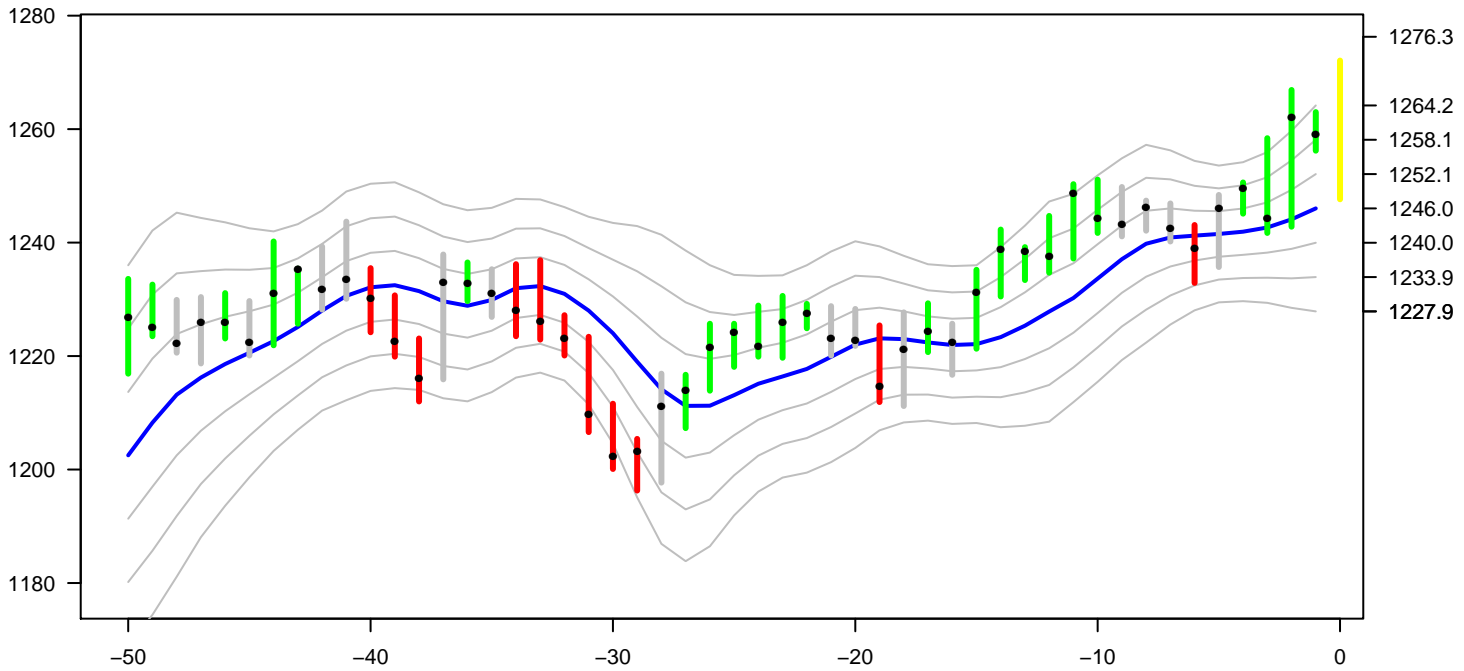
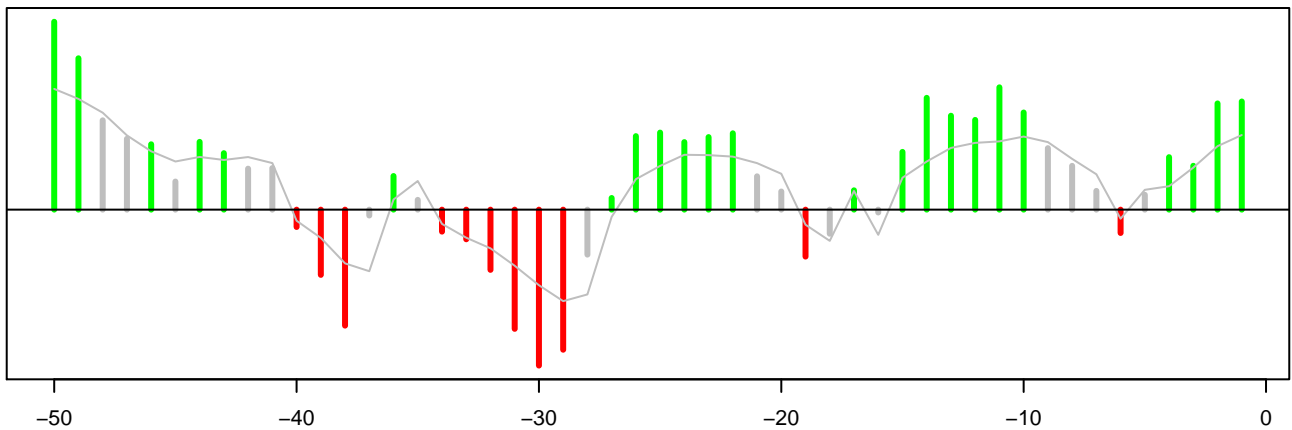


