***OFCF and NOPAT rather than FFCF and NI***

Some practitioners and textbooks discuss net operating profit after tax (NOPAT) and operating free cash flow (OFCF), defined as:

$$NOPAT=\left(Rev-COGS-FC-Depr-0\right).\left(1-t\_{c}\right)$$

$$OFCF=NOPAT+Depr-CapEx - ΔNOWC+0$$

These formulas are the same as the NI and FFCF formulas, but with interest expense set to zero (**IntExp=0**).

$$NI=\left(Rev-COGS-FC-Depr-IntExp\right).\left(1-t\_{c}\right)=NPAT$$

$$FFCF=NI+Depr-CapEx - ΔNOWC+IntExp$$

***Formulas: NOPAT & OFCF vs NI & FFCF***

$$NOPAT=\left(Rev-COGS-FC-Depr-0\right).\left(1-t\_{c}\right)$$

$$ =NI+IntExp.\left(1-t\_{c}\right)$$

Substitute into OFCF formula to see relationship with FFCF:

$$OFCF=NOPAT+Depr-CapEx - ΔNOWC+0$$

$$ = NI +Depr-CapEx - ΔNOWC+IntExp.\left(1-t\_{c}\right)$$

$$ =FFCF-IntExp.t\_{c}$$

So the OFCF equals the FFCF, but without the benefit of the interest tax shield per year: $IntExp.t\_{c}$

***EBIT and NI***

Earnings before interest and tax (EBIT) is sometimes used to construct similar formulas.

$$EBIT=Rev-COGS-FC-Depr$$

$$NI=\left(Rev-COGS-FC-Depr-IntExp\right).\left(1-t\_{c}\right)$$

$$NI=\left( EBIT -IntExp\right).\left(1-t\_{c}\right)$$

Let's check that it works for Just Group:

$$EBIT=Rev-COGS-Depr$$

$$ =822 -717 -24 = 81 $$

$$NI=\left(EBIT-IntExp\right).\left(1-t\_{c}\right)$$

$ =\left( 81 - 11 \right)×\left(1-0.3\right)=49$

***Negative Net Income, Taxes and Carry-Forward Losses***

$$NI=\left(Rev-COGS-FC-Depr-IntExp\right).\left(1-t\_{c}\right)$$

The Net Income (NI) equation above works for positive before-tax income: $Rev-COGS-FC-Depr-IntExp>0$.

But if a business's NI is negative then it's actually a loss.

The loss is not reduced by one minus the tax rate ($1-t\_{c}$) unless the loss can be deducted from another part of the business's profit.

If this is not the case, then the loss will be a 'carry-forward tax loss' and can be offset against any future profits, causing a time difference of when the tax saving is received.