ALASKA

ASSET MANAGEMENT

QUARTERLY LETTER

3Q2015

EQUITY SRATEGY

In the 3rd quarter of 2015, **Alaska Black FIC FIA - BDR Nível I** returned -22.54%, compared to +2.9% of IPCA+6% (*benchmark*), +3.43% of CDI and -15.11% of the Bovespa Index.

	3Q15 (%)	Since Inception (%)
Alaska Black	-22.54	-9.54
Ibovespa	-15.11	-20.61
IPCA+6% a.a.	2.92	59.78
CDI	3.43	42.25

The performance attribution for the quarter, by sector, is shown below:

Asset	Perf. Attribution 3Q15 (%)
Arbitrage	+0.40
Consumer Goods	-1.29
Cost	-0.02
Real Estate	-12.60
Industrials	-4.30
Cash	+0.29
Petrochemicals	+0.40
Steel	-4.58
Management Fee	-0.48
Total	**-22.54**

The fund ended the 3rd quarter of 2015 with the following characteristics:

1. Investments and Divestments: In the third quarter, we made two divestments of the portfolio, which made room for a new position. We also increased our position in the cyclical companies that we added to the portfolio in the last quarter, due to the attractive rates of return we see in the companies. In addition, we have increased our cash position in order to have more flexibility to increase exposure in certain

companies without having to divest in others. We currently have 10 shares in our portfolio.

2. IRR: The expected internal rate of return of the portfolio increased from 22.04% in the 2nd quarter of 2015 to 27.33% per year in the 3rd quarter. The increase is mainly due to the exchange of positions with lower rates of return for stocks with higher rates. There was also an increase in the IRR due to the fall in share prices with no change in fundamentals.

3. Dividends: In the 3rd quarter of this year, the fund received approximately R$ 63.17 thousand in earnings from companies (dividends and interest on equity). Year to date, we received R$ 724.37 thousand in dividends.

4. Other Revenue: In the 3rd quarter of 2015, the fund had a positive result of around R$260 thousand in other income/expenses such as share rent, Arbitration/Hedge operations and cash compensation. Year to date, these revenues generated an accumulated amount of BRL 3 million.

The table below shows how much the net income and revenues of the companies we invest in represent in the fund's equity. As we see the fund as a holding company, we see today's portfolio versus the portfolio we had a year ago. The large variation from one year to the next shows that our current portfolio of companies bring more "earnings per dollar of equity" than last year's portfolio.

Variation (%)	2Q14	2Q15
Net Revenue	18.76	46.74
Net Profit	1.45	1.87

Cycles

Carl Jacobi was a 19th century German mathematician who made numerous contributions to the field of algebra, in particular his work on elliptic functions and differential equations. However, we will leave these aspects aside to focus on a much simpler contribution that summarizes Jacobi's way of looking at complicated problems: the maxim "Invert, always invert".

For every investor, the goal is to increase their equity above inflation. Using Jacobi's logic, we can examine this objective using various inversions. The most obvious of these is "how not to diminish your wealth"; about this sentence we could talk about the various mistakes made by investors who waste time and money chasing results and not after good investments (whose characteristics we have already discussed in previous letters). As we want to continue the work of the previous letter, we will continue to look at the price, given that this variable is one of the gateways to increasing your wealth.

From Jacobi's point of view, we will focus on the factors that determine the pricing of an asset in the market, and not on the price itself.

The value of any cash-generating asset boils down to three important factors: the business's cash flow ("$E1$"), the rate at which it grows ("g"), and the rate at which future cash flows are discounted ("i"). With these three parameters, we calculate the value of perpetual assets, such as companies, in two steps: first, we estimate the individual cash flows of the first years, through the 3rd Quarter 2015 modeling of a period that can vary from 5 to 30 years, from according to preference. Then, we define a growth rate ("g") for all subsequent years and calculate the value of the portion that we call "perpetuity", through the formula of sum of infinite geometric progressions. It is

possible to calculate the entire value using the formula of sum of geometric progressions, just using the "g" for all years, and not only after the initial projection. In this case, the value is defined by the following formula:

$$SUM_{PG} = \frac{a_1}{(1-q)} = \frac{E_1}{(1+i)} \Big/ \left[1 - \frac{(1+g)}{(1+i)}\right] = \frac{E_1}{(i-g)}$$

Therefore, we can see that the company is worth more if the flow "E1" is higher, if the growth "g" is higher or if the discount rate "i" is lower. And vice versa.

