



December 4, 2004

Wireless Telecom Provision

Can You Hear Me Now? “Spotty”

Initiating Coverage

**John J. Choi**  
john.j.choi@yale.edu  
203.624.6545

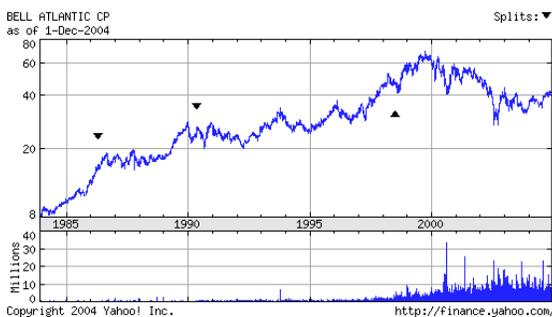
**John Thompson**  
john.thompson@yale.edu  
203.752.1667

Market Price:	\$42.02
Target Price:	\$40
52 Wk Range	32.13- 42.17
Insider Ownership	1.0%
Market Cap	\$115.9 B
Book Value per Share	\$3.25

Initiating with a Neutral, Target: \$40  
(VZ, \$42.02)

We are initiating coverage on Verizon Communications with a **Neutral** rating

- Domestic Telecom revenues have declined at 2% annual rate for a decade. Future prospects still bleak.
- Wireless revenue growth still strong. Sales growth expected to converge to steady-state growth of 4 percent over forecast horizon.
- Verizon is focusing its business. In last six months, divested assets outside core telephony business. Examples: Carlyle Group purchased VZ assets in Hawaii (except VZ wireless) for \$1.65 billion in May ‘04. Bain Capital purchased SuperPages Canada for \$1.54 billion in Nov ‘04.
- Capex expected to increase going forward to pay for Verizon’s entry into television services.





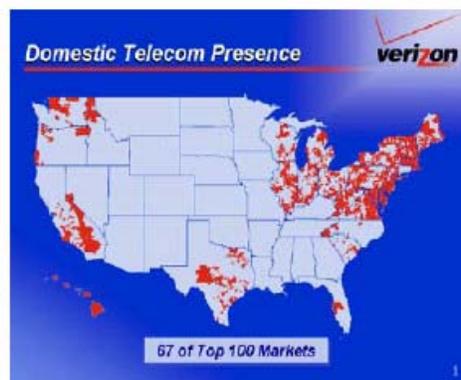
## I. Company Overview

**Company Description:** Verizon Communications Inc. (NYSE: VZ), a Fortune 10 company, is the largest integrated communications provider serving consumers and businesses in the U.S., with 56.2 million access lines, 36 million wireless subscribers, 15.9 million long distance subscribers, and 2.1 million DSL subscribers. Verizon was formed through the merger of Bell Atlantic, a regional Bell Operating Company (RBOC), and GTE Communications in 2000. In addition to its domestic telecommunications business, Verizon is the world's largest publisher of directory information and has stakes in telecommunications carriers in Europe, Asia, and Latin America. Verizon's main business lines are Domestic Telecom, Domestic Wireless, Information Services and International.<sup>1</sup>

### Domestic Telecom

This segment, mostly the wireline telephone operations, provided approximately 60% of 2003 total operating revenues. The telephone operations serve a territory consisting of 140 million access line equivalents in 29 states. This segment also provides long distance and other telecommunication services (**Exhibit 1**).<sup>2</sup>

### Exhibit 1



### Domestic Wireless

The Domestic Wireless segment provides wireless voice and data services and equipment sales in the United States through Verizon Wireless. Verizon Wireless is a joint venture formed in April 2000 with Vodafone Group (45% stake). Verizon Wireless had 37.5 million wireless subscribers as of December 31, 2003. It was the largest U.S. wireless provider until the recent AT&T Wireless/Cingular merger.



Nationally, Verizon Wireless also competes with Nextel Communications, Sprint PCS and T-Mobile USA. Regionally, it competes with carriers, such as ALLTEL and US Cellular.<sup>3</sup>

### **Information Services**

In the Information Services segment, Verizon does print and online directory publishing. It produces Verizon SuperPages print yellow and white pages directories, as well as the Internet's online directory, SuperPages.com. Total circulation is around 112 million copies in the United States and 25 million copies internationally. In 2003, the Company sold its directory businesses in Europe, which consisted of publishing operations in Austria, the Czech Republic, Gibraltar, Hungary, Poland and Slovakia. In November 2004, Verizon sold its SuperPages Canada to Bain Capital.

