FINM7401 Finance

Group 53 Assignment

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Part 1-1 Case study

1. Identify the ethical dilemma

The cooperation between company and stakeholders, which targets to maximize the return of investment as well as carry on social responsibility to improve community well beings, is the key (Bhattacharya, Korschun and Sen, 2009) while current situation poses this company under various threat from customers, employers, the board and other bond holders.

If leave the current situation, the quarterly revenue target will suffer, which stubs confidence among employers and undermines stock value, furthermore, leads to under-satisfaction among the board. According to Al (2012), corporate annual report is the most vital component that affect investor decision. Thus, it leads to a vicious circle in the future and damage company image by negative auditing portfolio.

If suggestion from management team is applied, it will fail the trust from both customers with large and small orders. Although in the short term, Valley Systems can reach the quarterly financial target. As a price, such unethical and immoral decision destroys the company's public image and smashes trust from customers and bondholders in the long run. No companies or customers will be willing to maintain partnership with a supplier who had bad reputation for breaking the original negotiation, delaying orders from minor partners and pushing large partners to pay in advance. It is no doubt that such doings will make a bad impact for the stock value; therefore, the stockholder and the board will lost their confidence.

2. Discuss the issue and its consequences to all stakeholders

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If suggestion from management team is applied, it will fail the trust from both customers with large and small orders. Although in the short term, Valley Systems can reach the quarterly financial target. As a price, such unethical and immoral decision destroys the company's public image and smashes trust from customers and bondholders in the long run. No companies or customers will be willing to maintain partnership with a supplier who had bad reputation for breaking the original negotiation, delaying orders from minor partners and pushing large partners to pay in advance. It is no doubt that such doings will make a bad impact for the stock value; therefore, the stockholder and the board will lost their confidence.

3. Recommendations and justification

- **Provide discount to the delay order customers for further partnership**

  To push larger order partner to pay in advance and postpone shipping to small orders, this company is suggested to provide discount in the future transaction and cooperation.

- **Release new bonds**

  Valley System maintains a reliable and promising image in Wall Street. Therefore, releasing new bonds internally and externally can help to relieve this threat. Introducing new bonds to public can accumulate capital, while releasing bonds to core employers instead of salary or incentive can temporarily lighten financial burden, integrate core employers into company and motivate their efficiency and loyalty toward company

  .

- **Reinforce auditing**

Auditing includes internal (to CFO) and external (to stockholders) layers. Advanced auditing and upgrading report standard help company to foresee the escapable financial mistake and make efficient decision (AICPA Survey Shows U.S. CPAs Gaining in Awareness of International Financial Reporting Standards, 2010).

- **From ROI to ROO**

Return of objective (ROO) is a value of chasing invisible gains, which include the company image, recognition and reputation, etc. As return of interest (ROI) is solely focus on visible financial benefit, which mainly reflected in sales. Previous and present stock value affect slightest to the company's future, which long run complimentary performance is the key (William H, 2011). By building the company value as ROO-oriented, from staffs and board, from stockholders to the business partners can see and propose in the long run as well as healthy and sustainable development, rather than over-emphasize temporary performance.

Part 1-2   Essay on corporate social responsibility

a)   1. Difference between stockholder and stakeholder management

Stockholders are the owners of the firm. In some cases we can also think that stockholders having contract with the firm. Stockholders part is to provide funding for the product any profits left after paying wages, suppliers etc. belong to the stockholders. Stockholders are also known as shareholders. Mainly firms are not only for stockholders because managing firms only for stockholders can be a harmful for other entities that are affected by firm. The responsibility principle says that people should accept depends on how their actions impact on others. Applying this principle to corporations means the manager should consider the firm action could impact on others and then manage firm accordingly.

There is an alternative leading approach to the stockholder that is stakeholder theory, which is developed by Edward freeman. According to this new theory that is stakeholder theory managers of the companies should not consider only stockholder decision they must also

consider stakeholders decision. Stakeholder's theories see business as a set of relationships between groups, which has stake in the firm's activity, and the manager job is to maintain the relationships.

