engineers	Willis Caldwell Ltd (2004), then WCL St James
Cameron Holdsworth	Nickalls Roche McMahon (2003), then NRM Consultants
Cameron Taylor	Scott Wilson (2006)
Cameron Taylor Bedford	Cameron Taylor (2005), then Scott Wilson (2006)
Cameron Taylor Brady	Cameron Taylor (2005), then Scott Wilson (2006)
Cantor Seinuk	WSP Cantor Seinuk (2000)
Carl Bro	Grontmij (2007)
CCP	Merged with Broad and Gloyens to form HAP (2001), then HAC (2006)
Cetec	White Young Green (2005)
Chadwick & Associates	CASE Consultants (1996)
Chapman, Smart & Barker	Barker Chapman (1984)
Christie, S P	Christie & Partners
Civil Engineering Design Group, British Rail (York)	CEDG York Ltd, (1995, within British Steel)
Civil Engineering Design, British Rail (Croydon)	Atkins (1995-67)

DGP International	Purchased by Scott Wilson (2006)
DHV International	company still active worldwide but UK office in liquidation
Dixon Hurst	merged with Redgrove & Kemp to form Dixon Hurst Kemp (1997)
Dobbie	Babtie (1990)
Dobbie, C H	Dobbie & Partners (mid 1980s), then Babtie Dobbie (1987), then Babtie (1990)
Donkin	Kennedy and Donkin
Doran, Dr I G	Doran Consulting
Douglass, Lewis and Douglass	see Lewis Duvivier
Durley Hill	merged with Cameron Taylor Bedford to form Cameron Durley Consulting (1999)
Earley Camping Lee	White Young
Elliott & Brown	Acquired by Waldeck (2010)
Elms Rooke	Geoff Rooke now a director of the Terrell Group
Engineering Geology	Acer (1993), then Hyder (1996)
ERL	Merged with ERM (1987)
Evans Grant	Evans Grant Opus (2004), merged with Veryards Opus to form Opus International Consultants (2006)
Evans, Wallace	Bought by Welsh Water (1990), merged with Acer as Acer Wallace Evans (1993), then Hyder (1996)
Ewbank	merged with Preece Cardew & Rider to become Ewbank Preece (1983)
Ewbank Preece	Mott MacDonald (1994)
Faber, Oscar	Merged with AECOM Maunsell (2001) to become FaberMaunsell, then AECOM FaberMaunsell, now AECOM
Ferguson McIlveen	Scott Wilson (2006), retains name

Clarke, Nicholls, Marcel	Bristol office became Clarke Bond Partnership (1986), then Clarke Bond Group (1999). Clarke, Nicholls, Marcel continues to operate under that name
Colquhoun, Brian	Thorburn Colquhoun (c. 1993-4?, with Thorburn), URS (1999)
Conisbee, Alan and Associates	Conisbee (2007)
Coode Blizzard	Graham Group (1994), WSP Group plc (1997)
Cook White Partnership	Nickalls Roche McMahon (1998) then NRM Consultants
Cook, E J	Costain
Cooper Macdonald	Practice dissolved (1993)
Cowan and Linn	Blyth and Blyth (2006)
Crabtree Morrell	Beers (1981)
Craddy & Partner	Craddy Pitchers (1999), then Craddy Pitchers Davidson (2006)
Crocker, Trevor	Burrow Crocker, then DHV Consulting (c. 1991-2)
Crouch & Hogg	Crouch Hogg Waterman, then (1997) Halcrow Waterman (structures) and Halcrow + Crouch (civil engineering)
Cuthbertson, R H	Cuthbertson Maunsell (1999), part of Balfour Maunsell, then FaberMaunsell, now Aecom
Dames & Moore	URS
Davies, Richard Associates	Robert Benaim
De Leuw Chadwick	De Leuw Knight Piesold, now Pell Frishmann
Deakin Callard	merged with Jon Walton Associates to form Deakin Walton (1999). Scottish office of Deakin Callard sold to the incumbent partner and relaunched as Goodson Associates. Deakin Walton acquired by the Clarke Bond Group (2008) and relaunched as Clarke Bond (2010)
Design & Construction Unit, British Rail (Birmingham)	Owen Williams (1995)
Design Group Partnership	DGP International, purchased by Scott Wilson (2006)

Flint & Neill	Merged with COWI (2008)
Flynn & Rothwell	De Leuw Chadwick, De Leuw Knight Piesold, now Pell Frischmann
FMH Consulting	acquired by SLR (2008)
Fordham Johns	Cameron Taylor
Fox, Douglas	Freeman Fox
Freeman Fox	merged with John Taylor to form Acer Group (1987), then Hyder Consulting (1996)
Gathard Brooke	Bettridge Turner (2004)
Geotechnical Consultants	Wilkinson Associates then part of Tony Gee & Partners (2003)
GHA Livigunn	Merged with Birkett Stevens Colman Partnership (2009, both retain name)
Gibb, Sir Alexander	Law Group (US), Jacobs Gibb (2001), Jacobs (2002), then Jacobs Babtie (2004)
Gifford	Purchased by Ramboll (2011)
Gower Associates	Babtie (1990s)
Graham Group	WSP Group plc (1997)
Graham, Frank	Graham Group
Gray & Hurst	B L Hurst left partnership in 1910 (see Hurst, B L). C W Gray in practice until 1922.
Green, Ernest	White Young Green (1997)
Gregory & Associates	BCSP (1997)
Grove Consultants	Tarmac Professional Services (TPS) (1995), then Carillion
Gunn & Colthart	merged with Leslie Plummer Associates (2005)
Haiste Group	Carl Bro (1988), subsequently Grontmij
Halcrow	Purchased by CH2M Hill (2011)



Hallam, Michael	Hallam, Alexander (1996), then Alexander Associates (2004)
HAP	HAC (2006)
Harris & Sutherland	Babtie Harris & Sutherland (1997), then Babtie, Jacobs Babtie (2004), Jacobs (2006)
Harris, A J & J D	Harris and Sutherland (c1964) (qv)
Harris, E C	Bought out by Arcadis (2011)
Haswell, Charles	Haswell Consulting, then (2005) taken in-house by Severn Trent
Hawksley, T and C	Amalgamated with J D and D M Watson to form Watson Hawksley (1978), merged with James M. Montgomery to form Montgomery Watson (1990), merged with Harza Engineering Company to form Montgomery Watson Harza (2001), shortened to MWH (2003)
Hay Barry	Acer, then Hyder Consulting (1996)
Henderson, L N	L N Henderson, Morgan (1978)
Hill, G H	Closed down following 1984 Carsington Dam failure
HJT	WSP Group plc (1999)
Holman, Davis	Mander, Raikes and Marshall (1986), then MRM
Howard Humphreys	Brown & Root, Halliburton, Kellogg Brown & Root, now KBR
Hunt, Anthony	YRM Anthony Hunt, then Kendall, then SKM Anthony Hunts
Hunter and Dunn	
Hurst, B L	B L Hurst & Peirce (1935), then Hurst Peirce & Malcolm (1947)
Husband	Mott MacDonald
Hutchinson, George Associates	Merged with Livingston Gunn to form GHA Livigunn
Infrastructure Design Group, British Rail (Glasgow)	Scott Wilson Kirkpatrick (1995)
Ingram, L.V.	Closed down (2005)

Lewis and Duvivier	A.W. Lewis was the last assistant of William Tregarthen Douglass, son of the lighthouse engineer Sir James Nicholas Douglass. When W.T. Douglass died his son Cuthbert became head of the firm in partnership with Lewis to become Douglass, Lewis & Douglass (1914). When Cuthbert was killed in WW1 the firm became Lewis & Lewis (1918), then Lewis & Duvivier (1942). It merged with Posford Pavry to form Posford Duvivier (1987), incorporated T F Burns and Partners (1992) and was acquired by Royal Haskoning (1994), becoming Posford Haskoning (2001) then Royal Haskoning (2005)
Livesey & Henderson	Binnie, now Black & Veatch (2003)
Macdonald, F A	W A Fairhurst (1963)
MacDonald, Sir M[urdoch] & Partners	Mott MacDonald (1989, with Mott, Hay & Anderson)
Maggs & Keeble	see Brimer, Andrews & Nachsen
Mainline Railway Infrastructure Consultants, British Rail (Swindon)	Scott Wilson Kirkpatrick (1995)
Malachi Cullen	White Young Green (2007)
Mander Structural Design	Integral Structural Design (2005, with Pilotis)
Mander, G C	Mander, Raikes & Marshall (1973)
Mander, Raikes & Marshall	MRM, then Rust (a subsidiary of Rust International), then Rust Environmental, now Parsons Brinckerhoff
Marsh, John Associates	merged with Sinclair Johnston (1998)
Marshall, Alan	Frank Graham, then Graham Group, then WSP Group plc (1997)
Matthew Consultants	Walsh Group
Maunsell, G	Maunsell, acquired by Aecom (2000), became FaberMaunsell (2001)
Maunsell, G A	Founded by Guy Maunsell and John Posford (early 1940s), then Maunsell, Posford and Pavry (1949). Firm split to form Posford Pavry and Partners (1955), incorporated W H Radford & Son (1983), merged with Lewis and Duvivier to form Posford Duvivier (1987), incorporated T F Burns and Partners (1992),

Irendco	High-Point Rendel
Jacobs Babtie	Jacobs (2006)
James, Harold	Merged with T A Millard (2005)
James, R T (London office)	Owen Williams (1996), now Amey (2006)
James, R T (Newcastle upon Tyne office)	WSP Group plc (1995)
James-Carrington & Partners	Acquired by Kenchington Little (c1990), then WSP Group (1995)
Joynes Pike	Acquired by Opus International Consultants (2008)
Kanthack, F E	WLPJ, then Knight Piesold (1990), then Pell Frischmann
Kara Taylor	Adams Kara Taylor (1997)
Kenchington Ford	WSP Group plc (1993)
Kenchington Little	Kenchington Ford (owned by A B Consulting), then WSP Group plc (1993)
Kennedy & Donkin	Rust (1994), then Parsons Brinckerhoff (1998)
Kirk McClure Morton	RPS Kirk McClure Morton (2004)
Kirkpatrick, J A	Carl Bro (1990)
KML Consulting	Carl Bro (1993)
Knight Morrish	Morrish and Partners (1999)
Knight Piesold	Pell Frischmann
Knowles, James R	Knowles, then acquired by Hill International (2006)
Leonard & Partners	Brand Leonard (1985?)
Lewis & Lewis	see Lewis and Duvivier
Lewis and Duvivier	A.W. Lewis was the last assistant of William Tregarthen Douglass, son of the lighthouse engineer Sir James Nicholas Douglass. When W.T. Douglass died his son Cuthbert became head of the firm in partnership with Lewis to become Douglass,

McDowells	Closed down (1996)
McKelvey Ellis Partnership	Merged with Keith Pearson Associates to become Pearson Ellis Partnership (1991), then PEP Ltd (1994), then PEP Civil & Structures Ltd (1996)
McKelvey, K K	McKelvey Ellis (1971) (qv)
McMahon Associates	Nickalls Roche McMahon (1979) then NRM Consultants
Meik	Halcrow
Mentor, a Cooper Macdonald geotechnical subsidiary	Mentor
Merz & McLellan	Parsons Brinckerhoff (1994)
Metro Consulting	Mouchel (2001)
Mitchell, McFarlane	In liquidation. Hong Kong Office Mitchell, McFarlane, Brentnall & Partners taken over by WSP Group plc (2000)
Modus	Sinclair Knight Merz (Europe) Ltd (1999)
Montgomery Watson	Merged with Harza Engineering Company to form Montgomery Watson Harza (2001), shortened to MWH (2003)
Montgomery, James M	Merged with Watson Hawksley to form Montgomery Watson (1990), merged with Harza Engineering Company to form Montgomery Watson Harza (2001), shortened to MWH (2003)
Moorehead Clancy Associates	formed 1969, separated (1972) to form Brian Moorehead & Partners and Brian Clancy Partnership, then Clancy Consulting (2000). Brian Moorehead & Partners ceased trading 1992, the Manchester office becoming Consultants BMP, then Modus, then Sinclair Knight Merz (Europe) Ltd (1999), the London Office becoming BMP Consulting Engineers (dissolved 1993), then R & H Moorehead (1992), then Ramboll Moorehead (dissolved 2005)
Morley, Stephen Partnership	SMP Atelier One (1994, with Atelier One)
Morton, Brian A and Partners	The Morton Partnership (1992)
Mott & Hay	Mott, Hay and Anderson (1920)



Mott, Hay & Anderson	Mott MacDonald (1989, with Sir M[urdoch] MacDonald)
Mouchel, L G	Mouchel Parkman (2003), now Mouchel Group
MRM	see Mander, Raikes & Marshall
Mulholland & Doherty	Acquired by Faber Maunsell (2008)
Nachshen, Crofts & Leggatt	NCL Consulting Engineers, then Project Engineering Partnership, NCL Stewart Scott Ltd, then NCL St James Ltd (part of St James Consultants), then St James Lovell Partnership (closed down 2007). Information available from Pinfold Consulting.
Newsum, H and Sons	also known as HNS. Taken over by Dexion and relaunched as Newsum Timber Engineering (NTE)
Nickalls and Roche	acquired McMahon Associates (1979), Cook White Partnership (1998) and Cameron Holdsworth (2003) to become Nickalls Roche McMahon and then NRM Consultants. Merged with Jan Bobrowski to become NRM Bobrowski (2004). NRM Bobrowski acquired by Capita Symonds to become Capita Bobrowski (2008)
Nickson Davis	Merged with T D Bingham to become Bingham Davis (2006)
Nolan, John Associates	Acquired by Erinaceous Group (2006), now Nolan Associates
Norman & Dawbarn	Capita Norman + Dawbarn (2005)
Northcroft	Acquired by Capita Symonds (2012)
NRM Consultants	NRM Bobrowski (2004). NRM Bobrowski acquired by Capita Symonds to become Capita Bobrowski (2008). See Nickalls and Roche
Osprey	Osprey Mott MacDonald
Parkman	Mouchel Parkman (2003), now Mouchel Group
Parsons, Brown	now part of WSP Group
Parsons, Brown and Newton	now part of Mott MacDonald
Pattisson, John	Evans Grant Opus (2004)
Pearson, Keith Associates	Merged with McKelvey Ellis & Partners to become Pearson Ellis Partnership (1991), then PEP Ltd (1994), then PEP Civil &

Roscoe, Edward Associates	Capita Roscoe (1999)
Ross Silcock	Babtie (2001)
Roughton & Fenton	Acer, then Hyder Consulting (1996) [not to be confused with Roughton Group]
Roxburgh Associates	Merged with Will Rudd Associates to form Will Rudd Roxburgh (2000)
RT-W	changed name to Structural & Civil Consultants (1998)
Rudd, Donald	WSP Group plc (1990)
Safier, Armand	Acer (1989), then Hyder (1996)
Sampson	acquired by W A Fairhurst (1997)
Saunders, William & Partners	William Saunders Partnership (c1990), then William Saunders Partnership LLP (2004). Also trades as WSP, not to be confused with WSP Group plc
Scott Wilson	URS/Scott Wilson (2010)
Scott Wilson Kirkpatrick	Scott Wilson
Severn, Kenneth	Halcrow Severn (1993)
Snow, Sir Frederick	Merged with Athens-based Associated Consulting Engineers (1991), acquired oil and gas consultants IMEG (2003)
Stevenson, Robert	R Stevenson & Son, then T & A Stevenson, then D Stevenson, then D A Stevenson (wound up c1960)
Stroyer & Adcock	Active 1913-1986
Sturrock, J C	Acquired by Hannah-Reed (2007)
Tanner, John A & Partners	Tanner Sadler Partnership (c1990), dissolved (1994), then Tanners (until 1999)
Taylor, John	merged with with Freeman Fox to form Acer Group (1987), then Hyder Consulting (1996)
Taylor, R G, Hodgkinson	Taylor, R G (1978)

Pearson, Keith Associates	Merged with McKelvey Ellis & Partners to become Pearson Ellis Partnership (1991), then PEP Ltd (1994), then PEP Civil & Structures Ltd (1996)
Peel and Fowler	Scott Wilson (2002)
Pell, C J	Pell Frischmann
Pencol	Penspen Group
Pettit	Mott MacDonald Pettit (2006)
Pilotis	Integral Structural Design (2005, with Mander Structural Design)
Posford Duvivier	A.W. Lewis was the last assistant of William Tregarthen Douglass, son of the lighthouse engineer Sir James Nicholas Douglass. When W.T. Douglass died his son Cuthbert became head of the firm in partnership with Lewis to become Douglass, Lewis & Douglass (1914). When Cuthbert was killed in WW1 the firm became Lewis & Lewis (1918), then Lewis & Duvivier (1942). It merged with Posford Pavry to form Posford Duvivier (1987), incorporated T F Burns and Partners (1992) and was acquired by Royal Haskoning (1994), becoming Posford Haskoning (2001) then Royal Haskoning (2005)
Posford Pavry	Incorporated W H Radford & Son (1983), merged with Lewis and Duvivier to form Posford Duvivier (1987), incorporated T F Burns and Partners (1992), acquired by Royal Haskoning (1994), Posford Haskoning (2001), Royal Haskoning (2005)
Preece Cardew & Rider	merged with Ewbank to become Ewbank Preece (1983)
Property Services Agency / PSA Consult	TPS Consult, now part of Carillion
PSA Projects	TBV Consult under Tarmac Professional Services (TPS, 1992)
Radford, W H	Incorporated into Posford, Pavry and Partners (1983)
Redgrove & Kemp	merged with Dixon Hurst Partnership to form Dixon Hurst Kemp (1997)
Rendel Palmer & Tritton	High-Point Rendel (1995)
Rendel Palmer & Tritton (Scotland)	High-Point Rendel, then Cadogan Consulting (1997)

TBV Consult - PSA Consult	Now part of Carillion
Thorburn	Thorburn Colquhoun (c1993-4, with Colquhoun), URS (1999)
Tietz, S B	Briefly in partnership as Cadogan Tietz (c1996-1999); still operates, also as Tietz Management Ltd (TML)
Tilney Simmons	White Young Green (1999)
Trant Brown and Humphreys	Howard Humphreys
Travers Morgan, R and Partners	Travers Morgan Ltd (late 1980s), then Symonds Travers Morgan (1995), then Capita Symonds (early 2000s)
Turner, Peter & Associates	John Pryke (2005)
Tweeds	Acquired by White Young Green (2006)
Underwood & Mander	Existed from 1949-1959, separated into E N Underwood & Partners (1959-1976) and G C Mander (1959-1973); D C Mander founded in 2000
Underwood, E N	1946-1949, then Underwood & Mander (1949-1959), then E N Underwood & Partners (ceased trading 1976)
Veryards	Veryards Opus (2005), merged with Evans Grant Opus to form Opus International Consultants (2006)
Walker, Brian	Beers
Wallace Evans	Acer, then Hyder Consulting (1996)
Walton, Jon Associates	formed 1969, merged with Deakin Callard to become Deakin Walton (1999). Walton Garden & Partners formed (1980), the Scottish office of John Walton Associates, incorporated into Walton Garden Ltd (2003), owned by Goodson Associates
Ward (John) & Partners	Beers
Ward Ashcroft Parkman	Parkman, then Mouchel Parkman
Ward, Anthony	Merged with Andrews, Kent and Stone to become AKS Ward (2005)
Ward, R.D.	



