

ECONOMIC BULLETIN



A quarterly update from Franklin + Andrews

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A promising future ahead?

The development of the UK's economy appears to be increasingly promising. In the first quarter of 2004, the UK economy increased by 0.6%: overall GDP is expected to grow by 3.5% during 2004, compared to 2.3% in 2003.

The economy saw significant improvements across a whole range of industrial indicators in the first half of the year with export orders at their highest level since the end of 1995, and accelerating manufacturing activity. Business surveys conducted by the Chartered Institute for Purchasing and Supply in May suggested that a resurgence in manufacturing is beginning. Nevertheless, the overall trend of the manufacturing sector remains quite moderate, with annual growth a mere 0.8%.

The Bank of England raised interest rates to 4.5% in June for the second month in succession. This latest move suggests that the Bank is intent to curb consumer borrowing, as the strength of the housing market and consumer borrowing could potentially undermine economic stability. Overall lending to consumers has picked up since the beginning of the year and we should expect to see a growth of 3.6% in consumer spending during 2004.

In its 2004 Budget, published in March, the Government set out its core targets on economic growth and innovation: Public expenditure is expected to be the major driver in the UK economy over the next three years, with spending on public services expected to be £61 billion higher by 2005/06, compared to 2002/2003. With an extra investment of £8.5 billion in the education sector over the next three years, spending is anticipated to grow by 4.4% a year on average from 2004/05 to 2007/08 and will ensure the sustainability of raising educational standards and achievements.

The UK's construction industry enjoyed a period of strong growth in 2003, performing significantly better than the UK economy. Graph 1 shows the movement in the UK construction output compared to the growth in the UK economy.

House building accounted for 14.4% of the construction industry's output in the latest annual figures. With continued buoyancy in the housing market and optimism from house builders, activity in this sector is expected to continue to increase during this year.

Infrastructure accounted for 8.6% of all construction work – a total

of £6.64 billion. Railway and road building are the main sources of infrastructure work. However, DTI have revised down its forecast for this year to no change before expectations of growth in 2005 and 2006.

Industrial construction is the smallest sector in the construction industry. In 2004 output of private construction work accounted for £3.03 billion, or 3.9% of total construction sector. Moderate rises in growth are expected over the next few years.

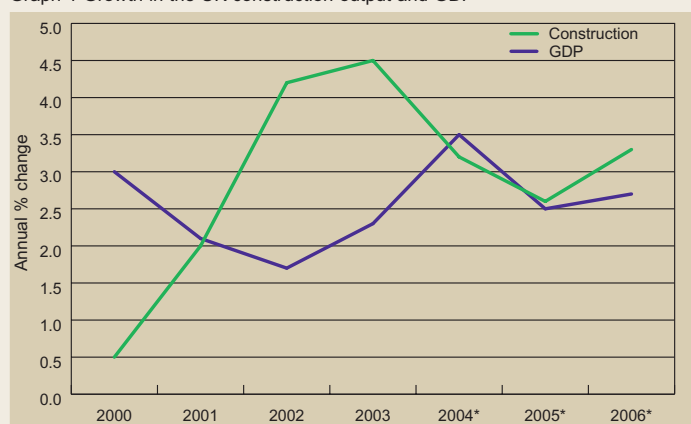
Commercial construction output accounted for just over 15% of all construction work despite the weak office market in London and the south.

The repair and maintenance sector accounted for 48% of the

construction industry's output last year and the sector is forecast to see more moderate growth over the next three years. The latest forecast is for steady pattern of output growth: 3.2% in 2004, 2.6% in 2005 and 3.3% in 2006.

Inflation, measured by the Retail Price Index (RPI), is forecast to increase from 2.6% in the second quarter to 2.9% in the third quarter of 2004. In 2005 it is still expected to rise to around 3%. Tender price inflation is expected to rise by 3% during this year and forecasts indicate a further rise of 3% in the year to first quarter of 2005. Looking ahead, tender prices are expected to rise by 3.8% in 2006. Table 1 below plots the annual inflation forecast for the construction industry in relation to the inflation of the UK economy.

