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About ARA: The American Rental Association, Moline, Ill., is an international trade association for owners of equipment rental businesses and the manufacturers and suppliers of construction/industrial, general tool and party/event rental equipment. ARA members, which include more than 7,500 rental businesses and nearly 900 manufacturers and suppliers, are located in every U.S. state, every Canadian province and more than 30 countries worldwide. Founded in 1955, ARA is the source for information, advocacy, risk management, business development tools, education and training, networking and marketplace opportunities for the rental equipment industry throughout the world. For more information, visit ARArental.org.

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“When you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind.”

— Lord Kelvin
Foreword

Introduction

The American Rental Association, Moline, Ill., is an international trade association for owners of equipment rental businesses and the manufacturers and suppliers of construction/industrial, general tool and party/event rental equipment.

A number of our member companies, as well as some non-ARA member companies, are required to publically report their financial performance under federal law. The vast majority of the performance measures or metrics that are required to be reported by these equipment rental companies are prescribed by the Financial Accounting Standards Board (FASB) under the rubric of *Generally Accepted Accounting Principles* (GAAP).

However, several key performance metrics for equipment rental businesses are unique to the equipment rental industry and have varied from company to company. Most of these metrics are associated with fleet efficiency and utilization. The lack of consistent industry reporting methods for metrics makes it virtually impossible for industry financial analysts and investors in the equity and/or debt instruments of these firms to understand industry performance or to make meaningful comparisons among firms in the industry.

Moreover, equipment rental businesses that are privately held have no consistent benchmarks to judge their performance against firms that are publically traded. The inability of privately held firms to demonstrate financial efficiency to investors also inhibits capital flows into the equipment rental industry and inevitably results in a higher cost of capital to the industry.

Recognizing the negative impact of inconsistent financial metrics among equipment rental companies that report publically, the ARA - at the direct request of a significant contingent of equipment rental companies - undertook a project that is aimed at producing an initial set of performance metrics for the equipment rental industry.

*This paper is an abridged version of a more complete document that contains specific mathematical formulations of the metrics described herein. To ensure that the mathematics embodied in this application are true and correct, ARA has relied on the reviews of workgroup participants and a third party reviewer, RMS McGladrey.*

**ARA's Role in Metrics Development**

Trade associations are extremely active in the development of “Industry Standards” with regard to process and product metrics. While the examples presented here are not exhaustive, they provide a good sense of how trade associations participate in standard setting for their industries.

Associations are an essential, nonpartisan way to create industry definitions and standards, and to collect and disseminate data. Industry association standardization is extremely useful to the industry as a whole in a multitude of ways. Financing, best business practices, industry creditability and understanding performance versus the competition are just some of the ways standardized information and metrics can be used. Associations assist companies in their industries by providing a nonpartisan and credible channel to express and define standards and metrics.

In general there are several levels of standard setting that we have identified. First is the association that develops a process for establishing and implementing standards for their industry. In some cases the association also has data and reporting programs that are associated with the standards.

The second kind of standards organizations are those that are established primarily for setting standards such as the
American Society for Testing and Materials (ASTM), the American National Standards Institute (ANSI) or the FASB. In the case of these organizations, members from different industries and disciplines - like accounting, property management, electrical engineering and many others - participate in the standard setting organization’s process though disciplinary committees. For example ASTM Committee E53 has jurisdiction over property management systems. The National Property Managers Association (NPMA) began developing standards in 1998 and chose the 100-year old ASTM as the organization that they would use to help them develop their industry standards. There are about 150 members of the ASTM E53 committee and 75 percent of them are NPMA members.

ARA does not propose having a standard setting organization involved in developing rental specific standards or metrics. However, it will be useful to use definitions that are either set forth in federal law or established by a standards organization when developing rental specific standards. For example, industry standards are well defined under the National Technology and Technical Transfer Act of 1995 (PL 104-113). The Office of Management and Budget Circular Number A-119 provides the following definition of standards:

1) Common and repeated use of rules, conditions, guidelines or characteristics for products, or related processes and production methods and related management systems.

2) The definition of terms, classification of components; delineation of procedures, specification of dimensions, materials, performance, designs or operations; measurement of quality and quantity in describing materials, products, processes, systems, services or practices; test methods or sampling procedures; or descriptions of fit and measurements of size and strength.

Moreover, FASB has developed GAAP, which will play an important role in developing rental specific metrics and will provide clarity in areas where GAAP is salient.

Scope

The initial goal of this project is to provide comprehensive definitions for major measures of fleet efficiency for equipment rental companies. In some cases this requires definitions of the measure as well as its components. Whenever appropriate, the definitions presented in this paper will be harmonized with GAAP. The definition of rental metrics is intended to provide equipment rental companies with guidance for measuring the performance of their business, so that common benchmarking that can be used by industry professionals, investors and analysts to compare a company’s performance over time and/or in relationship to a competitor.

The use or adoption of these metrics is strictly voluntary and ARA in no way asserts any authority to compel equipment rental companies to adopt any or all of these metrics. Furthermore, the definitions contained in this paper are not intended to be exhaustive and ARA reserves the right to publish additional definitions as the need to do so is identified.

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Executive Summary

Developing standard rental metrics allows consistent benchmarking and reporting, and gives analysts, investors, and financial institutions a tool to make meaningful comparisons among equipment rental companies.