Warnock, J C	White Young Green Ireland (2006)
Warren and Partners	taken over by R.H. Cuthbertson, now Aecom
Waterman, H L	Waterman Partnership (1986), now Waterman Group
Watson Hawksley	Merged with James M. Montgomery to form Montgomery Watson (1990), merged with Harza Engineering Company to form Montgomery Watson Harza (2001), shortened to MWH (2003)
Watson, J D and D M	Amalgamated with T and C Hawksley to form Watson Hawksley (1978), merged with James M. Montgomery to form Montgomery Watson (1990), merged with Harza Engineering Company to form Montgomery Watson Harza (2001), shortened to MWH (2003)
Weiss, Charles & Partners	Charles Weiss Partnership (1986), then Ernest Green, then White Young Green (1997)
Whitby Bird	Ramboll WhitbyBird (2007), then Ramboll UK (2009)
White Young	White Young Green
White, Robert	see Wolfe Barry
White, Sir Bruce, Wolfe Barry	see Wolfe Barry
Wilkinson Associates	Became part of Tony Gee & Partners (2003)
Williams Sale Partnership	WSP Group plc (1993)
Williams, Owen	Acquired by Amey (2006), name no longer used (2008)
Williamson, James	Formed in 1947, dissolved and merged with Mott MacDonald (1989)
Willis & Partners	Willis Caldwell (2004), then WCL St James
Willis Caldwell	WCL St James
Willis, Septimus	Dissolved (c1980)
Wimpey	Interchange with Tarmac, became Carillion
WLP	Knight Piesold (1990)

Wolfe Barry	John Wolfe Barry and Henry Brunel in practice as Barry and Brunel (1878). Sir George Barclay Bruce and Robert White set up as partners (1888). John Wolfe Barry's nephew A.J. Barry and Bradford Leslie in partnership as Barry and Leslie (1901), becoming A.J. Barry and Partners (1906). Sir George Barclay Bruce dies and Robert White continues alone (1908) until Robert White takes his son Bruce White and Cyril Hitchcock into partnership as Robert White and Partners (1919). Robert White and Partners amalgamate with John Wolfe Barry and Partners to become Wolfe Barry, Robert White and Partners (1941). After A.J. Barry dies, J.A. Cochrane continues as the sole principal of A.J. Barry, Cochrane and Partners (1944). Following the war the above firms merge to become Sir Bruce White, Wolfe Barry and Partners until a merger with Acer Consultants to become Acer Sir Bruce White (1991), then Welsh Water (1993), then Hyder (1996)
Woods Warren	RPS Woods Warren (2003), then RPS Design (2005)
WSP	bought by Genivar (2012)
Yorkshire Water Engineering	Babcock Water Engineering (1991), then Earth Tech Engineering (1998)
Zinn, W V Associates	Bill Zinn retired in 1969 with the regional offices going their own ways - W V Zinn & Partners for Birmingham area projects (c1970), Manchester office became Deakin Callard (1969), Scottish office became Zinn Hunter, then Woolgar Hunter (c1971), remainder to Cooper Macdonald & Partners (dissolved c1993)
Zukas Magasiner Green	ZMG Consulting Engineers, Zukas Magasiner Green, Zukus Magasiner Green Lewin, Zukus Magasiner Coppen, Zukas and Magasiner and AS Magasiner were all transferred to Sir M MacDonald and Partners (1987), then Mott MacDonald (1989). ZMCK formed in 1982 by a merger of ZMG and MCMK Consulting Engineers.
Zukas, Simon	Zukas Magasiner Green, then ZMCK (1982)



Personal Agendas



"What do you say we just skip this whole merger thing and just elope!"



APPENDIX VIII

PROJECT PHOENIX



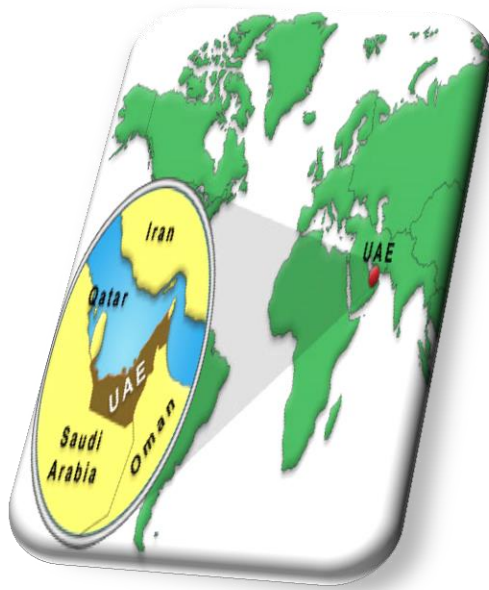
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Note: AppendixContents withheld from Distributed Copies



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“Project Phoenix”

“The Phoenix Group”, will be steered by a Prominent & Leading Middle East Businessman, and consist of a team of Stakeholders whose Aim and Objectives will initially be “to facilitate, advise, and participate in Corporate Deals involving M&A Opportunities & Investments in the Construction Industry which foster the promotion of Anglo-Arab co-operation in the development of Middle East funded Infrastructure and Construction related business.”

It is envisaged that the Group will promote a specific Target M&A Transaction, and provide introductions between Merging Construction Groups in the UK and Middle East based sources of Debt and Equity Investment Funds to help achieve the objectives of the Phoenix Group.

CONTENTS: ONE SCENARIO WITH MIDDLE EAST FOCUS

1. TO ESTABLISH A HIGH LEVEL MIDDLE EAST M&A FACILITATION GROUP

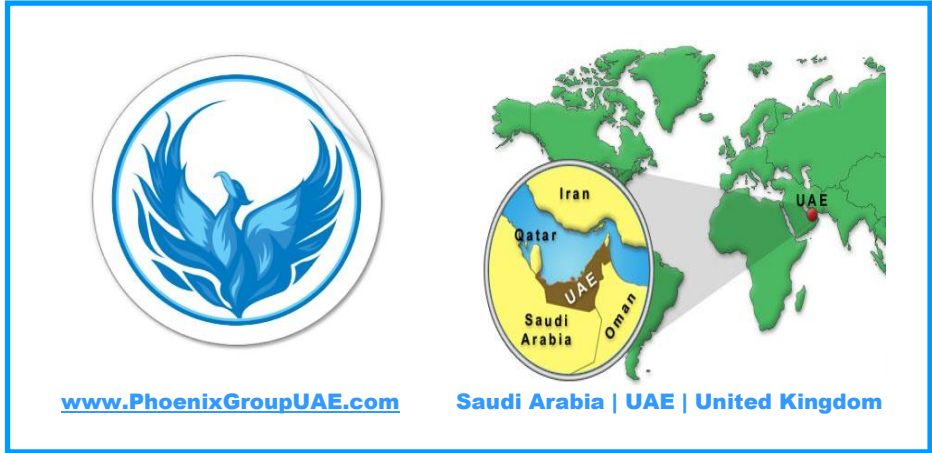
2. TO FORM A FUTURE GLOBAL ANGLO-ARAB CONSTRUCTION CONGLOMERATE VIA M&A AND DEBT/EQUITY INVESTMENT

3. PROPOSED SPONSOR

- PHASE I- UK CONSOLIDATION/ M&A
- PHASE II- BUSINESS DEVELOPMENT PLAN



THE PHOENIX GROUP - EXECUTIVE SUMMARY (A MIDDLE EAST FOCUS SCENARIO)



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Saudi Arabia | UAE | United Kingdom

PURPOSE



1. TO ESTABLISH A HIGH LEVEL MIDDLE EAST M&A FACILITATION GROUP

With Senior Level Contacts in Saudi Arabia, UAE, Qatar, Oman and wider Middle East Region, within:

- the Ruling Families
- the Leading Business Groups
- the Sovereign Wealth Funds
- the Leading Private Equity Funds
- the Leading Commercial Banks

PROMOTING A "BLUE-PRINT" FOR A FUTURE GLOBAL CONSTRUCTION COMPANY, WITH FOCUS ON INCREASED ANGLO-ARAB COOPERATION IN GLOBAL CONSTRUCTION & INFRASTRUCTURE

"Project Phoenix"

"The Phoenix Group", will be steered by a Prominent & Leading Middle East Businessman, and consist of a team of Stakeholders whose Aim and Objectives will initially be "to facilitate, advise, and participate in Corporate Deals involving M&A Opportunities & Investments in the Construction Industry which foster the promotion of Anglo-Arab co-operation in the development of Middle East funded Infrastructure and Construction related business."

It is envisaged that the Group will promote a specific Target M&A Transaction, and provide introductions between Merging Construction Groups in the UK and Middle East based sources of Debt and Equity Investment Funds to help achieve the objectives of the Phoenix Group.

The Phoenix Group will be based in Abu Dhabi, UAE.





[PHASE I- withheld]

PHASE II- BUSINESS DEVELOPMENT PLAN
A SCENARIO BASED ON:
FOCUS- MIDDLE EAST

Phase II will consist of Investment and dedicated Business Development Resource to building a Market Share in the Construction of the Middle East Region's Infrastructure, and the Kingdom of Saudi Arabia in particular.

More than 80 mega projects, each worth at least \$1 billion, are underway or planned for completion by 2030 in Saudi Arabia making it the Middle East's largest construction and build market by a huge margin.

TOP 10 KSA MEGA - PROJECTS

1. Riyadh Metro (\$22bn): Six lines covering 176km, 85 stations and 69 trains. The Riyadh Metro is the biggest infrastructure project in the world and the Riyadh authorities released in December a 12-minute video of work completed so far (see our Video section). The multi-billion dollar contract is divided into three parts, awarded to three different consortia in 2013. The project is due to open fully in 2018.

2. Jeddah Metro (\$8.5bn): The project will include three lines. The main one will be a 67km line with 22 stations connecting Makkah Road with Obhur, while a Blue Line containing 17 stations will run from the new King Abdulaziz International airport to the Old Airport Road. A third Green Line will run for 17km along Palestine Road and will also have a branch line to Jeddah's old airport. Final completion is expected to be 2020.

3. Riyadh Metro (\$22bn): Six lines covering 176km, 85 stations and 69 trains. The Riyadh Metro is the biggest infrastructure project in the world and the Riyadh authorities released in December a 12-minute video of work completed so far (see our Video section). The multi-billion dollar contract is divided into three parts, awarded to three different consortia in 2013. The project is due to open fully in 2018.

4. King Abdulaziz International Airport (\$7.2bn): Work on the new \$4bn terminal building is the centrepiece of a wider \$7.2bn redevelopment of Jeddah's King Abdulaziz Airport. The remaining \$3.2bn of work includes plans for the world's tallest control tower (135m), a major new transport terminus linking to the Haramain High-Speed rail route and a new four-lane tunnel for ground service equipment being built underneath the airport's runway.

5. Riyadh Metro (\$22bn): Six lines covering 176km, 85 stations and 69 trains. The Riyadh Metro is the biggest infrastructure project in the world and the Riyadh authorities released in December a 12-minute video of work completed so far (see our Video section). The multi-billion dollar contract is divided into three parts, awarded to three different consortia in 2013. The project is due to open fully in 2018.

6. Riyadh Metro (\$22bn): Six lines covering 176km, 85 stations and 69 trains. The Riyadh Metro is the biggest infrastructure project in the world and the Riyadh authorities released in December a 12-minute video of

work completed so far (see our Video section). The multi-billion dollar contract is divided into three parts,

awarded to three different consortia in 2013. The project is due to open fully in 2018.

7. Riyadh Metro (\$22bn): Six lines covering 176km, 85 stations and 69 trains. The Riyadh Metro is the biggest infrastructure project in the world and the Riyadh authorities released in December a 12-minute video of work completed so far (see our Video section). The multi-billion dollar contract is divided into three parts, awarded to three different consortia in 2013. The project is due to open fully in 2018.

8. Riyadh Metro (\$22bn): Six lines covering 176km, 85 stations and 69 trains. The Riyadh Metro is the biggest infrastructure project in the world and the Riyadh authorities released in December a 12-minute video of work completed so far (see our Video section). The multi-billion dollar contract is divided into three parts, awarded to three different consortia in 2013. The project is due to open fully in 2018.

9. Jubail II (\$80bn): A 22-year industrial project that is getting a massive expansion. This project will have the effect of double the population of the area. When completed, it will be composed of 100 industrial plants, 800,000 cubic meter desalination plant, miles and miles of railways, roads and highways, and an oil refinery producing at least 350,000 barrels per day. The entire project is slated to be finished in 2024. Picture: Petrochemical Complex at Jubail Industrial City

10. King Abdullah Economic City in Rabigh. Located off the Red Sea north of Jeddah across 168 million sq m the project is valued at \$27 billion. Master developer is Emaar, The Economic City. It includes a port and logistics, financial centre, light industry, and services and will create an estimated one million jobs and two million people will live there.



GULF \$400bn GCC Regional Mega Projects

Source: MEED



King Abdullah Economic City (\$93bn) A project aimed at creating a new city in Saudi Arabia close to Rabigh - around 100km north of Jeddah. The project includes a new 14km² sea port - where initial operations are set to begin in the third quarter of 2013 - a 62.5km² industrial zone, a 13.5km² central business district, 48km² of housing and 27km² of luxury resorts and housing. The project is being overseen by Emaar The Economic City - a specially-created economic vehicle set up by Dubai-based Emaar Properties. Much of the building work to date has been carried out by Saudi BinLadin Group. Major names already attracted to the city include confectioner Mars, Johnson Controls, Pfizer and Sanofi Aventis.



Lusail City (\$45bn) One of the biggest developments in the Middle East. The new Lusail City to the northern side of Qatar will cover a 38km² site which will eventually house up to 200,000 people. The \$45bn project is being developed in several different zones containing residential, commercial and financial districts. It will include a new waterfront, a \$275m mall, 22 hotels, two golf courses and four offshore islands. The city will also be home to the Lusail Iconic Stadium - the 80,000-seat showpiece stadium for Qatar's 2022 World Cup and the venue for the tournament's final. The project, which is due to complete in 2020, is being overseen by Qatari Diar - the real estate investment arm of Qatar's sovereign wealth fund.



Oman Rail network (\$30bn) Part of the wider GCC network which will connect Oman through the UAE and on to Saudi Arabia, Qatar, Bahrain and Kuwait. The project will run from Salalah in the south to Buraimi in the north, passing through the new port at Duqm on the way. It will be developed in two phases - the first running from Sohar to the capital Muscat (pictured), and the second from Muscat along the coast to Duqm and Salalah



Al Zour refinery and clean fuel project (\$30.5bn) One of the biggest and most important projects identified in Kuwait's 2010-2015 National Development Plan, but like many other projects in the country it had become somewhat mired in politics. The project for Kuwait National Pipeline Co involves the construction of a fourth refinery at Al Zour at a cost of \$14.2bn as well as the construction of a related \$16.3bn clean fuel plant. Contracts for the project had originally been signed in 2008 but cancelled in March 2009 due to political opposition. The work was eventually re-tendered in July last year, with Amec and Foster Wheeler picking up project management contracts to oversee construction in December last year. When complete in 2018, the refinery will have a capacity to process 615,000 barrels of oil per day. Much of this will be used to help fund a growing demand for electricity.



Jazan Economic City (\$30bn) One of the largest of the new economic cities proposed for the Kingdom of Saudi Arabia, but unfortunately also one of its most troublesome. Although the \$16bn refinery is moving along at pace, the development of an economic city around it - including a port, an aluminium smelter and scores of other industries, appears to have almost ground to a halt. Indeed, the joint venture appointed to develop the city - a partnership between Saudi BinLadin Group and Malaysian contractor MMC - was actually removed from the project by the Saudi Arabian General Investment Authority.



Qatar Metro/rail network (\$36bn). Qatar Railways Co announced the award of the bulk of the first phase of contracts for the Doha Metro (pictured) recently, handing out deals worth a combined \$8.2bn for the construction of the main Red Line, the Green Line and its two major stations ? Msheireb and Education City. This was on top of an estimated \$400m worth of deals which have been handed out for design and consultancy roles but do not include other expected deals for the construction of phase one of the golden line, rolling stock, and operations and maintenance deals. The first phase of the Metro is likely to complete in 2019. It will eventually connect to Bahrain and to Saudi Arabia as part of the plan to construct a GCC-wide rail network.



Makkah Grand Mosque redevelopment (\$24.4bn) A project which is reportedly costing \$26.6bn that will see the considerable expansion of the main pilgrimage site for Muslims worldwide. The work, which is expected to be completed in just two years, will cover the redevelopment of 400,000m² on the north west and north east of the mosque as well as new stations for the arrival of passengers from the Haramain High Speed railway. The main gate will also be expanded, with a view to increasing the mosque's capacity to 2.5m worshippers.



Duqm city, port and refinery (\$20bn) The ambitious plan to turn one of the lesser populated areas of Oman into a new industrial centre are showing some signs of progress. A \$1.5bn dry dock - the second-biggest in the Middle East - has already completed and the port began commercial operations earlier this year. Deals were also agreed last month between the Special Economic Zone set up to develop the area and a pair of operators to use its proposed liquid jetty terminal. It will support the planned oil

refinery also being built at Duqm, while a new logistics hub agreed earlier this year will also contribute to the development of its infrastructure. Other plans for the Special Economic Zone include petrochemicals plants, a refinery, airport, hotels and housing for more than 100,000 people to work in the city



Sadara Chemical Corp (\$17.3bn) Sadara is a joint venture between Saudi Aramco and Dow Chemical, is building a huge new Petrochemical Complex at Jubail Industrial City II - the biggest chemicals complex ever to be built in a single phase. The \$19.3bn complex will produce up to three million tonnes once it completes. The main tranche of funding - a \$10.3bn loan arranged through a syndicate of banks and the Saudi Public Investment Fund, was arranged with lenders earlier this month and a \$2bn sukuk has also been issued. The remaining \$7.3bn is expected to be finalised by the third quarter of this year.