Verizon's main U.S. competitors are SBC Communications Inc., BellSouth Corporation, R.H. Donnelley, Yellow Book USA, Dex Media, Inc. and Trans Western Publishing. Its online competitors include Yahoo and Google.<sup>4</sup>

### **International**

The International segment includes international wireline and wireless communications operations and investments, primarily in the Americas and Europe. It has investments in the Dominican Republic, and Micronesia. The International segment held around 9 million access lines, and provided wireless services to roughly 30 million customers as of 2003.<sup>5</sup>

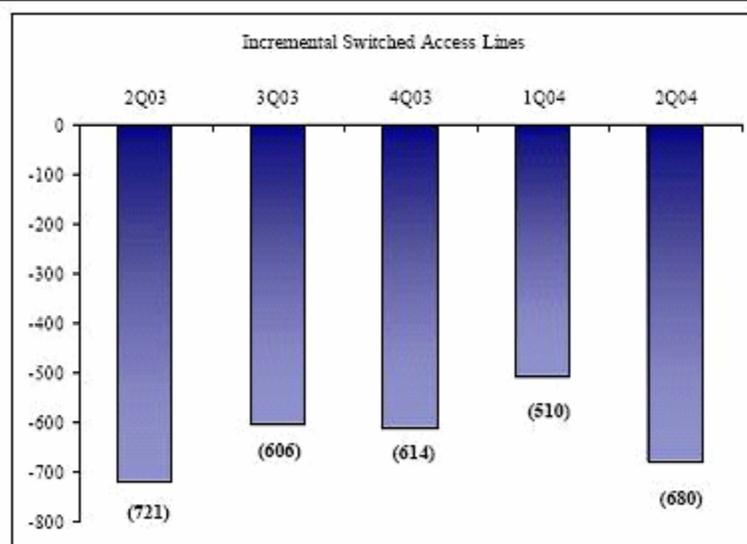


## II. Revenue Drivers

### Domestic Telecom

Verizon has been losing domestic telecom revenues at an average rate of 2 percent for the last three years. In our model, we assume this 2 percent will persist over our ten year forecast horizon. We believe this assumption is justified by the decreased demand for local telephone service (**Exhibit 2**), increased substitution of mobile services over fixed line, and increased competition from VoIP providers—especially from well-positioned cable providers. Verizon offers VoIP services but cable adoption for the similar technology has outstripped that of Verizon.

**Exhibit 2: Verizon Access Lines**  
**Access Line Losses Increase**

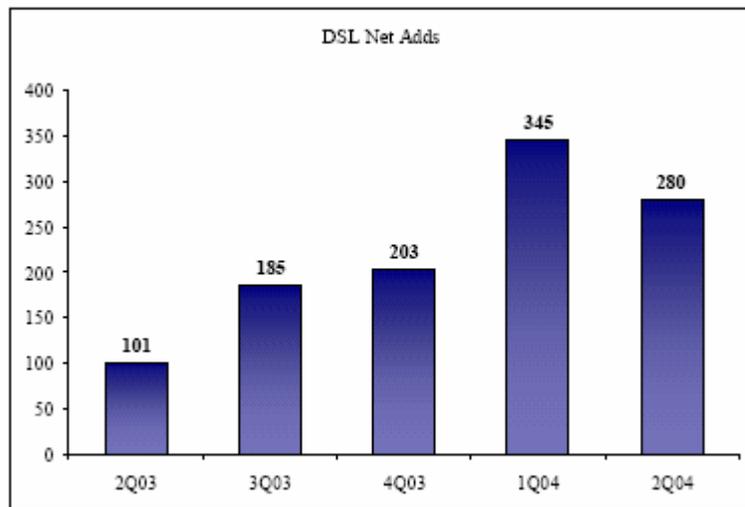


Source: Company data. Morgan Stanley Research

Broadband revenues at Verizon are growing but leveled off in the second quarter of this year (**Exhibit 3**). Essentially, competition from other DSL providers and from cable carriers has cut into Verizon broadband top line. One reason cable carriers have been more successful in broadband has been their ability to bundle cable television with broadband internet and telephone services. Telecom providers like Verizon still lack this ability.



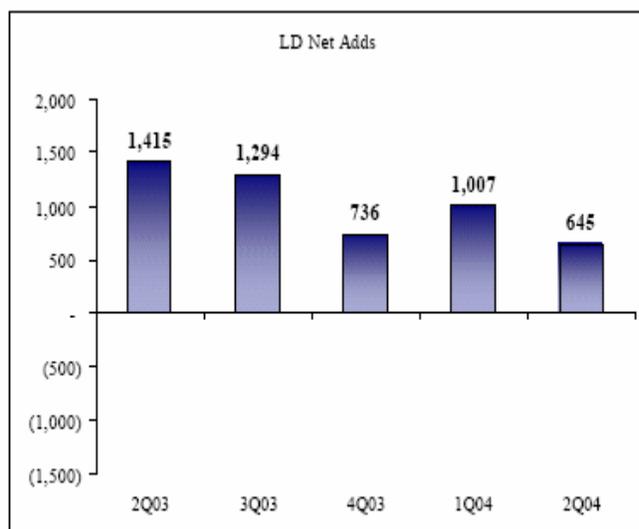
**Exhibit 3: Verizon DSL  
DSL Add Trend Reverses**



Source: Company data, Morgan Stanley Research

Another factor that is affecting domestic telecom revenues has been losses in long distance additions. Fierce competition from cable and mobile services have cut into Verizon's LD business (**Exhibit 4**).