Armed with this formula, we can understand what is happening throughout the market up-and-down cycle. However, before starting the cycle, it should be noted that we can separate these elements between what is concrete data (cash generation) and what are market expectations (discount rate and growth expectation).

Cash generation is intrinsically linked to investment, and its variations can cause changes in the value of the business. Discount and growth rates are sensitive to several psychological aspects of the market, such as pessimism, optimism, risk appetite, fear, and we will see later that these can influence the price of an asset more dramatically.

We can use the formula VP = E1 / (i - g) for various purposes. In markets, a common practice is to try to find the "fair value" for companies, using a standard discount rate and an estimated "g". From the uncovered value, it is measured how much this price is higher or lower than the company's market value, reaching an "upside" or "downside". The problem with this approach is having to estimate the future cash flow ("$E1$") and the discount rate for the

stock. As Jacobi recommends, we invert the formula so that the discount rate "i" becomes the variable to be discovered. We are then left with the formula:

$$i = \frac{E_1}{\text{Price}} + g.$$

We consider the price at which the market trades the asset and we try to find the rate "i" so that the present value is equal to the stock price. Consider the following mathematical example: if a share is being quoted on the stock exchange at R$ 16.00, and has a cash generation of R$ 2.00 per share that grows by an average of 8% we can reverse the calculation and try to find out what rate "i" implied. We arrived at the discount rate of 20.5%, as indicated by the calculation below.

$$\text{Price} = \frac{E_1}{(i-g)} \Rightarrow i = \frac{E_1}{\text{Price}} + g = \frac{2}{16} + 0{,}08 = 20{,}5\%$$

Another way of looking at the discount rate is to see it from the investor's point of view. In this case, an investor who buys an asset that has the above characteristics will have an annual rate of return of 20.5% on its capital.

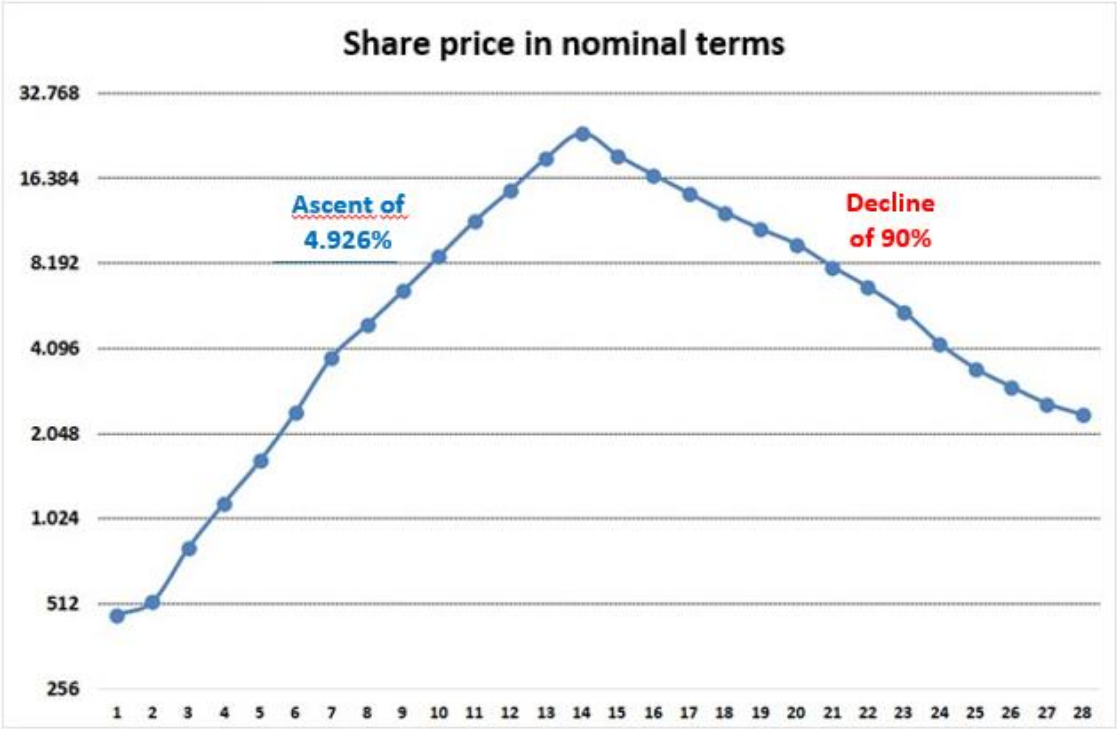
Having defined the mathematical relationship between all the terms of the formula, we will start with a description of a complete market cycle, following the variables of the same asset. The column "Nominal profit" contains the behavior of the asset's profit in the period.

