MARKET DATA: MAY 2017

EquipmentWatch remains the largest sales database on the planet with 20x the sales data of any other source.

$28,015,902,387

RESALE
$27,852,935,829
222,262 Assets

AUCTION
$162,966,558
3,444 Assets

The *EquipmentWatch* **Market Report**™ is a monthly resource for the construction, lift/access, agriculture and commercial truck industries to make better-informed decisions by leveraging key **equipment values, market activity, age and usage metrics**.

How is the Price Stability INDEX calculated?

MARKET SUMMARY

For more detailed articles, visit *EquipmentWatch* Intelligence online.

MARKET ACTIVITY	YEAR OVER YEAR MARKET METRICS	MONTH OVER MONTH MARKET METRICS	MONTH OVER MONTH PRICE STABILITY INDEX ™
CONSTRUCTION $13,738,284,927 MARKET VALUE 154,062 ASSETS	VALUES ▼ 3.1% FMV ▼ 6.0% FLV VOLUME ▼ 7.6% RESALE ▼ 15.6% AUCTION	VALUES ▼ 2.4% FMV ▼ 3.0% FLV VOLUME ▼ 23.7% RESALE ▲ 35.7% AUCTION	97.21 (95 – 105; DEFLATED / STABLE / INFLATED)
LIFT/ACCESS $1,187,241,465 MARKET VALUE 38,549 ASSETS	VALUES ▼ 6.3% FMV ▼ 5.5% FLV VOLUME ▼ 9.1% RESALE ▼ 16.2% AUCTION	VALUES ▼ 1.4% FMV ▼ 1.8% FLV VOLUME ▼ 0.1% RESALE ▲ 36.9% AUCTION	97.71 (95 – 105; DEFLATED / STABLE / INFLATED)
AGRICULTURE $10,768,750,055 MARKET VALUE 130,319 ASSETS	VALUES ▼ 4.9% FMV ▼ 5.5% FLV VOLUME ▲ 47.2% RESALE ▲ 32.2% AUCTION	VALUES ▼ 4.7% FMV ▼ 4.9% FLV VOLUME ▲ 8.3% RESALE ▼ 6.7% AUCTION	95.74 (95 – 105; DEFLATED / STABLE / INFLATED)
COMMERCIAL TRUCK $2,321,625,940 MARKET VALUE 58,429 ASSETS	VALUES ▼ 7.3% FMV ▼ 6.8% FLV VOLUME ▲ 107.8% RESALE ▼ 16.2% AUCTION	VALUES ▲ 0.1% FMV ▼ 1.3% FLV VOLUME ▼ 0.1% RESALE ▲ 74.7% AUCTION	96.40 (95 – 105; DEFLATED / STABLE / INFLATED)

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CONSTRUCTION

OVERALL | TYPE TRENDS | BRAND TRENDS | REGIONAL TRENDS

How is the Price Stability INDEX calculated?

MARKET ACTIVITY

$13,738,284,927
MARKET VALUE

154,062
ASSETS

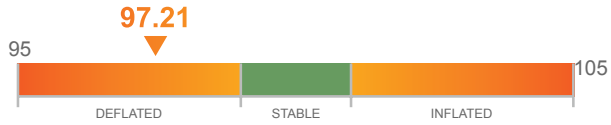
YEAR OVER YEAR MARKET METRICS

VALUES	▼ 3.1% FMV	▼ 6.0% FLV
VOLUME	▼ 15.6% RESALE	▲ 2.7% AUCTION

MONTH OVER MONTH MARKET METRICS

VALUES	▼ 2.4% FMV	▼ 3.0% FLV
VOLUME	▼ 23.7% RESALE	▼ 35.7% AUCTION

MONTH OVER MONTH PRICE STABILITY INDEX ™



MARKET PERFORMANCE

In May we saw a 23.7% monthly decline in resale channel activity, which is in line with in auction activity of 35.7%, FLV declined about 3% over the same period. The Price Stability Index™ value of 97.21 shows evidence of depressed prices across the board.

