

A Takeover Strategy Based on the Business Analysis of Transportation and Real Estate Industry

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Abstract-This paper aims to find out two proper target firms and make a proper advice for M&A, thus providing a method of how to assess the possible merger and acquisition. This paper will make suggestions for Jaffa Ltd, since it is an influential Australian based commodities trading company which encounter a dilemma of decreasing growth. Since the whole industry has the same problem, acquiring other newly developing companies from different industries will be a good strategy for this kind of companies that own a large amount of cash yet has difficulty in developing in its own field. With the business analysis, Jaffa Ltd is supposed to take over GMG and AZJ.

1 INTRODUCTION

To find the proper firms, this paper focuses on economic outlook and ratio analysis to narrow the industries scope and filter the most suitable two firms from the 61 firms, shown in Table 1(Only part of them are exhibited). These 61 firms are the leading enterprises in each industry. The capital structure of two firms will be a major concern, which affects the valuations of them. Furthermore, in order to further analyze the value of these two firms, the WACC(Weighted Average Cost of Capital) and sustainable growth rate are also be used. Different valuation methods have different assumptions. For example, when using FCFF method, this paper assumes the future growth of company’s sales and costs. Normally, for a fast-developing company, Two-stages approach is used to evaluate the future cash flow. In early stage, the author assumes that the company will go through a quick developing period and then return to a normal development period.

2 SELECTION OF TARGET FIRMS

The target firms selected are Aurizon Holdings Limited (AZJ) and Goodman Group (GMG). Aurizon Holdings Limited is a rail freight operator, it builds the network of rail for the transportation of coal and iron ore, and also to update other existing rail line for the coal and iron ore. Furthermore, it transports coals and iron ores to the ports for the export market, and transports mineral commodities and agricultural products throughout Australia. Another target firm is Goodman Group. Goodman Group provides property investment and management of business property services such as office building, business parking lots. Its property investment portfolio is composed of 411 industrial businesses and properties in 16 countries and it manages more than 70 projects of property development in 11 countries (Morningstar’s Data Analysis Premium, 2016).

TABLE I. SELECTED COMPANIES (SOURCE: AUTHOR’S BLOG, [HTTPS://WWW.JIANSHU.COM/P/16A4F80076B7.](https://www.jianshu.com/p/16a4f80076b7))

	Ticker	Name	Industry
1	ABC	ADELAIDE BRIGHTON	Building Mat Fix
2	AIO	ASCIANO	Railroads
3	ALQ	ALS	NondurHousehold Prod
4	AMC	AMCOR	Containers Package
5	AMP	AMP	Life Insurance
6	ANZ	AUS.AND NZ.BANKING GP.	Banks
7	APA	APA GROUP	Pipelines
8	ASX	ASX	Investment Services
9	AWE	AWE	Exploration Prod

The first step is to analyze 61 firms based on their industries from the Macroeconomic environment. The analysis for the Macroeconomic condition is divided into two parts, international and domestic economic conditions. In terms of the international outlook, based on the data on

the OECD (2015), the export value accounts for the GDP of Australia is around 19%, this number is even higher than the U.S. and Japan. As figure 1 shows, the mining accounts for the GDP of Australia about 24.54%.

GDP	Last	Reference	Previous	Range	Frequency
GDP Growth Rate	0.8 %	Jun/17	0.3	-2.1 : 4.4	Quarterly
GDP Annual Growth Rate	1.8 %	Jun/17	1.8	-3.4 : 9	Quarterly
GDP	1205 USD Billion	Dec/16	1345	18.59 : 1567	Yearly
GDP Constant Prices	427948 AUD Million	Jun/17	424450	60438 : 427948	Quarterly
Gross National Product	419432 AUD Million	Jun/17	422113	55132 : 422113	Quarterly
Gross Fixed Capital Formation	105837 AUD Million	Jun/17	104263	9479 : 114472	Quarterly
GDP per capita	55671 USD	Dec/16	54942	19178 : 55671	Yearly
GDP per capita PPP	44414 USD	Dec/16	43832	27897 : 44414	Yearly
GDP From Agriculture	11183 AUD Million	Jun/17	11138	3301 : 11606	Quarterly
GDP From Construction	32676 AUD Million	Jun/17	32223	7962 : 33901	Quarterly
GDP From Manufacturing	24542 AUD Million	Jun/17	24109	15598 : 29213	Quarterly
GDP From Mining	29573 AUD Million	Jun/17	29393	4490 : 29573	Quarterly
GDP From Public Administration	23317 AUD Million	Jun/17	23387	7406 : 23387	Quarterly
GDP From Utilities	10723 AUD Million	Jun/17	10872	3808 : 10872	Quarterly

