2019 - The Normalised Net Free Cash-flow Multiple in Context

- **Normalising, or "cycle-adjusting", was brought to fame by Prof. Robert Schiller,** with his famous CAPE, or "Schiller PE". Schiller makes both a cycle (taking a 10-year average) and an inflation adjustment to aggregated earnings data in the major world indices. We analyse here the value added of our own Normalised Net Free Cash-flow (FCF) multiple.

- **Our bottom-up, stock-specific approach to normalisation is not a historical averaging**. We deconstruct the accounts (see an example on page 3) of each stock to an unrecognisable level (always with the economic logic of capital allocation and consumption in mind, though), to produce a Normalised Net FCF multiple. On page 4, we plot 53 quarters of the median ratio (from Q1 2006 to Q1 2019).

- **Our ratio not only displays very strong mean-reversion characteristics (to be expected), but the numbers themselves are staggeringly consistent with other observations**. The average multiple over the period is 25.8x. This implies a real long-term expected return of diversified global equities of 5.7% (see detailed calculation on page 5).

- **5.7% real is perfectly aligned with the most prominent top down research results in the field.** It is also consistent with the cost of capital approach (long-term return equals real rates plus risk premium) and the "Warren Buffett approach" (long-term return equals real growth plus yield).

- **As much as this appeals to us as a vindication of our bottom-up work, this is not good news.** This study suggests that we have entered a major equity risk premium adjustment (expansion). In all likelihood, we will punch through the 25.8x long-term average in the coming years (we are currently at 30x, or an expected real return of 5.4%).

- **Bold stock picking and staunch Intrinsic Value awareness will be the winners during this period,** For the former, Apple trades on a norm. net FCF multiple of 18x, and Procter & Gamble on 27x. We know where the median investor is, and we are minded to challenge him. In addition, this study more than supports our wariness of multiples above 25x norm. net FCF. What was before a clear but occasionally flexible stance is likely to become more strictly enforced in our research.

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Summary

What is "normalised net Free Cash Flow"?

Free Cash-flow is one of the most talked about and least understood measures in financial analysis, partly because, as "non-GAAP", it is snubbed by US analysts. Here is a quick overview of the various levels of Free Cash-flow and their purpose.

Glossary of Free cash flow definitions

Free Cash-flow is a major management measure; it calculates the cash generated by operations after reinvestment. In simple form, Cash from Operations (CFO) minus CAPEX. It is usually understood "unlevered", or before financial costs, and compared to the Enterprise Value. In certain circumstances, it can be useful to calculate a *levered* version (including the cash interest charge), to be compared to the market value of the equity only.

Operating Free Cash-flow is a notional amount after maintenance CAPEX only. It is a useful measure to assess the structural, or organic, profitability of a business.

Net Free Cash-flow is defined after all capital expenditures, or "capital consumption". It is the amount of cash that is left to keep the company in the game, excluding acquisitions and the remuneration of capital lenders.

Normalised net Free Cash-flow takes into account the cash-flow cycle of a company to give an estimate of its cash generation potential over a business cycle. The VA normalisation process is at the revenue level, but also at the margin and CAPEX levels. Because Free Cash-flow is a small residual (usually smaller than net profits), this "calibration" is important and more accurate

than a simple average. Norm. net FCF is, we believe, the most accurate and relevant measure of corporate profitability.

A Typical Normalised Net FCF Calculation

The following table shows the difficulty of a simple averaging approach. Western Digital having made a major acquisition in 2016[1], the choice is between averaging over too short a period (2 years) and be consistent, or adding apples and pears (i.e. pre and post-acquisition data). See how the *reported* averaged net FCF number (3.7bn) does not bear any resemblance with the VA number (1.2bn).

WESTERN DIGITAL In USD Billion	VA Normalised	2-year average
Revenues	16.39	19.79
Comparable CFO margin	14.1%	22.6%
Gross Cash flow (**economic**) [2]	4.34	
Cash from Op. (**accounting**)		4.46
CAPEX	0.95	0.76
INTEX	1.96	
LEASEX	0.19	
OLTEX	0.46	
CONCEX	0.14	
Net Free Cash-Flow	**1.21**	**3.70**

Source ValuAnalysis and Capital IQ

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[1] The acquisition of SanDisk

[2] Not comparable to Cash from Op. (CFO), which is an accounting measure.

The Relevance of the Normalised Net FCF Multiple

The calculation of a normalised level of net Free Cash-flow (Norm.net FCF) allows investors to compare it to a market value and extract a multiple (Enterprise Value / Norm.net FCF). **This is what the P/E ratio is trying to approximate with net profits.** In the case of the VA Norm.net FCF multiple, its closest challenger would be the "Schiller P/E", or CAPE (Cyclically Adjusted P/E). The benefits of these normalised multiples are substantial. At the market level, this is the only way to extract some measure of the risk premium and the expected return.

