

Appendix A

Equity Research

North America

Industry

Telecom - Cable

Richard A. Bilotti

+1 (1)212 761 7162

Richard.Bilotti@morganstanley.com

Benjamin Swinburne

+1 (1)212 761 7527

Benjamin.Swinburne@morganstanley.com

Megan Lynch

+1 (1)212 761 3976

Megan.Lynch@morganstanley.com

Industry Overview

August 29, 2001

Broadband Cable Second-Quarter Review

COMPANIES FEATURED

AOL Time Warner (AOL)	Strong Buy-V
AT&T Corp. (T)	++
Adelphia (ADLAC)	Outperform
Cablevision (CVC)	Neutral
Comcast (CMCSK)	++
Charter (CHTR)	Strong Buy
Cox (COX)	Strong Buy
Insight (ICCI)	Outperform
RCN (RCNC)	Neutral-V
UnitedGlobalCom (UCOMA)	Strong Buy-V
Rogers (RG)	Outperform

RECENT REPORTS

Charter Communications: The Right Stuff	
<i>Richard Bilotti and Team</i>	August 6, 2001
Comcast Corporation: 2Q01 Results	
<i>Richard Bilotti and Team</i>	August 6, 2001
Cox Communications: Upgrade to Strong Buy	
<i>Richard Bilotti and Team</i>	August 7, 2001

- **Stratified 2Q01 results across the sector**
Charter and Adelphia reported strong 2Q01 results, with increased guidance for full year 2001.
- **Expecting accelerating revenue and EBITDA growth in 2002 vs. 2001**
We look for 15-16% revenue and 14-15% EBITDA growth in 2002 for the US cable operators. VOD and multiple ISPs represent upside to these forecasts.
- **Seasonality of second quarter has significant impact on new RGUs**
Some operators experienced greater seasonality than others, particularly in the areas of basic sub growth and cable modem additions.
- **Digital additions in line with expectations, S-VOD right around the corner**
Digital additions declined in 2Q01 15% versus 1Q01, in line with expectations, as penetration levels passed 20% across the sector. VOD could jump-start 2002 additions.

Broadband Cable Second-Quarter Review

++Rating and price target for this company have been removed from consideration in this report because under applicable law and/or policy, Morgan Stanley & Co. Incorporated may be precluded from issuing such information with respect to this company at this time.

Summary and Investment Conclusion

We continue to assign an overweight rating to the broadband sector. Our investment thesis is that consolidated revenue and EBITDA growth will accelerate from 12–13% in 2001E to 14–15% in 2002.

Our top picks among the pure-play cable companies are Charter (CHTR, \$21, Strong Buy) and Cox (COX, \$41, Strong Buy). Both should demonstrate growth trends that are better than the industry averages. Adelphia (ADLAC, \$32, Outperform) and Insight (ICCI, \$23.51, Outperform) are also attractive investments in our view.

Please note that we can publish forecasts but cannot assign an investment rating to Comcast (CMCSK, \$38) at this time due to Morgan Stanley's role as an adviser to Comcast on its proposed acquisition of AT&T Broadband.

The 2Q results for the sector are controversial, but we think the companies demonstrated trends that support our thesis of accelerating growth. Almost all of them

reported data and digital RGU (revenue generating units) additions that were clearly affected by seasonality. Seasonality has always been evident in the cable industry, as well as in most consumer electronic product sales. However, the industry can be faulted for not clearly explaining the impact of seasonality when it reported 4Q00 and 1Q01 results.

Historically, the percentage of basic subscribers added in 1Q–4Q are 40%, 10%, 10%, and 40%, respectively. The same trends have been seen in DBS subscriber additions to some extent and will almost certainly be present in digital cable and cable modem additions. For new service subscribers, we assume a slightly lower seasonality effect: We estimate additions at 27–30% in 1Q and 4Q, and approximately 20% in 2Q and 3Q (see Exhibit 1).

If we apply an appropriate level of new-service-subscriber seasonality to the new service additions during the last 10 quarters and next two quarters, the growth trend points to continued acceleration. This is particularly true in the high-speed data business. We believe that the slowdown in digital growth, after the seasonal adjustment, is an indication of a changing strategic and operational environment in the sector to better balance RGU growth with profitability. Evidence of this shift can be seen directly in Cox's and Charter's 2Q results.

Exhibit 1

Seasonally Adjusted Annualized Addition Rates

In Thousands

	1Q99	2Q99	3Q99	4Q99	1Q00	2Q00	3Q00	4Q00	1Q01	2Q01	3Q01E	4Q01E
Actual Digital Additions	496	517	674	675	864	976	1,426	1,957	1,634	1,238	1,219	1,624
Seasonal Assumption	29%	24%	26%	21%	20%	20%	27%	34%	31%	22%	21%	26%
Adjusted Annualized Additions	1,691	2,185	2,631	3,159	4,399	4,908	5,315	5,815	5,244	5,583	5,896	6,245
Trailing 12-months				2,363	2,731	3,189	3,941	5,222	5,992	6,254	6,047	5,714
Actual Cable Modem Additions	155	176	184	343	456	444	647	966	892	755	885	1,114
Seasonal Assumption	26%	23%	20%	31%	22%	19%	25%	34%	27%	22%	24%	27%
Adjusted Annualized Additions	596	777	902	1,112	2,067	2,359	2,541	2,869	3,264	3,468	3,709	4,122
Trailing 12-months				859	1,160	1,428	1,890	2,513	2,948	3,260	3,499	3,646

E = Morgan Stanley Research Estimates

Year-over-year revenue and EBITDA growth was higher in 2Q than in 1Q for all eight of the major cable companies. Digital additions in 2Q01 were slightly ahead of our expectations, but high-speed-data additions were slightly below. As discussed in the following sections, seasonally adjusted installation rates for digital set-tops and cable modems improved from both 1Q01 and 4Q00 levels. More important, however, we have maintained our year-end 2001 high-speed-data subscriber estimate at just under 7.5 million. With respect to digital, we raised our year-end estimate from 14.27 million to over 14.4 million. Specifically, we raised our year-end 2001 forecast for digital for Adelphia and Comcast.

MSOs are shifting their focus from new service RGU additions to a combination of RGU additions and revenue and EBITDA growth. During the past six months, we have seen a pronounced strategic shift among the major MSOs away from business plans focused primarily on new service RGU additions. The MSOs are now pursuing strategies that emphasize balanced targets for RGU additions, revenue growth, and EBITDA growth. Cox and Adelphia are the most vivid examples of this shift.

