Crude oil and grains look bullish in the first quarter while precious metals may experience short-lived bounce before resuming downtrends. Base metals have completed the bounces and are expected to reverse their gains made in the last quarter of 2016. Outlook on softs are mixed, with sugar and coffee to rise while cocoa is expected to slide more.

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U.S. oil may rise to $58.76

U.S. oil may break a resistance at $55.02 per barrel and rise to $58.76 over the next three months, as suggested by its wave pattern, Fibonacci projection analysis and a wedge. The contract is riding on a wave C, the third of a three-wave cycle from the Feb. 11 low of $26.05. The Fibonacci projection analysis based on the length of the preceding wave A reveals an immediate resistance at $55.02, the 61.8 percent level. This barrier triggered a pullback towards the upper trendline of the wedge formed between June 8 and Dec. 12. The pullback has been almost totally reversed, signalling a continuation of the uptrend. The wedge is a bullish continuation pattern and this one suggests a target of $58.76. However, wave C could travel far above this level. At its full capacity, it may extend to $64.81.

The current cycle is against the preceding downtrend from the Aug. 28, 2013 high of $112.24, which consists of five waves. The fourth wave, labelled 4, having peaked at the May 6, 2015 high of $62.58. Wave theory indicates this peak may be approached. The pattern from Aug. 24, 2015 to Dec. 14, 2016 looked like an inverted head-and-shoulders before the drop from the Oct. 10 high of $51.93. It is more like a rounding bottom now. Whatever the pattern is, the signal is clear that oil has bottomed at $26.05. Support is at $52, a break below which could cause a loss to $48.98.
Brent oil may rise to $61.10

Brent oil may retest a resistance at $57.36 per barrel in three months, a break above which could lead to a gain to $61.10. The resistance is at the 61.8 percent Fibonacci projection level of an upward wave C, the third of a three-wave cycle from the January 20 low of $27.10. At its full capacity, the wave C may extend to $67.15, its 100 percent projection level. The current cycle followed the completion of a downward five-wave cycle from the Aug. 28, 2013 high of $117.34. The fourth wave, labelled 4, peaked at the May 6, 2015 high of $69.63. Wave theory indicates this peak could be approached. The chart from June 8 high of $52.80 looks like a wedge which has been confirmed as a bullish continuation pattern, indicating a target at $61.10. This wedge, along with the uptrend from $27.10, makes up a flag, which suggests a target above $69.63.

It seems all the analyses based on the daily chart point north. On the monthly chart, the current rally seems to be controlled by a set of Fibonacci projection levels and a set of retracements.

The retracement analysis is of the fall from the March 2012 high of $128.40 to $27.10, which reveals that oil has broken above the 23.6 percent level at $51.01. It is heading towards $65.80. The projection analysis is on the target of a downward wave C, the third of a three-wave cycle from the 2008 high of $147.50. It marks a lower target at $62.25, the 61.8 percent level. Oil may slide more to $51.30 should it drop below the Dec. 12 low of $53.15 (refer chart 1).
Spot gold may bounce to $1,210 before falling again next quarter

Spot gold may bounce to $1,210 per ounce before falling towards its Dec. 15 low of $1,122.35 in the next three months, as suggested by a Fibonacci retracement analysis, its wave pattern and a head-and-shoulders. The downtrend from the July 6 high of $1,374.91 has been controlled by a set of Fibonacci retracements on the uptrend from the Dec. 3, 2015 low of $1,045.85.

The 76.4 percent retracement of $1,124 has apparently worked as a strong support, which has successfully stopped the downtrend and caused a bounce. Three waves make up the trend. The third wave labelled (c) has travelled a distance exactly 1.618 times the length of the first wave labelled (a). Such a relation strongly suggests the completion of the wave c. However, there is no indication of a reversal of the downtrend, as a head-and-shoulders forming between May 2 and Nov. 11 points a target at $1,060.