Original Equipment Cost (OEC):

OEC measures the size of a rental fleet expressed in a base currency. Consistent with the concept of gross book value under U.S. GAAP, it represents the undepreciated cost of acquiring a piece of equipment.

- For assets bought off lease, OEC represents the cost paid to buy-out the lease
- OEC includes the cost of any refurbishments that can be capitalized under U.S. GAAP

Time (Physical) Utilization (TU):

TU is the time an equipment unit is on-rent divided by the total time available. Fleet-wide TU is weighted by OEC and is a measure of fleet efficiency expressed as a percentage of time the fleet is on-rent.

- TU per equipment unit = (OEC on rent during the period)/(Total OEC for the period)

Financial Utilization ($U):

$U is a function of annualized rental revenue exclusive of ancillary fees weighted by OEC.

- $U is calculated by dividing ‘pure’ rental revenue by average OEC
- ‘Pure’ rental revenue excludes ancillary fees such as environmental fees, damage waivers, delivery charges and re-rent revenue

Fleet Age (Age):

Age is the OEC–weighted average age (expressed in months) of the equipment in the fleet.

- In-service date is used to calculate fleet age
- No adjustments for refurbishments

Change in Rental Rate %RR:

The period-over-period change in rental rates measures the change in average contract rental rates. Rates vary depending on contract type (daily, weekly or monthly) and the equipment rented.

- When reporting period-over-period rental rate changes, rental companies are measuring the average change in contract rental rates weighted by the prior period revenue mix
Data that demonstrate the calculational methodology have been withheld.
Technical Definitions and Examples

1.0 Defining Metrics

There are six identified equipment rental metrics that will be defined in this paper. Using analysis of revenue and other factors, they measure efficiency of fleet use, business activity and fleet turnover.

1. Time Utilization
2. Financial Utilization
3. Fleet Age
4. Percent Change in Rental Rate
5. Total Percent Change in Rental Revenue
6. Apportioned Percent Change in Rental Revenue due to Yield, Utilization and Fleet Changes

In addition, there are three component measures that are used in the calculation of these metrics.

1. Realized Contracts
2. Original Equipment Cost
3. Time On-Rent

The metrics developed in this paper are “dimensionless” parameters and are currency neutral. This means that the parameters are scaled to measure the fleet so that other parameters like time, value or size have no impact on the ability of anyone analyzing these data to make valid comparisons of parameters across many rental companies.

In order to develop an internally consistent set of mathematical statements that rigorously define each of the fleet utilization metrics, it is necessary to establish common notation that will be applied to all subsequent definitions. The scientific notation that has developed in the unpublished version of this paper provides an unambiguous method for calculating the defined metrics and establishing the internally consistent relationships between these metrics. What follows is a qualitative description of these metrics.

1.1 Definition of the Day

The day is the fundamental unit of time used in calculating rental metrics. The day is defined as 1/(number of days in the current calendar year) i.e. 1/365 or 1/366 in a leap year. Specifically, the day is the 24-hour period that begins at 12:00 a.m. This definition is not influenced by when a rental business is physically open.

An On-Rent day is a day when a unit is in control of the renter and is earning revenue.

Nominal days represent the period for which a contract is written.

1.2 Definition of Revenue

Rental companies derive revenue from renting equipment and from charges that are associated with the rental of equipment. Rental companies also derive revenue from the sale of equipment and other items that support the use of the equipment or the equipment operator. GAAP sets specific rules on recognition of revenue and requires equipment rental companies to report revenue from all sources. However, throughout technical discussions of revenue measures it is clear that some rental companies use all revenues associated with a rental transaction in their calculation for reporting performance. Other rental companies only use a portion of total revenues they call “rental revenue” which is net of any ancillary charges such as delivery or environmental fees or loss and damage waivers. Throughout this document the
terms revenue and realized revenue will refer to rental revenue net of any ancillary charges.

1.3 Original Equipment Cost (OEC)

Original Equipment Cost (OEC) is used to weight several metrics. Referring to GAAP, the OEC is defined as the first cost of acquiring the asset, including the costs necessary to bring the asset to the condition and location such that it is ready for its intended use. This definition requires that the OEC of a rental equipment unit that is acquired as an asset for a rental fleet reflects the cost of the equipment (price minus any rebates or incentives, but including taxes and fees) and any other charges associated with its delivery to the location where it is recognized as part of the rental fleet, as well as any costs that are required to put the equipment unit into working order.

This definition is especially important as it relates to used equipment. If used equipment is purchased, for example, at an auction, the OEC of that equipment unit should reflect the auction bid price of the equipment, plus transportation costs to the rental yard where it will be recognized in the fleet, plus any maintenance or reconditioning costs that are required or undertaken to put the equipment in condition to rent. If an equipment unit is taken out of service and reconditioned, its OEC value should be revised according to GAAP upon re-commissioning into the fleet.

1.4 Time On-Rent

If rental equipment is in the possession of a renter and is generating rental revenue for the rental company at any time during a day, it is considered on-rent for that day. Thus, the on-rent parameter can assume only two values, 0 or 1, on any given day. An equipment unit cannot be on rent for part of a day. If the equipment unit is rented more than one time during a particular 24-hour period, it is on rent for one day. If an equipment unit is rented on a Saturday on a daily contract when the business is closed on Sunday, so the equipment must be returned Monday morning, the on-rent time is counted as two days, Saturday and Sunday. A similar situation should apply over holidays.

