



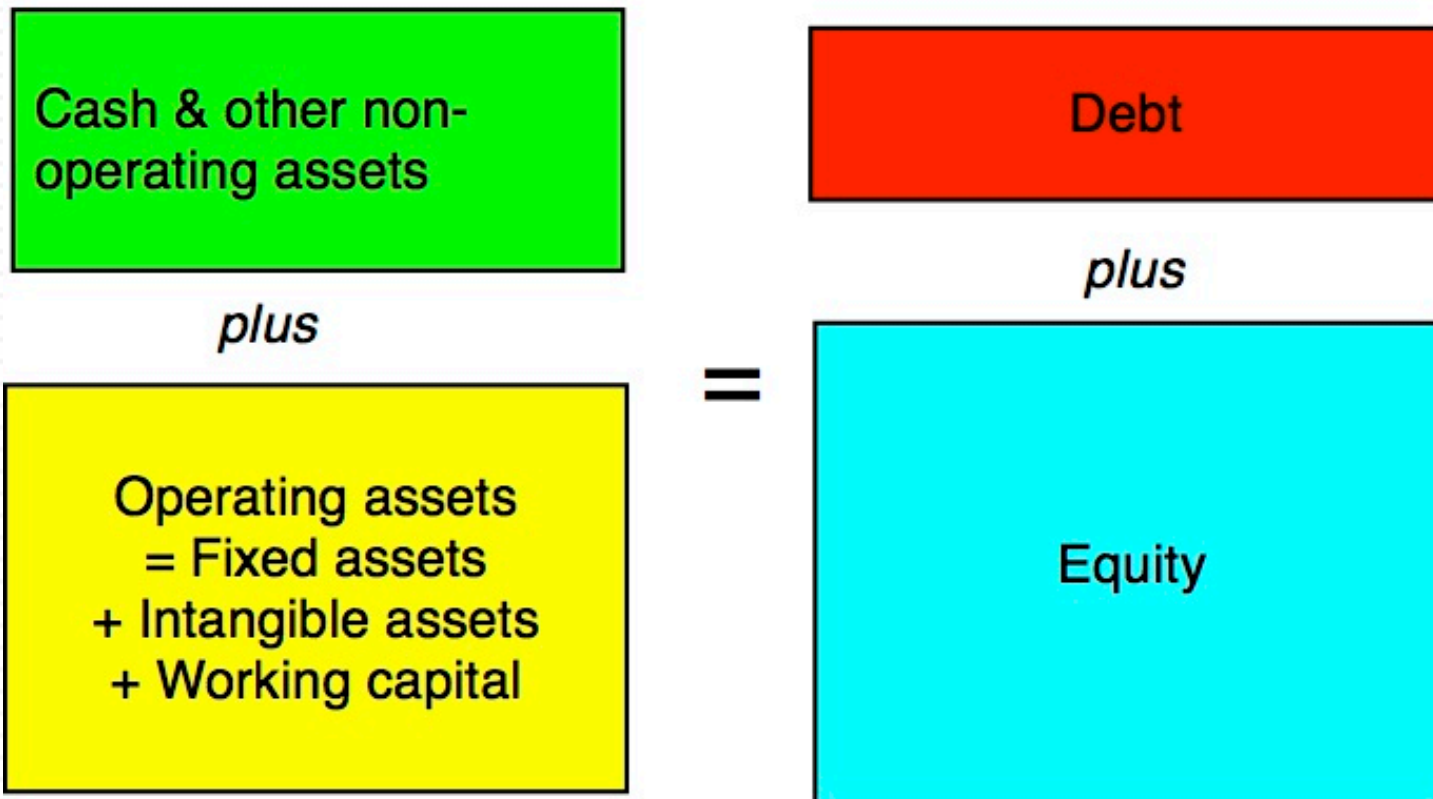
A TANGLED WEB WE WEAVE: ENTERPRISE, FIRM & EQUITY VALUES

