

1. Industry Revenues and Contributions

This section provides a general overview of the revenues of the U.S. telecommunications industry and the contributions to the universal service support mechanisms that are based on these revenues. The information for 1999 comes from worksheets containing first half 1999 revenue data that carriers filed with the administrator of the universal service support mechanism. By October 1999, the universal service database contained first half 1999 data for 2,354 contributing service providers. The data represent all carriers, although revenue data were estimated for some contributors due to late filings or inadequate filings and also for carriers that were not required to file a universal service worksheet. Over 1,000 carriers, however, were exempted from universal service filing requirements because their potential contributions to the universal service support mechanisms were expected to be "de minimis" - that is, their contribution for the year was expected to be less than \$10,000.

Table 1.1 shows carrier's carrier revenue and end-user revenue for 1998 and first half 1999 for six broad classes of carriers.

Universal service requirements include several mechanisms that help ensure that all Americans have access to affordable telecommunications service. In section 254(d) of the Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 *codified at* 47 U.S.C. §§ 151 *et seq.*, Congress mandated that "[e]very telecommunications carrier that provides interstate telecommunications services shall contribute, on an equitable and nondiscriminatory basis, to the specific, predictable, and sufficient mechanisms established by the Commission to preserve and advance universal service." The Commission adopted funding mechanisms in a Report and Order, FCC 97-157, CC Docket No. 96-45, 12 FCC Rcd 8776 (rel. May 8, 1997). The Commission subsequently selected the Universal Service Administrative Company (USAC) as the interim administrator. Carriers first filed Universal Service Worksheets on September 1, 1997, for the first half of 1997. Starting with the September 1999 filing, carriers were instructed to file the FCC Form 499 Telecommunications Reporting Worksheet instead of the FCC Form 457 Universal Service Worksheet. The April version of the Form 499 is similar to the Form 457. The September version, however, contains significantly less revenue information.

Table 1.2 shows how carrier revenue data and program requirements information were combined to determine the contribution factors used to bill carriers during 1998.

Revenue Data

Almost all telecommunications carriers are considered to be interstate service providers. Local telephone companies are classified as interstate service providers because they provide interstate access services. Similarly, competitive access providers, pay telephone operators, and cellular telephone companies derive revenue from providing access to interstate services and accordingly file worksheets. Virtually all pay telephone providers, interexchange carriers (IXCs), operator service providers (OSPs), and toll resellers provide interstate services. Special mobile radio (SMR) and private paging providers offer dispatch, paging, and some telephone services. At one time, SMRs were not regulated as carriers and did not have to contribute to the provision of TRS. SMRs were first required to file TRS

Worksheets in 1996. Private carriers are subject to universal service support mechanism contribution requirements but not to TRS contribution requirements.

Both the universal service and telecommunications reporting worksheets require each legal entity that provides interstate telecommunications service to file a separate worksheet. Several wireless carriers, however, received permission to make consolidated universal service filings in situations where they maintain separate legal entities because their spectrum licenses have different groups of owners, but where a single entity managed the combined operations.

In the universal service and telecommunications reporting worksheets, each filer is required to report total and interstate revenues in two broad categories: service provided to other universal service contributors for resale (carrier's carrier); and, service to de minimis carriers and end users (end user). In the April version of the form, Carriers must provide further breakdowns of local, wireless, and toll services as well as breakdowns for intrastate and interstate (including international) service. The September version of the form only requires the breakdowns for intrastate and interstate service. Universal service contributions to the universal service support mechanisms are based on a carrier's interstate and international end user revenues. One category of end user telecommunications revenue - toll calls that both originate and terminate outside of the United States, primarily call-back and World Direct type service -- is excluded from universal service contribution bases.

