



## Would you pay USD 100 for a hundred dollar bill?

### Reflections on the value of a firm versus the same amount in money

The purpose of a Valuation is to estimate the fair value of a company or project and there are different approaches to achieve this. The main valuation models are discounted cash flow - DCF, which determines the value of the company by the sum of the present value of future cash flows; and the valuation using multiples, which is calculated by the ratio between the Firm value and a financial, economic or operational variable.

Although no evaluation methodology is perfect, the model of discounted cash flow is the most accepted and is the basis for the understanding of other models.

This methodology is used in both merger and acquisition transactions between companies as well as in the stock market (when an offer of shares occurs, the initial price of paper is calculated through a valuation of discounted cash flow on future operations).



In this model, the expected cash flows of the firm are discounted at a rate that reflects their risk level and the value of money over time.

Although the company's risks are already, in theory, priced at the discount rate, there will always be uncertainty regarding its ability to generate cash in the future, due to operational, market, technological and macroeconomic issues that will affect the value of the company.

By recognizing that a company is worth USD 100 million through a discounted cash flow valuation, it is assumed that all the assumptions used in the projections (both relating to future revenues and costs) as well as the discount rate, are correct and are accepted by all parties.

Now, imagine a company that is hypothetically valued at USD 100. Would you pay USD 100 for this company? Or furthermore, would you pay USD 100 for a 100 dollars bill?

If the answer is "yes" to question 1 and "no" to question 2, we need to reflect on why.

Although it is a strange statement, an ordinary investor has no incentive to pay for a company what it is worth, even after reviewing the valuation by discounted cash flow and agreeing with all the assumptions. In this transaction, the net present value to the investor is zero, it pays the present value of the sum of cash flows of the company, that is, this is like saying that it is paying USD 100 for a 100 dollars bill. Even with an aggravating factor, with a 100 dollars bill, he would not be subject to the risks associated with a company and could make a financial investment that would give him an almost certain return from period to period (such as the purchase of debt securities from countries with strong economies).

Therefore, this investor will only acquire this company if a discount is given on the firm value of the DCF, as he is able to obtain some return on what was invested only if he pays less than the company is worth, with this return proportional to the discount that was applied to the amount calculated per the DCF.

However, there are cases where the investor values a company at a higher level than was calculated in a DCF valuation.

This occurs when the investor sees some synergy with the operation of the company. For example, when the British drinks giant Diageo purchased Ypióca in 2012, the Brazilian company was valued at 19 times EBITDA. This amount was much higher than is usually paid in an acquisition in the sector, where the value of the company rarely reaches 10 times EBITDA. It is very unlikely that Ypióca submitted a valuation where the present value of the company would total 19 times EBITDA, and even if it had, this would not be decisive in the formation of the price paid by Diageo.

Diageo saw beyond Ypióca's cash flow because there was additional cash flow to be generated from the merger of the two companies' operations, in which Ypióca would open a market for Diageo's portfolio of products and would also dilute distribution costs.

Thus, it made sense for the company to pay an amount much higher than would be customary in the industry.

The discussion on how to assess the fair price of a company is extensive. There are those that see valuation models as an exact science, where there is little room for subjectivity or human error, and those who believe that the valuation is a kind of art, where analysts manipulate the numbers to generate the results they desire. The truth lies somewhere between these two opposing views, and we see that even in cases where both sides agree on the assumptions used, and therefore agree with the calculated fair value, the discussion on the amount to be paid remains. The conclusion is that the parties involved in a transaction must leave satisfied with the final agreement, in order to enable the buyer, on the one hand, to receive a fair return on the investment and on the other hand to provide liquidity to the shareholder's assets, on fair terms.