VERIZON

COST FACTORS AND LOADINGS MANUAL

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I. Introduction

Verizon utilizes capital and property tax factors, expense factors and expense loadings in its cost studies to estimate recurring and non-recurring costs associated with specific services. In service cost studies, factors and loadings are applied to cost objects to calculate or assign different kinds of expenses associated with the objects. The factors and loadings may be categorized according to their cost object – investment, expense, or revenue.

A. EXPENSE TO INVESTMENT FACTORS

Expense to investment (E/I) factors, applied to investment cost, are ratios that represent relationships between expenses and investments. Verizon calculates the following E/I factors:

- Capital factors - ratios that represent the relationship between capital expenses (depreciation, income tax and return on invested capital) and investments. See section IV. A. for a discussion of capital factor development.
- Property tax factors - ratios that represent the relationship between property tax expenses and the investments to which the tax applies. Property tax factors are not calculated in VzCost. Verizon's capital asset department provides the property tax factors to be used in cost studies.
- Direct and shared network expense factors - ratios that represent the relationship between certain operating expenses and plant investments. Direct expenses include plant maintenance, repair, moves and rearrangements. Support expenses include engineering and network administration expense and maintenance and carrying costs on land and building and other support investments.

  Direct (FI) network factor =

$$\frac{\text{forward looking investment specific maintenance and repair expense}}{\text{forward looking plant investment}}$$

  Shared (S) network factor =

$$\frac{\text{forward looking shared plant expense}}{\text{forward looking plant investment}}$$

  The application of direct network expense factors yields costs that follow investments (FI). The cost is categorized direct or shared when the investments is direct or shared, respectively.

- Right-to-use factors - ratios that represent the relationship between amortized network software expenses and switching or transmission investments.

  Right-to-use factor =

$$\frac{\text{amortized right to use software expense}}{\text{forward looking circuit and switch plant investment}}$$

B. EXPENSE TO EXPENSE LOADINGS

Expense to expense (E/E) loadings, applied to expense, are developed in order to spread expenses that are not attributed to any single network investment, product or service to investment-specific or labor-related expenses. Verizon calculates the following E/E loadings:

- Marketing loading - a ratio that represents the relationship between marketing expenses (product management, sales, customer services, customer billing and product advertising) and investment-driven expenses.

  Marketing loading =

$$\frac{\text{forward looking marketing expense}}{\text{total forward looking company expense without nonrecurring, marketing, marketing support and common expenses}}$$

- Marketing support loading - a ratio that represents the relationship between marketing support expenses (shared land and buildings, information management, furniture/office equipment and other support equipment associated with marketing functions) and investment driven and marketing costs.

  Marketing support loading =

$$\frac{\text{forward looking marketing support expense}}{\text{total forward looking company expense without non - recurring, marketing, and common expenses}}$$

- Common overhead (COH) loading - a ratio that represents the relationship between common expenses (such as executive, planning, general accounting and finance, external relations, human resources, legal and regulatory) and total company costs (excluding common).

  Common overhead loading =

$$\frac{\text{forward looking common overhead expense}}{\text{total forward looking company expense without common expenses}}$$

C. EXPENSE TO REVENUE LOADINGS

- The gross revenue loading (GRL) is an expense to revenue (E/R) loading developed in order to spread revenue-driven expenses (gross receipts taxes, regulatory assessment fees and uncollectible expenses) to total revenue.

  Gross revenue loading =

$$\frac{\text{gross receipts taxes (if applicable)} + \text{regulatory assessment fees} + \text{uncollectible expense}}{\text{revenue}}$$

II. Use of Factors and Loadings in Cost Studies

In general, all factors and loadings are applied to cost objects in recurring cost studies; only the common overhead loading and the gross revenue loading are applied in non-recurring cost studies.

Charts 1 and 2 show how the factors and loadings are generally applied in Verizon's recurring and non-recurring cost studies. The cost attributed to each factor and loading can be separately identified. Not all costs are necessarily included in every Verizon cost study.