The columns "i" and "g" are the market projections at each moment of the cycle, and the column "nominal price" reflects what happens

to the asset price given the parameters "i" and "g" used in the projections.

Semester	Profit	i	g	Price	P/E	Δ Profit	Δ Price
1º	92,9	19,00%	-0,67%	469,3	5,1		
2º	98,1	18,00%	-0,67%	521,8	5,3	**5,5%**	**11,2%**
3º	109,1	15,00%	1,33%	808,7	7,4	**11,2%**	**55,0%**
4º	127,1	13,50%	2,33%	1.164,6	9,2	**16,5%**	**44,0%**
5º	151,4	12,50%	3,00%	1.642,0	10,8	**19,2%**	**41,0%**
6º	184,5	11,50%	3,67%	2.441,6	13,2	**21,8%**	**48,7%**
7º	224,7	10,50%	4,33%	3.802,5	16,9	**21,8%**	**55,7%**
8º	273,8	10,25%	4,50%	4.975,8	18,2	**21,8%**	**30,9%**
9º	333,5	10,00%	4,67%	6.545,4	19,6	**21,8%**	**31,5%**
10º	406,3	9,75%	4,83%	8.663,1	21,3	**21,8%**	**32,4%**
11º	495,0	9,50%	5,00%	11.548,9	23,3	**21,8%**	**33,3%**
12º	576,7	9,25%	5,17%	14.853,8	25,8	**16,5%**	**28,6%**
13º	672,0	9,00%	5,33%	19.305,6	28,7	**16,5%**	**30,0%**
14º	726,1	8,75%	5,50%	23.570,9	32,5	**8,0%**	**22,1%**
15º	761,6	9,25%	5,17%	19.614,1	25,8	**4,9%**	**-16,8%**
16º	787,0	9,75%	4,83%	16.781,5	21,3	**3,3%**	**-14,4%**
17º	794,0	10,25%	4,50%	14.430,5	18,2	**0,9%**	**-14,0%**
18º	782,4	10,75%	4,17%	12.380,2	15,8	**-1,5%**	**-14,2%**
19º	771,0	11,25%	3,83%	10.794,0	14,0	**-1,5%**	**-12,8%**
20º	759,7	11,75%	3,50%	9.531,3	12,5	**-1,5%**	**-11,7%**
21º	731,6	12,50%	3,00%	7.932,4	10,8	**-3,7%**	**-16,8%**
22º	704,6	13,25%	2,50%	6.717,9	9,5	**-3,7%**	**-15,3%**
23º	649,0	14,00%	2,00%	5.516,5	8,5	**-7,9%**	**-17,9%**
24º	572,9	15,00%	1,33%	4.247,9	7,4	**-11,7%**	**-23,0%**
25º	527,7	16,00%	0,67%	3.464,6	6,6	**-7,9%**	**-18,4%**
26º	508,2	17,00%	0,00%	2.989,4	5,9	**-3,7%**	**-13,7%**
27º	489,4	18,00%	-0,67%	2.604,3	5,3	**-3,7%**	**-12,9%**
28º	472,0	19,00%	-0,67%	2.384,1	5,1	**-3,7%**	**-8,6%**
29º	453,2	19,00%	-0,67%	2.289,0	5,1	**-3,8%**	**-3,8%**

The graph below was generated exactly from the points above. The hypothetical cycle, on a logarithmic scale, is represented below with the price varying over the years:



The explanation of each point of the chart follows, showing what is behind the price.

