**Answer on Question #38550 – Economics – Economics of Enterprise**

Present value, also known as present discounted value, is a future amount of money that has been discounted to reflect its current value, as if it existed today. The present value is always less than or equal to the future value because money has interest-earning potential, a characteristic referred to as the time value of money. Time value can be described with the simplified phrase, “A dollar today is worth more than a dollar tomorrow”. Here, 'worth more' means that its value is greater. A dollar today is worth more than a dollar tomorrow because the dollar can be invested and earn a day's worth of interest, making the total accumulate to a value more than a dollar by tomorrow. Interest can be compared to rent. Just as rent is paid to a landlord by a tenant, without the ownership of the asset being transferred, interest is paid to a lender by a borrower who gains access to the money for a time before paying it back. By letting the borrower have access to the money, the lender has sacrificed their authority over the money, and is compensated for it in the form of interest. The initial amount of the borrowed funds (the present value) is less than the total amount of money paid to the lender.

The value of the firm is

PV = $\sum_{k=0}^{n-1} \frac{CF}{(1+r)^k}$= 500,000/(1+0.14)^0 + 500,000/1.14^1 +...+ 500,000/1.14^29=

= $6,324,856.22