Hamad International Airport (\$15.5bn) At \$15.5bn, it is the largest airports project to be undertaken in the region in recent years, and it had around 40,000 people working on it during peak periods. The second is its potential. With Qatar Airways slugging it out with its two main competitors Etihad and Emirates to become the pre-eminent hub in the Gulf, the facilities it will offer will be important.



Jazan refinery (\$16bn) A huge new refinery capable of producing 400,000 barrels per day on the Kingdom's South West coast - for which eight separate engineering, procurement and construction (EPC) contracts were awarded during the final quarter of last year. The \$16bn project, which is due to complete in 2017, is being built by the Saudi Arabian arms of several international contractors –



www.thinkbigpartnership.com

with the biggest deals going to the UK's Petrofac (\$1.4bn), Spain's Tecnicas Reunidas (\$1bn), Korea's SK Engineering (\$1bn), and Japan's JGC Corp (\$1bn).



Mohammed Bin Rashid City \$5.75bn Mega-project announced by - and named after - Dubai's ruler Sheikh Mohammed Bin Rashid Al Maktoum in November. It is set to contain more than 100 new hotels, a Universal Studios complex, and a public park that is bigger than Hyde Park. Although no price tag or timeline was set for the project, the first two developments within the city have already been announced - the Mohammed Bin Rashid City planned by a joint venture between Meydan and Sobha Group and a golf course-based complex by Emaar Properties known as Dubai Hills. Emaar has j formed a joint venture with Meraas Holdings to deliver this scheme.



Satorp petrochemicals complex, Jubail (\$14bn) New refinery which will be capable of breaking down heavy crude to produce diesel, gasoline, LPG, petrochemicals and jet fuel. It will be operated by a joint venture between Saudi Aramco and Total once the facility opens later this year and has been built by a consortium led by Japanese contractor Sumitomo.

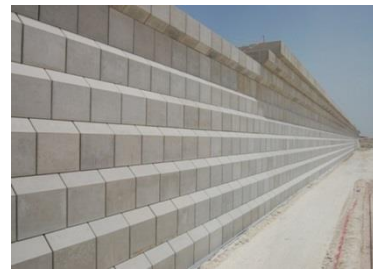


Jeddah Metro (est: \$8.5bn) The project will include three lines , the main one will be a 67km line with 22 stations connecting Makkah Road with Obhur, while a Blue Line containing 17 stations will run from the new King Abdulaziz International airport to the Old Airport Road. A third Green Line will run for 17km along

Palestine Road and will also have a branch line to Jeddah's old airport.



Ras Al Khair Aluminium Complex (\$10.8bn) Huge new complex being developed by the Saudi Arabian Mining Company (Ma'aden) in conjunction with US-based aluminium giant Alcoa. The project includes a bauxite mine, refinery, an aluminium smelter, a rolling mill and a rail link to the nearby Jubail Industrial City. The \$4bn smelter was completed last year by a consortium led by Bechtel, while the mine capable of producing four million tonnes of bauxite per year and the alumina refinery are both set to open next year. (Photo: Bechtel)



New Doha Port (\$7.4bn) A vital project for Qatar for so many reasons, not least because without it the delivery of much of the building materials required for its metro, rail, stadiums, roads and other projects simply won't be able to happen. It will also free up a large part of central Doha where the existing port operates for redevelopment. Preparation started for the port in 2007 following the issue of a decree by the country's Emir and is on schedule to complete by 2016. It contains three separate elements stretched over a 26km2 site the new port, a new naval base and a huge new industrial and logistics zone (Qatar Economic Zone). Construction work started in 2011 when China Harbour Engineering Co began excavation and Quay Wall works. Contracts for the construction of the Quay Wall, the dredging of an access channel to the Qatar Economic Zone 3 and for the construction of the port's commercial terminals, infrastructure and buildings, are all expected to be announced during the third quarter of 2013





Haramain High Speed Rail (\$11.1bn) Project covering a new 450km high-speed rail line linking Saudi Arabia's holy cities of Makkah and Madinah to Jeddah and to the new King Abdullah Economic City being constructed at Rabigh. The project is aimed at delivering pilgrims to Saudi Arabia's two holy cities much more quickly and involves the construction of up to 150 bridges.



Knowledge Economic City (\$7bn) Project which describes itself as the "new gateway to Madinah. Knowledge Economic City is a 4.8m m2 zone being developed just 5km away from the prophet's mosque in the holy city on the main axis route connecting to the airport and train station for the new Haramain High-Speed rail link. The project is being built over several phases, with a master plan proposing a large, gated residential community, a knowledge cluster with various shoals colleges and academic institutes, a hospitality and commerce tower, souks complex, museums quarter and an area containing residential apartments. The first phase invokes the construction of a large gated community closest to the Mosque.



Upper Zakum Development Field, Abu Dhabi (\$10bn) One of several major offshore oil development projects being undertaken by Abu Dhabi's National Oil Company as part of a concerted effort by the Emirate to boost both the efficiency and the capacity of its oil operations by 2017. The upgrade of the UZ750 field involves \$10bn worth of work, which has been split into two packages. The first was awarded to a joint venture between NPCC and French specialist Technip in July last year, while the second was a \$3.7bn contract awarded to a joint venture between Petrofac Emirates and Daewoo Shipbuilding & Marine in April this year. The work is expected to complete in 2016.



King Abdullah Financial District, (\$7.8bn) The new commercial heart of Saudi Arabia, which is being overseen by Rayadah Investment Co. The project is an attempt to build a financial centre in the Middle East to match some of the world's major financial hubs and includes the construction of up to 80 new towers, a station for Riyadh's proposed new metro system, hotels, conference facilities, shops and restaurants. The towers will include a new home for Saudi Arabia's stock exchange, Tadawul, and a 76-storey base for the Kingdom's Capital Market Authority.



Abu Dhabi Metro/light railway (\$7bn) Bids have just been submitted by several consortia looking to run Abu Dhabi's new combined metro and light railway system, which is being developed to link several key areas of the UAE's capital. The project, which is estimated to be worth a combined \$7bn, will begin with a largely underground stretch running from Mina Port at the north of the city to Zayed Sports City in the south. It will be supplemented by two light rail lines - a 15km line running to Reem Island and a 13km line running from the city's central bus station to Saadiyat island.



King Abdulaziz International Airport, Jeddah (\$7.2bn) Work on the new \$4bn terminal building which is the centrepiece of a wider \$7.2bn redevelopment of Jeddah's King Abdulaziz Airport is now around halfway complete, with the project set to open next year. The building, which has been designed to achieve a LEED Silver rating, will measure 1km x 1.3km, will have a capacity to handle up to 32 passengers a year. The terminal is being built by SaudiBinLadin Group, with Atkins and Arup acting as consultants and Areen Design responsible for the fit-out. The remaining



\$3.2bn of work includes plans for the world's tallest control tower (135m), a major new transport terminus linking to the Haramain High-Speed rail route and a new 4-lane tunnel for ground service equipment being built underneath the airport's runway. Civil works on the site are being delivered by Al Mabani General Contractors, while a Saudi Oger/Murray & Roberts joint venture is responsible for delivering the service road tunnel.



Riyadh Metro (Est: \$7-8bn) Plans for the six-line, 85-station metro network planned for Saudi Arabia's capital seem to be moving along at pace. Awards for the design of three of the major stations - Olaya Towers, Downtown Riyadh and King Abdullah Financial District - were announced last month, and the shortlist of consortiums bidding to run the network has been reportedly cut to three, with a decision expected soon. Among those bidding to build the network are consortiums led by France's Vinci Construction, Canada's Bombardier, Spain's FCC Construction and Austria's Strabag Group. The six-line network is being built with a view to providing an integrated public transport system to a city whose roads are already incredibly busy, and whose population is projected to grow by 40% by 2030.



Jabal Omar Development (\$5.3bn) Project linked to the expansion of Makkah's Grand Mosque which will see more than 2.2 million m² of land nearby redeveloped and a total of 38 new towers created containing hotels and serviced accommodation for the millions of visitors who flock to the city as pilgrims each year. It is also set to contain the Kingdom's biggest shopping mall. A special-purpose vehicle set up to develop the towers has said that the 38 towers are likely to be managed by 28 different companies, and that a total of 13,500 new hotel rooms will be added once work completes by the end of 2017. It is being developed in five separate phases. Hoteliers already signed up to operate towers include Hilton Hotels, Marriott International, and Starwood Hotels & Resorts, which has signed a deal to operate three hotels in the development.



Midfield Terminal Complex, Abu Dhabi (\$3.3bn) Terminal building being delivered by a consortium between Arabtec, Consolidated Contractors Co and TAV Construction. The project involves construction of a huge new terminal between Abu Dhabi International Airport's two main runways - hence the name. Once complete, the building will have a capacity to handle up to 40 million passengers a year. Its ceiling will reach 52m at its highest point and its central space will be large enough to house three football pitches. Work started on the development in August 2012 after the consortium announced that it had raised the necessary project finance required to build the terminal.

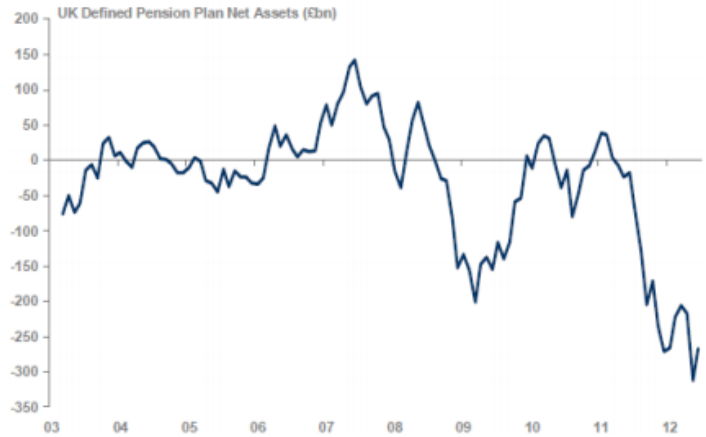


APPENDIX IX

PENSIONS AND M&A



UK DB Plans' Pension Deficits at Record Levels



Source: Morgan Stanley, UK Pension Protection Fund



PENSION LIABILITIES HAVE GROWN FASTER THAN ASSETS OVER 2016 SO FAR



Source: Skyval (UK pension asset and liabilities rebased)

Source: Skyval

PENSION DEFICITS

Pension risk is one of a number of key risks which an acquirer needs to assess. This area is often overlooked in the initial stages because acquirers do not always understand the pension issue. They prefer to focus on the core operational and business risks with which they are familiar. However, pension obligations can often be so large as to swamp any operational risk issues and may be a deal-breaker but are not discovered early in the process.

Carillion and Balfour Beatty Pension Deficits were c. £400m and £145m respectively at 2015 year end. No doubt this was in focus when Merger discussions were in place. Trustees need to be convinced of the robustness of Combined Groups going forward after mergers- something the Pensions Regulator is looking at. Other construction Group pension deficits at 2015 year-end were reported in Annual Reports as: Interserve £17m (surplus), Kier £123m, Taylor Wimpey £180m, Morgan Sindall £1.4m (surplus) and Costain £30m.

THE DEFICIT PROBLEM FOR M&A

- **PENSION DEFICITS**
- **EFFECT OF DECLINING INTEREST RATES**
- **DEFICITS AT UK CONSTRUCTION COMPANIES**

The Pensions Regulator



THE DEFICIT PROBLEM FOR M&A

Pension risk is one of a number of key risks which an acquirer needs to assess. This area is often overlooked in the initial stages because acquirers do not understand the pension issue. They prefer to focus on the core operational and business risks with which they are familiar. However, pension obligations can often be so large as to swamp any operational risk issues and may be a deal-breaker but are not discovered until well into the process. It is therefore vital for an acquirer to properly understand the pension risks it is taking on. Current particular issues can involve data and equalisation. Data can be very poor quality and will lead to an increase in liability if the company wants to buy out the liabilities. We have found data issues can result in an increase in liabilities of up to 5 percent. It is also not uncommon to find that, historically, equalisation of benefits was not done properly. This can result in an increase in the liabilities of 10-20 percent.

The key to any new solution is to recognise the underlying economics of the situation. Pension schemes can be so material to a target's valuation that the trustees have to have a significant stake in the success or otherwise of the transaction. Giving trustees protection through mitigation over a variety of employer assets as well as equity upside – either based on the transaction itself (which requires careful planning before) or more likely, as part of the post transaction exit strategy, has to be the obvious thing to do. There are now tools in the marketplace to achieve these objectives.

The pension regulator has recently (August 2016) said that they must be given the power to block companies from closing deals that would harm pension scheme members.

The Institute of Directors has said, "It is time to give the Pensions Regulator a binding veto over M&A activity, in firms of a certain size, where a sale does not come complete with a clear and obvious statement of how any pension fund deficit will be met in the future."

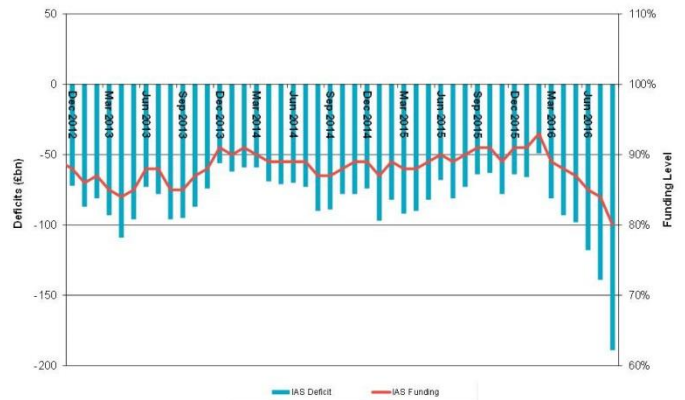
DECLINING INTEREST RATES PRODUCE RECORD PENSION DEFICIT IN UK

Investors are rightly starting to worry about pension fund deficits again. The fallout from the EU referendum has pushed the interest rates on bonds even lower. This is bad news for companies with final salary pension funds, as low interest rates make it more expensive to meet their promises to pay pensions to their workers in the future.

FTSE 350 companies' combined pensions deficit hit another record high in August 2016, as falling bond yields drove the deficit up by £50bn in a single month – the biggest monthly widening on record.

The accounting deficit of defined benefit pension schemes for the UK's 350 largest listed companies stood at £189bn on August 31, compared to £139bn at the end of July, according to consultancy Mercer.

The Growing Deficit Problem



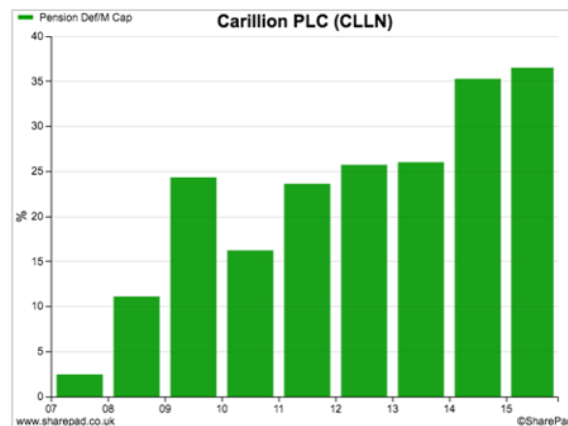
Source: FT

PENSION DEFICITS AT UK CONSTRUCTION GROUPS

CARILLION

Carillion's final salary pension scheme is proving to be a big problem. At the end of 2015, the liabilities of the scheme were £406 million more than the value of the assets in it.

This deficit equates to 37.7% of Carillion's current market capitalisation of £1,078 million, which is the biggest deficit on this measure in the FTSE 350 index.



ShareScope

Source:

At its half-year results in August, the company revealed that the deficit had increased to £509 million - or 47% of its market capitalisation. 2015 Balance Sheet Deficit was £406m down from 2014 Year End Deficit of £515m.

Carillion is trying to plug the hole in the Fund and did put £47 million of extra cash into it in 2015. This is £47 million that wasn't paid to shareholders - and has to be paid before they get a penny - which equates to an additional yield of 4.4% at the current share price.



The worry is that if interest rates stay low and asset values fall then £47 million a year won't be enough to plug the deficit quickly enough.

BALFOUR BEATTY

The Group's balance sheet includes aggregate deficits of £146 million (2014: £128 million) for pension schemes. The Group recorded net actuarial losses on those schemes of £86 million (2014: £237 million gains). The small increase in the deficit in the year is largely as a result of poor performance of the return seeking assets in the Group's largest scheme.

So Carillion/Balfour Beatty combined Pension Deficits are over £650m, which would provide focus if a Merger ever took place. Trustees would need to be convinced of the robustness of a Combined Group going forward; a major message throughout this Report- Consolidation in the UK Construction Industry would need to lead to stronger financial status of combined businesses. Arguably, for example, this was not the case at the Taylor Woodrow-Wimpey Homes Merger in 2007, which involved two highly geared businesses merging just before an unexpected dive in the market post the 2007 financial crisis.

The Merged Group Taylor Wimpey, formed in 2007, did not merge its George Wimpey Staff Pension Scheme and the Taylor Woodrow Group Pension & Life Assurance Fund until 2013- to create the single new scheme with £1.8bn of assets under management.

OTHER CONSTRUCTION GROUP PENSION DEFICITS

COMPANY	PENSION DEFICIT (£m) Year Ending 2015
Interserve	17.2 [SURPLUS]
Kier	123.0
Taylor Wimpey	179.8
Morgan Sindall	1.4 [SURPLUS]
Costain	29.6

When it comes to analyse Pension Fund Deficits there is a wide financial diversity between the Major UK Construction Groups. Both Interserve and Morgan Sindall have had favourable Surplus Positions prior to the recent sharp falls in projected Pension Fund Gilt and Bond Incomes.

Interserve, has seen its pension position swing from a £34.3m surplus to a £25.5m deficit at 2016 interim, due to a sharp fall in gilt yields. In its latest interim management report, Interserve said the swing was also due to the associated reduction in liability discount rates following the EU referendum

In a statement the company said: "Although the scheme's position has weakened over the last year, the work we have done in recent years to de-risk the scheme's liability position (the 2014 pension buy-in and making a one-off contribution of £55m of PFI assets in 2013) has left the scheme in a much stronger than it would have been in without these actions."

Morgan Sindall had a £1.4m Surplus at 2015 Year End.

These are in stark contrast to the positions at Carillion and Balfour Beatty, noted above.