The Universal Service and TRS Worksheets require each filer to categorize itself using one of the following categories:¹

- Competitive Access Provider (CAP) or Competitive Local Exchange Carrier (CLEC)
- Cellular, Personal Communications Service (PCS) and Specialized Mobile Radio (SMR) Wireless Telephony Service Provider
- Incumbent Local Exchange Carrier (ILEC)
- Interexchange Carrier (IXC)
- Local Reseller
- Operator Service Provider (OSP)
- Other Local
- Other Mobile Service Carrier
- Other Toll Service Provider
- Paging and Messaging
- Pay Telephone Provider
- Private Service Provider
- Pre-paid Calling Card Provider
- Satellite Service Provider
- Shared Tenant Service Provider

¹ For detailed definitions of the categories and worksheet instructions, see *Telecommunications Industry Revenue: 1997* (FCC CCB Industry Analysis Division, released October 8, 1998).

- Special Mobile Radio - Dispatch
- Toll Reseller
- Wireless Data Service Provider

Table 1.1 summarizes total industry revenue and shows detail for six broad groups of carriers. Carriers reported \$23.8 billion of carrier's carrier revenue and \$102.7 billion of end user revenue for the first half of 1999. \$39.0 billion of the end user revenue was identified as interstate, which includes domestic interstate calls as well as international calls, but excludes calls that both originate and terminate in foreign points.

Carriers were instructed to report the amounts actually billed to customers. This means that carriers should report revenue net of discounts, but without making any adjustments to reflect uncollectible revenue or international settlement payments. Most filers should be able to report revenue in this manner using information contained in their corporate books of account. Some filers, however, have no business or regulatory requirements to record intrastate revenues separately from interstate revenues or to use the detailed revenue categories contained in the worksheets. Therefore, breakdowns are likely to be less accurate than industry totals.

The universal service and TRS rules prohibit the fund administrators from releasing information contained in the worksheets. Worksheet revenue data for individual carriers are not available to the public.

Program Requirements and Contribution Factors

Once the Universal Service Administrator collects and tabulates end user revenue data, the Commission reviews program requirements and determines the contribution factors. Carriers file first half revenue on September 1. This information is used to determine contributions for the first two quarters of the following year. Carriers then file whole year data on the following March 31. First half-year data are then subtracted from the whole-year data, and the result – estimated second half revenue data -- is used to bill contributions to be made in the third and fourth quarters. On a quarterly basis, the Commission releases a public notice stating the proposed contribution factors for the upcoming quarter. If, after 14 days, the Commission takes no action regarding the proposed contribution factors, the factors become final.

Using revenue data that carriers filed on September 1, 1998, the Commission, on December 14, 1998, released approved contribution factors to be used to determine carrier contributions for the first quarter of calendar 1999.² On March 4, 1999, the Commission issued contribution factors for the second quarter 1999. Each of the Public Notices released two factors, one for the schools and libraries and rural health care support mechanism, and one for the high cost and the low-income support

² Public Notice, First Quarter 1999 Universal Service Contribution Factors and Proposed Actions, CC Docket No: 96-45; FCC 98-318.

mechanism.

The factors for the Schools and Libraries program are listed in table 1.2. The first quarter 1999 factor was 0.0058, and the second quarter factor was .0059. Carrier contributions to these support mechanisms for the first quarter of 1999 were determined by multiplying the factor times one quarter of their end user 1998 revenue. For instance, a carrier's first quarter contribution would be calculated by multiplying 0.0058 times one half of total end user revenue from intrastate, interstate and international telecommunications services billed in the first half of 1998.

The factors for the Low-Income support mechanism are also in Table 1.2. The first quarter 1999 factor was which was 0.0318, and the second quarter factor was .0305. Carrier contributions to these support mechanisms for the first quarter of 1999 were determined by multiplying the factor times one quarter of their end user 1998 revenue. For instance, a carrier's first quarter contribution would be calculated by multiplying .0318 times one half of total end user revenue from interstate and international telecommunications services billed in the first half of 1998.

As mentioned above, revenue information from the September 1 filings was also used as the basis for determining contributions for the second calendar quarter of 1998. On March 31, 1999, carriers filed revenue data for whole calendar year 1998. The Universal Service administrator determined second half 1998 revenues for each carrier by subtracting the carrier's first half revenues contained in its September 1, 1998, filing from the carrier's whole year revenues contained in its March 31, 1999 filing. Second half 1998 data were used as the basis for contributions billed in the third and fourth calendar quarters of 1999.

