#### Financing Cash Flows

Financing cash flows are:

- Debt-holders' cash flow (*DebtCF*) including coupons, principal and loan payments, less any new raisings such as debt issues (borrowing or selling new debt); **plus**
- Equity holders' free cash flow (*EquityFCF*) including dividends and buybacks, less any new raisings such as rights issues or placements (selling new shares).

*FinancingCF* = *EquityFCF* + *DebtCF* 

Where:

EquityFCF = Dividends + Buybacks - EquityRaisings

DebtCF = Coupons + Principal - DebtRaisings

## Why FFCF = Financing Cash Flows

FFCF must always equal equity-holders' dividends and buybacks plus debt-holders' coupon and principal payments, less any raisings (selling new equity or debt):

*FFCF* = *EquityFCF* + *DebtCF* 

 Note that FFCF, EquityFCF and DebtCF are defined in the narrow sense as cash flow income only, not capital gains.
FFCF will always equal the net cash flows to debt and equity holders because who else should be paid the FFCF besides these rightful owners?

#### Example 1: FFCF = EquityFCF + DebtCF

**Question**: If the firm kept this year's FFCF in the bank, wouldn't FFCF be higher while neither the debt nor equity-holders receive the cash flows, breaking the above equality?

**Answer**: No, because if some FFCF is put in the bank and:

- Excess cash is excluded from  $\Delta$ NOWC, keeping this cash in the bank will not affect  $\Delta$ NOWC or FFCF at all. The equality holds.
- Excess cash is **not** excluded from  $\Delta$ NWC (note the missing O for operating), then the cash kept in the bank would have increased  $\Delta$ NWC which should have already been subtracted from the FFCF, so all FFCF will still be paid to debt and equity holders.

 $\Delta NOWC = \Delta CA - \Delta ExcessCash - (\Delta CL - \Delta InterestBearingCL)$  $\Delta NOWC = \Delta CA - \Delta ExcessCash - \Delta CL + \Delta InterestBearingCL$  $\Delta NWC = \Delta CA - \Delta CL$  $FFCF = NI + Depr - CapEx - \Delta NOWC + IntExp$ 

FFCF = EFCF + DebtCF

 $NI = (Rev - COGS - FC - Depr - IntExp).(1 - t_c)$ 

## Example 2: FFCF = EquityFCF + DebtCF

If the firm uses its FFCF to re-invest and buy more assets, it may appear that FFCF is higher while neither the debt nor equity-holders will receive the cash flows, breaking the equality.

But remember that any increase in the firm's assets will result in an:

- Increase in capital expenditure (CapEx) in the case of buying buildings or machines; or an
- Increase in net operating working capital ( $\Delta$ NOWC) in the case of buying inventory.

Both should have already been subtracted from FFCF, so they should not increase FFCF at all. The equality holds.

 $FFCF = NI + Depr - CapEx - \Delta NOWC + IntExp$ 

FFCF = EFCF + DebtCF

# Why Financing Cash Flows are Ignored

If all financing costs such as equity dividends and buybacks together with debt coupons and principal were subtracted from FFCF, then there would be nothing left since:

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FFCF = EquityFCF + DebtCF
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So:

FFCF - EquityFCF - DebtCF = 0

Therefore it's best **not to subtract financing costs** such as dividends, buybacks, interest or principal payments from FFCF, otherwise the assets' FFCF will be zero and the present value of this will also be zero so your assets will appear worthless, when in fact they could be very valuable!

#### **FFCF Equation**

 $NI = (Rev - COGS - FC - Depr - IntExp).(1 - t_c)$ 

 $FFCF = NI + Depr - CapEx - \Delta NOWC + IntExp$ 

#### **FFCF equals Net Income...**

- Plus Depreciation (Depr), because it is subtracted in NI. We reverse it because depreciation is not a cash flow.
- Less net Capital Expenditure (CapEx), since the cash flow from buying buildings must be subtracted.
- Less the Increase in Net Operating Working Capital (ΔNOWC).

- Plus Interest Expense (IntExp), because it is subtracted in NI. We reverse it because Interest Expense is a finance or funding related expense which has nothing to do with the assets themselves.
  - Also, interest expense is an accrual, it is not a cash flow. This is apparent when considering that zero-coupon bonds incur interest expense. Accountants define interest expense as the debt price at the start multiplied by its current yield.

#### **Equation Summary**

 $NI = (Rev - COGS - FC - Depr - IntExp).(1 - t_c)$  $FFCF = NI + Depr - CapEx - \Delta NOWC + IntExp$ FFCF = EquityFCF + DebtCFEquityFCF = Dividends + Buybacks - Raisings*DebtCF* = *Coupon* + *Principal* - *Raisings*  $CapEx = NFA_{now} - NFA_{before} + Depr = GFA_{now} - GFA_{before}$  $\Delta NOWC = \Delta CA - \Delta CL - \Delta ExcessCash + \Delta InterestBearingCL$ Notes:

Cash Flow From Assets (CFFA) is another name for FFCF.

# FFCF equals Equity Free Cash Flow (EFCF) plus Debt Cash Flow (DebtCF) payments to debt holders.

Payments to debt holders should be actual cash flows of principal and coupon or loan payments, not interest expense which is an accrual. For example, a 10 year zero-coupon bond with a positive non-zero yield to maturity ( $r_D$ ) that's 2 years old has a positive interest expense ( $IntExp_2 = D_1. r_{D1 \rightarrow 2}$ ), even though no cash flows are paid or received ( $DebtCF_2 = 0$ ).