Cox missed our basic and cable-modem subscriber estimates by 62,000 and 35,000, respectively, primarily because the company decided to end deep discounts for new subscribers and started its summer marketing programs 30 days later than last year. However, 14.1% reported revenue growth was nearly equal to our 14.5% estimate, and 13.4% reported EBITDA growth was sharply better than our previous forecast of 11.1%. For the year, Cox reiterated its RGU, revenue, and EBITDA targets.

Valuations have become compelling, in our view. Multiples have declined from 15.5 times 2002E EBITDA at the end of June to 13.9 times today. We believe that the market has oversold the group and incorrectly interpreted typical seasonal trends as evidence of a secular slowdown in growth. The decline in valuations occurred despite two positive trends. First, across the group, year-end guidance was either reiterated or increased. Second, we see continued indications of accelerating revenue and EBITDA growth in 2002.

The cable group will probably be the only component of the overall media sector to demonstrate accelerating revenue and EBITDA growth in 2002. We expect the large media conglomerates to continue to be impacted by weak advertising sales trends until late 2002.

Telecom - Cable - August 29, 2001

Please refer to important disclosures at the end of this report.

Why we remain bullish on US cable following 2Q01 results . . .

- We raised 2001E digital additions for our coverage universe to 6.0 million from our previous forecast of 5.8 million.
- We maintained our 2001 year-end cable modem expectations for the sector at 3.8 million additions.
- We have better visibility into 2002 digital and data additions and feel more comfortable with our estimates.
- We are more convinced that revenue and EBITDA growth in 2002 will increase to 14–15% from 12–13% in 2001.

Scientific Atlanta Rescinds Its Guidance

On August 16, Scientific Atlanta (SFA, \$21, rated Neutral-V by Gary Lieberman) rescinded its guidance and created skepticism regarding digital deployments going forward. However, the company's lack of visibility into set-top box deployments does lessen our confidence in our forecast of 1.2–1.3 million digital cable additions in 3Q01, and 1.6–1.7 million additions in 4Q01, for the following reasons:

- **Pace and Pioneer became suppliers to US cable operators for the first time in late 2000 and early 2001.** The same volume is now spread over four suppliers rather than two.
- **We have not witnessed a major shift in inventory levels across most of the MSOs in the last 6 months.** However, AOL Time Warner may have taken advantage of attractive prices during 1Q01 and 2Q01 and increased its inventory level. AOL Time Warner is Scientific Atlanta's largest customer.
- **At the end of 2Q01, digital penetration for our coverage universe reached over 20% of basic subscribers.** A flattening of digital additions in 2001 has been our assumption, and continues to be. Early adopters have signed up, and typical premium churn of 4–5% a month is continuing to impact the digital

addition rate sequentially across the sector. However, we expect the fourth quarter to show continued strength for cable additions across both products. This is a typical seasonal effect for the sector.

- **We look for our coverage universe to add 5.0 million digital subscribers in 2002, compared with almost 6.0 million in 2001.** We expect that at the end of 2002 there will be 19.4 million digital cable subscribers (versus 19.7 million DBS subscribers), or 33% penetration. This is the exact level we were expecting for year-end 2002 in our forecast published in August 2000.
- **We believe that our 2002 addition level is conservative,** and that S-VOD and VOD deployments could provide significant upside to our estimates.

We believe that the digital set-top growth we are forecasting for 2002 will help generate 15–16% total cable revenue growth and 14–15% EBITDA growth on a pro forma basis for the major operators.

The most important point regarding the skepticism surrounding digital deployment is that our current forecast implies revenue growth of 15–16% and EBITDA growth of 14–15% on a pro forma basis for the major operators. The risk to these forecasts with respect to digital is that additions truly fall of a cliff and cable operators see a reduction in pricing power. We do not believe this is a likely case — we think visibility into the second half of 2001 and into 2002 remains strong and company guidance tends to be conservative across the group.

Cable Modem Deployment

We believe that the high-speed data deployment remains a source of considerable upside potential in 2002 and beyond. In our last preview (July 3), we raised our long-term cable modem subscriber estimates for the sector by 10%. Despite some revisions to our 2001 expectations — reductions to Cox and Charter, increases for Comcast and AOL Time Warner (AOL, \$42, Strong Buy-V) — we believe that our 2002 expectations are very conservative. We expect relatively flat overall additions in 2002 versus 2001E on the data product. We look for data additions of 3.8 million in 2001 and expect that to increase toward 4.2 million in 2002.

However, several trends are benefiting both the unit growth and the overall economics of the data business.

Telecom - Cable - August 29, 2001

- Multiple ISPs will provide additional marketing for cable modem service in 2002 as ISPs begin to market co-branded services that utilize the cable pipe.
- We expect AOL Broadband to become a product-line reality this fall across several Time Warner Cable systems. The most powerful Internet brand aligned with an upgraded cable network, the deployment of AOL Broadband should help to drive unit growth and lower subscriber acquisition costs.
- Cable modem prices are rapidly declining, with DOCSIS 1.0 modems nearing \$100 by year-end 2001. DOCSIS 1.1 modems, which will enhance the data offering through tiering and additional security, are in testing.

Overall, we continue to believe that high-speed data represents a powerful driver of ROIC for the cable operators. Our June 17 report entitled *The Sequel: Open Access Is Better* explains the economics of existing open-access agreements and the benefits that we expect will accrue to the cable operators.

Cable modem service is a true differentiator for cable, a product with which DBS cannot compete. Video-on-demand will be an additional differentiator beginning in 2002.

Risks to Our Thesis

We believe that there are two risks to our investment thesis on US cable stocks. First is the possibility that demand will quickly soften in 2002 and that cable subscribers will be reluctant to increase their total spend on entertainment services. In such a scenario, digital and data additions would likely decline rapidly in 2002 and pricing on these services would erode. This leads to the second risk to our thesis — price wars with DBS and/or the RBOCs.

Currently, it does not appear that a residential broadband price war is likely. In fact, most cable operators and RBOCs have begun raising broadband prices as much as \$5–6 a month. On the satellite side, an entry by Rupert Murdoch into the US market through DirecTV would in fact be a force to be reckoned with, but likely not through a price war. Mr. Murdoch appears more focused on deploying more robust set-tops for DBS subscribers, including PVR functionality to compete with VOD.

We do not believe that a combined DirecTV and EchoStar company would be likely to further subsidize services beyond current levels. Please see our July 3 note, *The Marquis de Broadbandbury, Part Deux*, for a longer discussion on a Murdoch entry into the US market.

Near-Term Events

The reorganization of Time Warner Cable, the cable division of AOL Time Warner, represents a significant event in the evolution of next generation video services. There are two distinct points relating to AOL Time Warner's decision. First, Joe Collins moved from his position as CEO of the cable business to a new position leading the interactive and video-on-demand efforts and reporting directly to Gerald Levin.