**Exhibit 4: Verizon Long Distance  
LD Net Adds Dip**



Note: 1Q04 adds adjusted to normalize restatement

Source: Company data, Morgan Stanley Research

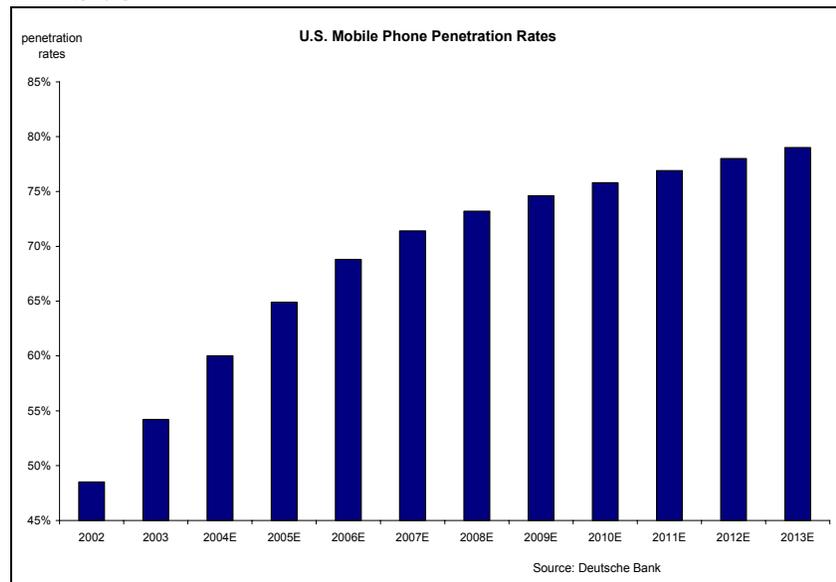


## Domestic Wireless

### **Gross Adds Will Slow Down**

The total wireless market is expected to increase from 174.6 million subscribers in 2004 to 249.4 million in 2013.<sup>6</sup> Wireless penetration rate will grow from 60% in 2004 to 79% in 2013 (Exhibit 5).

### **Exhibit 5**

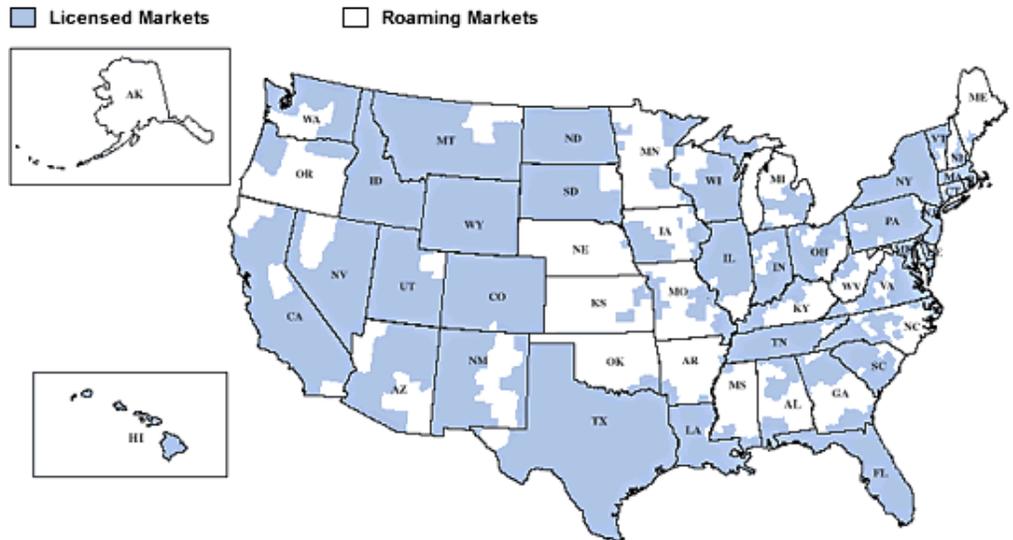


Over the last ten years, Verizon wireless revenues have increased at an average annual rate of 16.6 percent. Given the industry dynamics cited above, Verizon cannot sustain this robust growth performance going forward. We forecast that wireless revenue growth will gradually diminish from the 16.6 percent historical average in 2004 to 4 percent in the terminal year. Increased wireless saturation and vigorous competition in this space supports this estimate.

