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EMERGING MARKETS CORPORATE FINANCE

AXESAT, S.A. CASE

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Introduction

As Juan Ramirez looked at the clear, sparkling sky on a Tuesday night from his office in Bogota's business district, he asked himself about the prospects of Axesat, S.A. Axesat had been in business for less than two years and had proven that Colombia was ready for high speed internet satellite services. The company offered Internet connectivity via a secure satellite broadband connection. Axesat's success had been driven by the lack of Internet access in rural Colombia; not only was Axesat able to offer internet service in any region of the country, but it was also able to do it at a competitive price.

The company was privately held and owned by a small group of Colombian entrepreneurs who saw an opportunity to bring high speed communications to their country. Although Axesat's inception was financed with equity, after the first year of operations it was clear that the company needed additional capital to continue growing. The owner's had chosen to finance this growth by borrowing from Colombian banks in order to take advantage of the benefits of leverage.

As 2004 drew to a close, Axesat's owners faced a financial dilemma. What was Axesat's "optimal" capital structure? How much was Axesat's equity worth?

The owner's were unclear on the answers to these questions. They had asked Juan Ramirez to draft a proposal so they could make a decision during their first board meeting for the 2005 fiscal year. As he sipped the last drop of Colombian coffee in his office, Juan Ramirez opened his spreadsheet and began to crunch some numbers.

Colombia Background Information

Colombia, a country of 46 million people located in the northwestern corner of South America, has a land area of roughly 1 million square kilometers. Its economy traditionally relied on agricultural exports until the late 1980's when the hydrocarbon (petroleum and natural gas) industry as well as the manufacturing and service sectors became a larger part of the economy. Throughout the 1980's and 1990's Colombia achieved average growth rates of 3.5%, a slightly higher rate than other countries in the region. This growth was achieved despite the long-running civil insurgency involving the Revolutionary Armed Forces of Colombia (FARC). This terrorist insurgency, funded by drug trade and kidnappings, had had a severe effect on Colombia's population over several decades, as thousands lost their lives in the conflict.

In 2002 president Alvaro Uribe won in a landslide election and had since enjoyed high approval levels due to his hard line stance on security. He obtained support in the war against the FARC from the United States via the Plan Colombia, a program initiated by the previous administration. Through the Plan Colombia, the US provided military and financial support for the government's war on drugs and terrorism, and helped Colombia obtain support from the IMF and other multilateral lenders. In December 2004 the Colombian congress debated a proposal that would allow Uribe to run for reelection (presidents were previously allowed only one four year term). With the expected reelection of Uribe, the political outlook for Colombia seemed promising.

Colombia is expected to grow at a rate of 3.5%¹ in 2005 and inflation is expected to be around 5.8% (See [Exhibit 1](#) for a detailed description of macroeconomic patterns in Colombia). Colombia's currency had recently gained on the dollar due to the latter's loss of value in world markets. The country's biggest economic vulnerability was its high level of public debt which had doubled since 1996 and was currently standing at 53% of GDP. The government was expected to run a deficit of 5% of GDP as it had done in previous years. This deficit was partly offset by the surpluses in the decentralized sector (which included the public oil and telecommunications companies). In 2004 Colombia, Peru and Ecuador were negotiating a free trade agreement (FTA) with the US. The FTA was expected to take effect in 2006-2007.

Satellite Internet Access

Internet access technology via satellite requires significant backbone infrastructure. Usually, space is leased in a geostationary satellite with limited geographical coverage. There are multiple satellite operators around the world (See [Exhibit 2a](#) for a list of the world's top ten satellite operators). Axesat leased space on Intelsat's IS-805 satellite located at 304.5°E. In addition to leasing space on a satellite, the ISP uses servers and specialized software to manage customer access to the Internet. This is commonly done through a "hub", composed of computer equipment and a large antenna dish that relays the signal to and from the satellite. The hub is connected to the Internet via a dedicated ground line.

Connectivity by the end user is possible through the use of devices commonly referred as “earth stations”. The “earth stations” are small dish antennas that use a particular transmission standard. Axesat offered its customers VSAT (Very Small Aperture Terminal) technology. VSAT is a transmission standard developed by Gilat (NASDAQ: GILTF), a worldwide leader in satellite connectivity technology. VSAT was deployed across the world in many countries and proved to be the most reliable and flexible platform to meet Axesat’s transmission needs.

Gilat’s VSAT technology employs a device, (the “earth station”) that is used to receive satellite transmissions. Similar to a cable satellite dish, the antenna is about 2 to 4 feet (0.55-1.2 m) in diameter, and is mounted on a roof, a wall, or placed on the ground. The antenna, a transmitter and a low-noise blocker or LNB (which receives satellite signals) make up the VSAT **outdoor unit** (ODU). The second component of the VSAT earth station is known as an **indoor unit** (IDU) made up of a small desktop box or PC that connects with the user's equipment, a LANs, server, or PCs. The outdoor unit is connected to the indoor unit with a pair of cables. See [Exhibit 2b](#) for a diagram of how satellite internet access works.

Company History

In 2002, Intelsat, a worldwide satellite operator, chose Colombia to run a test pilot of its newly developed high speed internet access service. Colombia’s geographical location, its rugged topography and internet growth potential made it an ideal candidate to test this technology. For this purpose, Intelsat partnered with a local Colombian technology distributor, Informática S.A. Informática was a large reseller of computer equipment, with more than 25 years of experience in technology, specializing in providing hardware solutions for small, medium and large businesses. Thus Axesat was created in April 2003 with the purpose of bringing advanced communication services to Colombia and other Latin American and Caribbean countries.