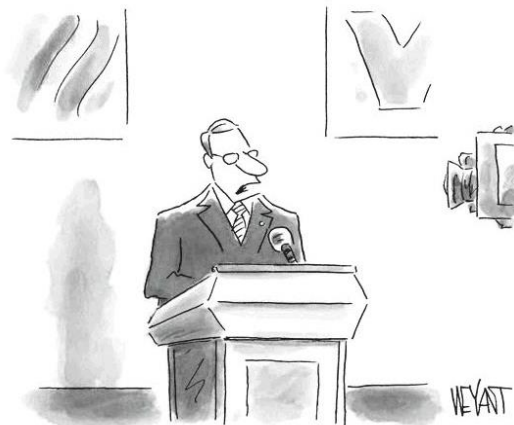
By 2016 interim Kier had reduced its Pension Deficit from £123m to £72m; while Costain Group's defined benefit (DB) scheme deficit has risen by £16.9m in one year. As at 30 June 2016, the deficit on the Group's legacy Costain Pension Scheme ('CPS') in accordance with IAS 19, net of deferred tax was £46.5 million (June 2015: £29.6 million).



"PENSIONERS' INTERESTS MUST COME BEFORE THOSE OF SHAREHOLDERS"



Clarity



**"I regret that my poor choice of words caused some
People to understand what I was saying."**

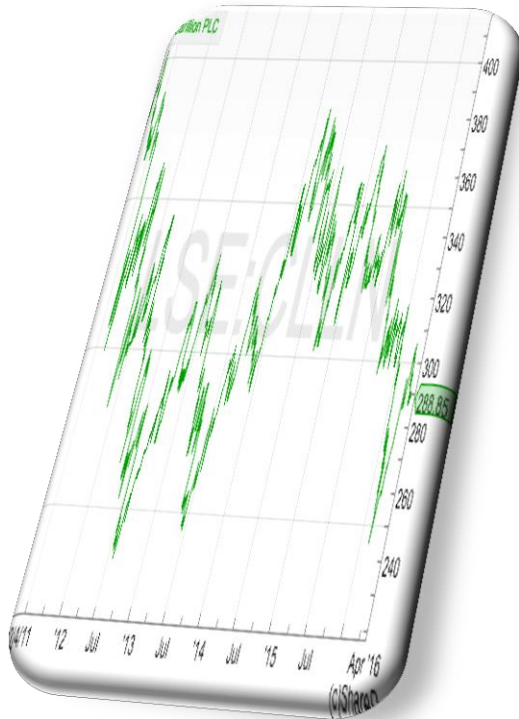


APPENDIX X

FOCUS ON CARILLION



INDEPENDENT ANALYST VIEW ON CARILLION



If you are trawling the stock market for shares with big dividend yields, there's a good chance that construction and support services company Carillion (LSE:CLLN) is going to appear on your list. As you can see from the share price chart above, its share price has been very volatile during the last five years. It has all the hallmarks of a share that investors quickly fall in and out of love with.

Carillion PLC (CLLN)

ACTIVITY BREAKDOWN



Turnover Pre tax profit

SUMMARY

Carillion PLC was incorporated on May 28, 1999. It is an integrated support service company. The Company provides all of the services needed to create and manage places and infrastructure, from project finance through design and construction to lifetime maintenance, facilities management and energy efficiency. It also provide essential services to customers in every industry to support the delivery of public services and business objective. The Company's business segments are Support Services, Middle East Construction Services, Construction services (excluding the Middle East) and Public Private Partnership Projects. The Support Services segment is engaged in the facilities management, facilities service, rail services, road maintenance, utility services and consulting businesses. The Middle East Construction Services segment engages in the business of building and civil engineering activities in the Middle East and North Africa. The Public Private Partnership Project reports equity returns from its investments in public private partnership projects. The Construction Services segment engages in the UK building, civil engineering and development businesses, as well as construction activities in Canada and the Caribbean. It offers services for commercial property, defense, education, health, rail, regeneration, highway maintenance, FM, civil engineering, international, nuclear, secure, fleet management and utility services. [less...](#)

A closer look at what the company does goes a long way to explaining why this might be. Support Services - looking after buildings and services, maintaining roads, railways and energy networks - can be very good, steady business with lots of recurring income. On the flip side, the government tends to be the customer in lots of support services contracts in the UK which can turn the sector into something of a political football from time to time - especially if companies are seen to be making too much money.

Construction can be the exact opposite. New building projects are sensitive to changes in the economy which makes the workflow lumpy and difficult to predict. Contracts also tend to operate on wafer-thin profit margins at the best of times. A mistake on budgeting for building costs can blow a big hole in a company's profits. There is also considerable scope for aggressive accounting - particularly in terms of when profits are recognised. This makes them hard to understand which has led many investors to be wary of construction companies over the years.

STOCK WATCH: CARILLION

Source: Phil Oakley
https://www.sharescope.co.uk/philOakley_article89.jsp



Phil Oakley

"I get an estimated value per share of 293.8p which suggests that Carillion shares are fairly valued based on my assumptions."

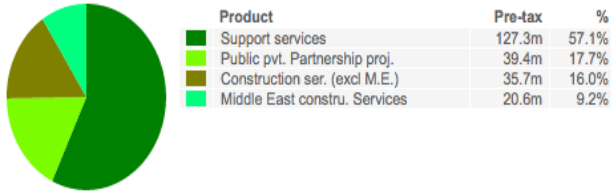
- **TURNOVER & PROFITS**
- **ROI**
- **FREE CASH FLOW**
- **PFI DISPOSAL PROCEEDS**
- **BUYING COMPANIES**
- **FINANCIAL POSITION**
- **VALUATION & FUTURE PROSPECTS**
- **MARKET CAPITALISATION**



INDEPENDENT ANALYST VIEW ON CARILLION

Carillion PLC (CLLN)

ACTIVITY BREAKDOWN

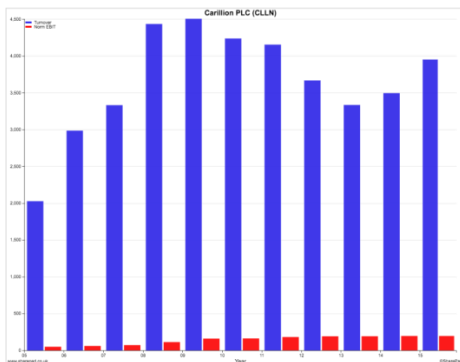


Turnover Pre tax profit

A closer look at what the company does goes a long way to explaining why share price volatility might be. Support Services - looking after buildings and services, maintaining roads, railways and energy networks - can be very good, steady business with lots of recurring income. On the flip side, the government tends to be the customer in lots of support services contracts in the UK which can turn the sector into something of a political football from time to time .

Turnover and profit history

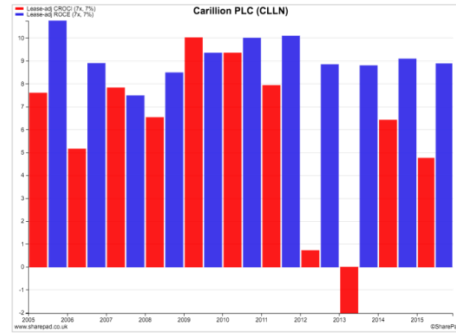
The large blue bars show that Carillion's turnover has moved around a lot. It has been driven by the state of the economy - and the impact this has on construction revenues - and by buying other companies. After taking a bit of a battering after the recession of 2008-09 it has been recovering in recent years.



Trading profits (the red bars) are very small in comparison to turnover which is telling us that Carillion is a low profit margin business. Profit growth looks as if it has been hard to come by.

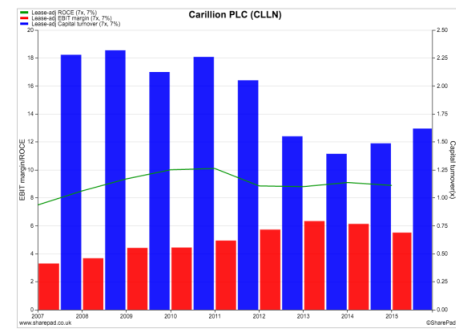
Returns on investment

Carillion's return on capital employed (ROCE) as shown by the blue or second bars below is not particularly impressive. ROCE has struggled to exceed 10% for much of the last decade. As a rough rule of thumb, a ROCE of 15% or more tends to be a reliable indicator of a good business. In 2015, Carillion's ROCE was 8.9% which was slightly lower than its ten year average ROCE of 9%.



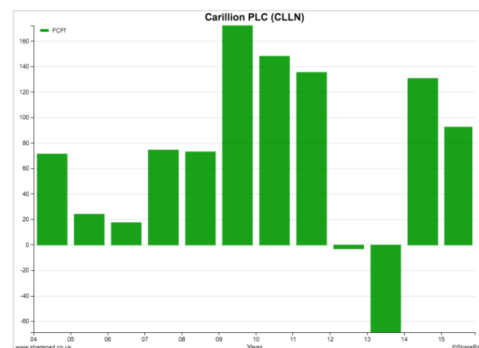
Free cash flow returns on money invested as measured by the cash return on capital invested (CROCI) has also been quite disappointing. Carillion's CROCI was 4.8% in 2015 and has averaged 5.7% for the last ten years. Very good businesses can consistently produce CROCI numbers of more than 10%. We can take a closer look at how Carillion achieves its ROCE in the chart below which shows a DuPont analysis. We already know that its profit margins are low (the first or red bars) and can see that they have fallen slightly during the last three years. Capital turnover (sales per £1 of capital invested) has also fallen sharply in recent years. This can be explained by the company reducing the size of its construction business after the last recession.

The mix between profit margins and capital turnover over the last decade has seen ROCE move in an approximate range of between 8% and 10%. This shows that returns have been reasonably stable, albeit at quite a modest level.



Free cash flow performance

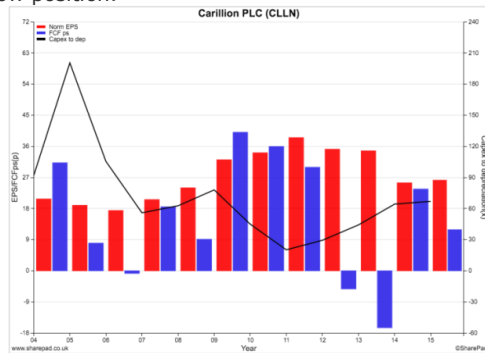
The chart below shows how effective Carillion has been in producing surplus or free cash flow. Its record is a bit patchy as free cash flow has been quite volatile and even negative in some years.





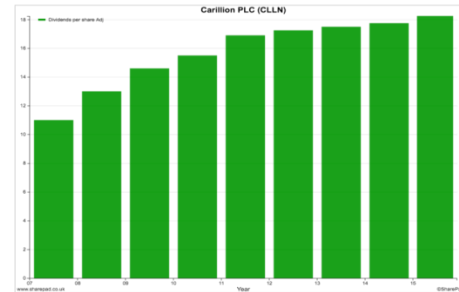
Despite consistently spending less money on new assets (capex) than its annual depreciation charge, Carillon's free cash flow per share has consistently lagged its earnings per share (EPS). This is not usually a good sign.

Note: Depreciation is a charge for the reduction in value of fixed assets and is deducted from profits - but is not a flow of cash out of the company. How much is actually spent on new or replacement assets is given by the capital expenditure figure in the cash flow statement. Depreciation is added back to profits when calculating cash flow so when capex is lower than the depreciation charge, this benefits a company's free cash flow position.



To make matters worse, the company's cash interest bill has increased significantly from £13.5m to £35.3m over the same period. In all, from these two items, Carillon's free cash flow has taken a £50m hit in five years.

This is slightly concerning and might give rise to some concerns about the sustainability of the company's dividend payout. The chart below shows that dividends have been increasing.

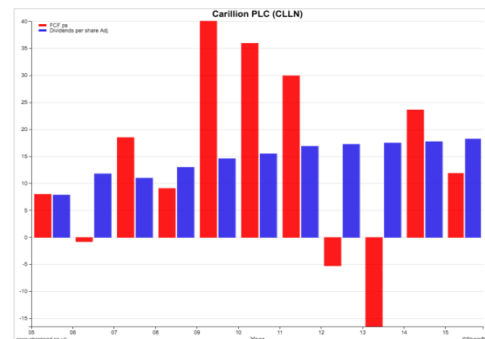


However, they have not been consistently covered by free cash flow as the next chart highlights. The blue (dark) bars show the dividend per share whilst the red (lighter) bars show free cash flow per share.

Free cash flow for shareholders (equity) was £144.1m in 2010 but was only £56.5m in 2015. If we take a closer look at Carillon's cash flow statement we can see why this has been happening.

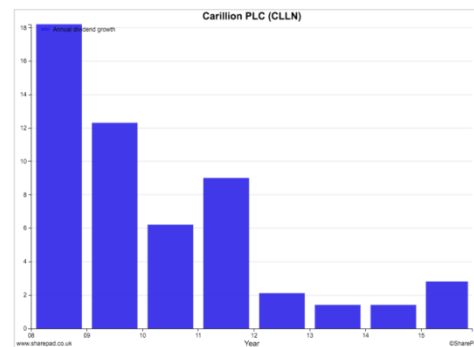
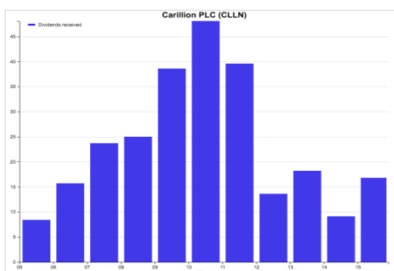
Firstly, the company's net cash from operations was £128.6m in 2010 but only £106.2m in 2015.

Carillon PLC (CLLN)						
	2010	2011	2012	2013	2014	2015
Fiscal period ending	31/12/10	31/12/11	31/12/12	31/12/13	31/12/14	31/12/15
£ millions unless stated	Q4 IFRS	Q4 IFRS	Q4 IFRS	Q4 IFRS	Q4 IFRS	Q4 IFRS
FREE CASH FLOW						
Net cash from operations	128.6	108.5	1.7	(58.6)	150.5	106.2
Capital expenditure	(28.5)	(12.6)	(18.3)	(28.1)	(28.8)	(30.4)
Dividends from joint ventures	48.1	39.6	13.6	18.2	9.1	16.8
Free cash flow for firm (FCFF)	148.2	135.5	(3.0)	(68.5)	130.8	92.6
Dividends paid to minorities	(2.3)	(3.4)	(8.2)	(1.1)	(1.1)	(1.7)
Interest paid	(13.5)	(21.3)	(27.3)	(30.9)	(29.6)	(35.3)
Interest received	11.7	10.0	12.0	25.3	12.0	2.9
Free cash flow for equity (FCFE)	144.1	126.8	(22.7)	(71.2)	112.2	56.5



Dividend growth has also slowed dramatically from the rates seen not so long ago. Growth was 3% in 2015.

Then you can see that the company's free cash flow has taken a big hit from the fall in dividends from joint ventures. £48m was coming in from this source in 2010, just £16.8m was received in 2015.



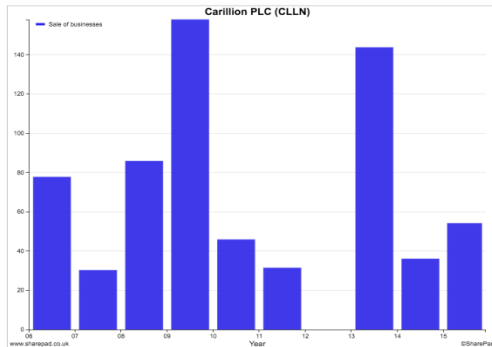


Is Carillion funding its dividend from disposal proceeds?

The table below shows the cumulative free cash flow and cash dividends costs for Carillion since 2010. Cumulative analysis allows you to spot trends that you might miss by comparing one year's figures with another's.

What can be seen from further analysis (not shown here) is that Carillion has paid out £94.7m more in dividends to shareholders than it has generated in free cash flow. This is despite having a cash flow boost of capex being less than depreciation.

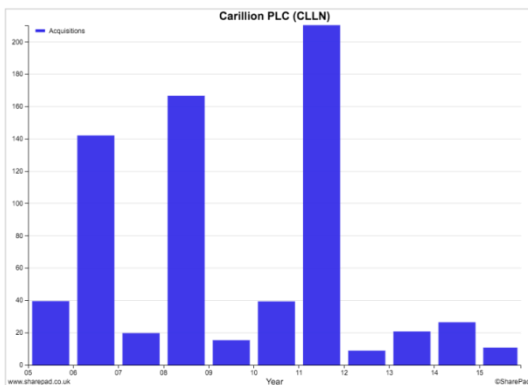
In 2010, 2011 and 2014, free cash flow has been sufficient to cover the cash cost of dividends. In other years there has been a shortfall. However, help has been at hand as Carillion has been able to sell its equity stakes in PPPs (Public Private Partnership projects) which has brought in £311m of cash to help pay a rising dividend.



But what happens when there's nothing left to sell? The directors estimate that the remaining PPP equity has a value of £48m. Without an improvement in free cash flow, Carillion's current dividend payment could come under pressure.

Has Carillion been too reliant on buying companies in the past?

When studying Carillion's cash flow statement one thing that you can't help noticing is that it regularly spends money buying other companies (acquisitions). In some years lots of money has been shelled out.



It has spent heavily on three big acquisitions as shown in the table below.

Year	Company	Cost	Cash Paid	New Shares
2006	Mowlem	350	117	225
2008	McAlpine	555	172	382
2011	Eaga	298	181	118
Total		1203	470	724

£1.2bn was spent on these businesses which is about the same amount as Carillion's current market capitalisation. These businesses also allowed the company to make significant cost savings by integrating them into existing company structures and contributed to significant growth in profits and dividends at the time.

What is interesting is that, in all three cases, when the cost-saving projects came to an end after a couple of years, Carillion then made - or tried to make - another acquisition. This process came unstuck in 2014 when Carillion failed to merge with Balfour Beatty.

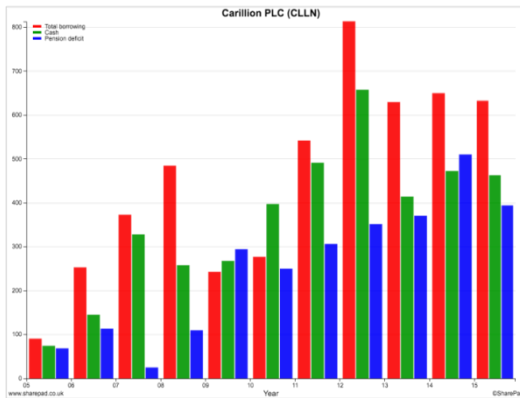
You can be forgiven for thinking that the company might have become too reliant on buying other companies - and the cost savings that come with it - to grow. Is it a coincidence that since 2013 the company's profits growth and share price performance have not been too stellar? Is this also the reason why Carillion's ROCE has tailed off recently?

As an investor you should always be wary of companies that have a habit of making big acquisitions as they often come a cropper eventually. The problem is often a case of acquisitions and their cost savings masking low underlying growth elsewhere. To keep the company's profits growing it has to keep buying companies and to make a big difference, each acquisition has to be bigger than the previous one.

