Assignment

The purpose of this assignment is to conduct a fundamental analysis of a company and derive an intrinsic value for its shares. This will require students to identify whether stocks are under or over valued in accordance with the valuation models and techniques used in this course together with appropriate analysis of the fundamental drivers of a company performance. The assignment has 2 parts, Part A, which must be done individually and Part B which must be done in groups of 3 (maximum) or in pairs.

The assignment is due on **Friday, 4pm, 28th October** and is worth **25%** of the total assessment for this subject and is not redeemable. Part A is worth 15% and Part B is worth 10%.

PART A: INDIVIDUAL COMPONENT

You are required to submit a word document on 'myuni'. Clearly identify your name and student number. Important: only diagrams, tables, charts etc that are produced by the student themselves should be included. All discussion should be to the point and meaningful.

Getting financial reports and data:-

Each student must select 3 companies from one industry sector according to their student number as follows:-

Banks (ANZ, CBA, NAB): student number ends in '0' or '1'
Consumer Services (CWN, FLT, SGR): student number ends in '2' or '3'
Diversified Financials (ASX, IFL, MQG): student number ends in '4' or '5'
Food & Staples Retailing (MTS, WES, WOW): student number ends in '6' or '7'
Real Estate (GMG, LLC, WFD): student number ends in '8' or '9'

If another member of your group has the same student number then select from a different industry sector.

All information including annual reports, share prices and beta can be obtained from the library website (select 'quicklinks'- Databases by subject/ Business/ DatAnalysis Premium) http://datanalysis.morningstar.com.au.proxy.library.adelaide.edu.au/ftl/company/ratio?xtm-licensee=datpremium&ASXCode=CSL&sy=2006-01-01&ey=2016-12-31&rt=A

Required

Provide a written report addressing the following issues. The report should provide a meaningful discussion of each issue.

1. Describe the industry sector to which each firm belongs in terms of what goods or services are produced and for whom (types of consumers).
2. Compare the financial performance of each firm over the last 4 years in terms of the following indicators (from the perspective of parent shareholders) and presented in tabular form (see below):
   - Total revenues
   - Gross profit margin [(revenues – cost of goods sold)/ revenues]
   - Net profit from continued operations
   - EPS based on net profit from continued operations
   - Net profit margin based on continued operations only (net profit/ revenues)
   - EBIT (1-T)
   - Effective tax rate (T)

- Interest rate (i)
- Interest expense
- Equity (book value)
- Debt
- D/E ratio
- b (retention ratio)
- ROC
- ROE
- Beta (current value from website)
- Average share price for the financial year

Company name: EVA Ltd			ASX code: EVA	Beta: 2.9
	Period t-3	Period t-2	Period t-1	Current Period
Total revenues				
Gross profit margin				
Etc, etc				

All information (except beta and share prices) should be sourced from annual reports.

3. Provide a ranking of the three companies as potential investments based on an analysis of their following multiples - trailing P/E, trailing P/B, fundamental 2 stage P/E and fundamental 2 stage P/B. Each multiple should be determined from data provided in the above table together with the current share price (as at end of September). For the purpose of estimating the discount rate assume a risk free rate of 3% and risk premium of 7%. Determine which company provides the best investment potential.

Important: The company you have selected together with the companies selected by your group members will form the basis of a portfolio to be used in assignments for Advanced Funds Management (M) and Derivatives (M).

PART B: GROUP COMPONENT

For this part of the assignment students are awarded marks as a group. It comprises of 5 sections. Students should submit a word document for Sections 1-3 & 5; and an excel file for Section 4 in addition to supporting analysis for Sections 2 & 3. You are required to submit both a word document file and an excel spreadsheet file on 'myuni'.

Important: only diagrams, tables, charts etc that are produced by the student themselves should be included. All discussion should be to the point and meaningful. A reference list should be provided at the end of the report.

Getting Started and data

Students are required to select a company based on their combined student number (last digit only).

