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21 More Timely Trade Ideas

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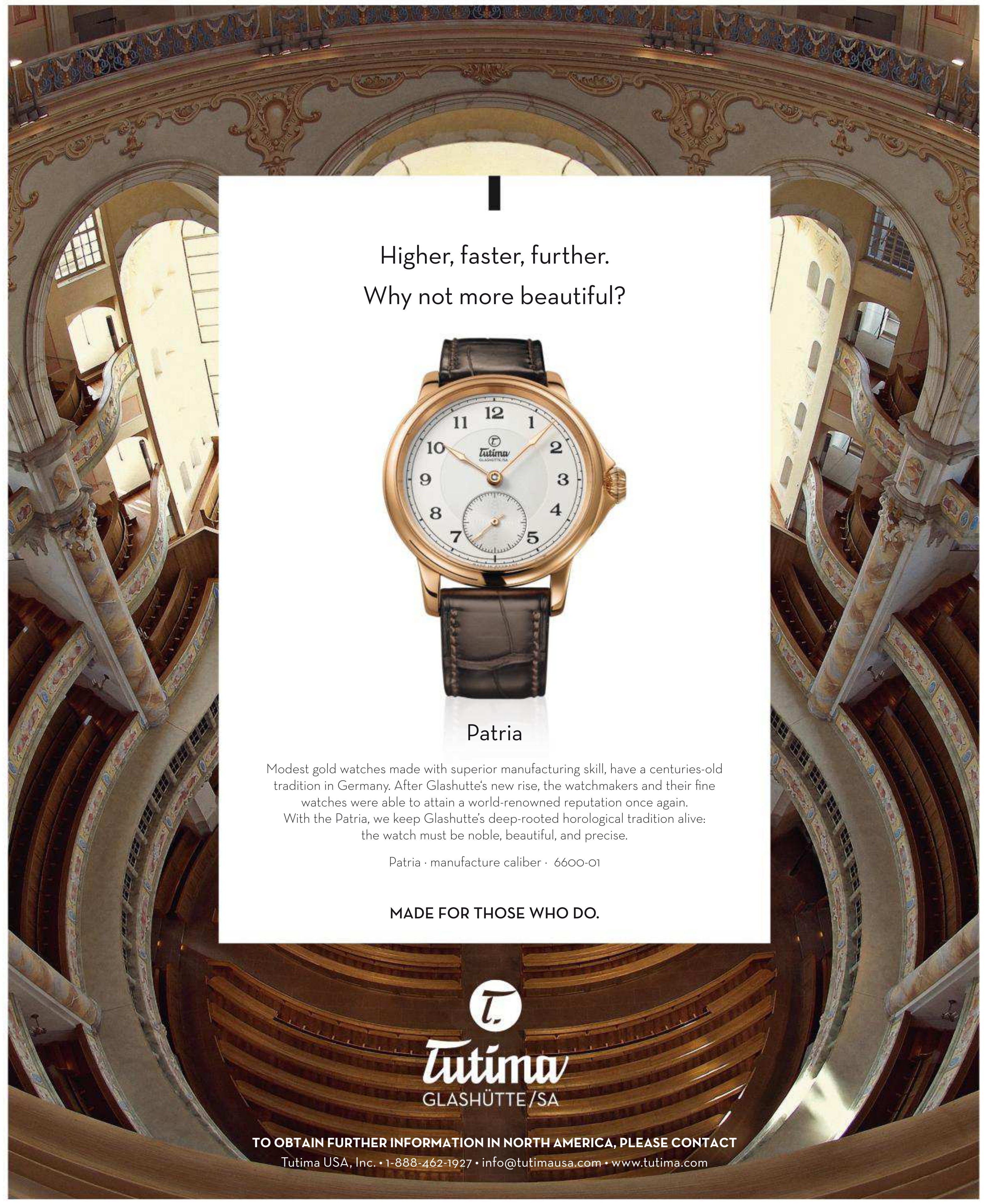
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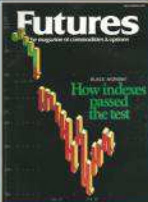

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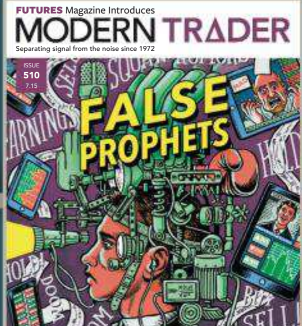
Stock Market Crash

1997
Asian Financial Crisis

1998
LTCM Collapse

2010
Flash Crash; Dodd-Frank Act



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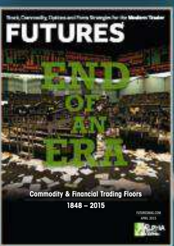

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Fintech's Big Promise

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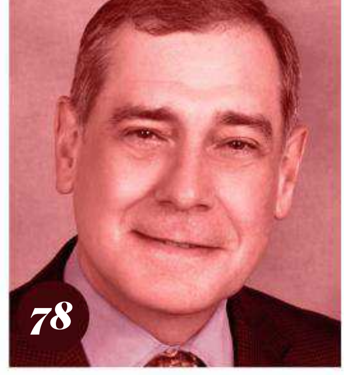

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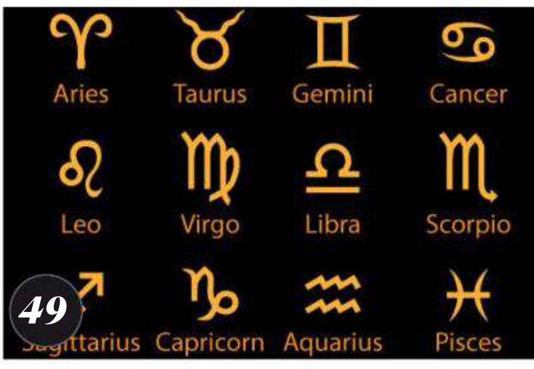

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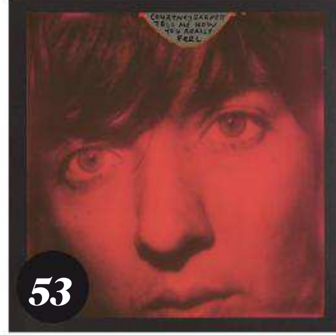

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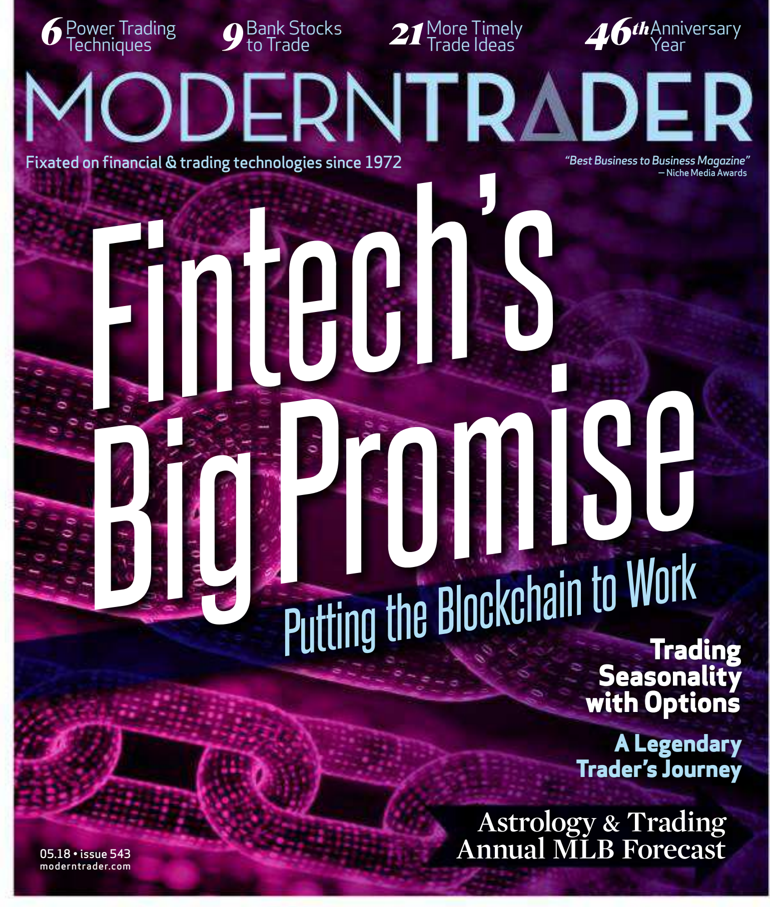
Industry insights from a 28-year trading industry veteran.

Fintech disruption



Financial technology has been driving markets for decades. Often when we talk about fintech it is about some new technology that promises to disrupt the current market model. But today's disruptive technology can be tomorrow's trading infrastructure.

While fintech innovations often offer ways to improve market operations on the fringes, some innovations threaten the status quo of the underlying market structure. Many in the fintech world suggest that the blockchain (distributed ledger technology) may be such a disruptor (**see "Distributed Ledger Technology, a Game Changer," page 41).**

As we have written about the explosion of cryptocurrencies during the last few years, there has been a common theme from market participants. Some people say cryptocurrencies are the Holy Grail for finance, others see them as a fraud; but usually both sides see the blockchain as a great innovation that is here to stay, regardless of their thoughts on cryptocurrencies.

That is the opinion of members of the World Federation of Exchanges (WFE), who expect distributed ledger technology to have a great impact on capital market infrastructure providers. In **"Decoding Fintech & Capturing the Opportunity in Capital Market Infrastructure," (page 30)** we present an abridged version of a study produced by the WFE and McKinsey & Co.

Much of the study focuses on entrepreneurial fintech firms and the effect their work is having on finance. The fact that this group would embark on such a study tells us that they are paying close attention to fintech.

But it can get tedious to constantly hear about the coming disruption fintech will create through white papers and at industry forums and conferences. At some point, you want tangible evidence. A new group of entrepreneurs is planning just that (**see "EverMarkets: Promising Revolution," page 44).** The EverMarkets Exchange (EMX) not only plans on launching a new futures exchange listing both cryptocurrency and traditional futures, but also, its own token traders must post as margin with the ethereum blockchain serving as the underlying backbone to it all.

Today's disrupting technology can be tomorrow's trading infrastructure.

It's an extremely ambitious undertaking – one that initially will not be open to U.S. traders – with many moving parts. There are plans for an initial coin offering, futures exchange and clearinghouse that exclude the most active market participants: high-frequency traders.

We do not want to handicap their success or failure – there are too many variables – but we look forward to seeing the next part of the blockchain story.

Disruptive technology is often not new, just a new way to accomplish an old goal. Bob Moss has been involved in trading for five decades – on the floor and then as a highly successful commodity trading advisor (**see "Floor trader comes full circle," page 78).** He earned his chops executing large orders for Richard Dennis. Now, he is applying lessons from decades ago, when traders tried to front run his positions, to the high-frequency trading (HFT) algorithms he competes with today. Moss has developed a new system to exploit those HFT algos.

Everything old is new again. ∆

Daniel P. Collins

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Real talk on business, finance, politics & alternative investments.

By **Daniel P. Collins**

"The entire company is outraged we were deceived. We are committed to vigorously enforcing our policies to protect people's information..."

That is from an official statement by Facebook (FB) over the misuse of data by political consulting firm Cambridge Analytica, which improperly harvested information on 50 million Facebook users.

While it claims to vigorously protect users' information, all evidence is to the contrary.

FB and its earnest 33-year-old co-founder Mark Zuckerberg have faced increasing scrutiny over his lack of vigilance in protecting the massive amount of personal data his company obtains. The bottom line is that Zuckerberg didn't amass a personal fortune of $62.2 billion by protecting his users' data; he earned it by selling access to that data.

"I think they are just trying to get a handle on the large ecosystem."

That's Peter Van Valkenburgh, director of research at Coin Center, on the Security and Exchange Commission's (SEC) decision to examine the business practices of hedge funds investing in cryptocurrencies and initial coin offerings. The number of hedge funds trading cryptocurrencies has exploded during the last few years (see "Breakout," page 54). As usual, the SEC is right on their game.

Trump confidant dumped millions in steel-related stock

That headline first appeared in "Think Progress" citing a Feb. 22 SEC filing indicating former Trump Administration advisor Carl Icahn had sold nearly 1 million shares ($31.5 million) of Manitowoc Company Inc., a firm heavily dependent on steel to make its products, just days before President Trump floated a 25% tariff on all steel imports. Insider trading expert and Duke Law Professor James D. Cox called the trade "awfully suspicious" in the story. You think?

"We are absolutely astounded by the decrease in the CFTC's budget."

That's from Erica Elliott Richardson, Commodity Futures Trading Commission director of public affairs, upon learning that the CFTC would receive $1 million less in 2018 from its 2017 budget, and $31.5 million less than they requested.

Apparently Richardson and CFTC Chairman Chris Giancarlo have not been paying attention regarding this Administration's commitment to regulation. The agency never received a significant budget increase to match its added responsibilities for regulating swaps that came under its jurisdiction after the Dodd-Frank Act was passed. While the proposed budget did not deliver on the CFTC's budget demands, the new White House budget proposed levying $31.5 million in fees on derivatives users to grow the agency's budget. That's a fee, not a tax, of course.

"I saw Dentacoin's Whitepaper while searching for dental-related cryptocurrencies."

That is from Danish prosthodontist Gerard van der Wal, who owns a Netherlands-based dental practice that is now accepting dentacoin, a cryptocurrency designed specifically for dental practices.

If you were waiting for a "jump the shark" moment in the distribution of specialty cryptocurrencies, this may be it. Of course, true believers would argue it is just another example of the versatility and creativity of the cryptocurrency space. But I wouldn't be placing dentacoin under my pillow and expecting the tooth fairy to convert it into dollars.

Open Outcry

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Send your comments and suggestions to **openoutcry@moderntrader.com**

"You're afraid of the NRA."

"I had a great meeting tonight with @realDonaldTrump & @VP. We all want safe schools, mental health reform and to keep guns away from dangerous people."

The first quote is by President Donald Trump from a bipartisan meeting with numerous Senators on potential gun control measures. The second quote is from Chris Cox of the National Rifle Association following a meeting with the President the following day.

What a difference a day makes.

"Somewhere in the cosmos, perhaps, intelligent life may be watching these lights of ours aware of what they mean."

That is a quote from Physicist Stephen Hawking, who recently passed away. It has been reported that the world-famous physicist may have saved his best work for last. Reportedly, Hawking's final work – titled "A Smooth Exit From Eternal Inflation" – is being reviewed by a leading scientific journal. In it, he predicted how our universe would eventually fade to darkness as the stars run out of energy.

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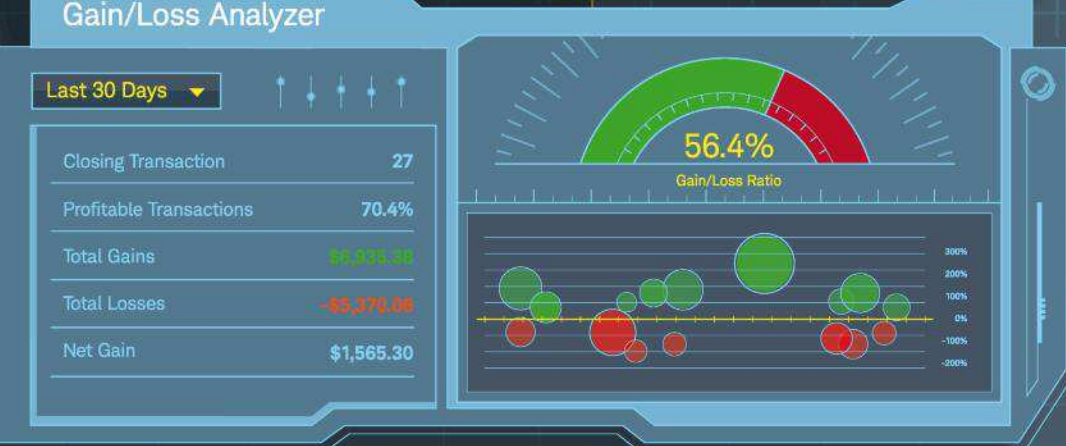

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Trades

21 HIGH CONVICTION IDEAS FROM TOP TRADERS, ANALYSTS & INSIDERS

BR building broad bullish base

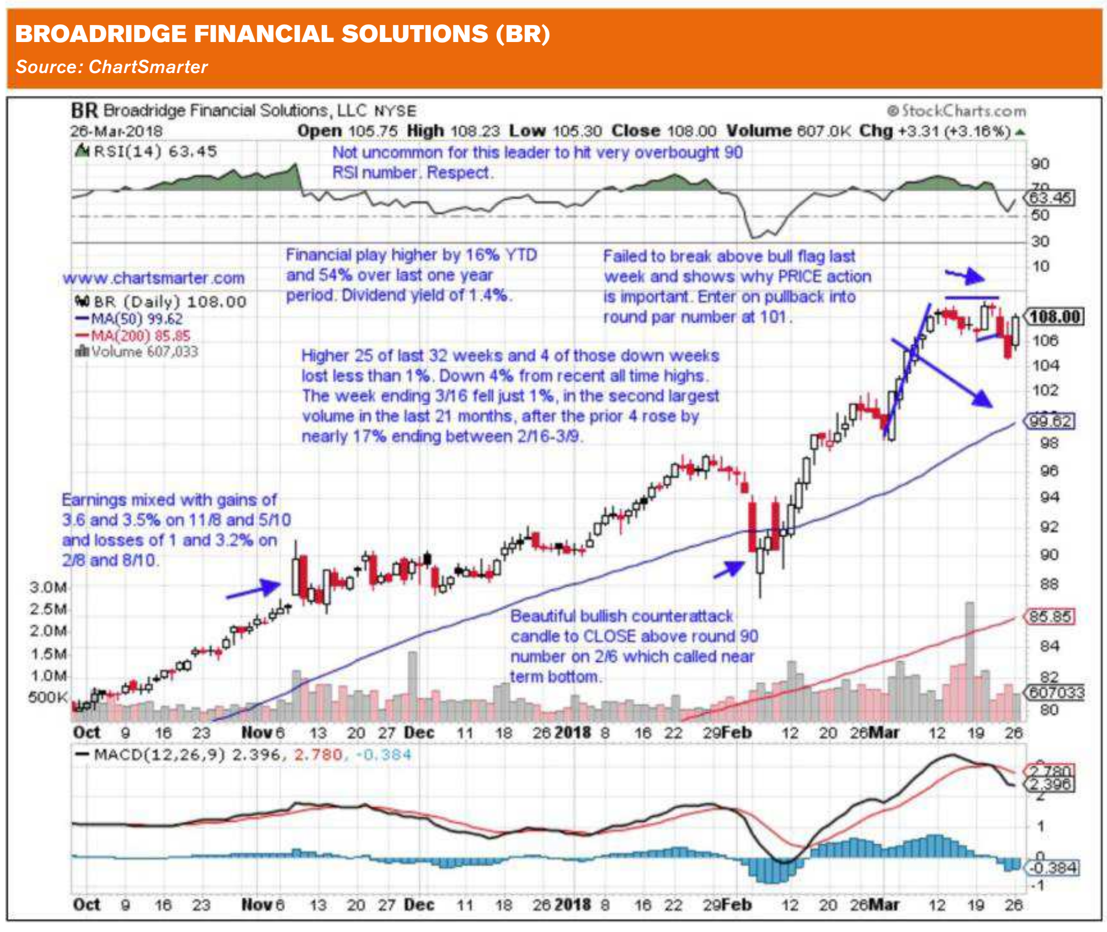
BR
Buy trigger: $101
Stop: $97

By **Doug Busch**

While many fintech firms are swimming firmly upstream, Broadridge **Financial Solutions** (BR) is up 16% year-to-date and 54% during the last 12-month period with a dividend yield of 1.4%. Earnings have been mixed, splitting positive and negative quarters over the last year. The stock was higher 25 of last 32 weeks entering the last week of March with four of the down weeks registering less than 1% moves.