This Interactive Video division includes overseeing VOD, S-VOD, cable IP telephony, and other advanced services. This represents a commitment of resources by AOL to aggressively deploy these services. In addition, it indicates that AOL is willing to create a single integrated business dedicated to selling cross-divisional services to cable subscribers. Future growth at AOL and HBO will become increasingly dependent on the speed at which Time Warner Cable deploys new services.

The second important takeaway from the reorganization at AOL Time Warner is the evidence of AOL's increased emphasis on the deployment of multiple ISPs. This increased emphasis could significantly increase our forecast of 2002 cable modem additions at AOL Time

Warner Cable. AOL Time Warner is again leading the charge in this area, with 20 markets scheduled by the middle of next year.

We also believe that VOD and S-VOD announcements will be more frequent in the next two quarters. While all the cable operators have discussed plans to deploy VOD in 2002, of particular interest are the planned deployments by Adelphia, Insight, and Time Warner Cable. Adelphia intends to deploy S-VOD including HBO, Showtime, and Starz! on-demand this fall, with a wider deployment in early 2002. In addition, the company expects to offer these services as part of its current digital offering, at no extra charge.

Insight offers a very broad array of titles in its VOD deployment. The company expects to offer VOD to 60–65% of its footprint by year-end. While its interactive digital deployment remains in the early stages, we expect the broad VOD product offering to rapidly increase penetration levels. AOL Time Warner has not disclosed specific deployment plans, but we expect the S-VOD deployment to be significant in 2002. Overall, we expect the company to be able to offer VOD to 4–5 million subscribers per year beginning in 2003.

Finally, we believe that IP telephony will bring an additional derivative revenue stream to cable operators. UPC in Europe plans to begin deploying IP voice services in 1Q02. In the US, Charter, Comcast, and AOL have been focused on such deployments.

Exhibit 2

Pro Forma Revenue and EBITDA Growth

Operator	Revenue Growth				Revenue Growth			
	4Q00	1Q01	2Q01	3Q01E	2000	2001	2002E	2003E
Adelphia (a)	7.4%	8.4%	10.4%	11.3%	7.6%	11.7%	13.0%	11.6%
Cablevision (b)	10.1%	9.4%	10.2%	11.6%	11.1%	11.0%	12.4%	12.3%
Charter (c)	15.8%	13.7%	15.3%	14.1%	11.9%	14.9%	15.4%	14.0%
Comcast (d)	9.7%	8.5%	9.7%	11.5%	9.0%	10.8%	13.8%	13.0%
Cox	11.7%	10.8%	12.8%	13.8%	10.5%	13.0%	14.1%	12.7%
Insight (e)	6.7%	4.4%	6.4%	9.3%	7.6%	8.2%	15.7%	15.8%
Time Warner Cable	13.4%	12.3%	13.9%	14.6%	12.7%	13.8%	15.4%	13.1%

Operator	EBITDA Growth				EBITDA Growth			
	4Q00	1Q01	2Q01	3Q01E	2000	2001	2002E	2003E
Adelphia (a)	4.1%	7.2%	8.5%	11.0%	11.9%	11.2%	13.4%	12.1%
Cablevision (b)	-6.6%	7.6%	6.1%	7.7%	2.1%	9.3%	10.3%	12.4%
Charter (c)	28.9%	9.0%	13.0%	12.2%	12.4%	13.3%	14.1%	14.6%
Comcast (d)	10.5%	10.8%	13.0%	11.5%	10.2%	13.9%	15.8%	15.3%
Cox	11.9%	9.0%	12.7%	13.1%	9.0%	12.1%	13.4%	14.7%
Insight (e)	6.1%	5.5%	2.2%	12.2%	9.0%	8.4%	11.3%	15.0%
Time Warner Cable	16.2%	15.3%	13.4%	15.3%	14.8%	14.8%	15.1%	11.5%

Note: Includes all residential business units, excludes programming assets. 2002 EBITDA growth rates are affected by losses generated by assumed residential telephony deployments.

(a) Adelphia results pro forma for all transactions closed at the end of that particular quarter. 3Q01 pro forma expectations are estimates, no pro forma 3Q00 data available.

(b) Cablevision 4Q00 results not pro forma for Westchester systems acquired January 2001.

(c) Charter 4Q00 results not pro forma for AT&T transaction closed July 3, 2001. CHTR 2000 results are pro forma only for transactions closed in 2000, EBITDA growth in 2000 is system-level.

(d) Comcast 4Q00 results not pro forma for AT&T transactions closed in 2001. 1Q01 and 2Q01 results not pro forma for 112,000 subscribers acquired from AT&T in July.

(e) Insight 4Q00 results not pro forma for AT&T transactions closed in January 2001.

E = Morgan Stanley Research Estimates

Exhibit 3

2Q01 Data Results vs. Expectations

(In Thousands)

Cable Modem Subscribers (In Thousands)

	MSDW 2Q01	Actual 2Q01	Prior 2001E	Revised 2001E	Prior 2002E	Revised 2002E
Adelphia	252	243	406	406	703	703
Cablevision	369	368	500	500	739	739
Charter Communications	403	386	634	620	1,074	1,075
Comcast (1)	646	676	905	953	1,577	1,577
Cox Communications	704	668	959	875	1,469	1,308
AOL Time Warner	1,334	1,310	1,704	1,754	2,434	2,569
Insight Communications	76	73	106	106	189	189
Other	1,774	1,721	2,207	2,214	3,298	3,337
Total	5,558	5,445	7,421	7,427	11,483	11,497
Net Additions						
Adelphia	55	46	257	257	297	298
Cablevision	65	64	261	262	239	239
Charter Communications	98	81	409	395	440	455
Comcast (1)	104	134	411	459	672	624
Cox Communications	117	81	477	393	510	434
AOL Time Warner	234	210	824	874	730	815
Insight Communications	13	10	54	55	83	82
Other	144	130	1,089	1,169	1,091	1,191
Total	829	755	3,783	3,863	4,062	4,138

(1) Revised 2001E estimates pro forma for AT&T swaps and acquisitions.