Chances are the downtrend from $1,374.91 could develop into a five-wave cycle. The current bounce is presumably driven by the fourth wave labelled (d). This wave could be as big as the second wave labelled (b) which started at the Oct. 7 low of $1,241.20 and ended at the Nov. 9 high of $1,337.40.

Under this assumption, the wave d could travel to $1,210, to touch the channel line of a falling channel. The fifth wave labelled (e) will then resume, driving the downtrend towards $1,045.85. A more decent bounce could occur when the wave e finishes around $1,046, as revealed by a Fibonacci retracement on the long-term trend from the August 1999 low of $251.70 to the September 2011 high of $1,920.30.

The analysis marks a key support at $1,086, the 50 percent level, which caused the sharp bounce to $1,374.91. The bounce may extend, consisting of three waves. The current wave B is ending, which could be totally or partially reversed by an upward wave C.
Spot silver may rise to $17.31 before falling to $15.62

Spot silver may bounce to a resistance at $17.31 per ounce before testing a support at $15.62 over the next three months, as suggested by its wave pattern and a Fibonacci projection analysis. The resistance and the support are at the 100 percent and 161.8 percent Fibonacci projection levels, respectively, of a downward wave c, the third of a presumed five-wave cycle from the July 4 high of $21.11.

This wave seems to have completed and will be partially reversed by an upward wave d, the fourth wave. A falling channel suggests a target for wave d at $17.31, as this wave could be as big as the second wave, labelled b, which started from the Aug. 29 low of $18.36 and ended at the Sept. 22 high of $20.06.

Upon its completion around $17.31, wave d will be reversed totally by a downward wave e that could travel into the range of $14.62-$15.37, formed by the 86.4 percent and the 76.4 percent Fibonacci retracements of the uptrend from the Dec. 14, 2015 low of $13.60.

From a long-term perspective, the downtrend from $21.11 has been driven by a wave (b), the second wave of a three-wave cycle from $13.60. The cycle developed around a key support at $14.38, the 76.4 percent Fibonacci retracement of the uptrend from the 1993 low of $3.53 to the 2011 high of $49.51.

Wave (b) is expected to end above $14.38, and then be partially reversed by an upward wave (c). It seems silver could remain in the range of $14.38-$21.09 most of next year.
LME copper targets $4,691

LME copper may test a support at $5,210 per tonne, a break above which could cause a loss to the next support at $4,691 over the next three months. These supports are identified respectively as the 100 percent and the 114.6 percent Fibonacci projection levels of a downward wave C, the third wave of a three-wave cycle from the Feb. 2011 high of $10,190. This wave has not completed. It consists of five smaller waves. The fourth wave labeled 4 developed around the 123.6 percent level at $4,371. It seems to have ended around $6,049. The fifth wave labeled 5 could have just started, unfolding towards the range of $3,013-$3,852. A detailed study on the structure of the wave 4 further confirms the completion of this wave. This wave has a corrective structure, made of three smaller waves. The second wave labeled (b) bottomed out at the June 9 low of $4,483.50. The third wave labeled (c) could be divided into three smaller waves as well, with the third wave labeled (c) having a five-wave structure. These complicated structures, along with the deep fall from the Nov. 28 high of $6,045.50, strongly indicates a reversal of the uptrend from the Jan. 15 low of $4,318. Over the next quarter, copper may slide towards the bottom of the wave (b) at $4,483.50. Resistance is at $5,638, the 23.6 percent Fibonacci retracement of the uptrend from $4,318 to $6,045.50. A break above this barrier could lead to a limited gain to $5,793.

**Monthly chart**

**Daily chart**
LME aluminium may drop to $1,595

LME aluminium may break a support at $1,694 per tonne and fall to the next support at $1,595 over the next three months, as suggested by its wave pattern, and Fibonacci ratio analysis. These supports are at the 38.2 percent and the 23.6 percent Fibonacci retracements, respectively, of the downtrend from the Sept. 8, 2014 high of $2,118 to the Nov. 23, 2015 low of $1,432.50.