Financial position

Carillion has a significant amount of borrowings (the first or red bar) totalling £632m at the end of 2015. The level of borrowings has come down from a peak in 2012. It also has sizeable cash balances of £462m giving net borrowings of £170m at the end of 2015.

One needs to be very careful when assessing the borrowings and net borrowing levels of construction companies. That's because the cash flows associated with construction contracts are moving around all the time. For example, some customers may pay cash in advance before any work is done. This will show up as cash on the balance sheet and will reduce the year-end net borrowing/net cash levels.



A company's year-end balance sheets tend to show its financial position at its most favourable. As a balance sheet is just a snapshot on one particular day it may bear no resemblance to what a company's financial position might be like for most of the year.

This is the case for Carillion and the company, to its credit, is very open about this. In its annual results statement for 2015, Carillion stated that its average net borrowing for the year was £538.9m compared with £450.7m in 2014. This is a big difference from the year end position of £170m. It also means that using year-end balance sheets to calculate ratios such as ROCE and CROCI will understate the capital employed in the business - because borrowings are much higher - and overstate the ratios.

Lots of companies won't tell you what their average debt levels are. However, you can have a good stab at estimating it yourself. Let me show you how you can do this.

4 Financial income and expense

	2015 £m	2014 £m
Financial income		
Bank interest receivable	0.8	0.9
Other interest receivable	1.6	1.4
Total financial income	2.4	2.3
Financial expense		
Interest payable on bank loans and overdrafts	(14.1)	(11.4)
Other interest payable and similar charges	(28.2)	(19.1)
Net interest expense on defined benefit pension obligations	(18.0)	(15.8)
Underlying financial expense	(60.3)	(46.3)
Fair value movements in the derivative component of convertible bonds	6.1	(3.6)
Total financial expense	(54.2)	(49.9)
Net financial expense	(51.8)	(47.6)

Other interest payable and similar charges include Private Placement financing interest of £14.3 million (2014: £14.3 million), finance lease charges of £1.0 million (2014: £1.1 million), convertible bond coupon payments and interest accretion of £7.1 million (2014: £0.2 million), the discount unwind associated with onerous lease provisions of £0.6 million (2014: £0.7 million) and contingent consideration relating to acquisitions of £2.0 million (2014: Nil). No borrowing costs have been capitalised in either of the above years.

In relation to the fair value movements in the derivative component of convertible bonds, a deferred tax charge of £1.9 million

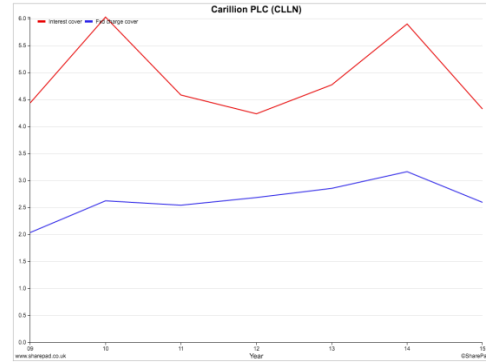
The screenshot above shows the breakdown of Carillion's interest expense. You should ignore the expense related to the pension scheme for now (more on the pension deficit shortly) and just look at the interest payable on borrowings.

To estimate the average level of total borrowings outstanding just divide the interest payable of £42.3m by an interest rate. Let's say that Carillion can borrow money at 5%. The average level of debt throughout the year would be:

£42.3m / 5% = £846m

This compares with a year-end figure for total borrowing of £632m. However, the gap between average net borrowing and year-end net borrowing is £369m. This is telling us that at

certain times of the year Carillion's cash balances are much lower and borrowings much higher than the above calculation suggests.



Having established that average debt levels are much higher than the year-end figures, the ratios for fixed charge cover and interest cover are not suggesting that Carillion is about to have financial difficulties. That said, given the significant level of profits coming from construction activities most people wouldn't want to see those ratios go much lower than they are currently.

One particular area of concern for investors is Carillion's substantial pension fund deficit of nearly £400m. The company contributed £47m of top-up payments in 2015 to try and plug the hole. This is a significant liability, and cash cost, and could threaten the company's ability to pay dividends in the future if the deficit doesn't come down.

Valuation and future prospects

At first glance, Carillion shares look to have a very low valuation attached to them. A forecast PE of 8.3 times and a dividend yield of 6.8% might lead you to think that the shares are very cheap. Carillion trades on a big discount to other support services companies with the exception of Interserve.

TIDM	Name	Close	PE	fc PE	fc Yield	Price to Free cash flow	Lease-adj CROCI (7x, 7%)	Lease-adj ROCE (7x, 7%)	Lease-adj EBIT yield (7x, 7%)
MTO	Mitie Group PLC	271.6p	12.2	11.2	4.5	18.0	9.6	14.2	8.5
CPI	Capita PLC	£10.34	34.9	13.7	3.3	23.3	9.0	8.6	3.9
MER	Mears Group PLC	419.5p	20.8	12.0	2.9	17.9	8.2	8.4	6.7
CLLN	Carillion PLC	290.3p	11.1	8.3	6.8	24.4	4.8	8.9	10.0
IRV	Interserve PLC	416.6p	10.0	6.4	6.1	-178.7	3.6	8.7	8.4

A lease-adjusted EBIT yield of 10.0% might be considered attractive too. However, bear in mind what I have just said about borrowings being understated. If average debt levels were used to calculate enterprise values and EBIT yields then Carillion would have a lower yield on this measure.

As I've said before, there are very few free lunches on the stock market - except when the stock market in general is falling - and therefore it seems that investors are concerned about the company's future prospects. The high yield in particular is usually associated with companies that offer low future dividend growth or a dividend that is likely to be cut.



What you need to try and work out is whether the stock market is right or wrong about Carillion.

The company's core Support Services business which provides the bulk of its profits seems to be doing well. It delivered decent revenue growth in 2015 of 9% and maintained its profit margins. The outstanding order book of £12.7bn represents around five year's current revenues which gives good visibility on future profits. Throw in a bidding pipeline on £12.1bn of contracts in the UK and Canada and it seems that this business is in a decent position.

Elsewhere in Carillion's business portfolio there is less transparency. The big profits from selling equity stakes in PPPs will not be repeated in 2016. The Construction businesses in the UK and Middle East have lots of opportunities to bid for new work but they represent a much lower-quality profit stream than Support Services with much less visibility. This makes them less valuable.

One of the ways you can try and work out how much Carillion shares are worth is to perform a break up or sum-of-the parts valuation (SOTP). This values a company on the basis of all its separate business units being sold off.

Professional analysts use this technique a lot when looking at companies with different businesses. They can be controversial based on the assumptions used to value each business and what liabilities have been included or ignored.

Basically, you take the operating profit for each business (you'll find this in the annual report), tax it at a rate of your choice, and apply a suitable PE multiple (or whatever valuation measure you want to use). I look for a similar business, or businesses, for guidance. This gives us an estimated enterprise value for each division and thus a total for the company. We then adjust this for cash assets and liabilities such as tax credits, debt and pension deficits - things that a potential buyer would add/deduct when valuing the company - to get an estimated equity value. Divide this by the number of shares and you have a value per share which you can compare with the current share price.

In my valuation for Carillion I've tried to be optimistic and have put quite high valuations on the businesses. For example, I've used the forecast PE of Capita to value the Support Services division which better-informed investors might consider to be overly generous. The Construction businesses have been valued at 10 times current post tax profits - the lower end of current multiples in the construction sector. I've used the directors' valuation estimate for the PPP business.

I've taxed profits at a rate of 20% even though Carillion's current tax rate is nearer 12% because it is utilising past losses to lower its tax bill. 20% is a conservative number but I've given back £103.8m for the tax assets (which can be used to reduce future tax bills) on its balance sheet.

I've used the average level of net borrowings compared with the year end number. This reduces the value per share by around 85p as the difference between the two numbers is very big. The pension fund deficit less tax and minority interest figures are taken from the latest accounts.

I get an estimated value per share of 293.8p which suggests that Carillion shares are fairly valued based on my assumptions.

Phil Oakley

23rd November 2016

Market Capitalisation: £1,085.10 million

Shares In Issue: 430.25 million

PE: 7.53

Dividend Yield: 7.17



Source: Citywire Factsheet

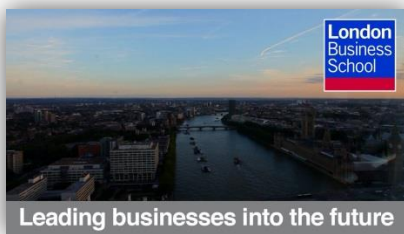


APPENDIX XI

**MANAGERIAL COURSES IN M&A
LONDON BUSINESS SCHOOL**



Source: <https://www.london.edu>



About LBS

Discover who you really are. Think independently. Find your own voice.

London Business School is one of the world's elite business schools. We shape business practice and transform careers across the globe. Our academic strength drives original and provocative business thinking, empowering our people to challenge conventional wisdom in a truly unique academic environment.

London experience

Location is everything. The strength we draw from the cultural diversity, the hunger and dynamism of London, sets us apart like no other school. We offer unparalleled access to some of the world's most successful businesses, who work right on our doorstep.

Our people are a reflection of the city in which we are based, where commerce, finance, science, the arts, media, heritage and multiculturalism collide with energy and enthusiasm.

Academic excellence

We are thought leaders with an unquenchable thirst for learning and a devotion to world class research and teaching. Our international faculty is the best in the world. In the classroom, they share their research and thought leadership with you. In the boardroom, they advise some of the worlds' biggest clients.

Our people benefit from this combined expertise, all the while learning how to have a positive impact on the way the world does business

Mergers and Acquisitions

Build your company's competitive advantage and create increased shareholder value through targeted and skillfully managed mergers and acquisitions (M&A).

This programme gives you an end-to-end understanding of the M&A process and the ability to judge whether a merger or acquisition fits with your corporate strategy. As a result you will identify the most lucrative M&A opportunities, select the best partners and get the maximum reward from the deal.

Gain the expertise to go into the M&A process with confidence and skill and leave with the result you want.



London experience.
World Impact.

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Mergers and Acquisitions

By topic

Strategy

Executing Strategy for Results

Developing Strategy for Value Creation

Making Innovation Happen

Mergers and Acquisitions

Who attends?

Benefits and Impact

Programme content

Fees

How to apply

Supply Chain Leadership

Mergers and Acquisitions

Build your company's competitive advantage and create increased shareholder value through targeted and skilfully managed mergers and acquisitions (M&A).

This programme gives you an end-to-end understanding of the M&A process and the ability to judge whether a merger or acquisition fits with your corporate strategy. As a result you will identify the most lucrative M&A opportunities, select the best partners and get the maximum reward from the deal.

Gain the expertise to go into the M&A process with confidence and skill and leave with the result you want.

[Download the brochure \(PDF document, 2.78MB\)](#)

Key details

Duration: 4.5 days
 Next start: 13 Feb 2017
 Fees: 25,300
 Location: London

Next programme dates:

- 13-17 Feb 2017
- 22-26 May 2017
- 11-15 Sep 2017

Next steps

- [Download a brochure](#)
- [Request more information](#)
- [Request a call](#)
- [Reserve a place](#)
- [Apply now](#)

Mergers and Acquisitions

Why choose this programme?

- **First-class teaching** – access to cutting edge research from faculty members who are influential and widely published business thinkers and consultants to some of the best known businesses in the world
- **Exchange ideas with business leaders** – hear directly from guest speakers in various industries about what worked, and what didn't, during M&As in their own organisations
- **World view** – based in the heart of a pivotal business city, we attract participants from around the world. Exposed to different cultures, you gain fresh insight into your own work norms and practices, building a global perspective of M&A.

"The professors brought a wealth of business expertise to the classroom, and offered practical acquisition and negotiation strategies, as well as filling their academic roles superbly well."

Kreshnik Robo (Albanian)
 Director, Head of M&A for Kosovo and Albania, Deloitte Europe

Contact us

Contact Evelyn Andriks,
 Programme Associate

Email: merger@london.edu
 Tel: +44 (0)20 7000 7324

[Email us](#)

Mergers and Acquisitions Programme Experience



Strategy

Mergers and Acquisitions

Who attends?

Benefits and impact

Programme content

Fees

How to apply

Benefits and impact

Arm yourself with the tools and tactics to plan, negotiate and complete deals that make your organisation stronger and more successful.

Benefits to you

- Widen your understanding of the role of mergers and acquisitions (M&A) in your corporate strategy
- Learn how to assess possible targets realistically, value target companies, assess bid tactics and avoid common pitfalls
- Approach the negotiation process with the skill and confidence to come away from it with the best possible deal
- Gain the global perspective, knowledge and awareness needed to tackle M&A anywhere in the world, through the diverse insights shared by your peers and faculty
- Handle the cultural and system issues that arise during the post-acquisition process, and understand key factors for on-going success, such as consistent leadership
- Successfully complete integration to generate maximum long-term value from the merger.

Benefits to your organisation

Your organisation acquires a senior manager with the ability to:

- use mergers, acquisitions and divestments to gain a competitive edge and increase shareholder value for sustained growth
- understand how to spot an opportunity, assess value and implement a deal on the most beneficial terms
- evaluate the financial implications of a merger or acquisition accurately and understand the use of leverage.

Next steps

- Download a brochure
- Request more information
- Request a call
- Reserve a place
- Apply now

Key details

Duration: 4.6 days
Next start: 13 Feb 2017
2017 Fees: £8,900
Location: London

Next programme dates:

- 13-17 Feb 2017
- 22-26 May 2017
- 11-15 Sep 2017

"The programme exceeded my expectations, and I was able to apply the learning to my experience from the very first day."

Todd Gensler (American)
 Vice President, Puerto Rico & Costa Rica, WWR International



Strategy
Mergers and Acquisitions
Who attends?
Benefits and Impact
Programme content
Fees
How to apply

Programme content

This intensive and practical programme gives you the confidence and skills to understand the key factors that bring long-term value to your business.

Build your knowledge of the entire M&A process, from the initial financial evaluation of a merger or acquisition, to leveraging your strengths to secure the best possible deal for your company.

The programme looks at the three key stages of the M&A deal cycle.

Next steps

- [Download a brochure](#)
- [Request more information](#)
- [Request a call](#)
- [Reserve a place](#)
- [Apply now](#)


Key details

Duration: 4.5 days
 Next start: 13 Feb 2017
 2017 Fees: £8,900
 Location: London

Next programme dates:

- 13-17 Feb 2017
- 22-26 May 2017
- 11-15 Sep 2017

^ What you learn



The strategic role of M&A

How do you judge whether a merger or acquisition fits with your corporate strategy? What kind of companies should you be looking at? What are the reasons for going ahead, and how do you define the objectives of the deal?

Find out the answers to these questions and more as you learn how to systematically assess whether, and how, a merger builds your organisation's resources and capabilities, and how it might maximise your competitive advantage. And gain the skills to develop an overall acquisitions strategy for your organisation.



Finance and valuation

Accurately valuing your target company is crucial. This part of the programme examines how to determine a company's worth – both in itself and to your organisation. Learn how to use corporate valuation techniques and assess potential synergies. You also develop the skills to finance a deal, focusing on highly leveraged transactions, as well as exploring debt capacity.



Post-acquisition integration

Securing long-term value is vital to the success of the deal. Examine how to integrate organisations – tackling the human, cultural and system issues that arise. Develop the toolkit you need to ensure any merger or acquisition delivers improved organisational growth and shareholder value.

"This programme gives you the right skills to work on transactions. You will be well placed to look at the market, assess likely targets against your business strategy, propose opportunities and really understand how they can deliver value to your organisation."

Wesley Gilbert (Australian)
 Head of Strategy and Business Development (Rail, TV Connectivity)

Student Spotlight



Wesley Gilbert

[→ See Profile](#)

Contact us

Contact Evelyn Andrews,
 Programme Associate
 Email: merger@london.edu
 Tel: +44 (0)20 7552 2000



Strategy

Mergers and Acquisitions

Who attends?

Benefits and Impact

Programme content

Fees

How to apply

Who attends?

Join senior executives involved in mergers and acquisitions (M&A) at any stage.

Participants vary from M&A first-timers to seasoned acquirers and are from a range of job roles, including:

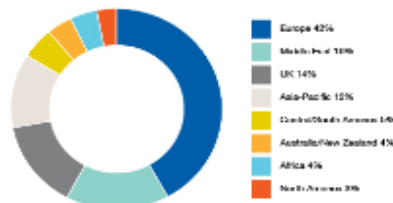
- chief executive officers (CEOs)
- general managers
- business development and marketing managers
- strategic planners
- lawyers
- accountants
- corporate finance specialists.

Inspiration through diversity

Instigate M&A anywhere in the world – in any sector – by learning alongside, and from, the diverse peers on this programme.

Some 80% of the executives on this programme are from outside the UK so you rapidly benefit from insights into ways of working in other countries; and with every major industry (in the public and private sector) represented you also learn about different business cultures.

Nationality of recent participants



Industry of recent participants



This programme has recently powered the performance of:

- Abu Dhabi Investment House (ADIH)
- ArcelorMittal
- Ariso
- BP
- Coit
- Deloitte
- Deutsche Bank
- Ethiad Etisalat Company (Mobily)
- Greene King
- Jadwa Investment
- Mubadala Petroleum Services
- Nedbank
- OJSC
- Pentax Medical
- Petrobras
- Phillips
- Reckitt Benckiser
- Rolls-Royce
- Saudi Aramco
- Saudi Telecom Company (STC)
- Sberbank
- Schnaider Electric
- Serwis
- Siemens
- Suzar Group
- Symphony EYD
- TASNEE
- Tawazun
- Vivendi Consulting
- Vodafone

Next steps

- Download a brochure
- Request more information
- Request a call
- Reserve a place
- Apply now

Key details

Duration: 4.5 days
 Next start: 13 Feb 2017
 2017 Fees: £5,000
 Location: London

Next programme dates:

- 13-17 Feb 2017
- 22-26 May 2017
- 11-15 Sep 2017

"It was a very fulfilling learning opportunity, most particularly hearing other participants' valuable experiences in M&A, which gave me insights for my own organisation."