1.5 Definition of Rate

The rate is defined as revenue realized for an equipment unit resulting from a specific rental contract. Calculations can be made for daily revenue or revenue can be based on the length of the contract.

1.6 Granularity of Data

Generally, the calculation of rental metrics is a discrete-time problem with the smallest unit of time measure defined as a day. In order to be able to properly characterize utilization and revenue, these metrics must be based upon daily information. This is necessary because on-rent is a daily event and fleet OEC weighting depends on changes in the fleet related to putting newly acquired equipment units in service and disposing of equipment units that have been culled from the fleet on any given day. The fact that the base unit of time is a day also is reflected in the choice of a discrete time model for making metrics calculations.

2.0 Time Utilization

Time utilization is an important measure of fleet efficiency that equipment rental companies report. In its simplest form time utilization measures the percentage of time an equipment unit is on-rent during a given period. The obvious problem with this simple average is that it does not take any factors like the cost of the equipment into consideration and thus is likely skewed because there is considerable variation in rental patterns across equipment categories and classes.

Time utilization should reflect the actual time that an equipment unit is in possession of the renter and generating

\[\text{GAAP should be consulted for definitions and specifics. The GAAP references in the document are only for clarifications purposes.} \]
revenue, which is to say, the unit is on-rent and subject to billing by the rental company. Thus, time utilization should reflect the use of an asset that is creating value for the rental business.

One instance of when an equipment unit is not on-rent is during maintenance. ASTM defines corrective maintenance as maintenance required to return property to such condition that it may be effectively utilized for its designated purpose. The equipment unit might not be on-rent if it is being transported to or from a job site or stored at a job site. Therefore, a strict definition of time utilization requires that the time factor is counted only on a day when an equipment unit is actually generating revenue for the rental company.

To develop a suitable measure of time utilization, time on-rent is weighted by OEC. Because the contract rental rate is a direct function of equipment cost, OEC will ensure a proper weighting of each asset in terms of its potential to generate revenue. It also may be useful to bifurcate or segment the fleet in other ways to look at the time utilization of different classes of assets. For example, items that have an acquisition cost of less than $5,000 may have much different levels of time utilization than earth moving equipment which has an OEC in excess of $50,000. A fleet manager may want to analyze the time utilization of reach and access equipment versus earth moving equipment to help determine where the next dollar of investment will be allocated.

2.1 Definition of Time Utilization:
Time utilization is a dimensionless aggregated value that quantifies the fraction of the fleet OEC that is on-rent for a given period.

3.0 Financial Utilization
Financial Utilization is also commonly known as dollar utilization. However, the international nature of the equipment rental industry leads us to establish nomenclature that is currency neutral. Financial utilization is defined as the revenue derived from the rental of equipment divided by the original cost of the equipment (in the same currency units). Therefore, it is a dimensionless parameter and would have the same value regardless of the currency units.

3.1 Definition of Financial Utilization
Financial utilization is a dimensionless measure of aggregated annualized revenue weighted by the fraction of the fleet OEC value that is on-rent for a given period. Since it is annualized, it also can be viewed as the inverse of a simple payback period for the fleet.

4.0 Fleet Age
Fleet age is the instantaneous measure of the average number of months a fleet has been used since its equipment units were put in service for the first time. As such, the “age” is not the average over a time period, but is the age on any fixed point in time.

We propose the following rules for establishing fleet age:

• The age of an equipment unit is zero months if the unit is “new” on the date the equipment unit is recognized in the fleet.
• The age of a used equipment unit added to the fleet is based upon either a verifiable first in-service date provided by the seller or the reference date of June 30 of the year the equipment was manufactured according to the original equipment nameplate.
• Equipment units that are remanufactured are not “new” and retain the age as established above. The equipment OEC may change as required by GAAP.
“New” means the equipment unit has never been put in service except for possibly de minimis use such as activity during transport from the manufacturer and testing at the dealership. Equipment that was put in service a second time is “used” even if rebuilt. Hours of use on an hour meter are not used to define “new” equipment.

The first bullet point above allows new equipment that is put in service to have an age of zero regardless of whether the year of manufacture is the current year or a previous year. We believe that in either case, the equipment functions as new equipment. The second bullet accounts for the fact that used equipment added to the fleet has been previously used and thus is degraded.

The third bullet acknowledges that refurbished equipment is still mechanically degraded by use. Remanufacturing does not return such equipment to “new” status. However, an investment was made in the unit and it should be recognized in the value of the equipment when returned to service to the extent allowed by GAAP. When remanufactured, the original nameplate should not be altered and the hour meter should not be reset. A second nameplate related to remanufacture might be affixed.