The retracement analysis reveals a resistance at $1,775, the 50 percent level, which appears to be triggering the current correction. However, there is a deeper reason.

The uptrend from $1,432.50 consists of three waves. The third wave, labelled (c), is roughly equal in length to the first wave, labelled (a), as suggested by a Fibonacci projection analysis. Such a relation confirms the completion of a corrective wave cycle.

The second wave, labelled (b), ended at $1,531, the May 13 low, which may be approached, as suggested by the wave theory. This target seems to be too aggressive. A more realistic target could be $1,595.

A Fibonacci retracement analysis on the uptrend indicates a target at $1,571, the 61.8 percent level, very close to $1,595. The chart pattern from Nov. 11 to Nov. 24 looks like a small double-top which points to a target between $1,571 and $1,594.

A break above $1,775 could confirm the extension of the uptrend towards $1,856.
Shanghai copper may fall to 41,500 yuan

Shanghai copper may retest support at 43,460 yuan per tonne, with a good chance of breaking below this level and falling more to 41,500 yuan over the next three months, as it has completed a bounce from the Nov. 24 low of 33,150 yuan. Three waves make up the bounce. The third wave labeled (c) consists of three smaller waves, with the final wave labeled c further broken down into five waves. This complicated wave structure, along with the deep fall from the Nov. 28 high of 49,840 yuan, simply confirms the completion of the uptrend from 33,150 yuan. A Fibonacci retracement analysis on the trend reveals a support at 43,460 yuan, the 38.2 percent level, which temporarily held the fall and triggered a moderate bound. However, wave theory indicates the fall is far from complete, as it may eventually extend to 34,810 yuan, the May 20 low and the bottom of the wave (b). From a longer perspective, the uptrend may have been driven by a bigger wave D, the fourth wave of a long-term downtrend from the 2011 high of 76,290 yuan. This wave will be totally reversed by a downward wave E which could at least travel to 33,150 yuan. Based on a huge head-and-shoulders forming between January 2010 and April 2013, copper could slide to $2,500. The current bear cycle may last one more year. A break above 45,900 yuan (refer to the first chart) could lead to a gain limited to 47,400 yuan.
Palm oil may climb to 3,415 ringgit

Palm oil may retest a resistance at 3,163 ringgit per tonne, with a good chance of breaking above this level and rising more towards the next resistance at 3,415 ringgit over the next three months. The first resistance is provided by the 61.8 percent Fibonacci retracement of the downtrend from the Feb. 10, 2011 high of 3,967 ringgit to the Aug. 25, 2015 low of 1,863 ringgit. This barrier has caused a correction, which may end around 2,915 ringgit.

Palm oil is riding on a long-term uptrend, which is driven by a wave (C), the third gigantic wave of a super cycle from the Sept. 3, 1986 low of 424 ringgit. A Fibonacci projection analysis reveals that this wave has travelled above 2,822 ringgit, its 23.6 percent level. The next key obstacle will be at 3,415 ringgit, which will be targeted when palm oil breaks above 3,163 ringgit.

The chart pattern from July 30, 2013 to Oct. 24, 2016 looks like an inverted head-and-shoulders, based on which an aggressive target at 3,740 ringgit is worked out.

The current drop from the Dec. 16 high of 3,202 ringgit is regarded as a pullback towards the neckline of the pattern. This pullback may end anywhere above the neckline. Most likely, it will stop in the range of 2,822-2,915 ringgit (refer to the first chart).