Graph 1 Growth in the UK construction output and GDP



*Forecast source, IMF and CFR

Table 1 Construction costs index (annual % change)

	2000	2001	2002	2003	2004*	2005*	2006*
Tender prices	6.1%	7.5%	8.3%	6.4%	3.0%	2.6%	3.8%
Building cost	4.5%	3.5%	4.0%	5.2%	4.6%	6.3%	2.5%
Retail prices	2.8%	1.8%	1.6%	3.0%	2.8%	2.6%	2.5%

*Forecast



A view from the Managing Director

by Andrew Williams

Economic growth bolsters construction industry

The global economy has shown significant improvement during this year. With the global recovery proceeding more rapidly than anticipated, world economic growth in 2004 and 2005 is now projected at about 4.5%. The expansion in the US is now firmly established across most sectors of the economy, helped by continued stimulus from fiscal and monetary policies. Increases in disposable income induced by tax refunds and wealth gains are providing ongoing support to consumption. The US growth is now estimated at 4.6% and 3.9% for the year 2004 and 2005 respectively. However, the upcoming US presidential elections will inevitably create some uncertainty on its future economic policies.

Euro area growth is predicted to increase to 1.7% in 2004 and 2.3% in 2005. This pick-up is underpinned by the strong recovery in world trade, improving corporate balance sheets and a supportive stance on monetary policy. The German economy is recovering from three years of stagnation. Growth is forecast to rise to 1.6% during 2004. As the upswing broadens in 2005, German economic growth is likely to grow at around 2%.

The upturn is most rapid in emerging Asia, particularly in China, which has recorded a growth of 9.1% in 2003. Recent data suggest that GDP growth in China is now projected at 8.5% in 2004 and 8.0% in 2005. In Japan, the recovery has continued to substantially exceed expectations, with 3.4% GDP growth in 2004, two-percentage points higher than predicted last year.

The latest estimate indicates GDP growth in the Middle East will be 4.1% in 2004, slightly down from our previous forecast of 4.5 percent due to the region's continuing unrest. Should the situation in Iraq ease the economy would be back on track for a growth of 5.0% in 2005. Growth in Africa is predicted to pick up strongly, 4.2% in 2004 and 5.4% in 2005, a rate of growth not seen since the early 1970s. The growth is generated by improved policy environment, the global recovery, higher commodity prices and large expansions in oil production.

For the UK a GDP growth of 3.5% in 2004 will represent the first above trend performance since 2000. The outlook for 2005 is slightly weaker with a forecast growth of 2.5%. Growth in the construction industry is expected to moderate in 2004 to 3.2%. The outlook for the construction industry is 2.6% during 2005. Looking further ahead, 2006 is

expected to be a better year for the construction industry as output is forecast to rise by 3.3%. The profile of the construction industry in the UK is expected to slow but public sector work is forecast to keep the profile positive. The Government's commitments to health and education, which is to be routed primarily through PFI/PPP, suggest that the activities in these sectors should remain robust. Government spending will continue to grow this year by 2.6%. However, it is likely to moderate to 2.4% with possible tax increases after the 2005 election. A slowdown in spending of 1.4% is forecast for the year 2006.

Global construction spending reached nearly \$4 trillion in 2003. It is forecast global construction spending will grow by 4.6% in 2004. Asia has the greatest potential of construction growth, particularly in China. This is mainly because of its size and the impressive predicted GDP growth over the next few years. Chinese construction will continue to grow rapidly. Development in Beijing for the 2008 Olympic Games is driving growth in China's most dynamic economic area.

The European construction industry generally has been recovering slowly during this year. Growth rates about 0.9% and 1.6% are expected for the

year 2004 and 2005. It is expected that with EU expansion, the economies of the new countries will improve and a high proportion of their spending will be on building projects. The positive development of the infrastructure sector is also expected in Western Europe. The outlook for the UK construction industry remains upbeat although expansion is expected to slow.

The global economic growth prospects have continued to improve. Brazil is one of the fastest growing construction markets in the world today. Its current forecast says the market will grow by 7.5% in 2004. India and China offer major business opportunities and an increase in revenue growth for construction companies. A positive growth of the construction sector in Europe is expected. The UK construction industry performance will be on a par with the UK economy as a whole. Consequently, the world construction output will grow at an impressive rate.



Water sector analysis

Watering the construction industry

Water is the most precious and irreplaceable resource in terms of human need. Delivering water projects and managing water resources have fundamental implications for health, energy and food production, and are critical to reducing poverty. Only 2.5% of water is fresh water, of which less than 0.3% is easily accessible in lakes and rivers. It is estimated that by 2025 as many as four billion people, nearly one half of the world population, could live under conditions of severe water stress, in particular in Africa, the Middle East and South Asia.