5.0 Fleet Apportionment

In order to properly develop a method that allows the detailed analysis of rental revenues, it is necessary to partition the fleet so that we can look specifically at changes in rates, utilizations, and fleet mix from one period to the next. This is accomplished by defining the “base fleet” and the “other fleet”. The base fleet is established through an analysis of the two periods being examined. Only equipment units or equipment classes that have rental activity in both periods being analyzed are included in the base fleet analysis. Some revenue associated with the base fleet cannot be incorporated directly into the analysis because a rate cannot be evaluated in both periods for a unit or class of units. ARA has developed a methodology for apportioning such revenue once good estimators of the effect of change in revenue due to the change in rates and the change in utilizations have been established. As we move to a new pair of periods, say 2 and 3, the base fleet will change. We believe a base fleet concept is critical for establishing meaningful changes in revenue that are not unduly influenced by changes due to fleet mix.

The fleet is separated into the base fleet and the other fleet. The other fleet encompasses changes in the fleet from period to period that result from adding equipment units to the fleet or deleting equipment units from the fleet. In order to examine the effect of rates and utilization on the change in revenue from period to period, we consider the revenue generated by base fleet only.

There are at least two ways to view the fleet. It can be composed of individual units that are tracked or it can be viewed as equipment classes that are tracked. The equipment class approach assumes that rates on similar pieces of equipment are very nearly the same. Thus, for 45 to 55 hp compressors, the rate in a given geographical area and time of year would be nearly the same.

A useful way to look at the base fleet revenue is that it reflect continuing operations, so that it is not influenced by large changes in revenue that result from significant additions to the fleet or de-fleeting. The overall objective is to characterize the business-wide metric. For national chains, the fleets might be analyzed on a regional basis and aggregated to a national level because rates might differ for the same equipment in different regions.

Each rental business must decide how they will define the base fleet; by unit or by class. The business should report which definition is being used when they report financial metrics. ARA has developed a methodology and set of rules that define the base fleet, the other fleet, and the apportionment of revenue associated with each.
6.0 Rental Rate, Revenue per Rental Day Definition and the Revenue Function

This section presents a discussion of financial metrics that is useful to analysts concerned with understanding the causes of changes in rental revenue from period to period. The topics include revenue apportionment, changes in rates, yields, and utilization. It is important to recognize two concepts of rate that provide measures of revenue change. One is rate that is based on the nominal contract days or contracts for an equipment unit, and the other is based upon the actual number of on-rent days.

The industry has traditionally reported period over period changes in rental rates. Rental Rate (%RR) is based upon realized rental revenue and contracts. The %RR metric measures how average rental rates change from period to period for the fleet as a whole. The metric is reported as a period over period change. For example, rates increased 3 percent this quarter over last.

The metric %Yield and its companion %Utilization relate to realized revenue and on-rent days. These metrics measure, how revenues change from period to period due to changes in rates and utilization patterns for the base fleet as a fraction of total rental revenue change. In essence, %Yield and %Utilization measure the changes in rental revenue from continuing operations of the rental fleet. Revenue due to changes in the “other fleet” (%Fleet Change) shows the effect of expanding and contracting the fleet. Overall, these three metrics provide a quantitative measure of the cause for the observed period over period revenue change.

6.1 Rental Rate Metric

The nominal rate or “Rental Rate” is the contract revenue divided by the number of contracts of a given type. Contract types could be daily, weekly or monthly. Assume the daily rate is $100, the weekly rate is $350 and the monthly rate is $980. Therefore the revenue per contract for the daily rental rate is $100, for the week the rental revenue is $350, and the monthly rental revenue is $980. Using contracts rather than contract days eliminates any ambiguity that results from variable contract periods for a given contract type that may occur.

The %RR metric provides a measure of the average change in rental rates from the previous period to the current period. It does not forecast the potential change in rates from the current period to the next period.

The %RR = \((\text{Rate}_{\text{period2}} / \text{Rate}_{\text{period1}}) - 1\) * 100

6.2 Revenue per Rental Day (RRD)

Revenue per Rental Day (RRD) is the contract revenue divided by the actual on-rent days associated with the contract. Assume an equipment unit is rented on Saturday at the daily rate of $100 per day and the business is closed on Sunday. The unit is returned Monday morning. There are two on-rent days and the RRD is $100/2 = $50. As a second example, a unit is rented monthly for $980 but returned after 14 days. The RRD is $70, ($980/14 days). Using RRD provides the most appropriate measure for economic analysis of revenue. If an equipment unit is rented on a monthly contract, but returned after 14 days, that unit can be rented again on the fifteenth day. Using RRD, the daily revenue is clearly assignable. When revenue is based upon contracts or nominal contract days, the equipment unit appears to be in use by two different entities at the same time. Furthermore, if contracts overlap reporting periods but on-rent days do not, a clean consistent division of revenue that applies is conceptually difficult to specify.

All revenue calculations related to “RRD” are on a daily basis. For “RRD”, the number of days a unit is on-rent is not the same as the contract period. Thus, actual on-rent days must be used. It should also be noted that the %RR metric and the RRD metric are the same when the equipment unit is kept for the full duration of the rental contract.
6.3 Apportioning Revenue Across Reporting Periods:
Across a reporting period boundary, there needs to be a rule for apportioning revenue. ARA has established rules for both situations; that is for the case where contracts and on-rent days are in effect across a reporting period boundary. These rules are specified in the ARA Rental Market Metrics application currently being developed.