Chart 1

Application of Expense Factors & Loadings in Recurring Cost Studies

- Total Installed Investment x **(1 + *Capital and Property Tax Factors + Network Expense Factors + RTU Factors*)** = Unit Cost $(UC)_{1\ w/o\ Expense\ Loadings}$ (where Total Installed Investment = modeled investment including installation costs)
- UC_1 x (1+**Marketing Loading)** = $UC_{2\ w/Marketing}$
- UC_2 x (1+**Marketing Support Loading)** = $UC_{3\ w/Mktg\ +\ Mktg\ Supt}$
- UC_3 x (1+**COH Loading)** = $UC_{4\ w/Mktg+Supt+Common}$
- UC_4 x (1+(**GRL/(1-GRL))**) = $\mathbf{UC_{5\ Total\ Unit\ Cost}}$
- UC_5 / 12 = Recurring Monthly Unit Cost

Chart 2

Application of Expense Factors & Loadings in Non-recurring Cost Studies

- Labor-Related Product Setup Costs x (1+(**GRL/(1-GRL))**) = NRC_1
- NRC_1 x (1+**COH Loading)** = Total Non-recurring Cost

III. Development of Factors and Loadings – Overview

A. WITHIN VZCOST

The capital, network expense and RTU factors, and the marketing, marketing support and common overhead loadings are developed in VzCost, Verizon's cost modeling platform. The VzCost model develops these factors and loadings and then applies them to either investment, investment-driven expenses or labor costs in the cost studies.

VzCost contains different domains that perform the various functions involved in cost studies. The domains involved in factor development are Data, Capital, and Expenses.

The data domain stores sets of data inputs that are used to calculate the factors and loadings. (It also stores the calculated factors and loadings which are then used as inputs to develop product costs in a different VzCost domain.) The Data domain contains data tables, each with specific data such as booked expense or adjustments to booked expense. Each data table contains item keys. Data inputs associated with the item keys are loaded into VzCost or generated by the factor runs. Each data table may contain multiple sets of data, each assigned a unique version name.

The capital factors are developed in the capital domain; the expense factors and loadings (network, RTU, marketing, marketing support and common overhead) are calculated in the expense domain. Each domain contains factor templates and factor runs. A factor template is a user-defined set of calculations and a list of data sources used to calculate factors and loadings.

A factor run calculates capital or expense factors by joining formulas contained in an associated capital or expense factor template with specific assumptions and data input versions.

B. OUTSIDE OF VZCOST

The property tax factor and the GRL are developed in special studies outside VzCost and loaded into VzCost data tables for use as inputs in cost studies.

IV. Factor and Loading Methodology

A. CAPITAL FACTOR METHODOLOGY

Verizon calculates three capital factor components:

- Depreciation – Straight-line depreciation as defined by Generally Accepted Accounting Principles (GAAP) .

- Return - Includes both return to debt and return to equity on investor supplied capital. The initial investment less the book depreciation and the deferred taxes for any period becomes the investor supplied capital, or the amount that Verizon needs to obtain from creditors and/or from stockholders. Return reflects bondholders' and stockholders' demands for a return on their investment compensatory for their risk.
- Income Tax – Includes income tax on the return to equity.

The steps used to calculate the capital factors within VzCost are as follows:

1. Load Input Data Tables

a) Cost of Money

Inputs to the *Cost_of_Money* data table include Verizon's rate of return on debt, rate of return on equity and debt/equity mix. The values are represented by the *Cost_of_Debt*, *Cost_of_Equity* and *Debt_Ratio* item keys, respectively. Cost of money inputs are provided by Verizon's Treasury Department.

b) Future Net Salvage

Data is loaded into the *Future_Net_Salvage* data table at the six digit account level for accounts 211100 through 269020 with the *FNS* item key. Each investment account receives a value representing the percent of investment value remaining at the end of the investment's useful life. Investment future net salvage values are supplied by Verizon's Capital Asset Department.

c) MACRS Recovery

The Modified Accelerated Cost Recovery System (MACRS) is the current method of accelerated asset depreciation permitted by the United States income tax code. Using MACRS for income taxes affects the return and income tax components of Verizon's capital factors. Under MACRS, all assets are divided into classes which dictate the number of years over which an asset's cost will be recovered for tax purposes.