History of the VA Norm. net FCF multiple

We have a database of 53 quarters of Norm. net FCF multiples for a representative sample of global large caps, excluding levered businesses such as banks or car makers, and resource companies (including oil). The chart on the right plots this ratio since Q1 2006. Unlike the Schiller approach, which adjusts aggregated data, our database is entirely bottom-up, and the quarterly reading is the median point of our universe, which we believe is the most representative average.

The line in orange is the 40 quarters (or 10 year) average. We also show, still in orange, the representative point of the average of the *entire* series, at 25.8x. The fact that it is trending upwards is not significant in our view, and is purely due to the relatively short period of study, we believe.

Strikingly, but not unsurprisingly, both measures point to a long-term "equilibrium" of between 25x and 26x normalised net FCF, which, for ease of calculation, we will call 25x. Note that this is the level at or under which we are happy to invest in individual shares.

VA Normalised net fcf ratio since Q1 2006

Norm. net FCF multiple and long-term average

25.8x, avg of the series
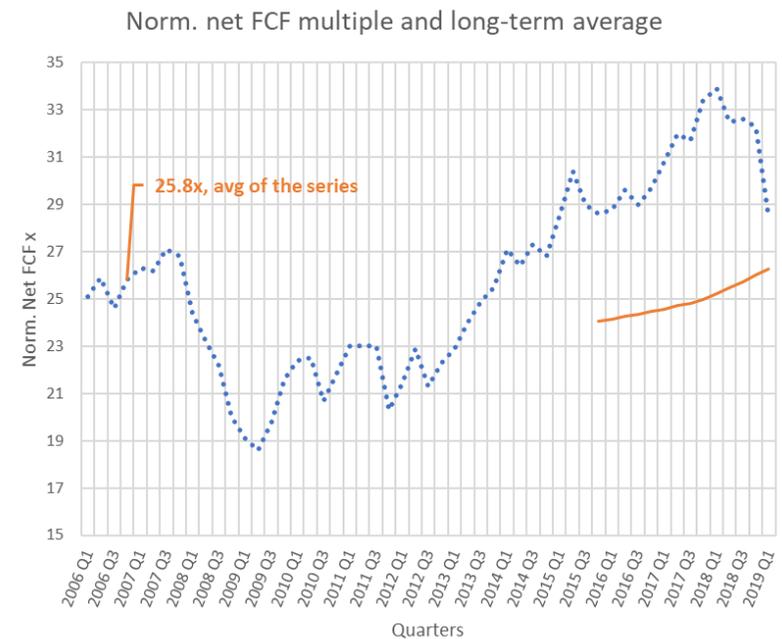
Source ValuAnalysis limited

Is 25x Norm.net FCF a significant level?

We believe that it is, as this average corresponds to many **long-term measures of equity returns**.

Our preferred (and uncontroversial) calculation of a real expected return is the following:

$$\delta(1 + g) * Y + (g - \pi)$$

Where:

δ is the distribution rate of dividends

g is the nominal growth rate

Y is the cash yield, or the inverse of the Norm.net FCF multiple

(g-π) is the expected real growth rate

We believe that it is reasonable to make the following assumptions:

Variable	Assumption
π	2.0%
g	5.5%
Y	3.1%
δ	67%

Source ValuAnalysis limited

We assume that the real growth rate of the world on a trend basis is 3.5%, which we have translated into 5.5% nominal growth minus 2% inflation.

The distribution rate is difficult to pin down, as it is not only covering dividend distribution but also share repurchase. We have based this figure (67%) on the belief and the anecdotal evidence that companies will tend to allocate two thirds of the remaining cash on average to their capital providers (excluding debt, see below).

We have taken the long-term average of our series (25.8x) as the basis of our unlevered cycle-adjusted, or normalised, yield. Investors expect a net figure, after financial costs are paid. We therefore assume an average 20% retention for the payment of financial costs, hence 3.1% yield, or (1/25.8) x 80%.

Plugging these figures into the formula gives the following results:

Level of the market	25.8x	30.0x (Q1 2019)
Expected Return	5.7%	5.4%

Source ValuAnalysis limited

- 5.7% (real) tallies with what most observers think the global equity market generates in the long run. The U.S. has been observed at perhaps a higher level (6.8% seems to be the central figure), but this exercise is based on a global universe. The U.S. corporates, with their premium capital allocation and management, do tend to return more than elsewhere.