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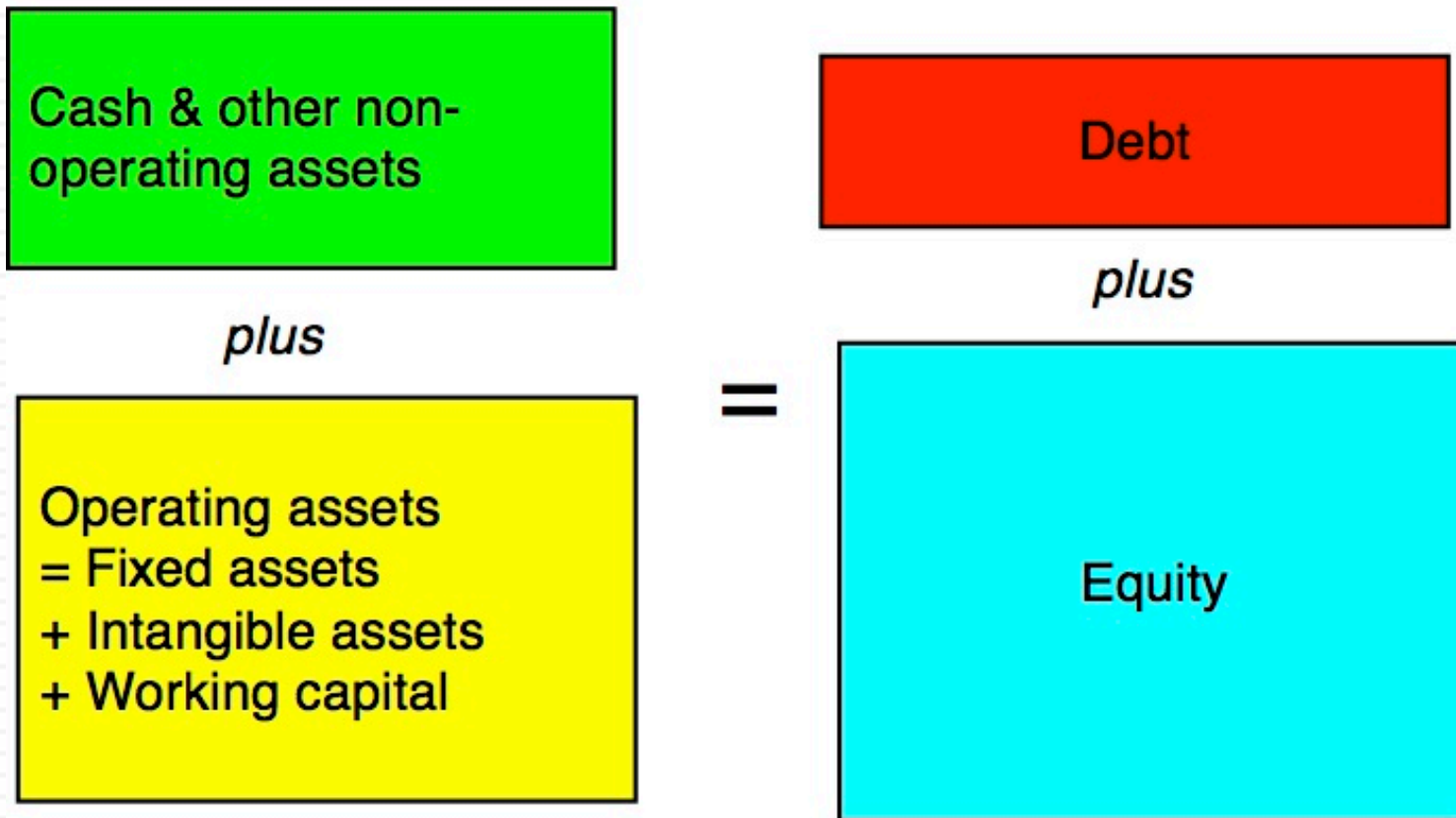
A Market Value Balance Sheet