The service was initially installed in 150 medium to large businesses in Colombia, with the objective of eventually expanding to other countries in the Latin American region. (See [Exhibit 3](#) for a diagram of Axesat’s coverage area).

Internet access was provided for local area networks (LANs). Typically, anywhere from 1 to 20 computers were connected in a LAN. The LAN’s internet server would then be connected to a dish, similar to that of a satellite cable provider, which would relay the signal to the satellite. Gilat, a worldwide leader in satellite communication systems provided the dish.

Axesat experienced tremendous growth during the first two years of operation. The installed customer base grew to over 1,000 customers, and the company began offering its Internet access service in other countries by partnering with local resellers that specialized in technology offerings. These resellers were typically local firms that sold computer equipment and software. In addition, Axesat launched an “agents” program,

where individuals could sign up as sales agents, sell internet service and receive a commission.

The flexibility of Intelsat's satellite broadband management system allowed Axesat to also offer data transmission services to customers. Whereas internet access required larger broadband capabilities, data transmission services used less bandwidth, and were used by businesses to link networks and send information via the web. For instance, data transmission is commonly used for online financial transactions, Point of Sale (POS) data transmission, credit card and check authorizations, software distribution and other similar uses. The data transmission business proved to be a successful way to complement Axesat's robust internet access service.

By mid 2004, Axesat had renewed its service contract with Intelsat, as the company expanded into offering residential internet service in Colombia and other countries. In July 2004, Intelsat announced:

"Axesat, a Colombian provider of satellite access services, has renewed and expanded its broadband service contract with Intelsat. The additional capacity is being used to extend Axesat's regional presence to serve existing as well as new customers in areas it previously had not served, such as Central America, Venezuela and Ecuador."

Referring to its strong partnership with Intelsat, Axesat's President highlighted the company's dominant position in the Colombian satellite internet access market:

"Intelsat's continued commitment to technological development in this region, as well as its demonstrated support of Axesat's growth initiatives, gives us an edge in the emerging Latin American broadband marketplace," said Axesat's President. "Intelsat's reliable management of our broadband network has enabled us to spend our time expanding our business into new areas where we had not previously offered services." As a result of its expanded relationship with Intelsat, Axesat has become the largest provider of satellite-based broadband Internet access solutions in Colombia."

As Axesat grew, the company began expanding its services to include offerings such as web hosting, web management, design and Voice-Over-IP (VOIP) telephony. It also signed a partnership agreement with Salesforce.com, a leading developer of web based CRM software to distribute the salesforce.com applications to customers using Axesat Internet access.

Given the high cost of deploying fiber optic networks, Axesat's satellite technology gave companies and individual users the opportunity to obtain Internet access in very remote locations, whether in small or large cities. A 2001 marketing study by NCM, a local Colombian marketing consulting firm, revealed that over 50% of all Internet users in Colombia were concentrated in Bogotá. The next largest city, Medellín, hosted 21% of

users, followed by Cali with 8% and Bucaramanga with 3%. Thus medium to small cities, like Bucaramanga, Manizales, Cucuta and Pereira represented significant opportunities to expand Axesat's Internet service.

Service had short installation times and customers had the flexibility to choose a high-speed broadband connection that could increase the connection speed as desired, with 99.5% service reliability. Axesat's growth opportunities centered around providing access to customers in very remote regions in Colombia and its neighbor countries, focusing on e-business as an important source of growth as well as residential market opportunities. By the end of 2004, the company had more than 1,000 satellite access points across the entire Colombian territory as well as Ecuador, Panama, Haiti, Venezuela and Guatemala.

The Broadband Internet Market in Colombia

Explosive internet growth in Latin America began around 1995, resulting in a 14-fold increase in the number of users over the next 4 years.¹ The period following 1999 saw internet host computers growing faster in Latin America than any other region in the world², buoyed by regional telecommunications deregulation and privatization, improved telecommunications infrastructure, and falling personal computer prices. E-commerce, educational opportunities and the commonality of Spanish language across the regions, also sped adoption for countries in Central and South America, despite relatively flat overall economic growth during this time.

Colombia experienced over 200% growth in internet users from 2000-2004, with expectations of over 3 million users by mid 2005³. Representing nearly 9% of the total population of Latin America, Colombia had a low computer penetration rate of 4.2% and internet connectivity in 6.5% of households⁴. See [Exhibit 4](#) for Internet usage rates and computer penetration across Latin American countries. Colombia faced other challenges to internet market growth, including relatively low computer literacy and underdeveloped telecommunications and IT infrastructure. However, recent use of VSAT technology allowed Colombia to leapfrog many of the infrastructure challenges.

Axesat's VSAT technology offered several advantages that uniquely suited the Colombian market. First, the technology allowed viable communication in rugged, mountainous terrain where landline, cellular, or fiber optic transmission lines were expensive to deploy. With roughly three-quarters of the population of Colombia dispersed outside of major urban areas, the expense of reaching these customers using fiber optic cables or fixed copper lines was significant. Second, growing demand for Internet access was being limited by existing network structure; broadband internet access, demand for paging services, and the nascent Voice-Over-IP markets were expanding rapidly. Finally, although performance of the satellite connection was slightly

¹ Budde, Paul. Latin America – Data, Internet, and E-service report. Communication Pty Ltd, 10/10/2003.