The challenge facing many countries is how to supply sufficient water of good quality at a reasonable price. National governments and international organisations such as the World Bank have been putting tremendous efforts and investment into water-related projects to tackle these problems. Currently the World Bank invests approximately

Table 1. Major water project funded by the World Bank

Project	Project Value (US\$m)	Country/Area
Sanitation projects:		
Ethiopia water supply and sanitation project	100	Ethiopia
GH second urban environmental sanitation	62	Ghana
Maharashtra rural water supply and sanitation	181	India
Sewerage projects:		
Water supply and sanitation project	279	Iran
Zhejiang urban environment project	133	China
Shanghai urban environment project	200	China
Water supply projects:		
Karnataka urban water sector improvement	39.5	India
Community Development "Gemi Diriya" project	51	Sri Lanka
Flood protection projects:		
Hazard risk mitigation and emergency project	150	Romania
Water resources assistance project	157.8	Vietnam

(Source: World Bank, 2004)

Chart 1: Average annual capital investment in the water industry

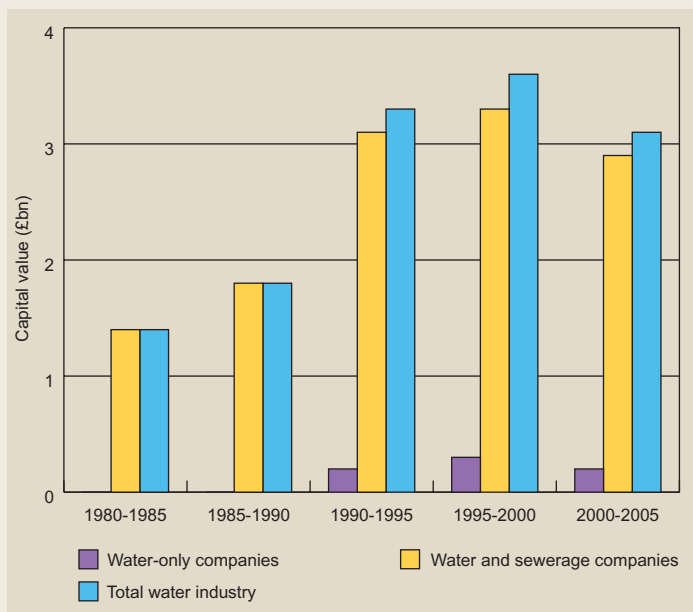
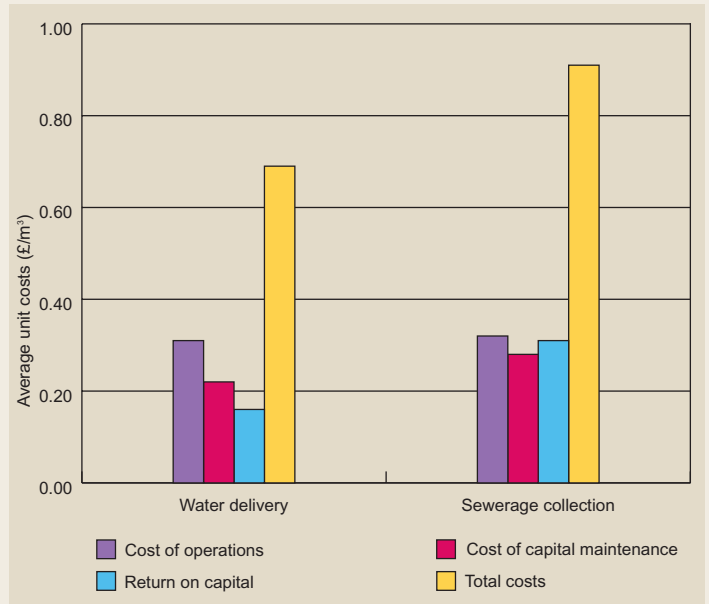


Chart 2: Water and sewerage service unit costs



US\$3 billion (£1.7 billion) a year into water projects such as water supply, sanitation, waste treatment, sewerage and flood protection. Most of those projects are being implemented through agencies and in partnership with individual developing countries. Table 1 below shows major water projects funded by the World Bank.

In the UK, the water industry is at the core of infrastructure and national economy. Output of water and sewerage construction projects accounts for about £2 billion a year on average, sharing approximately 29% of total output of infrastructure projects.

According to the Asset Management Plan 2004 (AMP4), a five-year strategy established by the Office of Water Services (Ofwat), the UK's water industry economic regulator, overall investment by water companies in England and Wales is anticipated to exceed £19 billion in the next five-year period from 2005 to 2010. Construction new work in water and sewerage is forecast to grow in double digit in both 2004 and 2005 given that those companies' planned capital programme are to be met. Chart 1 below highlights the average annual investment in water and sewerage in the UK water industry. Chart 2 illustrates average unit costs of water delivery and sewerage collection.