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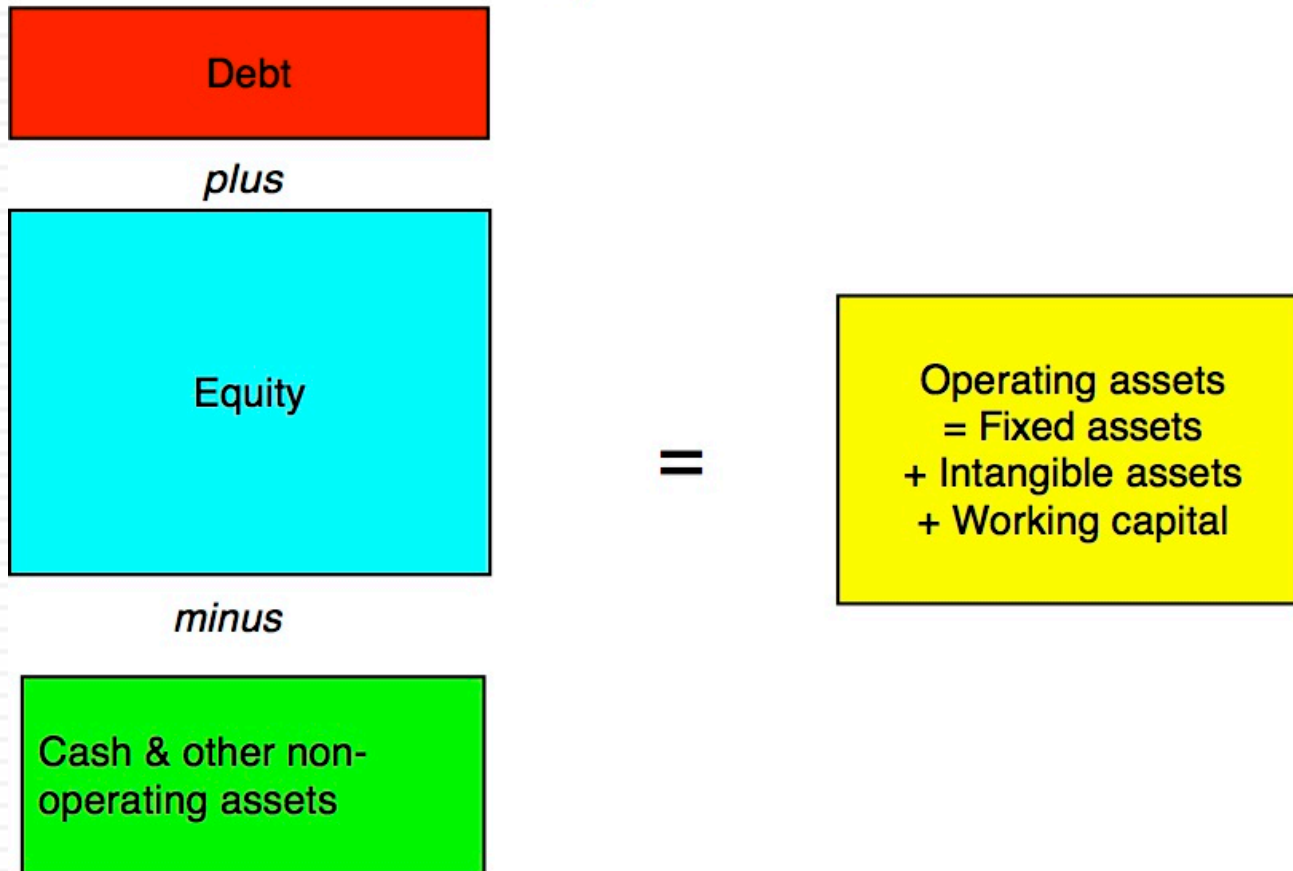
Firm Value = Value of everything that a company owns