- If your combined student number ends in 0 - 4 then your company is *Fortescue Metals Group Ltd* (ASX: *FMG*).
- If your combined your student number ends in 5 - 9 then your company is *Santos Ltd* (ASX: *STO*).

Financial data of individual firms can be obtained from the library website (select 'quicklinks'- Databases by subject/ Business/ Connect 4 Annual Report Collection or DatAnalysis Premium).

For share price and price index data go to https://au.finance.yahoo.com/. For an alternate list of index data go to S&P Dow Jones Indices website which provides a comprehensive list of indices including total return indices:
http://au.spindices.com/additional-reports/all-returns/index.dot?parentIdentifier=5f5bb69b-c5da-4001-9d5e-37e6afbdc150&sourceIdentifier=regional-exposure&additionalFilterCondition=

For information on government securities and the CPI Index go to Reserve Bank of Australia http://www.rba.gov.au/

Required

Section 1: Operating environment of the firm

In this section you should describe the firm's key operations. Operations should include what it produces and for whom it produces (types of consumers). Given your understanding of the firm discuss the challenges it presently faces.

Section 2: Analysis of revenues

In this section you should analyse the revenues of the company for at least the last 5 years including an analysis of revenues by segment (search supporting notes to annual report for this information). In your analysis you should attempt to derive the most appropriate approach to forecasting revenues. You should provide a summary of your key findings in tabular form in the word document report and the actual analysis in the excel file.

Section 3: Analysis of beta

In this section you should analyse the performance of the firm's share shares over the past 4 or 5 years compared with that of the ASX price index and include estimates of beta. Summarise your findings in a table showing regression outputs for beta, intercept, p-value and rsq for various time periods and intervals. Given your findings determine the appropriate measure of the firm's beta. Provide reasons to support your choice.

Section 4: Pro-forma financial statements and valuation (excel spreadsheet only)

Complete this section on excel spreadsheet only. On a single excel spreadsheet you are required to present a pro-forma income statement and balance sheet together with the actual/ adjusted financial data, free cash flow to equity (FCFE) and the firm (FCFF) and the valuation of a shares under both approaches. The spreadsheet should be organised in the format shown on the next page.

Important: You will marked on how well you link each cell by formulae. You will lose marks if you 'cut & paste' or manually key-in data (except for past financials). Provide a very brief description of how you forecast each item in 'column F' and the actual formula in 'column G', for example 'cost of goods sold' may be forecast based on average percentage of revenues in which case 'average % of past revenues' should be 'keyed in' in 'column F' and the excel formula of this calculation should be provided in 'column G'. In this way 'cost of goods sold' can then be forecast by linking it to the formula in 'column G' and the value of revenue in 'column H'. For items that require links to data outside of the spreadsheet, for example revenues based on a regression with GDP, then the revenue forecast should be linked to the cell in the regression output (cells from different spreadsheets can also be linked by excel formula).

Columns →

A	B	C	D	E	F	G	H	I	J	K
Income statement	Actual X1	Actual X2	Actual X3	Actual X4	Formula description	Formula	Forecast X5	Forecast X6	Forecast X7	Forecast X8
Revenue etc										
Balance sheet (adjusted)	Actual X1	Actual X2	Actual X3	Actual X4	Formula description	Formula	Forecast X5	Forecast X6	Forecast X7	Forecast X8
Current assets etc										
						FCFE	Forecast X5	Forecast X6	Forecast X7	Forecast X8
						NI etc				
						FCFF	Forecast X5	Forecast X6	Forecast X7	Forecast X8
						NI etc				
						Valuation FCFE				
						Valuation FCFF				

Forecast revenues should be based on the analysis performed in Section 2. For convenience all items that are not material should be forecasted as a % of revenues determined from past performance. As a guide items of the income statement of value that are at least 5% of revenues are material and items of the balance sheet that are at least 5% of total assets are material.

The present value calculations and share value should be of the following format.