A Fibonacci retracement analysis on the uptrend from the July 12 low of 2,186 ringgit to 3,202 ringgit (second chart) pinpoints a low at 2,814 ringgit, the 38.2 percent retracement, around which the uptrend may resume.
CBOT soybeans may rise towards $11.20

CBOT first month soybeans may retest a resistance at $10.68-1/2 per bushel over the next three months, a break above which could lead to a gain to $11.20. The first resistance is provided by the 23.6 percent Fibonacci retracement of the downtrend from the September 4, 2012 high of $17.94-3/4 to the Nov. 23, 2015 low of $8.44-1/4. The uptrend from this low seems to be against a three-wave cycle from $17.94-3/4. The cycle looks complete. The uptrend has only partially finished. It consists of three parts. The third part, driven by a wave c, is expected to extend to $11.20 - the resistance established by the trendline falling from $17.94-3/4. A break above $11.20 will lead to a further gain to $12.07-1/4.

It is critical that the contract hovers above a key support at $9.83, as a break below this level could make the target at $10.68-1/2 look doubtful. A Fibonacci retracement analysis on the uptrend on the daily chart reveals a similar support at $9.83-1/2, the 61.8 percent level. A break below $9.83 may cause a loss to $9.30, which is very close to the bottom of the wave b, while a break above $10.26-1/2 could signal the continuation of the uptrend towards $11.22-1/2, which is near the trendline resistance at $11.20.
CBOT corn may rise towards $4.29

CBOT corn may test a resistance at $3.80 per bushel with a good chance of breaking above this level and rising more towards the next resistance at $4.29 over the next three months. These resistances are at the 14.6 percent and the 23.6 percent Fibonacci retracements, respectively, of a downtrend from the August 2012 high $8.43-3/4 to the September 2016 low of $3.01. The trend could be divided into five waves. Even though this division does not look very typical of such a wave pattern, it does signal a completion of the downtrend. The bullish divergence on the weekly RSI further indicates the reversal of the trend.

On the monthly chart, another Fibonacci retracement analysis on the long-term uptrend from the July 2000 low of $1.74 to $8.43-3/4 reveals corn twice failed to break a key support at $3.32, the 76.4 percent level. When put in the context of five-wave completion from $8.43-3/4 and the bullish divergence on the monthly MACD, these failures make much sense to bulls, as they confirm a bottom at $3.01. Indeed, this support at $3.32 does not work alone. It is strengthened by a support zone of $2.90 to $3.18-1/4, formed by the Dec. 2008 low and the Sept. 2009 low. This zone contributed a lot to the gains from $3.01. Due to these strong supports, corn will be unlikely to drop again. Instead, it may continue to rally towards $4.29-3/4, which is very close to $4.29 (refer to the first chart). A break below $3.32 may cause a loss to $3.18-1/4, the October 2014 low.
CBOT wheat may rise towards $4.85

CBOT wheat may retest a resistance at $4.31-1/2 per bushel over the next three months, a break above which could lead to a gain to the next resistance at $4.85.

The downtrend from the February 2008 high of $13.34-1/2 was disrupted by a support at $3.73-1/2, the 86.4 percent Fibonacci retracement of the preceding uptrend to this high from the December 1999 low of $2.22-1/2.

Based on this retracement analysis, wheat may bounce to $4.85, the 76.4 percent level, which worked as a support and caused a decent rebound above $6.47-1/4.

Even though it is too early to conclude the downtrend has completed, the current support at $3.73-1/2 looks stronger and may cause another bounce that could extend to $4.85. The bounce has indeed started, but was temporarily stopped by the resistance at $4.31-1/2, the 76.4 percent Fibonacci projection level of a downward wave c, which is the third wave of a three-wave cycle from the July 2012 high of $9.47-1/4.

With wheat approaching this resistance again, the chance of it overcoming this barrier will be very high.

On the daily chart, a high-low bottom is developing, which will be confirmed when wheat breaks a resistance at $4.22-1/4, the 38.2 percent Fibonacci retracement of the downtrend from the June 8 high of $5.24 to the Aug. 31 low of $3.59-1/2. The wave pattern suggests the progress of an upward wave c, the third wave of a three-wave cycle from $3.59-1/2. This wave is likely to travel to $4.38-1/4, its 100 percent Fibonacci projection level.

