



## THE MOST POWERFUL EQUATION IN INVESTING

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Have you ever tuned in to live coverage of a Federal Reserve rate decision and the subsequent press conference? On the screen, the market ticker frantically moves, reflecting the immediate impact of the news. But what triggers this rapid repricing, and how does it unfold so swiftly?

Enter the Discounted Cash Flow (DCF) formula—the quintessential tool for evaluating investments, particularly stocks.

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

The DCF is essentially a modification of the equation for the time value of money. It assesses an investment's expected value as a sum of its discounted cash flows. In essence, the formula is comprised of fractions, each corresponding to a projected period in the future. The numerators represent the estimated cash flow (CF) for each year, while the denominators signify the interest rate (r) investors could securely attain over time if they didn't possess the investment (opportunity cost).

Now, let's delve into the magic.

Consider the scenario when the Federal Reserve announces a substantial and unexpected increase in interest rates that spreads across the yield curve. Initially, the value of each fraction diminishes as the denominator expands with the higher interest rates (r), causing the overall sum to shrink. Yet, the impact extends further. Rising interest rates elevate the cost of debt for most corporations, contracting the free cash flow in the numerator. In tandem, each fraction's value decreases with a declining numerator and an increasing denominator, resulting in a diminished DCF value.

Since most investments trade at a multiple of DCF, even if the multiple remains constant, a lower DCF value depresses the value or price of the investment.

Conversely, when interest rates decline, especially unexpectedly, the opposite unfolds. The cash flow numerators increase, and the interest rate denominators decrease, causing each fraction's value to grow. The cumulative DCF rises, leading to an increase in the value or price of the investment—almost instantaneously.

Given that DCF models populate every valuation tool and investment program, and with professional investors executing most trades with the assistance of computer programs, this repricing occurs rapidly, in the blink of an eye.

And where do we find ourselves currently, in Dec. 2023?

With interest rates likely having peaked and cuts anticipated, DCF models, in the absence of any disruptions, project the path of least resistance to be higher for equity investments.

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