Verizon Wireless has a comprehensive coverage infrastructure (**Exhibit 6**). But national plays like Cingular (now combined with AT&T Wireless), Sprint, and Nextel have strong footholds in Verizon's playground.



**Exhibit 6**  
**Nationwide Licensed Service Areas**



Source: Strategis Group, Inc.

One of Verizon’s strengths is its low churn rate (**Exhibit 7**). However, we don’t expect it to go any lower. A certain natural rate of churn will exist in even the best provider.

**Exhibit 7**

**Average Monthly Churn**

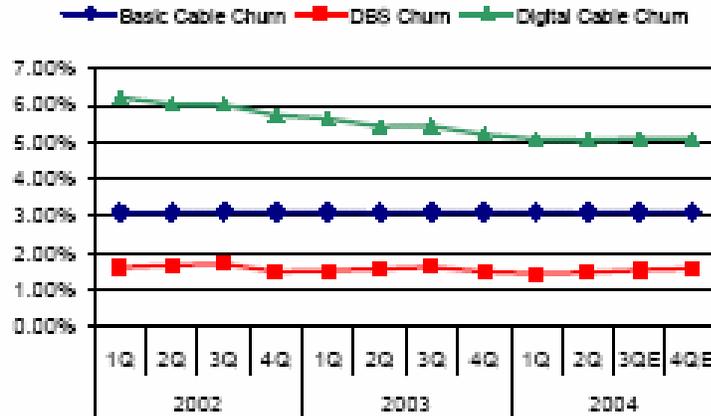
	<b>2002</b>	<b>2003</b>	<b>2004</b>
AT&T Wireless	2.6%	2.6%	3.6%
Cingular	2.8%	2.7%	2.7%
Nextel	2.1%	1.6%	1.7%
Sprint PCS	3.3%	2.7%	2.6%
T-Mobile	4.1%	3.1%	2.9%
<b>Verizon Wireless</b>	<b>2.3%</b>	<b>1.9%</b>	<b>1.5%</b>
US Cellular	2.1%	1.8%	1.6%
<i>National Average</i>	<i>2.7%</i>	<i>2.4%</i>	<i>2.5%</i>

source: Deutsche Bank

For comparison, in the cable and direct broadcast satellite (dbs) industry (**Exhibit 8**), monthly churn is higher for both basic and digital cable than the cellular industry. However satellite’s average 1.5% monthly churn is slightly lower than cellular’s average 2.5% monthly churn.



Exhibit 8



E = Morgan Stanley Research Estimates

Source: Morgan Stanley Research

Predictably, there has been an inverse relationship between domestic telecom and wireless revenues at Verizon in recent years. This association is being driven by a large-scale consumer preference shift away from fixed line and towards wireless telephony. With limited data availability, we studied this relationship at Verizon. We regressed the annual percentage change in wireless revenues against the percentage change in wireline revenues. Our slope estimator came out at -4.76. Unfortunately, the coefficient estimator did not achieve statistical significance. So while we are confident of the inverse relationship between wireline and wireless revenues, we are less sure about the magnitude of the relationship. Accordingly, we used historical averages to project the near-term evolution of revenues of these two product categories for Verizon going forward. For wireless, we recognize that increased domestic saturation will adversely affect Verizon revenue growth in the future. We account for this by assuming that Verizon will maintain its market share over our forecast horizon.

**Information Services**

Verizon is not devoting new resources to this business and we think that it will not play a material part in revenue growth going forward. As mentioned above, Verizon recently sold its SuperPages Canada company to Bain Capital. Similar sales have taken place in the U.S. For instance, Verizon sold all business lines in Hawaii except wireless to The Carlyle Group for \$1.65 billion in May 2004. Having cited these



divestitures, we don't think Verizon will exit the information services business altogether. But given the de-emphasis, we forecast that sales will remain flat in this small part of their revenue projection.

### **International**

There is a growing body of evidence to suggest that Verizon is shoring up its resources to better compete head-on with cable providers. Business lines that divert this focus have been pared down by Verizon. The same has held true with Verizon's international business. That said, we have no indication that Verizon will exit the business altogether. Consequently, we forecast that revenue growth will remain flat over our forecast horizon.

