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06/22/2000

Bond Price Data

Amount	Coupon	Priority	Maturity	Ratings	Next Call Price	Next Call Date	Bid Price	YTW	STW	Opinion
$470mm	0/13.000%	SrDisc	04/15/08	NR/NR	104.33	4 /04	53.25	15.74	971	NR

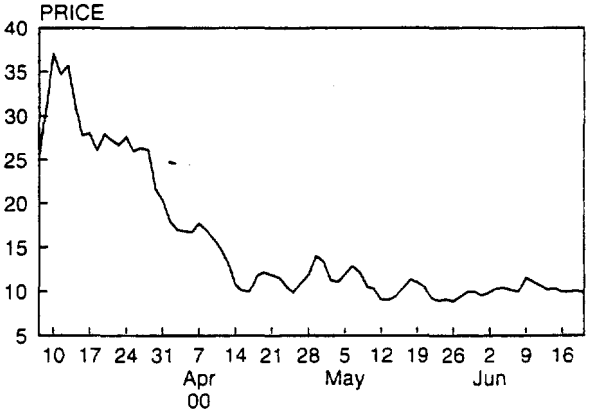
Balance Sheet

(US$, Millions)	12/31/99	3/31/00
Cash and Equivalents	28.6	231.0
Marketable Securities	20.6	58.9
Net PP&E	123.2	145.7
Total Debt	294.0	303.7

Income Statement

(US$, Millions)	1Q00	1Q99
Revenue	19.8	8.3
Gross Margin	22%	31%
EBITDA	(18.9)	(8.3)

Equity Closing Price



FirstWorld acquired Houston-based ISP Hypercon. The company now operates eight IDCs across the western U.S. with approximately 175,000 sq. ft. of space.

Company Description

FirstWorld Communications provides small and medium-size businesses with a full suite of Internet products and services. FirstWorld uses its network of Internet Data Centers to host, monitor and maintain mission critical Web-sites, e-commerce platforms and business applications. The company plans to have over 300,000 sq. ft. of operational data center space by year-end 2000. FirstWorld also offers its customers broadband solutions, including high speed Internet access, digital subscriber line service, Web integration, and consulting and telephony.

Recent Developments

- On June 6, FirstWorld announced that it has sold its excess rights to a fiber optic network in the Portland, OR, vicinity to RCN Corporation. FirstWorld is maintaining enough of its fiber to service its Portland data center, which opened on May 16. The Portland IDC covers 35,000 sq. ft., and allows FirstWorld to leverage its existing presence in Portland. The company established its presence in Portland when it acquired Optec, a Web-integration and consulting firm, in late 1998, and Transport Logic, a local ISP, in 1998. FirstWorld can now offer its Portland-area customers high speed Internet access, Web-hosting solutions, and IDC solutions including applications hosting and collocation.
- FirstWorld also announced on May 24 that it has opened its 38,000 sq. ft. Dallas, TX, Internet Data Center. The Dallas IDC is FirstWorld's latest presence in Texas; in January 2000, the company acquired the Dallas/Fort Worth-based ISP FastLane Communications, and in June 1999,

Credit Strengths

- FirstWorld has strong financial sponsorship from Donald Sturm (chairman of FirstWorld and former vice-chairman of Peter Kiewit Sons) and the Texas Pacific Group, which recently made a $179 million private equity investment in FirstWorld. Other investors include Colony Capital, Microsoft, SAIC (owner of Telcordia) and Lucent. The company also has strategic relationships with Microsoft, Cisco, Oracle and Lucent.
- Full suite of communications products and services for small and medium-size business customers — FirstWorld acts as a one-stop-shop for all of its customers needs, from telephony to Internet access to Web-hosting, application service provider and e-commerce solutions. This complete product set allows FirstWorld to drive the most value from each of its customers.
- Strong liquidity — FirstWorld raised $273 million during the first quarter of 2000, including $91 million from private equity placements and $182 million from its initial public offering. At March 31, 2000, FirstWorld had $289 million in cash on its balance sheet and approximately $25 million of net debt.

Credit Challenges

- A significant portion of FirstWorld's growth strategy involves acquisitions. The company's ability to execute such transactions — from negotiating favorable prices to fully integrating new operations — poses a potential stumbling

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block.

- FirstWorld's broad line of products and services creates a significant challenge for management to properly execute data, telephony and Internet Infrastructure strategies.

Industry Trends

Internet usage is growing rapidly worldwide, and we think the companies providing Internet infrastructure services are well positioned to take advantage of this opportunity. According to Forrester Research and the Yankee Group, the U.S. Web hosting market is projected to grow from $1.9 billion in 1999 to $14.6 billion in 2003 — a 66% CAGR. While the U.S. was the site of most of the expansion in earlier years, international markets have now surpassed it and continue to grow more rapidly. Forrester and Yankee estimate that the European Web hosting market will grow from $0.5 million in 1999 to $5.3 billion in 2003, a 80% CAGR. As a result, a number of Internet infrastructure companies are expanding their presence abroad, looking to take advantage of the high growth potential. In addition, customers are demanding that Internet Infrastructure companies provide them with a presence that is truly global.

Meanwhile, increased usage has driven similar growth for a number of other services, many of which are growing even more rapidly. These include e-commerce and other content services, managed access ("Intranets"), Web hosting, security services, and other products such as IP-based voice, fax, and video services. In our opinion, other factors are also driving (and benefiting from) Internet growth, including telecommunications deregulation and technological advances, both of which have made high-speed access more affordable to a broader range of businesses and consumers. This, in turn, is increasingly making Internet access and applications a requirement, rather than a luxury — even for smaller businesses.

Important disclosures appear on the inside back cover of this report

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Bond Price Data

Amount	Coupon	Priority	Maturity	Ratings	Next Call Price	Next Call Date	Bid Price	YTW	STW	Opinion
$270mm	0/12.125%	SrDisc	02/15/08	B3/B	104.04	2 /04	66.00	13.85	756	NR
$275mm	11.875%	SrNotes	01/15/10	B3/B	103.96	1 /06	100.00	11.87	558	NR

Balance Sheet

(US$, millions)	4Q99	1Q00
Cash & equivalents	188.1	413.8
Total debt	254.8	533.1
Market Capitalization (6/8/00)	1,322.0	2,487.5
Gross PP&E	203.3	255.6

Income Statement

(US$, millions)	4Q99	1Q00	2000E
Revenue	36.0	45.3	220.2
Gross margin	28.8%	26.6%	22.4%
EBITDA	(0.7)	(2.5)	(20.7)
Net Debt/LQA Revenue	0.5x	0.7x	1.9x

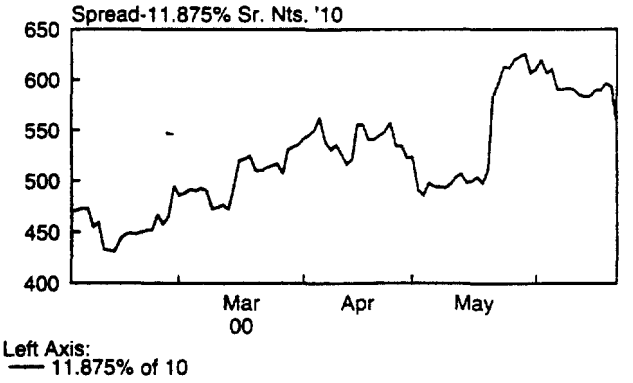
Company Operating Data

	4Q99	1Q00	2000E
Lines Installed	181,103	238,697	431,197
Corporate Lines	50,709	69,222	206,975
% of total lines	28%	29%	48%
Data Lines	130,394	169,475	224,222
% of total lines	72%	71%	52%

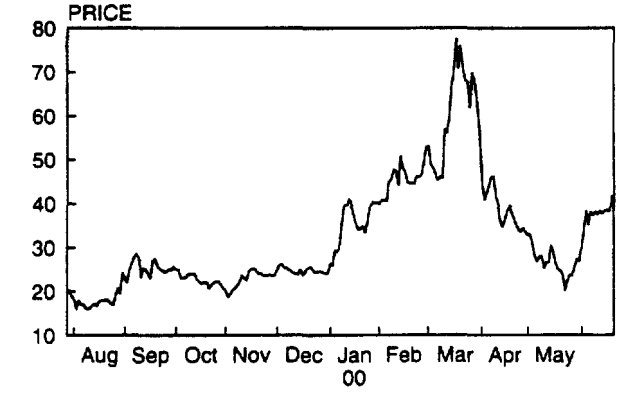
Company Description

Focal is a Chicago-based integrated communications provider that, along with Allegiance, has pioneered the "smart build" network deployment strategy. With a smart build network deployment, Focal installs its own switches and leases capacity for all of its connectivity needs between its switches, the ILEC network, the Internet, and long distance points of presence. Traditional facility-based CLECs have installed fiber optic cable for this connectivity, but Focal avoids early-stage capital requirements by leasing capacity. As Focal's traffic increases on its leased routes, the company purchases fiber from suppliers such as Metromedia Fiber Network and Level 3. For the last mile of connectivity, Focal leases fiber or unbundled copper loops from the incumbent or other suppliers, which is similar to most other facility-based CLECs. Focal provided data, voice, and collocation services to ISPs, large corporations, and value added resellers (VARs) in 18 markets as of March 31, 2000. The company intends to offer service in 20 markets by the end of the third quarter, and 24 markets by the end of 2001.

Spread History



Equity Closing Price



Chicago Market: Focal began offering service in May 1997 in its first market, Chicago. The company activated its own Chicago transport network in February 2000. The network features an OC-3 circuit providing connectivity between Focal's switching facility and an Internet backbone provider. During the first quarter of 2000, Focal's operations in Chicago generated a 38% EBITDA margin. The company estimates that it takes approximately 18-24 months for a new market to reach EBITDA positive.

Recent Developments

- In mid-May, the Illinois Commerce Commission (ICC) ruled

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that Focal is authorized to charge Ameritech the tandem reciprocal compensation rate of $.0052 for all local traffic, which is 38% higher than the end office rate Ameritech had been paying Focal since the expiration of the initial interconnection agreement.

- On April 10, Focal announced a number of new business initiatives that include the addition of four new core markets and four new broadband data products. The new data products include high speed Internet access, collocation, private peering services, and upstream bandwidth services. Focal increased its target markets to 24 from 20 by the end of 2001. The company hired Michael Mael to spearhead the Internet initiatives. Prior to Focal, he was vice president of applications and Web services for PSINet.
- In the first quarter of 2000, Focal reported total revenue of $45.3 million, a 26% sequential increase from $36 million in the fourth quarter of 1999. Focal generated $32.2 million in data services revenue from access lines sold to ISPs, a 22% sequential increase over $26.3 million in the fourth quarter. Telecom services revenue, which includes circuit switched services sold to corporations and value added resellers, was $13.1 million in the first quarter, a 35.5% sequential increase from $9.7 million in the fourth quarter of 1999.
- SG&A as a percentage of revenue increased 1% sequentially from 31% to 32% in the first quarter, even though the company experienced significant growth and entered two new markets. This increase highlights Focal's strict expense controls. For the first quarter of 2000, Focal reported an EBITDA loss of ($2.5) million versus ($0.7) million in the fourth quarter. We forecast a decline in EBITDA as renegotiated reciprocal compensation rates fall through the second quarter of 2000. As a result of its recently announced expansion plans and wholesale Internet initiatives, we expect Focal's EBITDA positive date to move from the end of 2000 to the first half of 2001.
- At March 31, 2000, Focal had 110,389 square feet of collocation space available to its customers or under development, versus 94,759 square feet at December 31, 1999. As one of its recently announced wholesale ISP initiatives, Focal plans to offer collocation services to applications service providers (ASPs) and other content providers for software distribution over the Internet, thereby getting its content closer to the dial-up customer.

Relative Value

Focal scored third in our First Quarter 2000 CLEC comparison analysis, behind McLeodUSA and Mpower Communications. The company proved its SG&A efficiency in the first quarter of 2000, ranking third, compared with ranking second in our Fourth Quarter CLEC Analysis. Focal reported a 1% increase in SG&A as a percentage of revenue, from 31% to 32%. Owing to its low debt level, Focal scored third in leverage-to-revenue and fourth in asset coverage during the first quarter. Even though Focal has a large exposure to reciprocal compensation, it managed to keep its DSO at 69.6 in the first quarter, versus the 12-company group average of 89.4. Focal ranked third in this measurement, trailing ITC DeltaCom and Mpower.

