About Value Traps

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Abstract

Over the past years, many investors expected the next big shock to be caused by raising interest rates, resulting in a crash in Fixed Income markets as well as the so-called bond proxies in equities. Years of strong outperformance on the back of rather unimpressive growth let valuations of the likes of Nestlé look rather rich and for sure, Bill Gross was not the only one calling German Bunds the short of a lifetime.
Now, confronted with the worldwide spread of the Coronavirus yields are in free fall again and the big underperformers in equities are typical value stocks.
Nothing quite manifests the vulnerability of the globalized world economy like the share prices of airlines over the past weeks. This situation has inspired us to take a closer look at one of these stocks through the lens of our proprietary Quantamental toolbox and take it as an example to illustrate the pitfalls of value investing. The toolbox is an interactive analytics and valuation software developed by our FinTech, Amadeus Quantamental.

1 A small case study

Less than three years after Lufthansa shares reached all-time highs in December 2017 on the back of strong demand and low oil prices, they are trading on the same level as 25 years ago again.
Even worse, just one year after posting profits of more than 2bn, the airline may need government aid to survive.

Investors are left with the dazzling task to value a corporation that faces potential bankruptcy right after a series of years of posting record profits. This especially highlights the limitations of Multiples based valuations. After all, the company's EBITDA yield reached an impressive 28% in October 2018 just before shredding another 50% of its market value.
The reasons for this disconnect and the fallacy of short-term oriented value investing become clear when the company is analysed with the help of our Quantamental Single Stock Valuation model, a flexible, web-based forward looking discounted cashflow model. Let's see how a reasonable fair value could be derived.

Figure 1: Market Capitalization

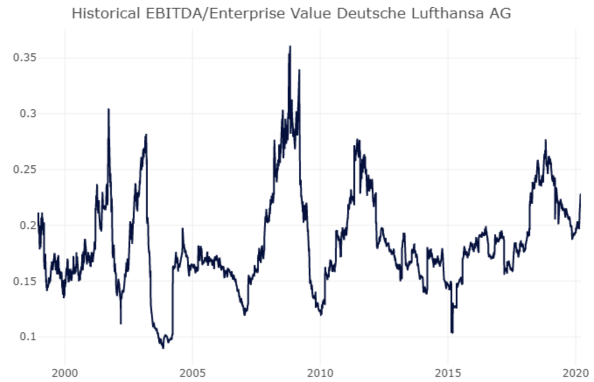

Figure 2: EBITDA Yield

Source: Amadeus Quantamental

2 Valuing Lufthansa - a tail of two cases

While nobody can deny Lufthansa's impressive secular revenue growth, actual cashflows returned to investors have been rather small. After all, Lufthansa's dividend payments reached €215m a year in 1999 and still stood at only €232m in 2017. The culprit for this can be easily found and is called "unusual items". Lufthansa's average adjusted EBIT margin since 1980 has been 5.5% but it's average operating margin stands at a meagre 1%. Numbers looked only slightly better over the last cycle (since 2008) with an average operating margin of 3%.

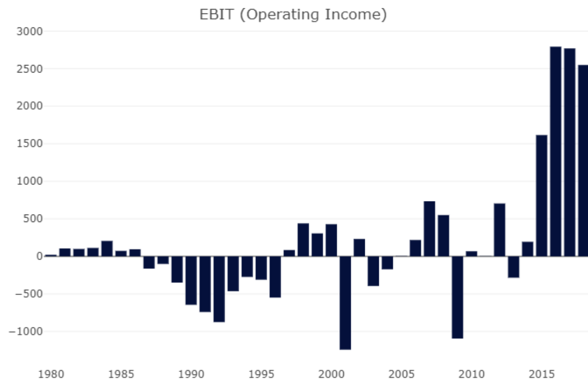

Figure 3: Operating Margin

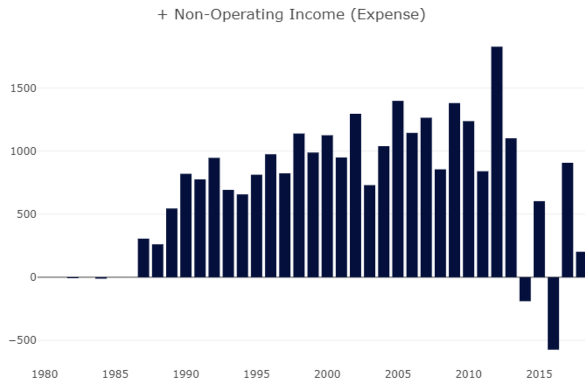

Figure 4: Unusual Expenses

Source: Amadeus Quantamental

2.1 The (unimpressive) bull case

As above chart clearly shows, in the history of the airline, the past boom years stand out as a great exception. Let's assume that thanks to operating leverage, better management and technology as well as a more stable economic environment, this represented the new normal and the airline can sustain its mid-cycle margin of roughly 5.5% without incurring the regular "unusual" losses. Let's also assume that in view of continued economic growth and globalization it will be able to sustain its trend growth rate of close to 2.5% (we use an ARIMA model).
Further assuming a cost of capital of 10%, this puts the value of the discounted cashflow to equity to €15.7bn,

close to its record 2017 market cap.

However, what many buyers probably overlooked, Lufthansa's pension plan is underfunded by €6bn and the company's 2018 balance sheet showed provisions for risks and charges of another 6.4bn EUR. According to IAS 37, to be recognized as a provision, an obligation must have a more than 50% likelihood of occurring. Furthermore, obligations are accounted for at present value. Let's therefore take the bullish assumption that the probability adjusted value of these provisions is only 3.2bn. Deducting this as well as the pension debt, still reduces the previously calculated equity value to 6.5bn EUR. Again, this assumes that unlike in the past the company will incur no unusual expenses. The exercise clearly shows that the company was overvalued despite of looking extremely cheap on valuation multiples.