Data is loaded into the *Macrs_Recovery* data table at the six digit account level for accounts 211100 through 269020 with the *MACRS* item key. Each investment account receives a value representing the MACRS depreciable life.

d) MACRS Rate

The *Macrs_Rate* table includes MACRS depreciation rates using the mid-year convention and the double declining-balance method. The

item keys *Item_Key*, *Year* and *Value* represent the MACRS recovery period, the depreciation year and the depreciation rate, respectively.

e) Service Life

Data is loaded into the *Service_Life* data table at the six digit account level for accounts 211100 through 269020 with the *Asset_Life* item key. Each investment account receives a value representing its useful economic life. Investment service lives are supplied by Verizon's Capital Asset Department.

f) Tax Rates

The *Tax_Rates* table includes federal and state income tax rates. The item keys *Fed_Inc_Tax* and *State_Inc_Tax* represent Verizon's effective federal and state income tax rates, respectively. Income tax rates are supplied by Verizon's Tax Department.

Table 1 – Capital Factor Data Table Inputs

VzCost Table Name	VzCost Item Keys	Data Source
Cost_of_Money	Cost_of_Debt Cost_of_Equity Debt_Ratio	Verizon Corporate Services-Treasury Department
Future_Net_Salvage	FNS	Verizon Capital Asset Accounting and Recovery Department
MACRS_Rate	Item_Key Year Value	Verizon Tax Department
MACRS_Recovery	MACRS	Verizon Tax Department
Service_Life	Asset_Life	Verizon Capital Asset Accounting and Recovery Department
Tax_Rates	Fed_Inc_Tax State_Inc_Tax	Verizon Tax Department

2. Create Capital Factor Template

A capital factor template is a user-defined set of calculations on the input data described above.

The capital factor template contains the formulas that determine the capital factors. For each investment and for each period in the investment's useful life, the template calculates book depreciation, return on investment and income tax amounts. Next, the present value of each periodic value is calculated and summed over the periods. Finally, an annuity from each of the total present value totals is calculated to levelize the factor over the investment's useful life. For a more detailed explanation of the capital cost calculations performed within VzCost, see the Excel workbook labeled "Capital Factor Cost Exhibit" for a process flow diagram and "Accompanying Notes" tab that explains the capital process.

3. Create and Execute Capital Factor Run

A capital factor run calculates capital or expense factors by joining a capital factor template (a set of mathematical formulas) to specific inputs (data tables).

B. PROPERTY TAX FACTOR METHODOLOGY

Data is loaded into the *Property_Taxes* data table for accounts 211100 through 269020 with the *Property_Tax* item key. Each investment account receives a value representing its effective annual property tax factor. Verizon's Tax Department provides the applicable property tax factor for each plant account.

C. EXPENSE FACTOR AND LOADING METHODOLOGY

In general, Verizon develops the network expense and RTU factors, and the marketing, marketing support and common overhead loadings using four basic steps:

1. Verizon loads annual expense and investment data into VzCost. The most recent annual data available in Verizon's financial ledgers are used; this is called "base-year" data. Data for the jurisdiction being studied are loaded by account.
2. Verizon calculates adjustments to the base-year expense and investment data. Generally the adjustments, when applied to the base-year expenses and investments, make the data appropriate for use in forward-looking cost studies. The adjustments are calculated in Excel spreadsheets and loaded into VzCost data tables so that they may be used as inputs for the factor runs.
3. Verizon uses a "cost pool" methodology to assign investments and expenses to network elements. Verizon develops special studies to map expense and investment account data to cost pools and loads the mapping assignments to VzCost data tables for use in the factor runs. Cost pools may be network-related, marketing-related, or common in nature. The network cost pools are based on the different types of

network investment, such as aerial copper cable, buried fiber cable, switch, or transmission equipment. Expense and investment data that have been assigned to network cost pools are used to calculate the network E/I factors. Marketing expenses and support costs for the marketing departments are assigned to the marketing cost pool and are used to calculate the marketing and marketing support E/E loadings. Common expenses such as executive, human resources and legal are assigned to the common cost pool and are used to calculate the common overhead E/E loading.

4. The expense factor run calculates the factors and loadings using the factor template and specific data inputs (e.g., base-year expense and investment, adjustments, and cost pool assignments).

The process is described in greater detail below.