6.4 The Revenue Function
Revenue is dependent on several variables. The revenue function is dependent upon rates, utilization, and fleet composition and is expressed as:

\[ Revenue = f \{ rates \ (r), \ utilizations \ (U), \ and \ fleet \ composition \ (c) \} \]

Rate is based upon contract revenue apportioned over contracts or on-rent days. We use the term utilization to describe the number and type of contracts or the on-rent days for a specific contract type. Fleet composition refers to the changes in fleet brought about by adding equipment units to the fleet and removing equipment units from the fleet continuously throughout the periods of analysis. For the base fleet, revenue depends only on rates and utilization because the fleet composition is held constant.

All of the model equations ARA has developed can be applied to both RRD and %RR.

6.4.1 Revenue Model and Revenue Change
ARA developed models that are applicable to both individual units of equipment or classes of equipment. Thus, we could represent a 50 hp air compressor or all 45 to 55 hp air compressors in the class. We will call either the unit or the class an element.

Rental revenue is calculated using rate and utilization by element and contract type. Utilization refers to contracts or contract days for a given type of contract for a specific unit or class of units in a given time period. The average rate for a specific element can be determined for each contract type in a period. The rental revenue in the period is the sum of the utilizations for a contract type times the average rate for a contract type for each element summed over all elements and contract types in the fleet.

The difference in revenue between two reporting periods (1 and 2) is:

\[ \Delta R_{12} = Rev_2 - Rev_1 = \Delta R_{12} \text{ (Base Fleet)} + \Delta R_{12} \text{ (Other Fleet)} \]

The base fleet revenue can be further partitioned giving the revenue function:

\[ \Delta R_{12} = (Change \ in \ Revenue \ from \ Rates \ for \ the \ Base \ Fleet) + (Change \ in \ Revenue \ from \ Utilization \ for \ the \ Base \ Fleet) + (Change \ in \ Other \ Revenue) \]

The first term is the revenue change for the base fleet due to a difference in rates when utilization is held constant. The second term is the revenue change due to a difference in utilization when rates are held constant. This measures the change in revenue for the base fleet due to the change in business activity. The revenue change due to a change in fleet mix is evaluated at constant rates and utilization.
6.4.2 Analyzing the Revenue Function

Analyzing the revenue function for the base fleet can be accomplished using the expression:

\[ dR = \sum_{i=1}^{N} \sum_{j=1}^{J} \left\{ \left( \frac{\partial R}{\partial r_{ij}} \right)_{U,c} dr + \left( \frac{\partial R}{\partial U_{ij}} \right)_{r,c} dU \right\} + \left( \frac{\partial R}{\partial c} \right)_{r,U} dc \]

The partial derivatives have a specific meaning. For example, the partial derivative \( \left( \frac{\partial R}{\partial r_{ij}} \right)_{U,c} \) is the change in revenue with respect to rates for equipment unit \( i \) and contract \( j \) with utilization held constant for the base fleet. The partial derivative \( \left( \frac{\partial R}{\partial U_{ij}} \right)_{r,c} \) is the change in revenue with respect to the utilization of equipment unit \( i \) for contract type \( j \) with all rental rates held constant for the base fleet, and \( \left( \frac{\partial R}{\partial c} \right)_{r,U} \) is the change in revenue due to fleet changes at constant rates and utilization.

6.5 Revenue Metrics

ARA has developed a set of equations and methodology for determining the revenue metrics based upon the revenue function. Below, we give the qualitative definitions of these metrics.

6.5.1 Rental Rate from the Revenue Equation

In order to make the change in revenue dimensionless, it needs to be normalized. We choose revenue as the logical normalization factor. In this instance the weighting is based on the revenue for the base fleet for period 1. This makes the analysis consistent with the typical year over year (YOY) approach. This metric is designed to measure the percentage change in rental rates from one period to the next. The metric is based on nominal on-contract days or contracts.

\[ \%RR = \frac{(Change \ in \ Revenue \ due \ to \ Rental \ Rates \ for \ the \ Base \ Fleet \ at \ constant \ utilization)}{Base \ Fleet \ Revenue \ for \ Period \ 1} \]

6.5.2 RRD Based Metrics:

The following metrics are based upon RRD using actual on-rent days. Because these metrics are based on the actual days an equipment unit is on-rent, contract days or nominal contracts do not influence the calculation. These metric calculations allow the analyst to partition rental revenues to account for changes in fleet size, rates and utilizations. These methods allow for a more complete characterization of the operations of the rental fleet.

The % Revenue Change measures the YOY change in rental revenue.

The %Yield, %Utilization, and the %Fleet Change give the percents of revenue change (that add up to 100%). A negative percentage implies that the category in question contracted YOY.

The total fleet revenue includes revenue from the base fleet and revenue from the other fleet.

