

Do ILECs Actually Invest?

By Bart Stuck and Michael Weingarten

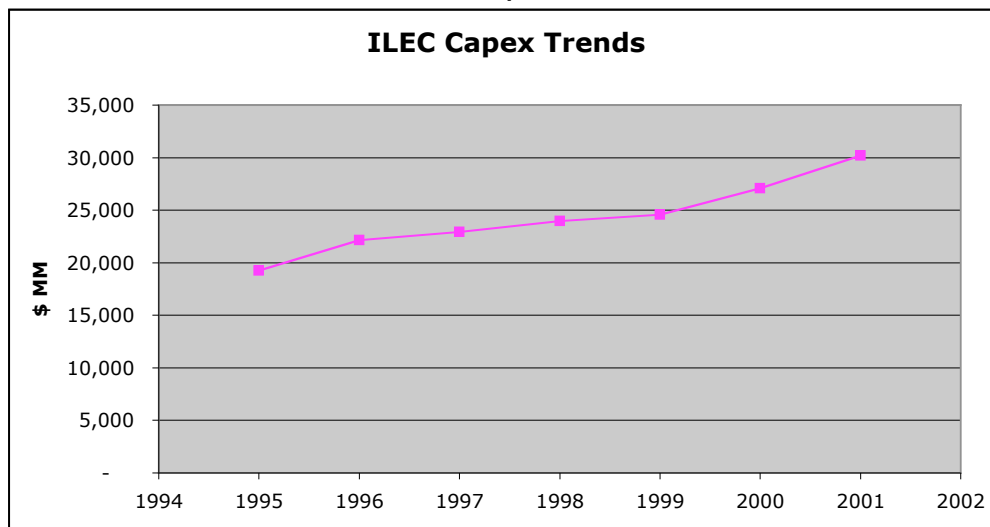
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In our most recent article, “Why RBOCs Won’t Invest,” ([BCR](#), July 2003) we commented that a combination of factors result in a substantial disincentive for RBOCs/ILECs to invest in new plant (although we continue to await the details of the FCC’s February 20 decision, which will remove UNE requirements for broadband networks). These factors include: TELRIC UNE rates 50% below GAAP costs; overly low cost of capital and depreciation assumptions; and TELRIC leveled prices that don’t consider productivity improvement trends.

In this piece, we move from theoretical to actual. If we compare ILEC spending patterns prior to 1996 (when the Telecom Act was passed) to more recent data, what do the results say? Was spending up, down, or what?

As a starting point, Table 1 shows aggregate ILEC capital spending for from 1995-2001, which coincides with the passage of the Telecom Act in February 1996 and the subsequent overheating of the telecom market. We ignore the data for 2002 and year-to-date 2003, which would show a substantial downturn in spending. Thus, if anything, our choice of years stacks the deck in favor of showing continued ILEC spending; and indeed, Table 1 indicates that annual capex grew from \$19 B to \$30 B, an annual growth rate of 7.81%. During the same period, aggregate Total Plant in Service (TPIS) grew at an annual rate of 5.08%. [Note: capex normally grows faster than TPIS, since each year fully-depreciated plant and/or scrapped plant is subtracted from TPIS. Capex needs to grow faster to make up the difference.]

Table 1: ILEC Capex Trends



Source: FCC [Statistics of Communications Common Carriers](#). 2002 date increased by 7.2% in order to include estimated capex for mid-sized LECs.

What does this suggest about spending levels? It's hard to say, unless you compare it to overall ILEC growth. Is new capital spending:

- Consistent with underlying growth;
- Faster than underlying growth (suggesting a decision to invest in next-generation infrastructure);
or
- Slower than underlying growth (suggesting a desire to 'cash out')?

Comparison Methodology

To answer these questions, our basic approach is to compare TPIS to two important physical metrics:

- *Revenue growth* (which grew at 3.35% annually from 1995-2001), and
- *Access line growth* (7.26% annual growth).

After all, for an ILEC to support a dollar of sales or an access line, it needs a certain level of Total Plant In Service. If revenues and access lines are growing, so must TPIS. If TPIS is growing, capex must grow faster, to offset assets that leave TPIS due to obsolescence/writeoffs.