Stakeholder approach developer freeman defines stakeholder as group/individual that can affect by the realization of an organizational purpose. Stakeholder definition is too broad. One can make argument for anyone in the globe being a stakeholder. But practically stakeholders will have strong claim on firms than other employees. However, some researchers said that the managers need to concentrate on stakeholders who have greater power means the stakeholder can influence the firm; legitimacy is a perception indicates the importance of stakeholder and urgency, which requires immediate attention of stakeholder.

2.   Corporate Social Responsibility

Corporate social responsibility is similar to stakeholder theory. Stakeholder theory explains the need to focus on both shareholder earnings and the firm behaving responsibility. It is more likely to be same outcome from a decision under corporate social responsibility or stakeholder. However, stakeholder is different from the corporate social responsibility in motivation. Corporate social responsibility starts with the firm and looks outwards to capture the responsibility and stakeholder theory will look outside the firm to determine relevant stakeholders and then it has work out how the firm must behave.

Corporate social responsibility is conceptualised as a firm that needs to be managed across three dimensions.

Environmental: The environmental dimension of social corporate responsibility is responsible for the business impact on the environment. As a social responsible company the goal is to engage in business practices that profit the environment like you might choose to use recycled materials in your packaging, add renewable energy sources like solar power to your factory.

Social: The social dimension of corporate social responsibility will maintain relationship between your business and society. When addressing the social dimension the aim is to use your business to get benefits for the society. Benefits involve source products or paying employees of company livable wages also it includes your resources to organize charitable fundraisers.

Governance: Corporate social responsibility and governance hold economic and legal features. They can be altered through socio-economic process where the competition in the product market is the powerful force. Governance and corporate social responsibility are complementary and close to the market forces. Governance in its narrow sense it elaborates the formal system of accountability of directors to the owners of the company's. The concept include whole network of formal and informal relationships. Governance will not maximize the stock value instead it concerns relationship among many stakeholders and the goals for which the corporation is governed.

b)   Summarizing the Environment social and governance by two companies

Boral Limited: Boral Company is a multinational company deals with the building and construction materials. Boral limited was formed by the old Boral limited. The old Boral limited comprising of energy assets, which is renamed to origin energy. However Boral and origin energy are currently has separate listings in Australian stock exchange because both the companies are independent to each other.

Environment: The goal is to deliver world-class health and safety outcomes also Boral is aiming to deliver returns that exceed the cost of capital through the cycle. To achieve these goals Boral strength of geographical diversification including leveraging growth platforms in Asia and USA. Construct a portfolio for business with traditional and innovative products also flexible cost structure, so that the company can better respond to market cycles to incrementally back in environments. Some of the challenges are maintaining an effective IT environment (Boral Annual Report, 2016). We recognize sustainability is important for the future success. It means providing a safe workplace for our people by minimizing the environmental impact.

In the environmental perspective, we acknowledge that nature of our operations means it will be an impact on the environment. However we have a goal of zero harm also working to eliminate adverse environmental impacts. Priorities of environment in Boral is:

- Efficiently utilizing the electricity

- Proper usage of water

- Minimizing and recycling of waste materials and production of energy

- Reduction of pollution

- Efficient usage of virgin and recovered resources and supplementary materials (Boral Annual Report, 2016)

In financial year 2016, Boral environmental management system revised HSEQ MS is showing the clear definition of the standards expect Boral operations to achieve also practices required to achieve them.

Social: Boral will strive to build something great. This means a safe, challenging workplace for our communities that means it is socially responsible method to all our activities (Boral Annual Report, 2016).

Governance: The governance statement describes Boral's governance framework. Boral limited is committed to verify its policies and practices reflect higher standard of governance. In the financial year 2016 Boral limited governance arrangements were consistent with the company governance principles and recommendations published by the Australian stock exchange corporate governance council (Boral Annual Report, 2016). Boral limited board succession planning also the progress and order renewal of board membership is an important part of governance process. Effectiveness of the group policies system and governance structure for recognizing and managing HSE risks. Boral's policy is to promote effectively two way communication with the stockholders and other investors so they can understand Boral's governance also how to access relevant information regarding Boral activities. The board of Boral limited is satisfied with the level of compliance with governance requirements as it identifies that practices and procedures keep improving; also companies governance will be kept

under review to consider account of changing standards as well as regulations (Boral Annual Report, 2016).

