

Paginas amarelas case study

Business



Brasilia Investments what the appropriate action would be, given the information available to them in 1996. Expected future events and forecasting techniques, together with the company performance results are used to perform appropriate valuations. The options available to Brasilia Investments would be the sale or restructuring of Vaginas Marvels.

In order to value Vaginas Marvels, future cash flows would need to be projected, a long run perpetual growth rate would need to be determined and the weighted average cost of capital (WAC) would need to be calculated using the cost of debt and the cost of equity.

The future cash flows have been projected by Juan Lopez, but the perpetual growth rate of free cash flows after 2004 needs to be determined. An analysis of the industry shows that the growth in the industry will not be constant after 2004, and thus a medium term growth and a long term perpetual growth rate is used. The medium term for Vaginas Marvels is defined as the time period when demand for telephone lines is growing rapidly, and the long term as the period when the demand for new telephone lines is fairly stagnant.

An analysis of the industry shows that the medium term will present robust growth rates, and to calculate only a long term constant perpetual growth rate would undervalue the company as this unsustainable high growth would have to be overlooked to allow a lower, more sustainable, long term growth rate. The free cash flows will be discounted to their present value using WAC, the cost of debt used will be the local borrowing rate, and the cost of equity will be calculated using the Godlier and Espanola (1996) method.

Although this method does contain flaws, which will be discussed, it is very practical, and is the only valuation model available given the data's availability and reliability. In order to estimate a reliable value for Vaginas Marvels, the parameters used in the CAMP, and adjustment factors will be introduced for each country, giving a cost of capital in US Dollars. US Dollar borrowing rates are given, and using the Dollar cost of capital and debt to equity ratio, a Dollar WAC can be calculated to discount the Dollar denominated free cash flows.

The value of operations of Vaginas Marvels will be calculated for each country, and the sum of these values will give the total value of operations of Vaginas Marvels. The reason for valuing each country's operations individually is to allow both the systematic and unsystematic risks that affect the operations to be separated and estimated for each country.

This is simply for accuracy reasons, as different countries expose Vaginas Marvels to different risks, or in some cases the same risk but to a different extent.

Therefore a growth rate and WAC will be calculated for Argentina, Brazil and Chile. The growth rate will determine the future cash flows, and will take into account the factors which affect the industry (unsystematic). The WAC, or more precisely the cost of capital, will take into account the risks of investing in the particular country (the systematic risks). 2 Determining the Medium and Long Term Growth Rates The long term perpetual growth rate needs to take into account the unsystematic factors that will affect Vaginas Marvels.

Note that the systematic factors that will affect the value of Vaginas Marvels will be taken into account in the cost of capital, and thus the discount rate, and to include these systematic factors in the growth rate would result in double counting, and thus a lower value for Vaginas Marvels will be lactated than what should otherwise be the case.

Juan Lopez calculated the free cash flows (FCC) for Vaginas Marvels for the next eight years, and took into account many factors that would affect the telephone directory industry in the relevant countries.

Although ten nominal gar town rates AT arc-yes In ten local currency are not equal between the three countries, adjusting for inflation differences between the countries results in the real growth of Offs being the same for all countries. Juan Lopez should be criticized for using the same growth rate for all three countries, as here are different factors, other than inflation, which affect the cash flows. We do not, however, have enough information to calculate a more accurate growth rate for each country within the period 1997-2004.

We will, however, slightly adjust the average short term growth rate for each country when determining a long term perpetual growth.

These adjustments will largely be due to competition, and demand for telephone lines in the countries. The above growth rates are fairly low when considering the US inflation rate forecasted at 3% per annum (giving an average growth after inflation of 1. 9%), and it will be argued later that the long run growth for Vaginas Marvels may be slightly higher.

We do also consider the fact that a firm cannot maintain high growth rates in perpetuity due to the mathematics of the calculation of growth rates: the absolute growth has to increase every year in perpetuity to maintain a constant growth rate. A company cannot grow at higher rates than GAP growth in perpetuity, thus further substantiating the claim that long term perpetual growth must be prudent.