Which metric -- revenues or access lines -- is more appropriate? Offhand, we don't know -- we would need to do a detailed activity-base cost analysis of what factors drive the need for new equipment. We tend to believe that physical metrics are more important, but Wall Street likes to look at percentage of revenues. Therefore, we've decided to highlight both, and will use the average (5.31% per year) for comparisons to TPIS and capex.

One caveat is that we admittedly are assuming that a marginal dollar of revenue or a marginal access line will require a proportional investment equal to the current average investment. We do understand that new equipment will typically cost less than old equipment for equivalent functionality. However (a) much of the ILEC plant is spent on old technologies that are not particularly subject to cost reductions; (b) some of these savings are offset by more rapid obsolescence; and (c) even CLECs, who spent on 'next-generation' technologies, wound up with extremely high aggregate spending growth during this period -- so that aggressive ILEC spending in this period should result large percentage increases, not just low single-digit numbers. Furthermore, to do an accurate job computing real-world long run incremental cost would require a great deal of work. All this having been said, we believe that if we perform a straight-forward TPIS to revenue/access line growth, the relative aggressiveness versus conservatism of ILEC spending behavior will become apparent on order-of-magnitude basis. Looking ahead, this will become apparent when you look at the spending for transport versus other network elements.

Comparison Results: Top-Line Analysis

In Exhibit 2, we compare TPIS/Capex trends to ILEC revenue/line growth. The results indicate that TPIS grew almost exactly the same as revenue/line growth, with capex growing 47% faster. This suggests that the ILECs, even during an historic run-up in telecom capital investment, essentially held a steady course, only adding to TPIS at a level consistent with revenue/line increases.

Exhibit 2: ILEC Capex Trends

ILEC Aggregate Growth	CAGR 1995-2001	ILEC Plant Growth	CAGR 1995-2001	Ratio to Average ILEC Growth
Revenue	3.35%	Total Plant In Service (TPIS)	5.08%	0.96
Access Lines	7.26%	Capex	7.81%	1.47
Average	5.31%			

Source: FCC Statistics of Communications Common Carriers, Signal Lake analysis

Comparison Results: Peeling Back the Onion

However, that's not the complete picture. In Exhibit 3, we peel back the onion one level and take a look at *what* infrastructure elements the ILECs invested in. The answer: Much of the overall TPIS growth came from transport (which grew at 10.6% per year). Net of this, non-transport TPIS grew at 3.66% per year – or only 69% of the 5.31% revenue/line growth rate. Another way to look at the growth of transport investment: In 1995, transport represented 18% of TPIS. By 2001, transport represented 41% of capex.