St Barbara Limited: St Barbara limited is an Australian firm, which moved into the gold market in the year 2005. The mines of St Barbara include gwalia in western Australia and simberi in Papua New Guinea. St Barbara was founded in 1969 as endeavor oil and later in 2005 it acquired many gold mines from sons of gwalia also in 2012 it purchased assets from allied gold (Credit Suisse, 2016).

The activities of environment, social and governance of St Barbara are as follows:

Environment:
- Major issues in this sector include toxic emissions, water stress, waste releases, land use and biodiversity.
- Companies' rehabilitation provision is discounted at pre-tax discount rate of 5% and it is re-measured at every reporting date. The total balance for rehabilitation at June 30 2015 is A$42mn.
- GHD have been employed to implement mine closure also rehabilitation plans along with subsequent cost estimate for sbm.
- A wide group of environmental management system has been implemented and there are no external reportable incidents during financial year 2015.
- St Barbara limited has received some negative response related to divest gold ridge assets. It shows that the company effort to mitigate environmental risk with a tailing dam which was nearly overflowing where it is not approved by the solomon islands government (Credit Suisse, 2016).

Social:
- ➢ Issues in this sector has management of health and safety risks which includes fatalities and injury rates.

➢ Labour management, political instability and corruption are considered to be social potential issues.

➢ St barbara has potential corruption also political instability risks that are associated with operations in papua new guinea.

➢ Two deaths are reported in the past 3 years detailed investigations were conducted for the incidents the first is rope conveyor and second is a local contributor conducts tree clearing on site.

➢ The average company wide rolling in 12 months total injury recordable frequency was 3.4 as december 31 2015 which is a low record.

➢ The overall winner in the CME 2015 is st barbara limited name of the competition is underground mine emergency response competition and the winner of four category at PNG competition that is national mine rescue challenge in the year 2015.

Injury Frequency Rate of St Barbara in Financial Year 2011-2016: St Barbara Limited has very low rate in injuries that is 3.4 at Q2 financial year 2016 when compared to other financial years. As we can see in the below graph there are more injuries in financial year 2015 that is 5 when compared to financial year 2014, 2016 still the emergency team response is good in 2015 financial year and they are the winners at 2015 Underground Mine Emergency Response Competition (Credit Suisse, 2016).

Total Recordable Injury Frequency Rate

12.5 9.0 6.0 4.1 5.0 4.1 3.4

FY 11   FY 12   FY 13   FY 14   FY15   Q1 FY16   Q2 FY16
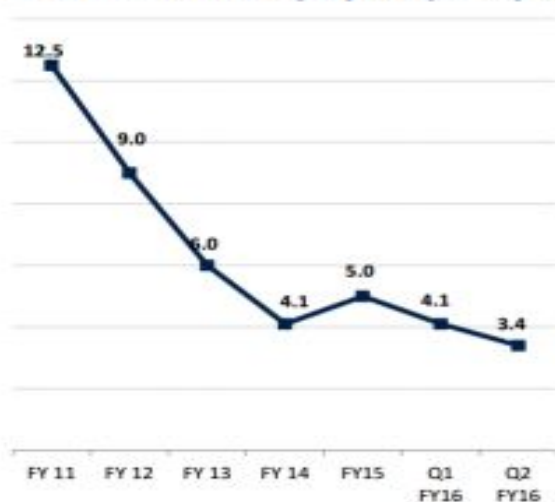
Safety performance

Ƶ Record low TRIFR[1] of 3.4 at Q2 FY16

Ƶ Continued good results for mixed jurisdiction underground / open pit combination

Ƶ Simberi Emergency Response Team multi prize winners at 2015 national competition[3]

Ƶ Leonora Emergency Response Team multi prize winners, including 'Best Team' at 2015 Underground Mine Emergency Response Competition[3]

Governance:

➢ The board of st barbara is comprised of 4 members with a range of knowledge, experience and skills which includes international and senior management experience and 75% of the board are non executive directors.

➢ The maximum aggregate amount is $1,200,000 which is payable to all non executive directors which was approved by the stockholders at Nov 2012 AGM.

➢ In the financial year 2015 chief executive officer remuneration was 45% fixed, 33% long term incentives and 22% short term incentive. Bob vassie MD and CEO received $631,217 in cash salary also bob holds ordinary shares of 1,769,053 and 4,062,500 rights in ordinary shares.