1. In times of little or no economic growth, most people are content to hold on to their money. Few see any possibility of improvement.

At this point risk aversion is at a very high level, which translates into a very high discount rate. The bad economic scenario makes growth projections much more reflective of the present scenario than the possibility of long-term growth.

2. The economy stops getting worse, and the results of the companies show the first signs of improvement.

3. After a while, the entire economy shows signs of improvement. The companies' profits are starting to surprise. Stabilizing the economy does not erase recent memory of poor performance. Risk aversion may not be at its peak, but it is still inflated by recent events. In terms of economic forecasting, there is still skepticism to imagine long-term growth for the economy. The few who have bought so far have taken advantage of the great distortions and opportunities that the market's mood has provided them, there will hardly be a better time to position themselves in this cycle. In the third semester of the cycle, the "i" = 15%, the "g" = 1.33% and the "E1" = 109.1. For these values, the price "P" = 808.7.

Note that, compared to the starting point, the profit increased 17% from 92.9 to 109.1, but the price increased 72%, from 469.3 to 808.7. The most drastic price reaction is due to the contraction of the discount rate and the review of the company's growth by the market. Profit accounts for just 17% of the price increase, the rest of the appreciation comes from changing market estimates.

4. The positive results exceed all market expectations and asset prices begin to reflect this improvement.

5. The positive effect of the results is beginning to be reflected by positive news about the economy in general. The average investor feels more confident about the positive results. The recent bad experience starts to slip away from the market's memory.

6. What was skepticism and caution some time ago becomes optimism and euphoria with the market.

7. Everyone who is not winning with the market regrets it and gradually returns to operations.

8. The longer the optimism, the greater the market euphoria. Fear of losing money gives way to fear of missing out on good opportunities.

9. Risk aversion disappears. It's hard to imagine where losses can come from.

In an optimistic market, it is common to see a huge volume of reports indicating companies with astronomical future growth, or cheap leveraged operations with the promise of equally large gains. This reflects the general mood of the market at the moment, optimistic about growth and negligent about the inherent risks of operations.

By the time leveraged trading has become commonplace in the marketplace, we know that risk aversion is at a dangerously low point. The growth prospects are also close to the peak of optimism, otherwise it would not be possible to justify the use of leverage.

10. In financial institutions, optimism appears in the form of easier and cheaper credit. They also facilitate riskier and even leveraged operations.

11. Easier access to bank financing causes investors to use leverage more frequently and in greater size

12. Leverage begins to yield very high returns for investors. This possibility of astronomical gains makes more people follow this path.

13. The entire market believes that this momentum of optimism will last forever. Leveraged investors are convinced that their returns will be greater than the costs of operations.

14. The market reaches the height of optimism, last skeptics give in and invest their money and build positions.

The same extrapolation that occurred when the economy was in a decline begins to occur when it improves. The feeling that "everything that could go wrong is gone" causes risk aversion to collapse, and discount rates follow ("i"). To justify purchases at relatively high prices, institutions incorporate very optimistic growth forecasts ("g"), unattainable in some cases. In our cycle, the point that best represents this feeling is the peak, in the 14th semester (point 6.5). At point "14" of the cycle, "i" is at 8.75%, "g" = 5.50% and "E1" = 726.6. For these values, the price "P" = 23,587.9.

Notice that, compared to point "3", the profit rose 566% from 109.1 to 726.6, but the price rose much more, 2,817%, from 808.7 to 23,587.9. The most drastic price reaction is due to the contraction of the discount rate and the review of the company's growth, that is, profit accounts for a 566% price increase in price, with the rest of the 2,817% price increase it's just a change in growth expectations and further relaxation in the return on capital requirement.

