

# ECONOMIC BULLETIN



A quarterly update from Franklin + Andrews

Volume 8.3 | September 2005

## The UK economy – showing signs of slowing

### Economic background

UK economic performance is forecast to slow as consumer spending, the main driver of UK growth, eases from 3.3% in 2004 to 2.0% in 2005, the weakest growth rate since 1995. Similarly, weak and disappointing manufacturing performance will exacerbate the downward pressures on the economy. Nevertheless, prospects for the UK's growth over the next two years are generally good and set to remain healthier than some other major economies in the EU. GDP growth is forecast to drop from 3.1% in 2004 to 2.0% in 2005 and to 2.5% in 2006.

The annual rate of inflation, as measured by Consumer Prices Index (CPI), rose to 2.0% in June from 1.9% in May 2005, hitting the government's inflation target of 2.0%. Annual inflation measured by Retail Price Index (RPI) remained unchanged at 2.9% for the same period.

As widely predicted, the UK's interest rate was cut by 0.25 percentage point to 4.5% in August for the first time in two years. The quarter-point reduction was announced amid growing concern about the health of the UK economy following the

worst growth in 12 years. The rate cut might accelerate the recovery in the household consumption growth and should also assist the retail sector whose problems were compounded by the recent bombings in London.

### Construction output forecasts

Different opinions have been provided by industry forecasters over the outlook of the construction industry, but many agree that industry output will remain generally strong over the next two years. Average forecast for total construction output is that output will increase to 1.3%, 2.2% and 3.7% in 2005, 2006 and 2007 respectively.

The public house building sector is forecast to be the strongest growing sector within the industry over the next two years with an average forecast growth of 16.0% in 2005, 13.0% in 2006 and 10.0% in 2007. Prospects for the public non-housing sector remain positive with a forecast growth of 3.8% in 2005, 5.3% in 2006 and 4.7% in 2007.

With continuing growth in health and education construction delivered through the PFI/PPP routes, private commercial output

is predicted to remain strong with a forecast output growth of 4.5% in 2005, 3.8% in 2006 and 5.0% in 2007.

However, it should be stressed that these construction output forecasts take no account of new construction works arising out of the recent decision confirming London as the host city for the 2012 Olympic Games. London's successful bid for the games will give a welcome boost to the construction industry as early as 2007 particularly in the infrastructure and leisure sub-sector. It is expected that total investment of around £8.6 billion would be delivered by 2012 games. The largest section of the investment, some £6.3 billion will focus on improving road and railways and the remaining £2.3 billion will be spent on stadiums and the Olympics Village.

### Input costs

National average labour rates for building and civil engineering operatives rose by 9.5% in June 2005 and rates for plumbers went up by 6.0% at the beginning of the year. These wage agreements will be implemented over a number of years and are expected to continue to be

significantly above general inflation throughout the forecast period.

Steel prices remained static during the first quarter of 2005 and many now believe that prices will stabilise during this year, whilst oil prices are expected to fluctuate at a high level. In June 2005, oil prices rose to almost \$61 a barrel compared to \$58.28 a barrel, the previous ceiling high in April. High oil prices will continue to impact on energy, manufacturing and transport costs which will in turn pass down to the end-user.

Material prices are expected to increase more or less in line with retail price inflation over the next two years.

### Tender price forecast

Franklin + Andrews' forecast for tender price inflation is that prices will increase by 4.2% in 2005, 4.5% in 2006 and 4.0% in 2007. Table 1.2 summarises the annual percentage change in construction cost and price indices and retail price index. It can be seen from the table that tender prices are expected to rise well ahead of general retail price inflation over the next two years.

Table 1.1 Key economic indicators (annual % change)

	2004	2005F	2006F	2007F
GDP*	3.1	2.0	2.5	2.7
Household consumption	3.3	2.0	2.1	2.5
Government consumption	4.7	3.1	2.3	1.4
Gross fixed investment	5.6	3.9	3.4	1.5
CPI*	1.3	1.9	1.9	2.0

F = Forecast Source:ONS, \*HM Treasury

Table 1.2 Construction cost index (annual % change)

	2004	2005F	2006F	2007F
Tender price index	4.9	4.2	4.5	4.0
Building cost index	6.1	6.5	4.8	3.7
Retail price Index**	2.2	2.4	2.5	2.5

F = Forecast \*\* RPIX (RPI excluding mortgages) forecast – Treasury average of independents May 2005



# A view from the Managing Director

by Andrew Williams

## The world economy – continues driving in low gear

Recent statistical data suggests that global growth has slowed in the second quarter of 2005 after exceeding expectations in the first quarter, partly reflecting the record levels in oil prices. Growth this year is expected to slow moderately but still remain above the historical trend at around 4.1%, compared to 4.6% in 2004 – the highest rate of world economic expansion recorded in almost three decades. Subject to the stabilisation of oil prices, the world growth for 2006 is expected to bounce back at around 4.3%.