6.5.2.1 %Revenue Change

The %Revenue Change is described by the following equation:

\[ % \ Rev = \frac{(Change \ in \ Revenue \ from \ Period \ 1 \ to \ Period \ 2)}{Total \ Fleet \ Revenue \ for \ Period \ 1} \]

6.5.2.2 %Yield

The average or achieved rate at constant utilization based on RRD and on-rent days is %Yield.

\[ % \ Yield = \frac{(Change \ in \ Revenue \ from \ RRD \ for \ the \ Base \ Fleet \ at \ constant \ utilization)}{Total \ Fleet \ Revenue \ Change} \]
6.5.2.3 Utilization
The percent revenue change due to changes in utilization at constant rates (RRD) and fleet composition is \( %\text{Utilization} \).

\[
%\text{Utilization} = \frac{\text{Change in Revenue from Utilizations for the Base Fleet at constant RRDs}}{\text{Total Fleet Revenue Change}}
\]

6.5.2.5 % Fleet Change in Revenue
The percent change in total rental revenue metric is indexed against total revenue for the previous period.

\[
%\text{Fleet Change} = 100 \left( \frac{\text{Change in Other Fleet Revenue}}{\text{Total Fleet Revenue Change}} \right)
\]

The Change in Other Fleet Revenue is found by difference as follows:

\[
\text{Change in Other Fleet Revenue} = \text{Total Fleet Revenue Change} - \text{Total Change in Revenue associated with Yield} - \text{Total Change in Revenue associated with Utilization}
\]

6.6 Simple Rental Rate and RRD Example
Table 1 provides a simple numerical example. This example can be interpreted to be either a base fleet by units or a base fleet by equipment class. The fleet consists of three elements; these are a gas aerator (or a class of gas aerators) and two boom lifts (or classes of boom lifts). All elements are in the base fleet because there is at least one contract type for each unit so that a rate can be determined in each period; a complete contract. There is other revenue that needs to be accounted for that is associated with the gas powered aerator in the base fleet because the daily and weekly contract data are incomplete. Table 1- Part A shows that the difference in revenue for the base fleet using only complete contracts is $18,993, while the total revenue change counting the other base fleet revenue of -$700 (Table 1 – Part B), results in a base fleet revenue change of $18,293. There is no revenue due to growing or shrinking the fleet. Thus, the base fleet revenue change is also the total fleet revenue change.

6.6.1 Rental Rate:
Table 1 – Part A shows the results for the %RR forecast version of rental rate. The utilization data and rates employ contracts.

For the 85 ft. telescopic boom daily contract, the calculations for %RR are performed as follows.

- For Period 2, the average daily contract rate = $2,679/5 contracts =$535.80 per contract.
- For Period 1, the average daily contract rate = $5,769/9 contracts = $641 per contract.
- The revenue due to a change in rental rates = “Withheld Data”

The calculations are withheld so as to not disclose the details of the ARA method. The revenue changes are summed and divided by the Period 1 base revenue.

Table 1-Part B shows realized revenue per day or the RDD approach. This provides a calculation of %Yield using the actual on-rent days for each piece of equipment. The calculations in Table 1-Part B also show the change in other revenue of $700 that is derived by taking the difference between realized revenue per day from Period 1 to Period 2 for the other fleet. Table 1-Part C summarizes these results and further assigns the change in other revenue to changes in yield, -$60 and changes in utilisations, -$640. In addition, the revenue summary is provided in Table 1-Part C. Table 1-Part D provides the metrics. The revenue change is $1,169 and the base fleet revenue for Period 1 is $31,241. The %RR is the ratio of the revenue change to the revenue from period 1, or 3.74%. Rates increased 3.74% YOY.
6.6.2 Yield, Utilization, and Total Revenue Metrics

The utilization values in on-rent days are shown along with the total number of contracts written by contract types in each year as shown in Table 1-Part B. The total revenue for each equipment unit and contract type for each year is shown. The average rate per day for each unit is found by dividing the appropriate realized revenue by the appropriate number of on-rent days.

For the 85 ft. telescopic boom weekly contract, the calculations for %RR are performed as follows.

- For period 2, the average weekly rate = $11,234/40 days = $281 per day.
- For period 1, the average weekly rate = $2,567/14 days = $183 per day
- The revenue change associated with Yield = “Withheld Data”
- The revenue change associated with Utilization = “Withheld Data”

Table 1-Part B shows the total revenues including the other revenue related to the base fleet. The %Revenue Change is as follows:

\[
\% \text{Revenue Change} = 100 \times \frac{(\text{Revenue}_2 - \text{Revenue}_1)}{\text{Revenue}_1} = 55.9\%
\]

Revenues increased 56% YOY.

Table 1-Part B shows that the revenue partition is $1,638 due to yield and $17,355 due to utilization. The other base fleet revenue due to incomplete contracts is -$700. Because there is no revenue related to fleet change, these add to the total revenue change of $18,293. The fraction of the other revenue due to units or classes in the base fleet assignable to Yield is -$60. The adjustment to utilization is -$639. The %Yield metric is ($1,638-$60)/$18,293 or 8.6% while the %Utilization metric is 91.4 %. The metric for fleet change is zero composition because there were no unit or class additions or deletions.
### Table 1
**Part A**