² Ibid.

³ <http://www.internetworldstats.com/stats2.htm>. Miniwatt's Int'l Internet World Statistics, February 2005.

⁴ Ibid.

lower than cable and DSL connections, it was still ten-times faster than normal dial-up connections⁵. When installed properly, the connection was robust, affected only during times of heavy rain or extreme weather.

Competition & Substitutes

Axesat faced little direct competition in Colombia as a satellite broadband internet provider. Other companies, such as Microm de Colombia, Ltd. had signed agreements with and leased bandwidth from Intelsat to service government organizations, enterprises and Internet Cafes, but did not represent significant competition to Axesat's commercial, corporate, or residential customers. See [Exhibit 5](#) for a listing of the principal Internet access providers in Colombia. With low internet penetration rates around the country, and less than 2% of Colombia's internet users currently subscribed to satellite internet services⁶, Axesat saw plenty of room for the market to support multiple providers.

Future technologies posed both threats and opportunities for Axesat and presented uncertainty as to which technologies might develop as market standards. Complementing its broadband internet satellite product, Axesat's data transmission, web hosting, management and design, and VOIP services all had potential for new applications to provide novel customer solutions. Emerging protocols such as WiMax, akin to the wireless Wi-Fi but offering ranges over tens of kilometers, offered to complete the "last-mile" connections from Axesat's dish units, allowing larger wireless LANs to grow. Also promising was connectivity using Wi-Fi or WiMax to growing mobile device services market—particularly cell-phones and PDAs—but critics suggested the technology might be too expensive for emerging and developing markets.

Pricing & Cost Structure

It had become common for companies in Latin America that had currency exposure to price their products in US dollars but bill the customer in local currency. Therefore, Axesat converted the price on a monthly basis using that month's official closing exchange rate. This was necessary because 90% of Axesat's operating costs were in US dollars, including payments to Bermuda-based Intelsat for the leased space on the satellite. Thus, to mitigate potential currency risk, management priced its services in USD. Axesat developed different access "plans", depending on each user's needs:

	Lite	Standard	Premium
Broadband Capacity	64 kbps	Up to 128 kbps	Up to 256 kbps
Computer terminals	1 to 5	Up to 12	Up to 20
Internet usage, file transfer and downloads	Light browsing with access to e-mail	Medium to Heavy, constant e-mail usage	Constant internet browsing, e-mail and heavy FTP* ⁷ usage

⁵ <http://computer.howstuffworks.com/question606.htm>. Marshall Brain's How Stuff Works, 2005.

⁶ Budde, Paul. Latin America – Data, Internet, and E-service Report. Communication Pty Ltd, 10/10/2003.

⁷ FTP stands for "File Transfer Protocol", which allows users to send and receive large files over the internet.

Given the current mix of customers, the weighted average price of the service was \$367 for commercial customers and \$285 for corporate customers if customers chose not to purchase the antenna. Management expected that this would fall to \$288 for commercial and \$220 for corporate in 2005 due to increased competition as well as economies of scale that would make each marginal customer less expensive, allowing Axesat to reduce the price of its services. The price if the customer chose to purchase the antenna was on average \$100 less.

Payments to Intelsat were made on the number of MegaBytes-per-Second (MBPS) used each month. This amount was based on the number of customers using a 64, 128 or a 256 kbps connection. In 2004, Axesat and Intelsat agreed on a pre-determined payment schedule for the 2005 fiscal year. The two companies had come to this agreement because in 2004 some technical issues with Axesat's hub had disrupted service and some customers had been lost. Management had taken the necessary steps to correct these issues and did not expect any additional problems of this nature in the foreseeable future. See [Exhibit 6](#) for a schedule of the expected cost in 2005 and 2006 on a MBPS basis.

Financing for Growth

A customer had two options when signing an Internet access service contract. He could either purchase the antenna dish ("earth station") for US\$1,299 or choose not to purchase it. Those customers who purchased the dish would pay US\$100 less per month on average for service, whereas the average customer contract was for 2 years. In the event the customer chose not to purchase the antenna, Axesat would have to buy the antenna from Gilat. Historically, the company had financed all of its antenna purchases by borrowing from Colombian banks. Banks were willing to extend Axesat loans if a contract with a customer had been signed. Therefore the ability of the company to finance its growth depended on the willingness of customer's to purchase the antenna. During the company's growth phase management had also had to finance the firm's working capital. The projections for 2005 and beyond assumed that Axesat would finance its cash shortfall and then start to pay down debt when cash after principal and interest payments turned positive.

See [Exhibit 7](#) for management's financial forecast under each financing scenario. Sales trends showed that customers preferred not to purchase the antenna and were willing to pay a higher monthly fee instead. The option to purchase the antenna was given only to commercial and corporate customers. Commercial customers represented small and medium businesses, while corporate customers were large corporations. Axesat's management estimated that if the company did not offer customer's the choice to not purchase the antenna, sales for commercial customers would fall 50% while sales for corporate customers would fall by 65%. Management did not expect a drop in sales in either Residential or International (outside Colombia) sales.

