ALFED ALUMINIUM FEDERATION

MARKET REPORT

OCTOBER 2017

ECONOMY

As ever, there is good news and bad news. Starting with the good news, Britain achieved the smallest budget deficit for ten years in September. The gap between what the government spends and what it receives in taxation dropped by £700 million, compared with the same month last year. This is the lowest September deficit since 2007. So, for the third month in a row, public finances have performed better than the pundits had predicted. It has improved the chances that in the next Budget the Chancellor may well be able to be more generous. Bear in mind though that although the deficit is not as high as expected, it is still £5.9 billion. No doubt Mr Micawber would have had a view on that.

The second surprise came with the announcement that in Q3 the UK economy grew at the rate of 0.4%, above the 0.3% predicted. In Quarters 1 and 2 the growth rates were 0.3% and nobody has foreseen any improvement. The service sector powered ahead but the construction sector, accounting for 6% of the economy, struggled. It shrank for the second quarter in a row and technically is now in recession. The Bank of England made strong suggestions that a small increase in lending rates was on the cards. Sterling rose against major currencies at the news, ending the month on $1.33 and 1.14 euros. The FTSE 100 at 7,492 stays at record levels and that is more of an indication of the expanding global economy rather than what is happening in the UK. The FTSE 250, an indication of the strength of UK industry, is also at record levels, now 20,217, having fallen over the last two weeks from the high of 20,250.

The Purchasing Managers' Index for the service sector was 53.6 in September against 53.2 in August, again beating economists' expectations. The service sector accounts for 80% of the UK economy. The PMI for the manufacturing sector indicated that it was slowing down. What has become clear from a survey by EEF is that investment in manufacturing industry in plant and machinery has dropped and fewer companies are at the moment planning to upgrade production capacity. While global economies are now expanding, the Eurozone grew in Q3 by 0.7% for example, UK companies may well be left behind. The SMMT also has found that investment is falling, with uncertainties about future trading arrangements. The CBI data shows that growth in factory orders has slowed to the weakest level in almost a year in September. The British Chambers of Commerce sent the government a request for a more generous investment allowances in the Budget.

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On a personal level, incomes have been squeezed with inflation at 3.0% and real wages falling. Family spending has declined for a fifth month in the past six. Spending is falling on cars, holidays and clothes but the population remains upbeat about prospects. A Deloitte's survey of 3,000 consumers found that confidence about job prospects is improving and consumers are coping with the reduction in incomes. Unemployment is now at a 42-year low. Personal debt remains a concern.

ALUMINIUM

For the primary metal producers, all the common non-ferrous metals have done well with pricing this year compared to the previous four or five years. On the LME, primary aluminium is now at levels last seen in October 2013. Aluminium started the month on $2,067and climbed steadily through October to peak at $2,175 and finish the month on $2,143. Anticipating a reduction in Chinese primary aluminium capacity and hence a reduction in primary production, the present global levels of primary aluminium pricing are likely at least to hold.

Metal Bulletin report that in recent weeks the aluminium billet premium globally has stayed flat, with participants assessing spot demand as limited and there is now a focus on the 2018 supply contracts. Premium paid in Italy was up slightly to $375-390 per tonne. Producers are looking for at least $400 next year. In Germany $390-400 has been reported.

Alcoa reported a $113 million profit in Q3 2017 with higher shipments of bauxite, alumina and aluminium and better prices. Their projection now for the full year is for earnings before interest, taxes, depreciation and amortization to be $2.4 billion. They also estimate that demand for aluminium will grow in the full year 2017 by 5.0-5.5%. If the promised production cuts in China eventuate then Alcoa can see the global market in 2018 in a relative balance.

Arconic also had a good Q3 with revenue up year-on-year by 3%, with higher volumes and better prices. The Engineered Products and Solutions Division reported revenue up 5% year-on-year, driven by increased aerospace volumes and net cost savings. The Transportation and Construction Division increased revenue year-on-year by 15%.