- This figure also tallies with the rule of thumb calculation that the cost of capital is the sum of the real risk-free rate plus an equity risk premium. Evidently, cost of capital and long-term expected return should converge, and they do. 5.7% could be rationalised as a risk-free real rate of, say, 2.5% (normalised), and a risk premium of 3.2%.

- The figure finally matches the "Warren Buffet calculation" of real growth + yield = real expected return. Assuming 2.5% and 3% (including share buy backs) gives a figure close to our calculated 5.7%.

Lessons for 2019 and beyond

A Risk Premium Market

The global cycle might be rolling over, with the U.S. at peak capacity, Europe not doing much, as always, and China struggling to pull out of the current low growth period. Yet we don't think that this is what is going to derail markets. In many respects, the more cyclical shares have already discounted the worst. For example, Western Digital, whose example we have used earlier, trades on exactly 1x assets (at replacement value) at its current share price (USD 40). Yet we believe that its normalised net rent is higher than the cost of capital, which means that it should trade above its economic net assets value. In Europe, Valéo, the car equipment manufacturer, has seen its share price halve in six months; at EUR 25, it trades on 90% of replacement value.

This anecdotal evidence suggests that the "cyclical adjustment" is perhaps more advanced than sometimes suggested. On the other hand, *the risk premium normalisation is not*. Long-term returns of equities have formidable mean-reversion characteristics. Capital flows ensure that excess returns get competed away efficiently. On the current level of normalised net FCF (almost exactly 30x), the expected return is probably too low with respect to long-term trends (5.4%).

The trigger for this reversion to the mean was, in all likelihood, the central banks. Calling the end of the party by removing excess liquidity in a way or another means that real rates are going up in the coming years. Everything else being equal, if real rates are going up, the equity risk premium is likely to be going up, too.

As the chart on page 4 makes it clear, the market hardly ever stays at its long-term, mean-reverting average of ca. 5.7% expected return. The likelihood is that we might punch through this level and see the market below 25.8x normalised net FCF in the coming years.

25x Norm. net FCF an important hurdle

ValuFocus, and generally all our stock-picking products apply the same rule: be wary of stocks trading above 25x normalised net FCF. This study, done – unusually for us – at the most aggregated level, vindicates this approach beyond our expectations. More than ever, we believe that money will be made when we buy, as the saying goes. The Entry Point, which we spend a lot of time to determine, seems to be critical in a market with rising risk premium. Stock picking and intrinsic value analysis and likely to be instrumental in managing this mean-reversion period.

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GLOSSARY

Cash Yield	The inverse of the normalised net free cash flow multiple
Competitive Advantage Period (CAP)	The period during which a firm can generate a return (see Rent) above the cost of capital.
Economic Profits	Cash profits or Free Cash Flow minus the notional cost of capital.
Excess Return	The level of return above the cost of capital.
Fade	The rate of normalisation of the competitive position of the firm, defined as its level of Rent and growth rate. By construction, an excess return cannot be assumed to be perpetual, and the market always assumes an eventual normalisation towards the cost of capital.
Franchise Value	One of the three sources of value, defined as the net present value of a firm's sustainable level of Economic Profits over its Competitive Advantage Period.
Gross economic Capital (GeC)	The sum of all operating capital used by the firm pre-depreciation, including all tangible assets, capitalised intangible assets and operating leases, Other Long Term Assets (OLTA) and concession assets.
Growth Value	One of the three sources of value, defined as the residual of: Market Value minus Replacement Value and Franchise Value.
Intrinsic Value	The sustainable value of a firm, defined as Replacement Value plus Franchise Value.
Net economic Capital (NeC)	The depreciated value of GeC, according to the principles of economic depreciation.
Net Free Cash Flow	Gross cash flow minus all capital spending.
Operating Free Cash Flow	Gross cash flow minus maintenance capital spending.
Rent or Rent Yield	The ratio of FCF over Net economic Capital. We refer to it as "asset yield" or "cash return" as well.
Replacement Value	One of the three sources of value, equal to Net economic Capital.
Residual Income Model	A valuation framework defining the price of an asset as the net (depreciated) value of this asset plus the net present value of its sustainable level of economic profits.
Sustainable Growth	The (usually debt-free funded) sustainable growth rate of assets.
Total Expected Return (TER)	Cash yield and sustainable growth
Worst of TER	Same as above calculated with the worst of the assumptions between the VA-input normalised FCF level and the market-implied level.

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Sell	11	28	0	0

The above table covers the period *12th June 2017 to 14th January 2019.* This disclosure is reviewed and updated on a quarterly basis. Last updated *14th January 2019*.

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