Broadridge is sitting only 4% off of its all-time high and failed to break above a bull flag last week. This should result in a small correction and buying opportunity. Enter on a pullback toward the $100 level at $101. A stop loss could be placed at $97. Additional support is at the $90 level. Δ

BROADRIDGE FINANCIAL SOLUTIONS (BR)
Source: ChartSmarter



Doug Busch *(CMT) trades U.S. equities using technical analysis with an emphasis on Japanese candlesticks.*

This month in TRADES

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Withdrawal of MS anchor tied to Biogen

■ By **Joseph Parnes**

Short
BIIB
$279-$291
Price Target: $256

Massachusetts-based **Biogen Inc.** (BIIB), founded in 1978, focuses globally on the research, development and manufacturing of products to combat various neurological and neurodegenerative diseases.

BIIB appears to have suffered a significant short circuit as a growth position moving closer toward a progressive long-term strategy short holding. BIIB is known for its treatments for multiple sclerosis (MS), marketing brands such as Tecfidera, Avonex, Plegridy, Tysabri, Zinbryta and Fampyra. The combination of BIIB's recent issues regarding Zinbryta, potential competition and its medication's inability to pass recent testing stages for further approval to increase its usage are clear signs of volatility.

Many analysts and brokerages have recently touted BIIB as a potential buying opportunity, including Deutsche Bank, due to Q4 earnings results released on Jan. 25. BIIB reported earnings of $5.26 per share, which narrowly missed the consensus estimate of $5.44. However, its revenue of $3.31 billion dollars surpassed the consensus of $3.07 billion by 7.6%. While seemingly positive news, BIIB continued its negative trend by 18% following its earnings report. Additionally, the lower tax rates set by congress have been viewed as an additional positive indicator for BIIB reflected in its Q4 $3.06 billion report and its earnings-per-share of $5.75, closely matching the consensus of $3.08 billion dollars and $5.55 respectively. However, this can be better interpreted as an unexpected benefit while BIIB continues its downward momentum within the broader context.

These issues for BIIB can be attributed to four significant factors. The first being the investigations in the fall of 2017 regarding its power drug Zinbryta, which attracted significant media attention in the United States due to its price of $87,000. This lead to Congressman Elijah Cummings (Dem. MD) attempting to pressure the government to take action. The second being the voluntary global withdraw of marketing authorizations for Zinbryta in light of the European Medicines Agency (EMA), which has recommended the immediate suspension and recall of Zinbryta.

The recommendation to suspend and recall Zinbryta has now been sent to the European Commission for a legally binding decision to determine its fate.

The recommendation to suspend and recall Zinbryta has now been sent to the European Commission for a legally binding decision to determine its fate. Third is BIIB's Tysabri medication, which failed additional rounds of testing. This would have expanded the scope of the drug's use increasing its market potential. Finally, its product Spinraza faces significant competition from other companies, which may erode BIIB's current and future hold within the market.

BIIB's breakdown is evidenced by its erratic chart pattern developed in late October 2017 when it plunged more than 10% from $344 to $307 (see "Biogen dive"). The reversal in base-building was responsible for trading above 50-day moving average and it steadily regained ground up until Jan. 26. A clear negative trend was confirmed when it took out that late October low, plunging more than $20 on Feb. 14. This move took out the 50-day moving average and then the 200-day with its own Valentine's Day massacre. A reversal could meet primary resistance at $300 to $307. At that point, selling pressure may resurface and continue the downtrend pattern. ∆

BIOGEN DIVE
Biogen's Q4 drop takes out key support area.
Source: eSignal

Joseph Parnes is an independent RIA with more than 30 years of trading experience, with a focus on short selling. @joseph_parnes

NBL's upside

■ By **Paul Kuklinski**

SOLID BASE
NBL is set to make multi-year highs.
Source: eSignal

Noble Energy (NBL) is a relatively small independent global oil and gas exploration and production producer with a market cap of $15 billion. Asset sales since 2010 generated proceeds of $6.8 billion.

Buy NBL
Price Target: $44

Assuming a $60 per barrel WTI crude oil price in 2018, the stock has an upside target of $44 per share – a 43% increase over current levels – based on its six-year average 7.7x cash flow multiple on 2018 estimated cash flow/share of $5.75.

Our bullish outlook is based on a higher overall production in 2019 and 2020 and a higher, 72%, 2018 production estimate from domestic sources.

After declines in 2017 and 2018, production will increase about 14% in 2019 and 35% in 2020. Strong growth is expected to continue to 2023 with the development of the Leviathan Field off Israel.

In July 2015, NBL closed on the acquisition of Rosetta Resources, which added 50,000 net acres in the Eagle Ford Shale play and 56,000 net acres in the Permian's Delaware Basin. Rosetta's 2014 reserves were 282 million equivalent barrels, 35% as large as NBL, with more than 1,800 horizontal drilling locations and a resource potential of one billion barrels of oil equivalent. NBL issued 41 million shares with a value of $2.1 billion to acquire Rosetta and assumed $1.8 billion of net debt.

In April 2017, NBL closed on the $616 million acquisition of Clayton Williams Energy, which added 71,000 net contiguous acres in the core of the southern Delaware Basin and production of 10 thousand barrels of oil equivalent per day. In June 2017, it divested its assets in the Marcellus for proceeds of $1.8 billion.

NBL reported 2017 reserves of 1965 MMEB: 23% oil, 12% natural gas liquids (NGLs) and 65% natural gas. The United States holds 40% of its reserves, of which 53% is oil, 28% is NGLs and 19% natural gas. Nearly 47% of its total reserves and 71% of its gas reserves are located offshore.

It will close on the sale of its Gulf of Mexico assets, which are relatively small, in Q2 2018 with expected proceeds about $480 million. The book value is $750 million with 2017 production consisting of 83% oil.

NBL's 2017 capital spending of $2.65 billion was up 72% from 2016; 2017 cash flow from operations of $1.95 billion was supplemented by $2.1 billion from asset sales. Capital expenditures in 2018 are expected to be $2.8 billion with 80% spent on U.S. operations. Cash flow from operations will be about $2.4 billion. It has a current debt ($6.7 billion)/ debt + equity ratio of 40%, in line with its peer group average, with $675 million additional cash on hand.

To protect the integrity of its capital program and dampen potential cash flow volatility, NBL has a policy of hedging half its current production on an ongoing basis.

NBL was down 24% in 2017 compared to a 12% decline in the SPDR S&P Oil & Gas Exploration and Production exchange-traded fund (XOP), while the SPX increased 19%. NBL hit a low of $24 per share in Q2 2016. Its 2014 high was $80.

We expect continued decline in production in 2018 followed by rapid growth in 2019 and 2020. However, higher domestic production in 2018 should create efficiencies for NBL. After the impact of

To protect the integrity of its capital program and dampen potential cash flow volatility, NBL has a policy of hedging half its current production on an ongoing basis.

the Marcellus divestment and the Clayton Williams acquisition, 2017 production was down 9%; 2018 production is expected to decline another 9% with the sale of its Gulf of Mexico assets. NBL will then derive 72% of its production from U.S. onshore resource plays, the rest offshore in Israel and Equatorial Guinea.

It anticipates a 15% increase in overall production in 2019 accelerating to a 30% increase in 2020.

U.S. operations are focused on the DJ Basin in Colorado, the Delaware Basin and the Eagle Ford. Estimated 2018 production will have a mix of 47% oil, 24% NGLs and 29% natural gas. U.S. production is expected to grow 19% in 2019 and 28% in 2020 as output oil grows even faster.

Total production costs in 2017 were up 20% from 2016. Oil production is more costly than producing natural gas. Company guidance provided indicates a 7% decline in 2018. The productivity of its newest wells in its resource plays is substantially better.

NBL's 2018 U.S. earnings before interest, taxes, depreciation, and amortization (EBITDA) will approximate $26 per barrel of oil equivalents.

NBL's most important U.S. asset and a focus of its capital expenditures is its 335,000 contiguous net acre position in the DJ Basin in Colorado, anchored by the long-lived Wattenburg Field.

NBL anticipates annual production growth of more than 15% in the play to 2020, while generating $500 million free cash flow during the period, assuming a $50 oil price.

New wells in the liquids-rich Niobrara formation continue to exceed expectations. The Niobrara is a low-risk development that compares favorably with the Eagle Ford and Bakken shale plays. It benefits from relatively greater formation thickness and a greater quantity of original oil in place per section. NBL has net resources of 1.7 billion barrel equivalents in the play with a 79% interest in 2,350 gross horizontal drilling locations.

During the next several years, NBL is expected to increase its oil production and the cost efficiency of that production, which makes it a solid growth stock. ∆

Paul Kuklinski, *founder of independent research firm Boston Energy Research, selects equity investments in the energy sector for major institutional investors.*

OXY's outlook

By **Paul Kuklinski**

Occidental Petroleum (OXY) ranks among the largest independent oil producers with a market cap of $50 billion, and it sells at a premium multiple in its peer group. Our target for OXY stock is $89 per share, a 37% increase from current prices, based on a $60 per barrel WTI oil price in 2018 and its seven-year average 10.6x cash flow multiple on 2018 estimated cash flow of $8.41 per share.

In the past it relied heavily on its enhanced oil recovery success in the Permian Basin and California to gain access to new projects, while minimizing geologic risk. It solicited projects in old, partially developed oil fields operated by national oil companies or others in the Middle East, and required terms in the form of production sharing contracts that provided incentives for the production increases it achieved, while protecting host governments from any risk. Management's goal was to capture enhanced oil recovery projects with large volumes of oil and gas remaining in place and upside potential.

The cost per well continues to decline and wells are increasingly more productive.

In an effort to improve shareholder returns, it initiated a major restructuring program in 2012 with a goal of consistent dividend growth superior to its peer group. Asset sales to date approximate $16.9 billion, including $6.1 billion from the spin-off of **California Resources Corp.** (CRC) to shareholders in 2014. It also divested its assets in the Bakken, Piceance Basin and the Hugoton gas field, as well as midstream assets.

In Q2 2017, it sold its south Texas operations for $500 million. In the Middle East, it exited Bahrain, Yemen and Iraq, as well as Libya to minimize its exposure to geopolitical risk.

Nearly two-thirds of OXY's 2017 proven reserves of 2,472 million equivalent

OXY holds the dominant position in the Permian with 2.5 million net acres... It has an additional 750,000 net acres with unconventional resource potential under evaluation.

barrels (MMEB) were located in the United States; the rest largely in the Middle East.

The 2017 cash flow from operations nearly doubled to $5 billion with U.S. upstream cash flow before corporate expenses of $2.38 billion, Latin America cash flow of $228 million and a Middle East cash flow of $1.4 billion; with its chemicals segment producing $1.17 billion and midstream operations of $422 million.

Asset sales of $1.4 billion helped fund 2017 capital spending of $3.6 billion, with $1.1 billion in acquisitions and dividends of $2.3 billion.

OXY's 2018 capital spending is expected to be $3.9 billion with projected cash flow from operations of about $6.5 billion.

Its balance sheet remains strong with a debt ($9.3 billion)/debt + equity ratio of 31%, compared to a peer group average of 41%. In addition, it has $1.2 billion cash on hand net of short-term debt.

OXY was up 2% during the last 12 months compared to a 10% decline in the SPDR S&P Oil & Gas Exploration and Production exchange-traded fund (XOP), while the SPX increased 14%. OXY hit a low of $57 per share in May (see "Beating the benchmark," below). Its 2014 high was $101.

Permian Production

The Permian Basin accounted for 27% of U.S. oil production in Q4 2017. Production was up 27% year-over-year. It is projected to grow 41% in Q4 2018. Located in west Texas and New Mexico, the Permian Basin covers a 100,000 square mile area that includes more than 1,500 oilfield operators and more than 10,000 oilfield interest owners. It holds about 150 billion barrel of equivalents recoverable resources split between the eastern Midland sub-basin and the western Delaware sub-basin. The cost per well continues to decline and wells are increasingly more productive, significantly improving return on investment and reducing the oil price needed to break even. The average breakeven oil price in both the Delaware and Midland is now in the $33 to $35 per barrel range.

OXY holds the dominant position in the Permian with 2.5 million net acres, including 450,000 net acres under development in the Delaware and 200,000 in the Midland. It has an additional 750,000 net acres with unconventional resource potential under evaluation.

Buy OXY Price Target: $89

Its total Q4 2017 Permian oil production is 8% of total Permian production. Its total net production is substantially larger than its closest competitors.

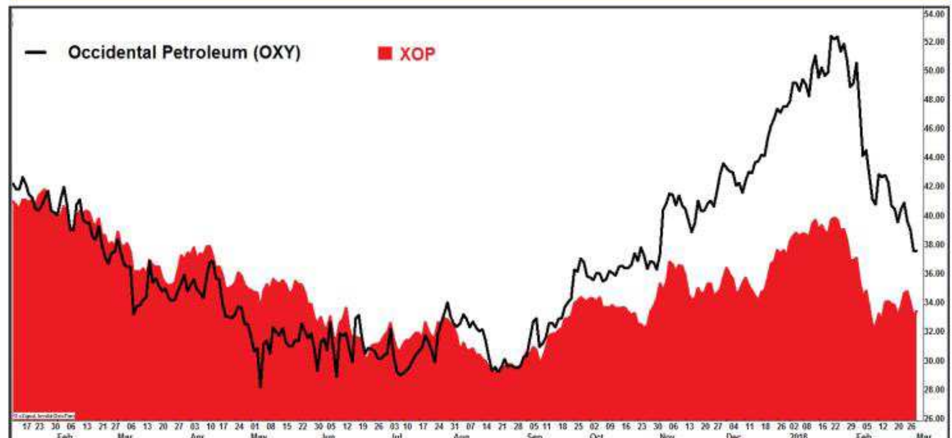
It divides its operations in the Permian Basin into two business units: Permian EOR focused on enhanced oil recovery using waterfloods and CO_2 floods, which generate substantial free cash flow; and Permian Resources, its growth component focused on unconventional resources.

The Permian Basin accounted for 48% of OXY's 2017 production and generated about 44% of its cash flow from operations.

OXY has a leading position in the Permian Basin. Its Permian Resources segment production will be up 44% this year to account for 31% of OXY's worldwide production. After a 4% decline in 2017, total 2018 production is expected to grow 8%. OXY is targeting high single-digit long-term growth at a $50 per barrel WTI oil price.

The downside is limited thanks to its 4.7% dividend yield. OXY has a bullish outlook with a strong position in one of the more profitable production regions in the United States. ∆

BEATING THE BENCHMARK
OXY has outperformed the XOP during the last year.
Source: eSignal



Chevron's financials make it a major player

By **Paul Kuklinski**

With a market cap of $217 billion, **Chevron** (CVX) competes with the likes of **Exxon** (XOM), **Shell** (RDSA), **BP** and **Total** (TOT). CVX consistently ranks among the lowest cost producers in its nine-company peer group. Strong production growth is anticipated in 2018 and 2019. The stock has an upside target of $153 per share, a 34% increase over current prices during the next 12 months, assuming a $60 per barrel WTI oil price with a $3 Brent premium, and its six-year average 8.8x cash flow multiple on 2019 estimated cash flow of $17.44 per share. The stock also has support from an attractive dividend yield.

CVX has proven reserves of 11.7 billion barrel equivalents, comprised of 56% liquids and 44% natural gas. Much of its gas production is sold as liquefied natural gas (LNG) linked to oil prices, with 29% of its liquid reserves in the United States and 27% in its TCO affiliate in Kazakhstan. Australia accounts for 44% of its natural gas reserves with the rest well-diversified across the globe.

Its 2017 operational cash flow was $20.5 billion, up 58% from 2016. Capital spending was $13.4 billion and the dividend requirement was $8.1 billion. Despite the severe 3.5-year decline in crude oil prices and earnings, its balance sheet remains strong with an 18% debt ($33.5 billion)/debt + equity ratio.

With a $63 per barrel Brent oil price, 2018 cash flow is likely to exceed $33 billion. Proceeds from asset sales are expected to add around $2.5 billion annually over the next few years. CVX's 2018 capital spending budget is $18.3 billon. It expects to spend about $19 billion in 2019 and 2020.

Buy
CVX
Price Target: $153

During the last 12 months, CVX is up 7% compared to a 3% decline in the XLE energy sector exchange-traded fund and a 17% increase in the SPX.

WTI increased 36% from $49 in Q4 2016 when OPEC announced its agreement with Russia and other non-OPEC producers to cut production to the late January peak near $67. It averaged $51 in 2017 and $43 in 2016. The Brent premium blew out to more than $7 in December and has contracted since.

The run-up in crude to the January peak mirrored the decline in surplus OECD inventories targeted by the OPEC cut. OPEC is pleased with its performance and the result.

Saudi Arabia recently said it "hopes OPEC and its allies (primarily Russia) will be able to relax production cuts next year and create a permanent framework to stabilize oil markets after the current agreement on supply cuts ends. Inventories are likely to remain relatively balanced the rest of the year stabilizing oil prices near current levels, which is good as 75% of Chevron's production is linked to oil prices.