Credit Strengths

- Focal is rapidly diversifying its revenue mix in order to reduce the share of reciprocal compensation and create a steadier revenue base. Over the past year, the company has been very successful in accomplishing this task, as reciprocal compensation as a proportion of total revenue has declined from 73% during the first quarter of 1999 to 35% during the first quarter of 2000.
- New Data Initiatives Leverage Network Assets: Currently, Focal's wholesale ISP offering is composed mainly of dial-up ports sold to ISPs to complete the local connection of their dial-up customers. Recently, Focal announced its intent to leverage its existing network and collocations by offering additional value added data/Internet services in the third quarter of 2000. The new services will include collocation and interexchange points. In order to implement the service offerings, Focal hired the former vice president of PSINet's Internet applications and Web services division, Michael Mael.
- Smart Build Allows Quick Market Entry and Low Up-Front Costs: Focal employs a "smart build strategy." Smart Build CLECs install customers onto their network through leased lines from the ILEC connected to switches owned by the CLEC. Smart Build CLECs do not build fiber to the end-user until it is economical justifiable to do so, which saves both time and up-front capital investment for the CLEC. The time and money spent on this strategy allows a Smart Build CLEC to focus on selling services when entering a new market and penetrate existing markets.

Credit Challenges

- We forecast the wholesale dial-up Internet opportunity to have a 3-5 year time frame as various broadband access technologies become available and end-users demand faster speed for applications.
- For long-term sustainability, wholesale dial-up Internet providers must offer advanced services such as broadband access, data applications, and integrated access services.
- Reciprocal compensation has been viewed as an unpredictable source of revenue, and proposed legislation in the House of Representatives could eliminate payments all together. Reciprocal compensation has stabilized over the past few months because of several CLEC agreements such as ICG - BellSouth, KMC - BellSouth, and Focal - Ameritech. We remain optimistic that reciprocal compensation will continue to be a stable revenue source over the next three years.

Industry Trends

The competitive local exchange carrier (CLEC) opportunity is a significant one. With less than a 5% total market penetration, CLECs are targeting under-served customers of the incumbent local exchange carriers (ILECs), which are

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former monopolies. The growing demand for affordable bandwidth should give CLECs an opportunity to acquire customers as long as they adhere to attractive pricing, high quality customer service, and differentiated offerings. In our view, a CLEC needs four key elements to succeed:

1) Management and sponsorship

2) Access to capital

3) Successful execution of the stated business plan

4) The maintenance of a consistent strategy with investors

We follow 13 CLECs in the high yield market. Because most of these companies are still in the build-out mode and currently operating with negative cash flow (EBITDA), we carefully track the trends in revenue growth and margin improvement. In 2000, we expect most of the CLECs we rate Market Outperformer to achieve double-digit sequential revenue growth each quarter — especially in local telecommunications and data services. We also look for several carriers to improve their gross margins and SG&A expense controls. Most of the carriers that we rate Market Performer have fallen behind in hitting their revenue growth targets and/or failed to improve their margins. Because the high yield market is currently difficult for most CLECs to access, we are concerned with the liquidity outlook for some of the carriers that have fallen behind.

In the first quarter, the CLECs in our comparison group increased revenues sequentially by over 12%, collectively reaching $1.3 billion. EBITDA losses for the group were $(162.5) million, including five companies generating positive EBITDA. Gross property, plant, and equipment for the group totaled $13.26 billion, and the group has $18.7 billion in total debt and $5.2 billion in redeemable preferred. The group's enterprise value is now $66.8 billion, which is a 60% increase over its total when we published our book for the 1999 Goldman Sachs Leverage Finance Conference in October of 1999. The total installed lines of the group grew 20% sequentially to 4,809,115 lines. All of the CLEC lines pale in comparison to the five Regional Bell Operating Companies (RBOCs) and GTE, which have over 160,000,000 installed lines. There is plenty of market opportunity. The CLECs also continue to make significant progress in moving lines onto their networks or switches via unbundled network elements (UNEs), which should contribute to improving gross margins in the future.

The group remains reasonably funded, with total cash at the end of the first quarter of $10.7 billion. We are concerned about the liquidity of a few CLECs in our group, such as Adelphia Business Solutions, CapRock Communications, and KMC Telecom. Over the past 18 months, more than $9.5 billion in private equity has funded various CLECs through their capital shortfalls, and some carriers have turned to the bank market. Given the current state of the high yield market, we think CLECs will continue to look to those sources for capital.

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Global Crossing Holdings Ltd.

GBLX

High Yield Research

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$900mm	9.125%	SrNotes	11/15/06	Ba2/BB	NC	NC	95.00	10.20	387	NR
$1,100mm	9.500%	SrNotes	11/15/09	Ba2/BB	101.58	11/06	94.50	10.43	429	NR
$800mm	9.625%	SrNotes	05/15/08	Ba2/BB	104.81	05/03	97.00	10.12	407	NR

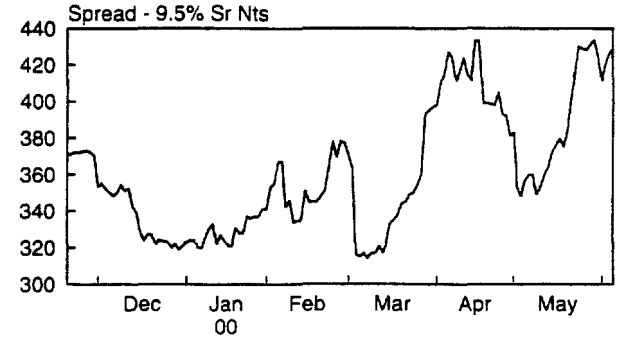
Balance Sheet

(US$, millions)	3/31/00	12/31/99
Cash & equivalents	1,453.5	1,864.9
Net PP&E	7,985.7	6,026.1
Long Term Debt	6,031.7	5,018.5
Market Capitalization (6/21/00)	24,225.0	

Income Statement

(US$, millions)	1Q00	1Q99
Revenue	1,119.5	176.3
Gross Margin	48.2%	60.6%
EBITDA	123.6	58.0

Spread History



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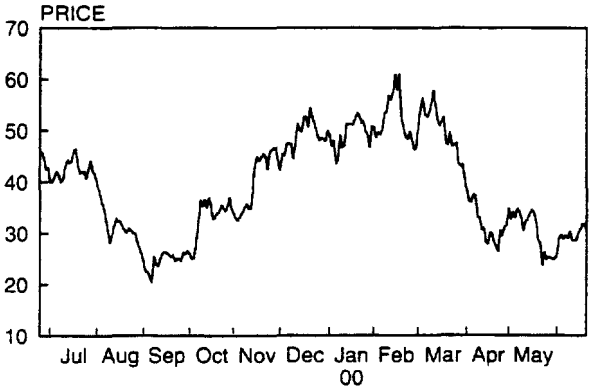
Equity Closing Price



Company Description

Global Crossing, Ltd., was founded in March of 1997 by Gary Winnick and Pacific Capital Group (PCG). In May 1998, Global Crossing commenced service on the first leg of its system, a cable linking the U.S. to Europe. In August 1998, Global Crossing raised approximately $400 million in an initial public offering. In July 1999, it acquired Global Marine, the leading provider of installation, maintenance, and support for subsea cabling, for approximately $875 million in stock and assumed debt; Global Marine provides Global Crossing with a strategic advantage over its competition given the market's limited availability of ships and other material necessary for cable deployment and repair.

In September 1999, Global Crossing acquired Frontier, a U.S. facilities-based provider of telecommunications services to corporate and residential customers in a stock swap valued at over $10 billion. As part of Frontier, the company acquired Global Center, a leading global Web Hosting provider. The company is intending to issue a tracking stock for Global Center within the next month. In September 1999, Global Crossing entered into a joint venture with Microsoft and Softbank in Asia to form Asia Global Crossing (AGC); in addition to the contribution of equity to the venture, both Microsoft and Softbank made material capacity purchases over the company's network. Global Crossing pursued the formation of AGC in order to advance its goals in Asia and gain considerable time-to-market advantage. On May 15, 2000, ACG filed an S-1 for an initial public offering. The offering is expected to be completed within the next month.

In October 1999, the company bought UK-based Racal Telecom, furthering its strategy of providing an integrated, end-to-end telecommunications services on a global basis; Racal provides Global Crossing with city-center access. In November 1999, the company furthered its move into Asia by entering into a joint venture with Hutchinson Whampoa in Hong Kong to form Hutchison Global Crossing (HGC); however, the company intends to contribute its interest in HGC to AGC concurrent with the IPO of ACG. In February 2000, Global Crossing purchased IXnet and IPC Communications, high growth providers of IP-Based network services to the global financial community.

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Early in the second quarter of 2000, Global Crossing completed an offering of $1 billion of cumulative convertible preferred stock, after upsizing it from an original offering of $750 million. Concurrent with the convertible offering, Global Crossing and some shareholders sold 43 million common shares at a price of $33 for combined proceeds of $1.4 billion. More than half of the stock sold was by the company.

Global Crossing is building the world's first independent global state-of-the-art, IP-centric, facilities-based network for the provision of data and long distance telecommunication services, utilizing a combination of undersea and terrestrial digital fiber optic cable systems; with an advanced network capable of handling IP and legacy-based traffic, Global Crossing is now focused on expanding the reach of its network and the scope of its product offering to attract global multinational customers. The company is well positioned to capitalize on the increasing demand for bandwidth, driven by the exponential growth in Internet and data traffic. Upon completion, Global Crossing's advanced high-bandwidth fiber optic network around the world will enable it to offer high-quality, competitive data and telecommunication services at low cost.

Recent Developments

- Global Crossing has accumulated its network assets through the following transactions:
- Atlantic Crossing: AC-1, Global Crossing's first undersea fiber optic cable in the Atlantic region, is a 14,300 km four fiber pair self-healing ring that connects the US and Europe.
- On February 17, 2000, Global Crossing and Level 3 announced an agreement to co-build a 1.28 terabit transatlantic cable. The four-pair cable is scheduled to be in service in September 2000. Global Crossing and Level 3 will each own two of the four fiber pairs in the system.
- Mid-Atlantic Crossing: MAC is being developed as a 7,500 km two fiber pair self-healing ring that will connect New York, the Caribbean and Florida. Global Crossing expects MAC to be completed within the next few weeks.
- Pan American Crossing: PAC is being developed as an 8,900 km two fiber pair cable that will connect California, Mexico, Panama, Venezuela and the Caribbean. PAC will also connect with approximately 3,000 km of terrestrial capacity in Mexico being developed through a joint venture arrangement.
- Pan European Crossing: In October 1998, Global Crossing announced plans to build PEC which, upon completion, will consist of multiple self-healing rings offering connectivity between AC-1 and 25 European cities: London, Paris, Strasbourg, Amsterdam, Rotterdam, Antwerp, Brussels, Berlin, Frankfurt, Munich, Stuttgart, Hamburg, Hanover, Dusseldorf, Cologne, Copenhagen, Dublin, Dresden, Leipzig, Lyons, Marseilles, Milan, Luxembourg, Turin and Zurich. PEC is initially planned as a 11,000 km system with 24 to 72 fiber pairs as well as spare conduits.
- Pacific Crossing: PC-1, Global Crossing's first undersea fiber optic cable in the Pacific region, is being developed as a 21,000 km, four fiber pair self-healing ring. PC-1 connects California and Washington in the western US with two landing sites in Japan.
- South American Crossing: In March 1999, Global Crossing announced plans for the development of SAC, an 18,000 km undersea and terrestrial fiber optic network directly linking the major cities of South America through NAC, MAC, PAC, AC-1, AC-2 and PC-1 to the US, Mexico, Central America, the Caribbean, Asia and Europe.
- Frontier Corporation: On September 28, 1999, Global Crossing completed the acquisition of Frontier, in a stock swap transaction valued at $10 billion, including the assumption of $1.3 billion in liabilities. Headquartered in Rochester, New York, Frontier was one of the largest long distance telecommunications companies in the US and one of the country's leading providers of facilities-based integrated communications and Internet services.
- Global Center, which Global Crossing acquired as a part of Frontier, is a worldwide market leader in Web Hosting. Global Crossing has committed to significantly accelerating the growth of Global Center both in terms of service offering and customer reach. Global Center's 10 data centers include over 1.3 million square feet; it expects to open 12 additional data centers in 2000. Global Center intends to expand its service offering beyond web hosting to include applications services and outsourcing, as well as IT management, consulting, and other professional services. Global Crossing filed an S-1 to issue a tracking stock for Global Center within the next month.
- In October 1999, the company bought UK-based Racal Telecom, furthering its strategy of providing an integrated end-to-end telecommunications services on a global basis. Racal provides Global Crossing with city-center access.
- Asia Global Crossing: On November 24, 1999, Global Crossing completed the formation, together with Softbank and Microsoft, of a new joint venture company called Asia Global Crossing. AGC wholly owns East Asia Crossing (EAC), a planned 17,700 km terrestrial and undersea network that will link Japan, China, Singapore, Hong Kong, Taiwan, South Korea, Malaysia and the Philippines. Global Crossing is responsible for the management and operation of the network. Global Crossing contributed to the venture its 58% share of Pacific Crossing-1 as well as its development rights in East Asia Crossing. Softbank and Microsoft each contributed $175 million in cash to Asia Global Crossing and also committed to make a total of at least $200 million in Global Crossing Network capacity purchases over a three-year period. Global Crossing expects these purchases to be utilized primarily on PC-1 and EAC. Softbank and Microsoft have also agreed to use Asia Global Crossing's network in the region. On May 15, 2000, AGC filed an S-1 for an initial public offering. The offering is expected to be completed within the next month.
- East Asia Crossing: East Asia Crossing is being developed as an undersea network, which Global Crossing expects will link Taiwan, Singapore, Hong Kong, Malaysia and the Philippines. Approximately $250 million has been spent on construction of EAC, and Global Crossing expects EAC to have a total cost of approximately $800 million.