E = Morgan Stanley Research Estimate

Exhibit 4

2Q01 Digital Results vs. Expectations*(In Thousands)*

Digital Video Subscribers (In Thousands)

	MSDW 2Q01	Actual 2Q01	Prior 2001E	Revised 2001E	Prior 2002E	Revised 2002E
Adelphia	1,429	1,503	1,737	1,816	2,208	2,308
Cablevision	0	0	50	50	333	333
Charter Communications	1,565	1,585	2,197	2,197	2,770	2,774
Comcast (1)	1,816	1,840	2,131	2,214	2,823	2,823
Cox Communications	1,087	1,071	1,343	1,343	1,817	1,817
AOL Time Warner	2,275	2,260	3,013	3,013	4,343	4,343
Insight Communications	215	201	296	285	406	420
Other	3,254	3,116	3,502	3,501	4,425	4,560
Total	11,641	11,577	14,269	14,419	19,125	19,378
Net Additions						
Adelphia	182	256	833	912	471	492
Cablevision	0	0	50	50	283	283
Charter Communications	221	241	1,128	1,127	573	577
Comcast (1)	261	285	637	719	692	610
Cox Communications	126	111	501	502	474	474
AOL Time Warner	351	336	1,449	1,449	1,330	1,329
Insight Communications	32	18	144	133	110	135
Other	130	(9)	1,071	1,071	923	1,060
Total	1,303	1,238	5,812	5,963	4,856	4,959

*(1) Revised 2001E estimates pro forma for AT&T swaps and acquisitions.**E = Morgan Stanley Research Estimate*

Exhibit 5

Cable Modem Forecast, Quarterly

(In Thousands)

	Actual Results, Not Adjusted for Pending Acquisitions							
	1Q00	2Q00	3Q00	4Q00	1Q01	2Q01	3Q01E	4Q01E
Adelphia	1,971	2,272	2,572	3,716	3,581	4,637	5,511	7,215
Cablevision	976	1,180	1,478	2,000	2,303	2,558	3,064	4,023
Charter Communications	5,081	5,202	4,580	5,551	5,689	6,281	6,872	7,918
Comcast	4,224	4,410	5,085	6,360	7,913	7,956	8,977	10,443
Cox Communications	5,015	5,646	5,945	7,123	7,756	8,385	8,685	8,782
Insight Communications	700	915	1,054	1,204	1,568	1,607	1,647	1,691
AOL Time Warner	9,932	10,988	12,045	13,102	13,983	16,177	16,400	16,623
Other	3,588	4,338	4,838	4,020	4,000	4,500	5,000	5,775
US HSCDS Homes Passed	42,136	48,090	51,809	58,505	62,258	66,148	70,757	78,631
RCN Corporation	602	831	1,006	1,100	1,184	1,274	1,366	1,475
Rogers Communications	2,630	2,591	2,601	2,631	2,657	2,684	2,710	2,737
Cogeco	930	892	959	1,062	1,109	1,140	1,188	1,237
Shaw Communications	1,631	1,705	1,889	2,196	2,389	2,728	2,788	2,849
Total Canada and Other	5,793	6,019	6,455	6,990	7,339	7,824	8,053	8,297
Total North America	47,929	54,109	58,264	65,494	69,597	73,972	78,809	86,928
Adelphia	50	71	105	149	197	243	308	406
Cablevision	71	93	140	239	304	368	433	500
Charter Communications	95	122	157	225	305	386	495	620
Comcast	195	237	304	400	542	676	786	953
Cox Communications	260	320	399	482	587	668	766	875
Insight Communications	12	19	24	30	63	73	88	106
AOL Time Warner	416	533	669	880	1,100	1,310	1,527	1,754
Other	107	132	157	86	350	375	380	491
US HSCDS Subscribers	1,771	2,216	2,841	3,638	4,729	5,445	6,270	7,427
Growth %	221.3%	195.9%	181.2%	175.0%	167.1%	145.7%	120.7%	104.2%
RCN Corporation	27	40	52	67	81	95	108	122
Rogers Communications	215	266	301	312	347	383	422	469
Cogeco	57	64	74	85	94	100	108	113
Shaw Communications	219	248	293	352	422	500	564	605
Total Canada and Other	518	618	720	816	944	1,078	1,202	1,309
Growth %	187.7%	169.4%	151.3%	84.2%	82.2%	74.5%	66.9%	60.3%
Total North America	2,289	2,834	3,562	4,454	5,673	6,523	7,472	8,736
Growth %	213.0%	189.7%	174.6%	152.2%	147.9%	130.2%	109.8%	96.1%

E = Morgan Stanley Research Estimate

Exhibit 6

Cable Modem Forecast, 1999–2006E

(In Thousands)

	Pro Forma							
	1999	2000	2001E	2002E	2003E	2004E	2005E	2006E
Adelphia	1,671	3,716	7,215	8,322	8,447	8,573	8,702	8,832
Cablevision	874	2,000	4,023	4,439	4,586	4,651	4,720	4,791
Charter Communications	3,468	5,551	7,918	10,371	11,144	11,546	11,752	11,961
Comcast	3,652	6,360	10,443	14,152	14,364	14,579	14,798	15,020
Cox Communications	4,099	7,123	8,782	10,176	10,329	10,484	10,641	10,800
Insight Communications	580	1,204	1,691	2,079	2,110	2,142	2,174	2,206
AOL Time Warner	8,875	13,102	16,623	16,873	17,126	17,383	17,644	17,908
Other	2,500	5,500	5,775	6,064	6,367	6,685	7,020	7,371
US HSCDS Homes Passed	35,466	58,505	78,631	95,184	98,737	100,671	102,447	104,262
RCN Corporation	551	1,100	1,475	1,715	1,906	1,906	1,906	1,906
Rogers Communications	2,630	2,631	2,737	2,769	2,802	2,852	2,895	2,961
Cogeco	921	1,062	1,237	1,250	1,267	1,282	1,295	1,308
Shaw Communications	1,542	2,196	2,849	2,898	3,010	3,101	3,151	3,200
Total Canada and Other	5,643	6,990	8,297	8,633	8,985	9,141	9,247	9,375
Total North America	41,109	65,494	86,928	103,817	107,722	109,812	111,694	113,638
Adelphia	37	149	406	703	1,052	1,464	1,930	2,504
Cablevision	52	239	500	739	974	1,204	1,419	1,599
Charter Communications	66	225	620	1,075	1,550	2,079	2,665	3,301
Comcast	159	494	953	1,577	2,233	2,910	3,537	4,184
Cox Communications	204	482	875	1,308	1,774	2,239	2,633	2,967
Insight Communications	8	52	106	189	275	366	454	546
AOL Time Warner	307	880	1,754	2,569	3,419	4,216	4,900	5,516
Other	130	303	491	661	816	960	1,094	1,221
US HSCDS Subscribers	1,323	3,638	7,427	11,497	15,680	20,088	24,331	28,585
Growth %	233.0%	175.0%	95.8%	54.8%	36.4%	28.1%	21.1%	17.5%
RCN Corporation	22	67	122	204	282	350	404	440
Rogers Communications	186	312	469	559	639	707	766	820
Cogeco	51	85	113	146	179	223	265	294
Shaw Communications	185	352	605	723	867	999	1,105	1,191
Total Canada and Other	443	816	1,309	1,632	1,969	2,279	2,541	2,745
Growth %	229.5%	84.2%	60.3%	24.7%	20.6%	15.8%	11.5%	8.0%
Total North America	1,766	4,454	8,736	13,129	17,648	22,368	26,872	31,329
Growth %	232.1%	152.2%	89.5%	50.3%	34.4%	26.7%	20.1%	16.6%