In addition to national governments' expenditure, international organisations such as the World Bank in cooperation with other aid agencies work in the water sector worldwide on many dimensions and covers different aspects of water and sanitation provision and water resource management. The EU is investing significantly in the water sector (under its 'Environment' sector) for the new member states. In the past five years the European Investment Bank has invested about €8 billion (£5.3 billion) into water and sewer projects. These projects have been beneficial to millions of people who live in poor conditions with lack of access to clean and safe water, and will ultimately benefit the world economy.

Spotlight on the PFI

PFI: Success or failure?

PFI context

The Private Finance Initiatives, PFI, is a way of using private sector finance and management skills to provide public infrastructure and services. First launched in the UK in 1992, as a major vehicle of the Government's Public Private Partnership initiative (PPP), it was expected to play two roles – to improve public sector services through the application of private management techniques and to ease the strains of public financing.

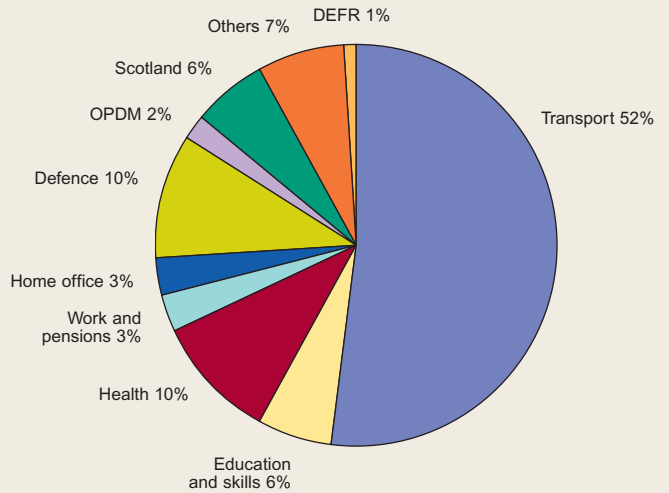
Since its first launch, a number of authorities/initiatives have been established by the Government to shape the PFI sector. (i.e. the Private Finance Panel in 1993, Universal Trading Testing in 1994, Treasury Taskforce in 1997). In 1999 the Office of Government Commerce (OGC) and Partnerships UK (PUK) took the responsibility forward. Until then PFI was starting to increase in significance, accounting for approximately 10% of Central Government Capital Expenditure.

Statistics of contracts

Until April 2004, 626 PFI projects with a total capital value of £40 billion have been signed in the UK according to the latest figures from the Treasury. The scope of PFI projects is wide-ranging and has covered sectors such as roads and bridges, rails, sewage treatment plants, waste incinerators, hospitals, schools, prisons and office accommodation. The numbers of signed projects reached a peak of 108 in 2000, and in 2003 the largest amount of PFI deals by capital value were signed.

The transport sector is the largest one by capital value, sharing 52% of total value of PFI projects. An estimated £45-billion expenditure plan for the transport sector PFI projects has been established for the next ten years. In the health sector there are already plans calling for £7 billion for capital expenditure on PFI projects by 2010. At the present time