The picture of economic growth, however, inevitably varies from one region to another.

In the United States growth has been relatively strong during the last few quarters, driven by private domestic demand that has not been restrained thus far by energy prices or interest rate increases. Household and business spending has been supported by ongoing wealth gains and favourable financial conditions. By contrast, net exports have subtracted considerably from growth and the trade deficit has again deteriorated. With labour cost growth picking up, core inflation has increased. GDP growth is expected to slow down during the next few quarters and overall growth for 2005 is forecast at a rate of 3.6%. Further tightening of monetary policies may be needed to contain emerging inflationary pressures, evidenced by the quarter point rise in interest rates announced by Federal Bank in August.

Economic growth continues in China despite a tighter fiscal policy and strengthened controls over investment. The construction sector is currently booming in the light of its huge construction spending and preparing to host a number of major events such as the 2008 Olympic Games in Beijing and the 2010 World Expo in Shanghai. After pegging the Renminbi to the US dollar for a long time, China shifted its exchange regime in July to a managed float against a basket of currencies, with an initial revaluation against the dollar of 2.1% in the aim of maintaining sustainable growth. Its rapid increasing exports and imports sector, and the economy as a whole, has largely offset weakness elsewhere in Asia. The real GDP growth is forecast to remain above 9.0% during the next two years.

In contrast, the Euro zone continues to disappoint and shows a lack of resilience against adverse conditions amid slow trend growth – less than 2.0% per annum. Increases in oil prices and a high of 8% in the unemployment rate all added even more uncertainty. Growth is projected to drop from just below 2.0% in 2004 to 1.2% in 2005 before recovering to around 2.0% in 2006.

German growth remains weak and heavily dependent on foreign demand. However, both non-residential investment and household consumption may pick up during the course of 2005, leading to GDP growth of 1.2%

and 1.8% for 2005 and 2006 respectively. The general government deficit is projected to be 3.5% this year and to remain above 3.0% in 2006, indicating that fundamental reforms are likely to be continued and deepened within a coherent framework to have a means of consolidating the fiscal status.

In Japan economic growth resumed at the beginning of 2005 after a pause in the second half of 2004, led by domestic demand with strong corporate profits and a recovery trend in employment and wages. The economy is forecast to grow by 1.5-2.0% in 2005 and 2006 despite a deceleration of export growth.

Elsewhere, growth in South America is estimated to have been above 5% in 2004, the strongest in almost 20 years. The strength of the Brazilian recovery was beyond market expectations, mainly driven by buoyant consumer demand and a recovery in employment and investment. Export growth also remains robust due to favourable commodity prices and strong demand from OECD markets as well as from China. The economic growth is projected to continue but at a lower pace over the next two year, at around 3.6%.

In Africa and the Middle East economic activities rose by over 5.0% last year underpinned by strong growth in oil-producing countries. However, African growth remains below the level required to reach the Millennium

Development Goal of halving income poverty by 2015 and is lower than other emerging markets. The prospects in 2005 and 2006 are expected to remain broadly unchanged for both regions, at 5.0% on average, subject to the future movement of the oil market.

The current move in oil prices appears to be sustainable and is expected to continue. The US crude oil price for August delivery moved to a new record of over \$60 a barrel, triggering losses in markets which rely heavily on oil imports, most of which are Asian countries. Rising energy prices could also drag down economic growth by an estimated 0.6% in the Euro zone and energy-intensive firms in the construction sector such as steel producers and aluminium makers might be among the hardest hit.

Overall, the world economy, the US and China in particular, are set to continue expanding during 2005. Gradual recovery towards the end of 2005 in the Euro area and Japan as well as a strengthening of activity in much of emerging Asia is also expected.

Main features in this issue include our series on renewable energy, an international viewpoint on Russia and our sports facilities study. I hope all of these articles continue to interest and stimulate debate.



# International viewpoint

## Russia: regional focus – Moscow

Russia ended 2004 with its sixth consecutive year of growth, averaging 6.5% annually since the financial crisis of 1998. Although high oil prices and a relatively cheap rouble are important drivers of this economic rebound, since 2000 investment and consumer-driven demand have played a noticeably increasing role.

Russia has also improved its international financial position since 1998, with its foreign debt declining from 90% of GDP to around 28%. Strong oil export earnings have allowed Russia to increase its foreign reserves from only \$12 billion to some \$120 billion at the end of 2004. These achievements, along with a renewed government effort to advance structural reforms, have raised business and investor confidence in Russia's economic prospects. Economic growth slowed down in the second half of 2004 and the government forecasts growth of only 4.5% to 6.2% for 2005.

Given the geographic size of Russia and the extreme regional variations, we have focused our construction industry appraisal on Moscow. Moscow houses Europe's largest city population with approximately 12 million residents. Average income is two to three times lower than London but is expected to increase by one and half times by 2007.