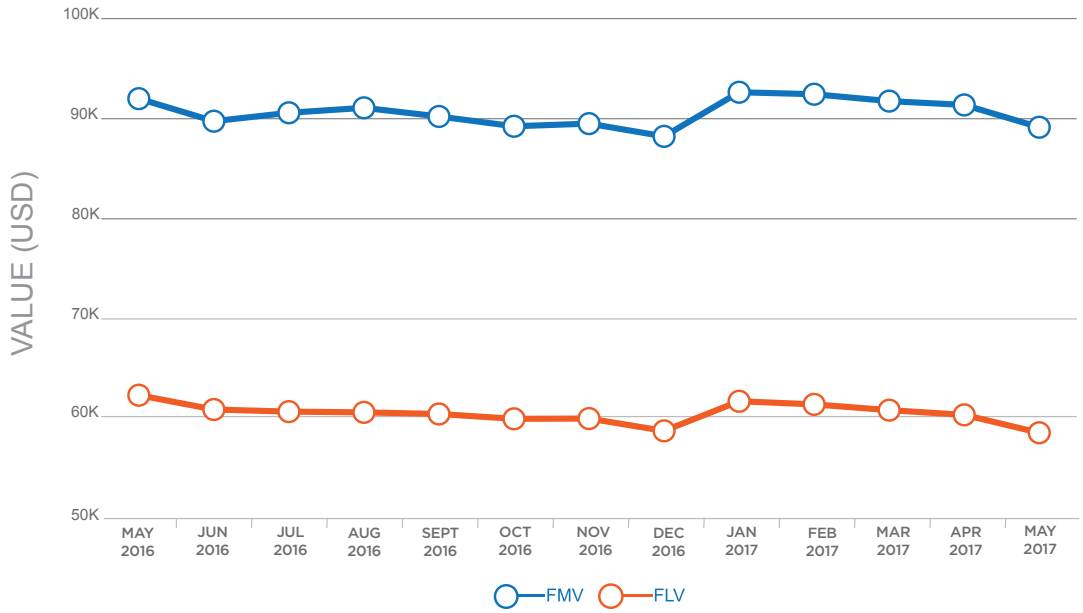
MARKET HIGHLIGHTS

- FMV Year over Year resale utilization rates remained relatively flat for May, but auction usage rates decreased significantly.
- FLV and FMV declined at a moderate rate month over month and Year over year.
- Construction equipment values continue to follow a downward trend that has existed for several months.

MARKET FORECAST

As was the case last summer, we expect to see a small dip in FMV and FLV prices this summer. Though market expectations of growth in the construction industry have been revised down, we expect an increase in market activity for the remainder of the year.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▼ 23.7% RESALE	▲ 35.7% AUCTION	▲ 0.5% RESALE	▲ 6.2% AUCTION	▼ 1.5% RESALE	▼ 8.7% AUCTION
YEAR OVER YEAR	▼ 15.6% RESALE	▲ 2.7% AUCTION	▲ 2.3% RESALE	▲ 4.0% AUCTION	▲ 0.9% RESALE	▼ 4.9% AUCTION

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LIFT/ACCESS

OVERALL | TYPE TRENDS | BRAND TRENDS | REGIONAL TRENDS

How is the Price Stability INDEX calculated?

MARKET ACTIVITY

$1,187,241,465
MARKET VALUE

38,549
ASSETS

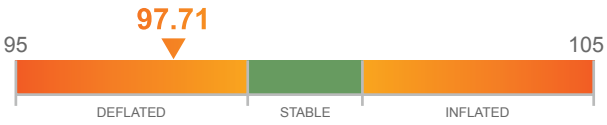
YEAR OVER YEAR MARKET METRICS

VALUES	▼ 6.3% FMV	▼ 5.5% FLV
VOLUME	▼ 16.2% RESALE	▼ 1.2% AUCTION

MONTH OVER MONTH MARKET METRICS

VALUES	▼ 1.4% FMV	▼ 1.8% FLV
VOLUME	▼ 0.1% RESALE	▼ 36.9% AUCTION

MONTH OVER MONTH PRICE STABILITY INDEX ™



MARKET PERFORMANCE

As compared to April lift values decreased by over 1% in both channels in May. Volume remained even in the resale channel, while auction volume increased by 37%. The overall market value increased by about 11% and the number of assets increased by about 14% as compared to April.