The sector share of PFI projects by capital value

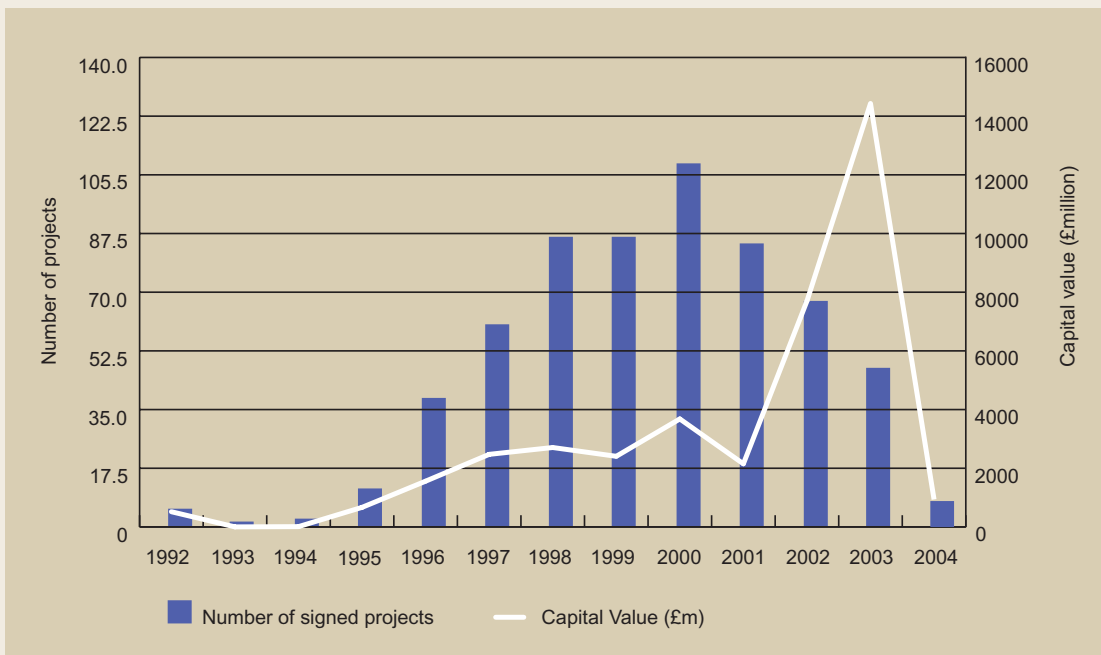


Key

OPDM – Office of the Deputy Prime Minister
DEFR – Environment, food and rural affairs

most new hospitals in the public sector are provided under PFI and this trend is likely to continue. The expectations are that the potential market will expand further because of the Government's commitment to improve public services, in particular, for schools and hospitals.

Signed PFI projects

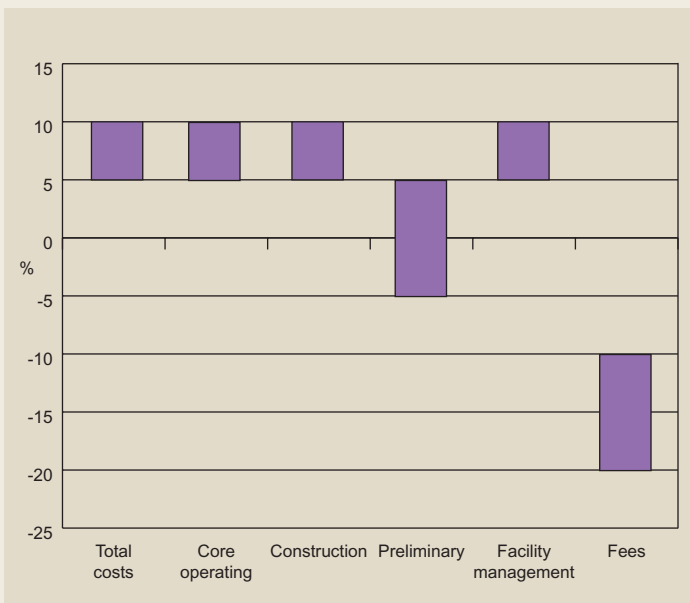


Cost saving issues

In its report 'The role of cost saving and innovation in PFI projects', published in 2000, the Construction Industry Council (CIC) addressed a range of issues related to cost savings for PFI projects. The report obtained its results and figures from respondents involved in a variety of projects across different PFI sectors. Results on savings reflect the respondents' subjective measurement of the quantitative savings in comparison with the Public Sector Comparator (PSC), in the case of public sector respondents, but in comparison with the respondent's own benchmark, in the case of the private sector.

Overall, the reported percentage median cost savings of the tested projects is presented in the following diagram. The weights of these components of cost are unequal on average, and vary substantially from sector to sector and from one project to another. While construction costs represent 5-10% savings, other components of cost such as Fees increase 10-20%. It is noted that the total cost saving of 5-10% is derived from the average of all types of savings throughout all the stages of a project's life.

PFI project cost savings



International application

Other countries are increasingly interested in the UK's experience and expertise in PFI. The main drivers for the international application of PPP/PFI remain, as in the UK, the achievement of value for money in the procurement of public services and the need for new investment in infrastructure.

Mexico, Mauritius, Spain, Germany, Denmark, Poland, Czech Republic and Estonia are just some of the countries that have expressed an interest in PFI. Canada and Japan are putting enabling legislation in place; Italy and South Africa are establishing task forces; Ireland has put in place a national plan to further the process following the announcement of 40 PPP projects. In the Netherlands and Portugal, governments have adopted PFI-type structures in order to promote efficient procurement practice. The earliest international PPP/PFI projects have been toll road schemes in the transport sector in Finland and Portugal. Other sectors also include rail and urban transport, education, defence, water, healthcare and prisons.

PFI insight

Despite the large number of projects, the PFI's effectiveness is still subject to much debate. As PFI is essentially a long-term contract for the Design Build Finance and Operate (DBFO), another form of PPP which involves main groups of players such as financial institutions, civil engineering and construction companies and facilities management companies, it will be a number of years before a complete analysis is possible. The collaboration-based approach will only deliver sustained value if it is adopted with the philosophy of mutual involvement, trust and benefit at its core, which many people say they have achieved, but actions suggest otherwise.