### The construction industry

#### General

Having overcome the negative effect of 1998, Russia's need for modernisation is once again the top priority. Many suspended projects have been resumed and new projects launched. As a result construction is now amongst those sectors showing the most dynamic growth. This relates to almost all construction sectors and in particular a booming real estate market. However, Russia's manufacturing base is dilapidated and must be replaced or modernised if the country is to achieve broad-based economic growth.

Rising prices and housing shortages have driven growth in the construction industry in Moscow recently but stagnation has been witnessed due to bank instability and a stalling in housing prices.

#### Retail

Moscow's capacity for construction growth in the retail sector is impressive. At the start of 2004 Moscow recorded only 75m<sup>2</sup> of retail space per 1000 residents, about a third of London's figure. As expected with such a low supply, demand is high with the share of vacant spaces at less than 5.0%.

Estimates show that 460,000m<sup>2</sup> of retail areas are due to have been constructed during 2004. With major retailers intending to invest \$2.3 billion in the construction of new stores and malls, retail areas are expected to triple their 2003 levels by 2008.

#### Office

There is approximately four million square metres of office space available in Moscow. The Moscow-city project is one of the world's largest construction projects and is valued at \$11 billion. This major project will have a great influence on the Moscow office market in the next five years, representing almost 10% of future stock by the end of 2007. At the end of 2003, companies were actively negotiating

preliminary agreements for the first buildings in Moscow, due for completion at the end of 2004-05, looking for more competitive terms in the period of construction.

#### Hotels

Although Moscow is desperately short of hotels, projects have so far been very slow in being realised. However, Iosif Ordzhonikidze, the deputy mayor responsible for international and foreign economic relations, has unveiled plans for a five year construction program to build 248 new hotels in Moscow, adding 98 thousand beds to the existing 64 thousand.

In 2004, the Moscow City Government allocated \$70 million for the construction of ten small-sized hotels in the city centre. The Golden Ring Development is another project designed to develop the tourist potential of the centre of Moscow and will include a number of 3-4 star hotels.

#### Housing

The market for mass housing construction is the largest construction sector in Moscow. Rising prices and housing shortages are the main factors fuelling growth in the industry. In 2004 housing construction growth increased by 7.2%.

Newly commissioned housing space totalled over four million square metres in 2003, which in per capita terms, is almost two times higher than the average national level. Housing costs in Moscow are four times higher than the average across the rest of Russia. The estimated value of new residential properties in Moscow was \$6.6 billion in 2003. At the same time, the supply of housing is expected to lag behind demand for the foreseeable future.

Chart 1.1 below plots benchmark costs that have been derived from analysis of projects held on the Franklin + Andrews internal cost database and reflect typical price levels witnessed at third quarter 2005 in Moscow and surrounding regions.

Chart 1.1 Typical construction costs



## Nuclear decommissioning: a challenging business

### Introduction

The peaceful utilisation of nuclear fission, notably for power generation, expanded in the 1950s under the high demand of electricity and the drive to seek cheap energy. Today's world produces as much electricity from nuclear energy as it did from the combination of all sources in 1960. Civil nuclear power can now supply 16% of global needs, in 30 countries, 17 of which depend on nuclear power for at least a quarter of their electricity. France and Lithuania see over 75% of their power from nuclear energy, while Japan (30%), Germany (32%) and the US (20%) rely on nuclear to a lesser extent but still at a substantial level. In the UK, nuclear power currently produces about 74 billion kWh electricity a year, around 20% of the UK total.

However, nuclear power has its downsides despite the cost competitiveness: nuclear facilities will pose a serious threat to the human world if they are not dealt with properly and maintained to the highest health and safety, environmental and security standards. Ageing nuclear facilities face a series of challenges from the clean up of radioactive waste and other material, disposal, care and maintenance to the eventual closure of the whole site.

Over the last five decades the UK nuclear industry has created a legacy of defunct and increasingly aged reactors, research laboratories, fuel facilities and waste disposal silos and now 20 nuclear sites in total in the UK have come to the decommissioning stage.

### Market deregulation

In April 2005 the UK government established a dedicated body, the Nuclear Decommissioning Authority (NDA), whose primary responsibility is to decommission all UK civil nuclear sites by adopting a nationwide unified approach. The NDA has assumed ownership of all British Nuclear Fuels (BNFL) and UK Atomic Energy Authority (UKAEA) sites for the purpose of introducing competition, in particular international competition. The NDA will invite bids for 50% of the sites by 2008, with the remaining 50% followed within three years. It is envisaged that the sector will transform itself from a monopoly to an open and competitive market.

With an overall budget of £50 billion to spend over the next 40-50 years, the NDA will certainly bring to the construction industry a substantial future workload.