FREE CASH FLOW TO EQUITY		**F20X5**	**F20X6**	**F20X7**	**F20X8**	**F20X9**
		130.0	48.4	52.5	57.0	61.8
Discount rate						
Present value	$x	$x	$x	$x	$x	$x
Terminal Value and formula						
PVTV						
Total Present Value of Equity						
Number of shares (m)						
Price per share						

An estimate of the cost of equity and WACC is required. The discount rate should be estimated using the capital asset pricing model, incorporating your estimate of beta produced in Section 3. An appropriate risk free rate and equity risk premium should be determined.

Section 5: Recommendation

In this section you should provide a comparison of the share value you have derived with the current market price (end of September) together with any reservations that you may have and conclude with your recommendation to buy/ sell or hold.

Producing Pro-forma financial statements:-

1. Downloading financial reports.

You should download or copy data ('unadjusted' data) from the income statements and balance sheets of the last 4 financial years on a single excel spreadsheet. Select the *2016* and *2014* annual reports if available otherwise the *2015* and *2013* financial reports (each financial report provides you with two years of data ie *2015* report provides the years *2015* & *2014*). Use **consolidated** data from the 'full' not 'concise' annual report and do not include 'other comprehensive income'.

Adjust the financial reports based on the following modifications.

a. Remove balances of goodwill and deferred tax debits or credits from the historical reports (they should not be forecasted either), making any necessary adjustment to the balance of 'retained profits' to ensure that balance sheet still balances for each year. Do not write off in excess of the value of 'retained profits' 'reserves' for any one year. To ensure this occurs, remove balances for deferred tax debits or credits first and if there is any balance remaining remove goodwill also. If a firm has a negative balance for contributed equity, like CSL, then do not go below zero for total equity.
b. Re-set all sub-totals using spreadsheet formula.
c. The adjusted financial reports should be presented in the spreadsheet.

2. Forecasting financial reports.
   Provide 'pro-forma' income statement and balance sheets for years t+1 to t+ 5 (explicit forecast period).

a. Revenues should be forecast in accordance with your analysis of revenues from Section 2.
b. An appropriate D/ E level should be obtained over time by end of explicit forecast period.
c. Retained profits. This should represent an accumulated balance of profits not distributed as dividends from year to year. The dividend payout ratio should be determined from an appropriate analysis of dividends distributed from past data. (Note: although some firms pay dividends in excess of current profits in any one year, you should count the dividend payout ratio as 100% maximum for that year). Provide a separate line representing dividends in the spreadsheet immediately below the net profit section even though this is not normally disclosed as part of the income statement.
d. Plug. To ensure that your projected balance sheet actually balances year by year an item from the balance sheet must be selected to be a PLUG – this item ensures that the balance sheet actually balances and should be the last item determined in the balance sheet. Select an appropriate item to be used as the PLUG and clearly mark this in the formula column.
e. All sub-totals and totals should be determined as totals.
f. Except for revenues, a description of the formula for each item should be provided in a separate column in the spreadsheet together with the actual cell containing the formula in the next column (which in turn is based on calculation and linked with other cells).
g. Your forecast financial statements should be provided together with the 'adjusted' past data.

3. Forecast free cash flow

Produce forecast free cash flows to equity (FCFE) and the firm (FCFF) year by year, showing each item separately. Each item should be determined by formula, linked with the appropriate items from the forecast income statement and balance sheet.

ASSIGNMENT SUBMISSION

The assignment should be submitted electronically to the Assessment folder using 'turnitin' on 'myuni'. Marks are deducted for late submission (see guidelines in Course Outline).

Clearly mark student names and IDs on both excel file (on spreadsheet) and word document.

Statement of Acknowledgement of Original Work

By submitting your assignment you are agreeing to the following:

I declare that all material in this assessment is my own work except where there is clear acknowledgement and reference to the work of others. I have also read the University's Academic Honesty Policy.

I give permission for my assessment work to be reproduced and submitted to other academic staff for the purposes of assessment and to be copied, submitted and retained in a form suitable for electronic checking of plagiarism.

Please be aware of policy and guidelines regarding plagiarism (see Course Outline for website link).

LIC Graeme Gould (GG)