Exhibit 3: ILEC Investment Trends: Transport Versus Non-Transport

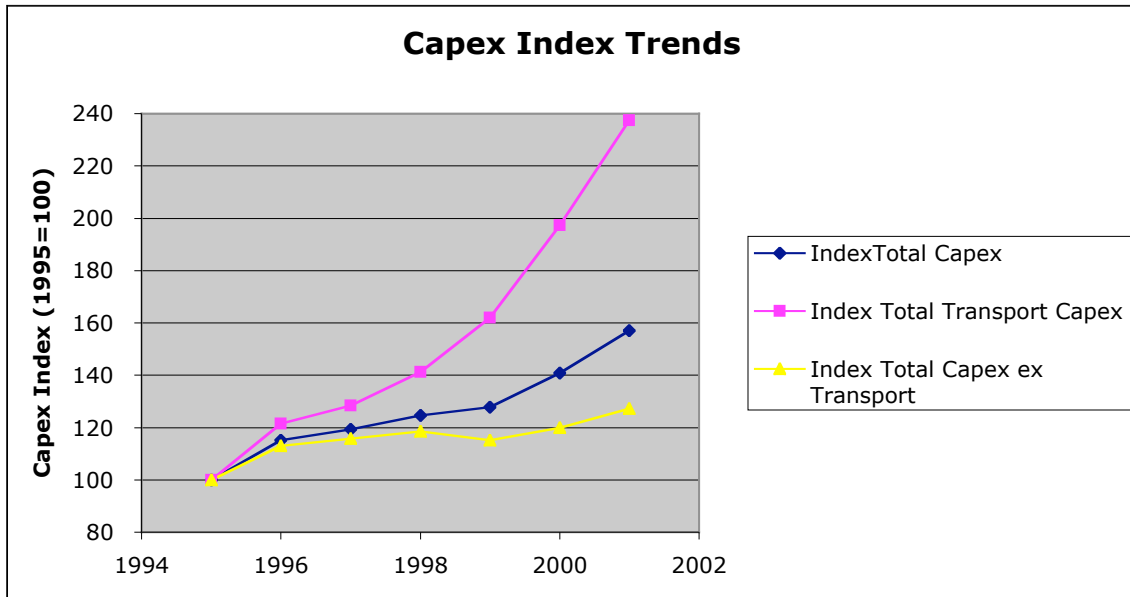
ILEC Aggregate Growth	CAGR 1995-2001	ILEC Plant Growth	CAGR 1995-2001	Ratio to Average Growth
Revenue	3.35%	Total TPIS	5.08%	0.96
Access Lines	7.26%	TPIS: Transport	10.56%	1.99
Average	5.31%	TPIS: Excluding Transport	3.66%	0.69
		Total Capex	7.81%	1.47
		Capex: Transport	15.50%	2.92
		Capex: Excluding Transport	4.08%	0.77

Source: FCC Statistics of Communications Common Carriers, Signal Lake analysis

As further illustrations of the importance of transport in ILEC spending during this period, Exhibit 4 shows capex index growth (1995 = 100). By 2001, transport spending grew to 240, compared to 122 for non-transport and 160 overall.

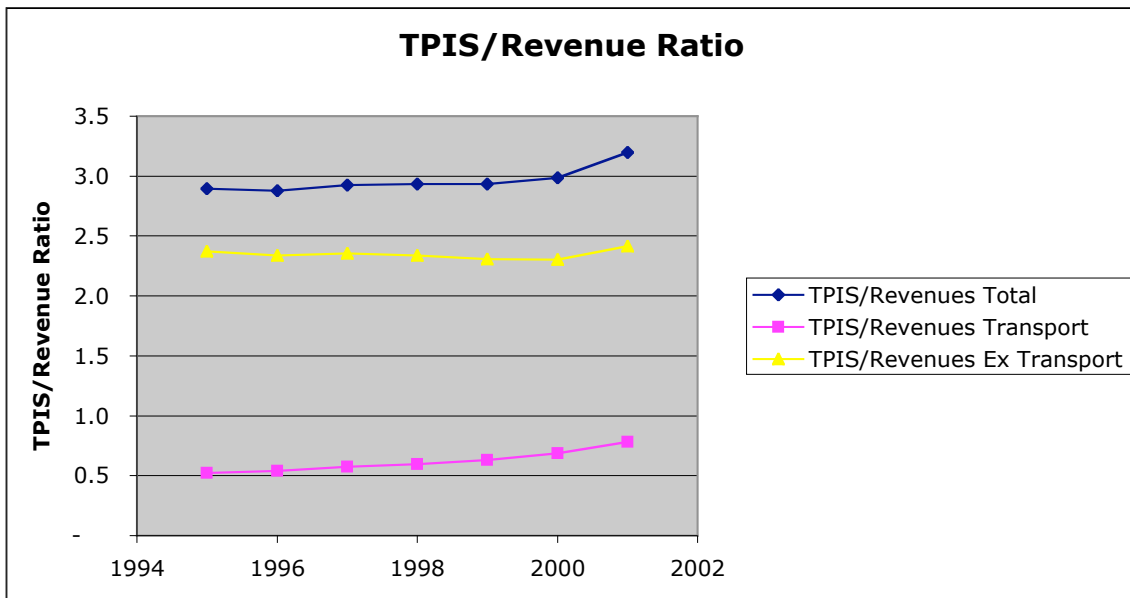
Exhibits 5-6 show TPIS/revenue and TPIS per access line trends for transport versus non-transport assets. Excluding transport, TPIS per dollar of revenue stayed roughly flat, while TPIS per access line dripped from \$1,367 to \$1,114.