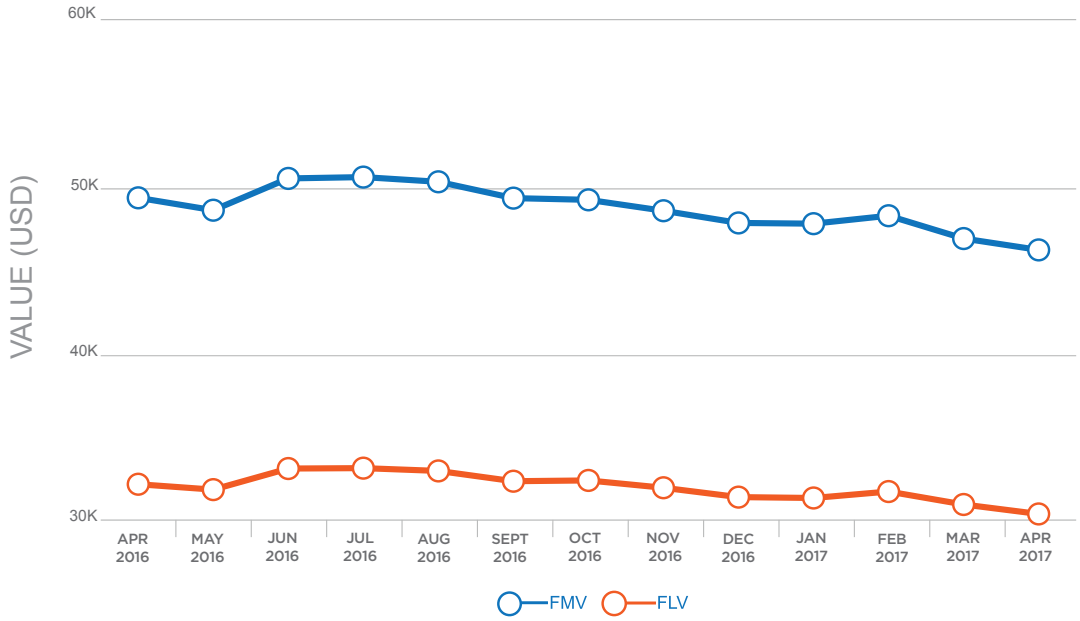
MARKET HIGHLIGHTS

- The Price Stability Index™ was deflated again in May with a score of 97.71, decreases in values caused this deflation.
- There was a big increase in auction volume in May, but in relative terms it was not as large as it seems due to the small overall volume in the auction channel.
- Average age and utilization remained even in the resale channel, while auction usage increased by about 16%.