Using data from the March 31, 1999 filing, the Commission established contribution factors for both mechanisms for the third quarter 1999.³ The Schools and Libraries factor was .0099, and the High Cost and Low Income factor was .0294.

On July 30, 1999, a three-judge panel of the United States Court of Appeals for the Fifth Circuit issued an opinion that reversed the Commission's determination of Universal Service contributions. Contributions could no longer be based on the intrastate revenues of universal service contributors, and some international revenues were to be treated differently.

On September 9, 1999, the Commission motioned the Court for a stay of the mandate, which, in part, asked the Court to stay application of its mandate until the first quarter of 2000. This motion allowed the Commission to release fourth quarter contribution factors that were based the Commission's earlier interpretation of the rules.⁴ The court's ruling, released on September 28,

³ Public Notice, proposed Third Quarter 1999 Universal Service Contribution Factors. CC Docket No. 96-45.

⁴ Thus, the Schools and Libraries contribution factor was multiplied by intrastate, interstate and international end-user revenue.

mandated that the Commission not apply the existing fourth-quarter contribution factors on or after November 1, 1999. Thus, the September 28 ruling forced the Commission to issue new contribution factors for the months of November and December.

Because of the court decision, all of the Universal Service Mechanisms are now based on interstate end-user revenue. Interstate end-user revenue includes most international service end-user revenue. Excluded are revenue from calls that both originate and terminate in foreign points, and international revenue from carriers whose interstate end-user revenue represents 8% or less of their combined interstate and international end-user revenue. Accordingly, on October 8, 1999, the Commission adopted a single contribution factor for all programs, to be applied for November and December.⁵ The consolidated factor was .058995. Monthly contributions for November and December are calculated as this factor times 1/6 times the carrier's contribution base.

Table 1.2 also shows the contribution base and program requirement information used to calculate the fund factors for 1999 and the first half of 2000. If all carriers provided correct data on the filing dates, end user revenue totals would be the same for the first two and last two quarters of the year. The revenue totals changed over time because of late filings and corrections. The Commission reduces the amounts in the contribution bases by 1% to reflect the fact that some contributions will prove uncollectible.

Table 1.2 shows the actual amounts billed for contributions in each quarter. Actual billings for the second, third and fourth quarters of 1999 were unavailable from USAC. Actual billings reflect the actual amounts billed carriers during the quarter and include some prior quarter obligations where there have been late filings and corrected filings. Actual collections vary from the amounts shown in the table due to late payments, carrier bankruptcies, and interest charged on late payments.

Table 1.2 shows separate lines for refunds and periodic true-ups. Refunds are shown as negative billed contributions. The Commission modified the de minimis threshold in 1998. The decision was released before the Universal Service administrator sent bills for contributions, so only those carriers with projected contributions of \$10,000 or more, for the year, received a bill. Some companies, however, filed revised worksheets that changed their contribution base such that they did qualify for the de minimis exemption. These companies have been issued refunds. Other companies did not pass the de minimis test contained in the worksheet but will be billed less than \$10,000 in 1998, given the actual contribution factors that have been authorized. Refunds for these carriers are shown starting with the fourth quarter of 1998.

Finally, Table 1.2 shows outlays actually approved during the quarter, by program. These figures do not include actual administrative expense, just projected administrative expenses. Actual administration expense data are unavailable from USAC. Also, the data in the table show projected

⁵ Proposed Fourth Quarter 1999 Universal Service Contribution Factor for November and December 1999. CC Docket No. 96-45; DA 99-2109.

interest received, not actual interest received. Approved outlays are not the same as actual disbursements. For the Schools & Libraries program, disbursements can lag approvals.