*Example Calculation: “Rental Rates”*

<table>
<thead>
<tr>
<th>Period</th>
<th>Utilization Contracts</th>
<th>Realized Revenue</th>
<th>Rate/ $/Contract</th>
<th>Utilization Contracts</th>
<th>Realized Revenue</th>
<th>Rate/ $/Contract</th>
<th>Revenue Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gas Powered Aerator</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Contract</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly Contract</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly Contract</td>
<td>1</td>
<td>$1,000</td>
<td>$1,000</td>
<td>1</td>
<td>$800</td>
<td>$800</td>
<td>WH</td>
</tr>
<tr>
<td><strong>85' Telescopic Boom</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Contract</td>
<td>5</td>
<td>$2,679</td>
<td>$536</td>
<td>9</td>
<td>$5,769</td>
<td>$641</td>
<td>WH</td>
</tr>
<tr>
<td>Weekly Contract</td>
<td>7</td>
<td>$11,234</td>
<td>$1,605</td>
<td>2</td>
<td>$2,567</td>
<td>$1,284</td>
<td>WH</td>
</tr>
<tr>
<td>Monthly Contract</td>
<td>8</td>
<td>$22,548</td>
<td>$2,819</td>
<td>3</td>
<td>$9,245</td>
<td>$3,082</td>
<td>WH</td>
</tr>
<tr>
<td><strong>60' Telescopic Boom</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Contract</td>
<td>4</td>
<td>$1,154</td>
<td>$289</td>
<td>6</td>
<td>$1,426</td>
<td>$238</td>
<td>WH</td>
</tr>
<tr>
<td>Weekly Contract</td>
<td>6</td>
<td>$3,758</td>
<td>$626</td>
<td>6</td>
<td>$3,786</td>
<td>$631</td>
<td>WH</td>
</tr>
<tr>
<td>Monthly Contract</td>
<td>5</td>
<td>$7,861</td>
<td>$1,572</td>
<td>6</td>
<td>$7,648</td>
<td>$1,275</td>
<td>WH</td>
</tr>
<tr>
<td><strong>Base Fleet</strong></td>
<td>36</td>
<td>$50,234</td>
<td></td>
<td>34</td>
<td>$31,241</td>
<td></td>
<td>$1,169</td>
</tr>
</tbody>
</table>

Revenue change divided by Period 1 Base Revenue: **3.74%**

WH is withheld data
Table 1 - Part B
Part B Example Calculation: “RRD” (Realized Revenue per Day)

<table>
<thead>
<tr>
<th>Period</th>
<th>2</th>
<th></th>
<th>1</th>
<th></th>
<th>Revenue Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Utilization</td>
<td></td>
<td>Utilization</td>
<td>Rates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On-Rent Days</td>
<td></td>
<td>On-Rent Days</td>
<td>Utilization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contracts</td>
<td></td>
<td>Contracts</td>
<td></td>
</tr>
<tr>
<td>Gas Powered Aerator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Contract</td>
<td>1</td>
<td>1</td>
<td>$800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly Contract</td>
<td>0</td>
<td>0</td>
<td>$0</td>
<td>5</td>
<td>$1,500</td>
</tr>
<tr>
<td>Monthly Contract</td>
<td>1</td>
<td>20</td>
<td>$1,000</td>
<td>$50</td>
<td>1</td>
</tr>
<tr>
<td>85° Telescopic Boom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Contract</td>
<td>5</td>
<td>5</td>
<td>$2,679</td>
<td>$536</td>
<td>9</td>
</tr>
<tr>
<td>Weekly Contract</td>
<td>7</td>
<td>40</td>
<td>$11,234</td>
<td>$281</td>
<td>2</td>
</tr>
<tr>
<td>Monthly Contract</td>
<td>8</td>
<td>210</td>
<td>$22,548</td>
<td>$107</td>
<td>3</td>
</tr>
<tr>
<td>60° Telescopic Boom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Contract</td>
<td>4</td>
<td>4</td>
<td>$1,154</td>
<td>$289</td>
<td>6</td>
</tr>
<tr>
<td>Weekly Contract</td>
<td>6</td>
<td>35</td>
<td>$3,758</td>
<td>$107</td>
<td>6</td>
</tr>
<tr>
<td>Monthly Contract</td>
<td>5</td>
<td>125</td>
<td>$7,861</td>
<td>$63</td>
<td>6</td>
</tr>
<tr>
<td>Base Revenue</td>
<td>439</td>
<td></td>
<td>$50,234</td>
<td></td>
<td>$1,638</td>
</tr>
<tr>
<td>Other Revenue*</td>
<td>1</td>
<td>$800</td>
<td></td>
<td></td>
<td>$17,355</td>
</tr>
<tr>
<td>Other Fleet Revenue</td>
<td></td>
<td>$0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Revenue</td>
<td>$51,034</td>
<td>$32,741</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 1 – Part C - Metrics

#### Change in Revenue Analysis

<table>
<thead>
<tr>
<th>Rental Rates</th>
<th>Changes in Revenue Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base, 2</td>
<td>Base, 1</td>
</tr>
<tr>
<td>$50,234</td>
<td>$31,241</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Yield and Utilization</th>
<th>Total 2</th>
<th>Total 1</th>
<th>Revenue Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield</td>
<td>$51,034</td>
<td>$32,741</td>
<td>$1,638</td>
</tr>
<tr>
<td>Utilization</td>
<td></td>
<td></td>
<td>$17,355</td>
</tr>
</tbody>
</table>

Other Revenue Adjustment

<table>
<thead>
<tr>
<th>Revenue Adjustment</th>
<th>Total 2</th>
<th>Total 1</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>~$60</td>
<td>~$640</td>
<td>$1,578</td>
<td></td>
</tr>
</tbody>
</table>