At the moment, the company is worth 32.5 times its current earnings on the stock exchange. This high multiple is a direct consequence of an expectation of strong earnings growth ("g") and little requirement of a discount rate to calculate the present value of its future cash generation ("i"). With this, it is clear that the 3rd Quarter of 2015 investors are paying a price with little margin of safety and little conservatism in future projections.

When we get to this point, it is very difficult to find someone who is not an investor, or who has not heard countless enrichment stories in the market. This is often a sign that things tend to adjust over the next few years.

As much as the economy remains solid, it is very difficult to exceed the expectations of an extremely optimistic market. Results that at any other economic moment would be seen with good eyes, are considered bad by opinion makers, due to expectations inflated by years of positive surprises. A string of disappointing results will start the correction.

15. Once everyone who wanted to buy has already done so, there is no longer anyone who pushes prices up (which in our model would indicate required, or i, lower rates of return).

16. Rational and cautious investors perceive the distortion in asset prices, and know that a correction is inevitable.

17. The first macroeconomic data starts to come in below market expectations.

18. Unrealistic expectations are increasingly in evidence and asset prices begin to fall. Downturns can be exacerbated by some catalyst, such as the disappointing results of some big "champion" company in the market.

19. Investors begin to review economic expectations, in search of values closer to reality. Nobody else knows what value to buy.

20. The news, which were full of positive reflections of the economy, are beginning to reflect a different reality.

21. The average investor sees things getting worse.

22. Investing is no longer attractive to the general public, the predominant movements are redemptions of positions.

23. Investors who saw the market hype and stayed out of the bubble are seen as icons of wisdom.

24. Risk aversion is on the rise, and capital preservation becomes a top priority for investors. No one analyzes new opportunities anymore.

25. Credit concessions are reduced by banks and finance companies. The move can even generate margin calls.

26. Leveraged investors suffer the biggest losses as the market crashes, and some even go bust. Forced asset sales further accelerate price declines.

27. Buying looks bad at any price.

28. Prices hit rock bottom, nobody believes in the market anymore. The consensus is that the market tends to get worse indefinitely.

In the 29th semester of the cycle, the "i" is again at 19.00%, as well as in the point "1", the "g" = -0.67% and the "E1" = 453.9. For these values, the price "P" = 2,292.7.

Note that, from the highest point until the last semester of the cycle, the profit dropped 37.5%, from 726.6 to 453.9, but the price dropped 90.3%, dividing practically by 10, from 23,587.9 to 2,292, 7. The most drastic price reaction is due to the increase in the discount rate and the downward revision of the company's growth, similar to what happened in the recovery period.

At this moment, the company is worth 5.1 times its current earnings on the stock exchange, after having already been quoted at 32.5 times. This low multiple is a direct consequence of an expectation of falling profits ("g") in the future and the requirement of a high discount rate to calculate the present value of its cash generation. With this, it is clear that investors are risk averse, leaving the share price with a good margin of safety for an investor who wants to buy.

A cycle like the one above usually lasts several years, and is not always composed of a straight line going up and another going down. The path to the peak is always different, and that's why it convinces everyone that "this time is different" and that's why the predictions make sense. The same reasoning can be applied to crises; if they all happened in the same way the market would never be taken by surprise.

What we can do is, instead of focusing on price, analyze the discount rates implicit in prices, and judge them sufficient (or not) to remunerate our capital. Little is concluded when a stock drops from R$20 to R$12. We don't know if the price is good to invest in after the drop. But if a company was trading at a discount rate "i" of 15%, and that rate rose to 30%, the information has more value. It is already possible to compare this rate of 30% per year with the CDI, with the implicit discount rates of other companies, whether they are publicly traded or private.