MARKET FORECAST

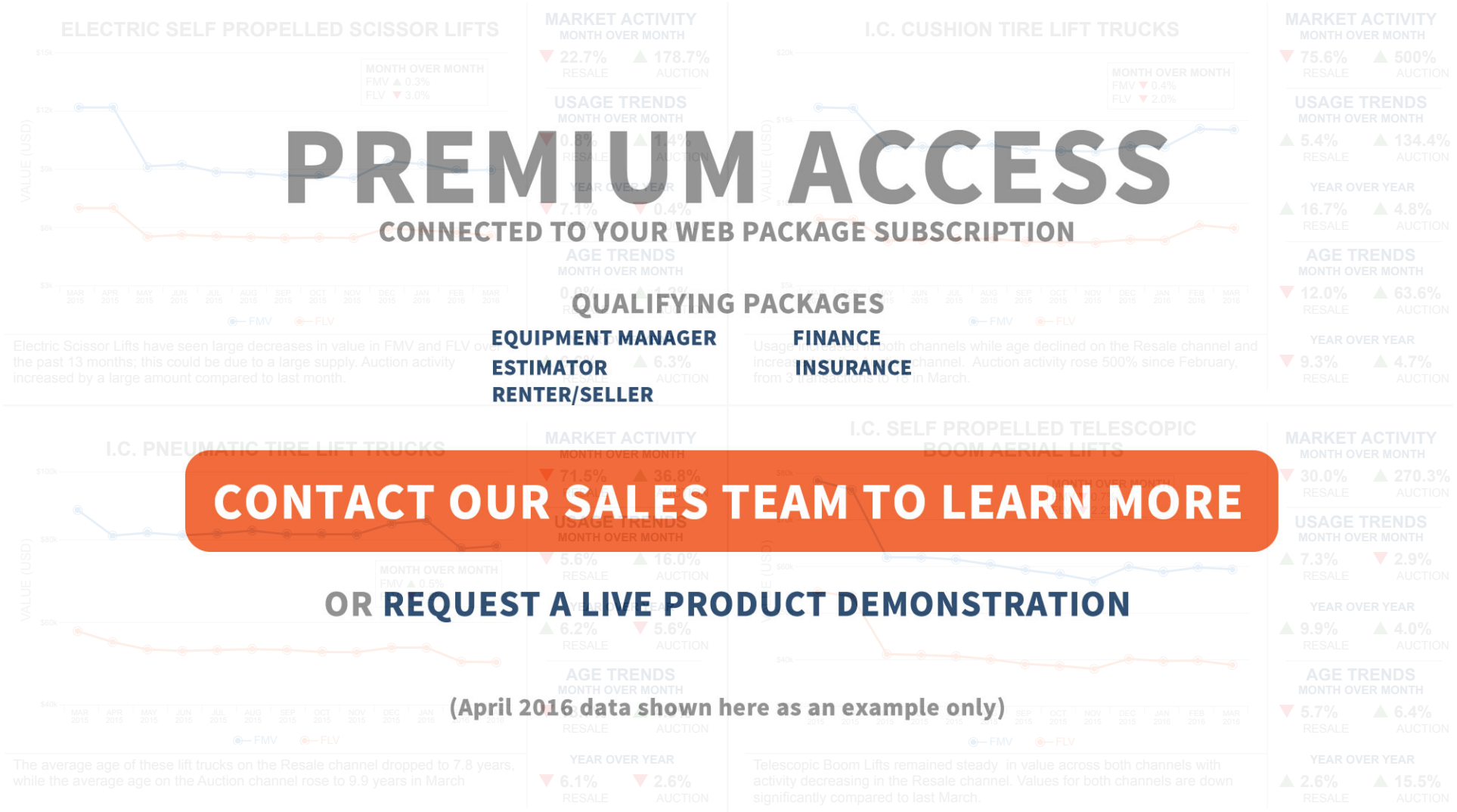
Values and volume should remain relatively even for next month across both channels due to the stagnation in the summer months..

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▼ 0.1% RESALE	▲ 36.9% AUCTION	▲ 1.1% RESALE	▼ 2.2% AUCTION	▼ 0.9% RESALE	▲ 15.8% AUCTION
YEAR OVER YEAR	▼ 16.2% RESALE	▼ 1.2% AUCTION	▲ 5.5% RESALE	▲ 2.5% AUCTION	▼ 1.8% RESALE	▼ 21.5% AUCTION

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AGRICULTURE

OVERALL | TYPE TRENDS | BRAND TRENDS | REGIONAL TRENDS

How is the Price Stability INDEX calculated?

MARKET ACTIVITY

$10,768,750,055
MARKET VALUE

130,319
ASSETS

YEAR OVER YEAR MARKET METRICS

	FMV	FLV
VALUES	▼ 4.9%	▼ 5.5%
VOLUME	▲ 32.2% RESALE	▲ 12.8% AUCTION

MONTH OVER MONTH MARKET METRICS

	FMV	FLV
VALUES	▼ 4.7%	▼ 4.9%
VOLUME	▲ 8.3% RESALE	▼ 6.7% AUCTION

MONTH OVER MONTH PRICE STABILITY INDEX ™

95.74

95 ▼ 105

DEFLATED | STABLE | INFLATED

MARKET PERFORMANCE

In May, average FMV and FLV prices took a sharp turn towards the down side compared to April. Average prices were also down compared to May 2016 to a similar extent. A Price Stability Index™ of 94.74 shows this is a below average value for deflation. Values did not increase slightly as we expected from the previous market report.

