MARKET DATA: MARCH 2018

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

$32,127,698,191

RESALE
$31,875,746,787
376,363 Assets

AUCTION
$251,951,404
8,651 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**.

MARKET SUMMARY

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

How is the Price Stability INDEX calculated?

MARKET ACTIVITY	YEAR OVER YEAR MARKET METRICS	MONTH OVER MONTH MARKET METRICS	PRICE STABILITY INDEX ™
CONSTRUCTION $15,598,142,592 MARKET VALUE 156,152 ASSETS	VALUES ▼ 6.5% FMV ▼ 8.0% FLV VOLUME ▲ 43.3% RESALE ▼ 1.1% AUCTION	VALUES ▼ 0.7% FMV ▼ 1.4% FLV VOLUME ▲ 8.1% RESALE ▲ 2.4% AUCTION	99.20 (95 – 105) DEFLATED / STABLE / INFLATED
LIFT/ACCESS $1,104,486,026 MARKET VALUE 33,270 ASSETS	VALUES ▼ 6.6% FMV ▲ 3.3% FLV VOLUME ▼ 4.7% RESALE ▲ 49.0% AUCTION	VALUES ▼ 0.6% FMV ▲ 0.5% FLV VOLUME ▼ 13.5% RESALE ▲ 85.8% AUCTION	99.82 (95 – 105) DEFLATED / STABLE / INFLATED
AGRICULTURE $12,559,240,250 MARKET VALUE 126,771 ASSETS	VALUES ▲ 1.5% FMV ▲ 0.6% FLV VOLUME ▲ 67.2% RESALE ▼ 0.7% AUCTION	VALUES ▼ 0.5% FMV ▼ 0.3% FLV VOLUME ▲ 0.6% RESALE ▲ 25.2% AUCTION	99.49 (95 – 105) DEFLATED / STABLE / INFLATED
COMMERCIAL TRUCK $2,865,829,323 MARKET VALUE 68,821 ASSETS	VALUES ▼ 10.9% FMV ▼ 4.0% FLV VOLUME ▼ 24.8% RESALE ▲ 56.5% AUCTION	VALUES ▼ 1.1% FMV ▲ 3.4% FLV VOLUME ▼ 23.8% RESALE ▲ 146.5% AUCTION	97.78 (95 – 105) DEFLATED / STABLE / INFLATED

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Did you miss a previous Market Report?

Click any of the buttons below to download the report

March 2018

December 2017

February 2018

November 2017

January 2018

October 2017



CONSTRUCTION

How is the Price Stability INDEX calculated?

MARKET ACTIVITY

$15,598,142,592
MARKET VALUE

156,152
ASSETS

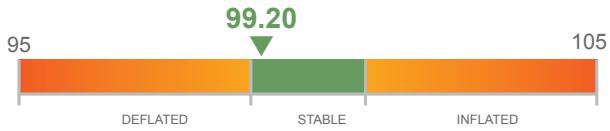
YEAR OVER YEAR MARKET METRICS

VALUES	▼ 6.5% FMV	▼ 8.0% FLV
VOLUME	▲ 43.3% RESALE	▼ 1.1% AUCTION

MONTH OVER MONTH MARKET METRICS

VALUES	▼ 0.7% FMV	▼ 1.4% FLV
VOLUME	▲ 8.1% RESALE	▲ 2.4% AUCTION

MONTH OVER MONTH PRICE STABILITY INDEX ™



MARKET PERFORMANCE

Construction markets in early 2018 continue their strong showing, with mild declines in average FMV and FLV countering surprising month over month growth in resale and auction market activity.