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Global Center Japan: Asia Global Crossing and IRI, a Japanese Internet-services company, formed a joint venture in January 2000 to develop a Web-hosting and Internet data center business in Japan.

Global Access Ltd.: Global Crossing owns a 49% interest in Global Access Ltd., a company that will own and operate a fiber optic terrestrial system being developed in Japan that, among other things, will connect the PC-1 cable stations with three cities in Japan: Tokyo, Osaka, and Nagoya. Global Crossing intends to contribute its stake in GAL to AGC concurrent with its IPO.

Hutchison Global Crossing: On January 12, 2000, Hutchison Whampoa Limited and Global Crossing formed Hutchison Global Crossing, a 50/50 joint venture to pursue fixed-line telecommunications and Internet opportunities in Hong Kong. Global Crossing intends to contribute its stake in HGC to AGC concurrent with its IPO.

In February 2000, Global Crossing purchased IXnet and IPC Communications, high growth providers of IP-Based network services to the global financial community.

Relative Value

Though it only recently departed from the developmental stage, we consider Global Crossing to be a relatively defensive bond within the telecommunications sector. Distinguishing characteristics include a fully funded core business plan, strong early operating results, and a tremendous growth potential for demand for international capacity, enhanced by a first-to-market advantage.

Credit Strengths

Worldwide telecommunications traffic is growing, with a particular focus on capacity-intensive services such as data. Within this context, Global Crossing's business plan establishes the company as the first independent developer of undersea, state-of-the-art, digital, international capacity, providing a first-to-market advantage in meeting the growing demand of international carriers and ISPs for flexible increments of broadband capacity.

AGC is expected to price its IPO within the next month and Global Center is expected to issue a tracking stock within the next month. Both of these ventures will be self-funding and reduce the burden placed on the parent company, Global Crossing.

Global Crossing has a strong, deep management team led by CEO Leo Hindery, former president and CEO of TCI who orchestrated its sale to AT&T, and Gary Cohen, the recently hired president and COO of Global Crossing who spent 22 years as head of telecommunications at IBM.

Pre-sales of fiber routes have allowed, and should continue to allow, Global Crossing to lower its cost of capital for network buildouts. In addition, the size of and demand for projects such as Pacific Crossing and Global Center have created the potential for capital-generating spin-offs.

Global Crossing has developed significant partnerships through investments from Microsoft and Softbank.

- The company's network is a unique, difficult-to-duplicate asset that requires years of planning and enormous amounts of capital. These barriers to entry should shield the company from intense competition.

Credit Challenges

- An increasingly competitive global telecommunications marketplace may result in longer-term pricing pressures. These pressures might squeeze operating margins of international carriers' carriers, especially as new competitors enter the marketplace.
- With aggressive expansion plans, Global Crossing will require large amounts of capital to complete its buildout. Access to capital — through capital markets or private investment — should be an issue to watch going forward. In addition, managing a company that is expanding on five continents requires constant vigilance and perfect execution from management.
- Reliance upon new business from relatively nascent international telephone companies represents a risk to Global Crossing, as many of these new and potential customers could require additional financing (in a turbulent market environment) to meet their own business plans.

Industry Trends

The fiber builders segment of the industry has seen an influx of new competitors in recent years, as the fiber excess that existed in the early 1990s has been more than absorbed by growing Internet and data traffic. Advances in fiber technology allow for greater capacity at lower prices, supported by more broadly spaced (and thus less expensive) electronics and increases in bandwidth capabilities. In addition, developments in optical switches, routers, and cross connects have reduced cost and increased fiber capacity for carriers. This, in turn, has led to concerns about the possibility of future overcapacity. We believe such fears are unfounded, because we think the lower cost of bandwidth delivery is driving significant growth in the demand for Internet and data usage. The elasticity is greater than 1. Furthermore, because fiber is more readily available and optical equipment advancements have driven down the cost to light a network, the barriers to entry have been lowered for "smart build" communications providers, which purchase dark fiber and bandwidth on a wholesale basis.

The most recent trend to emerge among fiber builders is the construction of data center/collocation facilities for housing the equipment of their end customers. Internet-centric dot-com customers place their Internet servers in these facilities and gain Web connectivity. Some emerging "smart build" telecommunications providers place voice-switching equipment in these facilities as well. The build-out of data center facilities is consuming more and more capital from our traditional fiber builders, and puts them in competition with Internet infrastructure providers such as PSINet and Exodus.

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We follow seven public fiber builders for credit comparison analysis. The group has a combined equity value of $125 billion — $24 billion in total debt and $22 billion in gross property plant and equipment. The fiber builders have constructed their networks with less leverage than the CLECs, as shown by a 1:1 ratio of debt to PP&E for the fiber builders and a 2:1 ratio of debt to PP&E for the CLECs. Many of the builders have financed their networks through presales of capacity and equity offerings. Because of their more conservative financing approach, the fiber builders tend to trade tighter to comparable Treasuries than CLECs do.

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Bond Price Data

Amount	Coupon	Priority	Maturity	Ratings	Next Call Price	Next Call Date	Bid Price	YTW	STW	Opinion
$600mm	12.500%	SrNotes	02/01/10	NR/B-	106.25	2 /05	86.60	15.19	919	NR

Balance Sheet

(US$ millions)	12/31/99	3/31/00
Cash	170	602
Total Debt	160	617
PP&E	129	134
Equity Market Capitalization	1,100	1,398

Income Statement

(US$ millions) (quarterly financial data)	12/31/99	3/31/00
Revenue	16.1	17.9
Gross Margin	38%	43%
EBITDA	(13.6)	(15.4)
Capital Expenditures	10.0	9.0

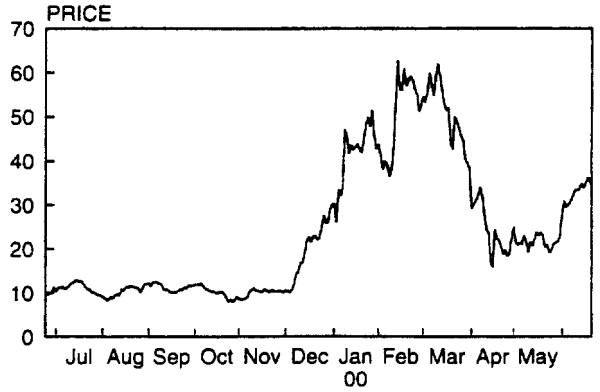
Company Description

Globix provides businesses with full-service Internet solutions through its network of Internet data centers. The company offers its customers Internet access and connectivity products, Web-hosting, collocation and support services for Internet-based applications, as well as application services such as streaming media, e-commerce, and Internet security. Globix currently serves over 2,000 customers who come from a broad cross-section of Internet-inensive industries, including media and publishing, financial services, retail, healthcare and technology. At the end of the first quarter of 2000, Globix had three Internet data centers in operation with 257,000 gross sq. ft. of space. Globix plans to build eight additional data centers during 2000 and add additional capacity to its backbone network.

Recent Developments

- Globix announced on June 19 that it had purchased an STM-16 ring network from Viatel. The network capacity gives Globix access to Viatel's pan-European network, connecting London, Amsterdam, Frankfurt, and Paris. Additionally, as part of the purchase, Globix will receive collocation space in a number of Viatel's European collocation facilities.
- In April 2000, Globix announced a substantial expansion of its network through the acquisition of 2.5Gbps of optical wavelength and multiple STM-1 transatlantic circuits. The new capacity will connect seven cities where Globix is currently operational or plans to expand its Internet data center presence: New York City, Boston, Chicago, Washington, D.C., San Francisco, Seattle and Los Angeles.
- In December of 1999, Globix received an $80 million private equity investment from Hicks, Muse, Tate and Furst.

Equity Closing Price



Credit Strengths

- Large opportunity — Globix is targeting the North American and European markets for providing Internet and data services to businesses. According to Dataquest/Gartner Group, worldwide corporate Internet access revenues are expected to increase from $6.9 billion in 1998 to almost $23 billion in 2003.
- Financial Sponsorship — In December 1999, Globix received an $80 million private equity investment from Hicks, Muse, Tate and Furst.
- Liquidity — As a result of the Hicks, Muse investment and a recently completed $600 million high yield offering, Globix is well funded, with over $600 million of cash on its balance sheet at 3/31/00.
- Large, High Revenue Customers and Strong Backlog — During the quarter ended March 31, 2000, Globix's top 100 customers increased their average annualized monthly revenues from $140,000 to over $239,000. Globix also booked more than $21 million of new annualized recurring revenue during the quarter, a 70% increase over the prior quarter.

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Industry Trends

Internet usage is growing rapidly worldwide, and we think the companies providing Internet infrastructure services are well positioned to take advantage of this opportunity. According to Forrester Research and the Yankee Group, the U.S. Web hosting market is projected to grow from $1.9 billion in 1999 to $14.6 billion in 2003 — a 66% CAGR. While the U.S. was the site of most of the expansion in earlier years, international markets have now surpassed it and continue to grow more rapidly. Forrester and Yankee estimate that the European Web hosting market will grow from $0.5 million in 1999 to $5.3 billion in 2003, a 80% CAGR. As a result, a number of Internet infrastructure companies are expanding their presence abroad, looking to take advantage of the high growth potential. In addition, customers are demanding that Internet Infrastructure companies provide them with a presence that is truly global.

Meanwhile, increased usage has driven similar growth for a number of other services, many of which are growing even more rapidly. These include e-commerce and other content services, managed access ("Intranets"), Web hosting, security services, and other products such as IP-based voice, fax, and video services. In our opinion, other factors are also driving (and benefiting from) Internet growth, including telecommunications deregulation and technological advances, both of which have made high-speed access more affordable to a broader range of businesses and consumers. This, in turn, is increasingly making Internet access and applications a requirement, rather than a luxury — even for smaller businesses.

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Bond Price Data

Amount	Coupon	Priority	Maturity	Ratings	Next Call Price	Next Call Date	Bid Price	YTW	STW	Opinion
$855mm	0/13.250%	SrNotes	02/01/10	Caa1/CCC+	106.62	2 /05	55.00	13.35	724	NR

Balance Sheet

(C$, millions)

	12/31/99	3/31/00
Cash & equivalents	29.3	732.1
Total Debt	57.0	781.5
Market Capitalization (6/8/00)		US$1,696
PP&E	108.0	567.6

Income Statement

(C$, millions)

	1Q00 (12/31/99)	2Q00 (3/31/00)	2000E
Revenue	2.3	13.3	62.0
Gross Margin	6%	20%	35%
EBITDA	(10.7)	(17.6)	(85.0)

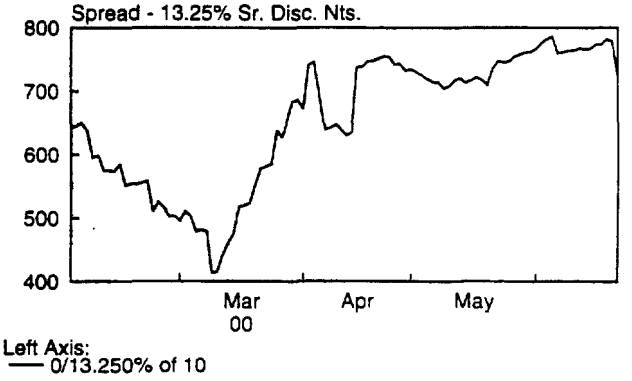
Company Description

Group Telecom (GT) is an early entrant into the recently deregulated Canadian telecom market (competition officially began in the local loop in January 1998). The company's target market, the small to medium-sized business customer, is relatively underserved and represents a growing portion of the overall market. GT is the second-largest facilities-based CLEC in Canada, and the largest CLEC. The company operates across seven Canadian provinces, including all of the large business centers in the country. The company has a network of 8,430 route km and 147,753 fiber km, pro forma for the recently announced acquisition of Moffat Communications. GT intends to offer service in 19 markets throughout Canada by the end of 2001.