### **III. COGS & SG&A**

For the last ten years, COGS, as a percent of revenues have averaged in the 55 percent neighborhood. This high rate was due to the fact that Verizon accounted for SG&A in the same category as COGS. In 2003, Verizon disaggregated these measures. Standalone, COGS comprised 32 percent of sales. SG&A totaled 27.7 percent of sales. Three year historical averages have SG&A at 30.3 percent of sales. For our forecast horizon, we estimate that COGS will stay at about 32 percent of sales. We also forecast that SG&A will stay at around 30.3 percent of sales. These two ratios tend to be strongly mean reverting. We have no evidence to suggest that SG&A will be materially different going forward. However, since Verizon plans to start competing with cable service providers in terms of television services, we believe COGS will slightly higher than historical measure.

### **IV. Depreciation and Amortization**

Over the last ten years, depreciation and amortization has averaged 16.8 percent at Verizon. We estimate that net property, plant and equipment will remain at its historical rate of 115.3 percent of sales. Given these inputs, depreciation and amortization will evolve according to our pro forma income statement in Appendix.

### **V. Tax Rate**

Statutory income tax rates for 2001, 2002, and 2003 were 46.6 percent, 42.8 percent, and 38.6 percent respectively. Effective tax rate for the same three periods were 78.6 percent, 25.5 percent, and 26.3 percent.



We take taxes as a percent of before tax income for the last ten years to arrive at a tax rate of 38.3 percent for our forecast horizon.

## **VI. Working Capital Reserve**

As with many telecom service providers, working capital for Verizon is negative. Current liabilities have exceeded current assets by an average of 42 percent over the last decade. Taking out current portion of long-term debt yields a similar imbalance. Given mean-reverting behavior in working capital to sales ratio for Verizon, we forecast that working capital will hover around negative 8 percent of sales over the forecast horizon.

The negative working capital is somewhat unusual, but not out of the question for communication service providers. Until 2003, Sprint and Bell South had negative working capital. In addition, current liabilities exceed current assets for SBC, US Cellular, and Qwest. In contrast, Nextel has had positive working capital for the last three years.

## **VII. CAPEX**

Historically, industry CAPEX as a percent of revenues has been around 20%. Verizon has historically spent similar levels for capital upgrades, averaging 21.4 percent over the last three years. Going forward, we expect Verizon to outstrip this historical figure because of its announced plans to begin competing in the television services space. By 2005 alone, Verizon plans to spend \$2.4 billion to upgrade its fiberoptic lines to deliver television services content. Given these major investment requirements, we forecast that Verizon will increase its share of capex as a percent of sales to 25 percent in 2005 and 24 percent thereafter.

## **VIII. CAPM Assumptions/Inputs**

We used a Yahoo! Finance beta of 0.964, 3-year historical tax rate of 41.3%, 10-year treasury risk-free rate of 4.13%, Ibbotson market risk premium of 6.47%, a Bloomberg industry target D/E of 1.04, and a debt ratio 7.5 percent (2004-Q3 interest expense/long-term debt). Terminal growth is 1.8%.



## **IX. Verizon Valuation**

### **DCF**

Based on the assumptions that we have laid out above, we calculate a target price of \$40. To get at this target, we take forecasted EBITDA through 2013 and subtract out taxes, changes in working capital and capital expenditures. Our free cash flows are discounted at a WACC of 8.9 percent. We use because Verizon is expected to maintain a constant debt-to-equity ratio. To get terminal value, we project 2013 free cash flow with a 1.8 percent growth rate, and discounted by the difference between WACC and our terminal growth figure.

### **Comparables**

We use SBC, BellSouth, Deutsche Telekom, France Telecom, Nippon Telegraph and Telephone Corp, and Telecom Italia as comparable companies. Using comparable valuation methodology, our sales multiple suggests a Verizon valuation of \$41.45 per share. EBITDA multiples would value Verizon at \$51.86. In truth, there are no exact comparables. SBC and BellSouth are the closest, but they have very different revenue mixes. On the international front, variation in global regulations and technology standards make comparison with Verizon difficult. In stead of omitting anything that doesn't look exactly like Verizon, we adopt an inclusive stance, using these firms to get reasonable comp multiples. Firms cited above are the largest and most dominant throughout the world's major markets. Verizon is the largest company in terms of market cap.

Taking the two valuation methods side by side, we are most comfortable with a valuation of \$40. This figure is in line with our DCF model and with the sales multiple. While we don't believe our valuation implies a sell for VZ stock, we don't anticipate any strong movements in the ticker over the next six to twelve months.