For this reason a medium term growth rate is used to allow for a period of higher growth.

The free cash flows (Offs) are calculated by taking the operating profit, subtracting tax and adding back non-cash items, giving the operating cash flow. A decrease in net working capital is subtracted (or an increase added) from the operating cash flow, and finally net capital expenditure is subtracted to give the free cash flow. Vaginas Marvels will not have large non-cash items, as the depreciation in 1996 only constituted 0.16% of gross revenue, and there will not be significant goodwill amortization as Vaginas Marvels is a subsidiary, and therefore not involved in the recess of acquiring many other firms.

Although we don't have the figures, it does not seem that the nature of a telephone directory company requires large changes in the net working capital, and considering that the Brazilian unit already owns its own printing facility, we would not expect net capital expenditure to play a large role every year.

Therefore the major factor determining the growth of Offs would be the growth of operating profit, and for this reason this paper focuses on the <https://assignbuster.com/paginas-amarelas-case-study/>

growth of operating profit when determining the growth rates for each country. 2.

Growth in the Telephone Directory Industry The long term growth in the telephone directory industry is constrained by the demand for advertising. The demand for advertising in the telephone directory industry is mainly affected by two factors; namely the competition in all industries, and the demand for telephone lines. These two factors are the main drivers of FCC growth in the telephone directory industry. 2.

1. 1 Competition I nee Tatterdemalion Ana deregulation AT Argentina, Brazil Ana candle would not only result in increased competition in the telephone directory industry, but in a general increase in competition throughout all industries.

With this general increase in competition comes an increase in demand for advertising as companies are constantly trying to differentiate themselves from their competitors. In an attempt to capture some portion of the market, companies will have to increase their advertising budgets, as in a competitive industry the perspectives of the consumer are critical to gaining market share. Therefore there are very positive prospects for growth in the telephone directory industry as telephone directories are essentially an advertising LOL, and most probably would be viewed as the primary advertising tool, I. .

Assuming the first form of advertising a firm would undertake would be to advertise in the telephone directory. This increase in demand will increase the quantity of advertising space demanded but unfortunately, due to <https://assignbuster.com/paginas-amarelas-case-study/>

competition within the telephone directory industry, the price should fall, thus decreasing profit margins. Although profit margins will fall, it is uncertain whether this will result in a decrease or increase in total operating profit. In order to determine which force will dominate an economic model incorporating the number of firms and elasticity will be used.

There is no evidence of collusion between the telephone directory companies, but there is a lack of competition, with only a few dominant firms. The telephone directory industry in Argentina, Brazil and Chile would thus be classified as a non-cooperative oligopoly.

There are various non-cooperative oligopoly models available to the economist, to provide useful insight into the effect of the number of firms in an oligopoly the Cournot model in Appendix A is adapted to derive the equation: $TTL = (a - m)^2 - F(n + 1)b$

The equation shows that when the number of firms in the industry (n) increases, the profit of the individual firm will decrease. The equation also shows that the fewer the number of firms initially, the greater the effect of an entrance of a new firm. In addition, it is important to note that the lower the price elasticity of demand (b) the smaller the effect of an increase in the number of firms on total profit. The case argues that in the short run, advertisers are very price sensitive, but elasticity are not continuous throughout time.

One would then expect the long run price elasticity to be lower than that of the short run, with the elasticity tending towards inelastic (0) in the very long run. The reason being is that it is observed that demand in developed <https://assignbuster.com/paginas-amarelas-case-study/>

countries (countries with much higher income levels) is not affected greatly by increases in the price of advertising in telephone directories since they see this form of advertising as a small cost.

Thus even in times of recession, they maintain the same levels.

As GAP grows in Argentina, Brazil and Chile, a decrease in the price elastically AT mean, Ana tens a screaming erect AT ten Increased competition thin the industry (due to the increased number of firms) should be observed. It was mentioned previously that competition in the economy increases the demand for telephone directory advertising, but competition within the telephone directory industry decreases the price demanded.