Hydro Aluminium net income in Q3 was up on Q2 by 40% but down on Q3 2016. Hydro are also optimistic about the full year 2017, estimating that it will show growth in demand by 5-6%.

Rio Tinto has faced primary aluminium production problems this year with production curtailed at Boyne, Queensland, due to increases in the cost of their energy, and lower production at Sohar where they have a 20% stake. Rio Tinto's year on year Q3 2017 primary production was 3% down on Q3 2016. Sohar lost power in early August and production wasn't re-started until mid-September. They lost production at the point where the metal prices were improving. The timing is right then, with better metal prices, for Rio Tinto to kick-start their sale of some of their primary capacity. Their Pacific Aluminium operations, in Australia and New Zealand, has been for sale for several years and now they are looking also to off-load the Dunkerque smelter that was established in 1991 by Pechiney, and also their smelter in Iceland. Dunkerque produces 270,000 tonnes per year using power produced at an EDF nuclear station. Since Rio Tinto has most of its capacity for primary smelting based on hydro-electricity in Canada, a huge economic advantage, they are keen to sell that primary production capacity that is not hydro-electric. Century Aluminium, 46% owned by Glencore, has an interest in Pacific Aluminium, as has the GFG Alliance. GFG Alliance is an international group of businesses combining mining, energy generation, metals and engineering. The Liberty House Group, owners of many major UK metal producers and fabricators, including the Lochaber smelter, are within the GFG Alliance.

ALTEK has now successfully established a large capacity plant for recycling salt slag from rotary furnaces that are used to recover the lower grades of aluminium scrap. The sodium and potassium salts used as a flux absorb the surface oxides and give optimum recovery of aluminium. The resulting salt slag is tapped off and contains some recoverable aluminium metal, up to 20%, as well as recoverable salt and other minor oxides that can be re-used. Land-fill of salt slags is now forbidden across Europe. Since secondary refiners' plants with rotary furnaces do not have a sufficiently large annual tonnage of salt-slag arisings, it is not economic for them to process the slags themselves. They have sent salt slags to central locations to be processed in a tonnage that makes it economic. Both the recovered aluminium metal and the recovered salt can then be returned to the smelter. The basic chemistry of recovery of salt slags is straightforward. The slags, solidified in large blocks, are crushed and screened, much of the recoverable aluminium can be separated at that point, the slag is then dissolved in water, the residue is filtered off and the salt recovered from brine by evaporation. ALTEK has developed a "Mini Salt Recycling Plant" and the technology can be used on a scale that matches the rate at which the salt slag is generated. This smaller scale recovery goes under the name of ALUSALT. Trials can be arranged for secondary refiners who wish to process their own salt slags.

AUTOMOTIVE

In the UK car market the months of March and September are the most important, accounting for one third of all sales. The trend away from buying diesel cars that we have seen in recent months continued in the data for September, published by SMMT. September overall was not a good month, the total new registrations for September was 426,170 vehicles, which were down by nearly 10% over September 2016. New registrations for diesel cars were by 22% down on last year and for petrol cars down by only 1%. The industry blames the fall in diesel purchases on the various official announcements about diesel cars being banned from major cities, increasing road tax threatened and the fear that the government's premature announcement about internal combustion engines being banned by 2040 will mean that there will be an even earlier date for banning diesel completely. Doubtless the general public will also hold the car industry to account for the manipulation of emission data from diesel cars that trigger off the closer examination of emissions in the first place.

The overall fall in September of car sales is also an indication of the concerns over the economy in the near future. The point is reinforced by examination of the year-to-date information on new car sales for the first three quarters of 2017. Compared to last year new car registrations from January to September are down overall by 4%, but for diesels they are down by 14% and for petrol they are up on last year by 3%. So the loss is entirely down to lower diesel sales.

The top ten best UK sellers in September, in order, top downwards, were:

Nissan Qashqai, Volkswagen Golf, Ford Fiesta, Ford Focus, Vauxhall Corsa, Volkswagen Polo, Mini, Nissan Juke, Mercedes-Benz A Class and Mercedes -Benz C Class.