1. Process Investments

a) Input base-year investment data into VzCost data tables.

Data is loaded into the *Booked_Investments* data table at the six digit account level for accounts 211100 through 269020. Accounts 221100 through 244100 represent network facility investment (also called revenue-producing or simply network investment) such as digital switches, circuit equipment, or cable. For these network accounts, Verizon's investment teams model the forward-looking network according to long-run incremental cost (LRIC) principles; these values are input into the *Booked_Investments* data table under the item key *FL_Investments* (forward-looking investments). Accounts 21xxxx and 26xxxx represent general support facility investment (also called support or non-network investment) such as land, buildings, general purpose computers, and vehicles. For these support investment accounts, Verizon loads annual investments from its financial records under the item key *Booked_Investments*.

Account 2690XX contains costs associated with intangible software assets. Three sub-accounts are used in VzCost to account for different amortization periods. Verizon amortizes non-network software over 7 or 5 years if the software is internally developed or purchased, respectively. Switch network software is amortized over 3 years; all other network software is amortized over 5 years.

b) Calibrate investments

As mentioned above, base-year data is adjusted to make it appropriate for use in forward-looking cost studies. For non-network (i.e., support) investments, this means that Verizon calibrates the data so that it approximates the investment that would be found in a forward-

looking network (that is, the network that theoretically will be in place during the cost study period). Unlike network investments, support investments are not modeled; therefore the base-year investments need to be adjusted to make them appropriate for use to calculate forward-looking factors. Verizon uses the Current Cost to Booked Cost (CC/BC) ratio to perform this calibration. The CC/BC ratios are based on the C.A. Turner Telephone Plant Indices at the time the asset was placed in service.

Investment calibration values are loaded into the VzCost *Investment_Calibration_Indices* data table for the item key *FL_Calibration*.

Network Investments: Because Verizon loads forward-looking modeled investments into the *Booked_Investment* data table they require no calibration.

c) Apply investment adjustments

Investments are further adjusted before being used in the factor calculations. Each adjustment is specific to an investment account and is developed as a percentage of the total booked investment account. Investment adjustment percents are developed outside of VzCost with special studies. Investment adjustments are loaded into the VzCost *Investment_Adjust* data table.

(1) Technology Adjustment:

Verizon eliminates investment accounts from the factor calculation if the associated technology is obsolete and therefore not a part of the forward-looking network. Examples include accounts 2211 (analog switching) and 2231 (radio systems). A value of 0 is loaded into the VzCost *Investment_Adjust* data table under the item key *Technology_Adjust* for any investment account that is obsolete; a value of 1 is loaded for all other investment accounts.

(2) Revenue-Producing or Support

Additional entries in the *Investment_Adjust* table designate an investment as either revenue-producing (i.e., network, plant) or support. The factor template treats the carrying cost of network and support investments values differently.

The carrying costs of support investments become a component of adjusted forward-looking expense and part of the numerator

of either an E/I or E/E factor depending on the cost pool to which the carrying cost is assigned.

The carrying costs of network investments are not a component of expenses (numerator) in any E/E or E/I factor. This is because the cost analysts calculate the carrying costs of network investments in their cost study. However, the carrying costs of network investments are included in total company costs when calculating the denominators of the E/E loadings.

Values are loaded to the *Investment_Adjust* data table under the *Revenue_Producing_Investment_Adjust* and the *Support_Investment_Adjust* item keys for each investment account. For each investment account a value is loaded identifying the portion of the account that is revenue-producing or support. In most cases, investments are either 100% revenue-producing (and 0% support) or 100% support (and 0% revenue producing). The exceptions are accounts 221200 (digital switching) and 223200 (circuit equipment).

(a) Account 221200

In former Bell Atlantic jurisdictions, account 221200 contains digital switch equipment investment which is considered 100% revenue-producing. In former GTE, account 221200 contains not only digital switch equipment but also computer terminals supporting central office operations. Therefore the general purpose computer portion of account 221200 is designated support and the remainder revenue-producing for former GTE jurisdictions. The support portion is developed in a special study from detailed accounting data.