Metal Price Analytics: Precious Metals Report 24-Dec-2018

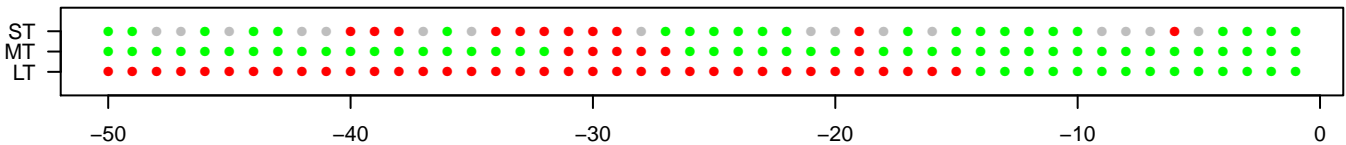
Gold (G\$SP) Price and Factor Model Trend Channel.
 Last Price History Date: 21 Dec 2018. Expected region for the next day: Yellow Bar.



Short Term Signal Oscillator. Green: Bullish. Red: Bearish. Grey: Neutral, uncertainty in direction.



Short (ST), Medium (MT) and Long Term (LT) Signals



Gold (G\$SP). Channel Alert: The price may move above the upper channel.
 The short term signal is green, bullish.
 The medium term signal is green, bullish.
 The long term signal is green, bullish.

The trend channel is constructed from a factor model that looks at the dynamic relationship between related markets. Among the factors considered in the model are Currencies, U.S. Bonds, Indexes. These weightings can vary through time and are recalculated daily using lasso and ridge regression. The short term signal is obtained from the Signal Oscillator which is calculated using an algorithm on the price movement around the Factor Trend Channel. Signals are also given for the medium and long term trend. A short, medium and long term signal alert is given warning of a possible trend change. A channel alert is given warning that prices may move above or below the trend channel.