E = Morgan Stanley Research Estimate

Exhibit 7

Digital Cable and DBS Subscriber Forecast, Quarterly*In Thousands*

Subscribers	As Reported				As Reported			
	1Q00	2Q00	3Q00	4Q00	1Q01	2Q01	3Q01E	4Q01E
Adelphia	5,004	5,018	5,191	5,548	5,723	5,672	5,800	5,841
Cablevision	2,787	2,828	2,832	2,831	2,969	2,999	2,999	3,000
Charter Communications	6,200	6,262	6,318	6,351	6,350	6,388	6,961	7,032
Comcast	7,109	7,113	7,529	7,607	7,733	8,307	8,422	8,426
Cox Communications	6,136	6,138	6,163	6,193	6,214	6,167	6,225	6,255
Insight Communications	929	915	915	919	1,285	1,270	1,283	1,288
AOL Time Warner	11,100	11,040	11,042	11,158	11,197	11,087	11,207	11,331
Total Basic Subscribers	55,350	55,455	56,146	56,786	57,343	56,330	56,510	56,795
Additions	2,268	105	691	640	557	(1,013)	180	285
RCN Corporation	161	217	239	267	296	331	367	410
Rogers Communications	2,237	2,233	2,229	2,219	2,297	2,295	2,293	2,291
Cogeco	827	816	828	882	905	901	898	895
Shaw	1,800	1,801	1,818	1,836	1,964	2,229	2,177	2,182
Total Canada and Other	5,024	5,067	5,113	5,204	5,461	5,756	5,735	5,777
Total North America	60,374	60,522	61,259	61,990	62,804	62,086	62,244	62,572
Digital Video Subscribers								
<i>In Thousands</i>								
Adelphia	291	342	523	904	1,247	1,503	1,659	1,816
Cablevision	0	0	0	0	0	0	13	50
Charter Communications	225	375	654	1,070	1,344	1,585	1,937	2,197
Comcast	770	943	1,134	1,354	1,555	1,840	2,041	2,214
Cox Communications	447	560	683	842	961	1,071	1,200	1,343
Insight Communications	54	64	73	103	183	201	227	285
AOL Time Warner	552	800	1,170	1,564	1,924	2,260	2,598	3,013
Total Digital Subscribers	4,347	5,323	6,748	8,705	10,339	11,577	12,796	14,419
Additions	864	976	1,426	1,957	1,634	1,238	1,219	1,624
RCN Corporation	10	23	40	44	53	69	92	127
Rogers Communications	101	111	140	201	222	246	270	304
Cogeco	65	75	86	98	105	108	117	127
Shaw	148	158	156	165	202	239	263	287
Total Canada and Other	324	367	421	508	582	661	743	845
Total North America	4,671	5,690	7,170	9,213	10,921	12,238	13,539	15,264
DBS								
DirecTV (including PrimeStar)	8,358	8,676	9,023	9,500	9,840	10,015	10,253	10,563
Echostar	3,865	4,310	4,765	5,260	5,720	6,070	6,470	6,904
Total DBS	12,223	12,986	13,788	14,760	15,560	16,085	16,723	17,467
Additions	734	763	802	973	800	525	638	744

E = Morgan Stanley Research Estimate

Exhibit 8

Digital Cable vs. DBS Subscriber Forecast

In Thousands

Subscribers	Pro Forma						
	2000A	2001E	2002E	2003E	2004E	2005E	2006E
Adelphia	5,789	5,841	5,917	5,986	6,051	6,113	6,173
Cablevision	2,960	3,000	3,036	3,069	3,099	3,127	3,152
Charter Communications	6,905	7,032	7,148	7,255	7,352	7,444	7,537
Comcast	8,334	8,426	8,517	8,607	8,696	8,784	8,871
Cox Communications	6,193	6,255	6,343	6,432	6,522	6,613	6,706
Insight Communications	1,279	1,288	1,297	1,306	1,315	1,324	1,333
AOL Time Warner	11,158	11,331	11,524	11,702	11,874	12,038	12,195
Total Basic Subscribers	56,185	56,795	57,453	58,077	58,679	59,262	59,835
<i>Additions</i>	<i>1,178</i>	<i>610</i>	<i>658</i>	<i>624</i>	<i>601</i>	<i>583</i>	<i>573</i>
RCN Corporation	267	410	502	600	666	692	714
Rogers Communications	2,219	2,291	2,266	2,243	2,221	2,198	2,198
Cogeco	882	895	883	869	859	849	847
Shaw	1,836	2,182	2,196	2,206	2,214	2,221	2,222
Total Canada and Other	5,204	5,777	5,847	5,919	5,959	5,960	5,981
Total North America	61,389	62,572	63,301	63,996	64,638	65,222	65,816
Digital Video Subscribers							
<i>In Thousands</i>							
Adelphia	904	1,816	2,308	2,672	2,900	3,079	3,226
Cablevision	0	50	333	596	833	1,109	1,408
Charter Communications	1,070	2,197	2,774	3,237	3,694	4,097	4,522
Comcast	1,495	2,214	2,823	3,320	3,752	4,124	4,442
Cox Communications	842	1,343	1,817	2,255	2,687	3,124	3,552
Insight Communications	152	285	420	532	628	703	763
AOL Time Warner	1,564	3,013	4,343	5,577	6,419	7,088	7,655
Total Digital Subscribers	8,456	14,419	19,378	23,551	26,980	29,999	32,769
<i>Additions</i>	<i>4,986</i>	<i>5,963</i>	<i>4,959</i>	<i>4,173</i>	<i>3,429</i>	<i>3,018</i>	<i>2,771</i>
RCN Corporation	44	127	219	299	353	388	411
Rogers Communications	201	304	424	577	713	840	950
Cogeco	98	127	156	196	240	282	318
Shaw	165	287	419	597	760	884	995
Total Canada and Other	508	845	1,218	1,669	2,067	2,393	2,674
Total North America	8,965	15,264	20,596	25,220	29,047	32,391	35,443
DBS							
DirecTV (including PrimeStar)	9,500	10,563	11,441	12,130	12,663	13,122	13,564
EchoStar	5,260	6,904	8,221	9,255	10,054	10,742	11,405
Total DBS	14,760	17,467	19,662	21,385	22,717	23,864	24,969
<i>Additions</i>	<i>3,271</i>	<i>2,707</i>	<i>2,195</i>	<i>1,723</i>	<i>1,332</i>	<i>1,147</i>	<i>1,105</i>