An interesting way to analyze the Brazilian stock exchange is to convert it into dollars, dividing the number of points by the dollar value at the moment in question. This perspective allows us to view the investment from the point of view of the international investor, who, when he buys Brazilian assets, is exposed both to the value of the asset and to the exchange rate variation for the period. We can also visualize longer periods of the exchange using the same

reference, given that Brazil has gone through a series of currency exchanges over the years. With that in mind, we have analyzed the stock market since 1963, in dollars, and separated four clear moments of appreciation and three of lows:

• From May 1965 to June 1971, the stock market rose 2,931%, resulting in a "boom" of IPOs of companies on the stock exchange, with GDP growing by more than 11% per year, and then falling by 82% until August 1983, when the 2nd Cruzeiro devaluation and GDP fell by almost 3%;

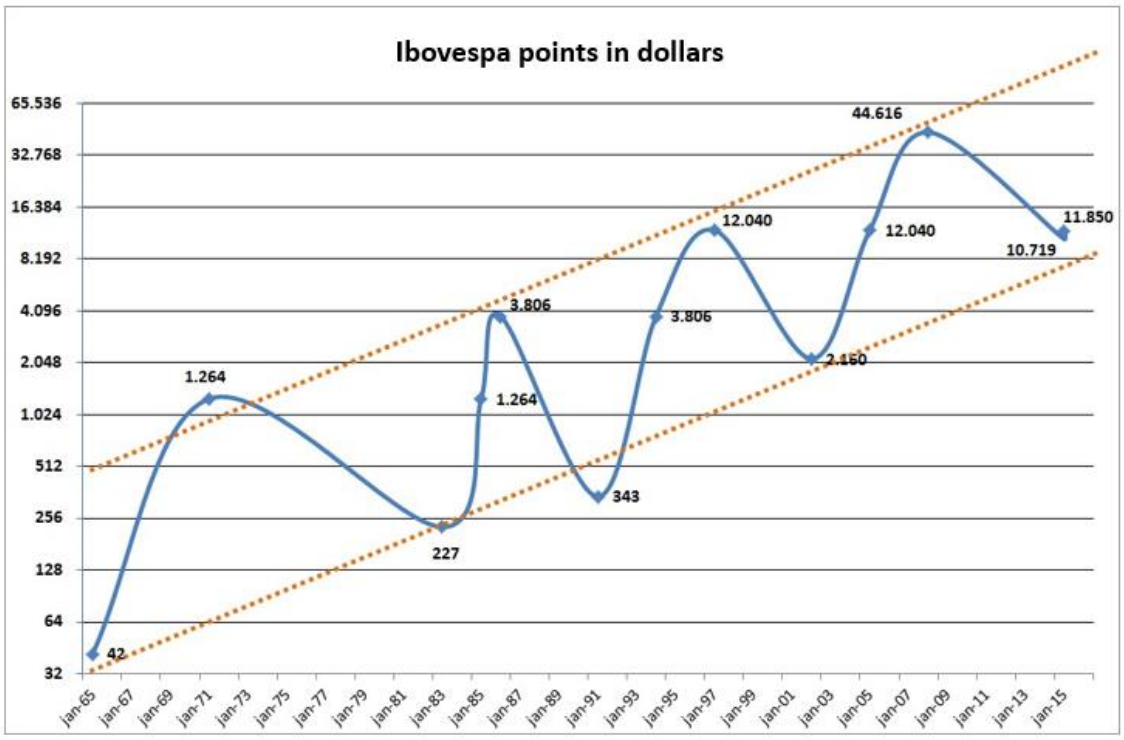
• Subsequently, the stock market rose 1,573% until April 1986, when the GDP rose two consecutive years by more than 7% a year, to fall again by 91% until January 1991 during the Collor II Plan;

• Subsequently, the index rose 3,415% until July 1997, with GDP growing more than 3% and with the amendment of the Corporate Law, to correct 84% until October 2002, with the fear of Lula's election causing the he Brazil risk to hit more than 2,500 points;

• Subsequently, the stock market rose 2,051% until May 2008, with Brazil discovering the pre-salt layer, reaching investment grade, and GDP growing by 5%, and since then the Ibovespa in dollar has accumulated a fall of 76.0 % if we consider the 29th of September 2015. From the 29th of September to the 9th of October, there is an increase of 13% in dollar terms.