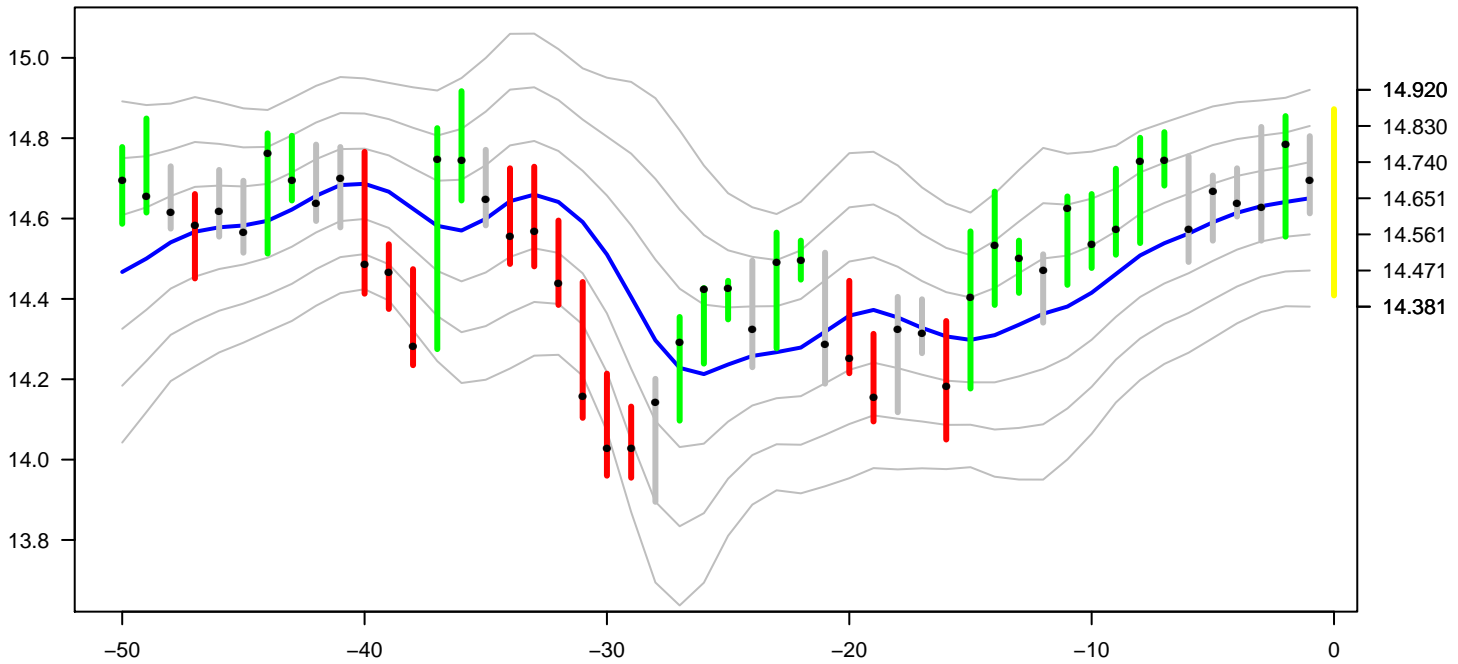
The signals are the output of an algorithm on a factor model and price and are not to be taken as investment advice. They must be viewed together with fundamental analysis and breaking news. Past performance is not indicative of future results. Every effort has been taken to present the correct information, however, neither Metal Price Analytics Ltd nor its staff are liable to any error that may occur. Historical Data may be subject to revision which may affect the signal.