➢ The STI target was $325,000 and the maximum stretch was $650,000. The achievement of total injury recordable frequency rate of 4.5 had a 33% weighting for STI.

➢ Relatively total returns of share holder is 67% weighting which is measured against TSR of comparative peer group of companies which are below 50% will result in nil vested performance rights 50% vesting in 50th percentile, pro-rata 50-100% vesting in 50-75th percentiles also 100% of rights vested for 75th percentile.

➢ Capital employed on return in excess of weighted average cost of capital is 33% weighting. The ROCE is equal or less than WACC will deliver nil vested performance rights. ROCE of WACC + 3% result in 50 percent vesting and WACC + 7% result in 100% vesting of performance rights.

Board Composition: Average tenure is 1.3 years, and the progressive replacement of the complete board from 2014 at that time company for performing poorly. Since when the company has appointed Bob Vassie then the company has significant turnaround. However, we identify

that a relatively new board members does mean that some part of corporate memory has been lost (Credit Suisse, 2016).

SBM.AX	Director	Tenure on Board		Gender	Independent	Position	Committee Membership			
							Nominations and Governence	Health, Safety, Environment & Community	Risk and Audit	Remuneration
1	Tim Netscher	Feb-14	2.1	Male	✓	Chairman	✓Chair	✓Chair	✓	✓
2	Bob Vassie	Jul-14	1.7	Male	✗	CEO and MD		✓		
3	Kerry Gleeson	May-15	0.9	Female	✓	Director		✓	✓	✓Chair
4	David Moroney	Mar-15	1.1	Male	✓	Director		✓	✓Chair	✓

Part 2: Calculation of Beta

St Barbara Ltd (AXS identifier: SBM) period: daily

	A	B	C	D	E	F	G	H
1	Security	SBM AU Equity						
2	Start Date	1/07/2016 0:00						
3	End Date	30/06/2017 0:00						
4	Period	Daily						
5	Date	PX_LAST	SBM daily return		Date	PX_LAST	ASX market return	SBM daily return
6	1/07/2016	3.23	0		1/07/2016	5246.609	0.00000	0
7	4/07/2016	3.42	0.058823529		4/07/2016	5281.776	0.00670	0.058823529
8	5/07/2016	3.34	-0.023391813		5/07/2016	5228.001	-0.01018	-0.023391813
9	6/07/2016	3.49	0.04491018		6/07/2016	5197.5	-0.00583	0.04491018
10	7/07/2016	3.6	0.031518625		7/07/2016	5227.918	0.00585	0.031518625
11	8/07/2016	3.55	-0.013888889		8/07/2016	5230.537	0.00050	-0.013888889
12	11/07/2016	3.69	0.03943662		11/07/2016	5337.105	0.02037	0.03943662
13	12/07/2016	3.62	-0.01897019		12/07/2016	5353.216	0.00302	-0.01897019
14	13/07/2016	3.62	0		13/07/2016	5388.535	0.00660	0
15	14/07/2016	3.59	-0.008287293		14/07/2016	5411.607	0.00428	-0.008287293
16	15/07/2016	3.54	-0.013927577		15/07/2016	5429.57	0.00332	-0.013927577
17	18/07/2016	3.53	-0.002824859		18/07/2016	5458.468	0.00532	-0.002824859
18	19/07/2016	3.43	-0.028328612		19/07/2016	5451.253	-0.00132	-0.028328612
19	20/07/2016	3.31	-0.034985423		20/07/2016	5488.723	0.00687	-0.034985423
20	21/07/2016	3	-0.093655589		21/07/2016	5512.397	0.00431	-0.093655589
21	22/07/2016	3.18	0.06		22/07/2016	5498.187	-0.00258	0.06
22	25/07/2016	3.05	-0.040880503		25/07/2016	5533.563	0.00643	-0.040880503
23	26/07/2016	2.9	-0.049180328		26/07/2016	5537.474	0.00071	-0.049180328
24	27/07/2016	2.85	-0.017241379		27/07/2016	5539.693	0.00040	-0.017241379
25	28/07/2016	3.05	0.070175439		28/07/2016	5556.556	0.00304	0.070175439
26	29/07/2016	3.01	-0.013114754		29/07/2016	5562.358	0.00104	-0.013114754
27	1/08/2016	3.22	0.069767442		1/08/2016	5587.392	0.00450	0.069767442
28	2/08/2016	3.07	-0.046583851		2/08/2016	5540.538	-0.00839	-0.046583851