CVX's 2017 production increased 6%, driven by the ramp up of its massive Gorgon and Wheatstone LNG projects in Australia and rapid growth in the Permian Basin.

CVX anticipates annual production growth between 4% and 7% through 2020 based on a $60 per barrel oil price. Its 2018 production will benefit from a further ramp-up in Australia and a larger increase in the Permian to support a 6% increase in total production.

CVX holds a 64% interest in the $34 billion Wheatstone LNG project. Train 2 of the project is expected to start in Q2 2018. More recent discoveries at its 67% owned Clio and Acme prospects will support future expansion opportunities. Wheatstone is slated to form the basis of a regional LNG hub with ultimate capacity of 25 million tons, which would likely also process gas owned by others.

CVX also has a 17% interest in the non-operated North West Shelf Venture in Western Australia, of which 70% is sold as LNG to Asian customers under long-term contracts.

Total 2018 Australia segment production is expected to increase 44%. CVX ranks as the third largest LNG producer behind Shell and Exxon. Over 80% of CVX's Gorgon and Wheatstone LNG is under long-term contract indexed to Brent crude oil.

CVX has a diversified and balanced portfolio of quality upstream and downstream assets plus a very strong balance sheet. Upstream operations will generate about 75% of its 2018 earnings. Its attractive dividend yield provides downside support as well as an inflation hedge tied to oil prices. ∆

CVX anticipates annual production growth between 4% and 7% through 2020.

ITG: Tough technicals for this fintech firm

By **Doug Busch**

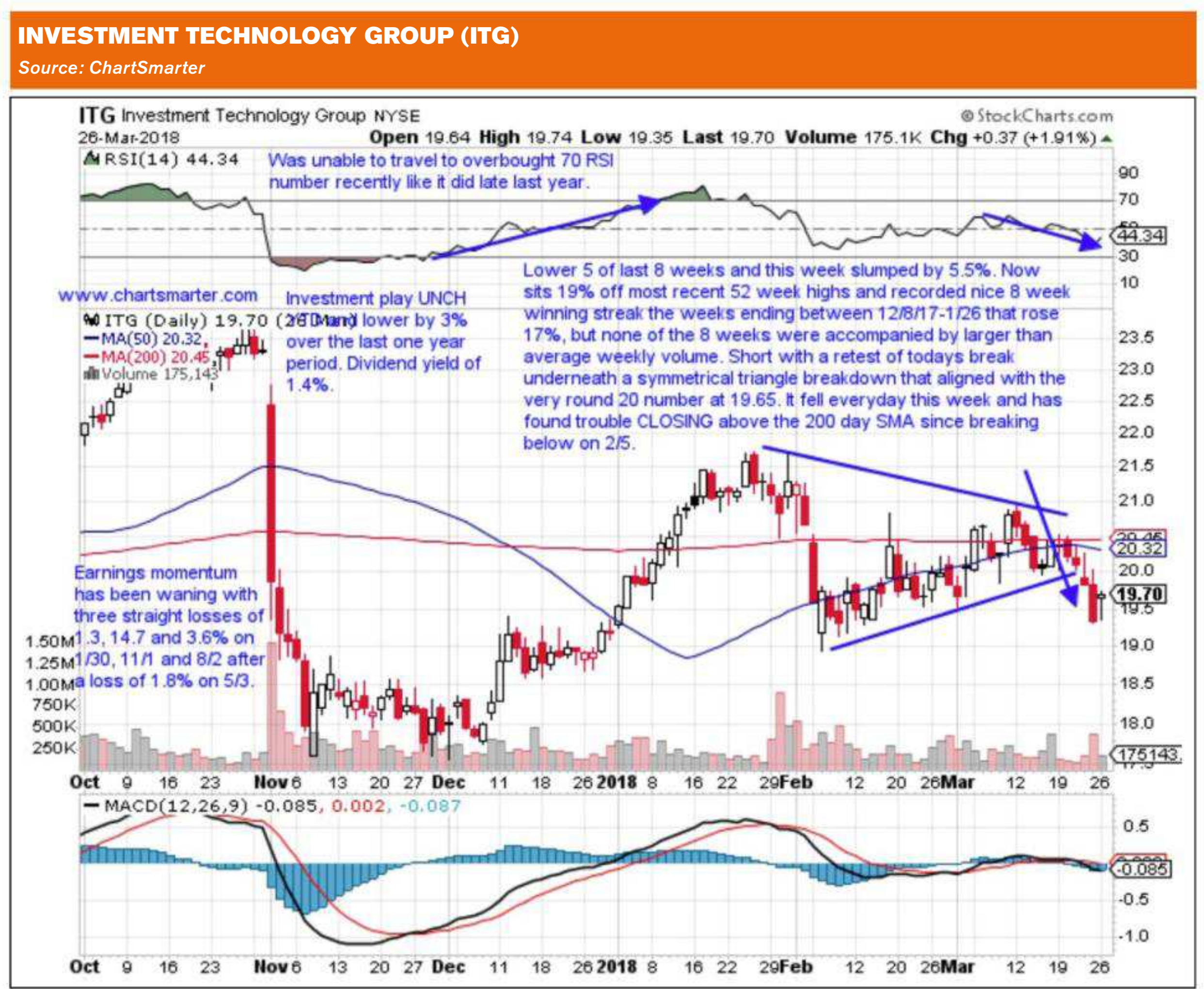
ITG Investment Technology Group (ITG) has been a laggard in a sector that is now spiraling lower – not a good combination. ITG is an investment play that is unchanged year-to-date and 3% lower during the last 12-month period. It sports a dividend yield of 1.4%. Earnings momentum has been waning with three straight losing quarters: 1.3%, 14.7% and 3.6% respectively.

ITG
Trigger: $19.65
Buy stop: $20.85

The stock has struggled in February and March and now sits 19% off its 52-week high. It did record a nice eight-week winning streak in December and January, raising the stock by 17%, but the rally was not accompanied by larger than average volume. Traders should short ITG with a retest of the late March break under a symmetrical triangle breakdown that aligned with the very round $20 level at $19.65. It fell everyday of the week following the break and has found trouble closing above the 200-day simple moving average since breaking below it in February. ∆

Doug Busch *(CMT) trades U.S. equities using technical analysis with an emphasis on Japanese candlesticks. @chartsmarter*

INVESTMENT TECHNOLOGY GROUP (ITG)
Source: ChartSmarter



A look at long-term trends of commercial interest in the CFTC's "Commitments of Traders" report.

Market	Net Commercial Position	Commercial Trader Momentum	Trend, Sideways, Reversal
Currencies	4 Week Net Change +/-		
AD	-13,121	Negative	Sideways
BP	-25,040	Negative	Sideways
CD	-38,133	Negative	Sideways
DX	-1,910	Negative	Sideways
EC	-191,187	Negative	Reversal -
JY	88,576	Positive	Reversal -
SF	16,133	Positive	Sideways
MP	-95,012	Negative	Reversal -
Grains			
BO	-50,102	Negative	Sideways
C	-175,246	Negative	Reversal -
KW	-30,132	Negative	Reversal -
S	-100,576	Negative	Reversal -
SM*	-169,049	Negative	Reversal -
W	23,386	Positive	Reversal -
O	-3,561	Negative	Trend -
Rates			
ED*	4,688,358	Positive	Reversal +
FN	598,813	Positive	Reversal +
TY	631,797	Positive	Reversal +
US	23,840	Positive	Sideways
Metals			
GC	-199,796	Negative	Sideways
HG	-47,021	Negative	Sideways
PL	-47,458	Negative	Reversal -
SI	-14,463	Negative	Reversal +
Energy			
CL	-729,989	Negative	Reversal -
HO	-41,435	Negative	Sideways
NG	95,822	Positive	Sideways
RB	-92,252	Negative	Reversal -
Softs			
CC	-36,932	Negative	Reversal -
CT*	-98,738	Negative	Reversal -
KC	33,114	Positive	Reversal +
OJ	1,534	Positive	Sideways
SB	102,029	Positive	Reversal +
Meats			
FC	50	Positive	Sideways
LC	-83,407	Negative	Sideways
LH	-1,457	Negative	Sideways
Indices			
DJ	-27,641	Negative	Sideways
ES	-148,566	Negative	Sideways
ND	2,088	Positive	Sideways
RU	-1,417	Negative	Sideways

Ag & Eurodollar spec bubbles ready to reverse

By **Andy Waldock**

Spring brings new hopes. The commercial grain growers aren't as optimistic. The year's early rally has seen commercial producers jump into the market to sell their anticipated forward production. Farmers' eagerness makes sense with the coming year's expected global harvest to be record-setting, once again. Modern agronomy combined with increased global acreage finds the world filling its bins higher and higher at lower and lower prices. Perpetually declining prices have made growers exceptionally opportunistic in the placement of their forward hedges.

The multi-year decline in grain prices isn't over. The rallies in Chicago wheat, Kansas City wheat, soybeans and corn have all petered out near the 120-week moving average during the last few years. In fact, soybean meal has been the only grain market to buck the downward trend in grain prices. The record-setting speculative position in soybean meal leaves it as the most vulnerable of the grains to a washout. Speculators are now long nearly seven contracts for every short in the soybean meal futures. Barring a weather event, the commercial grain growers will halt any meaningful rally. This should be the year that grain prices decline dramatically with soybean meal back below $300 per ton, December corn near $3 per bushel and wheat near $4 per bushel.

The speculative bubble brewing in the grains, specifically soybean meal, leads us to the divergent behavior between the speculators' record positions after the 10% decline in the stock market and the 13% decline in crude oil. A significant reversion to neutral of both the speculative and commercial positions can confirm a meaningful shakeout.

Market turns, on the other hand, are also characterized by a growing commercial position, adding pressure to the already spooked speculators. Markets that have experienced a shakeout can then begin anew as the next round of price discovery sets up. This is what happened with the stock market sell-off. The speculative position in the E-mini S&P 500 futures declined by more than 60% as the market fell by 10%. Conversely, the speculative position only decreased by 4% as crude dropped by 13%. This strongly suggests that the crude oil bulls are still bullish, and will need more than the 13% decline it recently experienced to frighten the emboldened speculative bid.

Finally, the record-setting commercial bid in the Eurodollar interest rate market must be addressed. Eurodollar futures are the most liquid contract in the world. They represent the interest paid on U.S. dollars deposited on foreign soil. The interest rate being paid can be calculated by subtracting the price of

This should be the year that grain prices decline dramatically.

the Eurodollar Index from 100. The December 2019 contract is already the front month because it has the most open interest: more than two million contracts as of this writing. The current price of 97.11 indicates the interest to be paid on these deposits is 2.89%. Total open interest in the Eurodollar market has a face value of more than $1 trillion. The commercial traders set a record net long position through March and April of last year. This led to the September 2017 high where they offset about half of their position. The market has since fallen below the post-election sell-off lows.

The commercial traders increased their net long position by 40% between Jan. 5 and March 5 in response to the recent wave of selling. They are now net long 1.66 contracts for every short. This is setting the stage for a sharp reversal higher to knock out the speculators and provide the commercial traders with an opportunity to reverse their position and get in line with the Fed's long-term plans. Δ

Andy Waldock *is a futures trader, analyst and founder of brokerage firm Commodity & Derivatives Advisors. He specializes in analyzing the CFTC COT data. @waldocktrades*

Spin-Offs – S&P 500 = profit

By **Joe Cornell**

The pace at which competition has forced restructurings in almost every industry has boosted the volume of corporate spin-offs.

Spin-offs provide fertile ground for a variety of investment disciplines. Growth opportunities arise when a mature company divests a subsidiary whose prospects have been masked by the slow growth of the parent. Value investors benefit when the price of a seasoned business – new to the public market – is beat down to attractive levels due to indiscriminate selling. Academic studies consistently confirm that the average spin-off has outperformed the market within three years of independence.

Spin-offs occur when a parent corporation distributes all or most of its ownership in a subsidiary to the parent's shareholders on a pro rata basis. As a result, the subsidiary company is no longer owned or controlled by the parent company and there are two separate publicly traded companies. This transaction is considered a stock dividend and is tax-free.

It is important to distinguish tax-free spin-offs from other types of related transactions (such as IPO carve outs and corporate split-offs). Under an IPO carve out, a portion of the subsidiary's shares is offered for sale to the general public. When the IPO market is healthy and valuations robust, some companies choose to carve out a subsidiary to boost shareholder

SPINNING PROFITS

The Guggenheim S&P Spin Off ETF has grown steadily during the last decade.

Source: eSignal

Spin-offs often result in a higher aggregate value for the constituent pieces. When one reconstitutes the parent and the spin-off after a one to two-year period, overall outperformance is often observed.

value. IPO carve outs can often be the first step of a tax-free spin-off. For example, the parent may first sell 20% of the subsidiary to the public in an IPO. The parent could then later distribute the 80% that is still owns in a tax-free distribution.

Under a split-off, shareholders exchange their parent stock for shares of the subsidiary. Split-offs also provide the parent an opportunity to separate the subsidiary in a tax-free manner.

Case for spin-offs

The first and foremost reason to invest in spin-offs is, of course, to make money. The idea of getting smaller may seem counterintuitive, but corporate spin-offs can be a very attractive option for companies and their shareholders. The rational behind a spin-off or a carve out (partial IPO) is that the parts are greater than the whole. A spin-off can help improve a company's valuation by providing powerful incentives to the people who work in the spun unit. Further, a split can help the parent's management to focus on the core operations. A spin-off often reduces the internal competition for corporate funds. For employees in the new separate entity, there is publicly traded stock to motivate and reward via stock and options. Spin-offs often result in a higher aggregate value for the constituent pieces. When one reconstitutes the parent and the spin-off after a one- to two-year period, overall outperformance is often observed.

340% + in the last 10 years

The Bloomberg U.S. Spin-Off Index (BNSPIN) is a market capitalization-weighted index that contains stocks with $1 billion in initial market cap that were spun-off from U.S. companies. The index includes companies from spin-off, split-off and carved out activities. We view the Spin Index as a good proxy for how spin-offs in general are performing. The BNSPIN has crushed the S&P 500. The Spin Index is up 6.85% year-to-date (as of March 7) versus a 2% return for the S&P 500. During the past 12 months the Spin Index has returned 37.5% versus 17% for the market. For the 10-year period, the BNSPIN has appreciated 342% (154% for the S&P 500 Index). The Guggenheim S&P Spin-Off ETF (CSD) tracks the S&P U.S. Spin-Off Index, and has produced similar returns (see "Spinning profits," page 21).

It appears that 2018 will be a banner year for spin-offs. In the first two months of 2018, there has been 11 new spin-offs announced (versus three spins announced year-over-year through February). ∆

Joe Cornell *is the founder and publisher of Spin-Off Research, a chartered financial analyst and author of "Spin-Off to Pay-Off." @spinoffresearch*

ANNOUNCED SPIN-OFFS YEAR-TO-DATE
Source: Spin-Off Research

Altice N.V. (ATC) to spin 67% stake in Altice USA by the end of Q218
Baidu's (BIDU) video unit iQIYI files for IPO on NASDAQ
Brunswick (BC) to spin off fitness equipment arm
Deutsche Bank (DB) to carve out 25% of its asset management business (DWS) in an IPO
EQT Corp. (EQT) to spin off its midstream business by the end of Q3
Fiat Chrysler (FCAU) to spin off Magneti Marelli by end of 2018
FMC Corporation (FMC) to spin off lithium business
GKN (GKNLY) to separate Aerospace and Driveline units in mid-2019
KAR Auction Services (KAR) to spin off Salvage Auction unit
Kering SA (PPRUY) to spin off 70.4% stake in PUMA (PMMAF) to shareholders on May 16
Netgear (NTGR) to separate Arlo in a "two-step spin-off"

Fed policy may turn U.S. dollar outlook

By **Matt Weller**

As any Economics 101 student learns, the Federal Reserve is responsible for U.S. monetary policy, including setting the level of interest rates, and more recently, managing the central bank's vast assets acquired though repeated iterations of Quantitative Easing (QE).

In March, the central bank raised interest rates for the sixth time this cycle; both the Fed's own projections and market expectations expect another two rate hikes this year, followed by another two or three increases in 2019. Meanwhile, the central bank has stopped reinvesting the proceeds from its asset holdings, starting the long process of decreasing its bloated balance sheet. At first glance, the Economics 101 student should conclude that the Fed's classic tools of monetary policy may now start to become a headwind for economic growth for the first time in nearly a decade.

However, Economics 201 students learn that the Fed is also responsible for another critical aspect of U.S. economic growth: banking regulation. In October, Randal Quarles was confirmed by the Senate as the central bank's first vice chairman for bank supervision. As you might expect from a former private equity executive, Quarles has prioritized finding ways to decrease regulations on the markets.

Quarles has proposed overhauling trading limits, streamlining capital rules and changing the Fed's stress testing process. Notably, the Fed has been working closely with other banking regulators on a proposal that could allow banks to exclude certain assets from leverage ratio calculations, potentially allowing those banks to make more loans on the same amount of deposits. In addition, Quarles has set his eyes on revising the Volker Rule, which restricts a bank's ability to trade with depositors' funds, and clarifying the criteria for its regular bank stress tests. Each of these changes is intended to decrease bureaucracy and make the banking system more efficient.

Thus, while it is true that the Fed's traditional monetary policy stance has changed from a tailwind for the U.S. economy to a neutral factor at best, the central bank's regulatory actions have simultaneously become more supportive for growth by making it easier for banks to lend funds. Add in a fiscal policy boost from the Republicans' recent tax cut, and the economics textbook suggests that the U.S. economy could be poised for strong growth during the next couple of years.

Strong domestic growth would benefit U.S. stocks, but it could also support the dollar by allowing the Federal Reserve to continue raising interest rates to beyond their equilibrium level. After a decade as one of the lower-yielding major currencies, the greenback's benchmark interest rate is already at the same level as traditional carry currencies like the Australian and New Zealand dollars. Barring a surprise shock to growth, the Federal Reserve is expected to raise rates more aggressively than any of its major rivals in the years to come.

As of late March, the U.S. Dollar Index is trading near a three-year low (see "Dollar technicals"). The greenback has trended consistently lower since the start of 2017 as the luster of the Trump Trade has worn off and other central banks show signs of tightening.