### Opportunities

With a huge investment of £1 billion per year on average in the nuclear decommissioning sector, consultants and contractors will be offered a great deal of project opportunities, not only physical decommissioning but also site management which involves alliances with site operators and decommissioning contractors for years into future.

The NDA has organised the work into two main elements or Tiers: Tier One contracts are for site management and operation while Tier Two work involves the physical decommissioning – which accordingly can be broken down into Tier Three and Four as subcontracts. It is expected that the industry's largest international and multi-disciplinary firms, either separately or more likely as consortia, are to bid for Tier One site

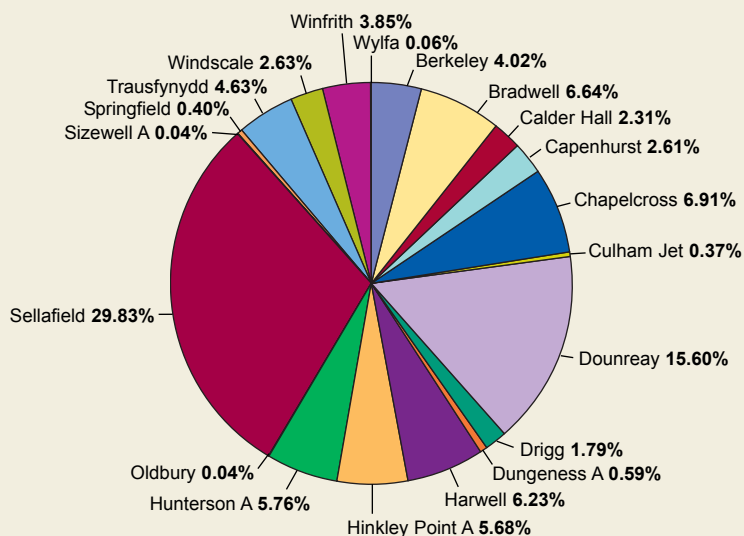
management and operation contracts, with contractors having previous nuclear industry experience supplementing their skills and resources from the supply chain operating at Tier Two and below. Both BNFL and UKAEA are offering themselves as major contractors to the nuclear decommissioning industry, the former known as the British Nuclear Group.

Based on a cost-reimbursement approach, with a further 4.4% bonuses (NCE, 2005) paid to encourage innovation and performance, the NDA contracts are set to run for three years or more.

The NDA has developed a process of work scope identification and costing for the site to be returned to a brown field condition known as the Lifecycle Baseline Plan (LCBL), which can typically cover a period of many decades. The short term element of the LCBL is called the Near Term Work Plan (NTWP), which identifies what has to be done, when and for what cost for a three year rolling period. This is then broken down to give a set of annual targets for each site.

The NTWPs and annual targets for each site are published on the web by the NDA, who are keen to promote full transparency. With a total value £972 million, of which nearly half will be spent on Sellafield and Dounreay, the percentage share of the current NDA annual investment plan 2005/6 for each site is illustrated as shown in Chart 1.2.

Chart 1.2 UK decommissioning spending 2005/6



## Challenges

Regulatory requirements and operational priorities in the 1950s when facilities were first built are very different to those of today. The focus then was on the development and application of nuclear technology rather than consideration of long-term implication of nuclear operation.

As a consequence, the industry now lacks comprehensive and accurate site records for existing nuclear facilities such as reliable design drawings, information about waste stored and plant utilisation to guide decommissioning. The diversity of facilities involved in a nuclear site also contributes to the difficulties decommissioning faces, from one-off test plants to modern facilities with built-in provisions for decommissioning.

Lack of continuous improvement in science and technology also presents another challenge to the decommissioning sector and the sector has to adapt technologies proven in other areas and develop innovative solutions to meet the complex engineering, organisational and logistical problems.

There are limited skilled people with experience in nuclear decommissioning due to the unique nature of decommissioning works and it is estimated that the nuclear sector may need to recruit as many as 30,000 people over the next 15 years taking into account retirement and growth in clean-up work although there is no sign of immediate shortage of skills.

## Cost implications

Unlike coal and gas generation, nuclear generation has the advantage of not emitting carbon dioxide. Without the carbon increment, nuclear power costs 2.3 p/kWh compared with traditional coal power at

2.5 p/kWh. However, average costs for coal or gas power will change significantly if carbon costs – the cost of capturing carbon dioxide emitted to the environment, is taken into account. The need to provide an adequate backup generation also costs wind power an extra of 1-2 p/kWh due to the uncertain nature of wind supply.

The comparison of generation costs from different resources is illustrated as shown in Table 1.3. According to the data from the Royal Academy of Engineering (RAE), nuclear power appears to be the cheapest despite the fact that the strategy of the UK Energy White Paper focusing on renewable energy eg wind power is still very much under debate.