E = Morgan Stanley Research Estimate

Exhibit 9

Revenue Segment Forecast, 2000–2006E

Dollars in Millions

	Pro Forma						
	2000	2001E	2002E	2003E	2004E	2005E	2006E
Regulated Analog Revenue							
Adelphia	\$2,283.6	\$2,390.7	\$2,518.3	\$2,644.6	\$2,761.9	\$2,882.7	\$3,007.5
Cablevision	1,166.4	1,258.3	1,334.9	1,404.3	1,475.7	1,549.0	1,624.5
Charter Communications	2,612.6	2,724.1	2,888.1	3,080.2	3,279.9	3,488.5	3,639.1
Comcast	3,395.8	3,580.3	3,800.4	4,033.1	4,279.0	4,539.0	4,813.6
Cox Communications	2,301.0	2,432.4	2,591.7	2,733.1	2,854.5	2,981.3	3,113.8
Insight Communications	474.6	483.3	507.0	530.6	552.6	576.0	600.4
AOL Time Warner	3,906.4	4,142.4	4,444.8	4,742.9	5,055.2	5,332.2	5,566.0
US CATV Industry Revenue	\$21,456.2	\$22,623.7	\$23,991.1	\$25,383.0	\$26,797.4	\$28,163.2	\$29,466.7
Growth Rate	7.7%	5.4%	6.0%	5.8%	5.6%	5.1%	4.6%
RCN Corporation	70.1	118.5	167.1	208.0	246.0	272.0	290.1
US CATV Industry Revenue Including RCN	21,526.3	22,742.2	24,158.3	25,591.0	27,043.4	28,435.2	29,756.7
Growth Rate	7.8%	5.6%	6.2%	5.9%	5.7%	5.1%	4.6%
Premium, Non-regulated and Other Revenue							
Adelphia	\$480.7	\$505.3	\$576.1	\$660.9	\$751.7	\$856.1	\$969.4
Cablevision	692.2	715.7	723.0	747.3	779.8	817.9	870.6
Charter Communications	831.3	1,016.4	1,129.5	1,264.3	1,398.8	1,546.6	1,709.9
Comcast	1,047.8	1,074.1	1,173.0	1,272.6	1,386.4	1,512.3	1,650.7
Cox Communications	845.5	856.7	927.2	1,017.7	1,122.0	1,242.6	1,381.0
Insight Communications	163.8	152.8	163.5	180.2	201.4	223.9	254.0
AOL Time Warner	1,686.2	1,758.7	1,951.0	2,127.9	2,312.5	2,496.7	2,686.9
US CATV Industry Revenue	\$7,810.9	\$8,117.1	\$8,822.5	\$9,609.5	\$10,467.1	\$11,405.8	\$12,441.6
Growth Rate	7.8%	3.9%	8.7%	8.9%	8.9%	9.0%	9.1%
RCN Corporation	15.9	37.2	63.7	88.8	114.2	133.9	147.3
US CATV Industry Revenue Including RCN	7,826.7	8,154.3	8,886.2	9,698.3	10,581.3	11,539.7	12,588.9
Growth Rate	7.9%	4.2%	9.0%	9.1%	9.1%	9.1%	9.1%
Digital Video Revenue							
Adelphia	\$49.9	\$193.7	\$274.7	\$341.3	\$392.8	\$433.9	\$471.1
Cablevision	0.0	5.6	57.9	128.3	198.0	275.7	366.1
Charter Communications	97.5	241.3	369.8	468.9	567.5	669.5	777.6
Comcast	141.8	252.5	380.8	487.7	589.4	689.2	787.2
Cox Communications	74.0	159.3	232.3	314.3	400.5	494.4	596.4
Insight Communications	13.6	49.4	83.7	116.5	146.2	172.7	196.0
AOL Time Warner	158.6	353.8	602.5	853.0	1,083.1	1,280.6	1,467.6
US CATV Industry Revenue	\$817.9	\$1,753.7	\$2,654.3	\$3,490.1	\$4,276.3	\$5,018.0	\$5,753.0
Growth Rate	130.9%	114.4%	51.4%	31.5%	22.5%	17.3%	14.6%
RCN Corporation	2.9	9.4	21.9	33.8	43.6	50.8	56.0
US CATV Industry Revenue Including RCN	820.7	1,763.2	2,676.2	3,523.9	4,319.9	5,068.8	5,809.1
Growth Rate	131.7%	114.8%	51.8%	31.7%	22.6%	17.3%	14.6%
HSCDS Revenue							
Adelphia	\$38.0	\$95.7	\$231.8	\$371.2	\$529.9	\$712.5	\$929.9
Cablevision	49.5	134.8	246.0	339.4	430.9	518.5	596.1
Charter Communications	68.2	166.6	386.6	591.3	814.1	1,060.2	1,329.6
Comcast	137.2	323.7	587.0	880.7	1,186.5	1,484.9	1,777.1
Cox Communications	148.9	272.3	404.2	546.1	704.4	847.0	967.7
Insight Communications	15.4	35.5	71.6	111.6	153.7	195.8	238.3
AOL Time Warner	302.8	634.4	954.7	1,239.8	1,478.0	1,699.5	1,935.5
US CATV Industry Revenue	\$1,035.8	\$2,271.1	\$3,915.6	\$5,533.3	\$7,197.7	\$8,892.5	\$10,618.2
Growth Rate	171.2%	119.3%	72.4%	41.3%	30.1%	23.5%	19.4%
RCN Corporation	22.2	43.5	67.6	95.2	122.0	144.0	159.4
US CATV Industry Revenue Including RCN	1,058.0	2,314.6	3,983.2	5,628.5	7,319.7	9,036.5	10,777.6
Growth Rate	171.3%	118.8%	72.1%	41.3%	30.0%	23.5%	19.3%

E = Morgan Stanley Research Estimate

Telecom - Cable - August 29, 2001

Please refer to important disclosures at the end of this report.