Table 1.1: Telecommunications Revenue Reported by Type of Carrier
(Amounts shown in millions)

	1998		First Half 1999	
	Carrier's Carrier Revenue	End-user Revenue *	Carrier's Carrier Revenue	End-user Revenue *
ILECs				
Intrastate	\$11,661	\$67,956	\$5,814	\$34,204
interstate	\$16,291	\$11,806	\$8,563	\$6,455
Total	\$27,952	\$79,762	\$14,377	\$40,660
CLECs & other local competitors				
Intrastate	\$1,014	\$1,330	\$438	\$1,156
interstate	\$519	\$1,121	\$450	\$726
Total	\$1,533	\$2,451	\$888	\$1,882
Pay telephone				
Intrastate	\$87	\$799	\$85	\$323
interstate	\$69	\$85	\$37	\$45
Total	\$156	\$884	\$122	\$368
Wireless Telephony				
Intrastate	\$2,370	\$27,023	\$1,445	\$15,567
interstate	\$277	\$3,327	\$223	\$2,163
Total	\$2,647	\$30,350	\$1,667	\$17,730
Other Wireless				
Intrastate	\$500	\$2,697	\$195	\$1,285
interstate	\$86	\$526	\$42	\$241
Total	\$586	\$3,223	\$237	\$1,526
Toll Carrier				
Intrastate	\$3,155	\$22,733	\$1,467	\$11,219
interstate	\$9,474	\$58,048	\$5,035	\$29,359
Total	\$12,630	\$80,781	\$6,502	\$40,577
All Carriers				
Intrastate	\$18,788	\$122,538	\$9,444	\$63,753
interstate	\$26,715	\$74,914	\$14,349	\$38,990
Total	\$45,503	\$197,452	\$23,793	\$102,743

* Universal service contributions are based on interstate end-user revenue excluding revenue from international-to-international calls.

Table 1.2: Universal Service Program Requirements and Fund Factors

(Amounts shown in millions)

	1998				year
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
High Cost and Low Income Support Mechanisms	Based on first half 1997 Revenue		Based on second half 1997 Revenue		
Interstate and international end user revenues					
Reported contribution base revenues	\$35,001	\$35,303	\$34,719	\$34,228	
Adjustment for uncollectibles				1.0%	
Contribution base at the time the factor was calculated	\$35,001	\$35,303	\$34,719	\$33,885	
Projections of demand and administration expenses at the time the fund factors were adopted					
High Cost					
Program demand	\$434.0	\$431.1	\$414.1	\$422.5	
Administrative	\$1.1	\$0.9	\$0.8	\$1.9	
Interest income	(\$1.0)	(\$0.9)	(\$0.7)	(\$0.7)	
Periodic True-ups					
Total	\$434.1	\$431.1	\$414.2	\$423.7	
Low Income					
Program demand	\$125.0	\$122.3	\$125.3	\$116.4	
Administrative	\$0.6	\$0.4	\$0.4	\$0.3	
Interest income	(\$0.3)	(\$0.3)	(\$1.0)	(\$1.0)	
Periodic True-ups					
Total	\$125.3	\$122.4	\$124.7	\$115.8	
Total High Cost and Low Income	\$559.4	\$553.5	\$538.9	\$539.4	\$2,191.2
Contribution factor	0.0319	0.0314	0.0314	0.0318	
Contribution factor times 1/2 of contribution base	\$558.3	\$554.3	\$545.1	\$538.8	\$2,196.4
Actual contribution amounts billed to carriers during quarter					
High Cost	\$438.7	\$433.1	\$409.1	\$417.9	
Low Income	\$126.6	\$123.0	\$123.2	\$114.1	
Refunds and adjustments to reflect contributor bankruptcy	\$0.0	\$0.0	(\$0.9)	(\$1.2)	
Total	\$565.3	\$556.1	\$531.4	\$530.8	\$2,183.6
Actual requirements approved for payment					
High Cost	\$420.4	\$422.8	\$426.9	\$426.9	
Low Income	\$105.2	\$112.8	\$118.0	\$135.5	
Total	\$525.6	\$535.6	\$544.9	\$562.4	\$2,168.5