Graph 1

	A	B	C	D	E	F	G	H	I
1	SUMMARY OUTPUT								
2									
3	Regression Statistics								
4	Multiple R	0.065417							
5	R Square	0.004279							
6	Adjusted R	0.000312							
7	Standard E	0.035307							
8	Observatio	253							
9									
10	ANOVA								
11		df	SS	MS	F	ignificance F			
12	Regression	1	0.001345	0.001345	1.078755	0.299976			
13	Residual	251	0.312892	0.001247					
14	Total	252	0.314236						
15									
16		Coefficients	andard Err	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	pper 95.0%
17	Intercept	0.000336	0.002223	0.151246	0.879903	-0.00404	0.004714	-0.00404	0.004714
18	X Variable	-0.33401	0.321588	-1.03863	0.299976	-0.96737	0.299343	-0.96737	0.299343

Graph2

Procedure in Excel to calculating Beta

1. Download the particular stock's daily price and ASX market price and add to same excel page.

2. Run a calculation of return for both the stock and market; by subtracting previous day's price from next day then dividing the result by previous day's price.

3. Use excel vlookup function to match the date of stock return to date of market return.

4. Use filter function to eliminate any date that ASX was not trading.

5. Use stock return and market return to run Excel data analysis of regression.

6. Choose stock daily return as Input Y range and market daily return as X range.

7. Find the beta in output, the yellow shaded cell (coefficient X variable) is the beta.

The other three beta for different stock and time periods would be calculated in the same way. Following betas only shows the screenshots related to the stocks and periods.

St Barbara Ltd (AXS identifier: SBM) period: weekly

Graph 3

Graph 4

Graph 4 — SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.079766139
R Square	0.006362637
Adjusted R	-0.013120449
Standard E	0.073876917
Observatio	53

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.001782366	0.001782	0.326572	0.570194478
Residual	51	0.278347741	0.005458		
Total	52	0.280130107			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Upper 95.0%
Intercept	0.001413501	0.01022146	0.138288	0.890558	-0.0191106935	0.021934	-0.01911	0.021934
X Variable	-0.402479466	0.704294062	-0.57147	0.570194	-1.816408794	1.01145	-1.81641	1.01145

Boral Ltd (AXS identifier: BLD) period: weekly

Graph 5

Graph 6

Graph 6 — SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.440689
R Square	0.194207
Adjusted R	0.178407
Standard E	0.032186
Observatio	53

ANOVA

	df	SS	MS	F	ignificance F
Regression	1	0.012734	0.012734	12.29168	0.000958
Residual	51	0.052834	0.001036		
Total	52	0.065568			

	Coefficients	andard Erro	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Upper 95.0%
Intercept	0.002158	0.004453	0.484534	0.630081	-0.00678	0.011098	-0.00678	0.011098
X Variable	1.075779	0.306844	3.505949	0.000958	0.459764	1.691794	0.459764	1.691794