(b) Account 223200

Account 223200 contains not only revenue-producing circuit equipment, but also circuit testing equipment that is considered support investment. A special study develops the portion of the account designated support; the remainder is revenue-producing.

d) Assign revenue-producing investments to investment cost pools

The investment cost pool table is used to assign investments to network cost pools (e.g., aerial copper, poles, switch) to calculate the denominator in E/I factors. Verizon loads mapping assignments to the *Invest_Cost_Pool_Map* table for each revenue-producing investment account. In most cases investment accounts are assigned

100% to a single cost pool. For example, account 241100, pole investment, is assigned 100% to the pole cost pool and is used as the denominator of the pole E/I factor. There are two exceptions.

(1) Switch RTU and Transmission RTU Investment Cost Pools

Collocation-specific switch and circuit investments are removed from the denominator of RTU E/I factors because collocators do not use Verizon's RTU software. A special study determines the percent of non-collocation investments in accounts 2212 and 2232. These percents are loaded to the Switch RTU and Transmission RTU cost pools in the *Invest_Cost_Pool_Map* data table.

(2) EEL Testing Cost Pool

An Enhanced Extended Loop (EEL) testing E/I factor is calculated for use in cost studies when the competitive local exchange carrier (CLEC) uses Verizon for its end user trouble testing. Customer Trouble Testing is performed on both central office and outside plant investments. Since trouble report testing for EEL loops involves testing outside plant only, a fraction is developed isolating the cost of testing for troubles on outside plant. Only the outside plant portion of trouble report testing expense is included in the EEL testing factor. A special study develops the percent of testing associated with outside plant; this percentage is loaded to the *Invest_ Cost_Pool_Map* table for the item key *EEL_Testing_Accts*.

In the case of EEL testing, the Invest_Cost_Pool_Map is used to reduce trouble report testing expense by the non-outside plant portion and then to spread the result over all outside plant investments. This is accomplished using special formulas in the expense factor template.

2. Process Expenses

a) Input base-year expense data

Jurisdiction-specific base-year expense data is loaded to the VzCost *Booked_Expenses* table with the item key *Curr_Year_Amount*. Verizon loads annual expenses from its accounting systems using the most recent year available.

The amount loaded to account 7240 excludes expenses for property taxes, regulatory assessment fees and gross receipts taxes. Property tax factors are provided by Verizon's tax department and are included

in the *Property_Taxes* table. Regulatory assessment fees and gross receipts tax expenses are included in the *Loading_Factors* table.

b) Calculate capital carrying costs

Carrying costs of support investments are added to booked expenses, inflated and adjusted to determine total adjusted forward-looking expenses. Adjusted forward-looking expenses become numerators of E/I factors and E/E loadings depending on the cost pool to which expenses are assigned.

Because cost analysts calculate the carrying cost of network investments in their cost studies, they are not included in numerators of E/I factors or E/E loadings.. However, carrying costs of network investments are calculated in the expense factor run since they are included in total company costs (denominator of E/E loadings).

To determine carrying costs, capital and property taxes are summed and multiplied by forward looking or calibrated investment values.

c) Apply expense adjustments

Expenses may be adjusted in the expense factor run to make them forward looking or to avoid double recovery. Expense adjustments are calculated in special studies and loaded to the VzCost *Expense_Adjust* table.

(1) Non-recurring Adjustment

Except for the common overhead and the gross revenue loadings, expense factors and loadings are used in recurring product studies only. In order to avoid double counting Verizon adjusts expenses to remove the portion associated with non-recurring service order and provisioning work. The non-recurring adjustment is loaded to the *Expense_Adjust* data table under the item key *NRC_Adjust.* Note: Non-recurring costs are added back to calculate the common overhead and gross revenue loadings since Verizon does apply those loadings in non-recurring cost studies.

(2) Retail Adjustment (for use in wholesale studies)

Verizon removes retail expenses when developing wholesale expense factors and loadings

Retailing costs, such as marketing or consumer billing costs associated with retail services, are not attributable to wholesale services and must not be included in the forward-looking direct

cost of a service. Verizon removes the expenses associated with direct and certain indirect retailing functions.