Metal Price Analytics Ltd

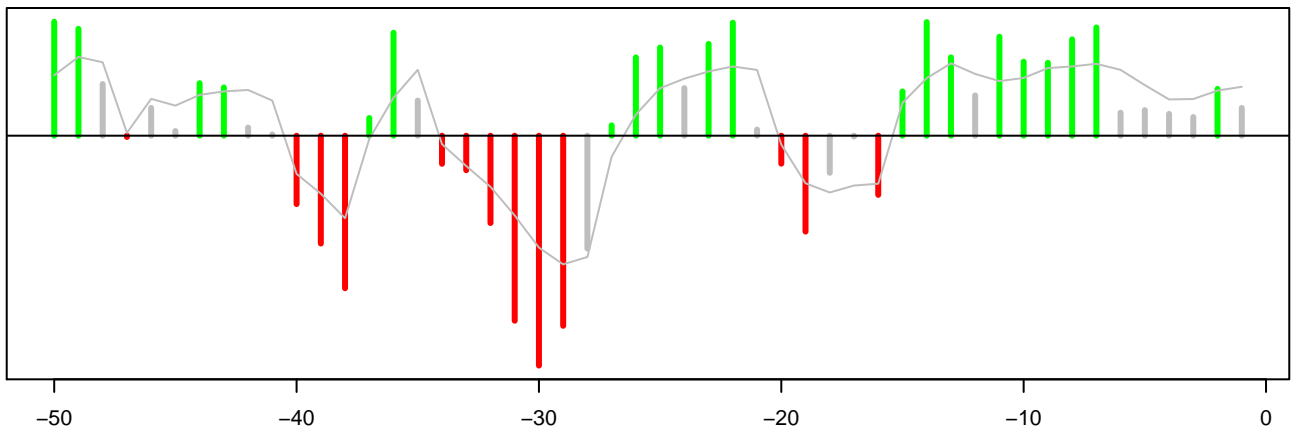


Metal Price Analytics: Precious Metals Report 24-Dec-2018

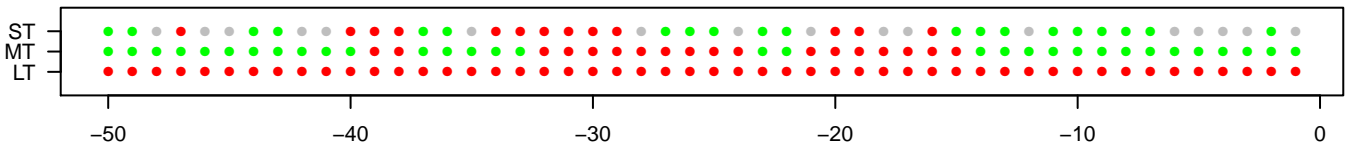
Silver (S\$SP) Price and Factor Model Trend Channel.
 Last Price History Date: 21 Dec 2018. Expected region for the next day: Yellow Bar.



Short Term Signal Oscillator. Green: Bullish. Red: Bearish. Grey: Neutral, uncertainty in direction.



Short (ST), Medium (MT) and Long Term (LT) Signals



Silver (S\$SP)

The short term signal is grey, neutral.

The medium term signal is green, bullish.

The long term signal is red, bearish

The trend channel is constructed from a factor model that looks at the dynamic relationship between related markets.

Among the factors considered in the model are Currencies, U.S. Bonds, Indexes. These weightings can vary through time and are recalculated daily using lasso and ridge regression. The short term signal is obtained from the Signal Oscillator which is calculated using an algorithm on the price movement around the Factor Trend Channel. Signals are also given for the medium and long term trend. A short, medium and long term signal alert is given warning of a possible trend change.

A channel alert is given warning that prices may move above or below the trend channel.

The signals are the output of an algorithm on a factor model and price and are not to be taken as investment advice. They must be viewed together with fundamental analysis and breaking news.

Past performance is not indicative of future results.

Every effort has been taken to present the correct information, however, neither Metal Price Analytics Ltd nor its staff are liable to any error that may occur.

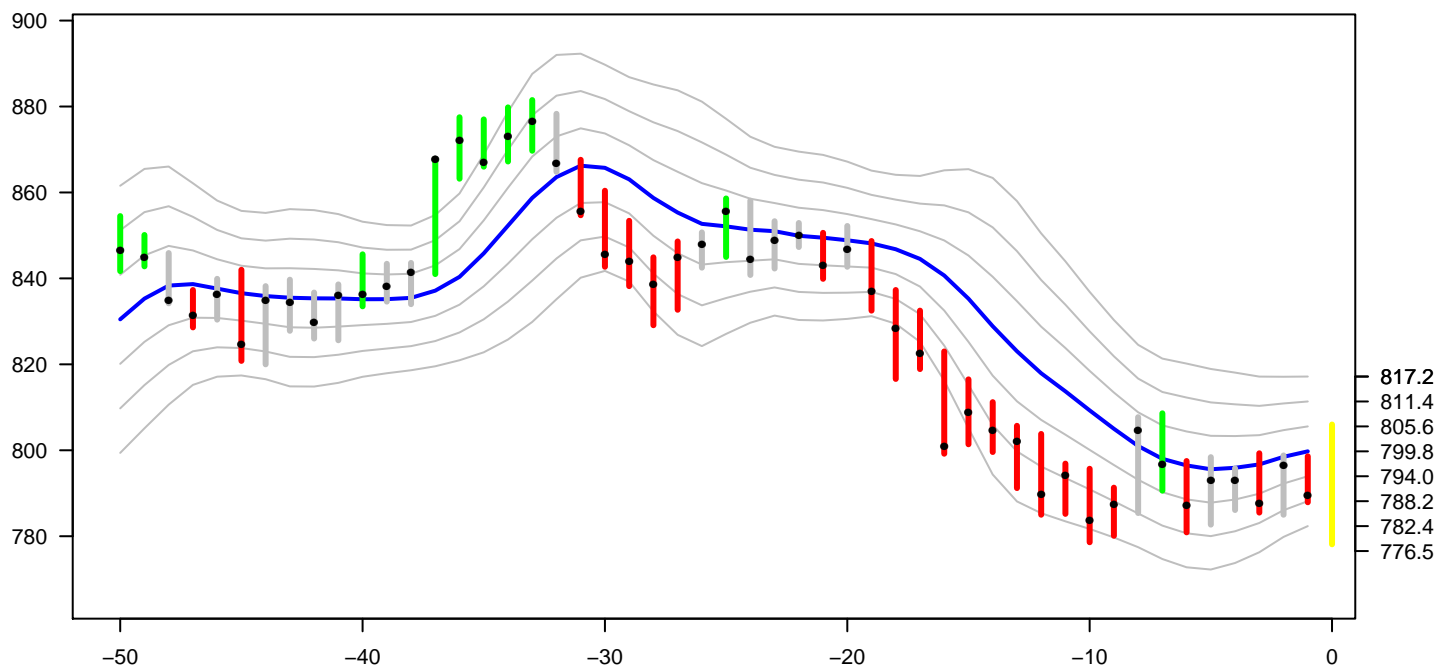
Historical Data may be subject to revision which may affect the signal.