The 61.8% Fibonacci retracement of the 2014-2017 rally near 88 represents a critical support level. A break below that area would open the door for a continuation toward the mid-80s. Meanwhile, bulls are looking for the Dollar Index to rally back through previous support and the 50% retracement near 91.50 to signal a turnaround. The next resistance level would be the November 2017 high of 95.00. If we see that, it could be a sign that traders are finally moving from an Economics 101 perspective to Economics 201 view, waking up to the potential of a more dynamic banking sector supporting strength in the U.S. dollar. ∆

DOLLAR TECHNICALS

The U.S. Dollar Index is seemingly at an important pivot.

Source: TradingView/Faraday Research

Matt Weller *is a CFA charterholder and senior market analyst for Faraday Research. @mwellerfx*

Banking sector vol & reversals

By **John Rawlins**

Quant Cycles is a technical tool that employs proprietary statistical techniques and complex algorithms to filter multiple cycles from historical data, combines them to obtain cyclical information from price data and then gives a graphical representation of their productive behavior. Other proprietary frequency domain techniques then are employed to obtain the cycles embedded in the price.

CITIGROUP

Citigroup (C) rallied nearly continuously from mid-2016 up until this February. After recovering much of the ground from the late January early February sell-off, Citigroup turned down again in mid-March pushing it close to oversold territory based on Quant Cycle analytics just as the cycle is expecting to turn higher. This presents a solid buying opportunity this spring. But don't wait too long as the Quant Cycle anticipates Citi peaking in early June and entering a significant bearish pattern that will last into September and take it well below its current levels. Two solid trades here, followed by a significant low in the fall.

JP MORGAN

JPMorgan (JPM) has a similar if a slightly more impressive equity curve as Citi during the last two years. The recent weakness has moved JPMorgan stock into definitive oversold territory based on its Quant Cycle reading. However, the Quant Cycle forward guidance is not as strong as with Citi. The cycle expects JPM to enter a slow steady downtrend for closing prices for the rest of 2018. Given the bank's current oversold position, it would be best to wait for JPM to see some rebound from its current level before going short.

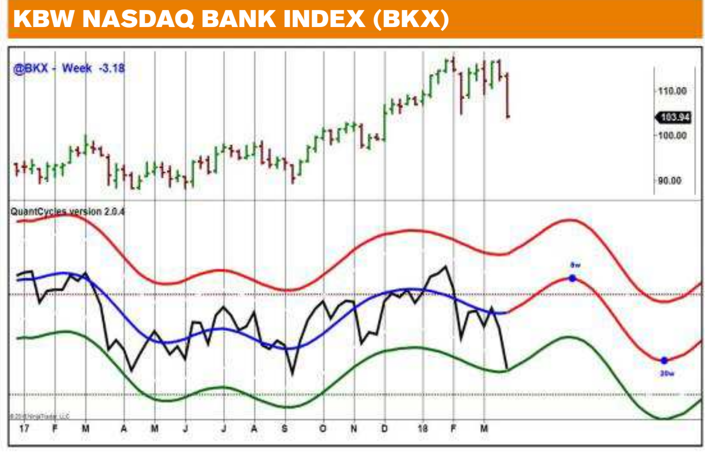
KBW NASDAQ BANK INDEX

The KBW Nasdaq Bank Index (BKX) has dropped 10% since setting a double-top in early March. Its Quant Cycle projection is remarkably similar to that of Citigroup. The BKX, however, has touched oversold territory and its Quant Cycle projection has already turned up. It is a solid buy at the low $100-level, but is expected to turn lower near the end of May. Unless you can go long at a price, it would be best to wait for an upward correction to short somewhere above $110. Like Citi, KBW will provide a solid buying opportunity in the fall.

CITIGROUP

JP MORGAN

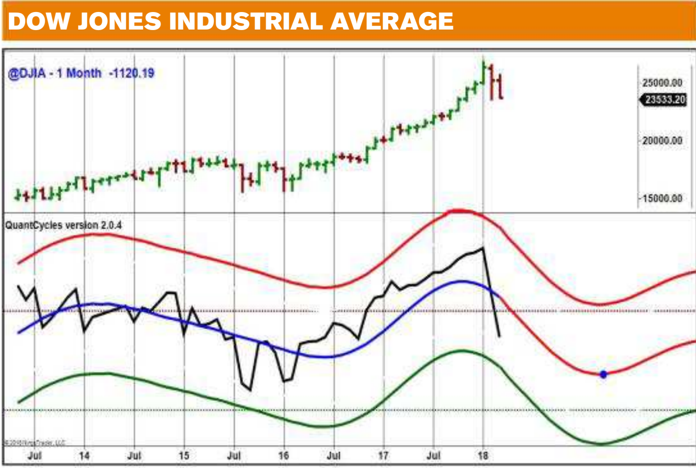
KBW NASDAQ BANK INDEX (BKX)



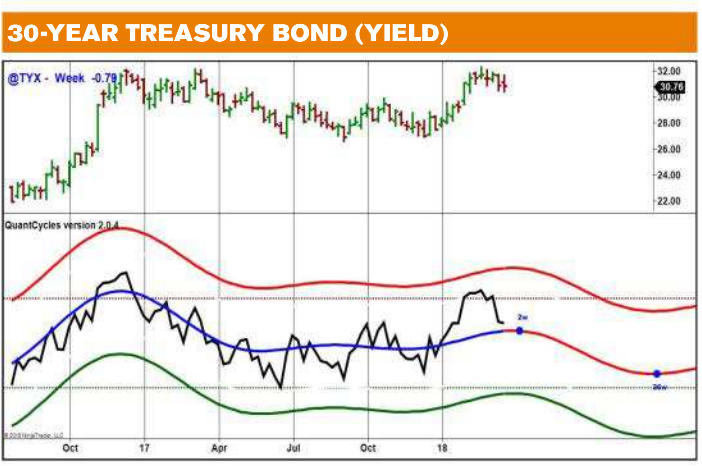
WFC is down more than 20% from its late January peak, but unlike Citi or BKX, no respite is in sight.

WELLS FARGO & CO.

DOW JONES INDUSTRIAL AVERAGE



30-YEAR TREASURY BOND (YIELD)



WELLS FARGO & CO.

Wells Fargo (WFC) began selling off with the rest of the market and banking sector in late January, but never recovered. WFC is down more than 20% from its late January peak, but unlike Citi or the BKX, no respite is in sight. While WFC is in solidly oversold territory, its Quant Cycle indicator has it continuing to weaken well into June. Given its oversold reading, you may wish to see some improvement before shorting, or simply wait for a bottom in mid-June, when its Quant Cycle reading has the stock turning higher. Given the Quant Cycle divergence from the rest of the sector, traders may wish to employ a spread, shorting WFC versus the broader sector index or another banking stock.

DOW JONES INDUSTRIAL AVERAGE

For close to a year, the Quant Cycle has been forecasting weakness in equities in general and the Dow Jones Index in particular. Every time that it looked like the market may be turning lower, it reversed and made new highs. That is up until recently. We included a longer-term Quant Cycle for the Dow and though it appears slightly oversold with the recent weakness, the Quant Cycle has the Dow in a downward cycle for another 12 months. It doesn't expect the Dow to make a bottom until the spring or summer of 2019. If this projection is correct, traders should change their outlook from looking for sell-offs to go long to looking for rebounds to short.

30-YEAR TREASURY BOND YIELD

Since the massive sell-off in bonds (rally in yields) in the second half of 2016 that took the 30-year Treasury bond yield above 3%, yields in the long bond have been straddling the 3% level. The recent rally in yields looks to be near a top based on Quant Cycle analytics. While many analysts think that the 35-year bull market in bonds is near an end or perhaps has ended, especially with the recent tightening by the Federal Reserve, the Quant Cycle expects yields to dip back below 3% and continue to slide well into the summer. If the Quant Cycle analysis of the Dow is accurate, this movement would make sense. In fact, it can be seen as somewhat of a confirmation of it. Δ

John Rawlins *is a former member of the CBOT with more than 30 years of experience in trading and research. He co-developed the Cycle Projection Oscillator with an aerospace engineer. @cpopro1*

The ratio calendar combination spread

By **Michael C. Thomsett**

COMBO SPREAD SCORECARD

price at expiration	short 105 put	short 110 call	Total	long 105 put	long 110 call	Total
	Profit or loss April combination			Profit or loss May combination		
120	+ 1.70	- 7.85	- 6.15	- 2.95	+6.37	+3.42
119	+ 1.70	- 6.85	- 5.15	- 2.95	+5.37	+2.42
118	+ 1.70	- 5.85	- 4.15	- 2.95	+4.37	+1.42
117	+ 1.70	- 4.85	- 3.15	- 2.95	+3.37	+0.42
116	+ 1.70	- 3.85	- 2.15	- 2.95	+2.37	- 0.58
115	+ 1.70	- 2.85	- 1.15	- 2.95	+1.37	- 1.58
114	+ 1.70	- 1.85	- 0.15	- 2.95	+0.37	- 2.58
113	+ 1.70	- 0.85	+ 0.85	- 2.95	- 0.63	- 3.58
112	+ 1.70	+ 0.15	+ 1.85	- 2.95	- 1.63	- 4.58
111	+ 1.70	+ 1.15	+ 2.85	- 2.95	- 2.63	- 5.58
110	+ 1.70	+ 2.15	+ 3.85	- 2.95	- 3.63	- 6.58
109	+ 1.70	+ 2.15	+ 3.85	- 2.95	- 3.63	- 6.58
108	+ 1.70	+ 2.15	+ 3.85	- 2.95	- 3.63	- 6.58
107	+ 1.70	+ 2.15	+ 3.85	- 2.95	- 3.63	- 6.58
106	+ 1.70	+ 2.15	+ 3.85	- 2.95	- 3.63	- 6.58
105	+ 1.70	+ 2.15	+ 3.85	- 2.95	- 3.63	- 6.58
104	+ 0.70	+ 2.15	+ 2.85	- 1.95	- 3.63	- 5.58
103	- 0.30	+ 2.15	+ 1.85	- 0.95	- 3.63	- 4.58
102	- 1.30	+ 2.15	+ 0.85	+0.05	- 3.63	- 3.58
101	- 2.30	+ 2.15	- 0.15	+1.05	- 3.63	- 2.58
100	- 3.30	+ 2.15	- 1.15	+2.05	- 3.63	- 1.58
98	- 4.30	+ 2.15	- 2.15	+3.05	- 3.63	- 0.58
97	- 5.30	+ 2.15	- 3.15	+4.05	- 3.63	+0.42
96	- 6.30	+ 2.15	- 4.15	+5.05	- 3.63	+1.42
95	- 7.30	+ 2.15	- 5.15	+6.05	- 3.63	+2.42

The ratio calendar combination spread earns profits in range-bound markets early on, followed by high volatility later on.

The ratio calendar combination spread couples two ratio calendar spreads, one using calls and the other using puts. The call strike prices are higher than the put strike prices. This strategy is complex and profit is limited, but if a high amount of time value is involved in the short positions, that profit can be substantial and risk is still limited.

Example:

The underlying stock is valued at $108.10. You initiate a ratio calendar combination spread with the following positions expiring in the months of April and May:

Sell April 105 put at the bid	**$1.70**
Sell April 110 call at the bid	**$2.15**
Credit	**1.70 + 2.15 = 3.85**
Buy May 105 put at the ask	**$2.95**
Buy May 110 call at the ask	**$3.63**
Debit	**-2.95 + -3.63 = -$6.58**
Total net debit	**3.85 – 6.58 = -2.73**

The advantage to this combination is maximized when the underlying stock price remains in the middle range until the earlier short April option expirations; and then the stock moves above or below that middle range. In this way, the short positions expire worthless or at a profit, leaving the potential for profits from the longer-term long positions.

If the underlying stock expires between $102 (lower breakeven price) and $113 (upper breakeven price), then the short April options will be profitable; if the underlying stock settles at or above $117 or at or below $97, then the long options will be profitable.

In "Combo spread scorecard," we list out the profit or loss for both the April and May combinations.

This strategy has the benefit of collecting premium on the front or being in a profitable long position with defined risk.

This column features strategies that are included in more detail in Michael Thomsett's upcoming book "The Complete Options Trader." ∆

Michael Thomsett *is author of 14 options books and has been trading options for 35 years. @michaelthomsett*

Dow Theory confirms a strong U.S. economy

By **John Blank**

TOP-RATED INDUSTRIES
27 Top stocks in top-rated industries.
Source: Zacks

Top Zacks Industries with Stocks

Industry	Top Stocks		
Retail - Regional Department Stores	DDS	KSS	M
Oil & Gas - Integrated Emerging Mkts	STO	SWSKF	PTR
Auto- Retail and Wholesale	CRMT	GPI	ABG
Retail - Consumer Electronics	CONN	BBY	AAN
Steel - Specialty	STLD	ANGGY	ZEUS
Transportation - Truck	SAIA	ARCB	CVTI
Semiconductor - Wafer Fab	LRCX	ASML	AEIS
Retail - Misc.	HIBB	KAR	HZO
Mfg. Construction & Mining	CASDY	HTCMY	KMTUY
Office Products	DLX	HNI	KNL

BEST IN TRANSPORT
Source: eSignal

Have you ever heard about the Dow Jones Transportation Average (DJTA)? It is more loosely termed the "Dow Jones Transports" by stock traders. The index is a running average of the stock prices of 20 transportation corporations.

Charles Dow himself created this average on July 3, 1884.

A basic tenet of "Dow Theory" is that stock market averages must confirm each other. Investopedia defines Dow Theory this way: The market is in an upward trend if [either the] industrial or transportation average advances above an important high and is followed by a similar advance in the other average.

In Charles Dow's time, the United States was a growing industrial power. The country had a few big population centers, but factories were scattered throughout the country. Factories had to ship their goods to market, usually by rail. Dow's first stock averages were an index of industrial (manufacturing) companies and rail companies. Hence, if an investor is looking for signs of health in manufacturers, he should look at the performance of the companies that ship their output to market, the railroads.

Given that, let's take a deep dive into the status of Zacks ranked transportation industries.

Can we confirm a positive "Dow Theory" effect, where transportation industries are hot? Are U.S. and global economies manufacturing growth indeed strong?

Yes. First off, look at Truck Transportation, a 17-company strong industry. The Zacks Industry Rank for Truck Transportation is #4 out of 265.

The year-to-date return of Zacks Trucking sector is 4.36%, while the S&P 500 returned 2.93%. During the last year, Trucking has returned 32.6%, while the S&P500 returned 18.26%.

Next, let's look into Air Freight and Cargo Transportation, a six-company strong industry. The Zacks Industry Rank for Air Freight and Cargo Transportation is #14 out of 265.

However, Air Freight's year-to-date return looks weak at -4%. During the last year, this industry returned +15%.

This share weakness is likely due to the Amazon effect.

Finally, the old Charles Dow favorite: trains. Rail Transportation is a 10-company strong industry. Its year-to-date return is 1.12%, while its 12-month return is 22.48%. That annual return is a tad better than the S&P 500.

So we can confirm a strong economy based on Charles Dow's metric. Two Zack "strong buy" stocks in the sector are **Covenant Transportation Group** (CVTI) and **Saia Corporation** (SAIA). ∆

***John Blank** is the chief equity strategist at Zacks. He covers the global financial markets for Zacks.com. @johnblank100*

Alternative data is driving fintech

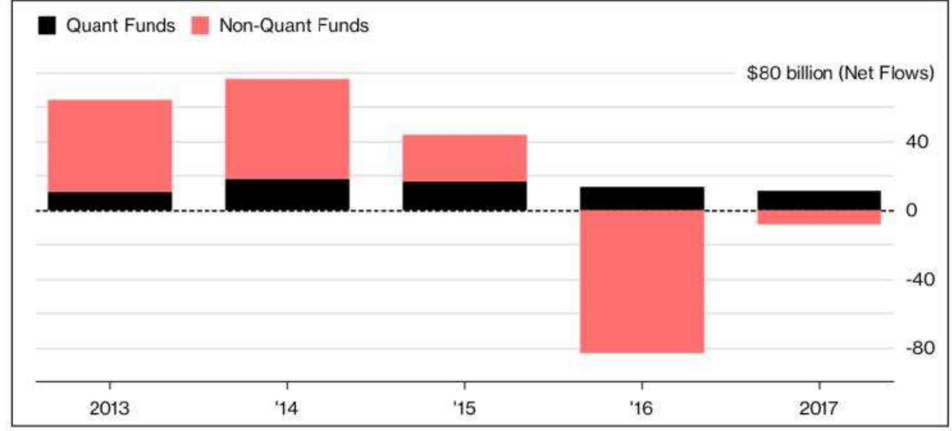
By **Christine Short**

There will always be alpha available to be arbitraged, which is associated with the irrational behavior of humans in markets, but most alpha generated by systematic traders is associated with an informational advantage.

QUANT APPEAL

Computer-driven hedge funds are marching ahead amid outflows from discretionary managers.

Source: HFR & Bloomberg



One of the hottest subsets of the fintech landscape these day, and for good reason, is alternative data providers. Quantitative investment funds, which continue to outperform their discretionary peers, are in an all-out frenzy to feed their algorithms with as much valuable data as possible to find market signals. According to research from the Tabb Group, the alternative data market could be worth around $400 billion by 2020.

These new types of data are changing the investment playing field, and coming to market fast and furious. A data set that might be innovative and nice to have this month, may be a definitely must have by next month.

Quantitative investors have become quite adept at using both structured and unstructured data sets in their models to give them an edge, but a much larger chunk of investors, those from the discretionary buy side, are just starting to catch on. It's fair to say that discretionary managers are a bit behind, but they have woken up and are now scrambling to understand what's taking place and how they must change in relation to it. Many will not survive the shift. Others will take advantage and be better off for it.

The move to passive investing continues, although all investing is technically active. In any case, we continue to see massive flows of capital out of active long only mutual fund and long/short hedge fund strategies and into these passive funds where alternative data is being used. Investors are now aware of the asymmetric risk they were taking on with active discretionary mutual funds, hedge funds and registered investment advisors. Most portfolio managers were simply playing with beta, whether it be through momentum, mean reversion, value, growth or sector-specific strategies. Managers were leveraging these forms of beta far more often than they were actually generating alpha.

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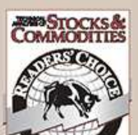


19 Years Running
1999 - 2018

There's simply more efficacy to what systematic managers are doing than the vast majority of the discretionary trading world, and they've (mostly) put up the numbers to prove it. And not just in regards to returns, these groups are producing real alpha. Their strategies are meticulously backtested in and out of sample before going live, and are scaled up over time. And while some systematic funds don't perform well, they also don't have the massive blow ups that are regularly seen on the discretionary side.