FIGURE I. GDP OF AUSTRALIA (SOURCE: AUSTRALIA | ECONOMIC INDICATORS)

Furthermore, the export of mining is the largest part of total exportation (Composition of trade Australia ,2016). Meanwhile, China accounts for the biggest part for the exported goods and services, and the major goods exported to China are Iron ore and concentrates(Australia’s export performance, 2016). However, that demand is decreasing. Hence, this paper should avoid the company only operate businesses are only relating to the mining when this paper consider the proper industries. Hence, some supplier chain for this kind of industries would be considered, such as transportation. In terms of the domestic data, the population and car numbers of the Australia is increasing stably every year(Trading Economics, 2017), which implies that the

Australia market is expanding, in other words, more and more firms would build more shopping centers, or office buildings to exploit Australia potential market, therefore, this paper considers some companies that are related to the real estate. Therefore, based on these analysis, this paper selects the industries relating to transportation and real estate.

3 CAPITAL STRUCTURE OF TARGET FIRMS

3.1 Analysis of Capital Structure

TABLE II. DEBT AND SHARE OF THREE COMPANIES

	AZJ	GMG	Jaffa
Cost of debt	0.0423	0.0423	0.07
Stock price on 30/06/2015	\$ 5.13	\$ 6.27	\$ 27.20
Share outstanding	\$ 2,122,010,000.00	\$ 1,753,035,922.00	\$ 1,000,000,000.00
Spread	1.60%	1.60%	N.A
RF	\$ 0.03	\$ 0.03	0.0263
interest expense	\$ 144,000,000.00	\$ 15,000,000.00	19040000000
Average maturity	430.00%	470.00%	N.A
Market value of equity	1088591130000.00%	1099153523094.00%	\$ 272,000,000,000.00

- All data period in this section used is on 30/6/2015.
- Jaffa: because the information about the Jaffa given is limited, this paper assumes that its market value and book value are the same.
- The market value of equity: is calculated by using share price on the 30th of June 2015 to multiply their share outstanding. The share price of these two companies are quoted from Yahoo finance (2017), and their share outstanding are quoted from their annual report in 2015.
- The market value of debt: is calculated by using the formula 1, and the cost of debt is 4.23%, it is calculated by using the spread to plus the risk-free

rate. The rating of AZJ is BBB+Baal(Aurizon Holding Limited, 2015). The rating of GMG is BBB. Based on the Table 2, both the spread of these two companies are 1.6%. The debt maturity of GMG and AZJ is quoted from their annual report.

- Risk-free rate: this paper used is the Australia 10-year Treasury bond rate. From the market premia (2017), in 1st of January 2016, the rate is 2.63%.
- The market value of short-term debt and long-term debt: are simply used the same percentage accounts for the total debt with the book value.

$$\text{Market value of Debt} = \text{interest expense} * \left(\frac{1}{\frac{(1+\text{cost of debt})^t}{\text{cost of debt}}} \right) + (\text{FV of Debt}/(1 + \text{cost of debt})^t) \tag{1}$$