Metal Price Analytics Ltd

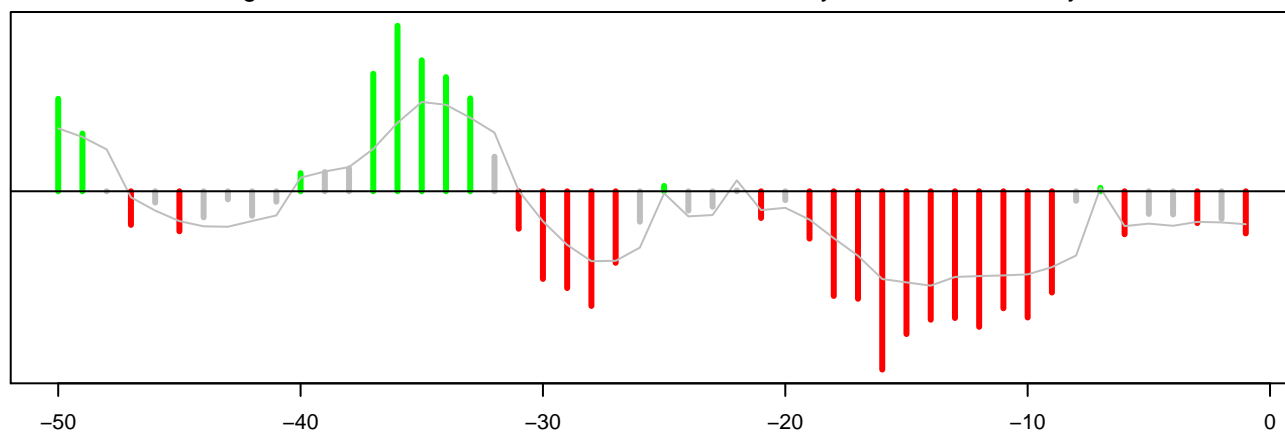


Metal Price Analytics: Precious Metals Report 24-Dec-2018

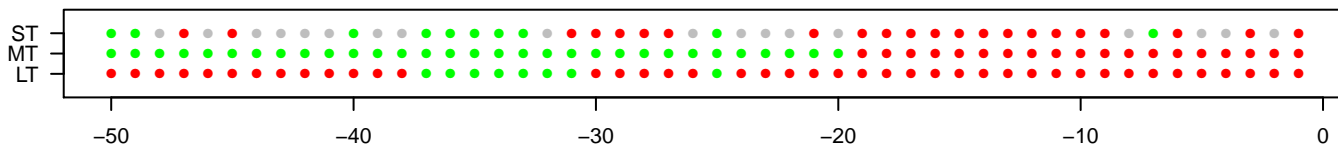
Platinum (PL) Price and Factor Model Trend Channel.
 Last Price History Date: 21 Dec 2018. Expected region for the next day: Yellow Bar.



Short Term Signal Oscillator. Green: Bullish. Red: Bearish. Grey: Neutral, uncertainty in direction.