By the end of 2004, Axesat held 500 antennas in inventory; the company could offer 500 customers the antenna as part of the service without making them pay for it. These

antennas were already paid for-- the company would not have to issue additional debt to pay for them. This inventory would last until November 2005. At that point management needed to make the decision on whether or not to continue borrowing and financing the company's growth through debt or to reduce the level of debt by offering service plans where the customer only had the choice to buy the antenna. Management's reasoning behind this was due to the fact that, on average, if a customer decided not to purchase the antenna, this customer would become profitable after 18 months. Management estimated that by the end of 2005 Axesat would have a large enough customer base to be able to afford the drop in sales associated with not offering customers the choice to buy the antenna. However, it was not clear for Juan Ramirez whether the benefits of reducing Axesat's debt would offset the decrease in sales. He had decided to evaluate the following scenarios:

Scenario 1: Axesat continued to finance its working capital requirements as well as its antenna purchases but focus on reducing the level of debt. Offer customers the option to buy or rent the antenna.

Scenario 2: Do not offer the option to rent the antenna to commercial customers. Stop financing for growth and pay down debt as soon as cash flow before financing turned positive.

Scenario 3: Do not offer commercial customers the option to rent the antenna, only the option to purchase it and maintain the level of debt.

Scenario 4: Do not offer commercial customers the option to rent the antenna, only the option to purchase it and increase the level of debt.

Valuing the Company

The owner's had also asked Juan Ramirez to value Axesat's equity⁸. When asked about the challenges, he replied,

"We are trying to value a small start-up firm in a very risky country. We have no comparable companies that are publicly traded in the Colombian stock market. Furthermore, the horizon for our valuation varies for each one of the original investors".

When asked about the risks and how he viewed the business in the long-term he replied,

"Technology companies usually face uncertainty regarding the sustainability of their chosen technology. Our challenge is to make sure that we are ready to adapt to those inevitable changes in the way that internet access is provided."

⁸ By December 31st, 2004, Axesat had 5,054,774,488 Pesos in debt and total invested capital of 5,502,854,000 pesos.

Other than estimating the cash flows accurately, the greatest challenge was posed by calculating an accurate discount rate. Ramirez knew that the CAPM model was sometimes used by investment banks and consulting firms to determine the discount rate. He ran a quick calculation on using the CAPM and got a discount rate of 16%. Was it too low? Too high? What impact would it have on the value of Axesat? These were questions to which Ramirez did not have answers.

Exhibit 1: Colombia Macroeconomic Data

Macro-Economic Data and Forecasts for Colombia

	2001	2002	2003	2004	2005	2006	2007	2008	2009
GDP Growth %	1.47	1.76	3.95	4.13	3.78	4.13	4.3	4.25	4.11
Consumer Spending %									
	2.68	2.04	2.33	4.62	3.78	4.05	4.45	4.36	4.15
Change									
Fixed Capital Formation	13.68	-1	19.38	8.52	7.45	6.97	6.75	5.3	5.18
% Change									
Government Consumption	1.12	0.62	1.24	2.25	1.87	1.69	1.1	1.6	1.95
% Change									
Imports (G+S) % Change	6.8	0.3	9.7	6.3	3.8	4.9	6.1	5.7	5.0
Exports (G+S) % Change	2.4	-4.6	5.6	2.0	2.5	4.9	6.5	5.3	5.2
GDP US\$bn	82.0	81.2	78.7	93.6	97.7	101.1	106.0	110.9	116.5
GDP Per Capita US\$	1903.6	1852.4	1764.9	2065.5	2121.3	2163.0	2232.8	2299.9	2380.1
Inflation (CPI) %	8.0	6.4	7.1	5.9	5.8	5.7	5.5	5.2	5.3
Budget Balance % GDP	-5.9	-5.5	-4.9	-4.6	-4.3	-4.0	-3.7	-3.5	-3.3
Population m	43.1	43.8	44.6	45.3	46.0	46.8	47.5	48.2	48.9
Population Growth %	1.8	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.5
Unemployment Rate %	15.0	15.7	14.2	13.6	13.1	12.4	11.8	11.1	10.5
Current Account Balance	-1.2	-1.6	-1.7	-1.8	-1.9	-2.2	-1.9	-1.7	-1.7
US\$bn									
Current Account Balance	-1.5	-2.0	-2.1	-2.0	-2.0	-2.1	-1.8	-1.6	-1.5
% GDP									
Trade Balance US\$bn	-0.4	-0.9	-0.9	-2.3	-2.8	-2.9	-3.0	-3.2	-3.4
Imports (G+S) US\$bn	17.1	16.5	17.7	21.5	22.3	23.3	24.8	26.4	27.9
Imports (G+S) US\$bn %	5.2	-3.6	7.3	21.6	3.8	4.2	6.8	6.2	5.9
Change									
Exports (G+S) US\$bn	16.7	15.6	16.8	19.2	19.6	20.4	21.9	23.1	24.6
Exports (G+S) US\$bn %	-7.1	-6.6	7.7	14.4	1.6	4.1	7.5	5.8	6.2
Change									
Local Currency to US\$	2299.8	2505.3	2876.3	2663.2	2795.3	2958.0	3108.6	3255.9	3387.4
Local Currency to Yen	18.9	20.0	24.8	25.3	28.5	31.3	33.1	35.1	37.1
Local Currency to Euro	2057.6	2364.5	3247.2	3298.3	3528.9	3769.9	4099.0	4340.2	4529.0

Source World Markets Research Centre.