Boral Ltd (AXS identifier: BLD) period: daily

	A	B	C	D	E	F	G	H
1	Security	BLD AU Equity						
2	Start Date	1/07/2016 0:00						
3	End Date	30/06/2017 0:00						
4	Period	Daily						
5	Date	PX_LAST	BLD daily return		Date	PX_LAST	ASX daily return	BLD daily return
6	1/07/2016	5.81	0.0000000		1/07/2016	5246.609	0.00000	0.00000
7	4/07/2016	5.71	-0.0160543		4/07/2016	5281.776	0.00670	-0.01605
8	5/07/2016	5.68	-0.0048844		5/07/2016	5228.001	-0.01018	-0.00488
9	6/07/2016	5.74	0.0098343		6/07/2016	5197.5	-0.00583	0.00983
10	7/07/2016	5.86	0.0210972		7/07/2016	5227.918	0.00585	0.02110
11	8/07/2016	5.92	0.0095373		8/07/2016	5230.537	0.00050	0.00954
12	11/07/2016	6.00	0.0141792		11/07/2016	5337.105	0.02037	0.01418
13	12/07/2016	6.06	0.0093151		12/07/2016	5353.216	0.00302	0.00932
14	13/07/2016	6.08	0.0030709		13/07/2016	5388.535	0.00660	0.00307
15	14/07/2016	6.10	0.0046087		14/07/2016	5411.607	0.00428	0.00461
16	15/07/2016	6.21	0.0167936		15/07/2016	5429.57	0.00332	0.01679
17	18/07/2016	6.25	0.0075089		18/07/2016	5458.468	0.00532	0.00751
18	19/07/2016	6.18	-0.0119310		19/07/2016	5451.253	-0.00132	-0.01193
19	20/07/2016	6.21	0.0045322		20/07/2016	5488.723	0.00687	0.00453
20	21/07/2016	6.30	0.0150177		21/07/2016	5512.397	0.00431	0.01502
21	22/07/2016	6.27	-0.0044450		22/07/2016	5498.187	-0.00258	-0.00445
22	25/07/2016	6.33	0.0089138		25/07/2016	5533.563	0.00643	0.00891
23	26/07/2016	6.37	0.0073651		26/07/2016	5537.474	0.00071	0.00737
24	27/07/2016	6.41	0.0058522		27/07/2016	5539.693	0.00040	0.00585
25	28/07/2016	6.40	-0.0014506		28/07/2016	5556.556	0.00304	-0.00145
26	29/07/2016	6.40	0.0000000		29/07/2016	5562.358	0.00104	0.00000
27	1/08/2016	6.43	0.0043582		1/08/2016	5587.392	0.00450	0.00436
28	2/08/2016	6.41	-0.0028929		2/08/2016	5540.538	-0.00839	-0.00289
29	3/08/2016	6.33	-0.0130869		3/08/2016	5465.717	-0.01350	-0.01309
30	4/08/2016	6.38	0.0088350		4/08/2016	5475.81	0.00185	0.00884
31	5/08/2016	6.37	-0.0014570		5/08/2016	5497.41	0.00394	-0.00146
32	8/08/2016	6.46	0.0131635		8/08/2016	5537.842	0.00735	0.01316
33	9/08/2016	6.47	0.0014402		9/08/2016	5552.548	0.00266	0.00144
34	10/08/2016	6.40	-0.0100821		10/08/2016	5543.711	-0.00159	-0.01008
35	11/08/2016	6.39	-0.0014684		11/08/2016	5508.014	-0.00644	-0.00147
36	12/08/2016	6.43	0.0058351		12/08/2016	5530.911	0.00416	0.00584
37	15/08/2016	6.48	0.0072477		15/08/2016	5539.964	0.00164	0.00725
38	16/08/2016	6.50	0.0043235		16/08/2016	5531.984	-0.00144	0.00432
39	17/08/2016	6.57	0.0100243		17/08/2016	5535.049	0.00055	0.01002
40	18/08/2016	6.54	-0.0042622		18/08/2016	5507.82	-0.00492	-0.00426
41	19/08/2016	6.62	0.0114043		19/08/2016	5526.683	0.00342	0.01140
42	22/08/2016	6.62	0.0000000		22/08/2016	5515.055	-0.00210	0.00000
43	23/08/2016	6.73	0.0168984		23/08/2016	5553.773	0.00702	0.01690
44	24/08/2016	6.45	-0.0415440		24/08/2016	5561.674	0.00142	-0.04154
45	25/08/2016	6.40	-0.0072267		25/08/2016	5541.891	-0.00356	-0.00723
46	26/08/2016	6.36	-0.0072793		26/08/2016	5515.47	-0.00477	-0.00728
47	29/08/2016	6.32	-0.0058693		29/08/2016	5469.217	-0.00839	-0.00587
48	30/08/2016	6.22	-0.0162240		30/08/2016	5478.29	0.00166	-0.01622
49	31/08/2016	6.16	-0.0089939		31/08/2016	5433.033	-0.00826	-0.00899
50	1/09/2016	6.10	-0.0090756		1/09/2016	5415.564	-0.00322	-0.00908
51	2/09/2016	6.01	-0.0152699		2/09/2016	5372.804	-0.00790	-0.01527
52	5/09/2016	6.05	0.0062060		5/09/2016	5429.581	0.01057	0.00621
53	6/09/2016	5.97	-0.0123355		6/09/2016	5413.633	-0.00294	-0.01234
54	7/09/2016	5.99	0.0031308		7/09/2016	5424.25	0.00196	0.00313

