

The Effects of the Global Financial Crisis on the Australian Building Construction Supply Chain



by Dr. Chan Toong Khuan

ENGINEERING EDUCATION TECHNICAL DIVISION

THE Engineering Education Technical Division had co-organised a talk entitled, 'The Effects of the Global Financial Crisis on the Australian Building Construction Supply Chain' with the Engineers Australia Malaysia Chapter, and the Institution of Mechanical Engineers Malaysia Branch, on 30 October 2012, at the C & S Room, 2nd Floor, Wisma IEM. The talk was delivered by Dr Chan Toong Khuan who is a senior lecturer at the University of Melbourne, Australia.

A total of 31 participants had attended the talk. Dr Chan started the talk with a brief overview of the Global Financial Crisis (GFC) which is commonly believed to have begun in July 2007 with the loss of confidence by US investors in the value of sub-prime mortgages.

OVERVIEW OF THE AUSTRALIAN ECONOMY

Dr Chan then proceeded to show the changes in the Australian gross domestic product (GDP), building starts and building volume for each quarter between 2005 and 2010 as extracted from the Australian Bureau of Statistics (ABS 2010, ABS 2011). It was recorded that the Australian GDP declined in the fourth quarter of 2008. From the fourth quarter of 2007 to the fourth quarter of 2008, building commencements fell by 22% due to an increase in unemployment rate and reduced confidence in the market. Office properties experienced a 20.6% decline in revenues for the financial year 2007-2008 and the retail market was also affected, resulting from reduced consumer spending.

The Australian Government's response to the GFC was then highlighted in the talk. In October 2008, the Reserve Bank of Australia (RBA) Board had cut interest rates by 100 basis points to 6% whilst the Australian Government announced that it would guarantee all Australian bank deposits, and also an AUD10.4 billion stimulus package including AUD1.5 billion to support housing construction.

In December 2008, it brought forward the commencement of large-scale infrastructure projects worth AUD4.7 billion and in February 2009, a second stimulus package worth AUD42 billion was launched where 70% of the package were to be spent on schools (AUD14.7 billion), social and defence housing (AUD6.6 billion), energy efficiency measures (AUD3.9 billion), and AUD890 million on road, rail and small-scale community infrastructure projects. The third phase of the infrastructure programme worth an additional AUD22 billion was announced in May 2009. As a result, there was a large increase in building starts in the third and fourth quarters of 2009.

Dr Chan lamented the difficulty in categorising Australian companies that truly operate in Australia alone

and also that truly represent a given sector of the supply chain. Notwithstanding this, he had managed to select 16 companies for the study.

CONTRACTION IN BUILDING CONSTRUCTION

The financial data of the four sectors of the building construction supply chain between the periods of 2006 and 2010 was highlighted. It was shown that in terms of revenue, property developers and A-REITs showed significant declines in 2008 and 2009, and in the case of developers, continuing into 2010. The building material sector showed a marginal contraction of 2.8% in 2009 followed by a further reduction of nearly 7% in 2010. In contrast, revenues for building contractors continued to increase, albeit by only 1.6% in 2009 and 0.8% in 2010 despite the slump in building starts in late 2008 (builders are not immediately affected by a downturn due to continuing construction projects awarded a couple of years earlier). It was pointed out that the stimulus packages had maintained building starts at a level of AUD81.5 billion and 75.6 billion in 2008 and 2009 respectively. In terms of net assets, the building contractors have more than doubled theirs as compared to 2006 with other sectors averaging an increase of 50%.

BUILDING COST STRUCTURE

Dr Chan went on to examine the industry cost structure by comparing input costs to revenue for each sector. For the material supplier sector, the cost structure is heavily weighted with a significant cost of input materials (represented by the cost of goods sold, COGS) and operating expenses. It was shown that the COGS and expenses have remained fairly consistent at 56% to 58% and 29% to 30% respectively, leading up to the GFC. The most significant effect is the drop in profit from 8% in 2007 to 1% in 2010.

For the building construction sector, COGS represents close to 90% of the total revenue with profits accounting for 3-4% pre-GFC. The study indicated that all the inputs have remained relatively stable with evidence of profits being squeezed. The interest expense for the building construction sector is lowest amongst all four sectors at less than 0.1%, indicating that companies in this sector have insignificant bank loans.