Avoided expense adjustments are developed in special studies outside VzCost and loaded to the *Expense_Adjust* data table under the item key *Retail_Avoid_Adjust.*

(3) Product-Specific Adjustment

Information may be available to assign expenses directly to a particular product. To avoid assigning these product-specific expenses to other products, they are removed from forward looking expenses used to calculate expense factors and loadings. Verizon cost production analysts determine product-specific expenses. Adjustment factors are calculated in special studies, using the product specific expense data, and are loaded to the *Expense_Adjust* table under the item key *Product_Specific_Adjust.*

(4) Normalization Adjustment

Normalization adjustments may be applied to base-year expenses to make them more representative of future expenses. Due to their nature, normalization adjustments may not apply to a particular jurisdiction in a particular year. All normalization expense adjustments are added and loaded to the *Expense_Adjust* data table under the item key *Normalization_Process_Change_Adjust. A*djustments may include the following:

(a) Pole and Conduit

Verizon makes adjustments for the revenues received from utility companies for pole attachments and conduit rentals. The revenue offsets Verizon's cost of maintaining the portion of its pole and conduit that it rents to other companies.

(b) Cable Maintenance Adjustment

Verizon makes this adjustment to account for the expected shift in maintenance costs in the forward-looking network that will result from the shift in technology choice (usually away from copper toward fiber).

(c) One-Time Event Adjustment

Adjustments may be made when the base-year expenses include amounts for significant and extraordinary events. In this way expenses used to develop expense factors and

loadings are more representative of future expenses (or forward-looking). In the past Verizon has made adjustments for unusually severe hurricanes or ice storms, the 9/11/2001 World Trade Center disaster and major reductions in force. Adjustments are made to normalize any extraordinary expenses incurred during the base-year period. Examples are costs related to extraordinary weather events, to reduction in force programs, or to a shift of company operations from one location to another. These types of expenses are normalized so that the factors are more representative of expected future costs.

(5) Non-forward-looking Technology Adjustment

As with investments, Verizon eliminates any expense account from the factor calculation if the associated technology is obsolete. A value of 1 is loaded into the VzCost Expense*_Adjust* data table under the item key *Account_Elimination_Adjust* for any expense account that is associated with obsolete investment; a value of 0 is loaded for all other expense accounts.

d) Apply inflation factors to expenses

Expenses are adjusted for inflation and productivity gains first from the base-year period to the first year of the study and then over the cost study planning period.

Since not every expense account is subject to the same inflationary forces, an index that most closely approximates the inflationary forces for each account is chosen and applied.

For expense accounts that are primarily non-labor in nature, the published Consumer Price Index values and projected values are applied through the end of the study period. Expense accounts that are predominantly labor driven are inflated using the wage increase and productivity index values for non-farm labor published by the US Bureau of Labor Statistics. The *Account_Inflation* data table in VzCost assigns the appropriate inflation index to each account; the *Inflation_Indices* table contains annual values for inflation and productivity indices that are applied to expenses in the factor run.

e) Assign expenses to expense cost pools

Verizon loads mapping assignments to the *Cost_Pool_Allocations* data table for expense and carrying cost amounts for each account.

Expense data is assigned to network-related, marketing-related, and common cost pools. In the expense factor run, expenses assigned to

the network cost pools are used as the numerators in the network and RTU E/I factors. Expenses assigned to the marketing cost pool are used as the numerators in the marketing and marketing support E/E loadings. Expenses assigned to the common cost pool are used as the numerator in the common overhead E/E loading.

While some expense accounts are mapped exclusively to one cost pool, many expense accounts, especially the non-network-related accounts, have portions of their value mapped to several different cost pools. For example, account 6724, expense associated with the Information Services (IS) department, is assigned to three cost pools. A portion is assigned to the common cost pool and becomes part of the common overhead loading. A portion is assigned to the marketing cost pool and becomes part of the marketing support loading. The final portion is assigned to the network other cost pool and becomes part of the shared network E/I factor. The IS department works on projects that support the common, marketing and network functions of the company By directing its expenses to each of these cost pools, IS expenses are assigned to the appropriate cost-causer when the factors are applied in a cost study.