Table 1.2: Universal Service Program Requirements and Fund Factors (continued)

(Amounts shown in millions)

	1998				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	year
Schools, Libraries & Rural Health Support Mechanisms	Based on first half 1997 Revenue		Based on second half 1997 Revenue		
Local, Interstate and International End User Revenue					
Reported contribution base revenues	\$89,827	\$92,186	\$94,066	\$94,482	
Adjustment for uncollectibles				1.0%	
Contribution base at the time the factor was calculated	\$89,827	\$92,186	\$94,066	\$93,537	
Projections of demand and administration expenses at the time the fund factors were adopted					
Schools & Libraries					
Program demand	\$299.3	\$322.4	\$690.0	\$320.1	
Administrative	\$2.7	\$4.4	\$4.4	\$4.9	
Interest income	(\$2.0)	(\$1.8)	\$0.0	\$0.0	
<u>Periodic True-ups</u>					
Total **	\$300.0	\$325.0	\$325.0	\$325.0	
Rural Health					
Program demand	\$23.0	\$23.2	\$24.3	\$24.3	
Administrative	\$2.2	\$1.9	\$1.2	\$1.5	
Interest income	(\$0.2)	(\$0.1)	(\$0.5)	(\$0.8)	
<u>Periodic True-ups</u>					
Total **	\$25.0	\$25.0	\$25.0	\$25.0	
Total Schools & Libraries, and Rural Health Care	\$325.0	\$350.0	\$350.0	\$350.0	\$1,375.0
Contribution factor	0.0072	0.0076	0.0075	0.0075	
Contribution factor times 1/2 of contribution base	\$323.4	\$350.3	\$352.8	\$350.8	\$1,377.2
Actual contribution amounts billed to carriers during quarter					
Schools & Libraries	\$306.8	\$325.7	\$326.6	\$323.6	
Rural Health	\$25.6	\$25.1	\$25.1	\$24.9	
Refunds and adjustments to reflect contributor bankruptcy	\$0.0	\$0.0	(\$0.3)	(\$0.9)	
Total	\$332.4	\$350.8	\$351.4	\$347.5	\$1,382.1
Actual requirements approved for payment					
Schools & Libraries	\$0.0	\$0.0	\$0.0	\$0.0	
Rural Health	\$0.0	\$0.0	\$0.0	\$0.0	
Total	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

See notes at end of table.

Table 1.2: Universal Service Program Requirements and Fund Factors (continued)

(Amounts shown in millions)

	1999				year
	First Quarter	Second * Quarter	Third Quarter	Fourth Quarter	
High Cost and Low Income Support Mechanisms	Based on first half 1998 Revenue		Based on second half 1998 Revenue		
Interstate and international end user revenues					
Reported contribution base revenues	\$37,062	\$36,979	\$38,366	\$38,204	
Adjustment for uncollectibles	1.0%	1.0%	1.0%	1.0%	
Contribution base at the time the factor was calculated	\$36,691	\$36,609	\$37,982	\$37,822	
Projections of demand and administration expenses at the time the fund factors were adopted					
High Cost					
Program demand	\$439.1	\$433.3	\$432.8	\$432.2	
Administrative	\$2.2	\$1.1	\$1.2	\$1.4	
Interest income	(\$0.9)	(\$0.6)	(\$0.5)	(\$0.6)	
<u>Periodic True-ups</u>		\$5.4	(\$1.2)	\$0.7	
Total	\$440.4	\$439.2	\$432.3	\$433.7	
Low Income					
Program demand	\$144.0	\$124.8	\$122.7	\$122.3	
Administrative	\$0.5	\$0.5	\$0.5	\$0.2	
Interest income	(\$0.7)	(\$0.8)	(\$0.8)	(\$0.8)	
<u>Periodic True-ups</u>		(\$5.0)	\$2.8	(\$9.4)	
Total	\$143.8	\$119.5	\$125.2	\$112.4	
Total High Cost and Low Income	\$584.2	\$558.7	\$557.5	\$546.1	\$2,246.5
Contribution factor	0.0318	0.0305	0.0294	0.02887	October only
Contribution factor times 1/2 of contribution base	\$583.4	\$558.3	\$558.4	\$182.0	
Actual contribution amounts billed to carriers during quarter					
High Cost	\$444.3	\$444.3	Data not yet available		
Low Income	\$145.1	\$120.9			
<u>Refunds and adjustments to reflect contributor bankruptcy</u>	(\$3.6)	(\$2.6)			
Total	\$585.7	\$562.5			
Actual requirements approved for payment		preliminary			
High Cost	\$431.0	\$296.5	Data not yet available		
Low Income	\$119.7	\$80.2			
Total	\$550.7	\$376.7			