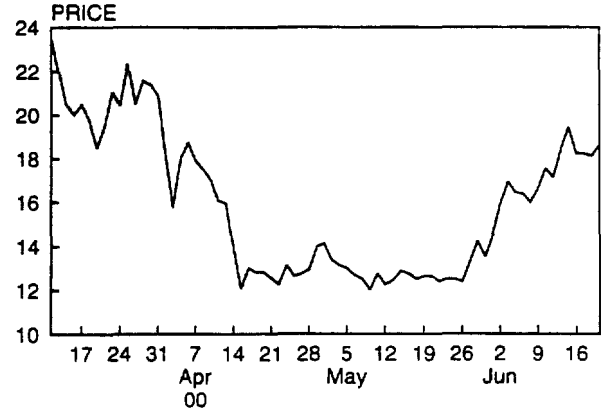
At the end of 1999, GT had more than 2,900 customers, mainly small to medium-sized businesses, ISPs, wireless operators, government institutions, financial institutions and other businesses. Approximately 85% of its revenue at the end of 1999 was from data. The company first tries to attract data customers, then offers them Internet and voice services.

GT has formed agreements with building companies, including national property owners Cadillac Fairview and Oxford Properties, for permanent access by the GT network to buildings owned by these companies. The company has also formed relationships with utilities to cost effectively build its network.

Spread History



Equity Closing Price



Recent Developments

- On June 5, GT announced a marketing agreement with Research in Motion (RIM) to add RIM's BlackBerry Internet Edition, including the RIM 950 Wireless Handheld and RIM 957 Wireless Handheld to its service portfolio. GT's customers will have a single mailbox, offering both wireless and PC-based access to email. GT's customer will be able to seamlessly access, manage, and respond to their email, voice, and fax messages anytime, anywhere.
- At the end of May, GT announced the completion of an agreement with 360networks to purchase approximately C$336 million of fiber and high speed bandwidth network access. At the same time, GT made an equity investment in 360networks of approximately C$43 million. Over time,

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360networks will provide GT with 12 strands of fiber, covering 7,000 km between Seattle and Halifax via Victoria, Vancouver, Kamloops, Edmonton, Calgary, Regina, Winnipeg, Toronto, Ottawa, Montreal, and Quebec City. In addition, GT will receive an IRU for 7,900 km in the U.S. from Vancouver and Seattle to Sacramento, Denver, Chicago, Detroit, Toronto, Buffalo, Albany, Boston, and Montreal.

- In early May, GT signed strategic agreements with five national property management companies: Bentall Real Estate Services, Brookfield Properties, Cadillac Fairview, Oxford Development, and Standard Life Assurance. The agreements provide GT with the ability to install its network in 229 office buildings in 13 markets across Canada.
- On April 27, GT announced the completion of its acquisition of Moffat Communication's CLEC business. GT paid C$68 million in cash for Moffat's fiber assets and provided Moffat with 1.7 million shares in GT. The acquisition gives GT 620 route km in Edmonton and Winnipeg and 240 on-net buildings.

Credit Strengths

- Canada has a rapidly growing telecom market: Goldman Sachs Equity Research estimates that the Canadian business telecom market will grow from its current size of C$14.7 billion to C$31.2 billion by 2009, with data and Internet applications being the fastest-growing segments of the business.
- Favorable Regulatory Environment in Canada: The early stage of the Canadian competitive telecom market coupled with a more attractive regulatory environment makes Canada a far less crowded CLEC market than the U.S. The favorable treatment given to facilities-based operators, indicated by the CRTC's (Canada's FCC equivalent) decision to eliminate the sunset provision for mandatory unbundling of local loops in 2002, puts an operator like GT at a significant advantage to resellers. Furthermore, foreign ownership restrictions, which prohibit U.S. operators from expanding their facilities into Canada, are likely to keep the competitive environment manageable.
- Strong Management Team: GT's senior management includes CEO Dan Millard, who was the president of Adelphia Business Solutions, and CFO Steve Shoemaker, who was the treasurer of Qwest. Other members of the team include former employees from AT&T Canada, Telus, Sprint, and Cable & Wireless.

Credit Challenges

- Competition: The company's competition is mainly focused on ILECs, primarily Bell Canada and Telus, and the threat of the those operators expanding their regional strategies nationwide, and other CLECs such as AT&T Canada, OCI, Videotron, and others.
- GT faces a challenge in obtaining access agreements and rights of way to build its network.

Industry Trends

The competitive local exchange carrier (CLEC) opportunity is a significant one. With less than a 5% total market penetration, CLECs are targeting under-served customers of the incumbent local exchange carriers (ILECs), which are former monopolies. The growing demand for affordable bandwidth should give CLECs an opportunity to acquire customers as long as they adhere to attractive pricing, high quality customer service, and differentiated offerings. In our view, a CLEC needs four key elements to succeed:

1) Management and sponsorship

2) Access to capital

3) Successful execution of the stated business plan

4) The maintenance of a consistent strategy with investors

We follow 13 CLECs in the high yield market. Because most of these companies are still in the build-out mode and currently operating with negative cash flow (EBITDA), we carefully track the trends in revenue growth and margin improvement. In 2000, we expect most of the CLECs we rate Market Outperformer to achieve double-digit sequential revenue growth each quarter — especially in local telecommunications and data services. We also look for several carriers to improve their gross margins and SG&A expense controls. Most of the carriers that we rate Market Performer have fallen behind in hitting their revenue growth targets and/or failed to improve their margins. Because the high yield market is currently difficult for most CLECs to access, we are concerned with the liquidity outlook for some of the carriers that have fallen behind.

In the first quarter, the CLECs in our comparison group increased revenues sequentially by over 12%, collectively reaching $1.3 billion. EBITDA losses for the group were $(162.5) million, including five companies generating positive EBITDA. Gross property, plant, and equipment for the group totaled $13.26 billion, and the group has $18.7 billion in total debt and $5.2 billion in redeemable preferred. The group's enterprise value is now $66.8 billion, which is a 60% increase over its total when we published our book for the 1999 Goldman Sachs Leverage Finance Conference in October of 1999. The total installed lines of the group grew 20% sequentially to 4,809,115 lines. All of the CLEC lines pale in comparison to the five Regional Bell Operating Companies (RBOCs) and GTE, which have over 160,000,000 installed lines. There is plenty of market opportunity. The CLECs also continue to make significant progress in moving lines onto their networks or switches via unbundled network elements (UNEs), which should contribute to improving gross margins in the future.

The group remains reasonably funded, with total cash at the end of the first quarter of $10.7 billion. We are concerned about the liquidity of a few CLECs in our group, such as Adelphia Business Solutions, CapRock Communications, and KMC Telecom. Over the past 18 months, more than $9.5 billion in private equity has funded various CLECs through their capital shortfalls, and some carriers have turned to the

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bank market. Given the current state of the high yield market, we think CLECs will continue to look to those sources for capital.

Goldman, Sachs & Co. or an affiliate has rendered significant corporate finance services to G.T. Group Telecom, Inc. within the past 12 months. As a result of its position in G.T. Group Telecom, Inc.'s securities, regulations require that we indicate that Goldman, Sachs & Co. may be deemed an affiliate of the issuer. A director and/or employee of Goldman, Sachs & Co. is a director of G.T. Group Telecom, Inc. Investment funds affiliated with Goldman, Sachs & Co. (the 'Goldman Sachs Funds') have a principal investment in GT Group Telecom, Inc. (the 'Company'). The Goldman Sachs Funds own approximately 24% of the Class A voting shares and approximately 33% of the Company's outstanding Class A and Class B shares. Pursuant to an agreement among the Company, the

Goldman Sachs Funds and certain other shareholders, the Goldman Sachs Funds have the right to designate two nominees for election to the Company's Board of Directors. As a result of the Goldman Sachs Funds' relationship to the Company, Goldman, Sachs & Co. may be deemed an affiliate of the Company.

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Company Description

iBEAM Broadcasting's proprietary network delivers streaming audio and video over the Internet. Its infrastructure helps iBEAM deliver content for a wide variety of companies who use streaming media to enhance their business. iBEAM uses satellites to broadcast streaming media to its "Internet head ends" located at Internet access providers' locations.

The iBEAM network consists of three main components:

Edge Network: iBEAM's MaxCaster media serving systems in access provider points-of-presence (POPs) around the world serve content as close to the end user as possible.

Broadcast Platform: iBEAM's proprietary broadcast platform coordinates its extensive network of servers.

Satellite: This lets iBeam transmit information from a single source to multiple recipients simultaneously and economically.

The company also uses fiber optic communications to add redundancy to its network and to link different components of its Internet broadcast network.

Currently, the company has contracts to provide its services to over 100 content providers. iBEAM generates revenue from its broadcasting services based on the volume of content stored or delivered to end users and from its other services such as encoding and event production based on hourly or fixed price billing. iBEAM derived 74% of its revenue from its event-based on-stage services during 1999 and 25% of its revenue from these services for the three months ended March 31, 2000.

As of March 31, 2000, iBEAM's network was sufficient to support up to 300,000 simultaneous Internet users accessing streams of data from the Internet at 20 kilobits (20,000 bits) per second. iBEAM plans to expand its network to support 1,000,000 simultaneous Internet users at this rate by the end of 2000.

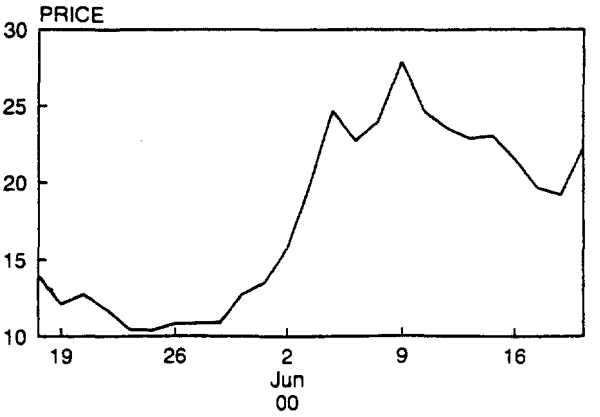
As of March 31, 2000, iBEAM had servers at 65 locations on the edge of the Internet and it estimates that as of this date, the Company was serving less than 5% of traffic delivered through its network from the edge of the Internet. By the end of 2000, iBEAM expects that it will be able to serve up to 40% of the traffic on its network through its servers located at the edge of the Internet.

iBeam's top investors include Intel and Microsoft.