Graph 7

	A	B	C	D	E	F	G	H	I
1	SUMMARY OUTPUT								
2									
3	*Regression Statistics*								
4	Multiple R	0.494437							
5	R Square	0.244468							
6	Adjusted R	0.241458							
7	Standard Er	0.014598							
8	Observatio	253							
9									
10	ANOVA								
11		df	SS	MS	F	ignificance F			
12	Regression	1	0.017308	0.017308	81.21607	5.29E-17			
13	Residual	251	0.053491	0.000213					
14	Total	252	0.070799						
15									
16		Coefficients	andard Err	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	Ipper 95.0%
17	Intercept	0.000322	0.000919	0.350584	0.726194	-0.00149	0.002132	-0.00149	0.002132
18	X Variable	1.198298	0.132967	9.011996	5.29E-17	0.936425	1.460171	0.936425	1.460171

Graph 8

Beta analysis

stock identifier	Period	beta	risk-free rate	market return
SBM	weekly	-0.40248	10 year Australian government bond	Annual return of ASX
SBM	daily	-0.33401	10 year Australian government bond	Annual return of ASX

	Security	SBM AU Equity	PX_VOLUME	return
1	Security	SBM AU Equity	PX_VOLUME	return
2	12/07/2016	3.62	5077622	-0.01897
3	13/07/2016	3.62	6089932	0
4	21/11/2016	2.37	5591703	0.072398
5	22/11/2016	2.37	3297535	0
6	28/02/2017	2.54	10102844	-0.11189
7	1/03/2017	2.54	5606727	0
8	24/05/2017	2.86	8589195	-0.0623
9	25/05/2017	2.86	7237080	0
10	23/06/2017	2.97	3658153	0.020619
11	26/06/2017	2.97	2237165	0
12	27/06/2017	2.97	3564687	0

Graph 9

Both periods of betas are negative figure means the stock has an inverse relationship with the market, although the volatility of the stock is less than the market as both betas are greater than -1. The beta based on the weekly return is higher than beta based on daily return. These are two reasons that this essay believes might cause the difference. Firstly, the size of SBM usually would be considered as small with a market capitalization around 1.3 billion (Bloomberg). The relatively small size decreases the beta as the return interval is shortened. It makes the stock appear less risky than it should be (Ibbotson, Kaplan and Peterson, 1997); such as the SBM's beta indicates less volatile with daily interval than the weekly interval. The second reason might be thin-trading. This essay applied zero return as an indication of thin trade which determined by no trade for stock or trade at an unchanged price. There were several days that SBM traded without price change in contrast to the previous trading day (Graph 9). There is a negative relationship between beta and number of the thin-trading day (Davidson and Josev, 2005). Both sizes of corporation and thin-trading might contribute to less volatile daily beta. On the other hand, weekly interval might smooth out the noisy with longer estimation period (Stoll and Whaley, 1990).

stock identifier	Period	beta	risk-free rate	market return
BLD	weekly	1.07578	10year Australian government bond	Annual return of ASX
BLD	daily	1.19830	10year Australian government bond	Annual return of ASX

Graph 10

The weekly and daily beta for BLD is greater than one show BLD's stock has greater volatility than the market. The beta based on a daily interval has a higher number than the beta based on weekly interval. This essay found two possible causes for the difference of the betas. It might be it's no-autocorrelation effect. For instance, reaction time for specific news could be different between companies and market. Another possible cause for a beta variance could be non-trading days (Aswath, 2012). Excel screenshot shows that compare green shaded area (trading date of BLD stock) to the yellow shaded area (market trading date), there were several days that BLD wasn't trading in the market, it could potentially add bias into the calculation (Graph 10). However, The more observation results used during the estimation period, the smaller the standard errors (Graph 8) of the estimated β than weekly estimation (Graph 6). The difference could simply be that the BLD daily beta is the more accurate than weekly beta (Phillip, Michael and Robert, 2000).

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