Nuclear decommissioning costs are estimated at 9-15% of the initial capital cost of a nuclear power plant (WNA, 2005). At a lower level, a standard item of construction works on a nuclear decommissioning site could take much longer than on a normal construction site in terms of labour time due to nuclear-pertinent measures such as access and safety restrictions, dose limits – the radiological limitation at the work face and efficiency.

Franklin + Andrews has been involved in the nuclear sector since the 1970s and worked in connection with most of the sites currently being decommissioned. This workload is focused through our energy business sector under the leadership of Divisional Director Mark Gudgeon with specific responsibility for nuclear decommissioning work managed by Divisional Director Shaun Taylor. Franklin + Andrews has also developed particular expertise in scope identification and estimating the Lifecycle Baselines and Near Term Work Plans in addition to cost and commercial management of the emergent work.

Table 1.3 UK electricity generation costs from new plant

	Basic costs (p/kWh)	Back-up costs (p/kWh)	Carbon costs (p/kWh)	Overall costs (p/kWh)
Nuclear	2.3*	n/a	n/a	2.3
Gas-fired CCGT	2.2	n/a	1.2	3.4
Coal pulverised fuel	2.5	n/a	2.5	5.0
Coal fluidised bed	2.6	n/a	2.5	5.1
Onshore wind	3.7	1.7	n/a	5.4
Offshore wind	5.5	1.7	n/a	7.2

\* Including an allowance for decommissioning costs (Source: RAE, 2004)



# Benchmark costs

## Leisure sector – sports centres

The UK leisure sector is the core of the private commercial construction sector. Output from the leisure sub-sector accounted for about £2,059 million in 2004 sharing approximately 17.2% of the total output of private commercial projects. Activities in the leisure sector remain buoyant with more cinemas, casinos and the two prestigious stadium development projects at Arsenal and Wembley. Redevelopment and expansion is planned at Manchester United's Old Trafford football ground with an estimated cost of £43 million and at Twickenham Rugby stadium at an approximate cost of £80 million. Activities in the leisure sector are expected to expand over the next three years driven by the works arising from the London 2012 Olympic Games.

The sector is diverse and covers a wide range of facilities from sports stadia, hotels, restaurants and bars, to museums, theatres and cinemas, leisure centres and theme parks. In the light of growing interest in

London 2012 Olympic Games we are focusing on sports centres, interest in these facilities is expected to grow throughout the UK in the run up to the Olympics.

This article addresses benchmark costs and inflationary costs associated with typical sports centres. Benchmark costs have been derived from the analysis of the projects held on the Franklin + Andrews internal cost data base and reflect typical cost levels witnessed in recent sporting facilities projects. Costs have been rebased to the third quarter of 2005 and are representative of a UK average location.

Over the range of projects analysed, a typical sports centre construction cost was an average of £851/m<sup>2</sup> (Gross Floor Area). A relatively consistent cost level was recorded although one particular project recorded a cost of around 43% above the benchmark cost.

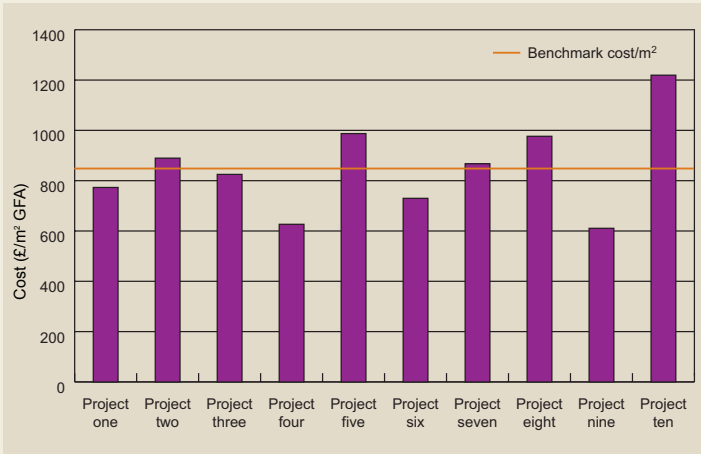
Table 1.4 Sports centre cost indices from June 2004 to June 2005 (Base January 2000=100)