The year-to-date on car sales shows some differences from the sales in the month of September. In the year-to-date the top two places are filled by the two Ford models, so Ford are losing market share in UK. For the year-to-date Vauxhall Astra is in 6^{th} position, but in September it failed to get into the top ten. There is concern about the future of the Vauxhall plant at Ellesmere Port, and hence the future of the Astra, now owned by Peugeot. Jobs losses there just announced will total 400 and it only builds the Astra which is also built in Poland. If UK sales are falling the plant will be under renewed pressure. And that in turn may deter buyers so it could be a self-fulfilling prophecy.

Turning to UK car production in September, the total, 153,224 vehicles, was down 4% on the same month last year. Cars manufactured for the home market were 14% down on last year but for exports the total was down by only 1%. UK car production is therefore following the rate of new registrations in the home market, as one would expect. Nobody produces cars in order to park them in a field.

Ford USA reported Q3 profits up year-on-year by 63% to $1.6 billion. The majority was earned from their F-150 Pickup sales in US, Canada and Mexico. They produce some 750,000 per year of the F-150 and their decision of three years ago to move from steel to an all-aluminium vehicle has been vindicated.

AEROSPACE

In our Market Report for September we reported that Boeing has taken a case of state aid against Bombardier to the US International Trade Commission, claiming that Bombardier are selling their C-series single aisle plane to Delta in USA at below cost price. The claim is odd because the plane is of a type that Boeing does not produce, being, for them, too small. Never-the-less the Commission, in the first instance, found for Boeing and made a recommendation that extra duties amounting to 220% would have to be paid. The decision has yet to be confirmed. A further recommendation from the Commission then added another 80% to the 220% decided earlier. The implications for Bombardier would be devastating since the company in Canada is in some difficulties financially and the sales of the C-series plane are essential for survival. There are implications also for Shorts in Belfast where parts of the plane are produced and any ensuing jobs losses there could upset the political balance in Northern Ireland. The UK government has made their views known in USA, but little sympathy has been expressed. We ended the last month's Market Report by remarking that there is some way to go yet on this matter.

Who could have predicted then that the knight in shining armour, riding over the hill, would turn out to be Airbus, Europe's equivalent major aerospace champion? Airbus has taken a major shareholding in Bombardier's C-series jet liner. The C-series plane is of a size that Airbus does not produce and it would fit very well into the demand for planes taking 100 to 140 passengers on short haul. How does that get round the decision on extra duties on the C-series being sold to Delta? Airbus has a facility in Alabama where it builds the A320 and they could expand the facility to build the C-series. The plan has the support of the local city and the State of Alabama where unemployment is high. The question of tariff is not then an issue because the plane becomes a domestic product.

In the meanwhile sales of C-series planes look like being boosted by a big order expected from Qatar airways. UK ministers are being urged to support industry in Northern Ireland by ordering the C-series plane for the Queen's Flight, where four ageing BAE 146 planes are due to be replaced. Shorts in Belfast employ some 4,000 people directly and about 25% are employed on the C-series construction. In spite of some good news the company has just announced a cost-cutting exercise that will result in 280 job losses.

Constellium NV has announced that it has signed a multi-year contract to supply aluminium flat rolled products to Bombardier's aircraft projects such as the C-series and others. Their facilities in Ravenswood, USA, and Issoire, France, will be involved.

Bombardier UK was also boosted by large orders at their train assembly plant at Derby. They received an order for 333 electric carriages to run on the new West Midlands Trains franchise, the contract valued at £900 million. That comes on top of an order last year for 665 electric train carriages to run on the East Anglian franchise.

The days of the jumbo jet look numbered, United Airlines and Delta in USA will shortly be dropping their Boeing 747s from passenger service. They could be adapted for commercial transport. They can carry up to 540 passengers with a range of 8,350 miles but the new narrow bodied, single aisle planes are more flexible, more economic and more fuel efficient. This is the sector where aluminium wings score over composites. The A380 carrying up to 615 passengers was not the great success that was predicted for the same reasons.