With increases in the order of thousands of percentages, and decreases that divide the value by 10, the fact is that the stock exchange over the years has maintained an average return of 10.5% in dollars. The corrections lasted an average of 7 years and 4 months. If we consider that the last peak of the stock market was in May 2008, it has been exactly 7 years and 4 months, coincidentally.

Below is the Ibovespa chart, in dollars, since January 1965. It is worth noting that we only consider the points of the minimum days, the days when there was a recovery from the fall, and the maximums:



By reversing the common logic of focusing on price, and starting to focus on the implicit discount rate, it is possible to identify at what level it becomes interesting to invest. We never know with 100% certainty that we are at the peak of the cycle, or "rock bottom", but we are able to identify the asymmetry.

Therefore, if we know that price fluctuations tend to be noise when compared to the history of the asset, if we know of the existence of the cycle, which by definition says that big highs and big lows are interspersed, and if it is possible to identify when it becomes interesting if investing, just by calculating the implicit rates of return ("i") of the assets, why don't investors follow what rationality says, investing in the lows, and selling in the highs?

Portfolio

As anticipated in the last Quarterly Letter, the fund invested in two cyclical companies in the industrial sector. Normally, we had been avoiding this sector, due to the weakness of the Brazilian GDP, and the low level of business confidence. However, after an unanimity of indicators already pointing to pessimistic levels, the prices of these stocks already incorporate a prolonged unfavorable scenario. In the case of our models, a perpetual pessimistic scenario, which we believe to be exaggerated.

Appendix

Below is a brief explanation that illustrates why we use the sum of geometric progression to calculate perpetuity.

The present value of a perpetual cash flow with a fixed growth rate can be defined by the equation below:

$$PV = \frac{E_1}{(1+i)^1} \quad \frac{E_1\,(1+g)^1}{(1+i)^2} \quad \frac{E_1\,(1+g)^2}{(1+i)^3} \quad \frac{E_1\,(1+g)^3}{(1+i)^4} \quad \frac{E_1\,(1+g)^n}{(1+i)^{n+1}}$$

where n = infinity

We realize that each installment is always the previous one multiplied by the factor below:

$$\frac{(1+g)}{(1+i)}$$

By substituting a discount factor "i" smaller than a growth factor "g" in the above term, we arrive at a value smaller than one. The present value of the company, therefore, is nothing more than a sum of shares that decrease as they are multiplied by a factor smaller than one. It is an infinite geometric progression, which by definition converges to a value. The best-known example of a geometric progression sum is 1 + 1/2 + 1/4 + 1/8 + 1/16 + 1/32 +..., which equals two.

Recalling, the sum of an infinite geometric progression is:

$$SUM_{PG} = \frac{a_1}{(1-q)}$$

Where "a1" is the first term of the geometric progression (1 in the case above) and "q" is the quotient used in the multiplication (0.5 in this case, since each installment is the previous one multiplied by 0.5). Therefore, the sum of the famous geometric progression above becomes:

$$SUM_{PG} = \frac{a_1}{(1-q)} = \frac{1}{(1-0{,}5)} = 2$$

If we apply the same logic above for the company with infinite cash flow ("E1"), which grows at a rate "g" and we want to discount the flow in time at a rate "i", we have:

$$PV = \frac{E_1}{(1+i)^1} + \frac{E_1\,(1+g)^1}{(1+i)^2} + \frac{E_1\,(1+g)^2}{(1+i)^3} + \frac{E_1\,(1+g)^3}{(1+i)^4} + \cdots + \frac{E_1\,(1+g)^n}{(1+i)^{n+1}}$$

Replacing E1 / (1 + i) with "a", and [(1 + g) / (1 + i)] with "q", we have:

$$PV = a + aq^1 + aq^2 + aq^3 + aq^4 + \cdots + aq^n$$

And we know that:

$$SUM_{PG} = \frac{a_1}{(1-q)}$$

Substituting, we arrive at the formula we use to calculate perpetuity:

$$SUM_{PG} = \frac{a_1}{(1-q)} = \frac{E_1}{(1+i)} \Big/ \left[1 - \frac{(1+g)}{(1+i)}\right] = \frac{E_1}{(i-g)}$$