For large non-financial service companies with market cap > \$ 5 billion

If interest coverage ratio is	Column1	Column2	Column3
>	≤ to	Rating is	Spread is
8.50	100000	Aaa/AAA	0.60%
6.5	8.499999	Aa2/AA	0.80%
5.5	6.499999	A1/A+	1.00%
4.25	5.499999	A2/A	1.10%
3	4.249999	A3/A-	1.25%
2.5	2.999999	Baa2/BBB	1.60%
2.25	2.499999	Ba1/BB+	2.50%
2	2.2499999	Ba2/BB	3.00%
1.75	1.999999	B1/B+	3.75%
1.5	1.749999	B2/B	4.50%
1.25	1.499999	B3/B-	5.50%
0.8	1.249999	Caa/CCC	6.50%
0.65	0.799999	Ca2/CC	8.00%
0.2	0.649999	C2/C	10.50%
-100000	0.199999	D2/D	14.00%

FIGURE II. RATINGS (SOURCE: RATINGS, INTEREST COVERAGE RATIOS AND DEFAULT SPREAD)

3.2 Capital structure

This part depicts the capital structure of AZJ and GMG from two sides, book value and market value. In terms of the book value, as the table 3 shows, the AZJ’s book value of equity and debt are \$6506 million and \$2983 million, respectively. Its D/E ratio is 45.85%. The GMG’s equity and debt value are \$7376.1 million and \$2707.9 million and its D/E ratio is less than AZJ, 36.71%. The reason for this difference is that the liquidity of REITs would be weak. In other words, they should carefully control their debt, then they would have more flexibility. Therefore, The capital management strategy is aiming to minimize its financial leverage to further offset risk. In terms of the market value, both their D/E ratios are less than their book value D/E ratio, GMG 21.14%, and D/E

ratio of AZJ is 28.03%. This is due to their market value of equity, which is significantly increased. The market equity value of AZJ increases by \$4379.9 million and GMG increases by \$3615.4 million. Moreover, as the table 3 shows, AZJ has more debt than the GMG no matter short-term or long-term debt. In terms of the stocks, both companies don not have preferred stock on their balance sheet, while the value of common stock of AZJ is more than that of GMG.

The debt of GMG is composed of bank loans, foreign private placement, U.S. and Euro senior notes. As the Figure 8 shows, the U.S bond accounts for the largest part of its debt, \$1719 million. For the debt construction of AZJ, based on the figure 4, it is formed by various facilities and medium-term notes, it is different with the composition of GMG, its major part of its debt is bank facilities rather than the bonds, \$1690 million.

Capital management continued

12. Interest bearing liabilities

Interest bearing liabilities comprise of bank loans, bonds and private placements. Interest bearing liabilities are recognised initially at fair value plus any directly attributable transaction costs. Subsequently to initial recognition, interest bearing liabilities are measured at amortised cost using the effective interest rate method.

	Note	Consolidated	
		2015 \$M	2014 \$M
Bank loans, unsecured	12(a)	333.2	155.4
Euro medium-term notes, unsecured	12(b)	509.9	453.6
US senior notes, unsecured	12(c)	1,719.0	1,406.0
Foreign private placements, unsecured	12(d)	171.9	170.2
Borrowing costs		(26.1)	(24.7)
		2,707.9	2,160.5

FIGURE III. COMPOSITION OF DEBT (SOURCE: 2015 ANNUAL REPORT OF GOODMAN GROUP)

16 Borrowings

KEEPING IT SIMPLE

The Group borrows money through bank debt facilities and through the issuance of debt securities in capital markets.

	2015 \$m	2014 \$m
Current – Unsecured		
Working capital facility	59	42
	59	42
Non-current – Unsecured		
Medium-term notes	1,250	518
Bank facilities	1,690	2,310
Capitalised borrowing costs	(16)	(29)
	2,924	2,799

FIGURE IV. BORROWINGS (SOURCE: 2015 ANNUAL REPORT OF AURIZON HOLDING LIMITED)