Short (ST), Medium (MT) and Long Term (LT) Signals



Platinum (PL). Channel Alert: The price may move below the lower channel.
 The short term signal is red, bearish
 The medium term signal is red, bearish
 The long term signal is red, bearish

The trend channel is constructed from a factor model that looks at the dynamic relationship between related markets. Among the factors considered in the model are Currencies, U.S. Bonds, Indexes. These weightings can vary through time and are recalculated daily using lasso and ridge regression. The short term signal is obtained from the Signal Oscillator which is calculated using an algorithm on the price movement around the Factor Trend Channel. Signals are also given for the medium and long term trend. A short, medium and long term signal alert is given warning of a possible trend change. A channel alert is given warning that prices may move above or below the trend channel.

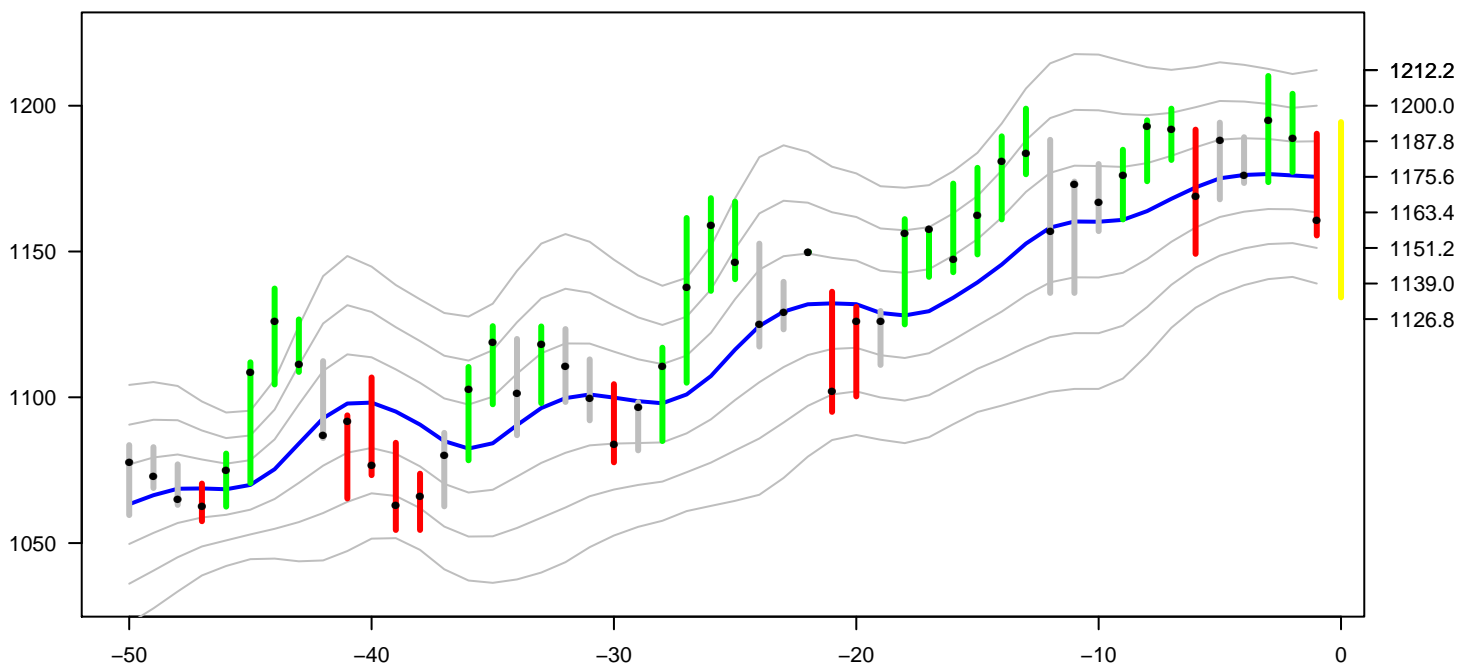
The signals are the output of an algorithm on a factor model and price and are not to be taken as investment advice. They must be viewed together with fundamental analysis and breaking news. Past performance is not indicative of future results. Every effort has been taken to present the correct information, however, neither Metal Price Analytics Ltd nor its staff are liable to any error that may occur. Historical Data may be subject to revision which may affect the signal.