Noting that a decrease in profit margin does not necessarily result in decreased profit levels (m), it was uncertain whether increased competition resulted in an increase or decrease in profit.

It was unclear which force dominated, but in light of the above analysis, it may seem that in the long run the decrease in the price elasticity results in the effect of increased competition within the industry to be outweighed by the effect of the increased competition in the economy.

Also note that as countries develop, advertising becomes more important, thus substantiating the argument that as these countries develop the price elasticity of demand will decrease. In terms of growth prospects, it means that the long run growth should be higher than the short run growth when only taking competition into account.

The growth prospects in the short run used by Juan Lopez were every dampened by the imminent increase in competition within the industry, but the analysis above suggests that in the medium to long run, the economy wide competition will result in the long term perpetual growth rate to be significantly higher than the 4.09% short run average growth rate. Another important facet of competition involves the nature of the industry, whereby a few firms share the market, but each municipality is assigned only one telephone directory.

The reasons for this go beyond economics to practicality, even though the region is striving for a competitive market, having a large enough number of firms applying telephone directories in one municipality so as no firm has the ability to affect price is completely unpractical. The profit margin (revenue from advertising less costs of advertising) achieved by Vaginas Marvels will thus not be as strongly affected by competition as posited by the case study as the price of advertising within the industry should not be affected due to each telephone directory having monopoly power within the municipality.

Even in the face of an increasing number of telephone directory companies the price would be unchanged and be set where original cost equals marginal revenue, ceteris paribus. The portion of revenue that the telephone directory company has to 'kick back' to the municipality should however have to increase from the 40-45% levels in order to attract contracts, thus decreasing operating profit.

In this regard, Vaginas Marvels has a very strong advantage over new entrants in that it has good connections with the municipalities, already has contracts settled, and has a very good understanding of the industry.

The crux of this argument is that increased competition in the industry will not remove the price setting ability of Vaginas Marvels, and this contributes further to the previous argument that the effect of industry competition decreasing operating profit will be outweighed by the effect of increased economy wide competition.

Besides economic reasons for the price within municipalities being unchanged, another reason is that the higher the profits made by the telephone directory companies, the higher the 'kick back' to the municipalities, giving the municipality's authorities strong incentive to leave the industry (Walton ten multiparty) relatively uncompetitive. 1. Demand for Telephone Lines With the deregulation, and increased competition, in the telephone line industry, there is expected to be an increase in the quality of service and a decrease in price.

This will strongly affect the demand for telephone lines as both factors result in an increase in the demand.

The GAP growth rate will also affect the demand for telephone lines, and it would be expected that there will be some positive relationship between GAP and demand for telephone lines. We are not given the income elasticity of demand for telephone lines, but we could deduce that it is between zero and one. Telephone lines are not an essential good, and thus are affected by

income levels, and one would expect for there to be increased demand with increased income; thus the income elasticity will be greater than zero.

Households, compared to businesses, should be more income elastic as a telephone is not essential, and may only be bought when there is enough income. Businesses, on the other hand, will be more income inelastic as a telephone is often required for the daily operations. We assume that telephone lines are not considered a luxury good and thus the income elasticity would probably be less than one.

For example, if GAP increases by 10%, we would expect the demand for telephone lines to increase by between 0% and 10%.

In addition, we would expect the income elasticity to fall over time (assuming GAP per capita increases over time). This is due to the fact that once a household or firm can afford, and purchases, a telephone line, an increase in income would not normally result in additional telephone lines being demanded. Thus, as income increases, people demand new telephone lines at a decreasing rate. In this essay, it is assumed that the average lines per one hundred people of 50.

In 67 countries is the upper limit.

Thus, once Argentina, Brazil and Chile reach 50.4 telephone lines per one hundred people, increases in income will not result in increased demand for telephone lines (income elasticity of demand will be zero). Considering this argument, it would be expected for their to be a larger income elasticity of demand for countries with a low density of telephone lines and a lower

income elasticity for countries with higher telephone line densities. Each country's identities and income elasticity will be analysed in the following sections.