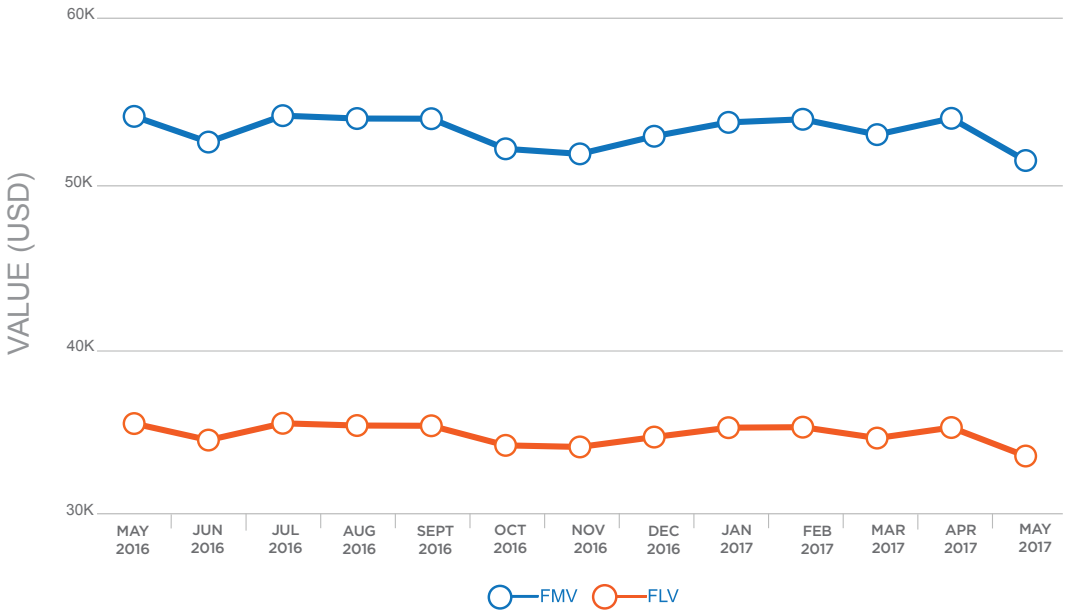
MARKET HIGHLIGHTS

- Average age in the auction channel was up 22.2% since May 2016 and flat over April. As for the resale channel, average age was higher since April 2017 and May 2016.
- Average meter hours in the resale channel were up month over month and year over year.
- The resale channel also experienced an increase in market activity since April this year and May last year.

MARKET FORECAST

The increases we saw in May for market activity coincide with strong demand for new equipment. As this demand is accommodated by the market,, we expect the higher prices for new equipment to eventually reach the resale and auction channels.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▲ 8.3% RESALE	▼ 6.7% AUCTION	▲ 5.4% RESALE	▼ 0.1% AUCTION	▲ 16.7% RESALE	▼ 4.0% AUCTION
YEAR OVER YEAR	▲ 32.2% RESALE	▲ 12.8% AUCTION	▲ 8.0% RESALE	▲ 22.2% AUCTION	▲ 14.8% RESALE	▼ 57.7% AUCTION

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COMMERCIAL TRUCK

How is the Price Stability INDEX calculated?

MARKET ACTIVITY

$2,321,625,940
MARKET VALUE

58,429
ASSETS

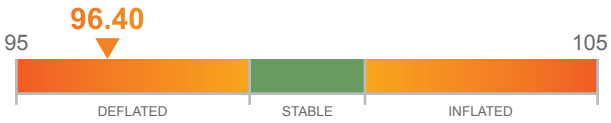
YEAR OVER YEAR MARKET METRICS

VALUES	▼ 7.3% FMV	▼ 6.8% FLV
VOLUME	▼ 16.2% RESALE	▼ 21.2% AUCTION

MONTH OVER MONTH MARKET METRICS

VALUES	▲ 0.1% FMV	▼ 1.3% FLV
VOLUME	▼ 0.1% RESALE	▲ 74.7% AUCTION

MONTH OVER MONTH PRICE STABILITY INDEX ™



MARKET PERFORMANCE

FMV was up for the market during May at a minimal percentage, which coincides with the minimal drop in volume. Average age was relatively stagnant month over month as well.