Recent Developments

- On June 13, 2000, iBEAM Broadcastingfi Corporation announced a streaming media distribution agreement with The MTVi Group, the world's leading online entertainment company with 22 Web sites around the world. MTVi's network of Web sites includes MTV.com, VH1.com, and sonicnet.com. Per the agreement, iBEAM will stream MTVi content, which includes music, events, chat, shows and more to a mass Internet audience through iBEAM's streaming media network. Music fans can now create personalized music programs at sonicnet.com and listen to the streams from any device connected to the Internet.
- On June 12, 2000, iBEAM announced that it has inked contracts with over 150 Internet Content Providers (ICPs), including content giants MTVi, MSNBC.com and LAUNCH.com, plus notable new customers Salon.com, Music Choice, The Golf Channel, Indianapolis Motor Speedway, Hollywood.com and Veon.Success with leading content providers such as these has led to explosive growth in traffic served by iBEAM .
- In the Month of May 2000, iBEAM served more than 43.0 Million Megabytes of traffic, equivalent to more than 95.6 Million three-minute streams. This traffic volume has been growing at rates of greater than 40% per month since the commencement of operation of iBEAM's Network in October of 1999. This massive growth is due to the compounding effect of more leading content providers attracting more users with longer listening times and faster access.
- In April 2000, iBEAM acquired webcasts.com to add business-to-business communications capabilities, such as online training and interactive trade shows. This combined technology allows users to view streaming content, interactively obtain related data and transact online purchases.
- January 25, 2000 iBEAM Broadcasting Corporationfi, a leading Internet Broadcast Network, and Williams Communications (NYSE:WCG) today announced a three-year, multi-million dollar agreement that will significantly increase iBEAM's network capacity and functionality in delivering streaming content to edge servers and regional datacenters located around the Internet.
- As part of the build-out of its broadcasting network, iBEAM has agreements to locate servers with over 90 ISPs, including America Online, Excite@Home, Covad Communications and Northpoint. To realize the benefits of these access agreements with ISPs, the Company will need to invest at least $15.0 million in capital equipment located at ISPs during 2000. iBEAM has agreed to make non-refundable prepayments to ISPs in the amount of $5.5

Equity Closing Price



million, of which $3.0 million has been paid as of March 31, 2000.

- On December 20, 1999, iBEAM announced a strategic investment from Sony Corporation of America, one of the world's premiere entertainment and electronics companies. iBEAM Broadcasting has an advanced network designed to deliver high quality streaming media to hundreds of thousands of Internet users simultaneously. iBEAM uses the economic advantages of satellite content distribution to make transmission of streaming media more affordable for content companies while giving the iBEAM's network the ability to deliver more than 300,000 simultaneous streams to viewers and listeners.
- The combination of technology and distribution agreements with such notables as MSNBC.com, Sony Music Entertainment (Columbia Records), Launch.com and AtomFilms makes iBEAM the leading streaming content distributor in the industry.

ICG Communications

ICGX

Market Outperformer

High Yield Research

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Bond Price Data

Amount	Coupon	Priority	Maturity	Ratings	Next Call Price	Next Call Date	Bid Price	YTW	STW	Opinion
$584mm	0/13.500%	SrDisc	09/15/05	B3/B-	106.75	9 /00	95.00	14.10	779	O
$550mm	0/12.500%	SrDisc	05/01/06	B3/B-	106.25	5 /01	85.00	13.86	753	O
$176mm	0/11.625%	SrDisc	03/15/07	B3/B-	105.81	3 /02	71.00	14.44	809	O
$405mm	0/9.875%	SrDisc	05/01/08	B3/B-	104.94	5 /03	56.21	15.73	953	O

Balance Sheet

(US$, millions)

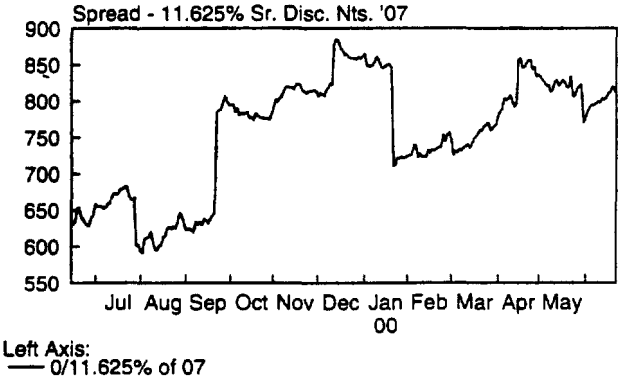
	4Q99	1Q00
Cash & equivalents	167.0	85.7
Total Debt	1,791.2	2,125.1
Market Capitalization (6/8/00)	941.0	1,204.0
Gross PP&E	1,673.3	2,018.0

Income Statement

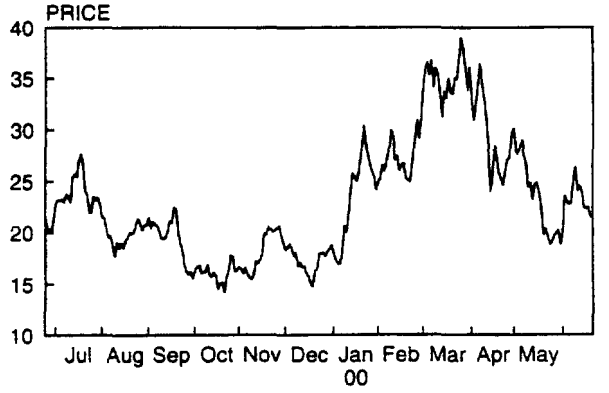
(US$, millions)

	4Q99	1Q00	2000E
Revenue	142.1	156.9	815.2
Gross Margin	58.1%	47.2%	49.6%
EBITDA	23.2	18.9	147.8
EBITDA/Cash Interest	8.0x	6.5x	4.8x
Total debt/EBITDA	21.1x	28.1x	15.6x
Net debt/LQA revenue	3.2x	3.2x	2.6x

Spread History



Equity Closing Price



Company Description

ICG is a Denver-based integrated communications provider (ICP) that offers voice and data services to business customers and network facilities and data management services to ISP customers in approximately 700 cities. At March 31, 2000, ICG had 12,000 business customers and more than 600 ISP customers.

ICG is transitioning from a traditional CLEC to a hybrid wholesale dial-up Internet provider and a provider of integrated voice and data services to business customers. ICG originally operated as a CLEC to business and interexchange customers. In 1998, ICG acquired NETCOM On-Line Communications and its Tier 1 national data network. ICG began offering backbone services using leased capacity and peering capacity it picked up with the NETCOM acquisition. The company also has 18,000 miles of leased long haul fiber from WorldCom and Qwest. ICG provides DSL on a wholesale basis through NorthPoint and Covad to its business customers.

In order to serve the applications provided by ASPs on its systems, ICG intends to have more than 1,000 traffic, application, and content servers in service throughout its network by the end of the third quarter of 2000. Traffic servers will enable ICG to increase the download speed of data by close to 30% and improve network efficiency by providing caching services for its customers. Application and content servers will support Web and e-mail hosting, video, voice streaming, and other media applications. ICG plans to add these advanced services in 2001.

Recent Developments

- During the first quarter of 2000, ICG reported total revenue of $156.9 million, an 11% increase from $142 million in the fourth quarter. Its local revenue grew 18.9%, from $86.3 million in the fourth quarter to $102.6 million in the first quarter. Local revenue is driving ICG's business due to strong line additions and reciprocal compensation even as

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rates fall. Long distance revenue grew 8%, and is expected to decrease due to planned attrition of resale access lines that had high long distance penetration rates. During the quarter, ICG collected $51.5 million in reciprocal compensation payments.

- Although reciprocal compensation rates are falling, we expect ICG to generate a substantial portion of its revenue base from collectible reciprocal compensation, as evidenced by the first quarter. Although we think reciprocal compensation as a percentage of total revenue will decline, ICG has more certainty of collection going forward since its BellSouth settlement. In addition, ICG booked $35.5 million of reciprocal compensation in accounts receivable during the quarter.
- ICG's EBITDA declined from $23.1 million in the fourth quarter to $19.2 million because the company continues to increase its investment in its network and hire additional employees to handle the demand for both its commercial and wholesale Internet access service offerings. Going forward, we expect ICG's EBITDA to benefit from advanced services it intends to add to its current offerings at little incremental cost to the company.
- In mid-March, ICG announced a three-year reciprocal compensation agreement with BellSouth related to its outstanding balance and interconnection rates. Under the agreement, BellSouth agreed to pay $50 million of its past due reciprocal compensation at December 31, 1999. ICG will receive a $.002 per minute rate in 2000, $.00175 per minute rate in 2000, and $.0015 per minute rate in 2002.
- ICG has benefited from large contracts from both ISPs and large carriers and is leveraging its network to deliver wholesale ISP services; at the same time it is continuing to offer business customers voice and data services. ICG is planning to offer additional value-added data centric services that will exploit its Internet footprint. During 1999, ICG received orders for 700,000 ports (500,000 IRAS and 200,000 RAS), including 250,000 ports from Microsoft and orders ranging from 100,000 to 200,000 ports from Spinway, NetZero, and Qwest.

Relative Value

We find ICG Holdings Senior Discount Notes attractive in comparison to Adelphia Business Solutions and Intermedia bonds. For example, ICG Holdings 13.5% Senior Discount Notes trading at 95, a YTW of 14%, trade 181 basis points behind ABS 13% Senior Discount Notes. We think ICG *Holdings and ABS Senior Discount Notes spreads should* trade at an even yield.

We think ICG Holdings Notes trade tighter than ICG Services Notes because they are structurally protected. ICG Holdings Notes were issued at the cash-generating CLEC restricted subsidiary, ICG Holdings, which is prohibited from providing cash or credit support to the company's other bond-holding subsidiary, ICG Services. We think that the structural protection of the ICG Holdings Notes is overlooked by the market because ICG Holdings Notes trade wider than other comparable CLEC discount notes such as Intermedia 12.25% Sr. Sub. Disc. Notes.

We are forecasting significant revenue growth and margi expansion for ICG in 2000, driven by wholesale Interne services. Because our forecasted margin expansion i aggressive in comparison to other companies that we follow we recognize that some investors may act upon ou recommendation cautiously and wait for some indication tha our estimates are achievable. If ICG Communications meet or exceeds our estimates over the next two quarters, w expect its bond spreads to compress by 100 basis points offering an annualized return of 19% for ICG Holdings 13.5° Senior Discount Notes holders and 28% for ICG Service 10% Senior Discount Notes holders.

ICG is funded into 2001 with approximately $1.03 billion i committed liquidity, including $86 million of cash on hand a March 31, 2000, a $750 million private equity investmen from Liberty Media and Hicks Muse, $168 million in vendo financing from Cisco, and a $25 million revolving credi facility.

Credit Strengths

- Positioned for Long-Term Growth: Based on projectec dial-up Internet demand, we think the wholesale Interne business is a 3-5 year business model; however, for-long term success, companies must position themselves tc augment the dial-up segment with advanced Interne services and continue to offer integrated voice and data services to business customers. We think ICG is positioning itself for long-term success with its local access anc nationwide data network offerings to both ISPs anc business customers. Although most CLECs offer ISF wholesale services, we estimate that ICG is the only one that has more than 10% of the dial port market.
- Significant Asset Base Creates Robust Network: At March 31, 2000, ICG had 35 circuit switches, 24 ATM switches. 4,807 fiber route miles, 8,792 buildings on-net, 183 collocations, and a national IP network capable of carrying voice traffic. ICG's nationwide data backbone currently has OC-12 capacity and is expected to be upgraded to OC-48 in the second quarter and OC-192 by the end of the year.
- Non-Core Asset Sales Renew Focus on Core Operations: In order to focus on providing advanced services to business and wholesale dial-up Internet connectivity for its ISP customers, ICG sold non-core assets during 1999, netting more than $400 million in gross proceeds.
- Wholesale Internet Contract Backlog: ICG intends to expand into 22 new markets during 2000 driven by 3-5 year contracts signed in the second half of 1999 for more than 700,000 new Internet access ports (500,000 Internet Remote Access Service lines and 200,000 Remote Access Service lines). At the beginning of 2000, approximately 500,000 ports remained to be provisioned during 2000.
- Teligent Cross Investment: In February 2000, ICG and Teligent agreed to a stock exchange where ICG purchased one million Teligent shares and Teligent purchased 2,996,076 ICG shares. We think the Teligent ownership will provide future business endeavors and operating efficiencies

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for both companies, specifically in relation to fixed wireless broadband access. ICG stated that it would look to transition close to 7,000 LEC T-1s on-net by converting the buildings to wireless broadband access.

- Smart Money Infusion: In February 2000, ICG announced the sale of $750 million of convertible preferred stock to Liberty Media ($500 million), Hicks Muse ($230 million), and Gleacher Capital Partners ($20 million). The offering is expected to close during the second quarter of 2000.
- BellSouth Agreement Provides Reciprocal Compensation Certainty: In mid-March, ICG announced a three-year reciprocal compensation agreement with BellSouth related to its outstanding balance and interconnection rates. Under the agreement, BellSouth agreed to pay $50 million of its past due reciprocal compensation at December 31, 1999. ICG will receive a $.002 per minute rate in 2000, $.00175 per minute rate in 2000, and $.0015 per minute rate in 2002.
- Centralized Provisioning Centers Increase Productivity: During 1999, ICG replaced 30 regional provisioning centers with two centralized centers in order to maximize economies of scale. Since the new management team was brought in during the second quarter of 1999, ICG has more than doubled its provisioning capability from 75,000 lines in the second quarter of 1999 to 174,000 in the first quarter of 2000.
- Back Office Improvements in 2000: ICG is spending $50 million on back office systems from Telcordia for flow-through provisioning, including inventory management, remote provisioning and order processing. The installation of the systems is an 18-month process and was approximately 50% completed by mid-May 2000. ICG estimates that all systems will be in place by the end of this year. In addition, the company is installing a Saville billing system, and estimates that 75% of its revenue will be billed on the Saville system by the end of July. Finally, ICG is developing a system for provisioning ports when they become available, and can be deployed real time when ICG matches orders with available port capacity.