Exhibit 2a: Top 10 Fixed Satellite Operators (2004)

Rank ¹	Satellite Operator ²	2003 Revenue ³	2002 Revenue ⁴	Country	Satellites in Orbit	Satellites on Order	Remarks
1	SES Global	\$1.52 billion	\$1.41 billion	Luxembourg	30	5	
2	Intelsat	\$1.1 billion	\$992 million	Bermuda, U.S.	265	1	Includes \$143.6 million from satellites purchased from Loral.
3	Eutelsat S.A.	\$954 million	\$690 million	France	24	2	Revenues are for two six-month periods ending Dec. 31, 2003.
4	PanAmSat Corp.	\$831 million	\$812 million	U.S.	21	2	Satellites on order include one from Loral.
5	JSAT Corp.	\$421 million	\$381 million	Japan	9	2	Revenues are for fiscal year ending March 31.
6	Telesat Canada	\$266.2 million	\$207.4 million	Canada	6	3	Figures include \$22.9 million in consulting revenues.
7	Space Communications Corp.	\$241.94 million	\$199.8 million	Japan	5	0	Superbird 6/A-2 satellite, launched in April, is not yet operational.
8	New Skies Satellites N.V.	\$214.9 million	\$200.5 million	Netherlands	5	1	Company is considering buy-out offers from private-equity firms.
9	Loral Space and Communications	\$152.4 million	\$195 million	U.S.	4	1	Revenues are for satellites Loral is retaining after Intelsat sale.
10	Shin Satellite	\$146.5 million	\$115.5 million	Thailand	3	1	The iPSTAR satellite is set for launch late in 2004 or early 2005.

Source: http://www.space.com/spacenews/top20_satellite_2004.html

Exhibit Footnotes:

1 – Figures are for calendar year ending Dec. 31, 2003, unless otherwise indicated.

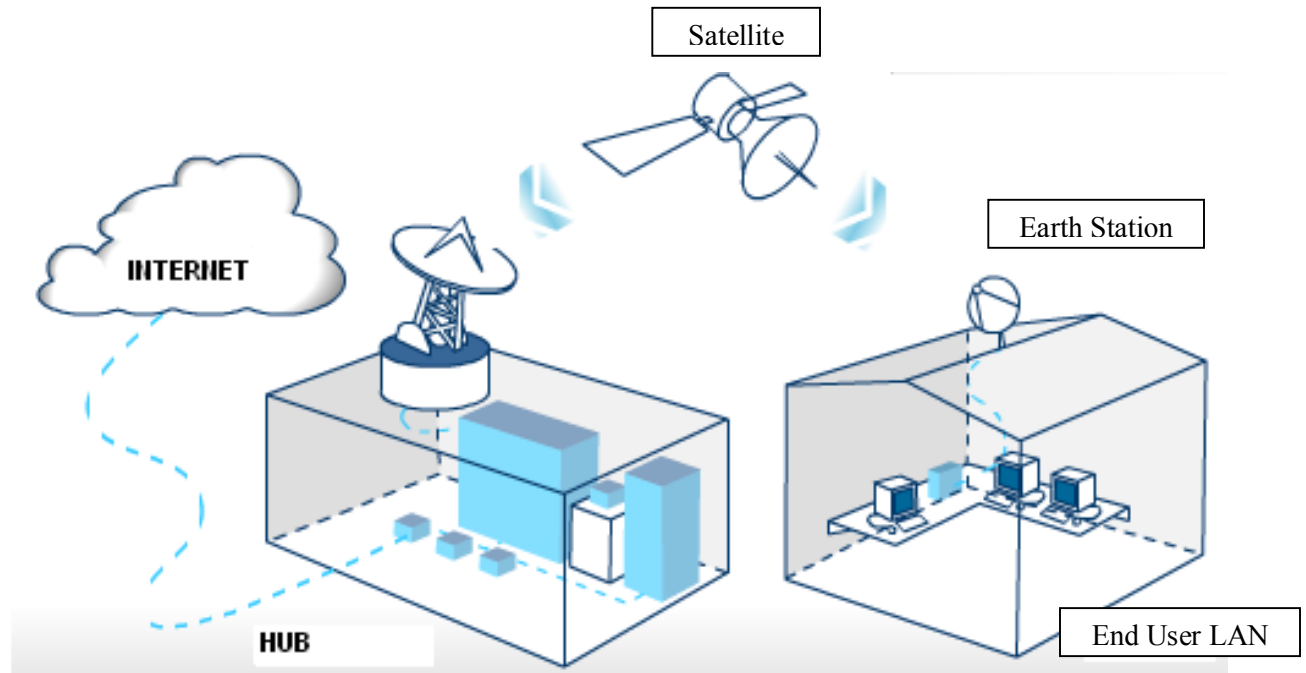
2 – Chart includes data for companies providing fixed satellite services, defined as leasing transponders for television broadcasting, data transmission, telephony and other services.

3 – Non-U.S. currencies converted into U.S. dollars using interbank exchange rate on Dec. 31, 2003 for 2003 figures and Dec. 31, 2002 for year-2001 figures.

4 – Figures may differ from last year's chart following companies' restatement of revenues, or a reorganization of company accounts.

5 – Intelsat leases two satellites from Insat of India.

Exhibit 2b: How Satellite Internet Works



End user connects a network (LAN) from 1 to 20 computers to an “earth station”. The earth station uses an antenna dish to relay the signal back and forth from the satellite. The satellite relays the signal to a “hub”, which has a dedicated connection to the internet via a T1 line or similar.