Louise Au (Chinese)
 Director of M&A and Integration,
 Aigo Media China

Student Spotlight



Wesley Gilbert

→ See Profile

Contact us

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 Programme Associate
 Email: mergen@london.edu
 Tel: +44 (0)20 7000 7824

[Email us](#)



People Management



**“Yes, I think I have good people skills.
What kind of idiot question is that?”**



APPENDIX XII

**2025 GLOBAL CONSTRUCTION REPORT
EXTRACTS FROM ENR INTERNATIONAL REVIEW**



“Global Construction 2030 provides forecasts of growth and gives analysis for all major construction markets globally to 2030 and also provides forecasts and analysis for infrastructure, housing and non-housing sectors globally and for key regions and markets. In this special paper, we give an overview of the health of the global economy and explain how key drivers, including growth in economic output, rising populations and faster urbanisation in emerging markets are expected to impact growth in key regional construction markets. More detailed forecasts and analysis of key construction markets are presented in the Global Construction 2030 report (approx. 400 pages, 700 figures and tables) and in over 50 separate databases that provide consistent and comparable data over a 25 year period from 2005 to 2030 for all construction markets. The new Global Construction 2030 report also outlines key themes giving valuable insight and perspectives on key global trends impacting the global construction industry. These include how China will export its massive construction capability to build a modern day Silk Road to new markets and how reform in the way public infrastructure assets are funded is needed to achieve the needs of growing emerging global cities. Our last Global Construction 2025 forecast and report for the global construction industry was published in July 2013, as a recovery for the construction and engineering industry from the global financial crisis had become apparent. The new Global Construction 2030 forecast and report is the fourth in a series of global studies by Global Construction Perspectives and Oxford Economics describing the medium and longer term prospects for the global construction industry and giving forecasts showing how the global construction industry will evolve as the recovery from the global financial crisis transitions into new opportunities, challenges and uncertainties. Global Construction 2030 is an invaluable tool for senior executives and policy makers globally who seek to gain a clear perspective on the global construction and engineering industry. The forecasts and report have been developed and written by the world renowned expert team from Global Construction Perspectives and Oxford Economics. Our previous Global Construction 2025 global study of the construction industry has provided companies and organisations throughout all sectors of the global construction and engineering industry with a clear and invaluable perspective”

Source: Global Construction Perspectives

<http://www.globalconstruction2030.com/>



KPF: Ping An Finance Center, Shenzhen, Guangdong Province, China. A 115 storey supertall skyscraper, standing a total of 650 meters high and will be the second-tallest building in the world and the tallest in China.

Global Construction 2030

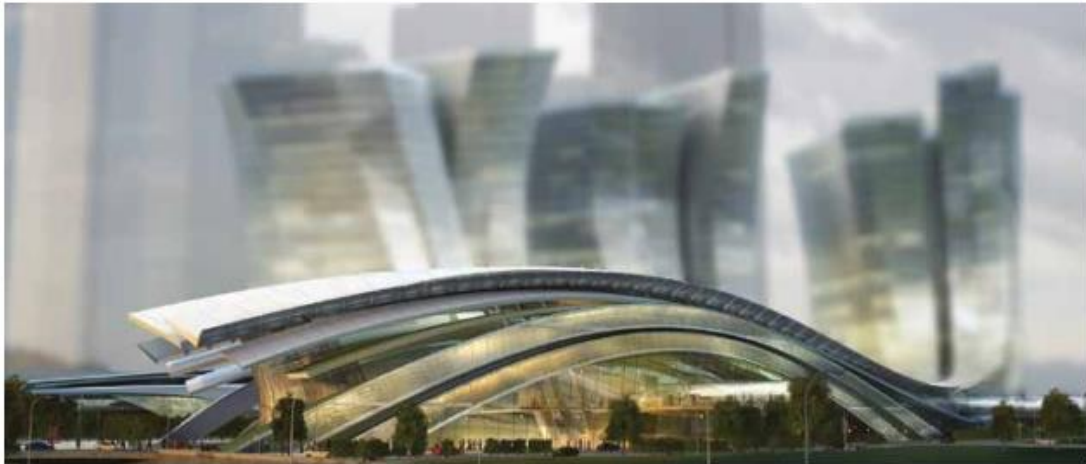
Key economic developments driving the construction outlook

Much has changed in the global economy since Global Construction 2025. The nadir of the global financial crisis is now six years behind us, and there is a certain return to “economic normalcy” as recovery across the developed world appears to be building momentum, credit conditions have improved considerably, and the massive pullback in construction activity has turned the corner, albeit at varying speeds across regions. This suggests that the expansion phase of the construction cycle is well-established and that we thus can expect relatively strong prospects over the next few years from a business cycle perspective.

At the same time, there have been a number of developments over the last two years that are likely to have both short-term ramifications and longer-lasting impacts on construction activity, both positive and negative. As our forecasts for Global Construction 2030 have not yet been finalised, this paper identifies and discusses the major developments in the global economy and how they are likely to shape the construction outlook across the major regions of the globe.

Some of the key patterns that are emerging are as follows:

- The global construction market is expected to grow at a faster pace than world GDP over the next decade as Asian economies continue to industrialise and the US recovers from the sharp downturn during the global financial crisis.
- The next decade will see a continuing shift towards faster-growing construction markets in Asia and other emerging economies where rising populations, rapid urbanisation and strong economic growth are drivers for construction.
- China has already begun to slow significantly in the near term, ceding its position as the fastest-growing Asian market to India within a year or two and offering new growth opportunities for ASEAN nations. However increasing demand for consumer-oriented construction will provide considerable support (albeit with changes in the relative importance of industrial/infrastructure and commercial).
- China is expected to significantly increase its investment in real assets and infrastructure and in the export of construction services and building products into key global markets over the next decade leveraging its significant construction and engineering capability and vast manufacturing capacity.
- Developed markets are set for a more positive near-term outlook as the fallout from the global financial crisis recedes, household incomes firm, and public finances improve. Nonetheless, Europe and Japan in particular face very weak longer-term prospects due to poor demographics and limited potential for economic growth. The UK is a stand out market in Europe with growth set to outpace the average its Western European neighbours by a significant margin.



AEDAS: West Kowloon Terminus, Hong Kong. High speed rail terminus will connect Hong Kong to major cities in Mainland China. It will probably be the largest below ground terminus station in the world

In our previous report we had already identified the warning signs of unbalanced and unsustainable growth in China and the need to take action to reduce dependence on export- and investment-driven growth in favour of a more consumer-oriented economy that would drive domestic demand. But China adopted a different path, adopting additional infrastructure initiatives and further easing of credit conditions, to the point that investment's share of GDP continued to increase to nearly 50% of GDP. It is becoming increasingly apparent that something has to give, and for the moment it is heavy industry, building materials and construction, where the fall in investment growth in China has impacted heavily.

Within China, this has led to downgrades in our construction outlook, though we don't expect construction growth to pull back as much as some observers fear. Indeed, there are many new markets for construction in China. Amidst the broader transition within the Chinese economy away from investment led industrial growth, construction in the future will be more focused on the consumer economy. Whereas much construction in the past concentrated on heavy industry and large residential schemes, construction will be focused on building schools, hospitals, high-end retail facilities and business parks to satisfy the anticipated acceleration of consumer spending.

China will need to significantly upgrade its healthcare facilities to cope with an ageing population. The numbers aged over 60 years in China will reach a staggering 36.5% of the population by 2030, compared with only 15.2% in 2015. The numbers aged over 60 years in China will be higher as a percentage of population than in Europe by 2030.

In addition, China still has huge infrastructure challenges that will need to be met and its new five-year plan will mean a focus on clean energy, water and sanitation. Road, rail and maritime infrastructure will all need to be upgraded if China is to remain competitive going forward. The development of pan-Asian trade along the old Silk Road will present the construction sector with enormous challenges, but also huge opportunities. It will also help open western markets further to over a billion new consumers.

The slowdown in China is also having a dramatic impact on commodity demand, and by extension the outlook for mining construction and the infrastructure needed to move commodities to market. This downshift is likely to have substantial impacts on resource-intensive economies such as Australia, Brazil and Chile.

A second development that will have both near-term and longer-term impacts on construction is the sharp fall in crude-oil prices in late 2014. This was driven largely by supply factors: the shale revolution has allowed the US to nearly double production in just five years. In addition, the desire of Saudi Arabia to safeguard market share over profits meant that impending return of Iranian exports into international oil markets following agreement on their nuclear program has caused Brent prices to dip below \$50pb in early August 2015, with weak global demand and record inventories putting additional downward pressure on prices.

Lower oil prices affect construction activity in numerous ways, both positively and negatively. On the demand side, lower oil prices act as a tax cut for consumers, boosting spending and ultimately driving additional productive capacity. In Europe, for example, the "sugar rush" of consumer spending in the first half of 2015 has helped boost flagging economies. In more oil dependent countries such as Japan and India, the fillip from falling oil prices has been most significant. However, amongst the oil exporting countries, the new oil price reality is less of a stimulant. Construction projects related to oil drilling and refinement have been scaled back (to the tune of US\$200bn, according to recent analysis by Wood Mackenzie), while other sectors linked to oil production have seen reduced demand via supply chain effects. This has been particularly true in Canada, which appears to have entered recession. On the supply-side, the cost of building materials that require high levels of energy input in their production process should come down. At the margin, this should raise construction value add.



ZAHA HADID ARCHITECTS: Beijing New Airport Terminal Building, Dawing, Beijing, set to become the world's largest airport passenger terminal

A third key development is changes in relative national competitiveness. Some of these dynamics are policy-related – such as the large quantitative easing programs undertaken by the Bank of Japan and the ECB to weaken the yen and euro against the dollar and the more recent devaluation of the yuan – and are not likely to have longer-term impacts. But others reflect more structural issues and will ultimately have a bearing on construction activity, in particular the industrial and infrastructure segments.

One of the key themes of our previous report was the “reshoring” of production back to developed markets, which was one of the reasons underpinning our relatively robust US outlook. In China, unit labour costs in manufacturing have tripled since 2000, while those in Japan and the US have remained stable, and by some measures the “all-in” manufacturing costs in China are not much lower than in the major developed economies. One might think that the oil price drop might change the reshoring calculus due to falls in transportation costs, but we don't think this is likely. More important than the financial cost is the time cost, as time-to-market has become critical across an increasing spectrum of products. Furthermore, firms can exercise greater oversight and control over their supplier networks, as well as tailor their products to local consumer tastes. Notwithstanding the near-term drag of the strong dollar on US cost competitiveness, we expect the combined impact of low energy costs and strong productivity to support industrial construction into the medium term.

The erosion of industrial competitiveness in traditional offshoring countries is also having impacts in other emerging markets. In Asia, rising labour costs in China have led some firms in more labour-intensive sectors such as textiles and light manufacturing assembly to relocate to ASEAN

countries such as Vietnam. India too has an enormous pool of low cost labour which should provide significant opportunities for firms to invest into, and reform efforts by President Modi may well open up additional opportunities in industrial and infrastructure construction. As will be discussed later, the speed and depth of reforms in countries such as Brazil and Mexico will have a key bearing on the longer-term construction outlook.

Across emerging markets, structural reforms programs aimed at boosting growth prospects have been implemented, with varying degrees of success.

In India, the Modi government was elected on a program of substantial structural reforms. The economy in India has long since been hampered by excessive bureaucracy and it is hoped that Modi will bring in new reforms to stimulate much needed activity in India's transport infrastructure and industrial sector. Significant doubts remain as to whether these reforms will be fully implemented as political realities start to bear down, but our expectation is that Indian economic growth will certainly outpace China's by 2016.

After a prolonged period of recessionary drag on the economy, the green shoots of recovery have taken a firm hold. In North America, economic growth is now firmly in the 2½% range, while household liabilities as a percentage of income have come down from the highs during the crisis. The house price crash that precipitated the crisis produced a large fall in the residential construction market as households were forced to deleverage. With household liabilities trending downward, the residential construction market is in better shape for sustained building activity.





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COOP HIMMEL(B)AU Wolf D. Prix & Partner: Dawang Mountain Resort Changsha, Changsha, China

Emerging Asia Pacific

The most important narrative since our previous Global Construction Perspectives report in 2013 has been the continued slowdown in the Chinese economy. China's status as the construction capital of the world is well founded; consider that over the three years from 2010-12, China produced more cement than the US did in the 113 years from 1900-2012. The scale of construction in China has been, and continues to be, truly immense, as the challenge of transforming from a predominantly rural based society into a modern, urban-based international economy continues. As of 2014, the urban population in China was at 54%, still a considerable way off the major advanced economies, and suggestive of further residential building to come.

Official data for the Chinese economy recorded year-on-year growth of 7% in both Q1 and Q2, suggesting that the slowdown is only a marginal phenomenon. But looking at the lower level data suggests the ailments to the Chinese economy may go further than the authorities are prepared to admit. Output in the sectors that feed into construction such as cement and rebar steel have both shrunk this year, while data on car production also point toward slowing economic output. Meanwhile, investment growth in real estate development continues to slow, with the most significant frosting in the residential sector and reflective of the large oversupply of housing stock in China. Furthermore, the 100-city average house price index has fallen for 10 straight months in year-on-year terms – though there have been some signs of this abating recently.

Nonetheless, our China view is not all doom and gloom. There remains scope for significant new construction programs. The pressing need for China to upgrade its transportation networks, from road, rail, maritime and aviation will continue to give significant new opportunity for construction in China. Also needed are improvements to China's consumer facing sectors as the country matures into a modern consumption led economy. This will mean vast improvements to commercial and entertainment buildings as well as huge investments in educational and medical building. And furthermore, despite the much publicised reports of China's housing oversupply and the talk of ghost cities lying empty, much of the housing stock is substandard and in need of upgrading, that will provide strong impetus for construction.

Indian economic prospects have been raised following the election of Narendra Modi. His highly anticipated reform program has fuelled much excitement within India and amongst the international business community, and progress thus far bolsters our expectation that India's GDP growth will outpace China's by 2016. Much of India's recent economic growth has been driven by foreign investment expectant of 'big bang' style reforms. Though the government has already implemented a number of important reforms, significant ground remains to be covered. Structural reforms to taxation, labour markets and the utilities sector remain on the Modi government's to-do list. Most important to the construction sector in India are the land reforms promised by the government. Modi



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Developed Asia Pacific

has promised to overthrow the 2013 land acquisition law that restricts the ability of government to sanction areas of land for new construction projects. Much of India's long-term construction outlook rests on the ability of the Modi government to overcome internal opposition to his land reform program. This is made all the more important given the huge infrastructure challenges India; transportation and power networks require serious upgrades if India is to develop into a modern international economy. Furthermore, India's urban population stands at just 32%, amongst the lowest in the world. The scale of building work required to do this is truly awesome. Taking China as an example, getting the urban population from 32% to the 54%, took 18 years at a compounded annual growth rate of 10.3%.

Nonetheless, India's enormous potential remains untapped. Very favourable demographics over the next two decades, a rapidly expanding middle class, and low unit labour costs all provide India with very beneficial economic terms. Leveraging these advantages will be a question of governance.

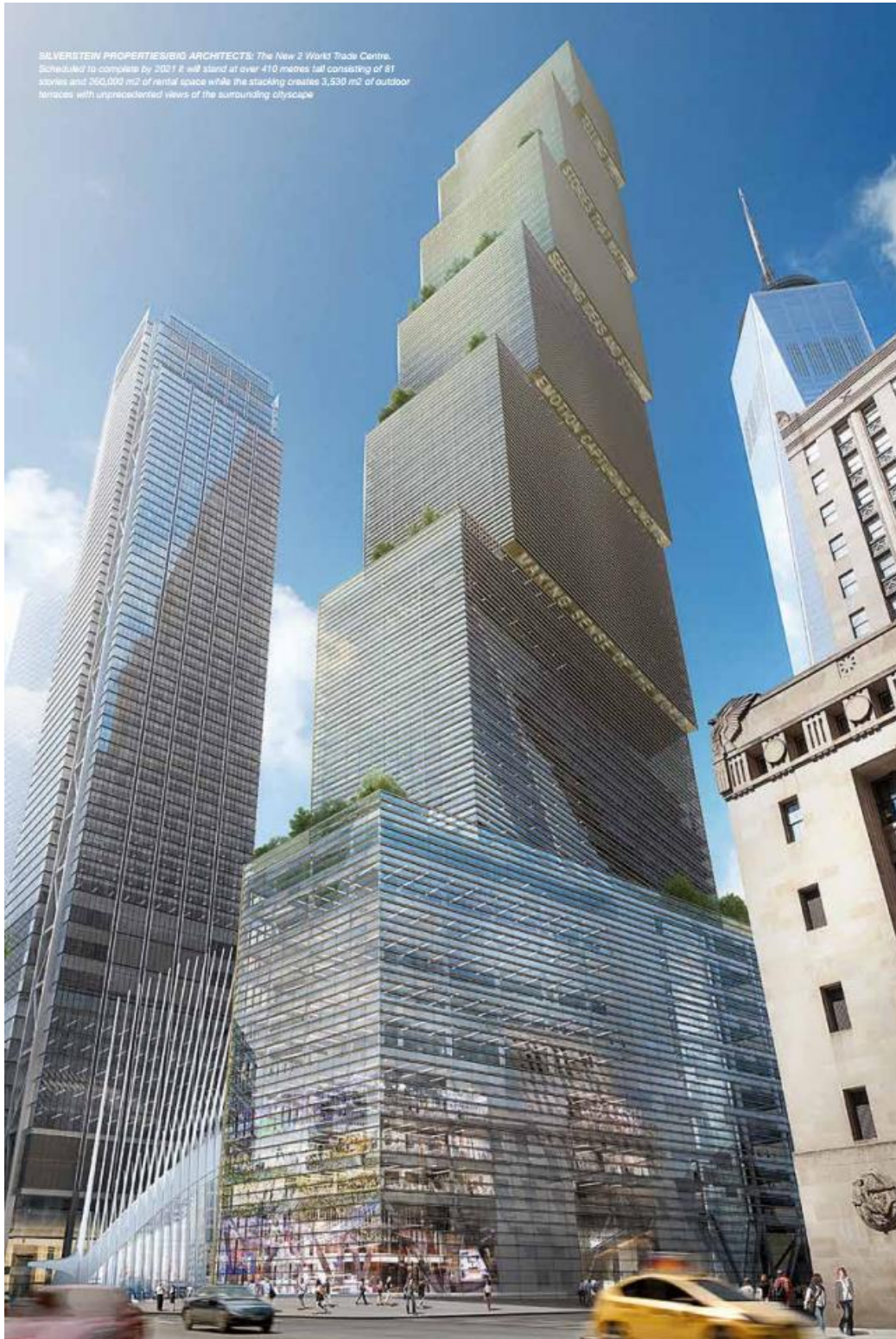
The pace of growth in the ASEAN countries has slowed somewhat as weaker Chinese demand bleeds across the Asia-Pacific region. In addition, the lower global oil price has driven down government receipts in Indonesia, calling into question the government's proposed infrastructure upgrades. We expect to see ASEAN construction markets grow at over 7% on average over the next five years which is significantly faster than that foreseen for China.