Exhibit 9 (continued)

Revenue Segment Forecast, 2000–2006E*Dollars in Millions***Total Revenue - Analog, Digital, & Data**

	2000	2001E	2002E	2003E	2004E	2005E	2006E
Adelphia	\$2,852.1	\$3,185.4	\$3,600.9	\$4,018.0	\$4,436.3	\$4,885.2	\$5,377.9
Cablevision	1,908.1	2,114.3	2,361.9	2,619.3	2,884.3	3,161.1	3,457.3
Charter Communications	3,609.5	4,148.4	4,773.9	5,404.7	6,060.3	6,764.8	7,456.2
Comcast	4,722.6	5,230.6	5,941.1	6,674.1	7,441.4	8,225.4	9,028.6
Cox Communications	3,369.4	3,720.7	4,155.5	4,611.3	5,081.3	5,565.3	6,058.9
Insight Communications	667.4	720.9	826.0	938.9	1,053.8	1,168.5	1,288.7
AOL Time Warner	6,054.0	6,889.3	7,952.9	8,963.6	9,928.7	10,808.9	11,656.0
US CATV Industry Revenue	31,120.7	34,765.7	39,383.5	44,015.8	48,738.6	53,479.5	58,279.5
Growth Rate	11.5%	11.7%	13.3%	11.8%	10.7%	9.7%	9.0%
RCN Corporation	111.0	208.6	320.4	425.9	525.8	600.7	652.7
US CATV Industry Revenue Including RCN	31,231.7	34,974.3	39,703.8	44,441.7	49,264.3	54,080.2	58,932.2
Growth Rate	11.7%	12.0%	13.5%	11.9%	10.9%	9.8%	9.0%

Telephony Revenue

Adelphia	\$0.0	\$0.0	\$4.7	\$47.9	\$196.0	\$494.2	\$881.8
Cablevision	9.9	14.5	30.0	67.9	140.5	233.1	324.0
Charter Communications	0.0	0.0	13.2	51.3	127.2	248.0	437.1
Comcast	0.0	0.0	9.9	48.8	144.0	348.0	640.0
Cox Communications	106.1	205.7	323.4	438.0	555.3	686.8	805.4
Insight Communications	0.0	1.5	9.9	29.0	54.7	78.9	96.8
AOL Time Warner	0.0	0.0	0.0	34.1	172.6	512.3	1,122.5
US CATV Industry Revenue	\$281.8	\$705.2	\$1,332.6	\$2,119.0	\$3,329.8	\$5,076.7	\$7,210.8
Growth Rate	481.7%	150.2%	89.0%	59.0%	57.1%	52.5%	42.0%
RCN Corporation	54.4	113.2	184.8	241.8	268.5	279.7	284.8
US CATV Industry Revenue Including RCN	336.3	818.4	1,517.4	2,360.8	3,598.2	5,356.4	7,495.6
Growth Rate	367.0%	143.4%	85.4%	55.6%	52.4%	48.9%	39.9%

Total Revenue - Analog, Digital, Data & Telephony

Adelphia	\$2,852.1	\$3,185.4	\$3,605.7	\$4,065.9	\$4,632.4	\$5,379.5	\$6,259.7
Cablevision	1,918.0	2,128.8	2,391.9	2,687.2	3,024.9	3,394.2	3,781.3
Charter Communications	3,609.5	4,148.4	4,787.1	5,456.0	6,187.6	7,012.8	7,893.3
Comcast	4,722.6	5,230.6	5,951.0	6,722.9	7,585.4	8,573.4	9,668.6
Cox Communications	3,475.5	3,926.4	4,478.9	5,049.2	5,636.7	6,252.0	6,864.4
Insight Communications	667.4	722.5	835.9	967.8	1,108.6	1,247.4	1,385.6
AOL Time Warner	6,054.0	6,889.3	7,952.9	8,997.7	10,101.3	11,321.2	12,778.6
US CATV Industry Revenue	31,402.5	35,470.9	40,716.0	46,134.8	52,068.3	58,556.2	65,490.3
Growth Rate	12.3%	13.0%	14.8%	13.3%	12.9%	12.5%	11.8%
RCN Corporation	165.5	321.8	505.2	667.7	794.2	880.4	937.5
US CATV Industry Revenue	31,568.0	35,792.7	41,221.2	46,802.5	52,862.5	59,436.6	66,427.9
Growth Rate	12.6%	13.4%	15.2%	13.5%	12.9%	12.4%	11.8%

E = Morgan Stanley Research Estimate

Exhibit 10

EBITDA Segment Forecast, 2000–2006E*Dollars in Millions*

EBITDA - Excl. Telephony Analog Video, Digital Video, & Data	Pro Forma						
	2000	2001E	2002E	2003E	2004E	2005E	2006E
Adelphia	\$1,333.4	\$1,482.4	\$1,678.1	\$1,872.6	\$2,081.2	\$2,293.2	\$2,514.1
Cablevision	731.1	796.6	878.2	976.5	1,093.7	1,216.5	1,347.1
Charter Communications	1,721.9	1,938.6	2,231.4	2,542.2	2,876.1	3,245.7	3,609.8
Comcast	1,956.7	2,229.5	2,581.0	2,975.0	3,422.7	3,811.9	4,187.1
Cox Communications	1,400.1	1,530.4	1,722.2	1,959.7	2,176.2	2,398.3	2,622.4
Insight Communications	318.2	348.1	385.7	435.0	490.0	545.1	601.3
AOL Time Warner	2,831.0	3,248.7	3,740.5	4,160.2	4,607.7	5,021.4	5,403.0
US CATV Industry EBITDA	12,877.8	14,606.7	16,695.7	18,857.5	21,199.1	23,475.1	25,684.2
Growth Rate	11.6%	13.4%	14.3%	12.9%	12.4%	10.7%	9.4%
RCN Corporation	(250.9)	(285.4)	(181.4)	(89.8)	3.4	84.4	121.9
US CATV Industry EBITDA Including RCN	12,626.9	14,321.2	16,514.2	18,767.7	21,202.5	23,559.5	25,806.1
Growth Rate	10.3%	13.4%	15.3%	13.6%	13.0%	11.1%	9.5%
Total EBITDA							
Analog, Digital, Data and Telephony							
Adelphia	\$1,311.7	\$1,456.2	\$1,639.0	\$1,822.5	\$2,025.4	\$2,293.6	\$2,680.2
Cablevision	771.8	837.4	932.4	1,061.9	1,223.6	1,410.3	1,609.0
Charter Communications	1,721.9	1,938.6	2,215.2	2,525.3	2,862.6	3,274.2	3,685.4
Comcast	1,956.7	2,229.5	2,568.1	2,955.9	3,418.4	3,851.7	4,348.3
Cox Communications	1,364.7	1,529.6	1,735.2	1,990.3	2,260.2	2,538.1	2,830.0
Insight Communications	318.2	346.4	384.5	442.3	514.6	590.5	662.7
AOL Time Warner	2,831.0	3,248.7	3,740.5	4,171.8	4,675.5	5,224.0	5,873.1
US CATV Industry EBITDA	12,309.4	14,164.5	16,449.4	18,952.7	21,730.5	24,739.8	27,967.9
Growth Rate	11.4%	15.1%	16.1%	15.2%	14.7%	13.8%	13.0%
RCN Corporation	(263.7)	(276.5)	(140.0)	(4.1)	112.4	205.5	247.7
US CATV Industry EBITDA Including RCN	12,045.7	13,888.0	16,309.4	18,948.5	21,843.0	24,945.4	28,215.5
Growth Rate	10.0%	15.3%	17.4%	16.2%	15.3%	14.2%	13.1%