Firm Value

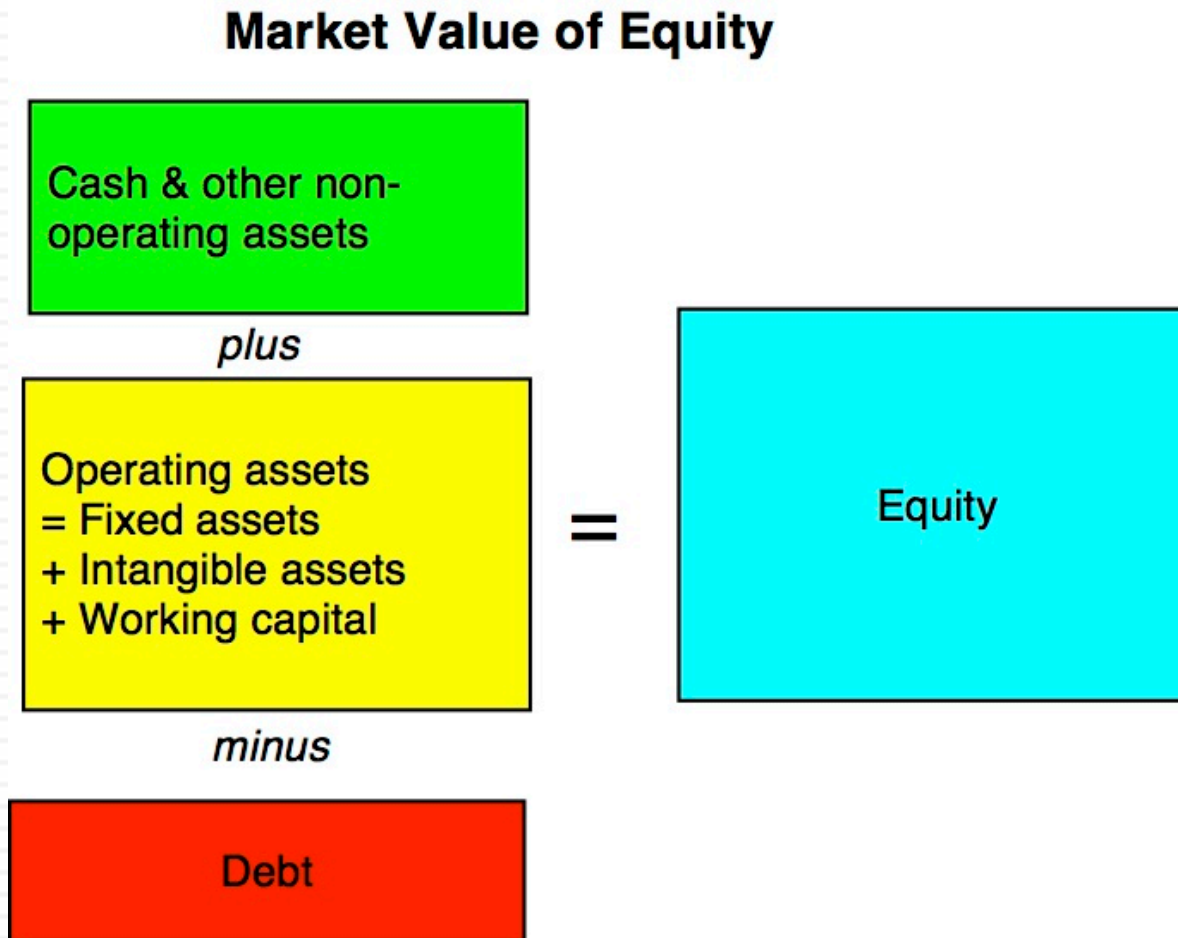


Enterprise value = Value of Operating Assets

Enterprise Value



Market Value of Equity



What goes into equity?