The demand for telephone lines should be strongly correlated with the demand for telephone directory advertising in the long run.

In the short run in Argentina, Brazil and Chile, it is different, as advertisers do not immediately recognize the benefits of a larger audience and increase their demand (or the price that they are willing to pay) for advertising space. In the long run, however, when the demand for telephone lines increases, the audience of telephone directories increase, and thus advertisers will be willing to pay higher prices for advertising space.

Advertisers in Latin America are to be very sensitive to price, and thus not immediately willing to pay a higher price (this contributed to Juan Lopper's short term growth being fairly low); but long run increase in demand for AT scheduled advertisers should realize increased benefits. The increased competition discussed earlier should encourage companies to advertise otherwise they may be marginal and lose market share in the long run. 2.

1. A Short Summary of the Growth Prospects in the Region The current improvements in the telephone line industry result in short term increase in demand for telephone lines. Paginas Amarelas will not, however, realize increased operating profits in the short run due to the slow reaction of firms in the region. There will be a delayed response, and robust growth in the

demand is expected for telephone directory advertising in the medium term, as this will allow sufficient time for firms in the region to react.

The robust medium term growth will be dampened in the long run by the slowing down of demand for telephone lines as the countries develop.

This factor will be included in the long run growth rate. Therefore two growth rates are needed; one for the 'medium term' and another for the long term.

We define the medium term for Vaginas Marvels as the time period when demand for telephone lines is growing rapidly, and the long term as the period when the demand for new telephone lines is fairly stagnant. The short term (1997-2004) growth rate of Offs in US Dollars is given by Juan Lopez at 4.6%, and we will determine a growth rate for each country in the medium term (2005-2007 in Argentina, 2005-2011 in Brazil and 2005-2008 in Chile) and the long term (end of medium term into perpetuity). Although the medium term will experience growth higher than that of the short and long term, Vaginas Marvels still has the ability to realize long term growth even in the environment of slowing demand for telephone lines, as the factor of competition in the economy will still play a significant role.

Competition provides for good growth prospects in the medium term and long term, while demand for telephone lines provides for good growth in the medium term but stagnates in the long term.

2.2 Estimation of the Growth Rates for Argentina

The average growth rate during 1997-2004 of Offs in Argentina used by Lopez is 4.09% (1.09% net of US inflation). When determining the medium term (2005-2007) and long term (2008 into

perpetuity) growth rates the two factors previously discussed, namely competition and demand for telephone lines, will be taken into account.

The reason that the Argentinean medium term is shorter than Brazil and Chile is due to the fact that Argentina currently has a much higher density of telephone lines, and it has the highest nominal GAP per capita in 1996 of \$8451.47. For arenas previously discussed, we would expect the robust medium term growth to be dampened by slowing demand for telephone lines sooner in Argentina than in Brazil and Chile. As there are only two other telephone directory companies in Argentina, there will be a strong Innocence when new competitors are introduced as apostle Day ten court model.

This, however, should be taken into account in the short run growth prospects, and as argued earlier, we expect the increased competition in Argentina to result in an increased level of profit (even though profit margins will decrease due to increased competition within the industry) and thus fairly high growth rates are expected due to competition in both the medium and long run.

Concerning the demand for telephone lines in Argentina, it was previously argued that the higher the current density of telephone lines, the lower the income elasticity of demand for telephone lines.

As Argentina has the highest telephone density of 37.7 telephones per 100 people compared to Brazil (9.3) and Chile (14.7); we would expect for the increased demand for telephone lines due to GAP growth to have the smallest affect in Argentina.

We would thus not expect very robust operating profit growth due to the increased demand for telephone lines allowing higher prices for telephone directory advertising to be charged.