TABLE III. BOOK VALUE AND MARKET VALU

Book Value			
	AZJ	GMG	Jaffa
Book value of debt	\$ 2,983,000,000.00	\$ 2,707,900,000.00	\$ 60,000,000,000.00
Book value of equity	\$ 6,506,000,000.00	\$ 7,376,100,000.00	\$ 272,000,000,000.00
D/E	45.85%	36.71%	22.06%
Short-term debt	\$ 59,000,000.00	\$ -	N/A
Long-term debt	\$ 2,924,000,000.00	\$ 2,707,900,000.00	N/A
ST debt/total debt	1.98%	0.00%	N/A
LT debt/total debt	98.02%	100.00%	N/A
Common stock	4,977,000,000.00	7,936,000,000.00	N/A
Ordinary shares	2,122,010,000.00	1,753,035,922.00	1,000,000,000.00
Preferred stock	0.00	0.00	N/A
Treasury stock	-10,000,000.00	-132,000,000.00	N/A
Market Value			
	AZJ	GMG	Jaffa
Market value of debt	\$ 3,051,741,111.56	\$ 2,323,886,391.30	\$ 60,000,000,000.00
Market value of equity	\$ 10,885,911,300.00	\$ 10,991,535,230.94	\$ 272,000,000,000.00
D/E	28.03%	21.14%	22.06%
Short-term debt	\$ 60,359,613.00	\$ -	N/A
Long-term debt	\$ 2,991,381,498.56	\$ 2,323,886,391.30	N/A
ST debt/total debt	1.98%	0.00%	N/A
LT debt/total debt	98.02%	100.00%	N/A

TABLE IV. KEY ELEMENTS FOR CALCULATING BETA

	AZJ	GMG	Jaffa
Cost of equity	5.44%	6.89%	7.64%
RM	7.64%	7.64%	7.64%
RF	2.63%	2.63%	2.63%
Premium	5.01%	5.01%	5.01%
Covariance	0.000734185	0.001115372	N.A
Variance	0.00131504	0.00131504	N.A
Beta	0.56	0.85	1
Growth rate	1.72%	3.60%	N.A
ROE	9.59%	9.27%	N.A
Dividend	\$ 0.24	\$ 0.22	0
Expected return	12.95%	9.20%	N.A
Payout ratio	82.08%	61.14%	N.A
Cost of debt	4.23%	4.23%	7.00%
Market value of debt	\$ 3,051,741,111.56	\$ 2,323,886,391.30	\$ 60,000,000,000.00
Market value of equity	\$ 10,885,911,300.00	\$ 10,991,535,230.94	\$ 272,000,000,000.00
Enterprise Value	\$ 13,937,652,411.56	\$ 13,315,421,622.24	\$ 300,000,000,000.00
TAX	30%	30%	30%
WACC	4.89%	6.20%	7.91%

4 COST OF CAPITAL AND SUSTAINABLE GROWTH RATE

The cost of capital of AZJ and GMG is 4.89% and 6.20%, while that of Jaffa is 7.91%. To calculate the cost of

capital, this paper will need to calculate the cost of debt and equity as well as market value of debt and equity. All these inputs are derived from the section two except for the cost of equity. The cost equity is calculated by the CAPM formula:

cost of equity=risk-free rate + beta*(expected market return-risk-free rate).

The period of risk-free rate, expected market return this paper used is in January of 2016, and they are 2.63% and 7.64%, respectively (Market-Risk-Premia, 2017).

For the Jaffa's beta, this paper decide to use the raw data beta one as its beta, the reason is that the beta should be calculated based on the company's historical data, but the information only shows some basic information, hence, this paper decided to use the raw beta. For target firms' beta, it is calculated by the.

$$\beta_p = \frac{Cov(r_p, r_b)}{Var(r_b)}$$

The data that this paper used to calculate the beta are from ASX200, all of the time period is from January of 2011 to January of 2016. As the table 4 shown, the cost of equity of AZJ and GMG is 5.44% and 6.89%, respectively. Then, using WACC formula: $WACC = r_D(1-T_c)(D/V) + r_E(E/V)$. Thus, these two target companies' WACC are 4.89% and 6.20%, and the Jaffa is 7.09%.

According to table 4, the sustainable growth rate of AZJ and GMG is 1.72 %, and 3.60% respectively. To calculate the sustainable growth rate, the formula this paper used is:

Growth rate = (1-Payout ratio) * ROE. The payout ratio and ROE are from this two companies' annual report (2015).