A rise to $4.38-1/4 will surely confirm both the high-low bottom and a target at $4.85. Support is at $3.95-3/4, a break below which could cause a loss into the range of $3.71 to $3.85-1/2.
NY sugar may retest 23.10-23.55 cents zone

New York sugar may retest a resistance zone of 23.10 cents-23.55 cents per lb over the next three months, as suggested by its wave pattern and a Fibonacci retracement analysis. The uptrend from the Aug. 24, 2015 low of 10.13 cents seems to have adopted a five-wave mode. So far, only four waves have completed. The fifth wave labelled (5) has just started, unfolding towards the resistance zone. The trend has been controlled by two sets of Fibonacci retracements, respectively derived from the downtrend from the February 2011 high of 36.08 cents to 10.13 cents and from a shorter trend from the Aug. 2011 high of 31.85 cents to 10.13 cents. The 50 percent retracement of the longer trend at 23.10 cents and the 61.8 percent level of the shorter trend at 23.55 cents make up the resistance zone which has caused a wave (4) correction. This wave seems to have ended around 18.43 cents. The first wave labelled (1) comprises five smaller waves. Likewise, the wave (3) consists of five waves as well. The wave (4) ended slightly below the range of the wave 4 – the fourth wave of the wave (3). Everything looks perfect and nothing is against the wave principles. There is little doubt that the trend from 10.13 cents could eventually develop into a five-wave cycle. Only a break below the support at 18.17 cents could make the bullish view invalid.

Weekly chart

Daily chart
NY coffee may end fall in $1.2215-$1.3165 range

New York coffee is expected to bottom out in a range of $1.2215-$1.3165 per lb and then rally towards a resistance at $1.6110 over the next three months, as suggested by its wave pattern and a Fibonacci projection analysis.

The range is formed by the 7 percent and the 14.6 percent Fibonacci projection levels of an upward wave C from the March 1, 2016 low of $1.1340. This is the third wave of a three-wave cycle from the Nov. 7, 2013 low of $1.0415. Compared to the preceding wave A which ended at the Oct. 13, 2014 high of $2.2910, the wave C looks too small to complete.

The wave C could have only completed its first part which had been driven by a smaller wave (a). The current downtrend has been driven by the second wave labelled (b), which may end above $1.2215.

The third wave labelled (c) will then start to unfold towards the trendline falling from the 2011 high of $3.0890. This line may establish a resistance around $1.6110.

A closer examination on the structure of the wave (b) suggests this wave may extend a bit further into a range of $1.2240-$1.29, formed by the 86.4 percent and the 76.4 percent Fibonacci retracements on the uptrend from $1.1340 to the Nov. 8, 2016 high of $1.7955.

The wave (b) consists of five smaller waves. The fifth wave labelled (5) is yet to develop. The current bounce from the Dec. 28 low of $1.3520 has been driven by the fourth wave labelled (4), which may end around a resistance at $1.4650. A break above the resistance could signal a resumption of the uptrend towards $1.6110.
NY cocoa targets $1,881

New York cocoa is expected to test a support at $2,060 per tonne, a break below which could cause a further loss to $1,881 in three months, as suggested by its wave pattern and a Fibonacci projection analysis. The contract is riding on a downward wave C, the third wave of a three-wave cycle from the March 2011 high of $3,775. This wave has travelled below its 61.8 percent Fibonacci projection level at $2,322, it is extending towards the range of $1,881-$2,060. At its full capacity, the wave C may travel to $1,637. This wave has a fierce character and may not be disrupted by any decent bounce until it reaches $1,637. Three small waves make up the wave C. The third wave labelled (c) has much extended. A detailed examination on the structure of the wave (c) confirms it is incomplete. Strangely, a part of this wave (c) has adopted a triple-zigzag pattern, which started at the Aug. 19 high of $3,120. This pattern comprises 11 small waves. So far, only eight waves have completed. The ninth wave, labelled a, is progressing towards the range of $1,954-$2,023, formed by the 186.4 percent and the 176.4 percent Fibonacci projection levels of the wave (c). Eventually, the final wave labelled c could drive the price down to $1,860, very close to $1,881. A falling channel indicates cocoa may temporarily end around $2,023 and then bounce towards $2,124, before falling again.
Baltic dry index may revisit high of 1,257

Baltic dry index may revisit its Nov. 18, 2016 high of 1,257 over the next three months, as indicated by its wave pattern and a Fibonacci retracement analysis.