However, as systems improve, there is far less alpha in the market to capture. Relative value and statistical arbitrage strategies are about capturing asset mispricings associated with the irrational behavioral aspects of fear and greed. But as a data set becomes popularized, it moves from alpha to beta over time. It may take decades for this transition, but the timeline seems to be quickening. There will always be alpha available to be arbitraged, which is associated with the irrational behavior of humans in markets, but most alpha generated by systematic traders is associated with an informational advantage.

About five years ago, many of the classic stat-arb strategies stopped working due to an influx of competitors. There simply wasn't enough alpha to go around. This caused the smartest firms to search for new data sets with predictive power, or reflexivity. Fast-forward a few years and an all-out arms race is now under way for the latest and greatest in big data, and that doesn't appear to be slowing down anytime soon, as a plethora of new entrants come to market. Even the biggest investment banks are getting in on the game, holding alternative data events to connect their clients with data vendors, while keeping their own quants on top of the changes as well.

As this absolutely massive transformation taking place within the discretionary institutional management industry continues to play out, alternative data companies will be some of the biggest winners in fintech. ∆

The biggest investment banks are getting in on the game, holding alternative data events to connect their clients with data vendors.

Christine Short, *Estimize senior VP, is an expert in corporate earnings who produces content highlighting Estimize data. @estimize*

Financial technology is the engine of market innovation and growth. Here is an examination of fintech based on a survey of members of the World Federation of Exchanges and an analysis of McKinsey & Co. clients.

Decoding Fintech

& Capturing the Opportunity in Capital Markets Infrastructure

■ By **Nandini Sukumar, Siobhan Cleary, Matthias Voelkel, Markus Röhrig, Roger Rouhana & Christian Schaette**

Technology has long been the engine driving capital markets efficiency – both for investors in the markets, and for the capital markets infrastructure providers (CMIPs) that operate the exchanges and other trading venues, central counterparties, securities depositories, index providers and data and analytics companies.

More recently, fintech companies are bringing new technologies to market even faster and with a greater impact.

Hundreds of fintechs are focusing their development on capital markets infrastructure (CMI), and while CMIPs recognize that fintech will have a significant influence on the industry, many remain unsure of which technologies to adopt and to what degree, and how best to engage and interact with fintech companies (see "Capital markets infrastructure," right).

The role and importance of CMIPs in the markets has grown in the past decade – along with their revenues – owing to changes in the regulatory environment (a push toward mandatory central counterparty [CCP] clearing of over-the-counter [OTC] derivatives or ever-increasing reporting requirements), in the investor landscape (a higher profile for buy-side firms) and in customer behavior (an increasing call for data and analytics solutions).

In the coming years, many CMIPs will seek to protect their businesses, and achieve even higher levels of efficiency, service provision and growth through innovation and adoption of new technologies, some of which may prove revolutionary. These technologies will come from current technology leaders that tailor their services to CMI applications, from firms' internal development and from the new generation of fintechs.

Here we evaluate the fintech landscape within the CMIP industry, potential uses of the new technologies across the industry value chain, and

FINTECHS INDEXES

Source: McKinsey Panorama Fintech database

Capital markets infrastructure

The capital markets infrastructure (CMI) industry comprises a global network of organizations that handle and safeguard the world's investments. These organizations carry out the execution of trades, clear securities positions and settle payments, take custody of assets, and facilitate these functions with secure networks for transactions, communications, data analytics and value-added services (regulatory services and corporate solutions). CMI providers (CMIPs) include traditional exchanges and alternative trading venues, interdealer brokers, broker-dealer trading platforms, providers of order management systems, central counterparties and clearing houses, securities depositories, and securities services firms. An important opportunity, for both exchanges and independent firms, arises from information services, ranging from streams of data on market transactions and market indexes via financial and economic news to advanced analytics that develop value-added information.

some of the areas likely to see the most innovation. Although growth in fintech investment across the broader financial services sector has slowed since 2015 due to investor caution during a more uncertain macroeconomic environment, the growth trajectory of CMI fintech has remained steep, and likely has yet to reach a peak.

We have identified four fintech themes shaping the CMI value chain. Some of these themes increase productivity and lower costs, while others generate new sources of revenue.

1. The use of advanced analytics and artificial intelligence (AI) is set for rapid growth, as the amount of available data circulating through capital markets grows amid increasing interest in the application of advanced analytics to market, financial and economic data.

2. Distributed ledger technology (DLT) is applied to a range of CMI operations (see "Distributed ledger technology, a game changer," page 41). Use cases include clearing and settlement, alternatives to the traditional markets for access to capital (initial coin offerings [ICOs]) and new digital markets.

3. Fintechs will bring greater efficiency through innovative technologies such as cloud and quantum computing – for example, in the sphere of matching technologies – while driving depth in traded markets and expansion toward new asset classes.

4. Post-trade services will gain in productivity through the application of automation and robotics. A separate branch of regulatory tech firms (regtechs) will bring efficiency and uniformity to risk management and regulatory reporting.

The fintechs most active in CMI are smaller start-ups. Here we define CMI-related fintechs as companies founded since 2000 that are unlisted, employ fewer than 1,000 people, and operate outside the areas of robo-advisory, brokerage and foreign-exchange trading. Most are developing products as components within the CMI industry, and appear to be mainly interested in working together with existing providers, rather than in poaching their customers.

Still unclear, however, are the interests and intentions in CMI of the global tech giants, such as **Amazon** (AMZN), **Google** (GOOG) and **Microsoft** (MSFT), and whether they might venture into the core of the industry at scale. Given their great capital resources, deep data pools and world-class analytic capabilities, their entry could significantly change the CMI landscape. Most CMIPs believe that it is either these tech giants or incumbents working with fintechs who have the greatest disruptive power.

We surveyed the membership of the World Federation of Exchanges (WFE). Respondents were largely positive about the potential of fintechs, and were unanimous in expecting enhanced productivity or new revenues from incorporating their technologies in their businesses (see "Survey methodology," page 33). None saw fintechs as a threat, but instead viewed them as potential partners and enablers of growth. They acknowledged, though, that the extent of the impact is difficult to ascertain.

CMIPs follow various routes to bringing fintech into their organizations. Some firms surveyed reported relying on more than one, depending on their view of the size and importance of the opportunity.

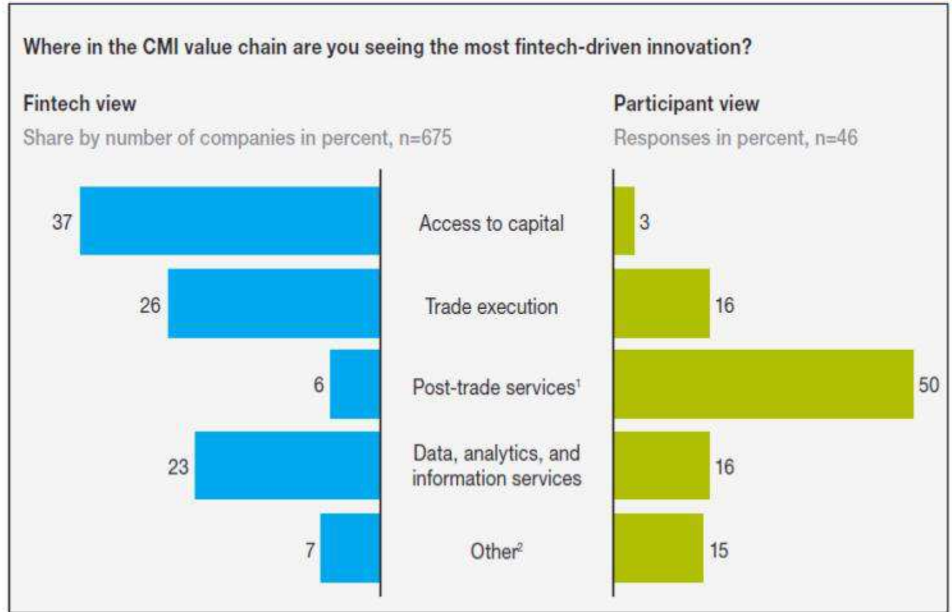
Development of internal capabilities: Most of the survey participants have established one or more internal groups dedicated to studying the global fintech landscape. Only a few indicated they were aggressively developing new technologies themselves, as this is a resource-heavy approach.

The fintech landscape is evolving at an accelerated pace as new firms and innovations enter the market while others drop out.

FINTECH ACTIVITIES FOCUS

Post-trade services includes clearing, custody and settlement, risk and regulatory solutions. Others include operations and technology and corporate solutions.

Source: WFE and McKinsey



Collaboration and joint ventures: 40% of the WFE members surveyed believe that collaboration is the most efficient approach to fintech, followed by joint ventures at 25%. The primary reason cited is a shortage of resources, inhibiting the development of their own solutions. Moreover, the speed of innovation is rapid, and diverse talents are needed for internal development.

Minority or majority financial investment: Of the 46 WFE members surveyed, 11 said they are investing in fintechs through minority stakes, while 10 said they use majority investments (multiple choices were allowed). Most innovations may fail, but one or two are likely to become success stories, WFE members said.

Outright acquisition: Just 9% of survey participants cited acquisition of fintechs as the most effective approach.

The fintech landscape is evolving at an accelerated pace as new firms and innovations enter the market while others drop out, and ideas are rapidly developed and deployed.

One approach to a successful CMIP fintech strategy calls for a "portfolio of initiatives" where incumbents invest in multiple fintechs of different sizes, time horizons and objectives – some with a short-term focus aimed at enhancing the core business, and others with longer-term objectives based on a smaller number of revolutionary ideas. With so many fintechs in the market and more to come, a structured approach is essential to identify the technologies best suited to a CMIP's strategy and operations. It is also important to determine which projects to develop internally or through reliance on fintechs, and what form the relationship and investment in fintechs should take.

Fintechs and the CMI Value Chain

The McKinsey Panorama Fintech database covers more than 6,000 of the 12,000+ fintech innovations in the global marketplace. Based on their activities and technologies, about 700 fintechs are relevant to the CMI industry. Through steady growth totaling 277%, this number has almost quadrupled since 2010, and has outpaced other areas of fintech within financial services, such as corporate banking, with growth of 186%, and payments with growth of 184% (see "Fintechs indexes," page 30).

We look at where fintechs reside on the CMI value chain, and analyze the technologies they rely upon. The distinction between location on the value chain and technologies used in development is essential to a full understanding of the CMI fintech universe. Certain technologies, such as DLT, are a component of CMI fintech products and services, rather than end products in their own right. In other instances, significant product innovation can be achieved without the use of new technologies – one prominent example is crowdfunding platforms that have emerged in the last several years.

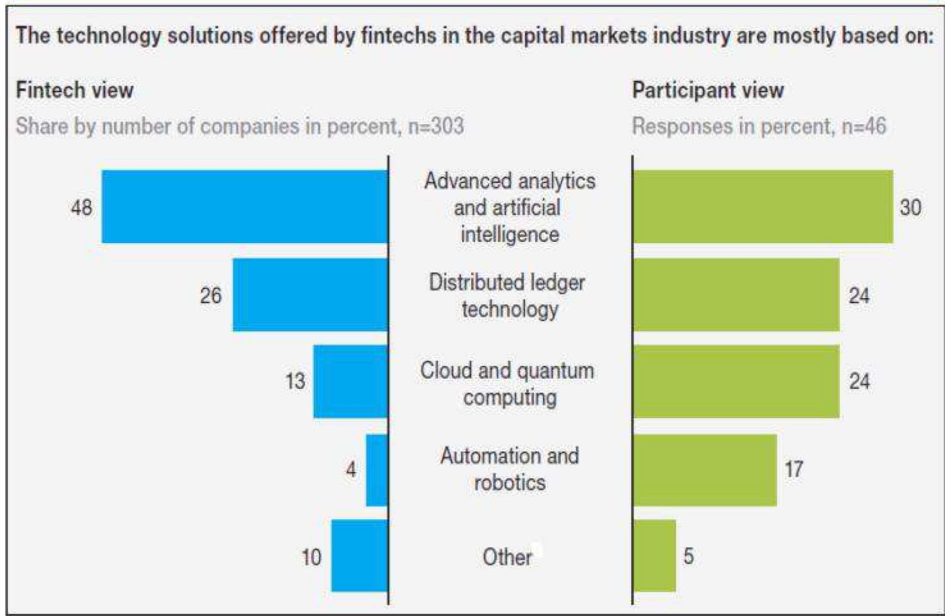
Fintech-led innovation can be found in

According to an analysis by CB Insights, ICOs have surpassed venture capital as the biggest source of funding for companies developing blockchain technology.

LEADING FINTECH TECHNOLOGIES

Here is a ranking of what fintech technology solutions are based on. The other category includes cybersecurity and biometrics.

Source: WFE and McKinsey



all five major parts of the CMI value chain.

Access to capital: Creating innovative ways to reach and serve issuers and investors and broadening the range of asset classes offered

Trade execution: Gaining new efficiencies.

Post-trade services: Bringing simplification, automation and improved security to incumbents' operations.

Data, analytics and information services: Developing new techniques to mine and interpret data to its full potential.

Operations and technology: Creating greater cost efficiency, lower latency and reduced operational risk.

According to the McKinsey Panorama Fintech database, the density of fintechs is greatest in access to capital, at 37% of all CMI fintechs, followed by trade execution, data, analytics and information services and post-trade services. By contrast, WFE members perceive little fintech activity in access to capital (3%), and ranked post-trade services as the most active (see "Fintech activities focus," page 32). The difference in emphasis is understandable, however, in view of the broad media attention during the past few years to developments in blockchain and other DLTs, as well as the high-impact potential of the technology, particularly in the post-trade realm of clearing and settlement. Moreover, in separate interviews, WFE member executives mentioned that investment in post-trade technologies has historically lagged investments in other parts of the value chain, and currently draws greater attention than access to capital.

While the boundaries among fintech technologies may blur, the solutions they deliver can be grouped in four categories according to Panorama: Advanced analytics and AI (see "Advanced Analytics and AI" page 35), followed by DLT (including blockchain), cloud and quantum computing, as well as a small number in automation, and robotics (see "Leading fintech technologies," left). By and large, WFE members' assessments of fintechs' technology deployment aligns closely to the observed state of the market.

Survey methodology

The study that underpins this report was developed jointly by the World Federation of Exchanges (WFE) and McKinsey. The WFE is the global industry association for exchanges and clearing houses, representing over 200 market infrastructure providers, including standalone central counterparties (CCPs) that are not part of exchange groups.

Amidst continuous debate on the disruptive power of fintech, this report aims to demystify these new technologies. It examines opportunities for CMIPs to use fintech to achieve greater efficiency and enhanced client service, and to work with and invest in fintechs. The insights have been derived from an anonymous survey of 46 WFE members worldwide as well as in-person interviews with staff of WFE members and McKinsey experts. The analysis of the fintech landscape is based primarily on the McKinsey Panorama Fintech database, which catalogs more than 6,000 fintech innovations globally.

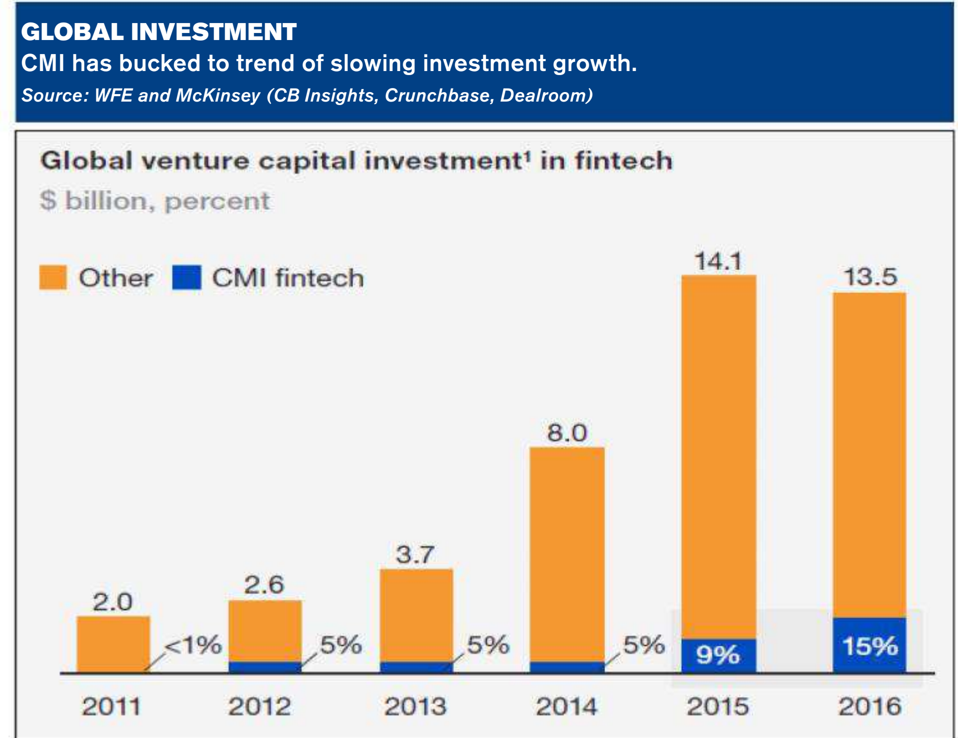
Bucking the Trend

Following rapid growth in overall fintech funding in 2014 and 2015, global capital raising plateaued in 2016 at about $14 billion. Investors seem to be tuning out the hype around fintech with greater scrutiny of actual results. Furthermore, the offerings of the current crop of start-ups are less innovative than earlier entrants, raising the bar for entrepreneurs trying to win investors.

A little more than 40% of survey participants see large technology companies echoing the moves by Apple (AAPL), Alibaba (BABA) and Amazon into financial businesses, and becoming important potential disruptors.

Investment in CMI fintech has, however, continued its rapid growth, reflecting the variety and novelty of the offerings. The funding rounds from 2015 and 2016 were exceptional, at $1.3 billion and $2 billion, respectively (see “Global investment,” page 34). This growth was mainly driven by a handful of large individual transactions.

The largest investment went to Lufax, a peer-to peer lender in China, at $1.7 billion. Other considerable commitments went to Darktrace (machine learning-enabled cyber-threat detection) and Dataminr (aggregation of news and market data). CMI fintechs should continue to draw significant levels of investment, as both nascent and more mature solutions emerge across the CMI value chain, leveraging a wide spectrum of technologies.