	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05
<b>Substructure</b>	130.8	136.3	136.7	136.9	137.6	137.1	137.0	136.8	137.9	138.3	138.2	139.3	138.3
Frame	127.5	129.3	132.7	134.5	136.1	136.6	137.1	138.7	139.4	137.7	138.3	139.91	139.2
Upper floors	125.4	127.4	129.3	130.4	131.4	131.8	133.0	134.1	134.8	134.3	134.6	134.8	135.1
Roof	114.0	115.4	116.1	116.6	116.9	117.3	117.8	118.3	119.2	119.1	119.4	120.7	121.2
Stairs	133.4	138.6	138.7	138.6	138.5	138.4	138.5	138.2	139.5	139.3	139.5	140.2	139.2
External walls	121.4	126.5	126.5	127.2	127.4	127.2	127.2	127.2	128.3	128.9	128.5	129.8	130.2
Windows and external doors	118.5	123.0	123.0	123.0	123.0	123.7	123.7	123.7	124.4	124.4	124.4	124.4	124.4
Internal walls and partitions	121.4	126.5	126.5	127.2	127.4	127.2	127.2	127.2	128.3	128.9	128.5	129.8	130.2
Internal doors	117.6	121.3	120.1	119.6	119.5	118.9	119.0	119.6	119.6	119.6	119.6	120.2	120.1
<b>Superstructure</b>	120.2	123.3	124.2	125.0	125.5	125.7	126.0	126.5	127.4	127.1	127.2	128.2	128.5
Wall finishes	118.2	123.8	124.0	124.0	124.0	124.0	124.2	124.0	124.7	125.0	125.2	125.2	125.5
Floor finishes	118.5	123.1	123.4	123.4	123.1	123.2	123.3	123.3	124.1	124.7	124.7	125.6	126.8
Ceiling finishes	118.9	125.0	125.9	126.5	126.8	127.1	127.0	127.2	127.7	128.1	128.6	128.9	128.8
<b>Internal finishes</b>	118.5	123.6	123.9	124.0	123.9	124.0	124.1	124.0	124.8	125.2	125.4	125.9	126.6
<b>Fittings and furnishings</b>	114.7	116.8	117.1	117.4	117.6	118.0	117.5	117.8	118.3	118.8	119.0	119.1	119.6
Sanitary appliances	119.0	119.0	118.3	117.8	117.8	117.3	117.2	120.1	121.5	123.5	123.5	124.8	124.8
Services equipment	117.5	118.2	118.2	119.0	122.8	123.1	123.1	124.2	124.2	124.2	124.2	124.6	124.6
Disposal installations	120.3	120.3	120.3	121.1	121.1	121.6	121.6	121.0	126.5	126.5	126.9	126.4	126.4
Water installations	121.3	121.3	120.7	122.1	122.1	122.6	122.1	122.6	127.2	128.4	128.3	128.3	128.3
Heat source	121.2	121.4	121.6	121.9	126.4	126.1	126.6	127.0	127.3	127.3	127.5	127.5	127.5
Space heating and air treatment	115.5	116.5	116.9	117.5	117.7	118.0	118.9	119.8	120.7	120.7	120.7	123.2	123.2
Ventilating systems	118.6	119.3	119.3	119.9	123.9	124.2	124.2	125.3	125.3	125.3	125.3	125.6	125.6
Electrical installations	105.0	105.2	105.8	106.5	106.5	106.8	106.5	107.0	107.5	107.0	106.8	108.3	108.3
Gas installations	121.2	121.4	121.6	121.9	126.4	126.1	126.6	127.0	127.3	127.3	127.5	127.5	127.5
Lift and conveyor installations	108.1	108.7	109.2	110.0	110.1	110.4	110.6	111.4	111.9	111.7	111.6	113.3	113.3
Protective installations	117.9	118.3	118.8	119.0	122.0	122.4	123.0	124.1	124.4	124.5	124.5	124.6	124.7
Communication installations	127.1	127.4	127.5	128.4	129.1	129.5	129.7	132.9	133.1	133.0	133.0	133.1	133.2
Special installations	119.8	120.2	120.6	121.5	122.4	123.1	123.3	125.5	125.6	125.7	125.8	125.8	125.9
Builder's work in connection	126.5	134.9	135.0	135.0	135.0	135.1	135.0	135.0	135.1	135.2	135.1	135.1	135.2
<b>Services</b>	114.0	114.7	115.0	115.6	116.3	116.6	116.8	118.1	118.7	118.7	118.6	120.2	120.2
<b>Sports centre building cost</b>	118.8	121.6	122.2	122.7	123.2	123.3	123.5	124.1	124.8	124.8	124.9	125.9	126.1

The substructure costs ranged from £54 to £128/m<sup>2</sup> with the average cost around £83/m<sup>2</sup>. The element that contributed to greatest variance in the costs is superstructure, ranging between £181 to £509/m<sup>2</sup>. The deviation is predominately due to the alternate building layouts and the varying level of specification. Cost of services also contributed a large part in the cost of the sporting centres which range from £161/m<sup>2</sup> to £412/m<sup>2</sup>.

As part of our inflation study, Franklin + Andrews has developed a unique set of indices to reflect the cost movements of a typical sport centre construction project. These indices are offered as an alternative to the existing use of building cost indices to inflate project budgets.

Chart 1.3 Sports centres – benchmark total cost/m<sup>2</sup> (10 projects)



The standard elemental components were established as being the index categories on a typical project. Through the use of weighting existing public domain indices for historical movements cost indices have been created for each year of the elemental categories from a base date of January 2000. These indices have been weighted to replicate a typical sports centre project in order to create a sports centre project cost index.