Table 1.2: Universal Service Program Requirements and Fund Factors (continued)

(Amounts shown in millions)

	1999				year
	First Quarter	Second * Quarter	Third Quarter	Fourth Quarter	
Schools, Libraries & Rural Health Support Mechanisms	Based on first half 1998 Revenue		Based on second half 1998 Revenue		
Local, Interstate and International End User Revenue					
Reported contribution base revenues	\$98,510	\$98,672	\$100,947	\$101,214	
Adjustment for uncollectibles	1.0%	1.0%	1.0%	1.0%	
Contribution base at the time the factor was calculated	\$97,525	\$97,685	\$99,938	\$100,202	
Projections of demand and administration expenses at the time the fund factors were adopted					
Schools & Libraries					
Program demand	\$319.9	\$318.2	\$555.7	\$562.5	
Administrative	\$10.2	\$6.8	\$6.8	\$7.1	
Interest income	(\$5.1)	(\$35.4)	(\$8.0)	(\$2.7)	
<u>Periodic True-ups</u>		(\$5.8)	(\$14.8)	(\$10.7)	
Total **	\$325.0	\$283.8	\$539.7	\$556.2	
Rural Health					
Program demand	\$0.0	\$0.0	\$0.0	\$3.3	
Administrative	\$0.0	\$0.0	\$0.0	\$0.8	
Interest income	\$0.0	(\$3.3)	(\$0.4)	(\$0.0)	
<u>Periodic True-ups</u>		(\$0.5)	(\$0.3)	\$0.1	
Total **	\$0.0	(\$3.8)	(\$0.7)	\$4.2	
Total Schools & Libraries, and Rural Health Care	\$325.0	\$280.0	\$539.0	\$560.3	\$1,704.3
Contribution factor	0.0058	0.0057	0.0099	0.0110	October only
Contribution factor times 1/2 of contribution base	\$282.8	\$278.4	\$494.7	\$183.7	
Actual contribution amounts billed to carriers during quarter					
Schools & Libraries	\$287.8	\$279.9	Data not yet available		
Rural Health	\$0.1	\$0.0			
<u>Refunds and adjustments to reflect contributor bankruptcy</u>	(\$1.2)	(\$2.1)			
Total	\$286.7	\$277.8			
Actual requirements approved for payment		preliminary			
Schools & Libraries	\$114.5	\$368.0	Data not yet available		
Rural Health	\$0.0	\$0.0			
Total	\$114.5	\$368.0			
Contribution for Universal Service Support Mechanisms					
Interstate and international end user revenues					
Reported contribution base revenues				\$38,204	
Adjustment for uncollectibles				1.0%	
Contribution base at the time the factor was calculated				\$37,822	
Combined Contribution Factor				November & December	
Contribution factor times 1/2 of contribution base				0.058995	
Contribution factor times 1/2 of contribution base				\$743.8	
Actual contribution amounts billed to carriers during quarter					
Schools & Libraries, Rural Health, Low Income & High Cost			Data not yet available		
<u>Refunds and adjustments to reflect contributor bankruptcy</u>					
Total					

* Billings shown for second quarter represent projected billings. Actual requirements approved for payment shown for the second quarter represent actual amounts through June 11.

** In some cases the total represents a capped amount rather than the sum of the projected requirements.