The expected return of GMG is 9.20%, and AZJ is 12.95%. This expected return this paper calculated by the DDM formula:

$$P = \frac{D_0(1+g)}{r-g}$$

Based on the Morningstar (2017), the dividends paid by the June of 2015 for the GMG is 0.22\$, and 0.24\$ for the AZJ. The expected return of DDM is better than the return calculated by the CAPM in table 4, the return calculated by the CAPM is the cost of equity. The distinction refers to the fact that CAPM considers more factors than DDM. The DDM method only calculate the expected return through focusing on the dividends, but the

CAPM will consider more factors such expected return, risk-free rate, and beta of the firms.

5 VALUATION METHOD

Firstly, Free Cash Flow will be used to calculate Equity Method (FCFE), which is a measurement of amount of cash that can be paid as dividend to equity shareholders after all expenses, reinvestment and debt repayment have been met.

$$FCFE_{2017} = FCFF - \text{interest payments} * (1-T) + \text{net borrowing}$$

The firm value can be given:

$$\text{value of firm} = \frac{FCFE * (1+g)}{k-g}$$

The second method is FCFF, the formula is given below:

$$FCFF_{2017} = EBIT * (1-T) + \text{depreciation \& amortization} - CAPEX - \Delta NWC$$

The process of valuation of firm by FCFF is quite similar to that of FCFE, except that the required rate has been changed from cost of equity to WACC, meanwhile the arthur do not deduct the interest payment in FCFF method.

6 TARGET FIRM VALUATION

6.1 Valuation of GMG

The author uses FCFF to calculate the valuation of GMG. With high volatility and hard prediction of real estate industry, the author assumes seven years in the first prediction period before sustainable growth period. For the first year's prediction of income, the author assumed the growth rate is stable in near future and used the growth rate from 06/2014 to 06/2015. Then, after 06/2016, the author uses the house price growth rate in 2015 as the next six years income growth rate. For other items, the author applies the same portion as the year of 2015. The sustainable growth rate after 06/2022 is 3.6% and the discounted rate WACC is 6.2%. These rates are calculated in Section 3.

TABLE V. FUNDAMENTAL VALUATION

Fundamental valuation (Discounted Cash Flow) of GMG					
Pre 06/18	Pre 06/19	Pre 06/20	Pre 06/21	Pre 06/22	Sustainable growth rate
233,359,043	249,274,129	266,274,625	284,434,554	303,832,991	3.60%
4,475,715	4,780,959	5,107,020	5,455,319	5,827,372	
1,330,389,418	1,421,121,977	1,518,042,495	1,621,572,994	1,732,164,272	
1,568,224,176	1,675,177,065	1,789,424,141	1,911,462,867	2,041,824,635	
404,502,040	432,089,080	461,557,555	493,035,780	526,660,820	
8,045,926	8,594,658	9,180,814	9,806,946	10,475,779	
1,069,498,655	1,142,438,463	1,220,352,766	1,303,580,825	1,392,485,037	
91,942,994	98,213,506	104,911,667	112,066,643	119,709,588	
8,045,926	8,594,658	9,180,814	9,806,946	10,475,779	
4,632,503	4,948,440	5,285,923	5,646,423	6,031,509	
439,532,938	469,509,084	501,529,604	535,733,922	572,270,976	
541,436,147	578,362,092	617,806,386	659,940,782	704,948,743	
465,839,117	468,558,706	471,294,171	474,045,606	476,813,103	12,850,653,999

Fundamental valuation (Discounted Cash Flow) of GMG				
Item	06/14	06/15	Pre 06/16	Pre 06/17
Rental Income	207,700,000	206,100,000	204,512,325	218,460,066
Investment Income	9,800,000	6,200,000	3,922,449	4,189,960
Other Income	989,500,000	1,074,100,000	1,165,933,108	1,245,449,746
Total Income	1,207,000,000	1,286,400,000	1,374,367,882	1,468,099,772
Cost	457,000,000	402,500,000	354,499,453	378,676,316
Depreciation+Amortization	6,200,000	6,600,000	7,051,328	7,532,228
EBIT	743,800,000	877,300,000	937,292,400	1,001,215,741
-TAX Expense	45,490,000	75,420,000	80,577,445	86,072,827
+Depreciation+Amortization	6,200,000	6,600,000	7,051,328	7,532,228
- Capex	2,800,000	3,800,000	4,059,855	4,336,738
- changes of NWC	-431,300,000	513,600,000	385,200,000	411,470,640
FCFF	1,133,010,000	291,080,000	474,506,427	506,867,765
Present value of CF with WACC (6.2%)			460,447,204	463,135,314
Valuation of the firm	16,130,787,220			

With DCF model, the enterprise value is AUD 16,130,787,220. The intrinsic value per share is 7.53.