Source: Internal Company Documents

Exhibit 3: Axesat Service Coverage Area



Source: Internal Company Documents

Exhibit 4: Internet Usage across Latin American Countries

CENTRAL AMERICA	Population 2005 (Est.)	Internet Users Latest Data	User Growth (2000-2005)	% Population (Penetration)	% Users
Belize	291,904	30,000	100.00%	10.30%	0.20%
Costa Rica	4,301,172	800,000	220.00%	18.60%	5.60%
El Salvador	6,467,548	550,000	1275.00%	8.50%	3.80%
Guatemala	12,328,453	400,000	515.40%	3.20%	2.80%
Honduras	6,569,026	168,600	321.50%	2.60%	1.20%
Mexico	103,872,328	12,250,000	351.60%	11.80%	85.00%
Nicaragua	5,766,497	90,000	80.00%	1.60%	0.60%
Panama	3,074,146	120,000	166.70%	3.90%	0.80%
CA Total	142,671,074	14,408,600	347.80%	10.10%	100.00%
SOUTH AMERICA	Population 2005 (Est.)	Internet Users Latest Data	User Growth (2000-2005)	% Population (Penetration)	% Users
Argentina	37,584,554	5,600,000	124.0 %	14.90%	14.60%
Bolivia	9,073,856	270,000	125.00%	3.00%	0.70%
Brazil	181,823,645	18,660,650	273.20%	10.30%	48.50%
Chile	15,514,014	4,000,000	127.60%	25.80%	10.40%
Colombia	45,926,625	2,732,200	211.20%	5.90%	7.10%
Ecuador	12,090,804	569,700	216.50%	4.70%	1.50%
Guyana	877,721	125,000	4066.70%	14.20%	0.30%
Paraguay	5,516,399	120,000	500.00%	2.20%	0.30%
Peru	28,032,047	2,850,000	14.00%	10.20%	7.40%
Suriname	460,742	20,000	70.90%	4.30%	0.10%
Uruguay	3,444,952	1,190,120	221.70%	34.50%	3.10%
Venezuela	24,847,273	2,310,000	143.20%	9.30%	6.00%
SA TOTAL	365,389,570	38,450,870	169.00%	10.50%	100.00%

Source: <http://www.internetworldstats.com/stats2.htm>: Minwatt International Internet Statistics, Feb. 05

Exhibit 5: Internet Service Providers in Colombia

Provider / Plan	Technology	Speed	Price Pesos / Month	Other Costs	Value Added Services	Cities Served
Empresa de Telefonos de Bogotá (ETB) / Internet Extremo	ADSL	128 Kbps 256 Kbps	\$78.000 \$116.000	Connection fee: \$30.000 up to \$150.000; loan modem or \$250.000 with no annual contract	Five e-mail accounts (15MB each)	Bogotá
Empresas Publicas de Medellin EPM.Net / Residencial Broadband	ADSL	128 Kbps 256 Kbps	\$95.000 \$120.000	Connection fee: \$114.000 \$170.000 \$255.000	3 to 4 e-mail accounts of 60 MB each.	Medellín, Bogotá, Manizales, Pereira
Emcali	ADSL	128 Kbps 256 Kbps 384 Kbps 512 Kbps	\$119.000 \$174.000 \$297.000 \$428.000	Connection fee: \$200.000; Modem fee: \$220.000		Cali
Cablenet (Local TV Cable Company)	Cable	64 Kbps 128 Kbps 256 Kbps	\$88.000 \$135.000 \$160.000			Bogotá
Supercable	Cable	90 Kbps 128 Kbps 256 Kbps	\$80.000 \$98.000 \$145.000			Bogotá

Source: Internal Company Documents

Exhibit 6: MBPS Costs

	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05
Total MBPS Used	19.5	20.0	20.5	20.5	21.5	22.0	22.5	23.5	23.5	24.0	25.5	27.0
Total Cost US\$	185,104	190,354	195,604	188,104	198,104	203,104	208,104	218,104	226,604	231,604	246,604	261,604

	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06
Total MBPS Used	30.0	31.5	32.5	34.0	35.0	36.5	37.5	38.5	40.0	41.0	42.5	43.5
Total Cost US\$	291,604	306,604	316,604	331,604	341,604	356,604	366,604	376,604	391,604	401,604	416,604	426,604

Source: Internal Company Documents

Exhibit 7: Statement of Cash Flows (\$Pesos) -

Scenario 1: Keep financing working capital and antenna purchases but reduce level of debt