Despite a slip in economic activity as a result of the tax hikes that dampened consumer spending growth, construction growth in Japan has been a bright spot over the past few years with Abenomics providing the impetus. Furthermore, extensive QE has pushed the exchange rate lower, aiding competitiveness and supporting industries dependent upon external demand. However, the outlook is not all positive for Japan given poor demographic trends, with the population already shrinking, and bleak prospects in China, which is somewhat offsetting the benefits of a weaker exchange rate.

Demand for construction in Australia has suffered adversely from the slowdown in Chinese industrial activity. China's insatiable demand for commodities drove a mining and gas related infrastructure projects in Western Australia, with knock on effects in the residential and non-residential sectors in Perth and other cities supporting Australia's mining infrastructure. The slowing growth rate of Chinese demand has caused overcapacity issues within the Australian mining sector which has in turn depressed investment spending across the economy. We expect construction output to fall this year, before returning to growth in 2016, albeit at a more reserved level than witnessed during the commodities super-cycle of the previous decade. However, the recent sell off of state owned infrastructure assets is expected to help fuel further investment and growth in urban infrastructure needed to improve Australia's poor quality infrastructure.



RLB: Xiqu Centre, Hong Kong. The Xiqu Centre will be the first of 17 core arts and cultural venues, occupying a prime site of 13,000 square meters





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North America

In the US, the outlook for construction has been looking up after a prolonged period of stagnation. This has been most pronounced in the residential sector, where household deleveraging, slack labour markets, and flat hourly wages stifled demand for new home construction. With the return to more normal economic conditions, the possibility for catch-up growth in the residential sector is growing. In addition, demographic developments are supportive of further residential construction as the large millennial generation reaches child bearing age and requires new housing space to raise their young families.

US non-residential construction did not suffer the same deep contraction as its residential counterpart following the 2008 crash although some city centre commercial markets suffered significant downturn. Strength in US industry following the crisis has been remarkably robust with much of this is due to the competitiveness gains in the US and the consequent reshoring of industrial activity.

Looking forward, the outlook for US manufacturing remains robust following the late-2014 falls in the global oil price. The effective tax cut this represents to businesses and consumers alike should drive activity in the non-residential sector. This is in spite of the recent appreciation in the dollar that has created a tougher export environment for US firms.

Employment data for the construction sector also suggests a more positive picture of overall activity. Job openings in the sector have grown at double-digit pace over the first five months of the year, while new hires have shown similar strength. These trends are in line with our view that the construction sector is expanding capacity ahead of an expected upturn in demand over the coming quarters.

Construction activity in hospitals and schools provides another key area for the US construction sector in coming years. The recent Supreme Court decision in favour of the Affordable Healthcare Act should provide some stimulus to medical sector construction which has been lacklustre in recent years. Favourable demographic trends also point to growing demand for new school buildings as the now third generation baby boomers enter the education system.

In Canada, the late-2014 oil price slide has had significant adverse effects on the economy. Given the dominance of civil engineering construction in Canada, and of extraction related construction within civil engineering, the effects of lower oil prices have been extensive. Investment in the oil and gas sector has been paired back, which has in turn had supply chain effects on other sectors in regions of the country dominated by the extraction sector, Alberta being the standout case.

Via reduced investment and increased pessimism, construction prospects in the non-residential sector have dwindled. Target's recent decision to close all its stores in Canada, as well as creating a lot of vacant space and thereby dampening new construction demand, is emblematic of broader commercial challenges facing Canada over the nearer term.

The residential sector, particularly in the big cities of Toronto and Montreal has been subject to over-heating fears following years of house price inflation. Furthermore, the lack of serious employment growth could put pressure on household incomes, leading to questions over the viability of Canadian housing demand going forward.



KPF: Hudson Yards in New York City, consisting of 16 skyscrapers containing more than 12.7 million square feet of new office, residential and retail space



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Latin America

In Mexico, the construction outlook continues to be driven by strong industrial growth as the country continues to feed US demand for manufactured goods. Cheap energy and business friendly government policies has driven a wave of international companies to setup operations in the country, which also has the benefit of extensive free-trade agreements with the US and Canada. The automotive sector has been the jewel in the manufacturing crown, as almost every major global car manufacturer has built assembly plants in the country, while continuing investment streams guarantee future construction projects. Furthermore, the government's plans to open up the state controlled energy sector should generate a raft of private investment into the country's ageing energy infrastructure. In addition, earlier this year the government announced a 5-year, US\$600 million program to improve infrastructure across a range of industries, although the impact of lower oil prices on public finances may reduce its scope somewhat.

One big loser from Mexico's industrial ascendance is Brazil. We had forecast a 2% average annual increase in construction activity through the end of the decade in our last report, but the outturn is now likely to be less than half that. Competitiveness in Brazil remains low as much needed productivity-enhancing reforms have fallen short in recent years. Brazil missed the chance to implement reforms when economic conditions were favourable. Although the government now seems keen to re-orient policies, there is only so much that fiscal and monetary policy can do to affect medium-term prospects. Without reforms to improve labour productivity and simplify the tax code, Brazil will remain very close to the bottom of the list of growth in the major emerging economies.

The near term result is a collapse of the economy into recession. Set against a glowing economic performance only two years ago, Brazil now faces a prolonged period of negative growth. Investment has shrunk for the past 18 months – this in spite of all the spending



ZAHA HADID ARCHITECTS: Esfera City Centre, Monterrey, Mexico, a low rise, high density residential development. The design targets crime prevention through environmental design (CPTED)





ZAHA HADID ARCHITECTS: Estero City Centre, Monterrey, Mexico, a low rise, high density residential development. The design targets high standards in sustainability





MARKET ANALYSIS





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Western Europe

The outlook in Europe remains constrained by ongoing macroeconomic uncertainties surrounding the future of the Eurozone and a possible Grexit. Though things have improved since the depths of the crisis, the continent is still suffering from internal imbalances and competitiveness issues that stem from diverging economies being locked into a common monetary system.

Though Europe continues to linger under the weight of economic imbalances, there are still some positives for growth. After an L-shaped recovery in the construction sector across many European countries, there is now the potential for pent-up demand to be unleashed. Spain is one example where we are starting to see particularly robust growth after a multi-year period of double-digit declines in construction activity.

The lower oil price has provided an unequivocal boost to Western European nations. As a tax cut, the lower oil price should boost consumption and ultimately investment, which all else equal will drive construction activity over the near term. We are indeed seeing this, as a strong "sugar rush" of consumption appears to be leading to improvement in business sentiment (in spite of the Greek drama this summer) and investment activity, so we are thus a bit more optimistic for the next couple of years. Nonetheless, the European outlook over the long-term remains broadly unchanged. Europe's poor demographic profile underlines much of our construction outlook for the continent. Low birth rates point towards limited new demand for new buildings over the longer-term. In parallel to this, the rise of populist anti-immigration politics in Europe risks shutting out much of the potential for imported labour from abroad.

In France, weak demand at home and abroad is hampering investment, while a lack of competitiveness in the French economy points towards longer term structural constraints on growth. Germany, the major industrial engine of Europe has benefitted from increased trade under the weak euro, though the reduction in capital goods demand from China has weakened demand for industrial construction.

The southern European countries such as Spain and Italy have started to show some promise lately. The Italian economy is expected to grow this year for the first time since 2011, while Spain is forecast to grow by 3.2%. Both countries saw construction activity slashed in the years following the crisis as fears of contagion from a possible Grexit weighed on investor sentiment. This creates the potential for considerable catch-up growth in the coming years. Indeed, we expect average annual growth on the order of 1½% in Italy over the next 5 years, with Spain expected to grow at almost double that rate.

The UK construction sector remains buoyant. Having not witnessed the multi-year declines seen in other European countries, the growth path of construction remains stable. A chronic shortage of housing in the south-east region of the UK coupled with an ever growing population should drive new residential construction, while healthy business investment will spur on growth in the non-residential sector. The outlook for infrastructure spending is also promising but the government's commitment to fiscal consolidation may only serve to widen an already significant infrastructure deficit in the UK and dampen growth as publicly funded construction is still expected to shrink further.



Nine Elms on the South Bank, will be one of London's greatest transformations, becoming an ultra-modern complex offering 16,000 homes and 25,000 jobs, schools, parks, culture and the arts, set over 196 hectares including the iconic Battersea Power Station



US embassy in Nine Elms, Battersea. The 11 storey cube-shaped building, one of the highest performing energy use and sustainability in the world

Eastern Europe

The Russian economy has entered deep recession, brought on by a combination of war, sanctions and low oil prices. A BRIC country of previously immense promise, the Russian economy is forecast to contract by around 4% this year, and our expectation of the medium term has been revised down as well. Tumbling investment driven by collapsing confidence and a withdrawal of foreign capital has meant that spending on new construction projects will recede over the coming years, with only a tepid recovery from 2017 onwards.





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KPF: Abu Dhabi International Airport Midfield Complex, Abu Dhabi, UAE, planned to cater for 30 million annual passengers and designed to achieve a minimum Two Pearl Rating following the Estidama approach towards sustainable design developed by the Abu Dhabi Urban Planning Council

Middle East and North Africa

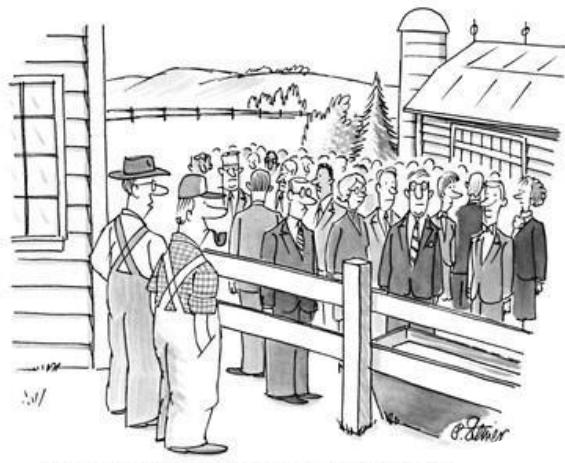
The sharp fall in the oil price underscores our calculus for Middle-eastern construction prospects. The Saudi response to low oil prices – and by extension, the OPEC response – has been to squeeze margins of the upstart shale producers by maintaining output and relying on the Kingdom's vast reserves to act as a buffer against falling government revenues. So far this strategy has held up, but the Kingdom is rapidly burning through its forex reserves. A prolonged period of low oil prices would have serious impacts on the Saudi and other Gulf state's fiscal budgets. Of course, there are clear consequences for infrastructure construction also. Should the oil price remain below \$50pb, investment in developing new extraction projects would likely suffer. It may also affect prospects for big infrastructure projects due to depleted public finances. The recent FIFA scandal and investigation has delayed projects in Qatar as a part of the preparations to host the FIFA2022 World Cup.

Sub-Saharan Africa

In Nigeria, the slide in oil prices has intensified pressure on the government's fiscal position and balance of payments, where fuels and mining products represent some 95% of Nigeria's goods and services exports. However, Nigeria still has plenty of potential for economic growth. The government has made hints towards economic liberalisation such as opening up the oil industry to outside investment and an ending of fuel subsidies, which if combined with better functioning institutions could provide the building blocks for sustained economic growth. Nigeria's population growth is explosive and Nigeria is set to become one of the world's most populated countries by 2030. Growth in working age population is also a key driver.

South Africa, though not a major oil producer has suffered from a more general downturn in metals prices since the end of the commodities super-cycle. Falling investment in mining projects has led to relatively tepid construction activity relative to the last decade. Furthermore, ongoing labour disputes and chronic problems in the country's power grid mean the South African construction industry shouldn't expect a return to stellar growth just yet.

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APPENDIX XIII

HISTORY OF GEORGE WIMPEY & ROLE OF SIR GODFREY MITCHELL

A History of George Wimpey, and the role played by its chairman Sir Godfrey Mitchell, its formative years.

SOURCES:

<http://www.managementtoday.co.uk/uk-why-whimpering-stopped-wimpey/article/409934#oKQ5wK05A2DOscW1.99>

<http://www.referenceforbusiness.com/history2/78/George-Wimpey-PLC.html#ixzz4QYUv7I7x>

HISTORY OF GEORGE WIMPEY PLC

George Wimpey PLC ranks among Great Britain's largest

The firm was established by Walter Tomes and George Wimpey as a stone-working partnership in 1880. The young entrepreneurs initially took contracts for structural and decorative residential masonry, but by the late 1890s they had expanded into paving, specializing in laying the foundations for the horse-drawn streetcars of that era. Tomes sold out in 1893, leaving Wimpey with a sole proprietorship. Winning local public works contracts boosted the contractor's reputation in the 1890s. The company built the local town hall in 1896 and was contracted to lay the foundations for London's first "electric tramway" in the latter years of the decade. After the turn of the century, Wimpey won a prestigious contract to build the 140-acre White City complex. This series of pavilions and gardens built for the Franco-British Exhibition of 1908 featured an 80,000-seat stadium that also served as the site of that year's Olympic Games.



Wimpey Head Quarters- Hammersmith Grove



Four years of progressive illness culminated in George Wimpey's death in 1913 at the age of 58. Owing partly to the distractions and labor shortages of World War I, the founder's family put the business up for sale in 1919. With £500 for goodwill, £2,500 stock-in-trade, and an extra £100 to help the Wimpey heirs meet their last payroll, Godfrey Way Mitchell bought the firm and registered it as a private enterprise. In recognition of the fine reputation built during the company's first four decades, Mitchell retained the Wimpey name.

With £3,000 in working capital borrowed from his father, the 27-year-old Mitchell took his company back to its roots: paving. Mitchell built up a fleet of eleven steam rollers and took contracts for public and private paving jobs. In spite of severe economic recession in Britain in the early 1920s, Wimpey's annual revenues topped £137,000 by 1925. The company subcontracted for several housing developers during this period. Mitchell astutely observed that Wimpey stood to make higher profits (albeit at an increased risk) if it bought the land and built and sold homes itself instead of just contracting for the projects. The company's first residential development, Greenford Park Estate, was completed in 1928.

It seemed an inauspicious time to expand operations into such a capital-intensive venture: unemployment ran high in the 1920s, and in 1931, Britain followed the United States into the most serious economic depression in modern history. Although unemployment in the United Kingdom neared three million by 1933, Wimpey and its housing venture boomed. The company concentrated its early efforts on construction of inexpensive, accessible homes. Those in the Greenford Park development, for example, sold for £550. Buyers needed less than five percent (£25) down and received a £50 government subsidy as further incentive. Wimpey's emphasis on the low end of the residential market, with its high and relatively stable demand, would characterize its housing business for decades to come. The construction bonanza was credited with fueling one-third of Britain's re-employment from 1932 to 1935. In the decade before World War II, Wimpey built an average of 1,200 houses annually. The company continued to build roads throughout southern England during this period.

When Mitchell took Wimpey public in 1934, he set up a unique ownership scheme wherein the charitable Tudor Trust (later renamed Grove Charity Management) held about half of the firm's shares. By that time, the company's annual revenues neared £2 million--over 13 times its turnover of a decade before. In 1936 Wimpey won its first major civil engineering contract, an £800,000 government agreement to build the Team Valley Trading Estate in northeast England. The comprehensive job called for diverting a river as well as building railways, a viaduct, and other accouterments of an industrial park. By this time, the company was able to provide a full range of contracting services, from planning to marketing.

After Germany's 1938 invasion of Austria, the British government began issuing defense contracts in cautious preparation for a conflict that British diplomats tried in vain to avert. Wimpey's war-related government contracts started that year with immense underground concrete tanks used to store aviation fuel reserves. A second £4 million contract called for the construction of a Royal Ordnance Factory near Glasgow, but even this extensive project paled in comparison to Wimpey's later contributions to the war effort. In 1938 Wimpey began bidding on contracts to build airfields or "aerodromes," as they are known in the United Kingdom. By the war's end, Wimpey had built nearly 100 of the facilities for the burgeoning Royal Air Force, which proved key to Britain's

defense. Wimpey received so many government contracts during this time that some in the media speculated that the company was receiving preferential treatment and that Winston Churchill had a financial stake in it. In response, Mitchell himself requested a government investigation, which cleared the company of all charges and noted that Wimpey's efficiency won it the contracts. The company also built fortifications along Britain's eastern coastline in case of a German invasion. Although the RAF averted a ground invasion of Great Britain, intensive bombing forced Wimpey from its headquarters to a suburban, bomb-proof outpost on land owned by Mitchell. The Hammersmith complex was bombed shortly thereafter, and the company stayed in its "temporary" headquarters until a new office building was completed in 1949. In 1948 Mitchell was knighted "in recognition of his public services."

Mitchell laid the foundation for post-war growth by establishing local offices throughout Great Britain in the years immediately following the war. These satellites helped absorb the deluge of veteran workers and prompted diversification into coal mining, among other activities.

Demand for housing was especially high in the post-war era--nearly one-third of Britain's housing had been damaged in the bombing and practically no new homes had been built since 1939. A shortage of bricks drove Mitchell to seek out an economical, reliable, and efficient alternative method of construction. Wimpey architects and engineers based their "No-Fines" technique on a Norwegian idea. The concept employed concrete containing no fine aggregate (sand or stone), hence the name. Poured concrete walls formed the main structure upon which conventional interior and exterior finishes were then applied. Government housing contracts propelled the construction of tens of thousands of residences annually in the early 1950s, and after the government lifted restrictions on private home-building in 1954, Wimpey re-entered that market as well. The proliferation of automobiles brought many road building contracts. Other major projects in the immediate post-war era included a factory for Pirelli General Cable Works, the Queen Elizabeth II grandstand at Ascot, London Bridge House, and Heathrow Airport.

Wimpey became one of Britain's first contractors to expand overseas in 1946, when the company added offices in Cairo, Baghdad, and Singapore. Early international projects concentrated on roads and airfields, but the rapid expansion of the global automotive industry in the postwar era drove burgeoning demand for oil and petroleum products. Wimpey "mutually developed" with the oil industry, both at home and abroad. The company built oil fields, refineries, pipelines, and support systems in Kuwait, Borneo, Iraq, Syria, and New Guinea. Many of these early projects required the contractor to build its own roads out to the chosen sites. In Borneo, Wimpey built an entire town, complete with over 2,200 residences, a shopping center, swimming pools, hotels, and a power station. At first the company shipped laborers from the United Kingdom to its often-remote sites, but it gradually started training indigenous labor, subcontracting locally, and using local materials.

Wimpey naturally moved "downstream" in the petroleum industry, building numerous plants for the world's largest petrochemical firms. Contracts with chemical giant Union Carbide Corporation alone called for the construction of 15 plants in Sweden, Belgium, India, and Australia. Other major clients included Imperial Chemical Industries plc (ICI),



Shell Oil Company, Conoco Inc., and, of course, British Petroleum Company PLC.