Determine the growth rates for the various countries is subjective and fairly arbitrary, UT given the economic assessment of the potential for growth in the industry, we would expect the medium term growth to be the significantly higher than the short run growth and higher than the long run growth. Based on the growth predicted by Juan Lopez, we estimate the medium term growth for Offs denominated in US Dollars for Vaginas Marvels in Argentina to be 7% in the medium term (2005-2007) and 4.59% in the long run (2008 into perpetuity).

Note that the higher inflation in Argentina is taken into account in the exchange rate and thus only US inflation needs to be taken into account when determining the real growth rate.

The reason that we use a fairly high growth rate in the long run is that the increased competition in the economy should have a very profound effect on the demand for advertising and thus allow a high growth to be sustainable in the long run. 2.3 Estimation of the Growth Rates for Brazil When determine the growth rates for Brazil the same methodology used for Argentina will be applied.

Firstly the reasoning for Brazil having the more extended medium term compared to Argentina and Chile, is due to: the low density of telephone lines currently in Brazil of 9. Per one hundred people, the fact that Brazil has

a very large population of 160 million and therefore contains more growth potential, and the nominal GAP per capita of \$4678.

81 being significantly lower than Argentina and lower than Chile. The above points indicate more room for growth in the medium term, with the dampening effect of slower demand for new telephone lines taking longer to impact demand.

The above combination of factors in Brazil indicate a more robust growth expected in the medium term compared to Argentina and Chile, and we estimate this growth to be 8.5% for the period 2005-2011. The long ERM growth will be similar to that of Argentina, and we thus estimate a long term growth of 4.59%; with the differences between the countries only affecting the period in which the long term begins, and the rate of growth in the medium term.

2.4 Estimation AT ten Growth Rates Tort c Again, the same methodology is used for Chile as was used for the other two countries, and we will thus not re-explain our reasoning.

The current telephone line density of 14.7 in Chile, and the nominal GAP per capita of \$5376.43 places Chile in between Argentina and Brazil.

A large constraint on growth is the low Chilean population of 14 million. The strong economic fundamentals in Chile combined with the factors of competition and increased demand for telephone lines previously discussed gives Chile good growth prospects in the medium term, the small population, however, constrain the long term growth. We thus estimate a medium term

(2005-2008) growth rate of Offs in US Dollars for Chile of 7. % - slightly higher than Argentina; and a long term perpetual growth rate of 4. 25% - slightly lower than that of Argentina and Brazil. 3 Calculating the Cost of Capital Saba (2001) offers four models that can be used to calculate the cost of equity for a many in an emerging economy, namely the International Capital Asset Pricing Model (CAMP), the Modified International Capital Asset Pricing Model (MICA), the Godlier and Espanola (1996) model, and the Arbitrage Pricing Theory (APT).

The CAMP and MICA cannot be used as they require the stock of the company to be actively traded on a stock exchange, and the stocks of Vaginas Marvels are not traded as it forms part of a large conglomerate. Thus no meaningful beta can be determined for Vaginas Marvels which is required for a meaningful CAMP and MICA. Estimating a required return on the markets in the region may not be accurate due to thin trading and inefficiency in the capital markets.

Another reason the CAMP cannot be used is that it assumes that markets are fully integrated, and thus assets with the same risk must have the same return. This, however is not the case with the emerging economies relevant to Vaginas Marvels. The APT cannot be used as there is no comprehensive list of factors that affect the expected return of Vaginas Marvels.

This essay will use the Godlier and Espanola (1996) model, both for its practicality and due to all the necessary information being available and reliable. 3.

The Godlier and Espanola (1996) Model The Godlier and Espanola (1996) model is an adaptation of the capital asset pricing model (CAMP), where beta is adjusted and a credit risk premium is added to the cost of capital. The investment in Vaginas Marvels will expose an international investor to three broad risks, which Godlier and Espanola (1996) label as currency risk, business risk and political risk [Saba, 1996]. In order to account for currency risk a “ base hard currency” is used in the CAMP (this essay uses the US dollar as required by Brasilia Investments), thus the risk free rate and the expected market return will