The rally from the Feb. 10, 2016 low of 290 has adopted a five-wave mode. So far, only four waves have completed. The fourth wave, labelled (4), has ended around a support at 919, the 50 percent Fibonacci retracement of the uptrend from the June 21, 2016 low of 580 to 1,257.

A break below 919 could signal the extension of the wave 4 towards the 61.8 percent retracement at 839. As long as the index remains above 919, it may be assumed that the fifth wave, labelled wave (5), has started. It is expected to travel to or above 1,257.

On the weekly chart, the index has broken the upper trendline of a falling wedge, which looks like a bottom pattern, as it appeared after a sharp downtrend from the 2008 high of 11,793. The break confirms that the index has bottomed out at 290 and a long-term uptrend could be developing.
3-MONTH TECHNICALS

CRB index may test resistance at 201.507

Thomson Reuters CRB index may test a resistance at 201.507 over the next three months, a break above which could lead to a gain to the next resistance at 215.4267. The rally from the Jan. 20, 2016 low of 154.8462 seems to have been controlled by two sets of levels. One set is represented by the Fibonacci projection levels of a downward wave C that developed from the April 29, 2011 high of 370.7105. The other is derived from the Fibonacci retracement analysis on the downtrend from the June 23, 2014 high of 313.434 to 154.8462. Three small waves make up the rally. The third wave labelled (c) is expected to travel a similar distance as the first wave labelled (a) did, to extend to about 220. The index has been temporarily disrupted by a resistance at 192.2729, the 23.6 percent retracement. It may either hover below this level for a short period or retrace towards 178. A detailed study on the rally helps pinpoint the possible correction targets. Another Fibonacci projection analysis on the target of the wave c reveals a more precise resistance at 194.6142, the 38.2 percent level, which caused the current sideways move. The index is expected to find support at 188.6236, a break below which could cause a loss to 184.9307. Indeed, the break could have a more bearish indication that chart pattern from June 8 onwards will look like a double-top, which simply suggests the completion of the rally from 154.8462.

Weekly chart

Daily chart
Dollar index may rise to 109.144

The dollar index is expected to test a resistance at 106.614 over the next three months, a break above which could lead to a gain to the next resistance at 109.144. The index has broken a lower resistance at 101.797, the 61.8 percent Fibonacci retracement of the downtrend from the July 2001 high of 121.02 to the March 2008 low of 70.698. Based on this analysis, the index could rise more to 109.144, the 76.4 percent level. However, the current rally seems to be controlled by another set of retracements as well. This set is based on the downtrend from the March 1985 high of 164.72 to 70.698. One of the retracements is at 106.614, the 38.2 percent level, which may block the way towards 109.144. The rally on the daily chart shows a clear five-wave mode. Based on the range of the wave 4, the index may rise to 107.626, the 238.2 percent Fibonacci project level of the first wave, labelled (1). A rising trendline suggests a higher target at 110.471. The range of 107.626 - 110.471 well engulfs 109.144 level, the target derived from the monthly chart. A correction from the current level may be limited to 100.175.

**Monthly chart**

**Daily chart**
Intraday technical outlooks are available to Eikon users on the following 13 products: U.S. oil, Brent oil, spot gold, LME copper, LME aluminium, Shanghai copper, Malaysian palm oil, CBOT soybeans, CBOT corn, CBOT wheat, New York sugar #11, New York coffee and New York cocoa. To retrieve the 24-hr technical outlooks, please press F9 and key in TECH/C.

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