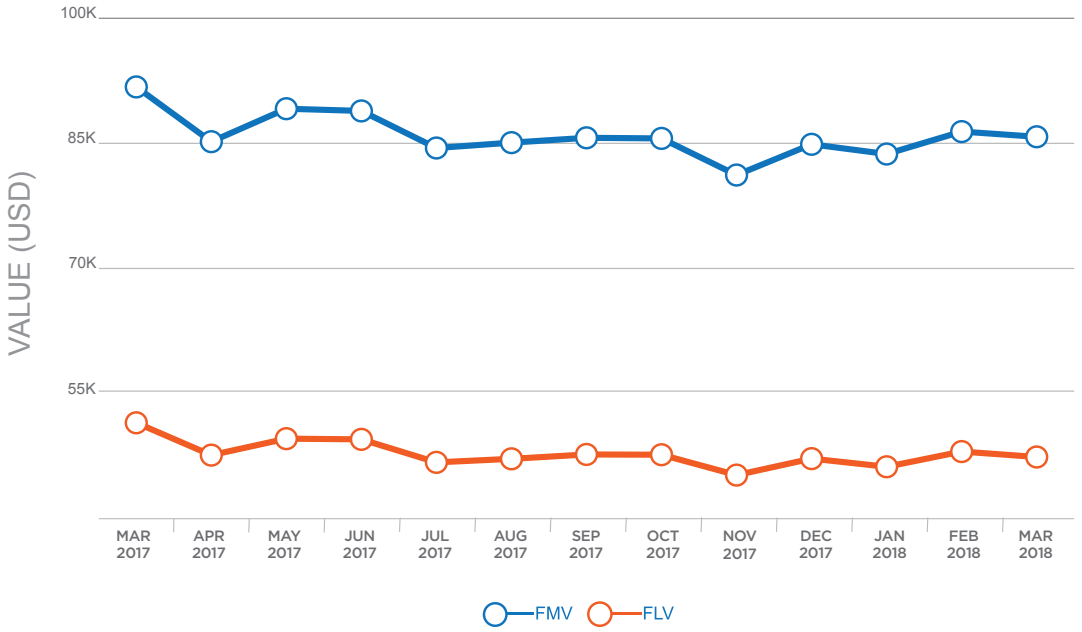
MARKET HIGHLIGHTS

- Significant month-over-month climbs in average age (31%) and average usage (24%) on the auction channel are common in March, as the auction markets recover from the buying frenzies of February.
- Auction activity increased by 2.4% from February to March, a trend that has emerged in recent years as more auction houses attempt to avoid direct competition with the February mega-auctions in Florida.
- After consistent declines in average FMV since summer 2017, values on the resale channel appear to be stabilizing in the first few months of 2018.

MARKET FORECAST

April is typically the start of a slump in secondary market activity for construction equipment, as the majority of project owners are well into projects and equipment disposition is being planned for the fall. As a result, we expect to see average FMV and FLV decline alongside resale and auction market activity for the next few months.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▲ 8.1% RESALE	▲ 2.4% AUCTION	▼ 2.5% RESALE	▲ 31.3% AUCTION	▼ 3.4% RESALE	▲ 24.0% AUCTION
YEAR OVER YEAR	▲ 43.3% RESALE	▼ 1.1% AUCTION	▲ 5.0% RESALE	▼ 4.7% AUCTION	▼ 5.1% RESALE	▲ 6.6% AUCTION

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LIFT/ACCESS

OVERALL | TYPE TRENDS | BRAND TRENDS | REGIONAL TRENDS

How is the Price Stability INDEX calculated?

MARKET ACTIVITY

$1,104,486,026
MARKET VALUE

33,270
ASSETS

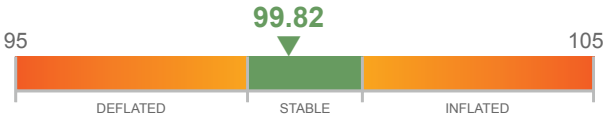
YEAR OVER YEAR MARKET METRICS

VALUES	▼ 6.6% FMV	▲ 3.3% FLV
VOLUME	▼ 4.7% RESALE	▲ 49.0% AUCTION

MONTH OVER MONTH MARKET METRICS

VALUES	▼ 0.6% FMV	▲ 0.5% FLV
VOLUME	▼ 13.5% RESALE	▲ 85.8% AUCTION

PRICE STABILITY INDEX ™



MARKET PERFORMANCE

Lift auction values increased again in March, but only a slight increase of 0.5%, while resale values declined by 0.6%. Resale market activity decreased by -13.5% in March, while auction activity had a 85.8% increase in March, when compared to February.