Credit Challenges

We forecast the wholesale dial-up Internet opportunity to have a 3-5 year time frame as various broadband access technologies become available and end-users demand faster speed for applications.

For long-term sustainability, wholesale dial-up Internet providers must offer advanced services such as broadband access, data applications, and integrated access services.

Reciprocal compensation has been viewed as an unpredictable source of revenue, and proposed legislation in the House of Representatives could eliminate payments all together. Reciprocal compensation has stabilized over the past few months because of several CLEC agreements such as ICG - BellSouth, KMC - BellSouth, and Focal - Ameritech. We remain optimistic that reciprocal compensation will remain a stable revenue source over the next three years.

Industry Trends

The competitive local exchange carrier (CLEC) opportunity is a significant one. With less than a 5% total market penetration, CLECs are targeting under-served customers of the incumbent local exchange carriers (ILECs), which are former monopolies. The growing demand for affordable bandwidth should give CLECs an opportunity to acquire customers as long as they adhere to attractive pricing, high quality customer service, and differentiated offerings. In our view, a CLEC needs four key elements to succeed:

1) Management and sponsorship

2) Access to capital

3) Successful execution of the stated business plan

4) The maintenance of a consistent strategy with investors

We follow 13 CLECs in the high yield market. Because most of these companies are still in the build-out mode and currently operating with negative cash flow (EBITDA), we carefully track the trends in revenue growth and margin improvement. In 2000, we expect most of the CLECs we rate Market Outperformer to achieve double-digit sequential revenue growth each quarter — especially in local telecommunications and data services. We also look for several carriers to improve their gross margins and SG&A expense controls. Most of the carriers that we rate Market Performer have fallen behind in hitting their revenue growth targets and/or failed to improve their margins. Because the high yield market is currently difficult for most CLECs to access, we are concerned with the liquidity outlook for some of the carriers that have fallen behind.

In the first quarter, the CLECs in our comparison group increased revenues sequentially by over 12%, collectively reaching $1.3 billion. EBITDA losses for the group were $(162.5) million, including five companies generating positive EBITDA. Gross property, plant, and equipment for the group totaled $13.26 billion, and the group has $18.7 billion in total debt and $5.2 billion in redeemable preferred. The group's enterprise value is now $66.8 billion, which is a 60% increase over its total when we published our book for the 1999 Goldman Sachs Leverage Finance Conference in October of 1999. The total installed lines of the group grew 20% sequentially to 4,809,115 lines. All of the CLEC lines pale in comparison to the five Regional Bell Operating Companies (RBOCs) and GTE, which have over 160,000,000 installed lines. There is plenty of market opportunity. The CLECs also continue to make significant progress in moving lines onto their networks or switches via unbundled network elements (UNEs), which should contribute to improving gross margins in the future.

The group remains reasonably funded, with total cash at the end of the first quarter of $10.7 billion. We are concerned about the liquidity of a few CLECs in our group, such as Adelphia Business Solutions, CapRock Communications, and KMC Telecom. Over the past 18 months, more than $9.5 billion in private equity has funded various CLECs through their capital shortfalls, and some carriers have turned to the

bank market. Given the current state of the high yield market, we think CLECs will continue to look to those sources for capital.

Company Description

mOn Hospitality is a technology services company created to provide unique, easy and fast Internet access and content solutions to the hospitality industry. ImOn creates a distinctive experience for hotel guests utilizing state of the art echnology and equipment, and an innovative portal design hat offers increased value, customer loyalty and a competitive advantage to ImOn's hospitality partners. Guests utilizing ImOn's technology platform will have the ability to access the Internet, order room service or take out from local estaurants, make phone calls, send video emails to family and friends, listen to music, video conference for work, and much more.

mOn is also the first to offer all wireless Internet technology solutions. The company will provide hotel guests internet access at T-1 speeds through in-room, thin client flat screen computer stations, enabling guests to bypass the hotel's PBX for their computing needs. The stations are permanently installed in the room at no cost to the hotel. ImOn will also support high-speed wireless connectivity in all of the hotel's public areas, including hotel meeting rooms and lobbies.

mOn has a contract to install its technology solution into the 1,300 properties in the U.S. Franchise Systems (Nasdaq: USFS) portfolio. As of December 31, 1999, USFS had 1,308 properties open or in development in 49 states, South and Central America, Mexico, Canada, the Caribbean and Israel. Hotels magazine cited USFS as the world's 10th largest hotel franchising company. USFS has a 5% equity stake in ImOn Hospitality and two board of director's seats. On June 5, 2000 USFS announced that it had entered into an agreement with management and interests of the Pritzker family of Chicago to take the company private. Pritzker family business interests own, among other ventures, Hyatt Hotels, representing over 225,000 rooms worldwide.

mOn has established partnerships with several nationally known companies to assure successful implementation of its strategy: Computers: ImOn has agreements with IBM and ECS to supply thin client, flat screen computers at below market prices. Installation Services: IBM and Texel provide installation services capable of supporting a national rollout. ISP: UUNET has agreed to install T-1's under a deferred billing program. Customer Service: CSC, a nationally known provider of customer service to the technology industry, will provide 24x7 service to hotel guests. Billing: Systems Design and Development (SDD) has developed a proprietary internet content billing solution for ImOn. Leasing: IBM has agreed to provide four year lease financing for equipment and installation costs.

mOn will complete the installation of its six beta site locations in USFS's Hawthorn brand by June 30, 2000.

Company Description

Infonet is a leading provider of cross border managed data communications to more than 1,150 corporations worldwide, including 29% (21% in 1996) of the top 500 corporations in Business Week's 1998 Global 1000. Infonet client base includes Allergan, Baan, Microsoft, Nestle, Nokia, Pharmacia/Upjohn and Volkswagen.

Infonet owns and operates the "World Network", an extensive and versatile ATM-enabled network that can be accessed from over 180 countries, making it one of the world's largest data communications networks in terms of geographic coverage.

The "World Network" has approximately 11,977 ports comprised of over 6,000 IP, Frame Relay and X.25 access and customer premise devices, connected over 950,000 route-kilometers. Infonet's most important countries of presence include the U.S. (34% of 1999 revenue), the Netherlands (12%), Germany (8%), the U.K. (6%), Australia (4%), France (4%) and Sweden (4%).

Infonet began operations in 1969 as a part of Computer Sciences Corporation (CSC), a leading IT services company. In a series of transactions from 1988 to 1992, CSC sold its ownership to a group of telecommunications companies.

Infonet sells its services directly through country representatives and indirectly through major international telecommunications carriers. Currently Infonet has 56 country representatives, nine consolidated and 47 non-consolidated, which together provide services in more than 60 countries. Infonet's goal is to be the leading provider of global data communications services to multinational corporations. Their focus is on multinational clients that require data communications solutions.

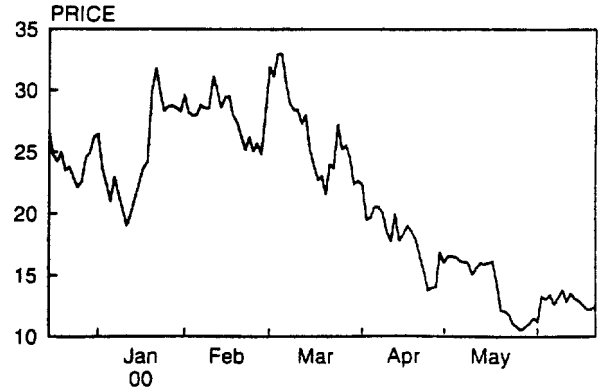
Infonet's network services include: frame relay, remote access, intranet, multimedia, Internet, and IP services, consulting, Integration and provisioning services, design and implementation, installation of leased lines and customer premise equipment associated with the client's access to the World Network, and use of its network services.

Infonet's applications services include: E-mail, messaging, collaboration, Web hosting, and other value-added services, X.25 transport services, service access fees, and other communications services.

Recent Developments

- In March 2000, Infonet signed a Memorandum of Understanding with Deutsche Telekom. It is a 5-year agreement whereby DT becomes an Alternate Sales Channel partner for Infonet. DT will resell Infonet's portfolio to its clients under its own brand.
- In September 1999: Infonet announced an AT&T Unisource Communications Services outsourcing contract. It is a 3-year management contract that gives Infonet immediate access to AUCS' revenue stream. Revenues at guaranteed gross margin of 20%. Infonet gains ownership of 1,300 multinationals and the right to migrate customers to its World Network. In addition, it gives Infonet the right to purchase the remaining AUCS assets for US$130 million.
- In January 2000 Infonet signed an agreement with SBC whereby Infonet will essentially be the exclusive provider of global data services for SBC's customers in the United States. SBC and Williams will be Infonet's preferred providers of network services in the US.

Equity Closing Price



KMC Telecom

KMCT

Market Outperformer

High Yield Research

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06/22/2000

Bond Price Data

Amount	Coupon	Priority	Maturity	Ratings	Next Call Price	Next Call Date	Bid Price	YTW	STW	Opinion
$460mm	12.500%	SrDisc	02/15/08	Caa2/CCC+	106.25	02/03	50.00	18.72	1250	O
$275mm	13.500%	SrNotes	05/15/09	Caa2/CCC+	106.75	5 /04	90.00	15.61	943	O

Balance Sheet

(US$, millions)

	4Q99	1Q00
Cash & equivalents	174.5	193.1
Senior debt/capital leases	235.0	499.0
12.5% Sr. Disc. Nts.	312.0	322.0
13.5% Sr. Nts.	275.0	275.0
Total Debt	822.0	1,096.0
Gross PP&E	676.0	777.0

Income Statement

(US$, millions)

	4Q99	1Q00	2000E
Revenue	22.0	29.2	175.7
Gross Margin	(15.9%)	1.2%	14.6%
EBITDA	(27.2)	(39.0)	(131.0)

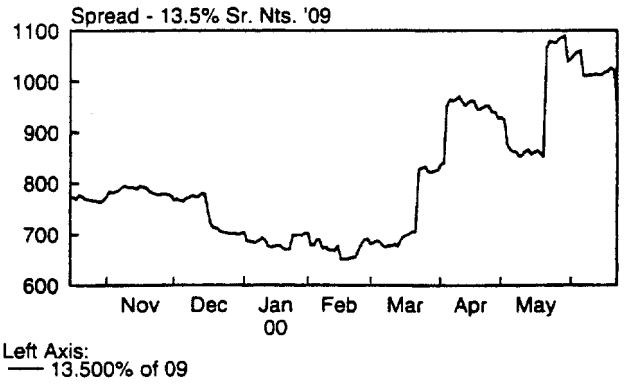
Company Operating Data

	4Q99	1Q00	4Q00E
Access lines installed	113,750	148,439	253,439
Markets served	34	35	37
Collocations	100	111	150

Company Description

KMC is a facilities-based integrated services provider operating in markets with populations of 100,000 to 750,000 (Tier III markets) primarily in the Southeast and Midwest. The company offers its fiber-based services to business, government, and institutional end-users, as well as other telecom carriers. KMC intends to provide customers with a complete bundled package of telecommunication services. KMC currently operates in 34 Tier III markets and has an *additional five markets under constrcution. Due to demand for* higher speed Internet access and advanced data services, KMC rolled out its DSL strategy in 1999. In addition to its retail strategy, KMC is leveraging its network by serving wholesale customers that require high data traffic transport. The long-term contracts with the wholesale customers complement KMC's retail strategy and result in higher overall margins.