Contractors are influenced by the massive bid costs associated with PFI contracts. Average tender costs expressed as a percentage of expected total costs, across projects of all sizes, is higher for PFI public services projects than for traditionally procured projects. A report published by the Adam Smith Institute in 1996 found the total cost of tendering for a PFI project to all potential contractors to be just under 3% of expected total costs while for traditional procurement the total costs accounted for just under 1%. All these costs have to be recovered from the PFI client sector sooner or later.

The length of time required from the client's decision to adopt a PFI solution and financial closure – two years or more, is significant and will not necessarily decline. The possible impact of the EU Composite Procurement Directive may increase the costs of bidding thus making the whole procedure less cost effective and reducing competition.

The move to extend the role of PFI in health and education will involve the management of increasing numbers of more highly qualified staff on a permanent basis. This development may put a strain on the management resources of the PFI contractors and require additional resources and skills.

A number of measures have been taken by the Government to address these concerns such as improving procurement skills, enforcing of standardisation of contracts and enhancing monitoring of PFI projects. Nonetheless, there are undoubted opportunities for major players in the PFI sector which should maintain its level of activity and the momentum of the sector.



International viewpoint

European whole-life costs

This is the first edition in a new series that compares the whole-life costs of a typical facility in a variety of locations throughout the European Union.

Choosing a location

Whole-life costs are critical when deciding upon location for a particular project. Organisations seeking to identify the most cost-efficient location for the siting of a development must understand not only the costs of the constructing the facility in the first instance, but also the cost of ownership throughout the period the facility is required. The period of

ownership can significantly impact on its whole-life cost. Therefore, when considering where to locate a facility, it is important to consider how long the facility will be required. Climate can also impact on cost: owning a property in a colder northern European climate may result in significantly higher fuel energy costs, for example, when compared to a Mediterranean climate. However air conditioning plant and energy costs may be an offsetting issue.

The evaluation of alternatives is at the heart of whole-life costing: by considering the options available, the best-value strategy for building and operating a facility can be identified.

Manufacturing Facility										
	UK		Austria		Belgium		Finland		France	
	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €
Construction Cost	1,754,618	780	1,473,879	655	1,386,148	616	1,684,433	749	1,666,887	741
Occupancy costs										
M&E Maintenance	618,563	275	577,271	257	554,925	247	657,275	292	641,019	285
Fabric	618,563	275	310,467	138	369,716	164	433,705	193	279,657	124
Cleaning	899,728	400	638,960	284	896,194	398	1,489,799	662	955,012	424
Waste	13,574	6	8,352	4	9,863	4	24,722	11	14,613	6
Electricity	418,888	186	684,731	304	281,938	125	225,550	100	491,393	218
Gas installations	33,589	15	87,464	39	40,533	18	2,774	1	36,267	16
Water	27,137	12	14,169	6	42,883	19	46,428	21	37,288	17
Communications	400,798	178	917,762	408	383,027	170	289,689	129	292,714	130
Post room	27,763	12	26,824	12	30,311	13	29,909	13	19,581	9
Porterage	57,132	25	41,937	19	48,262	21	50,803	23	33,063	15
Internal moves	696,125	309	349,396	155	416,075	185	488,088	217	314,723	140
Security	230,357	102	189,582	84	250,574	111	203,515	90	172,585	77
Management	169,517	75	155,238	51	183,713	82	116,908	52	134,445	60
Occupancy cost	4,211,735	1,872	3,962,155	1,761	3,508,014	1,559	4,059,165	1,804	3,422,361	1,521
Whole-life cost	5,966,352	2,652	5,436,033	2,416	4,894,162	2,175	5,743,598	2,553	5,089,248	2,262