GLOBAL INVESTMENT
CMI has bucked to trend of slowing investment growth.
Source: WFE and McKinsey (CB Insights, Crunchbase, Dealroom)

In 2017, a new means of funding start-ups – initial coin offerings (ICOs) – raised more than $2 billion. According to an analysis by CB Insights, ICOs have surpassed venture capital as the biggest source of funding for companies developing blockchain technology. While ICOs can have great potential, regulators around the world are mostly skeptical, and have warned investors of their short track record and high risk.

Fintechs: Friend or Foe?

At most points in the value chain, fintechs are potential partners to incumbent CMIPs rather than competitors. Within post-trade services, 90% of fintechs aim to provide services to incumbents; that is, they have business-to-business models. This finding aligns with the results of the WFE survey, where 75% of participants saw fintech offerings as being aimed at CMIPs rather than their customers (90% for WFE Asian members).

However, at the front end of the value chain, in the “access to capital” portion, 82% of fintech business models have a business-to-consumer focus, and therefore represent more of a threat to incumbents.

Overall, WFE members see potential for fintech integration rather than incursion: 61% of survey respondents envision fintechs becoming integrated into their franchises and generating new sources of revenues, while 37% expect to benefit from greater productivity. Only one survey participant saw fintechs as direct competitors, and none thought that fintechs might bring disintermediation.

Moreover, the consensus opinion was that less than 20% of the industry’s current revenue base was at risk to fintech encroachment.

In separate interviews, however, executives at some of the WFE members in Europe and the Americas did note that the industry’s clearing and settlement processes, as well as

Advanced Analytics & AI

Advanced analytics and artificial intelligence (AI) are expected to reshape industries. In some sectors, AI is already a center of gravity: The McKinsey Global Institute estimates the total global AI spending in 2016 was between $26 billion and $39 billion.

Although large technology companies account for most of the spending, the financial services industry is a leading early investor in AI. This stands to reason: Information has always been a crucial resource for financial markets, and financial services firms have long been on the forefront of adapting new information technologies.

Within capital markets specifically, providers of advanced analytics and AI services have become some of the most influential players. At McKinsey's recent CMI Roundtable, industry leaders ranked advanced analytics and AI as the most important forces shaping the near future of the industry.

New advanced analytics and AI applications are finding homes across the CMI value chain. In trading, advanced analytics predict sources of market liquidity to guide customers in placing orders, and refine the measurement of market impact and other transaction costs. Risk in clearing and settlement is being reduced through automated analysis of counterparties, including, for example, enhanced analysis of payments flows. CMI firms are selling many forms of market data to customers, including indicators of market sentiment, comprehensive industry analyses and analytics of trade flows and best executions. CMIPs' own operational risks are mitigated through improved advanced analysis of trades and predictive maintenance of trading systems, as well as market surveillance monitoring for fraudulent trading.

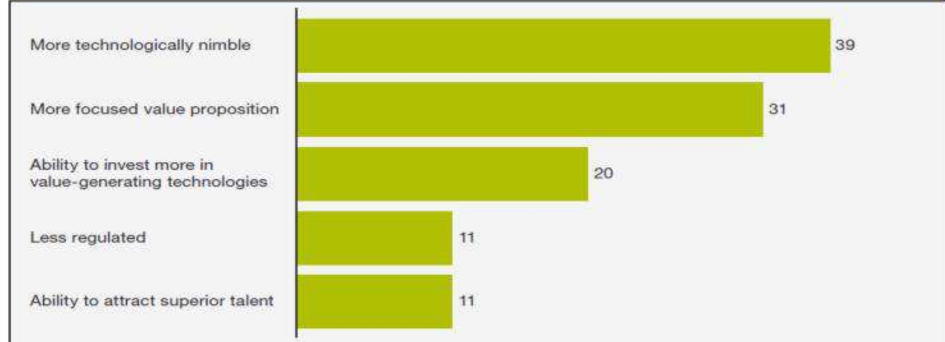
Some of these applications have been developed internally by CMIPs, but in most cases, large incumbents – even those with strong internal technology efforts – have turned to fintechs for unique analytical solutions.

capital-raising activities, are vulnerable to new competitors, and that incumbent firms will need to counter fintech innovation to maintain these core franchises.

BIGGEST ADVANTAGES

Here are the top five fintech advantages listed by survey respondents.

Source: WFE/McKinsey



The Impact of Large Technology

Efforts in bringing new technologies to CMI are not limited to those small and new fintechs dedicated to the capital markets. Further innovation in CMI could also come from large technology companies such as Amazon, Google and Microsoft, which already serve CMI and the broader set of financial players through, for example, cloud services. In some cases, they have also enriched their capabilities by integrating and partnering with smaller specialists. Google, for instance, collaborates with data-wrangling experts Trifacta for its Google Cloud Dataprep product, while Microsoft acquired Maluuba, a specialist in deep learning for speech and image recognition, to enhance its AI capabilities.

A little more than 40% of survey participants see large technology companies echoing the moves by **Apple** (AAPL), **Alibaba** (BABA) and Amazon (AMZN) into financial businesses, and becoming important potential disruptors in the CMI market in the coming five years. Others expect incumbent CMIPs (39%) or start-ups (20%) to have the largest effect within the next five years.

Large technology companies are nimble and possess deep pockets and considerable other assets – access to issuers and retail investors and proprietary information – that could be leveraged to their advantage in the realm of CMI.

Moreover, for large technology companies, CMI might rank high in the opportunity space when compared to other financial services verticals: The industry is highly digitized and rich in data, and some areas, such as information services, are lightly regulated compared to adjacent financial

Notice of Class Action Settlement

If you transacted in Euroyen-Based Derivatives[1] from January 1, 2006 through June 30, 2011, inclusive, then your rights will be affected and you may be entitled to a benefit. This Notice is only a summary of the Settlement and is subject to the terms of the Settlement Agreement[2] and other relevant documents (available as set forth below).

The purpose of this Notice is to inform you of your rights in connection with a proposed settlement with Settling Defendants The Bank of Tokyo-Mitsubishi, UFJ, Ltd. ("BTMU") and Mitsubishi UFJ Trust and Banking Corporation ("MUTB") in the actions titled *Laydon v. Mizuho Bank Ltd., et al.*, 12-cv-3419 (GBD) (S.D.N.Y.) and *Sonterra Capital Master Fund, Ltd., et al. v. UBS AG, et al.*, 15-cv-5844 (GBD) (S.D.N.Y.). The settlement with BTMU and MUTB ("Settlement") is not a settlement with any other Defendant and thus is not dispositive of any of Plaintiffs' claims against the remaining Defendants.

The Settlement has been proposed in two class action lawsuits concerning the alleged manipulation of the London Interbank Offered Rate for Japanese Yen ("Yen LIBOR") and the Euroyen Tokyo Interbank Offered Rate ("Euroyen TIBOR") from January 1, 2006 through June 30, 2011, inclusive. The Settlement will provide $30 million to pay claims from persons who transacted in Euroyen-Based Derivatives from January 1, 2006 through June 30, 2011, inclusive. If you qualify, you may send in a Proof of Claim and Release form to potentially get benefits, or you can exclude yourself from the Settlement, or object to it.

The United States District Court for the Southern District of New York (500 Pearl St., New York, NY 10007-1312) authorized this Notice. Before any money is paid, the Court will hold a Fairness Hearing to decide whether to approve the Settlement.

Who Is Included?

You are a member of the "Settlement Class" if you purchased, sold, held, traded, or otherwise had any interest in Euroyen-Based Derivatives at any time from January 1, 2006 through June 30, 2011, inclusive. Excluded from the Settlement Class are (i) the Defendants and any parent, subsidiary, affiliate or agent of any Defendant or any co-conspirator whether or not named as a defendant; and (ii) the United States Government.

Contact your brokerage firm to see if you purchased, sold, held, traded, or otherwise had any interest in Euroyen-Based Derivatives. If you are not sure you are included, you can get more information, including the Settlement Agreement, Mailed Notice, Plan of Allocation, Proof of Claim and Release, and other important documents, at www.EuroyenSettlement.com ("Settlement Website") or by calling toll free 1-866-217-4453.

What Is This Litigation About?

Plaintiffs allege that each Defendant, from January 1, 2006 through June 30, 2011, inclusive, manipulated or aided and abetted the manipulation of Yen LIBOR, Euroyen TIBOR, and the prices of Euroyen-Based Derivatives. Defendants allegedly did so by using several means of manipulation. For example, panel banks that made the daily Yen LIBOR and/or Euroyen TIBOR submissions to the British Bankers' Association and Japanese Bankers Association respectively (collectively, "Contributor Bank Defendants"), such as BTMU and MUTB, allegedly falsely reported their cost of borrowing in order to financially benefit their Euroyen-Based Derivatives positions. Contributor Bank Defendants also allegedly requested that other Contributor Bank Defendants make false Yen LIBOR and Euroyen TIBOR submissions on their behalf to benefit their Euroyen-Based Derivatives positions.

Plaintiffs further allege that inter-dealer brokers, intermediaries between buyers and sellers in the money markets and derivatives markets (the "Broker Defendants"), had knowledge of, and provided substantial assistance to, the Contributor Bank Defendants' foregoing alleged manipulations of Euroyen-Based Derivatives in violation of Section 22(a)(1) of the Commodity Exchange Act, 7 U.S.C. § 25(a)(1). For example, Contributor Bank Defendants allegedly used the Broker Defendants to manipulate Yen LIBOR, Euroyen TIBOR, and the prices of Euroyen-Based Derivatives by disseminating false "Suggested LIBORs," publishing false market rates on broker screens, and publishing false bids and offers into the market.

Plaintiffs have asserted legal claims under various theories, including federal antitrust law, the Commodity Exchange Act, the Racketeering Influenced and Corrupt Organizations Act, and common law.

BTMU and MUTB have consistently and vigorously denied Plaintiffs' allegations. BTMU and MUTB entered into a Settlement Agreement with Plaintiffs, despite each believing that it is not liable for the claims asserted against it, to avoid the further expense, inconvenience, and distraction of burdensome and protracted litigation, thereby putting this controversy to rest and avoiding the risks inherent in complex litigation.

What Does the Settlement Provide?

Under the Settlement, BTMU and MUTB agreed to pay $30 million into a Settlement Fund. If the Court approves the Settlement, potential members of the Settlement Class who qualify and send in valid Proof of Claim and Release forms may receive a share of the Settlement Fund after they are reduced by the payment of certain expenses. The Settlement Agreement, available at the Settlement Website, describes all of the details about the proposed Settlement. The exact amount each qualifying Settling Class Member will receive from the Settlement Fund cannot be calculated until (1) the Court approves the Settlement; (2) certain amounts identified in the full Settlement Agreement are deducted from the Settlement Fund; and (3) the number of participating Class Members and the amount of their claims are determined. In addition, each Settling Class Member's share of the Settlement Fund will vary depending on the information the Settling Class Member provides on their Proof of Claim and Release form.

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[1] "Euroyen-Based Derivatives" means (i) a Euroyen TIBOR futures contract on the Chicago Mercantile Exchange ("CME"); (ii) a Euroyen TIBOR futures contract on the Tokyo Financial Exchange, Inc. ("TFX"), Singapore Exchange ("SGX"), or London International Financial Futures and Options Exchange ("LIFFE") entered into by a U.S. Person, or by a Person from or through a location within the U.S.; (iii) a Japanese Yen currency futures contract on the CME; (iv) a Yen LIBOR- and/or Euroyen TIBOR-based interest rate swap entered into by a U.S. Person, or by a Person from or through a location within the U.S.; (v) an option on a Yen LIBOR and/or Euroyen TIBOR-based interest rate swap ("swaption") entered into by a U.S. Person, or by a Person from or through a location within the U.S.; (vi) a Japanese Yen currency forward agreement entered into by a U.S. Person, or by a Person from or through a location within the U.S.; and/or (vii) a Yen LIBOR- and/or Euroyen TIBOR-based forward rate agreement entered into by a U.S. Person, or by a Person from or through a location within the U.S.

[2] The "Settlement Agreement" means the Stipulation and Agreement of Settlement with The Bank of Tokyo- Mitsubishi, UFJ, Ltd. ("BTMU") and Mitsubishi UFJ Trust and Banking Corporation ("MUTB") entered into on January 23, 2018.

(continued from previous page)

The number of claimants who send in claims varies widely from case to case. If less than 100% of the Settlement Class sends in a Proof of Claim and Release form, you could get more money.

How Do You Ask For a Payment?

If you are a member of the Settlement Class, you may seek to participate in the Settlement by submitting a Proof of Claim and Release to the Settlement Administrator at the address provided on the Settlement Website postmarked no later than September 25, 2018. You may obtain a Proof of Claim and Release on the Settlement Website or by calling the toll-free number referenced above. If you are a member of the Settlement Class but do not timely file a Proof of Claim and Release, you will still be bound by the releases set forth in the Settlement Agreement if the Court enters an order approving the Settlement Agreement.

If you timely submitted a Proof of Claim and Release pursuant to the class notice dated June 22, 2016 ("2016 Notice") related to the $58 million settlements with Defendants R.P. Martin Holdings Limited, Martin Brokers (UK) Ltd., Citigroup Inc., Citibank, N.A., Citibank Japan Ltd., Citigroup Global Markets Japan Inc., HSBC Holdings plc, and HSBC Bank plc or pursuant to the August 3, 2017 Notice, amended September 14, 2017 (the "2017 Notice") related to the $148 million settlements with Defendants Deutsche Bank AG, DB Group Services (UK) Ltd., JPMorgan Chase & Co., JPMorgan Chase Bank, National Association, and J.P. Morgan Securities plc, you do not have to submit a new Proof of Claim and Release to participate in this Settlement with BTMU and MUTB. Any member of the Settlement Class who previously submitted a Proof of Claim and Release in connection with the 2016 Notice or 2017 Notice will be subject to and bound by the releases set forth in the Settlement Agreement with BTMU and MUTB, unless such member submits a timely and valid request for exclusion, explained below.

What Are Your Other Options?

All requests to be excluded from the Settlement must be made in accordance with the instructions set forth in the Settlement Notice and must be postmarked to the Settlement Administrator no later than June 7, 2018. The Settlement Notice, available at the Settlement Website, explains how to exclude yourself or object. All requests for exclusion must comply with the requirements set forth in the Settlement Notice to be honored. If you exclude yourself from the Settlement Class, you will not be bound by the Settlement Agreement and can independently pursue claims at your own expense. However, if you exclude yourself, you will not be eligible to share in the Net Settlement Fund or otherwise participate in the Settlement.

The Court will hold a Fairness Hearing in these cases on July 12, 2018, to consider whether to approve the Settlement and a request by the lawyers representing all members of the Settlement Class (Lowey Dannenberg, P.C.) for an award of attorneys' fees of no more than twenty-three percent (23%) of the Settlement Fund for investigating the facts, litigating the case, and negotiating the settlement, and for replenishment of the litigation fund created to reimburse their costs and expenses in the amount of no more than $500,000. The lawyers for the Settlement Class may also seek additional reimbursement of fees, costs, and expenses in connection with services provided after the Fairness Hearing. These payments will also be deducted from the Settlement Fund before any distributions are made to the Settlement Class.

You may ask to appear at the Fairness Hearing, but you do not have to. For more information, call toll free 1-866-217-4453 or visit the website www.EuroyenSettlement.com.

services sectors. Also, the new entrants would not be burdened with incumbents' legacy platforms.

Innovation Across the Value Chain

Both survey respondents and McKinsey's Panorama Fintech database observe fintech solutions supporting innovation across the value chain, creating opportunities to enhance revenues, reduce costs and create a better experience for market players.

Fintechs are altering traditional access to capital models in several ways:

1. Providing crowdfunding offerings that raise equity and debt for smaller firms, and are open to both retail and institutional investors.
2. Developing platforms that create new connections among issuers and investors, focusing on nontraditional asset classes such as real estate, cloud capacity, venture capital, and private equity, as well as cryptocurrencies.
3. Deploying new technologies for the direct issuance of equity and bonds through distributed ledgers, reducing costs, frictions and settlement times in new issues. This challenge is likely to have the biggest effect on the industry and incumbents. In particular, DLT networks are facilitating ICOs, which issue digital tokens to investors that can be traded online.

Although few survey participants see much of a threat to access to capital from fintechs, their momentum in this arena could create a true disruption, given the B2C nature of most of the offerings. This could leave

Fintechs could also capture a first-mover advantage in emerging asset classes, owing to their greater agility, convenience, and insight into customer needs.

Survey participants saw trade execution as the second most active area of fintech innovation.

traditional exchanges exposed to a direct and indirect loss of listings, as well as the associated trading volumes. Solutions built on DLT may present a revenue risk to incumbents, as what is issued on DLT will stay on DLT, through the stages of trading, settlement and corporate actions (see "Distributed ledger technology, a game changer," page 41). Fintechs could also capture a first-mover advantage in emerging asset classes, owing to their greater agility, convenience and insight into customer needs.

Trade Execution

A substantial share of fintechs active in the trade execution space have focused on facilities for trading new asset classes, led by exchanges for cryptocurrencies and algorithmic trading strategies. In more traditional markets, fintechs are aiming to introduce greater efficiency by enhancing computational power, leveraging quantum computing, realizing trading systems with very low latency, and offering broad views of order books across markets in real time for improved price discovery. Survey participants saw trade execution as the second most active area of fintech innovation.

If DLT is broadly accepted in trade execution, it may bring substantial efficiencies through bilateral trading between participants in decentralized markets.

Survey participants say that fintechs are most active in the clearing, custody and settlement parts of the value chain, and see the most innovation in these areas. Streamlined processing and settlement result in a combination of reduced operating costs, and less need for capital. Early forecasts held that applying DLT to these areas would save the financial world billions in operating costs. McKinsey estimates that for OTC derivatives alone, there is a value generation opportunity of $4 billion to $7 billion.

Despite the estimated size of the opportunity, to date there have been few tangible results. DLT might have taken a significant step forward, however, in December 2017, the Australian Securities Exchange (ASX) announced that it would replace its existing equity clearing and settlement systems with a DLT-based system (see "ASX: DLT for equity post-trade processing," page 42).