| Category | Calculation notes |
|--|---|
| Common Stock (all classes) | Use only actual shares outstanding, if you are valuing options separately. If you are not valuing options, you can try to use diluted shares. Count Restricted Shares Units (RSUs) in shares outstanding. |
| Employee Options | Value the options as options (not on exercise value). |
| Conversion Options in other securities | If you can, value the conversion options embedded in other securities (debt & preferred stock) |

What goes into debt?

| Category | Calculation notes |
|---|--|
| Interest bearing debt | If you can estimate market value of debt, do it. If not, use book value of debt and hope and pray that the firm is not distressed. |
| Lease/Contractual Commitments | Take the present value of lease and other contractual commitments, using the pre-tax cost of debt as your discount rate. (If you have capital leases, they should already be in your interest bearing debt). |
| Underfunded Pension/Health care obligations | If these are going to require “legally obligated” payments (to make the under funding go away), treat those payments like lease commitments and convert to debt. |

What goes into Cash & Other Non-operating Assets?

| Category | Calculation notes |
|-------------------------------|--|
| Cash & Short Term Investments | These should be investments in liquid, close to riskless assets. If you feel strongly that some of the cash is needed for operations and that cash is wasting cash (it does not earn a fair rate of return, i.e. the riskless rate), you can net the operating cash from the cash balance. If some of the cash is trapped, you can also net out taxes. |
| Non-Operating Assets | These are primarily minority holdings in other companies. Ideally, you would like to estimate the market value of these minority holdings. If not, you can use book value. This is not meant to be a catch-all for other asset classes such as goodwill or brand name which are related to operations. |

Consistency in Multiples

| <i>If value estimate is</i> | <i>Earnings divisors</i> | <i>Book value divisors</i> | <i>Revenue divisors</i> |
|--|---|---|---|
| Market value of equity (Market cap or variants) | Net Income (PE) | Book value of common equity (PBV) | No consistent version (Do not use) |
| Firm Value | EBIT + Income from cash & cross EBITDA + Income from cash & cross holdings | Book value of common equity + Book value of preferred stock + Book value of debt (Firm value/ Book value) | No consistent version (Do not use) |
| Enterprise value (without leases) | EBIT (EV/EBIT) EBITDA (EV/EBITDA) | Book value of invested capital = Book value of debt + Book value of equity - Cash - Book value of cross holdings (EV/Invested Capital) | Revenues (EV/Sales) Subscribers/Members (EV/Subscriber or EV/Member) |
| Enterprise value (with leases treated as debt) | EBITDAR = EBITDA + Current year's lease/rent expense (EV/EBITDAR) | Book value of invested capital + PV of lease commitments | Revenues (EV/Sales) Subscribers/Members (EV/Subscriber or EV/Member) |