$16,715

### Table 1 – Part D

Revenue Metrics

**Forecast Model**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>%RR</td>
<td>3.74%</td>
</tr>
<tr>
<td>%Revenue</td>
<td>55.9%</td>
</tr>
<tr>
<td>%Yield</td>
<td>8.6%</td>
</tr>
<tr>
<td>%Utilization</td>
<td>91.4%</td>
</tr>
<tr>
<td>%Fleet Change</td>
<td>0%</td>
</tr>
</tbody>
</table>
7.0 Conclusions

The charge to the ARA Metrics Workgroup was to develop a set of consistent rental metrics that can be used by equipment rental companies of any size or type to establish and track financial performance benchmarks. We have succeeded in developing these measures for metrics that are commonly used in the equipment rental industry including Time Utilization, Financial Utilization, Fleet Age, and Rental Rate Changes. With respect to the latter, we have posited a basic formulation of the revenue function and shown how rental rates which are based on nominal days stated on a contract can change from one period to the next. In addition, we have also developed other metrics based on the revenue function that separate the causes of change in revenues from period to period. These causes include the revenue yielded from each contract based on the actual days the equipment unit is on rent, the change in revenue that comes from changes in the mix or pattern of rental contracts, and the change in revenue that is the result of an expanding or contracting fleet.

While the results of this analysis provide an initial basis for analyzing the financial performance of equipment rental companies with respect to the efficiency with which they manage their rental fleets, we do not presume that this analysis is complete. ARA will continue to develop additional information and analysis for the equipment rental industry so that all equipment rental companies will be able to operate more effectively and efficiently.
Appendix 1: Rental Market Metrics Review

RSM McGladrey

July 27, 2011
Mr. John W. McClelland, Ph.D.
Vice President of Government Affairs
American Rental Association
1101 Vermont Avenue, NW, Suite 400
Washington, DC 20005

Dear Mr. McClelland:

We have provided certain consultative services to American Rental Association (“ARA”) related to a draft whitepaper titled “Rental Market Metrics: Definitions, Calculation and Examples”. Our services were performed during June and July 2011 in accordance with the terms of our engagement letter dated June 14, 2011.

The scope of our work, as agreed upon with ARA, included evaluation of the whitepaper draft and identification of any inconsistencies between the mathematical formulas and the respective notations and definitions, review of financial statements presented by publicly listed entities in the equipment rental industry (based on list provided by ARA) and comment as to whether the performance metrics presented in the draft appear to be common within the industry. As part of the engagement we communicated and discussed initial findings, observations and suggestions with ARA and issued the present letter to ARA at completion of work.

It should be noted that the scope of our work did not include analysis of economic or business substance of the performance metrics and/or verification of the adequacy of proposed mathematical tools (formulae) in reflecting the economic or business concepts as presented in the “Rental Market Metrics: Definitions, Calculations and Examples” whitepaper. Consequently we make no representations regarding the suitability or sufficiency of these consultative procedures for ARA’s purposes. We have no responsibility to update this report for events or circumstances occurring after the date of this report.

This document has been prepared solely for the members of American Rental Association in accordance with the terms of our engagement letter dated June 14, 2011. This document is not to be referred to or quoted, in whole or in part, in any registration statement, prospectus, public filing, loan agreement or other document without our prior written approval.

We appreciate the cooperation extended to us during this engagement and are pleased to be of service to American Rental Association. If you have any questions concerning this report, please contact me at (703) 336-6548.

Sincerely,

Vlad Mitchev
Director

RSM McGladrey, Inc. is a member of RSM International - an affiliation of separate and independent legal entities
I. Executive Overview

Introduction

We completed a review of the “Rental Market Metrics: Definitions, Calculations and Examples” whitepaper drafted by American Rental Association (“ARA”). The focus of our review included evaluation of the whitepaper draft and identification of any inconsistencies between the mathematical formulas and the respective notations and definitions, and a review of financial statements published by publicly listed entities (based on list provided by ARA) within the equipment rental industry and comment as to whether the performance metrics presented in the draft appear to be common within the industry. Our review did not include analysis of economic or business substance of the performance metrics and/or verification of the adequacy of proposed mathematical tools (formulae) in reflecting the economic or business concepts as presented in the draft.

Scope

The scope of our review of the “Rental Market Metrics: Definitions, Calculations and Examples” whitepaper is as follows:

> Reviewed the proposed performance metrics mathematical formulas, notations and definitions and comment as to whether the notations and definitions appear to be correctly representing the respective performance metrics formulas as presented;
> Review the whitepaper to provide suggestions for improvement and/or clarification regarding the readability of the whitepaper from the perspective of a sophisticated reader;
> Review financial statements presented by publicly listed entities within the equipment rental industry to comment as to whether the performance metrics appear to be common nomenclature within the equipment rental industry based on a list of publicly listed equipment rental entities provided by ARA.

Conclusion

Our review identified suggestions to clarify certain performance metric formulas/notations, and readability of the whitepaper. We reviewed descriptions, notations and definitions correspondence to the respective mathematical formulae as presented and in our opinion they seem adequate.

We reviewed the list of publicly listed entities, as provided by ARA, and determined the performance metrics presented in the “Rental Market Metrics: Definitions, Calculations and Examples” whitepaper appear to be common nomenclature within the equipment rental industry (based on list provided by ARA).