Oil industry projects often offered the foothold that Wimpey leveraged into other overseas contracts. For example, the company's expertise in petroleum took it to Jamaica in the mid-1950s, but construction of sugar processing plants, hotels, highways, schools, and offices soon established it as one of the biggest contractors in the Caribbean. Political upheaval forced the closure of Wimpey's Cairo and Baghdad offices in the late 1950s, but by that time the company had launched operations in Canada and Australia that would prove vital contributors to overseas revenues. Wimpey's open-cast coal mine, launched in Australia in 1950, produced more than 1.5 million tons of coal in its first year alone. Over the years, operations "down under" expanded to three offices with the capacity to provide infrastructure, private and public housing, and general contracting.

Expansion into Canada was precipitated by a survey that indicated a "desperate need for construction and housing development expertise." Accordingly, Wimpey established an office in Toronto in 1955. The rapid pace of postwar suburbanization supported the company's expansion from residential construction into roads and highways as well as support systems like water mains and sewers. By 1970, Wimpey was building nearly 2,000 homes each year in the province of Ontario alone. Its high concentration of work in this region ranked Canada as the largest contributor to Wimpey's overseas revenues, at more than 30 percent.

Mitchell remained Wimpey's executive chairman until 1973. Geoffrey Foster's 1994 examination of Wimpey for *Management Today* noted the deep and lasting effects of Mitchell's tenure, characterizing him as a visionary, "patriarchal" leader whose influence was felt through the 1980s. Dick Gane, formerly chair of Canadian operations, led Wimpey from 1973 to 1976, when Reginald B. Smith advanced to the executive chair. A "life-long Wimpey man" and former chief estimator, Smith essentially carried on Mitchell's ideals as the company slogged through the difficult 1970s.

Wimpey's internationalization gave it something of a "split personality" during this decade. When the Organization of Petroleum Exporting Countries (OPEC) more than tripled oil prices after 1973's Yom Kippur War between Egypt and Israel, construction in the Middle East boomed, while most of the rest of the industrialized world went bust. Wimpey's activities there centered on Amman, the capital of Jordan, where the contractor built government offices, roads, and a stadium. Wimpey's overseas expansion earned it a Queen's Award for Export Achievement in 1977.

Although high oil prices meant a bonanza in the Middle East, they sparked astounding rates of inflation in the rest of the developed world. In the United Kingdom, wage freezes, strikes and 50 percent inflation characterized the middle years of the decade. When both the government and commercial interests lowered their capital expansion budgets, the company added remodeling of homes and historic buildings to take up the slack. In spite of the dramatic reduction in home-building, Wimpey was able to remain Britain's biggest private house-builder throughout the decade. The company also looked to joint ventures in continental Europe for new housing business.

A 1979 restructuring made Smith president, and nominally reorganized the company's numerous departments into four primary divisions: U.K. Construction, International and Engineering, Specialist Holdings, and Group Services. Wimpey

had grown exponentially in the postwar era: by 1980, the company had 40,000 employees, and its annual revenues exceeded £1 billion. However, some critics noted that the company's management techniques had not developed to accommodate the company's expansion. Sir Clifford Chetwood, who took the Wimpey reins in the early 1980s, worked to create divisional autonomy and responsibility by transforming over a dozen British subsidiaries into three divisions: homes, construction or contracting, and minerals.

The housing and public works markets remained depressed through the 1980s, but the middle years of the decade saw another "boom" that helped mask any organizational shortcomings. The global recession of the late 1980s and early 1990s saw Wimpey slide from a pre-tax profit of nearly £145 million at a 1988 peak to £43 million (after exceptional items) in 1990. The company registered consecutive annual losses of £16 million in 1991 and £112 million in 1992. From 1989 to 1992, Chetwood had divested some nonessential businesses, reduced employment rolls in the United Kingdom by 30 percent, and reduced debt by 40 percent. The chief executive relinquished his office to a hand-picked successor, Joe Dwyer, at the end of 1992.

Dwyer intensified Chetwood's reorganization, coordinating all activities around business areas. Perhaps more importantly, Dwyer purged the top executive offices, bringing in a completely new, significantly younger, board of directors, some from outside Wimpey's ranks. These new managers brought new techniques to the somewhat dated company. For example, Richard Andrew, Wimpey's recently appointed director of the homes division, instituted market research to help guide that department's activities.

Dwyer also worked to change Wimpey's ownership structure. In 1993 he convinced the trustees of Grove Charity Management to reduce its stake in the contractor from over one-third to about five percent. Within a few months, Wimpey raised capital vital to fuel its continued growth with its first rights issue since going public in 1934. As Foster's 1994 article observed, "after three horrendous years, Wimpey found itself towards the close of 1993 with a strong balance sheet and a range of options such as it had not had in 50 years." The firm recorded a £25.5 million profit before taxes that year on revenues of £1.59 billion, and had reduced its debt another 80 percent, from £136.1 million in 1992 to £27.9 million. Management hoped that this positive financial position would place it in the vanguard of the global economic growth that was predicted for the latter years of the twentieth century.



The Management Team who oversaw the Tarmac Asset Swap



This strengthened financial position enabled the company to acquire McLean Homes from Tarmac in 1996, at which time Wimpey divested its other construction and quarry businesses to devoted itself exclusively to house construction.

In the early years of the twenty-first century, Wimpey embraced new design concepts and experimented with modular construction. Modular homebuilding held out the possibility of vast improvements in efficiency; a home could be built in one-fourth the time of a conventionally-built house. However, it remained an experimental building method for Wimpey. As one company official told *Building Design* magazine, "If it improves the quality, decreases cost, and gains better customer satisfaction then it's a no-brainer that people will want to use it. The jury's out in terms of being able to say 'yes' to all of these questions." The company also invested £400,000 in its website, creating 300 "microsites," each devoted to a specific development.

In 2001, the company invested £29 million in the merger and reorganization of its two UK divisions, Wimpey Homes and McLean Homes, as George Wimpey. Later that same year, Wimpey acquired Alfred McAlpine plc for £461 million (\$659 million). Although some analysts questioned the wisdom of the acquisition--Wimpey paid a high premium to book value and took on additional debt to do so--the new business increased Wimpey's penetration of southeast England, an area that was expected to grow rapidly in the years to come. The acquisition also moved Wimpey into a slightly higher-margin segment of the homebuilding business.

Up to this time, the UK homebuilding industry had been very fragmented, with Wimpey the dominant player. Three key rivals--Taylor Woodrow plc, Persimmon plc, and Wilson Connolly Holdings plc--emerged from the merger frenzy. In fact, Persimmon's acquisition of Beazer Group plc in March 2001 vaulted it past Wimpey to the top of the UK homebuilding heap.

Wimpey was able to maintain growth in both revenues and profits throughout the late 1990s and early 2000s, with sales increasing from £1.2 billion in 1997 to nearly £1.9 billion in 2001. Pre-tax profits more than doubled during that period, from £63 million to £152 million. The company's interim results for the first half of 2002 showed revenues up 44 percent over 2001, positioning Wimpey to break the £2 billion mark. Profit before tax more than doubled during the first half, from £38.9 million to £86.3 million.



George Wimpey

"WHY THE WHIMPERING STOPPED"

By GEOFFREY FOSTER, Published: 01 Feb 1994, Last Updated: 31 Aug 2010

Despite Wimpey's disastrous performance at the outset of the '90s, the past year has seen a dramatic reversal in fortune. Geoffrey Foster discovers how the group put its house in order.

'All of our businesses are more competitive than ever and are poised to benefit rapidly when the recovery comes.' How many chief executives have penned such words for their shareholders during the past three or four years, then read through the draft and grimly concluded it was the best that could be done? And 12 months later they were trotting out the same lapidary phrases again. In the construction industry, certainly, both the claims and the implied confession have been ritually intoned at successive AGMs of several-dozen household names. But in recent months a new and more uplifting mantra has crept into use. It's a spring song, full of references to green shoots, or at least to 'an improvement in the company's underlying trading environment'. The long-awaited recovery is at last on the way, it seems, in construction as elsewhere.

But is it? There was no doubt whatever about the recession, at least, not in construction. Housebuilding was just about the first sector of the economy to slide inelegantly down the hill in the closing years of the 1980s, and the civil engineers came tumbling soon after. 'Contracting is still going through a torrid time,' in the words of Joe Dwyer, group chief executive of George Wimpey, by most reckonings the second-biggest player in the field after Tarmac.





Major new projects have remained extremely thin on the ground, so any invitation to tender that appears these days is likely to be an invitation to the underemployed contractors to cut their own throats. And while the housing market has given a few nervous twitches of late, there is still such a backlog of unsold and repossessed properties available that a buoyant time for the builders looks almost as far off as ever.

So why the new-found optimism? Partly, it's relief that things are no longer actually getting worse, like the feeling when somebody stops beating you over the head. In Wimpey's case, the group slumped from a pre-tax profit of close on £145 million at the 1988 peak, to £43 million (after exceptional items) in 1990, then to a loss of £16 million, which ballooned to a figure of minus £112 million in 1992. But the year recently ended saw the business restored to profitability once more, after scraping back into the black in the first half. Analysts put the profit for the full year at some £23-£27 million - which is fairly exiguous by historical standards but certainly progress in the right direction.

But these figures don't tell the whole story. Behind the turn-round in performance lie significant changes in the complexion and organisation of the group. Wimpey, its management says in effect, is leaner and fitter and better prepared to make the most of opportunities that come its way - which takes us straight back to the opening sentence. The company is assuredly leaner. Shareholders' funds shrivelled by almost 40% in the three years to end-1992. After divesting one or two non-core businesses - such as waste management - and the sale or write-down of numerous property assets, plus provision for redundancies (numbers employed in the UK fell by 30%, to 10,300, during the same period), the group is smaller in every respect. But simultaneously, net borrowings declined from over 50% of shareholders' funds in 1989 to a little over 30% three years later - which, in a recession, is certainly a measure of improving fitness.

Of course, other businesses can tell much the same story. Almost every company that has come through the past few years in one piece - and that includes Wimpey's rivals among the big constructors - will claim just as forcefully to have gained from the experience. If everyone in an industry is leaner and fitter to the same degree, then in a national context, at least, the competitive picture has scarcely altered; and with the market still flat, the vista can hardly give much delight to anyone.

Nevertheless, Wimpey people believe that their prospects have fundamentally changed for the better. Why? Because, they infer, the company's structure is more dynamic, its decision-making more soundly based, and because it enjoys greater freedom of action - not necessarily compared with its rivals but compared with its former self. Nowadays, when an enterprise makes assertions of this nature, it usually means that management has seen the light on the road to Damascus and is busily engaged in 'empowering' employees. Construction, however, doesn't properly lend itself to organisational reform of that kind, not in the way that mass production might. Besides, construction managers are generally robust, broad-shouldered types who are not easily swayed by the latest cult. None of the industry's big groups is famous for its addiction to management fashion. And Wimpey, perhaps, least of all.



The Tudor Charity Trust set up by Mitchell

Long periods of unbroken leadership tend to make for conservative organisations, and there have been times when Wimpey's top management appeared immutable. For almost all of the past 75 years the company has been headed by just three powerful chairmen-cum-chief executives. In fact, the full corporate history goes back to the last century, when the eponymous George Wimpey set up in business as a paviour in Hammersmith, west London, where the company still has its head office. But its rise to prominence in the construction world dates from 1919, when it was bought by Godfrey Mitchell, a young ex-army officer lately back from France.

The ghost of Sir Godfrey Mitchell has haunted Wimpey almost to this day; which is hardly surprising, since he was not only the group's effective founder but a business leader of genuine vision. He powered its drive into housebuilding after World War I, and again, into local authority housing in particular, after World War II. The company was already a sizeable public-works contractor before 1939, and during the war it peppered the landscape of Britain with military airfields, the remains of which are all too often visible yet. (This was hectic work: you can still hear tales of how runways were rolled out in the wrong field when Wimpey's trucks arrived ahead of the government-employed engineers.) In the post-war years, the group, like its peers, saw enormous expansion in contracting. And it was one of the first of the UK contractors to become active overseas.

Mitchell soldiered on as chairman into the 1970s. When he eventually retired, and after a brief interregnum, his place was taken by Sir Reginald Smith, his former chief estimator. In the early 1980s Smith was followed in the top job by another life-long Wimpey man - who had also, therefore, been long exposed to Mitchell's patriarchal management style. Sir Clifford Chetwood led the company through the boom of the later '80s and willy-nilly into the recession, before retiring at the close of 1992. A year or two earlier he had appointed Joe Dwyer (then in charge of contracting and quarrying) to succeed him as chief executive. These days the group has a non-executive chairman: Sir John Quinton, late of Barclays Bank.

At the end of Mitchell's long reign Wimpey seemed to have run out of momentum. Caught between a depressed housing market and a squeeze on public expenditure, it took a long while to pick itself up again after the downturn of the early '80s. Chetwood set about stirring up the sluggish organisation he had inherited, abolishing more than a dozen UK operating companies - each of which covered the waterfront from suburban semis to structural steelwork - and pouring their activities into separate divisional streams: homes, construction (ie contracting) and minerals (meaning quarries, etc). Although the previous structure may have looked decentralised, it was no such thing, according to Dwyer. The company was



actually 'a complex matrix'. The regional companies 'existed in shell form' but did not accurately reflect the realities of responsibility and accountability.

Dwyer has carried Chetwood's reorganisation a step further. In order to straighten the lines of accountability worldwide, and to capitalise on expertise, Wimpey's structure is now based entirely on business areas. The important (and much-troubled) North American housebuilding operations, for example, no longer report direct to the group chief executive in London but to the chairman of the homes division. More significant, Dwyer has completely recast the top management team. Among those who were working members of the main board when he became chief executive, not one remained 15 months later. Their replacements are all much younger men. Four of them were promoted from within. Two - finance director Roger Wood and homes division chief Richard Andrew - were recruited from the world outside. Andrew's appointment broke new ground, as they say. He was a banker who had worked in industry before, but never in building.

Now in his mid-50s, Dwyer has been with Wimpey throughout his working life of 38 years. He joined the company not long after Chetwood, starting out 'in the bowels of sites' at the age of 16. He might easily, therefore, have become steeped in the history and awed by the legend of Sir Godfrey Mitchell. On the contrary, Dwyer is self-evidently his own man; not afraid of being unconventional; gently spoken, and a good listener - but ruthless, too. Having pulled himself up via part-time study at technical college, he is, he says, 'a technocrat'-both as a civil engineer and as a manager. On being picked as chief executive, he 'thought very long and hard about how to bring some modern business principles in'.

Appointing someone with Andrew's qualifications to run the homes division was one result of that process. Wimpey is full of people who know about housebuilding. There are - or were - not so many who can interpret a balance sheet. Housebuilding, which begins with the purchase of plots and ends with the sale of finished homes not more than two years later (that's the aim anyway), has an enormous appetite for cash. Before Andrew was appointed 20 months ago it was widely believed - by Dwyer among others - that ERM had ushered in a new epoch of low inflation and stable prices. The housebuilders would need to appreciate the implications of these changed conditions, and understand that they could no longer rely on poor judgments being concealed under an inflationary tide.

ERM has gone, but the rest still applies. These days, housebuilding operations are measured (as they never were in the past) by return on assets and return on a nominal equity: 'I see no reason why a 20% return on assets should not be obtained in normal times,' says Dwyer. 'That equals around 15% on equity, dependent upon gearing.' So managers have been trooping off to internal courses to learn about balance sheets and what it means to have shareholders, and how to satisfy them. There are further signs that modern management thinking (circa 1960) is taking hold. When Andrew arrived he expected to be inundated by market research documenting exactly what kinds of people the next generation of buyers would be and what they wanted of their homes. There weren't any reports. But there soon will be. Andrew has found a divisional marketing chief, like himself from outside the industry.

In past decades the group itself was not much bothered by the idea of shareholders. 'It had scant regard for City views or for the share price,' says Dwyer. Wimpey could afford this lofty

attitude because, although a public company since 1934, it existed under the umbrella of a charitable trust set up by Sir Godfrey Mitchell. The Tudor Trust originally owned about 50% of the shares. Although the holding came down to 34% many years ago, this was probably quite enough to see off any predator. Unfortunately it constituted an equally formidable barrier to the raising of capital, for the Tudor Trust was a genuine charity without funds available for investment. Not once since the flotation had Wimpey gone back to the shareholders. Mitchell had even been adamantly opposed to borrowing. But while that objection later became unsustainable, the continuing need of the company to finance its own development might well have prevented moves that would have weakened its dependence on volatile housebuilding profits.

Here again, Dwyer broke with the Mitchell tradition, although the break was a little slow in coming. As Wimpey's new chief executive, he naturally met representatives of the Trust and explained his intentions: which were, above all else, to reduce borrowings by cost savings along with sales of assets. But some of the assets proved difficult to shift. And when the first hints appeared that the recession might be coming to an end he began to think seriously about raising new capital. He put it delicately to the trustees that they might accept some reduction, even a progressive reduction, in their holding. The trustees were 'not entirely happy'. However, it was later suggested by a director of the charity (Dr Desmond Graves, who is also a non-executive member of Wimpey's board) that a bigger and less gradual reduction might be to everyone's good. 'On reflection I thought, Why not?' says Dwyer.

An overnight placing of shares cut the Tudor Trust's interest in Wimpey to a mere 5% of the equity. With the critical constraint removed, the company waited a couple of months or so - while the market smiled on construction stocks in confident anticipation of recovery - before announcing a rights issue to raise £104 million. 'We were very fortunate with the timing,' Dwyer admits. The offer was 97% taken up. 'It gave us confidence that the City and the market thought well of us.' Thus, amazingly, after three horrendous years, Wimpey found itself towards the close of 1993 with a strong balance sheet and a range of options such as it had not had in 50 years.

There was no doubt about what to do with the money. Management has constantly reiterated that it intends to stick with its core concerns of housebuilding, construction and minerals. In any recovery, quantities of cash would be soaked up by the housebuilders, for extra plots and bricks and labour. The traditional source of liquid funds - aside from the banks - is contracting, which, since it employs negligible manpower, is able to operate with negative working capital: payments come up-front, settlement of subcontractors' bills at the back of the queue. But even in the good times, margins are notoriously thin. In that sense, says divisional chairman Dennis Brant, 'there's never really a boom time in construction'.

Increasingly the contractors have been looking overseas to offset the decline in UK work. The minerals division has ample opportunities both at home and abroad. Quarries normally supply stone over a radius of up to around 40 miles. Some of Wimpey's US quarries are connected to the railroad, which opens up the possibility of creating a whole network of railroad depots. All that's lacking are the orders - and the prices. 'There's little sign of black-and-white orders up to the present,' notes minerals chairman Tim Ross. On the other hand, he adds: 'If we wait until the order books start to move it will be too late.' 'Timing is everything,' Dwyer acknowledges.



Peter Redfern, CEO Taylor Wimpey





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