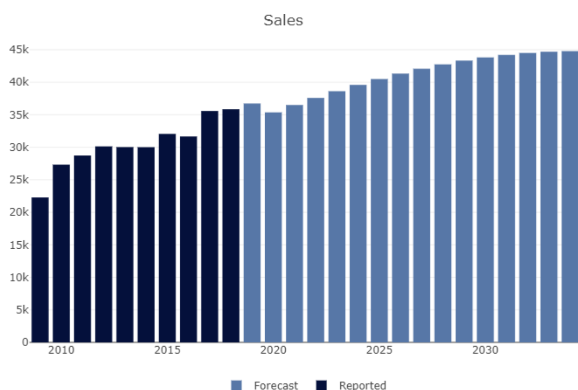

Figure 5: Revenues

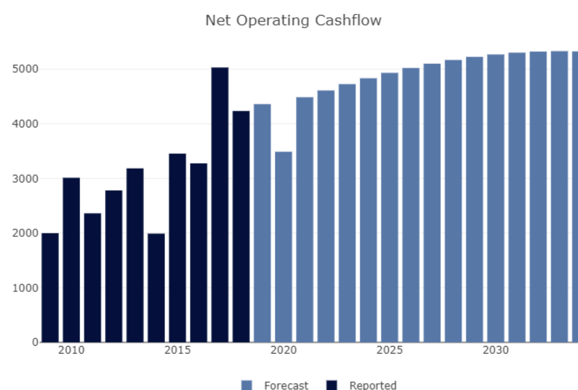

Figure 6: Net Operating Income

Source: Amadeus Quantamental

2.2 The bear (base?) case

Obviously, since then investors learned one thing the hard way: The past years were indeed exceptional and do not resemble a new normal.

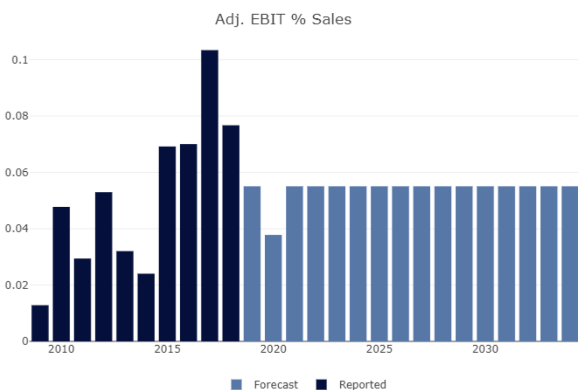

Figure 7: Revenues

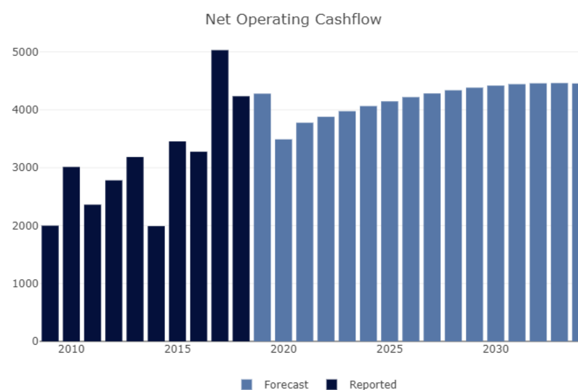

Figure 8: Net Operating Income

Source: Amadeus Quantamental

Let's therefore use the Quantamental model again and value the company based on its mid-cycle operating margin including unusual items. Let's also assume that this is close to the 3% it generated over the last cycle since 2008. This reduces the fair equity value from €15.7 to €7bn.

Adjusting again for pension debt and provisions basically leaves the equity investor with nothing – respectively a highly dilutive government bail-out.

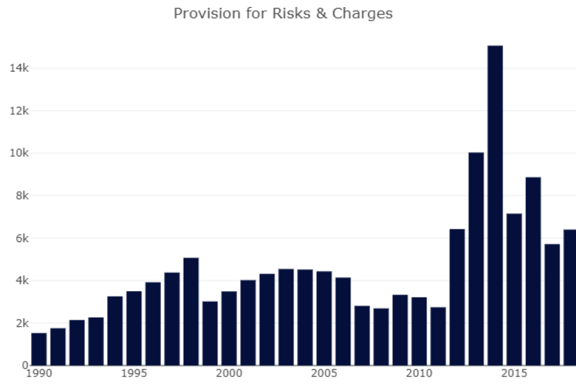

Figure 9: Provisions

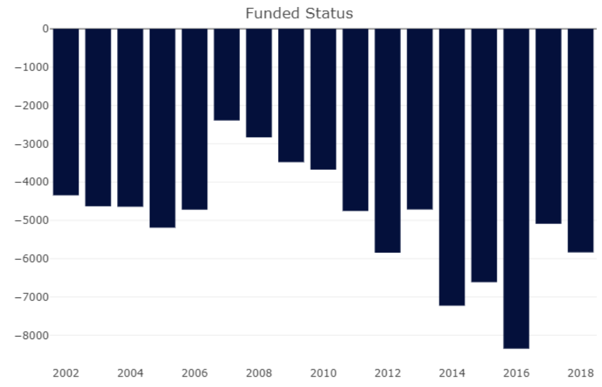

Figure 10: Net Pension Debt

Source: Amadeus Quantamental