TABLE VI. VALUATION

Valuation of the firm	16,130,787,220
Long-term debt	2,808,700,000
Equity	13,322,087,220
Out Standing shares	1,770,100,000.00
Share value	7.53

6.2 Valuation of AZJ

As well as GMG, the author also uses FCFF to calculate the stock intrinsic price. The author assumes that 7 years would be an appropriate time span for sustainable growth period. For the first year's prediction of income, the author assumes the growth rate is stable in near future and uses the growth rate from 06/2014 to 06/2015. Then, after 06/2016, the author uses the Australian CPI in 2015 as the next 6 years income growth rate.

TABLE VII.. FUNDAMENTAL VALUATION OF AZJ

Fundamental Valuation (Discounted Cash Flow) of AZJ				
Item	06/14	06/15	Pre 06/16	Pre 06/17
Operating Revenue	3,811,900,000	3,732,000,000	3,653,774,758	3,708,581,379
Other Revenue	10,400,000	48,000,000	221,538,462	224,861,538
Total Revenue Excluding Interest	3,822,300,000	3,780,000,000	3,875,313,220	3,933,442,918
Operating Expenses	2,471,700,000	2,271,000,000	2,086,596,674	2,363,187,531
Depreciation	321,900,000	330,000,000	338,303,821	343,378,378
Amortisation	177,300,000	189,000,000	201,472,081	204,494,162
Depreciation and Amortisation	499,200,000	519,000,000	539,775,902	547,872,541
EBIT	851,400,000	990,000,000	1,248,940,643	1,267,674,753
-TAX EXPENSE	134,230,000	271,500,000	342,512,510	347,650,197
+Depreciation and Amortisation	499,200,000	519,000,000	539,775,902	547,872,541
-CAPEX	870,400,000	1,083,000,000	1,099,245,000	1,115,733,675
-change of Net Working Capital	132,400,000	-248,400,000	-58,000,000	-58,870,000
FCFF	213,570,000	402,900,000	404,959,036	411,033,421
Present value of CF with WACC (4.89%)	4.89%		395,406,724	382,627,348
Valuation of the Firm	23,616,316,635			

As the CAPEX changes dramatically, the author used the CPI as the growth rate the first prediction year. For NWC, the author get an average value of 2014 and 2015. For other items, the author used the same portion as the year of 2015. The sustainable growth rate after 06/2022 is 1.72% and the discounted rate WACC is 4.89%. These rates are calculated in section 3.

TABLE VIII. VALUATION

Valuation of the firm	10,152,034,799
Long-term debt	3,051,741,112
Equity	7,100,293,688
Out Standing shares	2,099,200,000
Share value	3.38

With DCF model, this paper calculates the enterprise value is AUD 23,616,316,635. The intrinsic value per share is 3.38.

TABLE IX. ESTIMATION

Stock	Estimated Stock price	Market Price (January 27, 2016)	Premium
GMG	5.83-7.53	6.07	-3.95%-24.05%
AZJ	3.38-5.56	3.61	-6.37%-54.02%

TABLE X. RATIO ANALYSIS

Stock	Current ratio	Quick ratio	P/B ratio	P/E ratio	D/E ratio
GMG	2.21	1.67	1.49	17.27	1.53
AZJ	1.03	0.82	1.67	17.54	1.74

From table 10, the current ratio and quick ratio of GMG and AZJ are high, which means they have more liquidity and low financial risk. The low D/E ratio is also

7 MERGERS AND ACQUISITIONS

7.1 The attractiveness of these two companies

From the valuation calculated in section 6, the GMG is with an intrinsic value premium -3.95%-24.05% and the AZJ is with an intrinsic value premium -6.37%-54.02%.

consistent with the condition of low financial risk. Low P/B ratio means Jaffa doesn't have to pay high intangible assets' premium to target shareholders. Low P/E ratio,

which means GMG and AZJ are mature business and have stable profit earning.