	ACTUALS	ANNUAL PROJECTED		
	Dec-04	2005	2006	2007
Commercial	437,280,422	5,845,960,463	7,297,295,366	8,712,777,464
Corporate	232,117,224	3,528,777,065	5,249,810,384	6,866,746,687
Residential	2,300,450	632,928,160	3,161,987,985	6,149,257,140
International	71,470,385	1,884,969,879	3,791,085,240	5,584,872,291
Other	69,160,997	1,092,870,666	224,970,887	-335,107,787
Total Revenues	812,329,478	12,985,506,232	19,725,149,862	26,978,545,795
MPBS Cost	747,600,000	6,092,440,435	9,081,152,970	12,777,441,500
Other Operating Costs	79,033,448	1,296,649,996	1,321,525,990	1,428,383,230
Total Operating Costs	826,633,448	7,389,090,431	10,402,678,960	14,205,824,730
Total Administrative Costs	122,583,187	1,410,713,526	1,336,243,231	1,297,915,701
Total SG&A	155,011,033	2,018,601,811	2,166,868,015	2,173,623,692
Capex	96,416,750	446,124,300	35,000,000	35,000,000
Residential Antenna Purchases	8,160,000	456,116,467	719,781,419	703,946,228
Other Cash Outflows	67,963,200	74,917,420	40,807,362	1,775,512,361
Total Cash Outflows	1,276,767,618	11,795,563,953	14,701,378,987	20,191,822,712
Cash Flow Balance Before Financing	-464,438,140	1,189,942,279	5,023,770,876	6,786,723,083
Interest Payments - Antenna Financing	21,644,470	96,058,507	153,922,988	263,085,559
Interest Payments - Working Capital Loans	44,921,677	670,678,969	534,044,576	81,307,247
Banking Commissions	10,080,000	127,249,920	133,612,416	186,088,501
Banking Costs	16,224,013	219,699,906	252,644,763	322,950,691
Total Financing Costs	92,870,159	1,113,687,301	1,074,224,743	853,431,998
Principal Payments - Antenna Financing	183,085,209	1,488,575,851	820,488,197	2,021,490,272
Total Principal Debt Repayments	337,580,161	4,451,915,245	4,978,274,792	3,542,265,308
Excess Cash Flow Before new Financing	-894,888,460	-4,375,660,267	-1,028,728,660	2,391,025,777
Working Capital Financing	250,000,000	3,985,000,000	1,101,856,480	0
Free Cash Flow	-644,888,460	-390,660,267	73,127,820	2,391,025,777
Net Debt Issuance/(Repayment)	-87,580,161	-466,915,245	-3,876,418,313	-3,542,265,308
Ending Debt Balance	5,054,774,488	4,964,999,445	3,136,486,169	1,270,772,452

Source: Internal Company Documents

Scenario 2: Do not offer the option to rent the antenna to the customer. Stop financing for growth and pay down debt.

	ACTUALS	ANNUAL PROJECTED		
	Dec-04	2005	2006	2007
Commercial	437,280,422	5,849,998,784	6,670,419,619	6,757,612,128
Corporate	232,117,224	3,528,777,065	4,454,896,402	4,598,612,064
Residential	2,300,450	632,928,160	3,161,987,985	6,149,257,140
International	71,470,385	1,884,969,879	3,791,085,240	5,584,872,291
Other	69,160,997	1,086,889,581	45,011,997	-305,525,094
Total Revenues	812,329,478	12,983,563,469	18,123,401,244	22,784,828,528
MPBS Cost	747,600,000	6,092,440,435	8,625,871,182	11,330,328,339
Other Operating Costs	79,033,448	1,296,218,081	1,104,093,481	1,164,712,272
Total Operating Costs	826,633,448	7,388,658,516	9,729,964,664	12,495,040,611
Total Administrative Costs	122,583,187	1,410,713,526	1,331,188,802	1,283,910,232
Total SG&A	155,011,033	2,018,601,811	2,166,868,015	2,173,623,692
Capex	96,416,750	446,124,300	35,000,000	35,000,000
Residential Antenna Purchases	8,160,000	456,116,467	719,781,419	703,946,228
Other Cash Outflows	67,963,200	67,963,200	0	867,087,336
Total Cash Outflows	1,276,767,618	11,788,177,819	13,982,802,900	17,558,608,099
Cash Flow Balance Before Financing	-464,438,140	1,195,385,650	4,140,598,344	5,226,220,429
Interest Payments - Antenna Financing	21,644,470	96,058,507	0	0
Interest Payments - Working Capital Loans	44,921,677	670,678,969	525,961,285	73,859,669
Banking Commissions	10,080,000	127,249,920	133,612,416	186,088,501
Banking Costs	16,224,013	219,505,106	236,045,426	281,685,772
Total Financing Costs	92,870,159	1,113,492,502	895,619,128	541,633,943
Principal Payments - Antenna Financing	183,085,209	1,488,575,851	0	0
Total Principal Debt Repayments	337,580,161	4,451,915,245	4,137,521,879	1,445,589,589
Excess Cash Flow Before new Financing	-894,888,460	-4,370,022,096	-892,542,662	3,238,996,897
Working Capital Financing	250,000,000	3,985,000,000	992,458,302	0
Free Cash Flow	-644,888,460	-385,022,096	99,915,640	3,238,996,897
Net Debt Issuance/(Repayment)	-87,580,161	-466,915,245	-3,145,063,576	-1,445,589,589
Ending Debt Balance	5,054,774,488	4,616,004,040	1,470,940,464	25,350,875

Source: Internal Company Documents

Scenario 3: Do not offer the option to rent the antenna to the customer but maintain the level of debt.