If a traditional building cost index was used to inflate a typical sports centre project over the last year, an inflation adjustment of only 5.96% would have been applied, whereas the specific composition of resources in each project will produce differing inflation profiles.

Chart 1.4 Sports centres – elemental cost/m<sup>2</sup> comparison

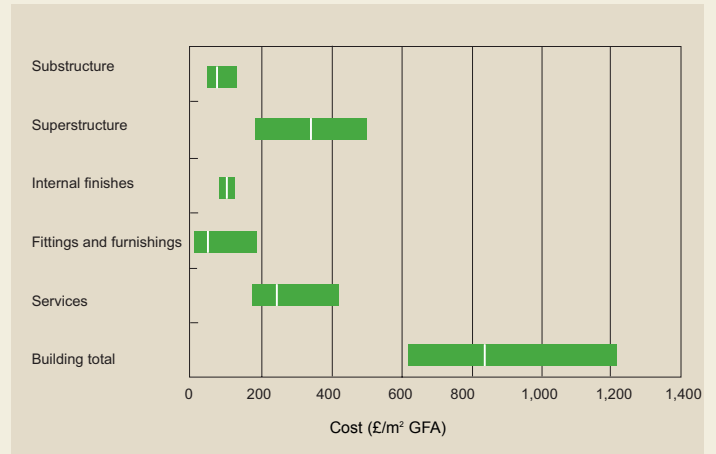
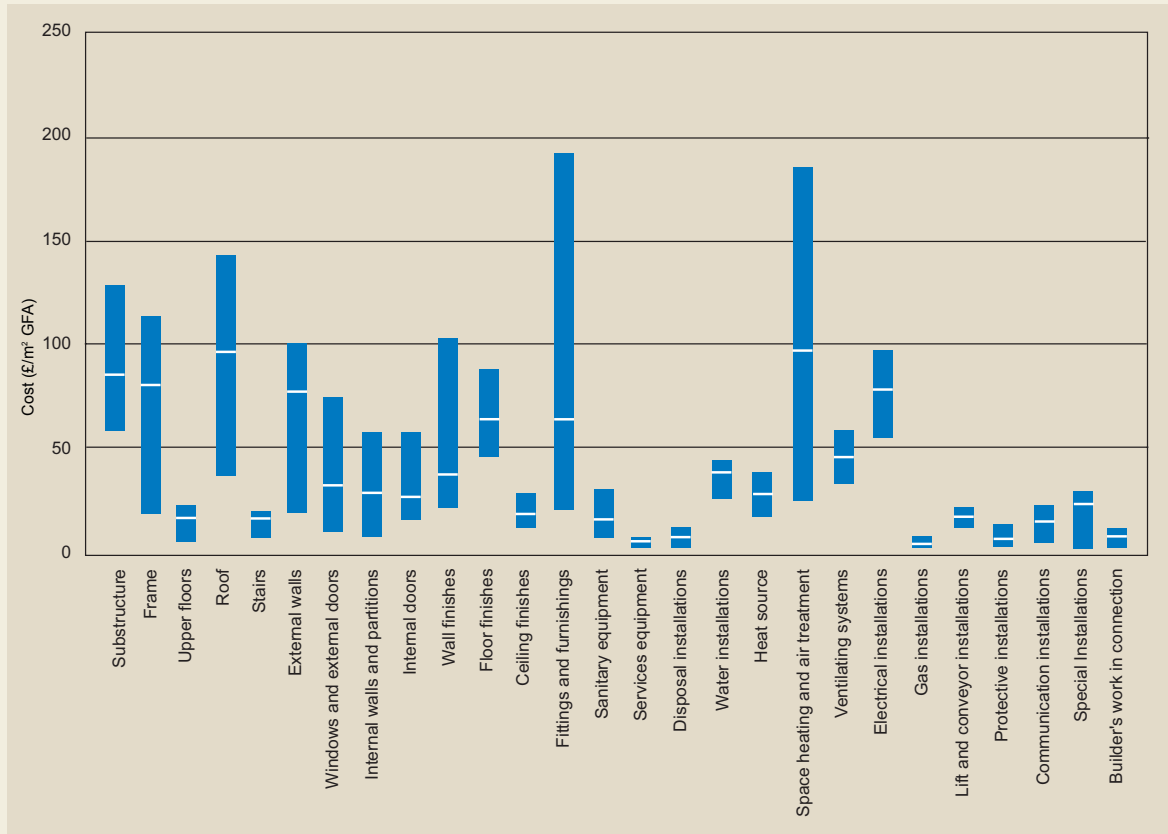


Chart 1.5 Sports centres – full elemental cost/m<sup>2</sup> comparison





# Commodities corner

## Copper – global demand sends copper prices up

Franklin + Andrews regularly review commodity price movements and explores what the future has in store for commodities and construction materials. In this edition, our commodities analysis looks at the cost trend of copper and examines its likely movement in the future.