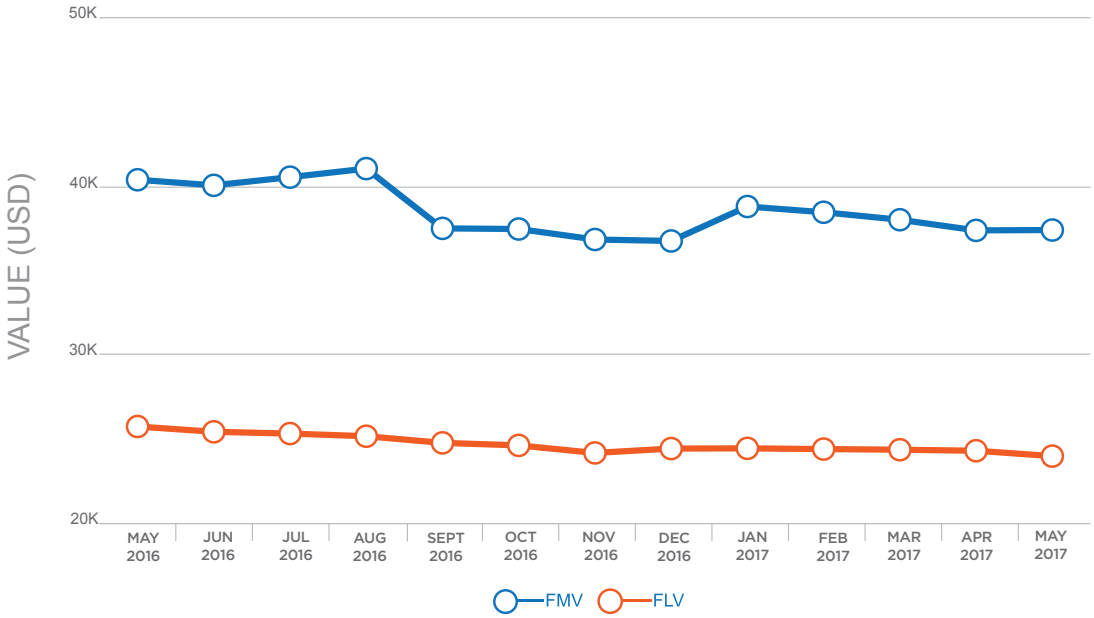
MARKET HIGHLIGHTS

- 'FMV was down 7.3% from last year while both average age and usage increased over 10% year over year.
- The auction channel showed more fluctuation than resale as the month over month drop was 1.3% with a 74.7% increase in volume during May.
- Both average age and usage increased month over month and year over year on the auction channel validating the FLV drops.

MARKET FORECAST

With minimal FMV and FLV changes during May, expect the resale channel to increase while auction continues to drop with the higher volume continues.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▼ 0.1% RESALE	▲ 74.7% AUCTION	▲ 0.5% RESALE	▲ 46.7% AUCTION	▼ 4.6% RESALE	▲ 18.3% AUCTION
YEAR OVER YEAR	▼ 16.2% RESALE	▼ 21.2% AUCTION	▲ 10.9% RESALE	▲ 16.9% AUCTION	▲ 15.4% RESALE	▲ 9.7% AUCTION

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APPENDIX

INTRODUCTION

The EquipmentWatch Market Report is a compilation of a wide array of EquipmentWatch's data, designed to bring you an in-depth look at used equipment markets over the last month.

This Appendix is designed to answer your questions regarding this report. Here we define and illustrate how we think about values, market activity, age, Usage, and regional influence for the most common types of equipment seen on used markets across North America.

OUR DATA

Selection Criteria for OEMs and Subtypes

EquipmentWatch tracks Resale and Auction prices and activity for over 15,000 models across 389 manufacturers throughout North America. With over $800 billion in collected equipment transactions, EquipmentWatch is your primary source for intelligence regarding used equipment markets.