Regulatory compliance solutions, a subset of post-trade services, has also evolved, with regtechs bringing big data, machine learning and AI to increasingly demanding regulatory and compliance regimes. These technologies enable the implementation of automated, standardized approaches for more complex tasks such as customer onboarding and know-your-customer-requirements, anti-money laundering compliance, trade surveillance, fraud and cyberattack detection through forensic analytics, and the preparation of compliance and regulatory reporting. Regtechs also offer technology for managing collateral and counterparty risk for more efficient use of institutions' capital.

CMIPs have begun to develop advanced regulatory solutions and have turned to regtech firms for enhancements through natural language and machine intelligence. They are also developing trade-reporting systems that meet the newly implemented MiFiD II regulations for firms that internalize their equity trading.

Fintechs are also finding, gathering and processing data, and in some cases creating new revenue sources. WFE members surveyed ranked the importance of innovations in data analytics on a par with those of trading technologies.

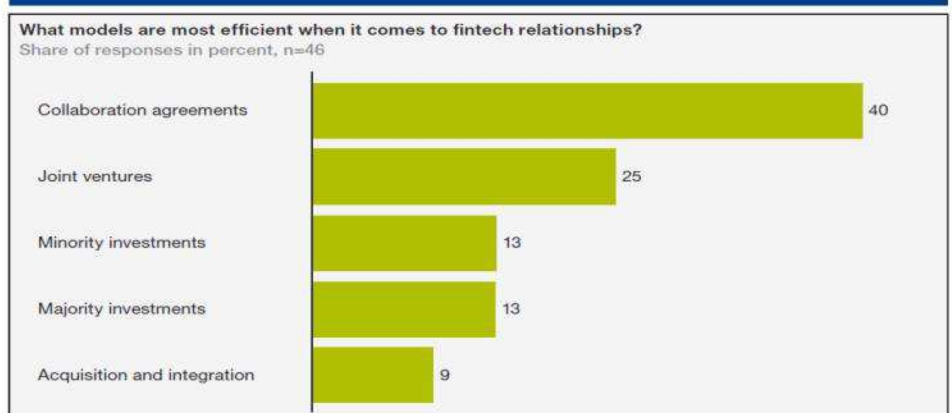
Operations & Technology

In a show of hands at McKinsey's

WHAT WORKS BEST

Collaborations and joint ventures were the most popular investment models based on this survey.

Source: WFE/McKinsey



2017 Sibos Securities Services CXO Roundtable, 44% of attendees cited automation and robotics as the industry's most important and effective no-regrets move. CMIPs adopting automation benefit from fewer errors and can rapidly scale their operations in response to changing market volumes. A number of players have started automating components of complex workflows – those which are not susceptible to full straight-through processing – by optimally allocating tasks to machines versus humans, and thus materially improving productivity and promoting process transparency.

McKinsey estimates the potential cost reduction from automation and robotics at scale can reach as high as 20% in the aggregate, depending on the pre-existing level of automation. Estimated savings are relatively minor – up to 10% – in areas that require frequent intervention and handwork, such as client service and back-office management. But as tasks become more repetitive, in areas such as custodian services, maintenance of client reference data and collateral management, cost savings can rise from 15% to 25%. The greatest efficiencies – estimated between 25% to 50% – are in areas where work is highly repetitive, but not yet automated, such as reconciliations, confirmations, settlements and payments.

Identifying the Fintech Opportunity

It is too early to know the full extent of fintech's effect on capital markets during the next five years, but if some of the most disruptive technologies reach wide-scale adoption, fintech could be an evolution that becomes a revolution. For CMIPs, however, it is essential to understand that fintech, in itself, is not a strategy. Instead, it is a means to a strategic end – a collection of new tools and technologies that have to be tested and thoughtfully introduced into each CMIP offering.

The fintech environment is highly complex, and populated with potential business partners and acquisition candidates, enabling cost savings and opening up of new revenue sources. From the survey participants' point of view, the advantages of fintechs are their agility with technology and the singular product focus of early-stage businesses. Surprisingly, they do not regard fintechs' ability to attract top talent or their being subjected to lighter regulation as core advantages (see "Biggest advantages," page 35).

Protect Core Business, Modernize & Expand

Thus far, technological changes to CMI have been subtle and isolated, but incumbents must guard against shifts in the broader industry – including other incumbents incorporating fintechs, as well as large technology companies operating largely outside finance – that render established ways of doing business obsolete. Examples from other industries include digital cameras displacing an enormous industry for processing traditional film, or Internet streaming replacing chains of stores renting videos and DVDs. While the industry is not likely to face a Blockbuster moment any time soon, CMIPs must recognize the disruptive potential of fintechs and how they might reshape a CMI's structure and value chain.

The technologies used by fintechs provide many opportunities for modernizing existing capital markets' offerings through efficiency gains, higher levels of customer experience, and executing the current business in new ways. Cloud processing can generate savings over traditional internal information systems, automation and robotics built into trading, clearing; and settlement operations can lower costs and create efficiencies and DLT applications, which while still novel have definitely arrived.

Fintechs are generating many new ideas from which CMIPs can draw a range of new revenue sources. These include demand for products such as better-informed market analytics, trading in new asset classes, expanded algorithmic trading, capital and collateral efficiencies and risk mitigation.

The fintech environment is highly complex, and populated with potential business partners and acquisition candidates.

Much of the current focus has been applied to existing processes and activities like the following:

1. Advanced analytics-based data: About 25% of CMI fintechs are active in this area. The availability of more data, and new and more efficient ways to mine and visualize it, results in more sophisticated products and greater demand. Among others, natural language processing and machine-learning techniques are being applied to develop more precise smart beta products for asset managers, and unique data streams for the sell side.

2. DLT for new market structures (see page 41).

3. Regtech and risk management: Following the global financial crisis, the regulatory climate has become more complex, and banks and brokers are seeking compliance systems to handle order capture and post trade compliance. Asset managers, too, face a greater compliance burden.

4. Ecosystems: The wave of innovation by fintechs, and their willingness to partner with incumbents, creates opportunities to develop ecosystems where customers can access a wide range of services and products through one entry point.

Capturing the Fintech Opportunity

CMIPs have a significant opportunity to draw on CMI fintech specialists. But given the usual constraints on available investment and time, to fully capitalize on fintechs, CMIPs need to establish knowledgeable and committed teams and a framework for selecting fintechs that offer the best fit.

Investment should be approached in three steps: Ensure that leveraging a fintech solution is the best option, determine which type of technology creates the most distinctiveness and fits best with internal processes, and which is most sustainable.

For many CMIP firms, investing in fintech will be an attractive choice. An efficient and high-return approach to the fintech opportunity will require understanding the fintech ecosystem and building relationships, building internal capabilities, and finally partnering with and investing in fintechs. CMIPs can adopt many different approaches to developing relationships with fintechs, each requiring differing levels of commitment. These range from collaboration efforts and joint ventures to various degrees of investment (see "What works best," page 38).

Working with startups can be challenging for large firms. Although the relationships can result in a positive learning experience, tangible products are often slow to materialize, frustrating companies accustomed to hitting predictable schedules.

Firms that can devote considerable resources to fintech may consider a corporate venture capital approach that invests in multiple targets, with the shared goals of leveraging their technologies and a return on financial investment. Such an approach, however, calls for still more specialized talent to properly manage the effort, and a more tolerant mindset toward the rate of success, or failure, of technological experimentation.

Fintech in capital markets has lagged its counterparts elsewhere in finance, and in some areas the technologies and benefits seem far off. But the level of investment in CMI fintech is gaining to the benefit of the early movers. Those incumbents that do not recognize its effect on their business, and fail to take a proactive stance, face a future that will be shaped by their peers and competitors. For investment in fintech, time is of the essence.

There are roughly 700 fintechs in various stages of development across the CMI value chain. An unfocused investment approach would be both unmanageable and expensive, and while fintech start-ups will not ultimately own the industry, over time, the typical CMIP will likely benefit from dozens of fintech innovations. Thus, fintech investments and partnerships must be chosen wisely. Fintech is not a strategy, but a means to reach strategic priorities. ∆

This feature is a condensed version of "Fintech Decoded: Capturing the Opportunity in Capital" produced by the World Federation of Exchanges (WFE) and McKinsey & Co., and authored by Nandini Sukumar, WFE CEO; Siobhan Cleary, WFE Head of Research and Public Policy; Matthias Voelkel, Partner at McKinsey; Markus Röhrig, Partner at McKinsey; Roger Rouhana, Associate Partner at McKinsey and Christian Schaette, McKinsey Knowledge Expert. @thewfe @mckinsey

Working with startups can be challenging for large firms… tangible products are often slow to materialize.

Of all the fintech disruptors of the last decade, distributed ledger technology is arguably the greatest, as it powered the bitcoin and cryptocurrency revolution and will survive regardless of what happens with cryptos.

Distributed Ledger Technology, a Game Changer

By **Nandini Sukumar, Siobhan Cleary, Matthias Voelkel, Markus Röhrig, Roger Rouhana & Christian Schaette**

Distributed ledger technology (DLT) is a cryptographically encoded, highly detailed ledger of transactions, distributed across a public or private network that promises substantial benefits of transaction speed and security, process efficiencies and cost savings.

Survey participants identified DLT as the technology likely to have the greatest impact on the CMIP value chain, specifically in the areas of clearing and settlement. Expected benefits are shortening of settlement times to a few minutes, mitigating counterparty risk, and reducing the amount of collateral posted against trades. The potential flexibility of DLT could lead to applications across the value chain, from capital raising to regulatory reporting.

Although DLT may have the most potential among the technologies fintechs are deploying in capital markets solutions, it may also be the furthest from realization at scale. In addition to having to live up to high expectations, DLT applications must also be fashioned to fit the current market infrastructure, and at the same time satisfy any relevant regulatory requirements. McKinsey expects the early challenges to be overcome, however, and that networks of participants in DLT solutions will grow. But rather than creating system-wide solutions, development will emphasize focused-use cases. Markets showing the most promise include OTC derivatives, equities and repurchase agreements, where DLT can match assets, manage collateral, and synchronize the movement of cash.

The first large-scale application is the implementation of a DLT clearing and settlement system at the Australian Stock Exchange (see "ASX: DLT for equity post-trade processing," page 42). Other early implementations are more modest in scope, but nonetheless revolutionary (see "Exchange blockchain use cases," page 43). For example,

Survey participants identified DLT as the technology likely to have the greatest impact on the CMIP value chain.

Athough DLT may have the most potential among the technologies fintechs are deploying in capital markets solutions, it may also be the furthest from realization at scale.

CME Group and Britain's Royal Mint are nearing introduction of a digital market for gold-based on a DLT. Through a blockchain and digital vault, a test group of institutional investors are trading digital tokens; rather than representing shares in a commingled fund, they instead record ownership of one gram of physical gold in the vault of the Royal Mint.

Nasdaq has developed a blockchain ledger technology dubbed Linq, and its first use, in late 2015, was to record a trade in shares of a private company in the Nasdaq Private Market. The DLT application ensures comprehensive records of share issuance and transfer. Trading began with six private companies, including Chain.com, a collaborator with Nasdaq on the Linq technology.

These initial cases are encouraging. Nevertheless, successful large-scale application requires long-term commitment, coordinated within the industry as a whole, calling for firms that are usually competitors to collaborate and invest together in the new technologies for the long term. ∆

Drawn from the WFE & McKinsey research paper: Fintech Decoded: Capturing the Opportunity in\Capital.

ASX: Distributed Ledger Technology for equity post trade processing

One of the primary bottlenecks in conventional equities trading is the need to reconcile transactions between different market users and financial market infrastructures. This is caused by delays in finding securities in time for settlement, and from mismatches of settlement instructions.

These restrictions are in turn the result of brokers, exchanges and custodians all using their own custom-designed solutions for transaction capture, and a lack of common technologies and standards. This makes the process of identifying errors in reconciliation time consuming and expensive. Post-trade systems based on DLT can eliminate many of these issues, as they are centrally managed and work with common data models.

DLT post-trade systems require building in new means of data privacy and security for participants, and thus will require features that are not available in public blockchains. In some senses, this represents a leap of faith for incumbents as they strive to understand the technology and its application, but the benefits of DLT mean it still stands a strong chance of widespread acceptance: No one vendor "owns" the underlying technology, and there are many different types of DLT platforms being developed in public- and private-permissioned DLT environments. Having said this, there is a general and growing understanding of what DLT can deliver – cost savings from reduced reconciliation, greater scale and speed for future operations, greater fintech innovation, and shared costs of development.

Following extensive testing of DLT and validation of its security,

Post-trade systems based on DLT can eliminate many of these issues, as they are centrally managed and work with common data models.

capacity, and resiliency, the Australian Securities Exchange (ASX) is introducing a DLT application to replace its existing CHESS system. It is being developed in conjunction with Digital Asset Holdings, a fintech based in New York. The ASX plan calls for a private and permissioned DLT system operated by the exchange – thus addressing the requirement of regulators to continue to have full accountability lodged with one party to operate the market (ASX) and ensuring that all users of the platform are known and meet appropriate regulatory standards (including KYC and AML).

The ambition is that participants will enjoy lower costs, improved functionality and potentially shorter settlement times. It also provides the opportunity for participants to greatly reduce the manual process of reconciliation. With a central operator, ASX provides a single "source of truth" for all clearing and settlement data that can be independently and mathematically verified by participants as being correct without the need for reconciliation.

EXCHANGE BLOCKCHAIN USE CASES

Source: WFE/McKinsey

Category	Exchange	Use case
Access to capital	London Stock Exchange	Cooperation with IBM to digitally issue private shares of Italian SMEs and digitize shareholding structures.
	Nasdaq	LINQ – a platform that allows private companies to simplify share management and powers capitalization tables.
	Stock Exchange of Hong Kong	Plans to launch a blockchain-powered private market in 2018, aimed at helping early-stage and smaller firms obtain financing.
	Korean Exchange	Launched Korea Startup Market in November 2016 with blockchain technology to enable equity shares of start-up companies to be traded in the open market.
Trade execution	CME Group	Provides a "fast, cost-effective and cryptographically secure method" of buying, holding, and trading Royal Mint Gold. Also launched bitcoin futures in December.
	Intercontinental Exchange	Minority investments in digital currency exchange Coinbase.
	Singapore Exchange Ltd.	Exploring making trading and settlement of fixed-income trading more efficient with blockchain.
	Six Swiss Exchange	Cooperation with Nasdaq providing DLT to SIX for a minimum viable product for its OTC structured products business.
	Cboe Global Markets	Launched bitcoin futures contracts in December 2017.
Post-trade services (clearing & settlement)	ASX	Using DLT to record shareholdings and manage the clearing and settlement of equity transactions in Australia.
	Euronext	LiquidShare for SMEs improving the transparency, speed and security of post-trade operations.
	DTCC	Launching industrywide DLT platform for its trade information warehouse for cleared and bilateral credit derivatives by 2018.
	Deutsche Börse AG	Prototype for the settlement of securities in delivery-vs. payment mode for centrally issued digital coins or digital securities.
	Euroclear	Partnership with itBit to create Bankchain, a distributed ledger settlement service for the London bullion market.
	TMX Group	Development of a blockchain-based prototype to power a new service offering from Natural Gas Exchange to optimize the NGX gas settlement process.
	Tokyo Stock Exchange	Cooperation with IBM testing a trade confirmation prototype for trading and settlement in low liquidity markets.
Post-trade services (know your customer)	National Stock Exchange of India	Trial allowing participants to access know your customer data information in real time.
	Bolsa de Madrid	Part of a Spanish multisector network developing blockchain-based identification network.
Post-trade services (proxy voting)	Moscow Exchange	Developing e-voting for shareholders via blockchain.
	Johannesburg Stock Exchange	Agreement with Nasdaq to deliver an e-proxy voting system based on blockchain.

The system will provide for open access where customers are able to interact with the exchange's systems through traditional message-based interaction, or directly with the distributed ledger via taking a "node" of the database operated by ASX. Importantly, the node preserves privacy as it only contains the information related to a participant's own transactions and is not a full copy of the ledger.

An exchange start-up threatens to revolutionize the way futures are traded, margined and cleared. Here is their story.

EverMarkets: Promising Revolution

By **Daniel P. Collins**

A new exchange is planning to launch in 2018 that would represent a sea change in the way futures are offered, traded, margined and cleared. EverMarkets Exchange (EMX), a project conceived by a team of young financial market professionals, combines key aspects of the emergence of financial technology (fintech) during the last decade. It promises to create a platform that offers trading and margining of cryptocurrencies, creating its own cryptocurrency in the process – a cryptocurrency index and a broad swath of traditional futures contracts.

The overriding thesis behind the project is to capture the efficiencies of the blockchain to provide cost savings to end users and to alter the entire derivatives exchange landscape.

"We intend to dramatically lower the cost of trading through the deployment of blockchain technologies," noted an EverMarkets white paper. "By leveraging smart contracts and a shared ledger, our platform will transform the traditional roles of the broker, the clearinghouse and the exchange into a more streamlined process. Building a standardized and modern futures derivatives market should reduce the cost of managing risk and make the marking, clearing and settlement processes more efficient and auditable."

There are many unique attributes EMX is planning, including a disintermediated platform that would allow traders to transact directly on the exchange with direct access to the clearinghouse. The clearinghouse and back office functions will fully use the Ethereum blockchain apparatus (see "Unique attributes," below).

The exchange plans to launch sometime in 2018 for non-U.S. customers, with access to U.S. customers coming later once EMX obtains regulatory approval from the Commodity Futures Trading Commission (CFTC) as a Designated Contract Market (DCM) and Designated Clearing Organization (DCO). "We are going to be working with the regulatory authorities to receive a license to operate a regulated exchange and in the interim we will be operating an exchange that will be self-regulated," says Jerald David, EverMarket's chief operations officer.

UNIQUE ATTRIBUTES

EverMarkets has taken a unique approach to building a futures exchange. Here are several elements that set it apart.

Source: EMX

- **EMX TOKEN:** EverMarkets (EMX) plans on launching its own cryptocurrency, EMX token, which will serve as the margin required by its clearinghouse.
- **BLOCKCHAIN BASED:** EverMarkets will use the Ethereum blockchain for its clearinghouse and to execute is smart contracts.
- **SMART CONTRACTS:** EverMarkets will offer smart contracts where users can transfer cryptocurrencies for its proprietary EMX token for margin collateral.
- **DISINTERMEDIATION:** Customers can trade directly with EverMarkets, eliminating the need for futures commission merchants (FCM); however, FCMs may serve as a margin syndicate to lend out the EMX token to traders.
- **SETTLEMENT:** Settlement will occur in real-time rather than T+1 utilizing blockchain technology.
- **AUCTION:** The exchange will not operate a typical exchange matching engine, but will match orders through an auction process.
- **INTERNAL LIQUIDITY TEAM:** EMX will create its own internal liquidity provision team to help create liquidity, which will be split as a separate subsidiary prior to the launch of trading.