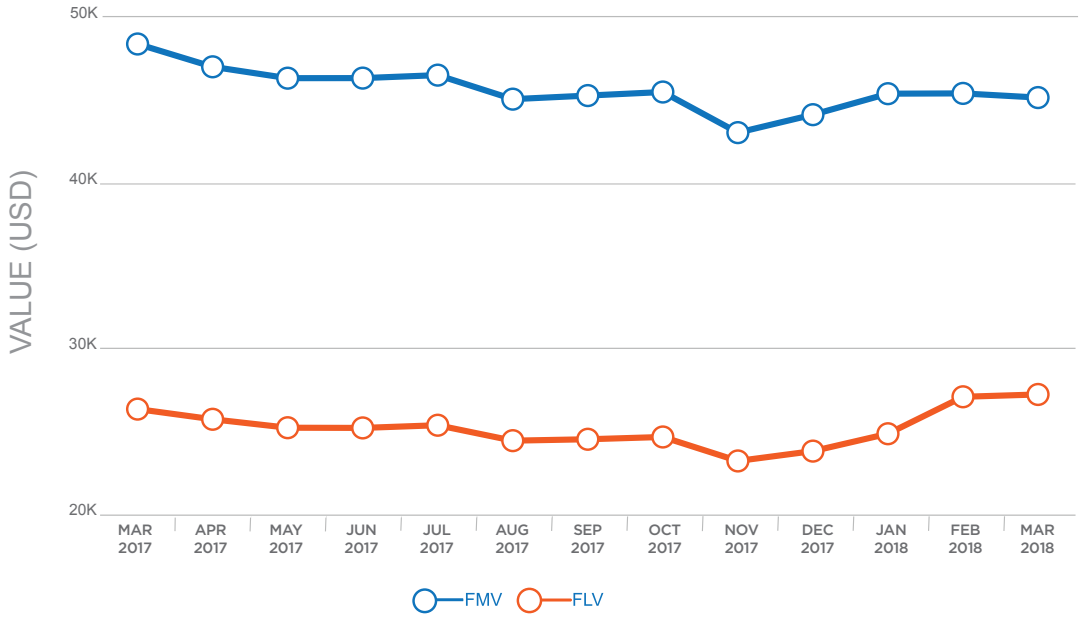
MARKET HIGHLIGHTS

- Auction market activity in March increased by 85.8% over February, this is what we expected due to the Ritchie Bros. auctions. March is usually the highest volume month for auctions across the U.S. and Canada.
- Average age decreased on the resale channel, while increased on the auction channel, while average utilization saw the opposite trend occur, with average age increasing in the resale channels and average utilization decreasing in the auction channels.
- The overall market value and the number of assets decreased by about -5% and -13%, respectively, in March. Those declines are largely related to resale market activity decreasing 13.5% in March.

MARKET FORECAST

Looking forward to April data, we should see very sharp decreases in auction market activity due to the large decline in the number of Ritchie Bros. auctions. February and March are always the busiest auction months. We should start to see FMVs increasing in the warmer regions, but maybe not in the northern regions due to recent unseasonably cold weather.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▼ 13.5% RESALE	▲ 85.8% AUCTION	▼ 3.2% RESALE	▲ 13.3% AUCTION	▲ 1.6% RESALE	▼ 8.7% AUCTION
YEAR OVER YEAR	▼ 4.7% RESALE	▲ 49.0% AUCTION	▲ 1.7% RESALE	▼ 9.2% AUCTION	▲ 12.9% RESALE	▼ 3.9% AUCTION

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AGRICULTURE

OVERALL | TYPE TRENDS | BRAND TRENDS | REGIONAL TRENDS

How is the Price Stability INDEX calculated?

MARKET ACTIVITY

$12,559,240,250
MARKET VALUE

126,771
ASSETS

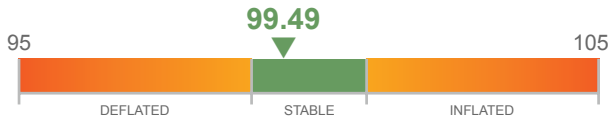
YEAR OVER YEAR MARKET METRICS

VALUES	▲ 1.5% FMV	▲ 0.6% FLV
VOLUME	▲ 67.2% RESALE	▼ 0.7% AUCTION

MONTH OVER MONTH MARKET METRICS

VALUES	▼ 0.5% FMV	▼ 0.3% FLV
VOLUME	▲ 0.6% RESALE	▲ 25.2% AUCTION

PRICE STABILITY INDEX ™



MARKET PERFORMANCE

The resale channel, shows a marginal increase in volume compared to last month, however the volume change compared to last year is significantly larger indicating more equipment on the market. The auction channel shows large gains relative to last month, however compared to last year there was a slight decrease of equipment on the channel.