Spread History



Recent Developments

- KMC recently announced that it had won a major dial-up wholesale ISP contract with Qwest Communications. The contract is for hundreds of thousands of dial-up ports in 90 different Tier 1 and Tier 2 markets for a minimum length of 42 months. KMC took delivery of $134 million of equipment at the end of the first quarter to support this contract. We estimate that the contract should generate over $80 million in revenue per year excluding reciprocal compensation revenue. We expect KMC to book approximately $20 million in revenue from this contract in 2000.
- On May 18, 2000, KMC announced that it had signed a definitive agreement with BellSouth regarding reciprocal compensation. There are two key aspects to the agreement: BellSouth will pay KMC Telecom a cash settlement for all reciprocal compensation that was billed through March 31, 2000. We estimate that KMC had recognized and accounted for $10.5 million of this revenue in its accounts receivable of $34 million at the end of the first quarter. This reduces KMC's reciprocal compensation accounts receivable *from $14.9 million to pro forma $4.4 million at the end of* the first quarter 2000.
- KMC opted into the recent ICG Communications agreement with BellSouth for its new reciprocal compensation rates. The new rates are $0.002 per minute in 2000, $0.00175 per minute in 2001, and $0.0015 in 2002, and these rates apply to ISP traffic. KMC also has a "most favored nation clause" with BellSouth in case another carrier negotiates higher rates. The settlement provides visibility into future revenue and collections for KMC, which until this settlement, we viewed as an issue for the company. The new rates will help us to forecast revenue growth and margins from KMC's

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big wholesale dial-up ISP contracts

- On May 1, 2000, KMC announced that it had filled the last remaining gap in its management structure with the addition of William F. Lenahan as CEO. Mr. Lenahan had been the president and CEO of BellSouth Wireless Data since 1994. Before BellSouth, he was employed by Inacom Information Systems and Sears Business Centers. Prior to the addition of Mr. Lenahan, KMC promoted its COO, Roscoe C. Young II, to president and COO, and appointed William Stewart as CFO.

Relative Value

We rate KMC Telecom bonds Market Outperformer. The company continues to exceed our operating expectations, and we therefore think it will be an attractive investment opportunity for private equity sponsors. KMC ranked last in our CLEC scoring analysis. Buoying KMC's poor performance in our scoring analysis was its extremely lopsided capital structure. The company has 80% of its funding through debt financing.

KMC is funded through the first quarter of 2001. Liquidity remains our top concern for KMC, but we think private equity sponsors should be attracted to this solid telecommunications growth story.

Credit Strengths

- KMC Telecom exceeded our estimates in growth and on-net line concentration, and the company settled its reciprocal compensation issues with BellSouth.
- Furthermore, KMC landed a major wholesale ISP contract with Qwest that we estimate should drive over $85 million in revenue per year over three years.
- KMC is funded through the first quarter of 2001. Liquidity remains our top concern for KMC, but we think private equity sponsors should be attracted to this solid telecommunications growth story.
- With its operations performing well and the addition of a new CEO, we think that the company has improved its chances of raising equity capital in the future.

Credit Challenges

- For first quarter of 2000, we believe KMC achieved positive operating results and gained contracts that provide us good operating visibility over the next 18 months. The one remaining issue that we have highlighted in prior research is KMC's current liquidity. At the end of the first quarter 2000, KMC had $193 million in cash and $200 million in availability on its credit facility. As of May 12, 2000 (according to its 10Q), KMC had $159.6 million available on this facility. The credit facility requires KMC to raise additional subordinate capital of $185 million by April 1, 2001; however the interest rate of the credit facility will increase by 100 basis points after July 31, 2000, until the $185 million in capital has been raised.
- Lucent has committed to investing in $100 million of KMC PIK preferred stock toward the $185 million requirement While the Lucent commitment is available, KMC ha: indicated to us that it is also pursuing private equity fror traditional private equity telecom sponsors. Based on th availability of the bank facility and commitment by Lucent we forecast KMC's liquidity will support its business througl the first quarter of 2001.

Company Outlook

We forecast solid revenue growth and EBITDA margir improvements as KMC ramps up its wholesale ISP busines: in the second half of 2000. Furthermore, the selling of equit should improve KMC's leverage statistics.

For the second quarter 2000, we forecast KMC to achieve $36.3 million in revenue and ($35.8) million in EBITDA. Fo 2000, we have raised our estimated revenue from $16 million to $175.7 million, and EBITDA loss from ($99.7) millior to ($131) million. We are increasing our revenue estimate because of the company's new contract with Qwest. For the second quarter of 2000, we forecast that KMC will adc another 35,000 switched access lines and maintain o improve its low mix of resale lines.

Industry Trends

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Bond Price Data

Amount	Coupon	Priority	Maturity	Ratings	Next Call Price	Next Call Date	Bid Price	YTW	STW	Opinion
$833mm	0/10.500%	SrDisc	12/01/08	B3/B	105.25	12/03	59.00	11.36	553	NR
$675mm	0/12.875%	SrDisc	03/15/10	B3/B	106.44	3 /05	55.50	12.87	660	NR
$2,000mm	9.125%	SrNotes	05/01/08	B3/B	104.56	5 /03	96.25	9.73	428	NR
EUR500mm	10.750%	SrNotes	03/15/08	B3/B	NC	NC	95.00	11.74	610	NR
$800mm	11.000%	SrNotes	03/15/08	B3/B	NC	NC	99.00	11.19	491	NR
$250mm	11.250%	SrNotes	03/15/10	B3/B	103.75	3 /06	98.50	11.50	539	NR

Balance Sheet

(US$, millions)	12/31/99	3/31/00
Cash & equivalents	4,492	7,731
Total Debt	3,989	7,047
Net PP&E	4,287	5,543

Income Statement

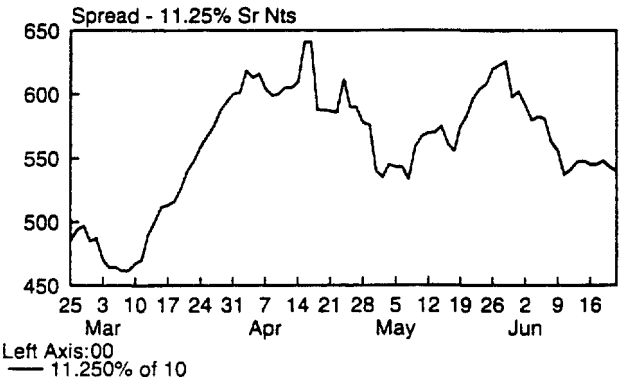
(US$, millions)	4Q99	1Q00
Revenue	173	177
Gross margin	32%	24%
EBITDA	(112)	(141)
Capital Expenditures	1,300	1,286

Company Description

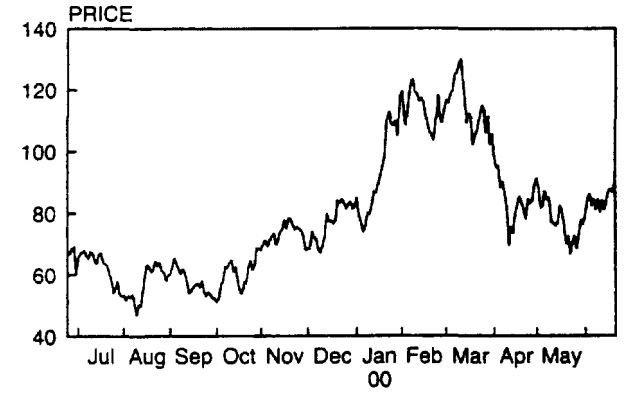
Level 3 is rapidly becoming a facilities-based provider of a broad range of integrated voice and data services, including local, long distance, international, and Internet services. To reach this goal, the company is currently creating an international, end-to-end (local and long distance), facilities-based communications network through a combination of construction, purchase, and leasing of facilities and other assets. The network is designed to use Internet Protocol (IP) technology, rather than circuit-switched based communications, such as that utilized by the public switched telephone network ("PSTN"). The network is designed to provide the company with the ability to adapt, in the most efficient way possible, its facilities, hardware, and software to future technology developments in packet-switch-based communications. Currently, Level 3 sales are primarily to Web-centric companies, which are expected to eventually represent 85% of Level 3's total sales. Web-centric customers package communications services into value added services and directly sell into the residential and business markets. Web-centric customers include Internet Service Providers, ASPs, content providers, systems integrators, next generation carriers, Web-hosting companies, streaming media companies, and IP-based storage providers.

The network is expected to encompass nearly 16,000 U.S. and 4,750 international miles, linking 56 domestic cities and 21 cities in Europe and Asia, as well as significant transoceanic capacity, including a 1.28 Terabit trans-Atlantic cable system and a 2.56 Terabit cable connecting Hong Kong and Tokyo. The network will have 10-12 conduits on each route and will start with 96 strands of fiber in its initial deployment. While 96 strands provide significant capacity, the company has installed additional conduits at low incremental cost in order to maintain the ability to leverage technical improvements in optical fiber. Level 3 has secured 100% of the Rights of Way ("ROW") agreements required for its planned North American intercity network route.

Level 3 Communications



Equity Closing Price



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06/22/2000

Recent Developments

- On June 8, Level announced that it had opened its fifth New York City area communications hub in Garden City, NY. The 34,000 square foot center will have the capacity to connect 60-100 local Web businesses to the Internet. After this opening, Level 3 has more than 35 gateway facilities. Level 3's 500,000 square foot facility in Manhattan is currently serving customers.
- In mid-May, Level 3 announced that NEXTLINK would purchase $306 million worth of fiber network in Europe from Level 3. NEXTLINK will purchase the Level 3 fiber in London, Paris, Frankfurt, Amsterdam, and Brussels. The cash purchase price also includes transmission capacity on a Level 3 transatlantic cable linking North America and Europe.
- On May 10, Level 3 announced that it will provide network its broadband fiber network services to participants in Equinix IBX centers nationwide. Level 3 will provide network connectivity and other wholesale Internet protocol (IP) services to ISPs, ASPs, content providers, e-commerce companies, and other companies. Level 3 will first extend its network to Equinix centers in the Washington DC, New York, and Silicon Valley metropolitan areas. It will extend the network into three additional Equinix locations by the end of 2000.
- In early May, Level 3 announced that Teligent will connect its local networks in 40 cities using Level 3's national fiber network.

Credit Strengths

- Level 3's strategy is to conservatively pre-fund its network in phases through a combination of debt and equity. Following the completion of raising $5.5 billion in the first quarter through a combination of equity, debt, convertibles and Euro denominated notes, Level 3 should be funded for the buildout of all six phases of its current business plan. We expect the company to raise additional capital if the company develops new business initiatives or deploys success-based capital.
- Level 3's network is designed to position the company to take advantage of the growing demand for end-to-end long-haul voice and data capacity. The network has significant capacity at the outset, utilizing 96 fibers together with dense wave division multiplexing (DWDM) technology. The network will utilize high speed SONET transmission equipment designed for high quality and reliable transmission. The network is optimized for IP technology to enable the company to capitalize on the evolution of the market from circuit-switched to IP protocol.
- IP based systems provide superior network utilization and efficiency, resulting in more information being transmitted through a given communications channel. Packet-switching is more cost-effective than circuit-switching. In order to interconnect, circuit-switched networks require complex machinery that costs millions of dollars. Stand-alone data networks, like Level 3's network, require routers (softswitches), which are less costly than circuit switches.
- Level 3's "Future-Proof" network will allow the company to quickly deploy state-of-the-art, more efficient technology. In addition, Level 3's strategic position allows it to take advantage of rapidly decreasing prices and increasing demand within the telecom services industry.
- Level 3 is uniquely positioned to benefit from fiber technology improvements. Additionally, utilizing an open-protocol (non-proprietary, published standards) network will more easily allow for technological change. It allows for market-driven development of new services and applications instead of turnkey development for a closed, proprietary system.
- Initial rollout of its services will be on a lease-to-own approach. By initially leasing fiber, Level 3 expects to be able to launch its services and to build its customer base in advance of its network build. Over time, as the network is constructed, the leased network will be replaced by the Level 3 network. As Level 3 migrates traffic on-net, it expects to be able to differentiate itself from its competitors through its end-to-end IP network.
- Level 3 has one of the strongest and most respected management teams in the business. Many of the company's senior managers are formerly of MFS Communications, including CEO James Crowe, COO Kevin O'Hara, CFO Douglas Bradbury, and Colin Williams CEO of Level 3 International.