The author assume there is no premium in merger. Then author calculate the result as table 11 shows.

7.2 Cash versus Share offer

In cash offer, the acquiring shareholders take on the entire risk. In stock offer transaction, the risk is shared with selling shareholders.

TABLE XI. CASH OFFER VS STOCK OFFER

	Cash Offer			Stock Offer		
Merger	Earnings per share(\$)	Stock price (\$)	Outstanding shares	Earnings per share(\$)	Stock price (\$)	Outstanding shares
Jaffa&GMG	3	30.00	1,000,000,000	2.68	22.09	1,358,150,233
Jaffa&AZJ	3	30.00	1,000,000,000	2.88	23.95	1,252,603,733
Jaffa&GMG&AZJ	3	30.00	1,000,000,000	2.64	18.62	1,610,753,967

With cash offer, Jaffa has to obtain extra cash from other ways, such as issue bonds or bank lending. It will increase its financial risk. Jaffa only has four billion dollars cash. The cash offer total value is as below the market value of each company.

TABLE XII. MARKET VALUE OF TWO COMPANIES

Company	Stock price (\$)	Outstanding shares	Market Value (\$)
GMG	6.07	1,770,100,000	10,744,507,000
AZJ	3.61	2,099,200,000	7,578,112,000

7.3 Potential synergy gains

GMG’s main business is real estate. It can provide Jaffa with commercial estate to reduce the cost of renting shop front. The AZJ’s main business is transportation, which can reduce Jaffa’s cost of commodity transportation. The merger can also help shareholders diversify industry risk.

Jaffa	After acquisition	Before acquisition
Value of debt	\$ 79,573,000,000.00	\$ 60,000,000,000.00
Value of equity	\$ 272,000,000,000.00	\$ 272,000,000,000.00
Cost of debt	7.00%	7.00%
Cost of equity	7.64%	7.64%
Tax	30.00%	30.00%
D/E	29.25%	25.00%
Enterprise value	\$ 351,573,000,000.00	\$ 300,000,000,000.00
WACC	7.02%	7.91%

Figure V. The capital structure of Jaffa

8 CONCLUSION

8.1 Acquired cash reserves

The author recommend Jaffa holding cash until the finish of takeover. The reason for that is because the takeover would be accomplished by raising debt rather than cash or equity, and chairman of Jaffa is keen to deliver values to shareholders, hence, the author decide to use this fund to deliver the dividends to shareholders after acquisition. The reason for raising the debt is that the Jaffa has excellent debt capacity, and even after the acquisition, as figure 5 shown, it still has strong capacity to raise funds by debt.

8.2 Whether to Approve this Takeover

This paper recommends Jaffa to acquire AZJ and GMG at price \$5.56 and \$7.53, respectively. There are several reasons for acquiring the AZJ and GMG. According to the section 1, the growth rate of commercial property management industry is quite high; even the growth rate of rail freight transport industry is only 0.6%, it expected to reach to 2.6%. Another reason for acquiring these two firms is that after the acquiring would increase D/E ratio, which means the capital structure of Jaffa will be improved. As the Figure 3 shown, the Jaffa's WACC of post-acquisition decreased from 7.91% to 7.02%, and its enterprise value increased a lot. In section 5, two methods that the author used to evaluate the value of two target firms have been clearly presented, therefore the author can make a valid valuation of target firms. Furthermore, according to section 6, using the share price of these two companies on the 27th of January 2016 to multiply their maximum premium, the reason for it is that the author have to know what the maximized price Jaffa need to pay, which would be helpful for Jaffa to plan how much funds they should raise operating synergies, which are from short front rental cost reduction and transportation cost reduction. In terms of the recommended offer price, the takeover is calculated through.

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