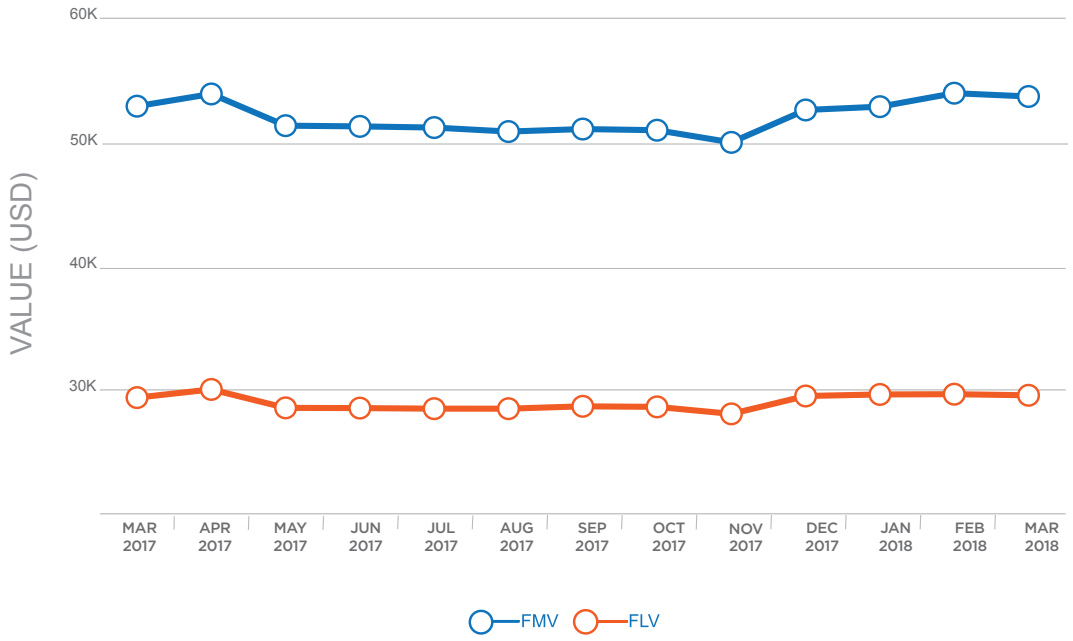
MARKET HIGHLIGHTS

- Resale market show the biggest gains this month with increases in volume, age, and usage. Relative to last year values have seen an increase.
- Overall average age for equipment has increased across all channels. The resale channel saw the largest gain in age relative to last year, while auction saw the greatest gain in age relative to last year.
- Usage has increased on the resale channel with significant gains of 40.3% relative to last year. The auction channel shows decreases in utilization; utilization decreased by 43.6% compared to last year.

MARKET FORECAST

Changes in the agricultural market tend to correlate with planting and harvesting season. April and May are usually planting months. So, expect values to marginally decrease for these months until the beginning of harvesting season for major crops.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▲ 0.6% RESALE	▲ 25.2% AUCTION	▲ 0.9% RESALE	▲ 8.8% AUCTION	▲ 1.6% RESALE	▼ 13.9% AUCTION
YEAR OVER YEAR	▲ 67.2% RESALE	▼ 0.7% AUCTION	▲ 13.6% RESALE	▲ 3.3% AUCTION	▲ 40.3% RESALE	▼ 43.6% AUCTION

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COMMERCIAL TRUCK

How is the Price Stability INDEX calculated?

MARKET ACTIVITY

$2,865,829,323
MARKET VALUE

68,821
ASSETS

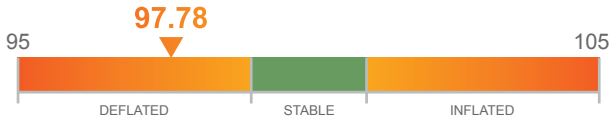
YEAR OVER YEAR MARKET METRICS

VALUES	▼ 10.9% FMV	▼ 4.0% FLV
VOLUME	▼ 24.8% RESALE	▲ 56.5% AUCTION

MONTH OVER MONTH MARKET METRICS

VALUES	▼ 1.1% FMV	▲ 3.4% FLV
VOLUME	▼ 23.8% RESALE	▲ 146.5% AUCTION

MONTH OVER MONTH PRICE STABILITY INDEX ™



MARKET PERFORMANCE

This was the third month in a row with a clear shift in activity from the resale to auction channel as FMV continued to drop and FLV increased. The average age was up for both channels, but much higher on auction while usage dropped for resale and increased again for auction.