The data in this report is divided into four distinct equipment markets: Construction, Lift/Access, Agriculture, and Commercial Trucks. For each market, we selected the top equipment types based on their market share from January 2015 to December 2015. They're listed in the table to the right.

Construction	Lift/Access	Agriculture	Commercial Trucks
4-Wd Articulated Wheel Loaders	Electric Self Propelled Scissor Lifts	Track Tractors	Heavy Duty: Conventional - Sleeper (Heavy Tractor)
Articulated Frame Graders	I.C. Pneumatic Tire Lift Trucks	Balers	Heavy Duty: Conventional - Day Cab (Heavy Tractor)
Articulated Rear Dumps	I.C. Self Propelled Telescopic Boom Aerial Lifts	Combines	Heavy Duty: Conventional - Day Cab (Heavy Cab Chassis)
Compact Track Loaders	I.C. Self-Propelled Articulating Boom Aerial Lifts	Corn Headers	Medium Duty: Conventional - Day Cab (Cab Chassis)
Crawler Mounted Compact Excavators	Telescoping Boom Rough Terrain Lift Trucks	Wheel Tractors	Medium Duty: Cabover - Day Cab (Cab Chassis)
Crawler Mounted Hydraulic Excavators	I.C. Cushion Tire Lift Trucks	Planters	Medium Duty: Crew (Cab Chassis)
Large Generator Sets			
Single Drum Vibratory Compactors			
Skid Steer Loaders			
Standard Crawler Dozers			
Tandem Vibratory Compactors			
Tractor-Loader-Backhoes			

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APPENDIX

We have also limited the scope of the EquipmentWatch Market Report to the following brands in each market:

Construction	Lift/Access	Agriculture	Commercial Truck
Bobcat	Caterpillar	Deere	International
Case	Genie	Case IH	Freightliner
Caterpillar	JLG	New Holland	Volvo
Deere	Sky Trak	Massey Ferguson	Kenworth
Komatsu	Skyjack	Challenger	Peterbilt
Volvo	Hyster	Kubota	Hino

THE EQUIPMENTWATCH PRICE STABILITY INDEX™

Academic justification

The EquipmentWatch Price Stability Index™ is a new metric for understanding used equipment markets for used heavy equipment. It measures resale price capacity based on the movement of market prices and market activity among the equipment types and manufacturers presented above.

Methodology and Calculation

The EquipmentWatch Price Stability Index™ is based on the Laspeyres Index, one of the many economic indices used to monitor changes in prices over time. To calculate it, we use the framework provided by the Laspeyres Index:

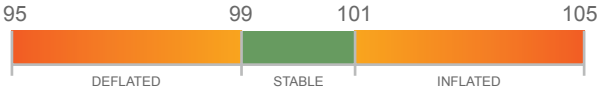
$$P_L = \frac{\sum(p_{c,t_n}) * (q_{c,t_0})}{\sum(p_{c,t_0}) * (q_{c,t_0})}$$

This equation sums the product of prices in the current month and quantity of the previous month and divides that by the product of prices in the previous month and quantity in the previous month.

We have modified this method to track the change in prices for each equipment type from month-to-month against the change in market activity for each equipment type month to month.

Interpretation

The EquipmentWatch Price Stability Index™ can be thought of as an index of price capacity. In more formal terms, it measures how efficiently used markets adjust to equilibrium given previous adjustments in prices and market activity. There are three primary ranges in the EquipmentWatch Price Stability Index™, as noted below:



When the EquipmentWatch Price Stability Index™ is higher than 101, that indicates that equipment is valued at a higher level than expected, given last month's prices and amount of market activity. We categorize this range as "Inflated".

When the EquipmentWatch Price Stability Index™ is lower than 99, it indicates that equipment is valued at a lower level than expected, given last month's prices and market activity. We categorize this range as "Deflated".

When the EquipmentWatch Price Stability Index™ is between 99 and 101, it is typically demonstrating that equipment prices and market activity are moving appropriately towards market equilibrium. We categorize this range as "Stable".