Manufacturing Facility										
	Ireland		Italy		Luxembourg		Netherlands		Portugal	
	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €
Construction Cost	1,719,525	764	1,421,240	632	1,701,979	756	1,719,525	764	1,473,879	655
Occupancy costs										
M&E Maintenance	708,693	315	364,094	162	987,458	439	477,295	212	334,030	148
Fabric	528,504	235	267,807	119	443,185	197	391,046	174	184,858	82
Cleaning	735,988	327	611,208	272	753,592	335	898,071	399	641,270	285
Waste	8,872	4	9,398	4	9,501	4	10,963	5	5,222	2
Electricity	298,055	132	386,676	172	212,661	95	426,947	190	443,063	197
Gas installations	29,865	13	45,865	20	30,932	14	58,666	26	27,734	12
Water	23,067	10	29,851	13	44,749	20	44,749	20	41,018	18
Communications	384,007	171	274,848	122	461,182	205	361,565	161	395,814	176
Post room	37,956	17	14,351	6	32,055	14	33,932	15	11,668	5
Porterage	63,461	28	27,133	12	53,448	24	52,973	24	20,543	9
Internal moves	594,773	264	301,387	134	498,756	222	440,079	196	208,037	92
Security	251,651	112	104,076	46	249,297	111	234,392	104	116,494	52
Management	138,620	62	65,552	29	171,187	76	137,785	61	100,207	45
Occupancy cost	3,803,511	1,690	2,502,246	1,112	3,948,004	1,755	3,568,462	1,586	2,529,959	1,124
Whole-life cost	5,523,036	2,455	3,923,486	1,744	5,649,982	2,511	5,287,987	2,350	4,003,838	1,779

Construction costs

The construction costs indicated in the following tables are based on the construction of a manufacturing plant. The figures would normally include land acquisition costs, capital allowances, finance costs and taxes – all of which vary from location to location. However, for the purposes of this simplified study, these costs have been excluded.

The tables are compiled using figures based on the cost of a theoretical project. In a full study, the specific regulations applicable within each country would be applied. However, this study has assumed a generic building across Europe and does not therefore take into account these influences.

Occupancy costs

Energy usage and maintenance are two of the key cost drivers in ownership costs. In order to understand these costs, it is important to record the circumstances under which they have arisen: if a property is under-used, with low staff numbers, energy costs may be lower than is normal for full occupation. Poor quality administration and policy can result in the infrequent application of maintenance, increasing overall maintenance costs. The costs shown in the tables assume a common application of administration of maintenance and assume normal occupancy usage of energy.

Manufacturing Facility								
	Germany		Greece		Spain		Sweden	
	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €	Total Cost €	Cost/m ² €
Construction Cost	1,614,248	717	1,386,148	616	1,421,240	632	2,158,180	959
Occupancy costs								
M&E Maintenance	653,615	290	438,268	195	734,932	327	595,628	265
Fabric	289,137	129	180,118	80	251,217	112	455,035	202
Cleaning	989,446	440	602,244	268	814,348	362	2,101,376	934
Waste	8,352	4	6,261	3	9,398	4	38,761	17
Electricity	378,617	168	273,901	122	692,789	308	155,303	69
Gas installations	40,533	18	23,512	10	29,865	13	20,153	9
Water	24,424	11	27,967	12	35,423	16	36,356	16
Communications	321,929	143	206,688	92	247,330	110	309,303	137
Post room	28,568	13	22,130	10	19,581	9	32,859	15
Porterage	42,746	19	31,088	14	31,749	14	54,824	24
Internal moves	325,392	145	202,703	90	282,717	126	512,092	228
Security	211,851	94	164,150	73	157,550	70	201,287	89
Management	137,367	61	106,470	47	112,316	50	95,614	42
Occupancy cost	3,451,977	1,534	2,285,499	1,016	3,419,217	1,520	4,608,591	2,048
Whole-life cost	5,066,225	2,252	3,671,647	1,632	4,840,457	2,151	6,766,771	3,007

Country	Climate (°C)			Rain (mm)			Labour Performance factor	Net building labourer income (€)*
	Min	Max	Average	Min	Max	Average		
Austria	-3	25	11	40	90	58	1.00	10,945
Belgium	-2	23	11	60	100	79	0.85	13,035
Czech Republic	-5	22	9	10	60	29	1.30	3,780
Denmark	-3	22	9	40	55	47	0.90	20,800
Finland	-10	22	5	40	85	62	0.95	15,290
France	2	24	12	40	60	53	0.90	9,860
Germany	-3	24	10	40	70	53	0.80	10,200
Greece	6	33	19	0	75	33	1.25	6,350
Hungary	-4	28	12	30	70	51	1.20	2,840
Ireland	2	20	10	50	80	68	1.05	18,630
Italy	5	30	17	10	110	60	0.95	9,440
Luxembourg	-1	23	10	40	90	63	0.90	15,620
Netherlands	-2	22	10	50	80	63	0.90	13,785
Poland	-6	23	9	20	90	47	1.20	2,840
Portugal	8	29	18	0	100	53	1.15	6,515
Spain	2	31	16	10	50	34	1.10	8,855
Sweden	-5	21	7	25	85	50	0.90	16,040
UK	3	22	11	40	55	47	1.00	21,805

* Taken from UBS report prices and earnings around the globe 2003 edition



Inflation analysis

Steel vs. Concrete frame: The impact of recent price rises

Steel demand worldwide is growing faster than the growth of steel production facilities. The constrained availability of certain raw materials used in the production of steel has exasperated the situation. The influence of booming economic regions in Asia particularly so in respect of China has resulted in producers capitalising upon a

constrained supply chain by uplifting prices at a far higher rate than normal inflation parameters.