Cost pool mappings for expense accounts that are assigned to several cost pools are developed in special studies and loaded to the *Cost_Pool_Allocations* data table under various item keys. The item keys and Excel studies are enumerated in Table 3 below. Each special study contains a description of the method and source data used to develop the account mappings.

f) Assign direct/shared designation to expenses

The *Expense_Account_D_S_Map* data table assigns expense and investment accounts a direct or shared item key. Verizon uses this map in VzCost to create a second layer of expense stratification once expenses and carrying costs are assigned to cost pools.

Generally an account may be assigned one of three item keys in the *Expense Account D S Map*: Support Account Map, Network Account Map, or Marketing Account Map. These item keys designate expenses assigned to network cost pools as either an FI or S factor and expenses assigned to the marketing cost pool as either a marketing or marketing support loading. All expenses assigned to the common overhead cost pool are part of the common overhead loading; the *Expense Account D S Map* does not provide further stratification for common overhead expenses.

The direct shared designation is important when considering how costs are ultimately classified after the factors are applied.

Table 2 shows the follow investment, follow expense, shared, or common designation of each factor or loading, and the direct, shared or common classification of the costs calculated when each is applied in a cost study.

Table 2 – Direct, Shared and Common Costs

Factor or Loading	**When applied to investment or expense, the resulting cost may be…**		
	Direct	**Shared**	**Common**
Capital & Property Tax Factors – FI (Follow Investment)	X	X	
Network Expense Factors – FI (Follow Investment)	X	X	
Network Expense Factors – S (Shared)		X	
RTU Expense Factors - S (Shared)		X	
Marketing Loading – FE (Follow Expense)	X	X	
Marketing Support Loading – S (Shared)		X	
Common Overhead Loading – C (Common Costs)			X
Gross Revenue Loading – FE (Follow Expense)	X	X	X

3. Expense and Investment Data Table Inputs

Table 3 lists the VzCost data tables and item keys (or the input variables) used in an expense factor run and the data source or Excel file that estimates each input.

Table 3 – Expense Factor and Loading Data Table Inputs

VzCost table name	VzCost item keys	Data source and/or file that develops inputs (if applicable)
Booked_Expenses	Curr_Year_Amount	Verizon financial records
Booked_Investments	Booked_Investments (for support investment accounts)	Verizon financial records

VzCost table name	VzCost item keys	Data source and/or file that develops inputs (if applicable)
	FL_Investments (for modeled network accounts)	Verizon Investment Teams (1c) 2008 Fctrs NJ FLi.xls
Expense_Adjust	NRC_Adjust	(2a) 2008 Fctrs NJ NRC Exp Adj.xls
	Retail_Avoid_Adjust	(2b) 2008 ACCESS Fctrs NJ Retail Cost Adj.xls
	Normalization_Process_Change_ Adjust	(2c1) 2008 Fctrs NJ Pole & Conduit Exp Adj.xls (2c2) 2008 Fctrs NJ Severance Exp Adj.xls (2c3) 2008 Fctrs NJ Cable Maintenance Exp Adj.xls
	Product_Specific_Adjust	(2d) 2008 Fctrs NJ Prod Specific Exp Adj.xls
	Account_Elimination_Adjust	None
Investment_ Calibration_Indices	FL_Calibration	(2e) 2008 Fctrs NJ CCBC Inv Calib.xls
Investment_Adjust	Technology_Adjust	None
	Revenue_Producing_Investment_ Adjust	(2f) 2008 Fctrs NJ Support Test Eqpmt in 2232.xls
	Support_Investment_Adjust	
Invest_Cost_Pool_ Map	EEL_Testing_Accounts	Not applicable
	Switch_RTU_Accounts Transmission_RTU_Accounts	(2g) 2008 Fctrs NJ % Collo in Switch & Ckt.xls
	Rev_Prod_Computer_Accts	None
	Switch_Accts	None
	Operator_Services_Accts	None
	Transmission_Accts	None
	Public_Communication_Accts	None
	IOT_Accts	None
	Poles_Accts	None
	Aerial_Fiber_Accts	None
	Aerial_Copper_Accts	None
	Underground_Fiber_Accts	None
	Underground_Copper_Accts	None
	Buried_Fiber_Accts	None
	Buried_Copper_Accts	None