Value Rankings

| Company Name | Market Capitalization | Ranking | (Plus) Total Debt | (Plus) PV of leases | (Plus) Preferred Stock | Firm Value | Ranking | (Minus) Cash & Investments | (Minus) Equity cross holdings | (Plus) Minority Interests | Enterprise Value | Ranking |
|--|-----------------------|---------|-------------------|---------------------|------------------------|------------|---------|----------------------------|-------------------------------|---------------------------|------------------|---------|
| Exxon Mobil Corporation (NYSE:XOM) | \$401,730 | 1 | \$13,412 | \$7,351 | \$0 | \$422,493 | 2 | \$41,855 | \$0 | \$6,076 | \$386,714 | 2 |
| Apple Inc. (NasdaqGS:AAPL) | \$372,203 | 2 | \$0 | \$3,854 | \$0 | \$376,056 | 3 | \$144,687 | \$0 | \$0 | \$231,369 | 10 |
| Google Inc. (NasdaqGS:GOOG) | \$292,077 | 3 | \$7,376 | \$3,224 | \$0 | \$302,677 | 8 | \$51,568 | \$0 | \$0 | \$251,109 | 6 |
| Microsoft Corporation (NasdaqGS:MSFT) | \$288,489 | 4 | \$14,765 | \$1,781 | \$0 | \$305,035 | 7 | \$84,981 | \$0 | \$0 | \$220,054 | 13 |
| Wal-Mart Stores Inc. (NYSE:WMT) | \$244,080 | 5 | \$57,201 | \$14,389 | \$0 | \$315,670 | 6 | \$9,355 | \$0 | \$6,141 | \$312,456 | 3 |
| Johnson & Johnson (NYSE:JNJ) | \$241,171 | 6 | \$15,892 | \$835 | \$0 | \$257,898 | 11 | \$23,193 | \$0 | \$0 | \$234,705 | 8 |
| General Electric Company (NYSE:GE) | \$239,787 | 7 | \$397,412 | \$3,623 | \$0 | \$640,822 | 1 | \$155,210 | \$0 | \$5,336 | \$490,948 | 1 |
| Chevron Corporation (NYSE:CVX) | \$229,403 | 8 | \$14,143 | \$3,190 | \$0 | \$246,736 | 13 | \$43,552 | \$0 | \$1,352 | \$204,536 | 15 |
| PetroChina Co. Ltd. (SEHK:857) | \$223,060 | 9 | \$91,709 | \$13,701 | \$0 | \$328,469 | 5 | \$33,089 | \$13,373 | \$19,413 | \$301,420 | 4 |
| International Business Machines Corporation (NYSE:IBM) | \$211,902 | 10 | \$33,397 | \$5,250 | \$0 | \$250,548 | 12 | \$17,045 | \$0 | \$122 | \$233,625 | 9 |
| Procter & Gamble Co. (NYSE:PG) | \$211,012 | 11 | \$32,223 | \$1,598 | \$1,195 | \$246,028 | 14 | \$7,385 | \$0 | \$685 | \$239,328 | 7 |
| Roche Holding AG (SWX:ROG) | \$210,644 | 12 | \$26,859 | \$793 | \$0 | \$238,296 | 17 | \$15,609 | \$26 | \$2,440 | \$225,101 | 11 |
| China Mobile Limited (SEHK:941) | \$209,922 | 13 | \$4,602 | \$5,387 | \$0 | \$219,911 | 18 | \$72,414 | \$7,757 | \$299 | \$140,039 | 20 |
| Nestlé S.A. (SWX:NESN) | \$208,796 | 14 | \$30,402 | \$2,839 | \$0 | \$242,037 | 15 | \$27,051 | \$10,754 | \$1,810 | \$206,042 | 14 |
| Royal Dutch Shell plc (LSE:RDSA) | \$203,451 | 15 | \$35,790 | \$27,023 | \$0 | \$266,263 | 10 | \$56,970 | \$34,478 | \$1,433 | \$176,248 | 17 |
| Pfizer Inc. (NYSE:PFE) | \$198,681 | 16 | \$40,403 | \$1,084 | \$39 | \$240,207 | 16 | \$51,529 | \$0 | \$577 | \$189,255 | 16 |
| Toyota Motor Corporation (TSE:7203) | \$191,230 | 17 | \$151,749 | \$578 | \$0 | \$343,557 | 4 | \$105,270 | \$22,329 | \$6,633 | \$222,591 | 12 |
| AT&T, Inc. (NYSE:T) | \$190,452 | 18 | \$74,915 | \$19,909 | \$0 | \$285,276 | 9 | \$9,625 | \$4,998 | \$340 | \$270,993 | 5 |
| The Coca-Cola Company (NYSE:KO) | \$178,640 | 19 | \$35,125 | \$966 | \$0 | \$214,731 | 19 | \$30,403 | \$9,850 | \$414 | \$174,892 | 18 |
| Novartis AG (SWX:NOVN) | \$174,213 | 20 | \$20,944 | \$2,664 | \$0 | \$197,822 | 20 | \$23,181 | \$0 | \$119 | \$174,760 | 19 |