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### Verizon Income Statement

	2002	2003	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Sales (Net)	67,625	67,752	67,752	70,616	73,750	77,085	80,532	83,983	87,319	90,410	93,122	95,327	97,004
Cost of Goods Sold	38,664	21,682	21,682	22,597	24,338	25,438	26,575	27,714	28,815	29,835	30,730	31,458	32,011
Gross Profit	28,961	46,070	46,070	48,019	49,413	51,647	53,956	56,269	58,504	60,575	62,392	63,869	64,993
Selling, General, & Admin Expenses	C	18,781	18,781	21,426	22,377	23,389	24,435	25,482	26,494	27,432	28,255	28,924	28,948
Operating Income Before Depreciation	28,961	27,289	27,289	26,593	27,036	28,258	29,522	30,787	32,010	33,143	34,137	34,945	36,045
Depreciation, Depletion, & Amortiz	13,423	13,617	13,617	13,685	14,292	14,938	15,606	16,275	16,922	17,521	18,046	18,473	18,798
Operating Income After Depreciation	15,538	13,672	13,672	12,908	12,744	13,320	13,915	14,512	15,088	15,622	16,091	16,472	17,247
Interest Expense	3,422	2,941	2,941	3,338	3,486	3,644	3,807	3,970	4,128	4,274	4,402	4,506	4,586
Non-Operating Income/Expense	1,731	2,376	2,376	1,234	1,289	1,347	1,407	1,468	1,526	1,580	1,627	1,666	1,695
Special Items	-6,375	-6,763	-6,763	-3,053	-3,188	-3,332	-3,481	-3,631	-3,775	-3,909	-4,026	-4,121	-4,194
Pretax Income	7,472	6,344	6,344	7,751	7,358	7,690	8,034	8,379	8,711	9,020	9,290	9,510	10,163
Income Taxes	1,618	1,252	1,252	2,965	2,814	2,942	3,073	3,205	3,332	3,450	3,554	3,638	3,887
Minority Interest	1,270	1,583	1,583	720	752	786	821	856	890	922	949	972	989
Income before EI&DO	4,584	3,509	3,509	4,066	3,791	3,963	4,140	4,318	4,489	4,648	4,787	4,901	5,286
Extraordinary Items	-505	503	503	0	0	0	0	0	0	0	0	0	0
Discontinued Operations	0	-935	-935	0	0	0	0	0	0	0	0	0	0
Net Income	4,079	3,077	3,077	4,066	3,791	3,963	4,140	4,318	4,489	4,648	4,787	4,901	5,286



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<b>DCF</b>											<b>Terminal</b>
EBITDA	26,593	27,036	28,258	29,522	30,787	32,010	33,143	34,137	34,945	36,045	
Taxes	2,965	2,814	2,942	3,073	3,205	3,332	3,450	3,554	3,638	3,887	
Δ in Working Capital	-2,505	-249	-265	-273	-274	-265	-245	-215	-175	-133	
Capex	15,132	18,438	18,500	19,328	20,156	20,957	21,698	22,349	22,878	23,281	
Free Cash Flow	11,001	6,032	7,081	7,394	7,700	7,986	8,239	8,449	8,604	9,010	128,213
Discount Factor	1.00	0.92	0.84	0.77	0.71	0.65	0.60	0.55	0.51	0.46	0.43
Present Value	11,001	5,539	5,969	5,724	5,473	5,212	4,937	4,649	4,347	4,179	54,609
Present Value of Cash Flows	111,639										
Shares Outstanding	2,770										
Share Price	40.30										