VzCost table name	VzCost item keys	Data source and/or file that develops inputs (if applicable)
	Intra_Bldg_Fiber_Accts	None
	Intra_Bldg_Copper_Accts	None
	Conduit_Accts	None
	Operator_Systems_Acct_622000	None
	Public_Communication_Systems_ Acct_635100	None
Cost_Pool_ Allocations	Switch_Pct Operator_Services_Pct Transmission_Pct Public_Communications_Pct IOT_Pct Poles_Pct Aerial_Copper_Pct Aerial_Fiber_Pct Underground_Copper_Pct Underground_Fiber_Pct Buried_Copper_Pct Buried_Fiber_Pct Intra_Bldg_Copper_Pct Conduit_Pct Network_Other_Pct Testing_Pct EEL_Testing_Pct Switch_RTU_Pct Transmission_RTU_Pct Access_Pct Marketing_Other_Pct Common_Pct	(3a) 2008 Fctrs NJ 61xx & 21xx Cost Pools.xls (3b) 2008 Fctrs NJ 6124 & 2124 Cost Pools.xls (3c) 2008 Fctrs NJ 6724 Cost Pools.xls (3d) 2008 Fctrs NJ 6728 Cost Pools.xls (3e) 2008 Fctrs NJ 642x Cost Pools.xls (3f) 2008 Fctrs NJ 6531 Cost Pools.xls (3g) 2008 Fctrs NJ 6362 Cost Pools.xls (3h) 2008 Fctrs NJ L&B Cost Pools.xls (3i) 2008 Fctrs NJ 269020 Cost Pools.xls
Capital_Factors	Depr Retrn Inc_Tax	VzCost Capital Factor Run
Property_Taxes	Property_Tax	Verizon Tax Department

VzCost table name	VzCost item keys	Data source and/or file that develops inputs (if applicable)
Account_Inflation	Inflation_Index_Name Productivity_Index_Name	None
Inflation_Indices	CPI (Consumer Price Index) PRD (BLS Productivity Index) Lab_Trnd (BLS Labor Trend Index) COL_Trend (Cost of Living Index	Verizon Finance
Expense_Account_ D_S_Map	Network_Account_Map L_B_Support_Account_Map Support_Account_Map Marketing_Account_Map	None
Loading_Factors	GRT REG_ASSESS UNCOLL	(4) 2008 Fctrs NJ GRL.xls

4. Calculate Factors and Loadings

After all the expense and investment data have been loaded into the VzCost data tables, a factor run is created. Creating the factor run establishes parameters including jurisdiction, study period, product type (i.e., wholesale or retail), data versions, and the expense factor template version. The factor run then calculates the expense factors and loadings using the specified parameters, data tables and formulas.

D. CAPITAL AND EXPENSE FACTORS AND LOADINGS – PUBLISHED RESULTS

The factors and loadings calculated within and outside of VzCost are published to VzCost data tables under unique item keys so that they may be used as inputs to cost studies in other VzCost domains. Table 4 provides a cross reference between each factor or loading and its VzCost table and item key.

Table 4 – Capital and Expense Factors and Loadings - Published Results

Factor or Loading	VzCost Data Table	VzCost Item Key
Depreciation Factor	Capital_Factors	Depr

Factor or Loading	VzCost Data Table	VzCost Item Key
Return Factor	Capital_Factors	Retrn
Income Tax Factor	Capital_Factors	Inc_Tax
Property Tax Factor	Property_Taxes	Property_Tax
Network Expense E/I Factor - FI	Expense_Factors	Exp_Factor (FI)
Network Expense E/I Factor - S	Expense_Factors	Exp_Factor (S)
EEL Testing E/I Factor	Expense_Factors	EEL_Testing
RTU E/I Factor	RTU_Factors	RTU_Factor
Marketing E/E Loading	Expense_Results	Marketing_Loading
Marketing Support E/E Loading	Expense_Results	Other_Mkt_Support_Loading
Common Overhead E/E Loading	Expense_Results	Common_OH_Loading
Gross Revenue E/E Loading: Gross Receipts Tax Component	Loading_Factors	GRT
Gross Revenue E/E Loading: Regulatory Assessment Component	Loading_Factors	Reg_Assess
Gross Revenue E/E Loading:Uncollectibles Component	Loading_Factors	Uncoll