E = Morgan Stanley Research Estimate

MORGAN STANLEY DEAN WITTER

The Americas	Europe	Japan	Asia/Pacific	
1585 Broadway New York, NY 10036-8293 Tel: (1) 212 761-4000	25 Cabot Square, Canary Wharf London E14 4QA, England Tel: (44 20) 7513 8000	20-3, Ebisu 4-chome Shibuya-ku, Tokyo 150-6008, Japan Tel: (81) 3 5424 5000	Three Exchange Square Hong Kong Tel: (852) 2848 5200	4th Floor Forbes Building Charanjit Rai Marg Fort Mumbai 400 001, India Tel: (91 22) 209 6600
BCE Place, 181 Bay Street, Suite 3700 Toronto, Ontario M5J 2T3, Canada Tel: (1) 416 943-8400	Serrano, 55 28006 Madrid Spain Tel: (34 91) 412 11 00		23 Church Street #16-01 Capital Square Singapore 049481 Tel: (65) 834 6888	The Chifley Tower, Level 33 2 Chifley Square Sydney NSW 2000, Australia Tel: (61 2) 9770 1111

V = More volatile. We estimate that this stock has more than a 25% chance of a price move (up or down) of more than 25% in a month, based on a quantitative assessment of historical data, or in the analyst's view, it is likely to become materially more volatile over the next 1-12 months compared with the past three years. Stocks with less than one year of trading history are automatically rated as more volatile (unless otherwise noted). We note that securities that we do not currently consider "volatile" can still perform in that manner.

The information and opinions in this report were prepared by Morgan Stanley & Co. Incorporated ("Morgan Stanley"). Morgan Stanley does not undertake to advise you of changes in its opinion or information. Morgan Stanley and others associated with it may make markets or specialize in, have positions in and effect transactions in securities of companies mentioned and may also perform or seek to perform investment banking services for those companies. This memorandum is based on information available to the public. No representation is made that it is accurate or complete. This memorandum is not an offer to buy or sell or a solicitation of an offer to buy or sell the securities mentioned.

Within the last three years, Morgan Stanley & Co. Incorporated, Morgan Stanley DW Inc. and/or their affiliates managed or co-managed a public offering of the securities of Adelphia Communications, Charter Communications, Comcast Corporation, Cox Communications, Cablevision Systems, RCN Corporation, Insight Communications, United Global Com Inc., AOL Time Warner Inc. and AT&T.

Morgan Stanley & Co. Incorporated, Morgan Stanley DW Inc. and/or their affiliates make a market in the securities of Charter Communications, Comcast Corporation, Insight Communications, United Global Com Inc., AOL Time Warner Inc. and AT&T.

Morgan Stanley & Co. Incorporated, Morgan Stanley DW Inc. and/or their affiliates or their employees have or may have a long or short position or holding in the securities, options on securities, or other related investments of issuers mentioned herein.

An employee or director of Morgan Stanley & Co. Incorporated, Morgan Stanley DW Inc. and/or their affiliates is a director of AOL Time Warner Inc..

The investments discussed or recommended in this report may not be suitable for all investors. Investors must make their own investment decisions based on their specific investment objectives and financial position and using such independent advisors as they believe necessary. Where an investment is denominated in a currency other than the investor's currency, changes in rates of exchange may have an adverse effect on the value, price of, or income derived from the investment. Past performance is not necessarily a guide to future performance. Income from investments may fluctuate. The price or value of the investments to which this report relates, either directly or indirectly, may fall or rise against the interest of investors.

To our readers in the United Kingdom: This publication has been issued by Morgan Stanley and approved by Morgan Stanley & Co. International Limited, regulated by the Securities and Futures Authority Limited. Morgan Stanley & Co. International Limited and/or its affiliates may be providing or may have provided significant advice or investment services, including investment banking services, for any company mentioned in this report. Private investors should obtain the advice of their Morgan Stanley & Co. International Limited representative about the investments concerned.

This publication is disseminated in Japan by Morgan Stanley Dean Witter Japan Limited and in Singapore by Morgan Stanley Dean Witter Asia (Singapore) Pte.

To our readers in the United States: While Morgan Stanley has prepared this report, Morgan Stanley & Co. Incorporated and Morgan Stanley DW Inc. are distributing the report in the US and accept responsibility for its contents. Any person receiving this report and wishing to effect transactions in any security discussed herein should do so only with a representative of Morgan Stanley & Co. Incorporated or Morgan Stanley DW Inc.

To our readers in Spain: Morgan Stanley Dean Witter, SV, SA, a Morgan Stanley group company, supervised by the Spanish Securities Markets Commission (CNMV), hereby states that this document has been written and distributed in accordance with the rules of conduct applicable to financial research as established under Spanish regulations.

To our readers in Australia: This publication has been issued by Morgan Stanley but is being distributed in Australia by Morgan Stanley Dean Witter Australia Limited A.C.N. 003 734 576, a licensed dealer, which accepts responsibility for its contents. Any person receiving this report and wishing to effect transactions in any security discussed in it may wish to do so with an authorized representative of Morgan Stanley Dean Witter Australia Limited.

To our readers in Canada: This publication has been prepared by Morgan Stanley and is being made available in certain provinces of Canada by Morgan Stanley Canada Limited. Morgan Stanley Canada Limited has approved of, and has agreed to take responsibility for, the contents of this information in Canada.

Morgan Stanley is a service mark of Morgan Stanley Dean Witter & Co. Additional information on recommended securities is available on request. This report may not be resold or redistributed without the prior written consent of Morgan Stanley Dean Witter & Co.

© Copyright 2001 Morgan Stanley Dean Witter & Co.

© Copyright 2001 Morgan Stanley Dean Witter & Co.