BIGfatpurse

Intrinsic Value Calculator

USER GUIDE

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Read Me First... PLEASE

Thank you for downloading the intrinsic value calculator.

This user guide will not demonstrate how discounted cash flow (DCF) or discounted earnings per share (EPS) valuation works.

We will not be going through DCF's complex formulas nor explain the meaning and rationale behind the calculations.

Investopedia has covered well about the method which you can read about it here: http://www.investopedia.com/university/dcf/

The spreadsheet which you have downloaded is supposed to be "Plug and Play". Enter the data, and voila... you get the intrinsic value of the stock.

Let's Get Started!

Once you opened the spreadsheet, you will see 2 tabs – **Discounted EPS** and **Discounted Cash Flow.**

As a rule of thumb, growth companies usually have higher earnings growth while more established or blue-chips companies have more consistent cash flow growth.

You will need to decide whether the discounted EPS or CF is more suitable for use (based on the financial numbers)

If the company's earnings or cash flow is highly inconsistent, then this calculator is NOT applicable.

Below are some terms used in the spreadsheet which you will come across:

CAGR = Compounded Annual Growth Rate
FV = Future Value (Final Year EPS or Cash Flow)
PV = Present Value (First Year EPS or Cash Flow)
DF = Discount Factor
DV = Discount Value

Discounted EPS

Step 1:

1.1 You will need to enter the data into the orange boxes.

Current Year
Current EPS
EPS CAGR
Discount Factor

Discounted Earnings Per Share Model

Note: Key in the values in orange

Current Year	2013	enter data in oranges boxes	**FV**	2	
Current EPS	1		**PV**	1	
EPS CAGR (%)	10		**n**	4	Eg: 2005-2009, n=4
Discount Factor (%)	4		**CAGR (%)**	18.92	For input in B6
Current Share Price	1				

compounded annual growth rate calulator

Step 2:

2.1 To help you get the EPS CAGR, there is a CAGR calculator on the right hand side of the spreadsheet.

2.2 For illustration purpose, I am using **BreadTalk Group** Ltd as an example. We will use BreadTalk last 5 years EPS as an indication of its earnings growth.

2008: *0.02760*
2009: *0.03940*
2010: *0.04002*
2011: *0.04118*
2012: *0.04263*
(data from shareinvestor.com)

Final Year EPS = 0.04263 (FV)
First Year EPS = 0.02760 (PV)

2.3 So, enter the above two figures and n=4 (2008-2012) into CAGR calculator:

FV	0.04263
PV	0.0276
n	4
CAGR (%)	11.48

2.4 You will find that the earnings grew by about 11.5% annually for the past 5 years.

2.5 So, we will assume the earnings will continue to grow at 11.5% over the next 10 years.

2.6 Then key in all the data as follows:

Current Year	2012
Current EPS	0.04263
EPS CAGR (%)	11.5
Discount Factor (%)	4
Current Share Price	0.9

2.7 In Singapore's context, you could use **CPF's 4% risk-free interest rate as the Discount Factor (DF)**.

2.8 If you enter all the data correctly, it will auto-calculate and will arrive at the intrinsic value of the stock at the bottom of the spreadsheet:

Intrinsic Value	0.638

2.9 In this BreadTalk example, the intrisic value is at **0.638**

Discounted Cash Flow

Step 3:

3.1 Basically, it's very similar to Discounted EPS model as well. Instead of using earnings, we are using cash flow of the company as an indication.

3.2 You will need to enter the following data into the orange boxes:

Current Year
Cash Flow
Cash Flow Growth Rate
Discount Factor
Current Share Price
No. Shares Outstanding

3.3 For illustration purpose, we are using **Osim International** Ltd as an example. We will use its last 4 years' cash flow as an indication:

Net Cash Generated from Operating Activities:
2009: 65.2M *2010: 93.5M* *2011: 99.5M* *2012: 103.1M* *(data from shareinvestor.com)* Final Year Cash Flow = 103.1M First Year Cash Flow = 65.2M

3.4 So, enter the above two figures and n=3 (Year 2009 to 2012) into CAGR calculator:

FV	103.1
PV	65.2
n	3
CAGR (%)	16.50

3.5 You will find that the cash flow grew by about 16.5% annually for the past 4 years. So, we will assume the earnings will continue to grow at 16.5% over the next 10 years.

3.6 Then key in all the data as follows:

Current Year	2012
Cash Flow (millions)	103.1
Cash Flow Growth Rate (%)	16.5
Discount Factor (%)	4
Current Share Price	2

3.7 In Singapore's context, you could use CPF's 4% risk-free interest rate as the Discount Factor (DF).

3.8 Lastly enter the no. of outstanding shares of 723.57M (data from shareinvestor.com)

PV of 10 yr Cash Flow (mil)	2028.62	
No. Shares Outstanding (mil)	723.57	◄ key in the outstanding shares
Intrinsic Value	2.804	

3.9 If you enter all the data correctly, it will auto-calculate and will arrive at the intrinsic value of Osim's stock at $2.80.

--------[End Of User Guide]--------