Metal Price Analytics Ltd

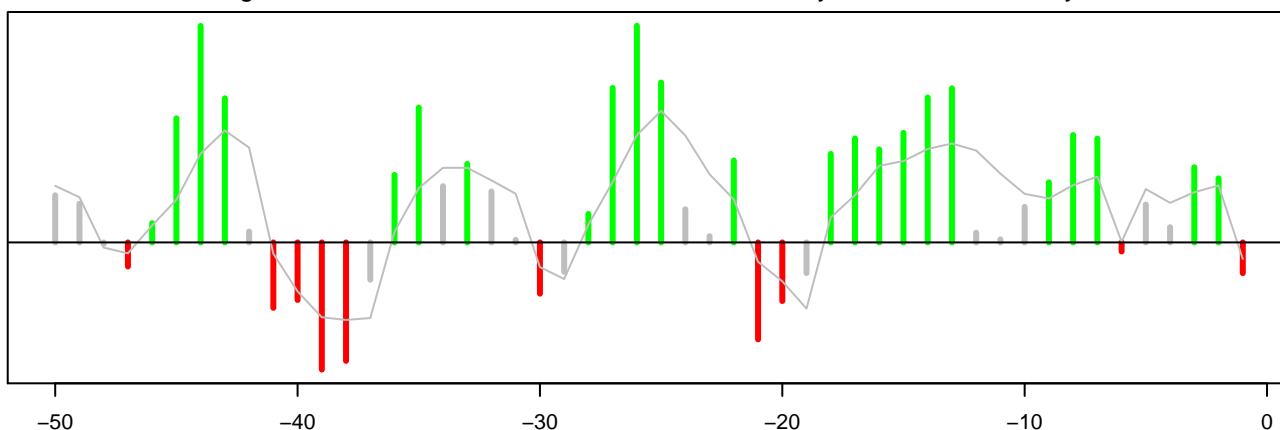


Metal Price Analytics: Precious Metals Report 24-Dec-2018

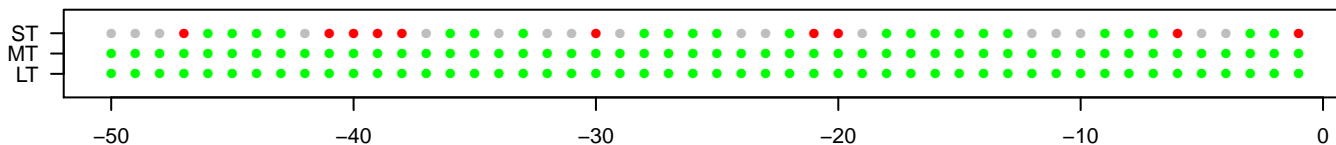
Palladium (PA) Price and Factor Model Trend Channel.
 Last Price History Date: 21 Dec 2018. Expected region for the next day: Yellow Bar.



Short Term Signal Oscillator. Green: Bullish. Red: Bearish. Grey: Neutral, uncertainty in direction.



Short (ST), Medium (MT) and Long Term (LT) Signals



Palladium (PA). Channel Alert: The price may move below the lower channel.
 The short term signal is red, bearish. The short term oscillator has turned negative.
 The medium term signal is green, bullish.
 The long term signal is green, bullish.

The trend channel is constructed from a factor model that looks at the dynamic relationship between related markets. Among the factors considered in the model are Currencies, U.S. Bonds, Indexes. These weightings can vary through time and are recalculated daily using lasso and ridge regression. The short term signal is obtained from the Signal Oscillator which is calculated using an algorithm on the price movement around the Factor Trend Channel. Signals are also given for the medium and long term trend. A short, medium and long term signal alert is given warning of a possible trend change. A channel alert is given warning that prices may move above or below the trend channel.

The signals are the output of an algorithm on a factor model and price and are not to be taken as investment advice. They must be viewed together with fundamental analysis and breaking news. Past performance is not indicative of future results. Every effort has been taken to present the correct information, however, neither Metal Price Analytics Ltd nor its staff are liable to any error that may occur. Historical Data may be subject to revision which may affect the signal.

Metal Price Analytics Ltd