Keeping up with the trend in cars towards electrics, Boeing and JetBlue Airways Corp. are investing in a start-up company to develop an electric powered aircraft. Zunum Aero is designing and building a 10-50 seat plane, with an initial range of 700 miles and up to 1,000 miles by 2030. They hope to have their first plane by 2020. They admit to serious technology challenges, not least the weight of the battery.

In all of these exciting developments in aerospace the global industry could only be shocked by the admission from Kobe Steel that over the last ten years documentation that validated the release of aluminium rolled and extruded products destined for aerospace had in some cases been falsified. The material was not confined to delivery to Japan but had been released globally. Worse was to come with a later announcement that some copper and steel material had been released with false data. The aluminium materials had been released not just for aerospace applications but also for automotive and rail, even a rocket launcher. No doubt those companies holding Kobe Steel material in stock would have rushed to check on the properties demanded in the standards to see if there was compliance. But they could never check on materials already in place, such as the Boeing Dreamliner joints between wing and fuselage. So far there is no evidence that any material released has been responsible for a failure. But like the 13th chime of the cuckoo clock, once you have heard it you worry about the previous twelve.

The standards for aerospace materials are more stringent than for general engineering, for obvious reasons. Every piece of material should be identified in a way that makes it traceable back to original cast numbers. And samples should have been tested for mechanical and physical properties from each and every heat-treatment furnace batch. Material in stock can of course be checked. Mechanical properties for rolled materials are easier to check than for extrusions but it must be remembered to check the properties in the correct directions, there being three possibilities. When checking chemical composition of a batch, a spectro spark on the surface will only confirm alloy type, not the exact composition of the batch. Segregation can happen even in wrought products. To check chemical composition to determine compliance it is necessary to take several pieces from the batch and melt them under careful control in a small crucible and then cast a proper spectro mushroom for testing.

Shares in Kobe Steel dropped like a stone and the company has already lost 40% of its value. Can it recover the confidence of the market in such critical products? It is doubtful in such a competitive market.

When dealing with military aircraft such as the Eurofighter Typhoon, we come into the realm of the more exotic materials that can operate at higher ambient temperatures than aluminium alloys. None-the-less it is a concern that BAE Systems are to cut nearly 2000 jobs, a significant blow to the UK manufacturing sector. Up to 1,400 jobs will go at the military aerospace sector, 375 at maritime services, our UK nuclear submarines, and 150 at their cyber-intelligence sector. The heaviest blows will land on the two plants in Lancashire and one in Yorkshire where Typhoons and Hawks are produced. Qatar has signed letters of intent for 24 Typhoons and 6 Hawks from BAE but a large order from Saudi Arabia is still pending. The RAF are retiring their Tornado fighters at the end of this year. The Typhoon program is a four-way partnership between Britain, Spain, Germany and Italy. BAE has one third of the consortium, Leonardo, Italy, has one fifth and Airbus holds the majority share.

BUILDING AND CONSTRUCTION

The seasonally adjusted UK construction PMI fell to 48.1 in September, against an expectation of 51. The previous month's figure was 51.1. Technically the sector is now in recession. The data revealed the sharpest contraction since April 2013. Civil engineering dropped the most for almost four and a half years. House building eased to a six-month low. There is a fall in business optimism in this sector to the lowest point since April 2013. The index is derived from a survey of 170 construction companies. In the Eurozone the PMI for construction is now at 52.7. Numbers above 50 indicate expansion.

ENERGY SUPPLY

OPEC has invited the USA fracking industry to join OPEC, no doubt tongue in cheek since such a move into a cartel would be illegal for them. However, the oil companies are enjoying the moment as oil prices moved above $60 per barrel. The majors are on line to enjoy their best annual profits for three years.

OTHER MATERIALS

The major mining companies did well on the stock markets when forecasts were announced that copper would be in deficit through to 2018. Rio Tinto, Glencore, BHP Billiton and Anglo American all gained. On the LME copper hit $7,000 per tonne during the month, a price last seen back in July 2014, but fell back by the month end to $6,822. Still some way to go to match the $8,300 in January 2012.

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