# Yale SCHOOL of MANAGEMENT

## Verizon Projections

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Revenue Levels</b>												
Domestic Telecom	40,839	39,602	38,738	37,893	37,066	36,257	35,466	34,692	33,935	33,195	32,470	31,859
Domestic Wireless	19,473	22,489	26,217	30,197	34,358	38,614	42,856	46,966	50,814	54,267	57,196	59,483
Information Services	4,287	4,114	4,114	4,114	4,114	4,114	4,114	4,114	4,114	4,114	4,114	4,114
International	2,219	1,949	1,949	1,949	1,949	1,949	1,949	1,949	1,949	1,949	1,949	1,949
Corporate & Other	-137	-402	-402	-402	-402	-402	-402	-402	-402	-402	-402	-402
Revenue of Access Lines Sold	623	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>67,304</b>	<b>67,752</b>	<b>70,616</b>	<b>73,750</b>	<b>77,085</b>	<b>80,532</b>	<b>83,983</b>	<b>87,319</b>	<b>90,410</b>	<b>93,122</b>	<b>95,327</b>	<b>97,004</b>
% Change	0.9%	0.7%	4.2%	4.4%	4.5%	4.5%	4.3%	4.0%	3.5%	3.0%	2.4%	1.8%
			26.2% (10 year history)									
<b>Revenue Projection Assumptions</b>												
Domestic Telecom			-2.2%	-2.2%	-2.2%	-2.2%	-2.2%	-2.2%	-2.2%	-2.2%	-2.2%	-1.9%
Domestic Wireless			16.6%	15.2%	13.8%	12.4%	11.0%	9.6%	8.2%	6.8%	5.4%	4.0%
Information Services			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
International			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Corporate & Other			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Revenue of Access Lines Sold			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>COGS</b>												
as percent of Sales	38,664	21,682	22,597	24,338	25,438	26,575	27,714	28,815	29,835	30,730	31,458	32,011
	57.4%	32.0%	32.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
<b>SG&amp;A</b>												
as percent of Sales	21,846	18,781	21,426	22,377	23,389	24,435	25,482	26,494	27,432	28,255	28,924	28,948
	32.5%	27.7%	30.3%	30.3%	30.3%	30.3%	30.3%	30.3%	30.3%	30.3%	30.3%	29.8%
<b>Net PP&amp;E</b>												
Net PP&E as percent of Sales	74,496	75,316	81,407	85,020	88,865	92,838	96,817	100,663	104,226	107,353	109,894	111,827
	110.7%	111.2%	115.3%	115.3%	115.3%	115.3%	115.3%	115.3%	115.3%	115.3%	115.3%	115.3%
<b>Interest Expense</b>												
as percent of Sales	3,422	2,941	3,338	3,486	3,644	3,807	3,970	4,128	4,274	4,402	4,506	4,586
	5.1%	4.3%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%
<b>Non-Operating Income/Expense</b>												
	1,731	2,376	1,234	1,289	1,347	1,407	1,468	1,526	1,580	1,627	1,666	1,695
	2.6%	3.5%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
<b>Special Items</b>												
	-6,375	-6,763	-3,053	-3,188	-3,332	-3,481	-3,631	-3,775	-3,909	-4,026	-4,121	-4,194
	-9.5%	-10.0%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%	-4.3%
<b>Income Taxes</b>												
Rate	1,618	1,252	2,965	2,814	2,942	3,073	3,205	3,332	3,450	3,554	3,638	3,887
	21.7%	19.7%	38.3%	38.3%	38.3%	38.3%	38.3%	38.3%	38.3%	38.3%	38.3%	38.3%
<b>Minority Interest</b>												
	1,270	1,583	720	752	786	821	856	890	922	949	972	989
	1.9%	2.3%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
<b>Capital Expenditures</b>												
as percent of Sales	18,369	13,061	11,884	15,132	18,438	18,500	19,328	20,156	20,957	21,698	22,349	23,281
	27.3%	19.4%	17.5%	21.4%	25.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%



**Sales History**

VZ	1999	2000	2001	2002	2003	$\mu$	$\sigma$
Domestic Telecom		42,322	42,148	40,839	39,602		
% change			-0.4%	-3.1%	-3.0%	-2.2%	1.5%
Domestic Wireless		14,236	17,560	19,473	22,489		
% change			23.3%	10.9%	15.5%	16.6%	6.3%
Information Services		1,976	4,313	4,287	4,114		
% change			118.3%	-0.6%	-4.0%	37.9%	69.6%
International		4,144	1,581	2,219	1,949		
% change			-61.8%	40.4%	-12.2%	-11.2%	51.1%
Corporate & Other		-276	114	-137	-402		
% change			-141.3%	-220.2%	193.4%	-56.0%	219.6%
Revenue of Access Lines Sold		2,305	997	623	0		
% change			-56.7%	-37.5%		-47.1%	13.6%
Calculated Total (SEC docs)		64,707	66,713	67,304	67,752		
% change			3.1%	0.9%	0.7%	1.6%	1.3%
WRDS Total	33,174	64,826	67,190	67,625	67,752		
% change	5.1%	95.4%	3.6%	0.6%	0.2%	26.2%	50.6%



### NACC Calculation for VZ

Assumptions		Note
$\beta_L$	0.964	(1)
$T_C$	37.1%	(2)
$r_f$	4.13%	(3)
$r_m - r_f$	6.47%	(4)
Target D/E	104.00%	(5)
<b><math>\beta_U</math></b>	<b>0.58</b>	