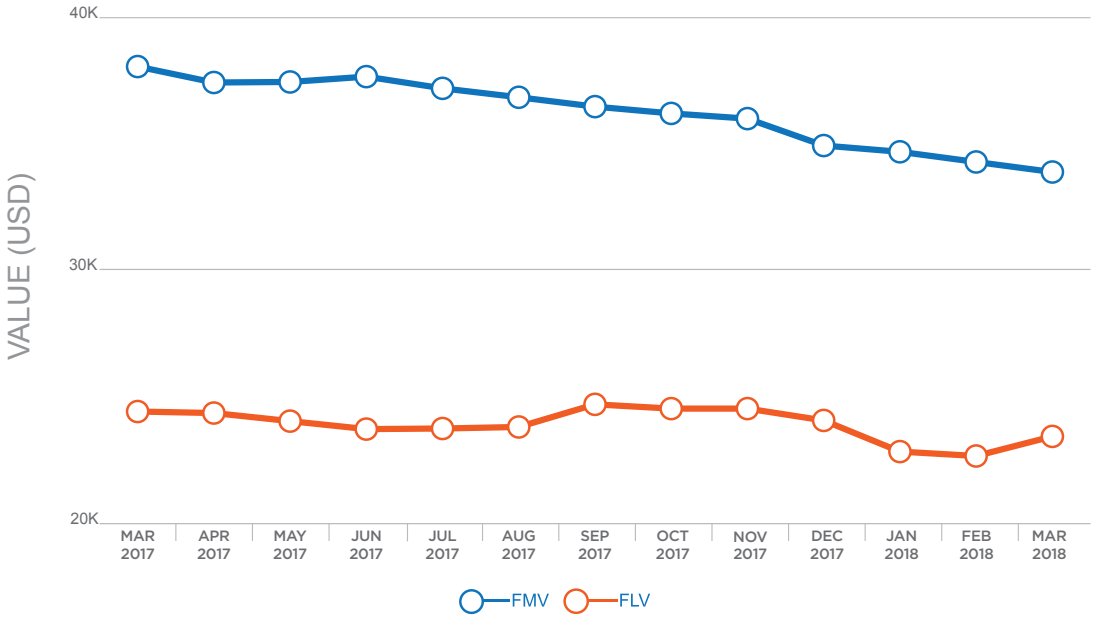
MARKET HIGHLIGHTS

- Volume for the resale channel was down for the month nearly the same percentage as it was year over year indicating a much slower month than usual.
- As auction channel volume increased, so did the FLV indicating the assets selling changed as indicated by average age and usage for the month.
- Surprisingly, the auction channel volume increased significantly higher than the previous month which was unexpected as seen with the 56.5% year over year increase.

MARKET FORECAST

FLV should continue to remain above previous month's averages for the next three months moving into the summer season.

FMV AND FLV TRENDS



	VOLUME CHANGE		AVERAGE AGE		USAGE	
MONTH OVER MONTH	▼ 23.8% RESALE	▲ 146.5% AUCTION	▲ 1.0% RESALE	▲ 20.3% AUCTION	▼ 3.1% RESALE	▲ 14.2% AUCTION
YEAR OVER YEAR	▼ 24.8% RESALE	▲ 56.5% AUCTION	▲ 8.2% RESALE	▲ 7.3% AUCTION	▼ 20.7% RESALE	▲ 8.9% 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:

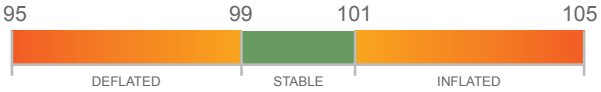
$$P_L = \frac{\sum(p_{c,t_n}) * (q_{c,t_0})}{\sum(p_{c,t_0}) * (q_{c,t_0})}$$

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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