For property developers, the cost structure consists of 70% for cost of goods and another 12% to 15% for operating expenses. Interest payments amount to approximately 3% of the total revenues. It was pointed out that in terms of profit, property developers have reported large deviation in

excess of 12% profit pre-GFC to losses amounting to approximately 20% of revenue in 2009.

The A-REITs do not report COGS. As this sector is heavily reliant on debt to finance the purchase of real estate assets, interest payments are relatively higher for this sector, i.e. close to 10% of total revenues. A-REITs were amongst the most severely affected with a reported cost structure nearly three times that of the total revenue for 2009, although it showed the highest profit margins with pre-GFC profit levels at 66% of the total revenue.

EFFECTS OF THE GLOBAL FINANCIAL CRISIS

In 2008 financial year, a decline was observed when the effects of the GFC started to affect the bottom line with a loss of 27%, and continuing the decline with a loss amounting to nearly 200% of the total revenue in 2009. It was explained that the GFC has a two-fold effect on the A-REITs: a loss of confidence in the property market that caused real estate valuation to plunge and massive write-down of assets values; and a drop in the occupancy causing a sharp decline in revenue.

Dr Chan continued by briefly vetting through the financial ratios of the companies that were being studied. He mentioned that it is generally accepted that ratios measuring profitability, liquidity, activity, leverage and solvency are used to gauge corporate performance. It was further clarified that the financial ratios were weighted based on the annual revenues of the respective companies.

A tabulation of 'Z score' obtained from a distress analysis carried out on the companies in the four sectors was highlighted. It was shown that building contractors and building material suppliers in Australia were financially sound and were able to withstand the impact of the GFC whereas property developers and A-REITs were the most vulnerable.

SUMMARY OF FINDINGS

All four sectors examined were susceptible to the GFC. The building material suppliers were the least affected as these companies have remained profitable and solvent throughout the period examined. They benefited substantially from the building economic stimulus package provided by the Australian government. Nett assets of these companies continued to grow. As these companies were also in the business of manufacturing products for other sectors of the economy, they also have customers in other sectors of the economy and thus were only marginally affected by the decline in construction demand in 2008. The activity ratio for these companies remained relatively constant over the period.

The building contractors also benefited substantially from the building economic stimulus package provided by the Australian government. However, Dr Chan expressed that there was a high likelihood that the findings might have been different if the study period had been extended beyond 2010 as the projects under the stimulus package would have been completed. The nett assets of the building contractors had doubled from 2006 to 2010 indicating that substantial additional investments were made into these companies. Despite this, the profit margins were low at 3% to 4%, and were further depressed by competition for jobs leading up to the GFC. These companies had a debt ratio of 60% and thus were able to repay their debts.

The property developers and the A-REITs were the most affected sectors in this GFC where severe drop in profitability was reported in 2009 when developers and A-REITs showed losses amounting to 25% and 105% of revenue, respectively. The GFC eroded the peak market capitalisation of Australian REITs from AUD147 billion in 2007 to AUD74 billion at the end of the 2010 financial year. The steep decline of asset values during the GFC was magnified by the high gearing employed by the A-REIT sector. The level of debt had reduced slightly to 0.33 in 2010, indicating a more conservative and managed approach to gearing in this sector after the GFC.

CASE STUDIES AND IMPORTANCE OF DATA

After the summary, Dr Chan proceeded to illustrate four case studies involving Australian companies that were badly affected by the GFC. He also showed as a postscript, a number of companies in the study sample that were reported to be in financial distress and had failed in 2012.

Dr Chan said that he hoped the findings from the study would reveal how ratio analysis, changes in the cost structure and financial distress could be used to examine the severity of the impact of the GFC on the Australian building construction supply chain. He also hoped that the findings would help investors, managers and construction professionals in devising strategies for prudent financial management and for weathering future financial crises.

There were active discussions and questions raised by the participants throughout the talk as Dr Chan encouraged a more interactive session. The talk ended with the presentation of a memento to Dr Chan and a round of applause from the participants. ■

Note: The above report was prepared with the help of the presentation slides and the paper of the same title that had been published in the Australasian Journal of Construction Economics and Building, 12 (3) 16-30, 2012. The material is used with the kind permission of Dr Chan Toong Khuan.