With approximately 30% of all steel worldwide being consumed in the rapidly expanding Chinese market virtually all spare capacity has disappeared. Until new production facilities come online

steel prices are unlikely to stabilise.

Increases identified globally include reported price rises in the USA of 65% on steel sections, and even higher percentages on steel rebar. In Europe steel prices will have risen 50% overall during 2004 alone.

Not surprisingly some developers are now questioning the best construction specifications when reviewing design solutions incorporating heavy reliance upon steel. As an example, steel and concrete framed buildings are often compared, with steel solutions often preferred as the lighter and faster erection alternative for high-rise buildings.

Table 1: Steel items material cost increases 1Q 2002 to 2Q 2004

	3-Storey		7-Storey		% Increase
	Concrete	Steel	Concrete	Steel	
Reinforcement (Substructure)	4,398	2,053	11,289	5,864	83%
Mesh (Substructure)	374	374	374	374	66%
Reinforcement (Superstructure)	23,164	733	66,268	1,613	83%
Mesh (Superstructure)	–	1,324	–	3,116	66%
Steel stairs	–	596	–	2,235	54%
Steel decking	–	14,547	–	29,093	55%
Steelwork	–	23,031	–	59,128	50%
Studs	–	863	–	2,013	55%
Holding down bolts	–	21	–	21	32%
Baseplates	–	43	–	43	54%

Table 2: cost and percentage increase of facilities 1Q 2002 to 2Q 2004

Facility Type	3-Storey		7-Storey					
	Concrete	Steel	Concrete	Steel	Concrete	Steel	Concrete	Steel
Gross floor area	4,500	4,500	10,500	10,500				
Contract sum in 1Q 2002	4,676,770	4,753,946	9,868,443	10,031,155				
Contract sum in 2Q 2004	5,107,845	5,190,067	10,796,986	10,962,115				
Cost and Percentage increase 1Q 2002 to 2Q 2004								
Substructure	20,829	17.0%	14,159	16.3%	40,021	17.7%	24,769	17.2%
Superstructure	67,941	18.1%	76,784	16.9%	179,992	18.5%	187,834	16.9%
External cladding	48,564	4.7%	49,309	4.7%	104,291	5.3%	106,594	5.3%
Roof finishes	15,162	13.0%	15,162	13.0%	15,162	13.0%	15,162	13.0%
Internal planning	8,654	9.4%	10,277	9.7%	18,456	9.5%	27,184	10.0%
Finishes	27,920	9.4%	27,606	9.3%	61,002	8.8%	59,781	8.7%
Fixture and fittings	6,827	11.3%	6,816	11.3%	11,367	11.0%	11,385	11.0%
Lift installation	7,727	8.3%	7,727	8.3%	49,675	8.3%	49,675	8.3%
Mechanical and public health installation	111,037	8.7%	111,037	8.7%	222,357	8.8%	222,357	8.8%
Electrical installation	46,898	8.3%	46,898	8.3%	109,437	8.3%	109,437	8.3%
Builders work in connection with services	16,558	8.3%	16,558	8.3%	40,292	8.3%	40,292	8.3%
External works	18,182	13.8%	18,182	13.8%	18,182	13.8%	18,182	13.8%
Preliminaries	34,775	11.2%	35,606	11.3%	58,308	11.3%	58,308	11.3%
Total facility	431,075	9.22%	436,121	9.17%	928,542	9.41%	930,961	9.28%
Total facility (excluding steel items)	382,462	8.36%	383,327	8.60%	792,993	8.27%	874,847	8.94%
Steel items only	48,612	0.86%	52,794	0.57%	135,549	1.14%	56,113	0.34%

To test if this scenario still stands true we have revisited an earlier analysis of steel and concrete framed buildings to demonstrate the influence of the recent steel price inflation. Not surprisingly the impact of steel rebar has a significant impact on both building types, with increases adding approximately 1% onto the contract sum. Opposing recent published reports the analysis demonstrates that concrete frames have suffered a higher impact than steel frames once taller storey heights are compared. This is due to the associated increases in tonnage of rebar that has witnessed a cost increase of 83% over the study period.

The two tables plot the cost increases of the steel components incorporated in both frame design solutions and the impact on the complete element prices over the period of first quarter 2002 to second quarter 2004.

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