Module 4

The Language and Tools of Financial Analysis

Forecasting Cash Flows (Back to the future)

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What do we need when using DCF?

DCF analysis requires estimates of future cash flows.

Consider the value of the firm to the shareholders.

$$Firm\ Value = \frac{Cash\ Flow_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \ldots + \frac{CF_n}{(1+r)^n}$$

We need to forecast cash flows over the firm's expected life (*0,….,n*).

When does forecasting make sense?

We know that future cash flow diminish in present value the further they are in the future.

So where do we draw the line?

$$Firm\ Value = \frac{Expected(Cash\ Flow_1)}{(1+r)^1} + \frac{E(CF_2)}{(1+r)^2} + \ldots + \frac{E(CF_n)}{(1+r)^n}$$

We distinguish between *short-term predictable* cash flows and *long-term sustainable* cash flows.

Forecast horizon

Length *(n)* of the predictability in cash flows depends on:

- size/maturity of the firm
- competition
- current growth

Estimation of future earnings

Estimate historical earnings growth – past is a guide to the future.

For the valuation of large established corporations this works, but for new investment projects, history is a poor guide.

For firms growing rapidly (from small to mature), past growth is no longer a guide.

Some analysts use management forecasts
Is that a good idea?

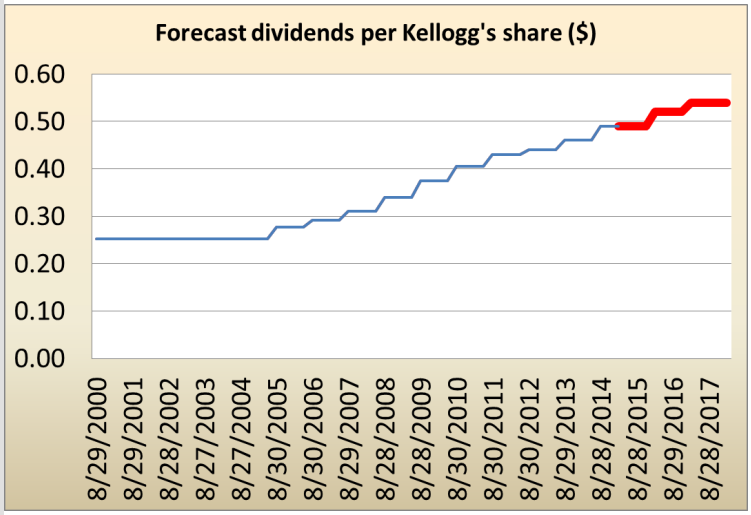
Estimation approaches

1. *Expected CF* is the single best estimate of the CF in that period – capturing the likelihood of good and bad outcomes.

2. *Scenarios* leads to a number of plausible cash flow forecasts – weigh each forecast by the likelihood of that scenario to get the expected CF.

3. *Simulation* leads to many different cash flow forecasts – the average of the simulations provides the expected CF.

Forecasting dividends is easy….



Estimation of future earnings

Quality of analysts' earnings forecasts over simple historical extrapolation depends on:

- *interpretation of historical information*
- *'environmental' information (competition, consumer confidence surveys, macroeconomic news)*
- *"private" information – **but be warned***
- *quality of analysts' models.*

Source List

Slide 7: Forecast dividends per Kellogg's share ($). © the University of Melbourne. Created with data sourced from Yahoo!7 Finance (https://au.finance.yahoo.com/q/hp?s=K) and NASDAQ (http://www.nasdaq.com/symbol/k/dividend-history)

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