Credit Challenges

- Level 3 is dependent on its new business plan, which relies on Internet Protocol technology. Level 3's success depends on its ability to use open, non-proprietary interfaces in its network software and hardware that allows the the company to buy equipment in the future from multiple vendors. Level 3 must generate substantial traffic at acceptable prices on-network in order to realize the anticipated efficiencies and benefits of the network.
- Substantial operating losses are expected for the foreseeable future. The development of Level 3's business plan requires significant capital expenditures. Level 3 expects to incur a large portion of these capital expenditures before it receives any significant related revenues from its business plan.
- Level 3 must obtain and maintain permits and rights-of-way to develop its network. To acquire and develop Level 3's network, the company must obtain many local franchises and other permits. Level 3 must also obtain rights to use underground conduit and aerial pole space and other rights-of-way and fiber capacity. The process of obtaining these franchises, permits, and rights is time-consuming and burdensome.
- Increased industry capacity and other factors could lead to lower prices for Level 3's products and services. Currently contemplated networks offer significantly more capacity than is now available in the marketplace. This additional capacity may cause significant decreases in the prices for services. Prices may also decline due to capacity increases resulting

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from technological advances and strategic alliances, such as long distance capacity purchasing alliances among regional Bell operating companies.

Industry Trends

The fiber builders segment of the industry has seen an influx of new competitors in recent years, as the fiber excess that existed in the early 1990s has been more than absorbed by growing Internet and data traffic. Advances in fiber technology allow for greater capacity at lower prices, supported by more broadly spaced (and thus less expensive) electronics and increases in bandwidth capabilities. In addition, developments in optical switches, routers, and cross connects have reduced cost and increased fiber capacity for carriers. This, in turn, has led to concerns about the possibility of future overcapacity. We believe such fears are unfounded, because we think the lower cost of bandwidth delivery is driving significant growth in the demand for Internet and data usage. The elasticity is greater than 1. Furthermore, because fiber is more readily available and optical equipment advancements have driven down the cost to light a network, the barriers to entry have been lowered for "smart build" communications providers, which purchase dark fiber and bandwidth on a wholesale basis.

The most recent trend to emerge among fiber builders is the construction of data center/collocation facilities for housing the equipment of their end customers. Internet-centric dot-com customers place their Internet servers in these facilities and gain Web connectivity. Some emerging "smart build" telecommunications providers place voice-switching equipment in these facilities as well. The build-out of data center facilities is consuming more and more capital from our traditional fiber builders, and puts them in competition with Internet infrastructure providers such as PSINet and Exodus.

We follow seven public fiber builders for credit comparison analysis. The group has a combined equity value of $125 billion — $24 billion in total debt and $22 billion in gross property plant and equipment. The fiber builders have constructed their networks with less leverage than the CLECs, as shown by a 1:1 ratio of debt to PP&E for the fiber builders and a 2:1 ratio of debt to PP&E for the CLECs. Many of the builders have financed their networks through presales of capacity and equity offerings. Because of their more conservative financing approach, the fiber builders tend to trade tighter to comparable Treasuries than CLECs do.

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Company Description

Logictier was founded in August 1999 by webmasters who built and managed the Internet's earliest and most active Web sites, including Netscape Netcenter, ESPN.com, CNN.com, ABCNews.com, @Home, NBA.com, Discovery Channel Online, family.com, and DisneyBlast.com. Logictier is the first e-Business operations sourcing company to guarantee Web site end-user performance levels. The company manages every element of an e-business's day-to-day site operations, ensuring specific site performance levels. The company assumes total accountability for Web site operations, guaranteeing not only uptime, but also, and for the first time, mutually agreed upon levels of customer experience.

Unlike traditional Web hosting companies and application service providers, Logictier manages the entire e-business operations infrastructure for its customers, from bandwidth and facilities through the systems and custom applications that drive customer business logic. Logictier is funded by Kleiner Perkins Caufield and Byers and Technology Crossover Ventures. The company's services range in price from around tens of thousands of dollars to several hundred thousand dollars per month, depending upon the number of applications, as well as the infrastructure and data transport facilities required.

Infrastructure and hardware partners provide the bandwidth, facilities, and hardware platforms that underscore Logictier's Performance Environment. The providers include Cisco Systems, Level 3 Communications, and Sun Microsystems.

Software and technology partners are ISVs and other companies whose software solutions are incorporated into Logictier's Performance Environment, including Akamai, Microsoft, Marimba, and Oracle.

Channel Partners are companies who serve a customer base similar to that of Logictier, and therefore have the opportunity to work with the company on a cooperative basis to share leads and participate in joint marketing.

Charter customers include Enigma Digital, OneName, Iron Planet, Ducket$ and The Salt Lake Organizing Committee for the Olympic Winter Games of 2002

Total Performance Management services address the need for guarantees by starting from scratch: constructing a customized system, comprising Web servers, storage subsystems, data transport, caching and other related elements, that will meet the specific performance objectives of its customers.

The Logictier Performance Environment is a geographically dispersed environment that uses system and application redundancy to ensure its User Experience Guarantees. It integrates third-party applications and services to support common business logic functionality such as credit card processing, personalization and ad management.

User Experience Guarantees are contractual agreements based on download and transaction metrics identified through the User Experience Management System that measure availability of content and transactions from the end-user perspective.

Insight is a unique, customizable browser-based executive information system that provides key stakeholders with easily understood performance metrics and summary site data including: site traffic analysis, end user usage patterns and demographics, and e-commerce data.

Recent Developments

- On April 6, 2000, Logictier, Inc., announced it had signed a five-year, $100 million agreement with Level 3 Communications, Inc., for collocation and network connectivity services in the United States, Europe, and Asia. This strategic alliance combines Level 3's global broadband network and Internet and communications facilities with Logictier's Total Performance Management services, allowing Logictier to offer a complete, high-performance e-business infrastructure solution backed by the industry's first performance guarantees for Web site visitors.
- On March 29, 2000, Kleiner Perkins Caufield and Byers and Technology Crossover Ventures announced that they had funded Logictier.
- On June 13, 2000, Logictier announced that it was named an Akamai Technologies Alliance Partner. Through the alliance, Logictier is able to offer its customers Akamai's industry-leading media streaming and caching services, further reinforcing Logictier's performance guarantees.
- On April 5, 2000, Oracle Corp., the largest provider of software for e-business, announced that Logictier had chosen Oracle8i to deliver highly scalable and reliable services to rapidly growing Web sites. Logictier assumes total accountability for Web site operations, guaranteeing not only 24x7 availability, but also mutually agreed upon high levels of end-user service.
- On March 29, 2000, Logictier, Inc. and Marimba, Inc., a leading provider of Internet infrastructure management solutions, announced a strategic partnership under which Logictier will use Marimba's Castanet technology in the development and delivery of new and innovative solutions for the rapidly growing arena of end-to-end managed services for Internet infrastructure.

Madison River

MADRIVPP

High Yield Research

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06/22/2000

Bond Price Data

Amount	Coupon	Priority	Maturity	Ratings	Next Call Price	Next Call Date	Bid Price	YTW	STW	Opinion
$200mm	13.250%	SrNotes	03/01/10	Caa/CCC+	104.42	3 /06	91.00	15.03	892	NR

Balance Sheet

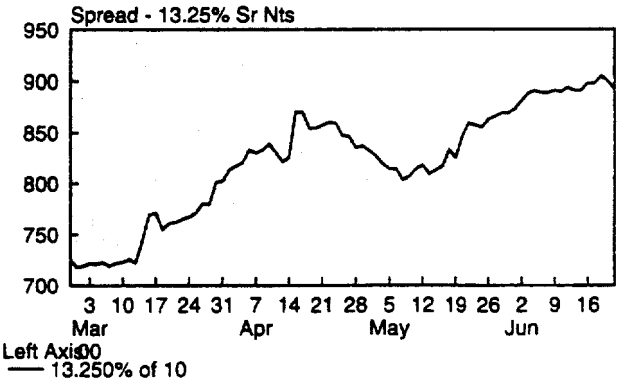
(US$, millions)	1Q00
Cash	90.5
RTFC Debt	474.6
High yield debt	198.0
Mortgage payable	2.4
Total debt	675.0

Income Statement

(US$, millions)	1Q00
Revenue a	41.0
EBITDA a	16.6
Access Lines Installed a	193,700

a Pro forma for the Coastal Communications acquisition.

Madison River



Company Description

Madison River operates primarily as an incumbent local exchange carrier (ILEC) that focuses on business and residential customers in the Gulf Coast, Mid-Atlantic, and Midwest regions. Madison River intends to become an integrated communications provider that offers voice, high speed data, fiber transport, and Internet access in North Carolina, Alabama, and Illinois. During the first quarter, Madison River reorganized its business into the Local Telecommunications Division (LTD) and the Integrated Communications Division (ICD). The primary focus of the LTD will be to integrate the recent acquisitions of Gulf Coast and Coastal Communications, and to develop the existing markets of its four local exchange carriers. The ICD will grow Madison River's CLEC operations and build new markets for its transport business around its 2,200 route mile network.

The company offers its services to business and residential multiple dwelling unit (MDU) customers along its 2,200 route mile network. Madison River currently has 12 markets in service (Alabama, Georgia, Illinois, North Carolina, Georgia). The company currently has 20 markets under development in Alabama, Florida, Georgia, Illinois, Louisiana, Mississippi, and Texas. Madison River's valued added services include DSL, voice mail, caller-ID, and conference bridge services.

Madison River functions as an ILEC in some of its markets because it thinks that the lower population density in those markets favors the incumbent local provider because of the high cost of build-out relative to major urban markets, and the low concentration of medium and large-sized business customers.

The management team has a history with strong companies such as Sprint, ICG, and Citizens Utilities.

Recent Developments

- During the first quarter, Madison River reorganized its business into the Local Telecommunications Division (LTD) and the Integrated Communications Division (ICD).
- On November 23, 1999, Madison River announced its intent to acquire Coast Communications. The acquisition closed ahead of schedule in the first quarter. The acquisition is complementary to Madison River's existing operations. At December 31, 1999, Coastal provided service in four secondary markets in Georgia and a military base, with approximately 39,300 access lines. Coastal reported revenue of $427.3 million for the nine months ended September 30, 1999.

Industry Trends

The competitive local exchange carrier (CLEC) opportunity is a significant one. With less than a 5% total market penetration, CLECs are targeting under-served customers of the incumbent local exchange carriers (ILECs), which are former monopolies. The growing demand for affordable bandwidth should give CLECs an opportunity to acquire customers as long as they adhere to attractive pricing, high quality customer service, and differentiated offerings. In our view, a CLEC needs four key elements to succeed:

1) Management and sponsorship

2) Access to capital

3) Successful execution of the stated business plan

4) The maintenance of a consistent strategy with investors

We follow 13 CLECs in the high yield market. Because most of these companies are still in the build-out mode and currently operating with negative cash flow (EBITDA), we carefully track the trends in revenue growth and margin improvement. In 2000, we expect most of the CLECs we rate Market Outperformer to achieve double-digit sequential revenue growth each quarter — especially in local telecommunications and data services. We also look for several carriers to improve their gross margins and SG&A expense controls. Most of the carriers that we rate Market Performer have fallen behind in hitting their revenue growth targets and/or failed to improve their margins. Because the high yield market is currently difficult for most CLECs to access, we are concerned with the liquidity outlook for some of the carriers that have fallen behind.

In the first quarter, the CLECs in our comparison group increased revenues sequentially by over 12%, collectively reaching $1.3 billion. EBITDA losses for the group were $(162.5) million, including five companies generating positive EBITDA. Gross property, plant, and equipment for the group totaled $13.26 billion, and the group has $18.7 billion in total debt and $5.2 billion in redeemable preferred. The group's enterprise value is now $66.8 billion, which is a 60% increase over its total when we published our book for the 1999 Goldman Sachs Leverage Finance Conference in October of 1999. The total installed lines of the group grew 20% sequentially to 4,809,115 lines. All of the CLEC lines pale in comparison to the five Regional Bell Operating Companies (RBOCs) and GTE, which have over 160,000,000 installed lines. There is plenty of market opportunity. The CLECs also continue to make significant progress in moving lines onto their networks or switches via unbundled network elements (UNEs), which should contribute to improving gross margins in the future.

The group remains reasonably funded, with total cash at the end of the first quarter of $10.7 billion. We are concerned about the liquidity of a few CLECs in our group, such as Adelphia Business Solutions, CapRock Communications, and KMC Telecom. Over the past 18 months, more than $9.5 billion in private equity has funded various CLECs through their capital shortfalls, and some carriers have turned to the bank market. Given the current state of the high yield market, we think CLECs will continue to look to those sources for capital.