3Q 2004	
Interest Expense	2,797,000
Long-Term Debt	37,252,000
Debt Ratio	7.5%

D/A	D/E	$\beta$	Effect on $\beta$	$r_E$	WACC under various $r_d$							
					5.51%	7.51%	9.51%	11.51%	13.51%	15.51%	17.51%	
0.00%	0.00%	0.58	0.00	7.90%	7.90%	7.90%	7.90%	7.90%	7.90%	7.90%	7.90%	7.90%
5.00%	5.26%	0.60	0.02	8.03%	7.90%	8.00%	8.10%	8.20%	8.30%	8.40%	8.50%	8.50%
10.00%	11.11%	0.62	0.04	8.16%	7.90%	8.10%	8.30%	8.50%	8.70%	8.90%	9.10%	9.10%
15.00%	17.65%	0.65	0.06	8.32%	7.90%	8.20%	8.50%	8.80%	9.10%	9.40%	9.70%	9.70%
20.00%	25.00%	0.67	0.09	8.49%	7.90%	8.30%	8.70%	9.10%	9.50%	9.90%	10.30%	10.30%
25.00%	33.33%	0.70	0.12	8.69%	7.90%	8.40%	8.90%	9.40%	9.90%	10.40%	10.90%	10.90%
30.00%	42.86%	0.74	0.16	8.92%	7.89%	8.49%	9.09%	9.69%	10.29%	10.89%	11.49%	11.49%
40.00%	66.67%	0.83	0.24	9.48%	7.89%	8.69%	9.49%	10.29%	11.09%	11.89%	12.69%	12.69%
50.98%	104.00%	0.96	0.38	10.37%	7.89%	<b>8.91%</b>	9.93%	10.95%	11.97%	12.99%	14.01%	14.01%

- (1) yahoo! Finance
- (2) 10 year historical average
- (3) 10-Year Treasury Constant Maturity Rate, FRED St. Louis Fed
- (4) Ibbotson market risk premium
- (5) Hoovers industry



## Yale SCHOOL of MANAGEMENT

Company #	1	2	3	4	5	6	
(\$ Millions) Name >	Verizon Communications Inc.	SBC Communications Inc	BellSouth Corp	Detsche Telekom AG	France Telecom	Nippon Telegraph and Telephone Corp	Telecom Italia SpA
Ticker	VZ	SBC	BLS	DT	FTE	NTT	TI
Current Stock Price	41.79	25.81	28.32	21.87	32.51	22.50	39.82
Shares Outstanding	2,770	3,320	1,830	4,200	2,470	3,150	1,610
<b>Equity Mkt. Capitalization</b>	<b>115,758</b>	<b>85,689</b>	51,826	91,854	80,300	70,875	64,110
Date of the Data (M/Y)	30-Sep-04	30-Sep-04	30-Sep-04	30-Sep-04	30-Sep-04	31-Mar-04	31-Dec-03
<b>Sales</b>	<b>70,160</b>	12,280	20,900	74,650	60,330	105,672	39,172
% Sales Growth (lfy)	0.2%	-5.3%	-0.9%	15.1%	18.5%		
<b>EBITDA</b>	<b>26,026</b>	13,840	9,500	26,639	22,170	14,860	10,410
Net Income	5,940	6,230	3,730	3,700	2,330	6,132	2,312
% Net Income Growth							
E.P.S. (Past Year, ttm)	2.13	1.88	2.03	0.88	1.03	2.10	1.95
E.P.S. (Est. -- Next Year) >	2.66	1.29	1.61	1.74	3.35	4.30	3.06
Forward % Change, E.P.S.	25%	-31%	-21%	98%	227%	105%	57%
Cash	13,261	13,490	9,200	7,900	4,470	13,900	6,199
Debt	40,520	18,240	16,190	60,640	10,300	58,240	5,610
Equity Mkt. Capitalization	115,758	85,689	51,826	91,854	80,300	70,875	64,110
<b>BEV (Amount)</b>	<b>143,017</b>	90,439	58,816	144,594	86,130	115,215	64,110
BEV / Sales	2.x	7.4x	2.8x	1.9x	1.4x	1.1x	1.6x
<b>BEV / EBITDA</b>	<b>5.5x</b>	<b>6.5x</b>	<b>6.2x</b>	<b>5.4x</b>	<b>3.9x</b>	<b>7.8x</b>	<b>6.2x</b>
P/E Ratio (Past E.P.S.)	19.6	13.8	14.0	24.9	31.7	10.7	20.4
P/E Ratio (Next E.P.S.)	15.7	20.0	17.6	12.6	9.7	5.2	13.0
Included?		yes	yes	yes	yes	yes	yes
Reason?							

**VZ Valuation (all)**  
**Sales Multiple** 114,827.5 \$ **41.45**  
**EBITDA Multiple** 160,285.5 \$ **57.86**

	BEV to Sales	BEV to EBITDA
Multiples	1.6x	6.2x



Yale SCHOOL *of* MANAGEMENT

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<sup>1</sup> 2003 Annual Report

<sup>2</sup> Reuters

<sup>3</sup> Reuters

<sup>4</sup> Reuters

<sup>5</sup> Reuters

<sup>6</sup> Deutsche Bank, US Telecom Data Book, Industry Report, August 2004.