Copper is the world's third most used metal, after iron and

aluminium. The construction industry is one of the biggest consumers of copper products such as pipes, cables and sheet metal cladding.

### Global scenario

The global economy has been emerging from recession since 2003 and is lending impetus to metals demand. The US and European countries are the largest copper consumers

historically. However, following the strengthening of the Asian economy led by China and India, the region has now emerged as the biggest consumer of copper. China now accounts for 20% of world copper consumption.

### Supply and demand

Copper demand is closely linked to industrial growth in the economy. In 2004, world copper demand exceeded supply by

720,000 tonnes. International Copper Study Group (ICSG) has predicted that 2005 is likely to be another year of market deficit as copper production in Chile, the world's largest producer, is declining and China's demand for copper is growing. However, the copper deficit is forecast to fall to 93,000 tonnes in 2006, almost achieving a balance of supply and demand.

### Price trend

The graph below highlights the movement of copper cash prices on London Metal Exchange (LME) over the last five years. It can be seen from the graph that copper prices had taken off sharply from the late 2003 and reached US\$3,000 per tonne in March 2004. This is largely due to the rapid growth in developing Asia, together with the recovery of the US and European economies that had led to strong consumption at the time of low inventories.

### Price outlook

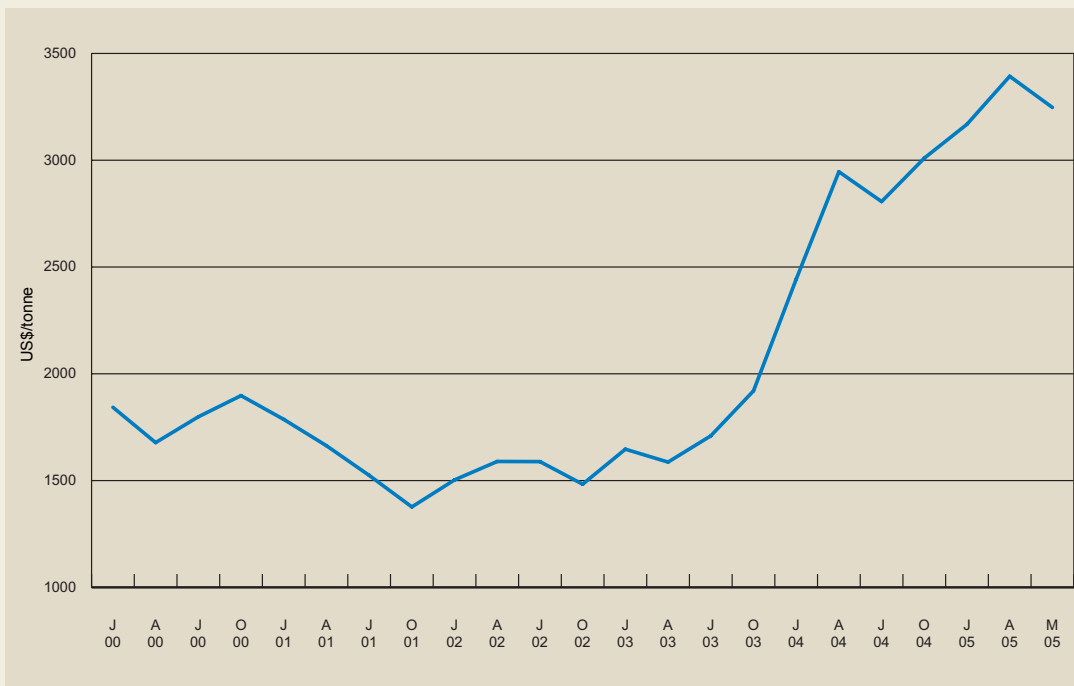
A surge in demand has been driving copper prices to a record high during the last few quarters. The prices are forecast to continue to rise during this year on the back of low stocks, surging demand from China and weak supply response but destocking and a lack of producer constraint will result in softer prices from 2006. Copper cash prices are expected to increase to \$3,202-\$3,670 per tonne range in 2005. However, uncertainties remain about the future trend on the copper market due to long lasting very high copper prices and a continuation of copper shortage.

Table 1.5 Global demand and supply of copper

	2001	2002	2003	2004	2005F	2006F
Consumption ('000 tonnes)	14,443	14,981	15,620	16,496	17,370	18,167
% change	-3.6	3.7	4.3	5.6	5.3	4.6
Production ('000 tonnes)	15,435	15,075	15,234	15,776	17,110	18,074
% change	5.7	-2.3	1.1	3.6	8.5	5.6
Usage Balance	992	94	-386	-720	-260	-93
LME cash prices (US\$/tonne)	1,578	1,535	1,778	2,865	3435*	3185*

Source: LME and ICSG, \*Franklin+Andrews forecast

Graph 1 Copper prices



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