**Exhibit 4: ILEC Capex Index (1995-100):
Transport Versus Non-Transport**



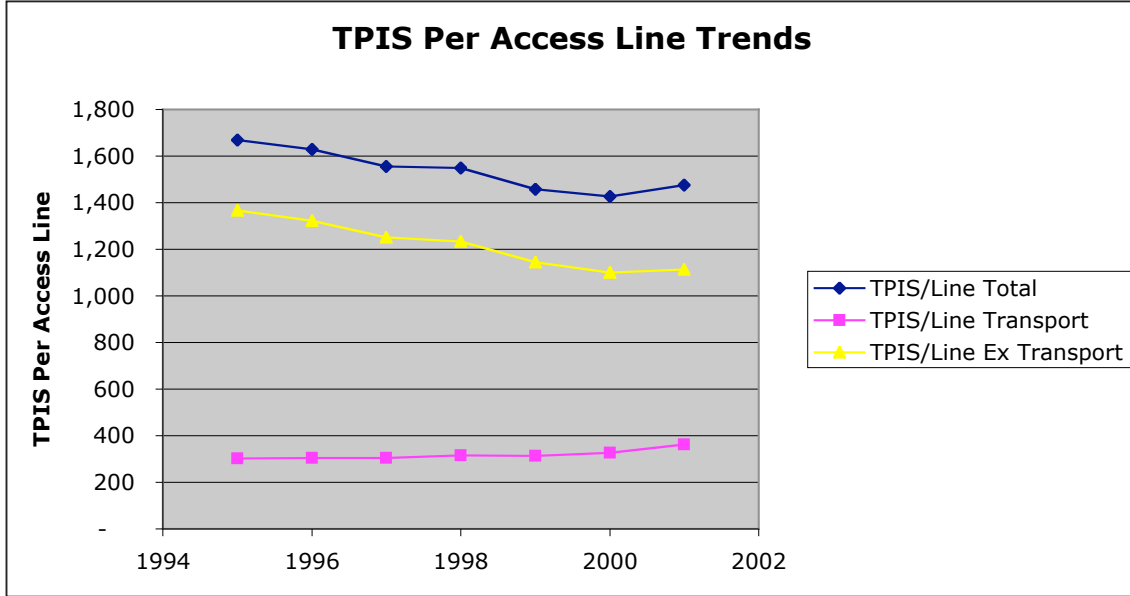
Source: FCC [Statistics of Communications Common Carriers](#), Signal Lake analysis

**Exhibit 5: ILEC TPIS/Revenue Trends:
Transport Versus Non-Transport**



Source: FCC [Statistics of Communications Common Carriers](#), Signal Lake analysis

**Exhibit 6: ILEC TPIS Per Line Trends:
Transport Versus Non-Transport**



Source: FCC Statistics of Communications Common Carriers, Signal Lake analysis

Conclusions

The above data suggest that even during an incredible run-up in overall telecom spending, ILECs at best spent on new plant at a rate consistent with overall customer growth but not faster than this. If we discount for the fact that a disproportionately high share of investment was spent on new fiber and WDM equipment to develop TCP/IP Internet networks, the residual investment in the rest of the ‘basic telephony’ plant was only at a rate equal to 70% of physical growth (with the 30% differential perhaps reflecting recent technology cost savings). The result is a plant with considerable transport power but limited next-generation edge functionality.

What does this say about ILEC disincentives to invest due to UNE TELRIC pricing rules? Clearly, the observable spending behavior is consistent with a desire to spend as little as possible and avoid investing in new technology (with the exception of transport). We grant that this behavior can be attributed to the basic conservatism of ILECs. However, we believe it also supports the importance of the issues we surfaced in “Why RBOCs Won’t Invest” as barriers to investment.

Last February 20, the FCC removed UNE requirements for RBOC broadband networks (although the written order as of July 22 still was not published). Within the past month, RBOCs have announced an RFP for a next-generation fiber to the premise infrastructure. It will be interesting to see if regulatory release results in a new surge of spending!