	ACTUALS	ANNUAL PROJECTED		
	Dec-04	2005	2006	2007
Commercial	437,280,422	5,849,998,784	6,670,419,619	6,757,612,128
Corporate	232,117,224	3,528,777,065	4,454,896,402	4,598,612,064
Residential	2,300,450	632,928,160	3,161,987,985	6,149,257,140
International	71,470,385	1,884,969,879	3,791,085,240	5,584,872,291
Other	69,160,997	1,086,889,581	45,011,997	-305,525,094
Total Revenues	812,329,478	12,983,563,469	18,123,401,244	22,784,828,528
MPBS Cost	747,600,000	6,092,440,435	8,625,871,182	11,330,328,339
Other Operating Costs	79,033,448	1,296,218,081	1,104,093,481	1,164,712,272
Total Operating Costs	826,633,448	7,388,658,516	9,729,964,664	12,495,040,611
Total Administrative Costs	122,583,187	1,410,713,526	1,331,188,802	1,283,910,232
Total SG&A	155,011,033	2,018,601,811	2,166,868,015	2,173,623,692
Capex	96,416,750	446,124,300	35,000,000	35,000,000
Residential Antenna Purchases	8,160,000	456,116,467	719,781,419	703,946,228
Other Cash Outflows	67,963,200	67,963,200	0	501,223,914
Total Cash Outflows	1,276,767,618	11,788,177,819	13,982,802,900	17,192,744,677
Cash Flow Balance Before Financing	-464,438,140	1,195,385,650	4,140,598,344	5,592,083,852
Interest Payments - Antenna Financing	21,644,470	96,058,507	0	0
Interest Payments - Working Capital Loans	44,921,677	670,678,969	776,998,117	738,166,974
Banking Commissions	10,080,000	127,249,920	133,612,416	186,088,501
Banking Costs	16,224,013	219,505,106	291,856,365	355,854,760
Total Financing Costs	92,870,159	1,113,492,502	1,202,466,898	1,280,110,235
Principal Payments - Antenna Financing	183,085,209	1,488,575,851	0	0
Total Principal Debt Repayments	337,580,161	4,451,915,245	4,713,187,565	5,042,162,740
Excess Cash Flow Before new Financing	-894,888,460	-4,370,022,096	-1,775,056,119	-730,189,124
Working Capital Financing	250,000,000	3,985,000,000	4,713,187,565	5,042,162,740
Free Cash Flow	-644,888,460	-385,022,096	2,938,131,445	4,311,973,617
Net Debt Issuance/(Repayment)	-87,580,161	-466,915,245	0	0
Ending Debt Balance	5,054,774,488	4,616,004,040	4,616,004,040	4,616,004,040

Source: Internal Company Documents

Scenario 4: Continue to finance growth by increasing the level of debt.

	ACTUALS	ANNUAL PROJECTED		
	Dec-04	2005	2006	2007
Commercial	437,280,422	5,845,960,463	7,297,295,366	8,712,777,464
Corporate	232,117,224	3,528,777,065	5,249,810,384	6,866,746,687
Residential	2,300,450	632,928,160	3,161,987,985	6,149,257,140
International	71,470,385	1,884,969,879	3,791,085,240	5,584,872,291
Other	69,160,997	1,092,870,666	224,970,887	-335,107,787
Total Revenues	812,329,478	12,985,506,232	19,725,149,862	26,978,545,795
MPBS Cost	747,600,000	6,092,440,435	9,081,152,970	12,777,441,500
Other Operating Costs	79,033,448	1,296,649,996	1,321,525,990	1,428,383,230
Total Operating Costs	826,633,448	7,389,090,431	10,402,678,960	14,205,824,730
Total Administrative Costs	122,583,187	1,410,713,526	1,336,243,231	1,297,915,701
Total SG&A	155,011,033	2,018,601,811	2,166,868,015	2,173,623,692
Capex	96,416,750	446,124,300	35,000,000	35,000,000
Residential Antenna Purchases	8,160,000	456,116,467	719,781,419	703,946,228
Other Cash Outflows	67,963,200	74,917,420	40,807,362	1,272,345,422
Total Cash Outflows	1,276,767,618	11,795,563,953	14,701,378,987	19,688,655,773
Cash Flow Balance Before Financing	-464,438,140	1,189,942,279	5,023,770,876	7,289,890,022
Interest Payments - Antenna Financing	21,644,470	96,058,507	153,922,988	263,085,559
Interest Payments - Working Capital Loans	44,921,677	670,678,969	828,379,829	1,035,450,905
Banking Commissions	10,080,000	127,249,920	133,612,416	186,088,501
Banking Costs	16,224,013	219,699,906	320,495,662	444,240,706
Total Financing Costs	92,870,159	1,113,687,301	1,436,410,895	1,928,865,671
Principal Payments - Antenna Financing	183,085,209	1,488,575,851	820,488,197	2,021,490,272
Total Principal Debt Repayments	337,580,161	4,451,915,245	5,625,249,743	8,220,178,836
Excess Cash Flow Before new Financing	-894,888,460	-4,375,660,267	-2,037,889,763	-2,859,154,485
Working Capital Financing	250,000,000	3,985,000,000	5,625,249,743	8,220,178,836
Free Cash Flow	-644,888,460	-390,660,267	3,587,359,981	5,361,024,351
Net Debt Issuance/(Repayment)	-87,580,161	-466,915,245	0	0
Ending Debt Balance	5,054,774,488	4,964,999,445	7,012,904,482	8,689,456,072

Source: Internal Company Documents

Exhibit 8: Daily Treasury Yield Curve Rates

January 2005

Date	1 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr
01/03/05	1.99	2.32	2.63	2.79	3.10	3.28	3.64	3.94	4.23	4.84

Source: US Department of the Treasury

<http://www.treas.gov/offices/domestic-finance/debt-management/interest-rate/index.html>

Exhibit 9: Industry Beta

Industry Name	Number of Firms	Average Beta	Market D/E Ratio	Tax Rate	Unlevered Beta	Cash/Firm Value
Telecom Services	137	1.32	27.61%	12.71%	1.06	3.86%
Market	7091	1	26.93%	16.93%	0.81	6.18%

Source: Damodaran Online
http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html