It is important to note that a higher rating on EquipmentWatch Price Stability Index™ does not necessarily imply that used markets are better than a lower rating. For some, price inflation is desirable; for others, it is undesirable. However, all parties involved in buying or selling equipment on used markets can use the EquipmentWatch Price Stability Index™ to easily understand how prices in a particular region or equipment channel are moving relative to the previous month.

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APPENDIX

SECTION GUIDES

The Introduction

In the top left, we exhibit a tally of the estimated market value of market activity last month in the Resale channel and Auction channel.

In the main table, we display market activity and assets for each market, along with month over month and year over year changes in Fair Market Value and Forced Liquidation Value.

Overall Trends

This page is an overview of each channel. The graph highlights an overall FMV and FLV trend line for all of the equipment types and manufacturers in the report for the last 13 months. It also displays very general month over month and year over year trends across the entire channel.

Type Trends

This page subsets the analysis of the previous page across each of the key equipment types in this report.

Brand Trends

This page shows some of the key month over month trends for the manufacturers represented in this report, including equipment values, Usage, market activity, and age trends.

Regional Trends

This page shows the EquipmentWatch Price Stability Index™ for each of the 14 regions, using the same calculation method as the EquipmentWatch Price Stability Index™ shown on the first page of the report. The states and provinces which make up each region are listed in the table to the right.

Note that due to regional disparity in market activity, some regions with very little or no market activity in the last month are excluded from the analysis. These are marked with “NA” on the map.

Country	Region	State/Province
USA	A	CT, DE, MA, ME, NH, NJ, MY, RI, VT
USA	B	MD, P, VA, WV
USA	C	AL, FL, GA, KY, MS, NC, SC, TN
USA	D	IL, IN, MI, OH, WI
USA	E	IA, KS, MO, NE
USA	F	AR, LA, OK, TX
USA	G	AZ, CO, NM, UT
USA	H	ID, MN, MT, ND, SD, WY
USA	I	CA, NV, OR, WA
USA	J	HI
USA	K	AK
CAN	L	NT, NU, YT
CAN	M	AB, BC, MB, SK
CAN	N	NB, NL, NS, ON, PE, QC

FAQS

Why did you limit the equipment types in this report?

EquipmentWatch tracks market activity for over a hundred unique equipment types each month. For each channel, we selected the most popular equipment types, based on the frequency of appearance on the resale and auction channels.

Why are there only 24 manufacturers in this report?

EquipmentWatch tracks market activity for almost 400 unique manufacturers each month. For each market, we selected the top 6 manufacturers. As the markets shift and prominence on used markets changes, we will adjust our selections accordingly.

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APPENDIX

Why don't you use OLV?

Orderly Liquidation Value, or OLV, is a third major category of values. These are the values of an asset given a single seller and multiple potential buyers given a long or indefinite timeframe in which to dispose. Given the lack of clarity around the time dimension, we have chosen not to make assumptions about the orderly liquidation process. However, OLV is typically between FLV and FMV in gross value.

IMPORTANT DEFINITIONS

Fair Market Value (FMV): the value of an asset sold to a single buyer under no compulsion.

Forced Liquidation Value (FLV): the value of an asset sold at a properly advertised and conducted auction in which the seller is under compulsion to sell on an as-is, where-is basis as of a specific date.

Market Activity: A measure of the total number of observations collected by EquipmentWatch, including publicly-available dealer listings, auction results, and final sales data.

Meter Reads: A measure of Usage that varies by equipment market. For most equipment types, this represents engine hours at the time of observation.

Age: the age of an asset, based on model year and the year of observation.

ABOUT EQUIPMENTWATCH

EquipmentWatch is the trusted source for heavy equipment data and intelligence. EquipmentWatch produces the leading database information products for the construction equipment industry and is the world leader in heavy construction research and serves more than 15,000 professional, high-volume users of construction and lift-truck data. Our online and print products are valuable tools in decisions surrounding the purchase, valuation, operation, and disposal of equipment.

For nearly 50 years, EquipmentWatch has served contractors, equipment manufacturers, dealers, rental companies, lenders and insurers, and government agencies involved in heavy civil construction.

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