ICO

Before EMX can launch as an exchange, it plans an initial coin offering (ICO) of the EMX cryptocurrency that is targeted for July 2018. This is a necessary step because the exchange will require the use of its cryptocurrency as margin.

The owners plan on listing its EMX token on numerous cryptocurrency exchanges prior to launching its exchange. Traders will be able to obtain the EMX token on these exchanges or through the use of "smart contracts" where they transfer their bitcoin,

“We are using smart contracts to handle all custody of collateral. That is what the blockchain was all about, using the transparent verifiable nature of the blockchain to facilitate transferring of funds without a middleman.” ***--Jim Bai***

ethereum or other cryptocurrencies for the EMX coin to post as margin.

There are other third-party exchanges that specialize in trading these coins,” David says. “Our token will be traded on these other exchanges. [Traders will] receive them directly from us or they can access them through a margin syndicate that could lend these coins out.”

EverMarkets CEO Jim Bai says, “We are using smart contracts to handle all custody of collateral. That is what the blockchain was all about, using the transparent verifiable nature of the blockchain to facilitate transferring of funds without a middleman.”

A smart contract is a piece of code that is running on the Ethereum blockchain itself, explains Craig Austin, EMX chief technology officer. “Think of it as a global computer that lets you store data and code. It is that smart contract that we are writing to handle the clearing and settlement of futures trading on the EverMarket Exchange,” he says.

While EMX plans on offering direct access to its markets and clearinghouse to customers, it does see a potential role for futures commission merchants (FCM).

“We feel there is a role for the FCM, but it is a different role,” David says. “The role that we envision the FCM playing would be of margin syndicate. In the role of margin syndicate there would be a guarantee and the margin syndicate would have the ability to loan tokens to customers, which they would be able to charge for.”

Contracts

The exchange itself plans to launch with futures on bitcoin and other cryptocurrencies, including its own: a cryptocurrency index that is yet to be fully designed and a host of the most liquid traditional futures contracts, such as WTI crude oil.

“We intend on listing a combination of both crypto futures as well as traditional commodities,” says David. “The initial contract slate that we have been discussing with customers [will include] our own contract, which is EMX (a futures on our own cryptocurrency) and some of the more heavily traded cryptocurrencies like bitcoin and ethereum,” he says. Also, EMX plans on having a crypto index, which will [include] some of the most heavily capitalized cryptos that are traded and will be rebalanced periodically. In addition to that, it will offer a select number of traditional commodities, some of the most heavily traded around the world. The intention will be to have these contracts at launch.”

Auction

The exchange will not include a traditional price and time match engine, but will operate an auction where traders will place orders into an open market during a five- to 15-minute period before an uncrossing session when orders will be matched. This will eliminate the time advantage of high-frequency traders and also eliminate the need for colocation.

Austin says it is similar to how the London Stock Exchange operates. “There is a call period and an uncrossing. [During] call periods people put in orders, cancel orders and move orders,” Austin says. “A short time after [the call period ends], we cross all the trades that are on the book and pick a price that crosses the most trades. We try and maximize the volume and all those traders get the same price. We [will likely] start with a five-minute timeframe.”

According to EMXs white paper, the design improves the price discovery process and minimizes market impact costs. “By using periodic pro-rata call auctions in lieu of continuous limit order trading, we de-emphasize the importance of speed and reassert competition based on price,” it notes. “The recent rise of alternative liquidity pools in equities has shown that there is significant demand for fresh ideas in execution and the sourcing of liquidity; we aim to translate many of these innovations to the derivatives arena.”

EMX’s leaders compare themselves to the IEX exchange on the derivatives side and say their structure will deliver similar perceived efficiencies and cost-savings to customers. “There is a common belief out there that exchanges are set up to benefit high-frequency traders and therefore the prices that some of the customers are executing at are below market value,” David says. “If we are able to do our job correctly, we can bring a [fairer] price and a price that is more representative at the time for the trader. It is a hard thing to quantify but there are going to be cost savings for customers.”

Austin says this will draw traders to the exchange. “If they are not receiving fair executions because of other market participants in some current exchanges and they believe in the auction model as we do, we think there is some value there,” he says.

Clearing & Structure

While the cost to traders associated with HFT is a debatable argument, especially on the futures side where there is no national market system, EMX expects to create more measurable efficiencies through its use of the blockchain. “There is significant complexity in the back-office processes that facilitate derivatives transactions. Payments, clearing and settlement processes are currently intermediated by a whole host of systems, depositories and counterparties that differ across borders and across products,” notes the exchange. “A standardization of global trade reporting and governance could be a noteworthy driver of cost savings

"There is a common belief out there that exchanges are set up to benefit high-frequency traders … If we are able to do our job correctly, we can bring a [fairer] price." *--Craig Austin*

in simplifying these workflows and increasing overall productivity."

Austin adds, "The way we describe our clearinghouse is that it is built on top of the blockchain. In this case the Ethereum blockchain is allowing us to settle trades [and] to store customer margin accounts. Ethereum is the second most popular cryptocurrency right now behind bitcoin; it is a global decentralized network, there is no owner of it. It is programmable, so each company, team or individual can write code that runs on top of it and allows people to transfer value and store value safely. We are using the technology to build a decentralized clearinghouse."

The lack of intermediaries also should provide price efficiencies. "Our intent is to create a fee that is less than current marketplaces and is transparent," Bai says. "Our goal is to be more than competitive; it is to come to market with an offering that is less expensive."

Market Making

While so-called efficiencies are great on paper, the greatest cost to traders usually involves the bid/ask spread, and without a robust liquid market that spread tends to be wide. To address this, EMX is putting together its own internal liquidity provision team that it plans to split off as a separate subsidiary once the exchange goes live.

"We will have our own internal liquidity provision team," David says. "Mark Pimentel (EMX president and head of trading), one of our founders who traded at Knight and Citadel, has been working with us on what the market infrastructure would look like."

Their plan is to create a market-making group that would have no informational or fee advantage over regular market participants, but will add liquidity by participating in all of the auctions.

"The intention will not be to post P&L, the intention will be to help balance the books and increase participation in the actual markets as they are being settled," David says.

Bai says **the** goal with the market-making team is not to generate profits but to facilitate trading, to settle auction imbalances and inject liquidity into the exchange so that it benefits everyone.

Key to this, is EMX's plan to split the team into a separate subsidiary prior to launch and to compensate them as a vendor. "We want to ensure that there is no miscommunication of what the role of the entity is," Bai says. "The entities' sole role is to provide liquidity in the marketplace and we can't think of a better way to ensure confidence than operating behind a wall and having that entire operation separate from the parent company. It is going to be separated before we open up our markets."

Who Will Trade?

EMX's initial target audience will be active cryptocurrency traders but EMX expects more traditional market participants to join. The goal is to build an exchange for cryptocurrency traders in the near term and institutional traders in the long term.

"We expect traditional market participants who have amassed tremendous amounts of wealth in cryptocurrencies who are looking for alternative means to deploy that," Austin says. "We also anticipate that current crypto trades will have interest in traditional commodities."

David adds, "We believe that the majority of our traders will be individual traders or companies that are currently long these currencies," and he adds that the ultimate goal of the exchange is to offer global trading 24/7 for all the commodities – both crypto and traditional – that a customer would want.

"There is a corollary to that, if we do our job correctly, we will be offering enhancements to how futures markets are currently operated," David says. "Whether it would be through the efficiencies of the blockchain [or] through innovation of our contract offerings, the impact we will have on the futures markets will be great."

The folks at EMX have put in place a plan for a fintech firm that promises to be truly revolutionary. "The goal is to build a new derivatives exchange using cryptocurrencies as collateral and using smart contracts to handle the margin, settlement and clearing aspects of futures trading," Bai says. "We see a huge need in the crypto space right now for an institutional-level exchange, a derivatives exchange, and we can see the benefits of using new technology, specifically blockchain, smart contracts and cryptocurrencies to facilitate the trading of derivatives."

During the last few years, we have been hearing, from many quarters, how blockchain technology would revolutionize the financial world; that it would be the ultimate fintech disruptor. EverMarkets could be the first test case of this concept. Its success or failure will not be the final word on the value of blockchain as a revolutionary disruptor of markets, but it may provide the first practical test case for what we have been hearing is the future during the past few years. For that reason alone, it will be worth watching. ∆

"Our goal is to build an exchange for cryptocurrency traders in the near term and institutional traders in the long term." *--Jim Bai*

No reason to fear more aggressive Fed – yet

■ By **Steven K. Beckner**

Weening a country, or market, off easy money is tricky, even when it's done slowly, as the Federal Reserve is doing.

The removal of monetary accommodation is not made any easier by protectionist threats and counter threats that complicate the macroeconomic mix, roil markets and tighten financial conditions.

Despite near hysteria at times over Fed actions, the markets seemed to be coming to terms with rising interest rates when President Trump's tariff announcements triggered trade war anxieties. Needless to say, there's nothing the Fed can do about trade policy, although new Fed Chairman Jerome Powell says that trade has become "a more prominent risk" to the downside.

More expansive fiscal policies pose off-setting upside risks, but Fed officials are restrained in their assumptions of how much tax cuts and increased federal spending change the economic outlook. In March they revised up their GDP projections by two-tenths for this year and three-tenths for next year before growth is expected to recede to 2%.

It's hard to see why markets should be so alarmed about interest rates at this juncture. It took seven years after the financial crisis for the Fed to stop holding the federal funds rate near zero. In 2015 and 2016, that benchmark short-term rate was raised a total of 50 basis points, while a balance sheet bloated by three rounds of heavy bond buying was left untouched. Finally, in 2017, the Fed got more serious about "normalizing" policy – raising the funds rate three times by 75 basis points. Not until October 2017 did the Fed at last start to shrink the balance sheet and then just passively by progressively limiting securities reinvestments and rollovers.

By the time Powell chaired his first Federal Open Market Committee meeting in March, the funds rate was still nestling in a 1.25-1.50% range – barely half the FOMC's estimated longer run "neutral" rate.

When the FOMC announced a sixth rate hike on March 21, it was merely taking "another step in the process of gradually scaling back monetary policy accommodation as the economic expansion continues," Powell said in his first press conference. Yet. there was talk that the Fed's rate-setting body had become more aggressive, even though they retained their projection of three moves in 2018 and only modestly increased the number of anticipated rate hikes in the next two years. The median funds rate for the end of 2020 was lifted from 3.1% to 3.4%. Some aggressiveness: A net 30 basis points of tightening over three years.

There was talk that the Fed's rate-setting body had become more aggressive.

And there's no guarantee the funds rate will ever get there. After all, the funds rate "dot plot" is just an aggregation of projections of all FOMC participants.

"Like any set of forecasts, those forecasts will change over time," Powell said, adding that is will be based on the pace of the economy.

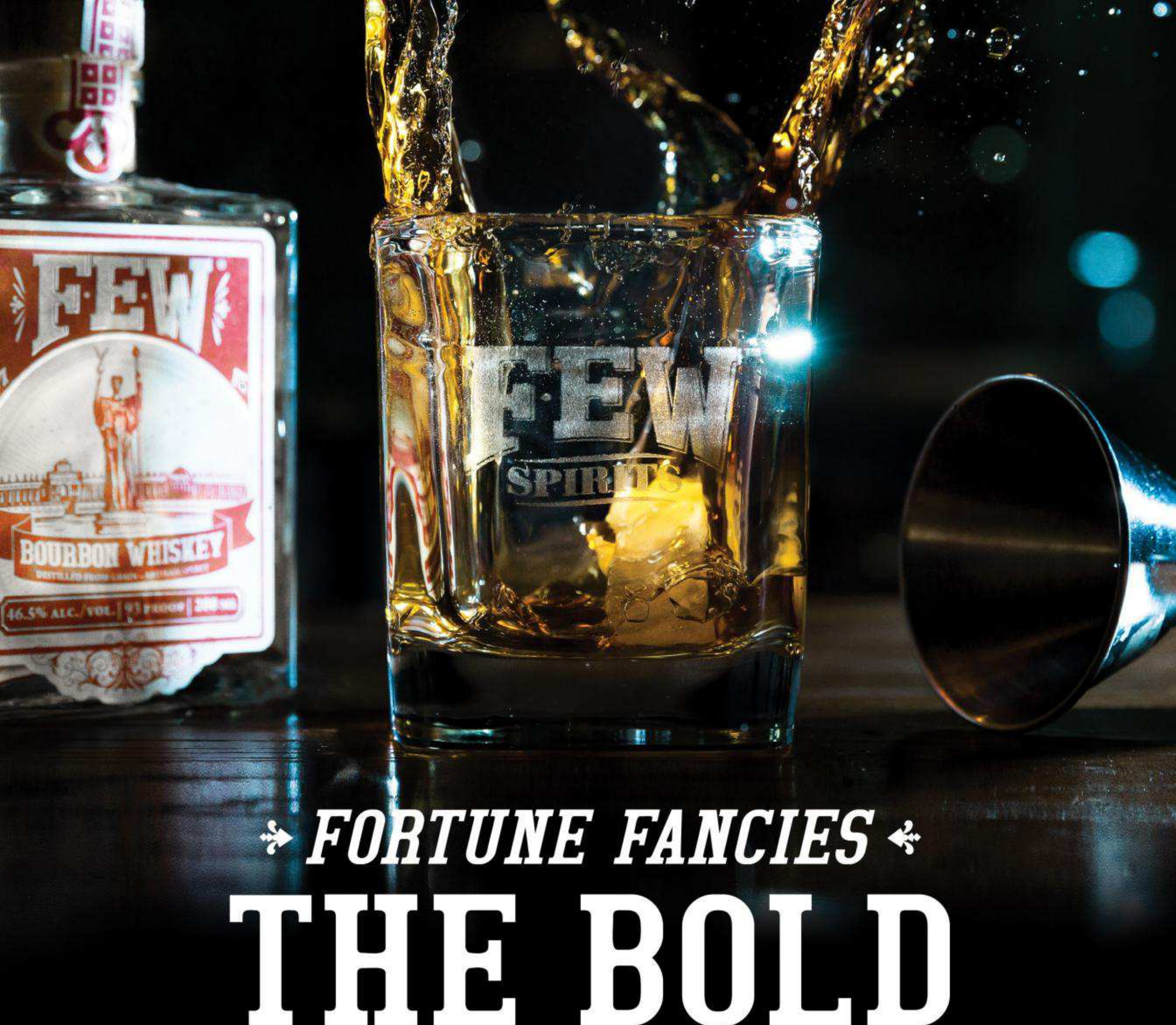
In fact, there's reason to think the neutral rate will be revised higher, as it was slightly from December to March. A big reason why Fed officials steadily lowered their estimate of the neutral rate from 4.25% in January 2012 was because they perceived its real component ("r*") had fallen as slower productivity and labor force growth undermined the economy's potential for expansion. But if Powell and others are right, tax incentives will boost investment and in turn productivity, while also increasing labor force participation. If so, we could see upward revisions in the neutral rate, which would render actual funds rate hikes relatively less restrictive.

For now, though, the outlook remains uncertain – a word Powell and his colleagues use very frequently. Dramatically increased market volatility intensifies the sense of uncertainty and in turn Fed caution. Of course, the big game changer would be a significant increase in the inflation component of the neutral rate – now assumed to be the Fed's 2% target for the price index for personal consumption expenditures (PCE).

The Fed has had the luxury of raising rates modestly and incrementally because inflation has stayed subdued. But the PCE and other price and wage gauges have been inching higher in recent months, as have inflation expectations measures. Were there to be an inflation breakout – which a trade war with China could spark if the Fed stays overly accommodative..... – markets would have something to worry about.

The Fed may yet raise rates more sharply, but that would require more convincing evidence of faster growth and/or escalating wage-price pressures – evidence that could be available by the time the FOMC revises its projections in June. ∆

Steven K. Beckner *is regularly heard on National Public Radio and is the author of "Back from the Brink: The Greenspan Years."*

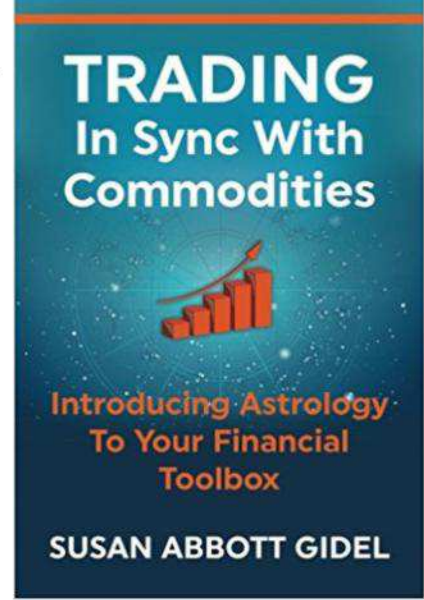


FEW®
SPIRITS

Many people check their horoscopes in the morning, but do you check your market's horoscope? One woman does and has written a book about it.

Star Traders

By **Daniel P. Collins**



A FEW YEARS AGO, Susan Gidel was teaching a class on astrology in the markets. When it was time for her to focus on the use of astrology in commodities markets, she started looking for reading material to assign to her class, but discovered there was none to be found.

So she wrote her own book. The recently released, "Trading In Sync With Commodities–Introducing Astrology to Your Financial Toolbox" combines Gidel's twin passions of commodity trading and astrology.

Her fascination with both goes back to her time as a senior editor for *Commodities* and *Futures* magazine in the 1980s.

"When I was at *Futures,* it was during the Gann revival in the late 1970s early 1980s. At the same time, there was an astrological revival as well," she says. "I found it all kinds of interesting. I got more interested in astrology over the years and finally started going to conferences."

Gidel began a more intense study of astrology and the markets in 2005 and discovered that there was a great deal of material on applying astrology to stocks, but very little on futures and commodity markets.

"There were financial astrologers out there who were paying attention to the stock market and using astrology to see what the stock market was going to do," she says. "A couple of years later I decided to start formally studying astrology with the intent of applying it to the market and to see if it worked on the markets that I knew about, which were commodities."

Underlying both passions was a fascination with what makes prices move. "I always have been a fan of Gann and Elliott Wave. I like the mystery of Gann and I like Elliott Wave's ability to tap into market psychology. I just think that markets move because people make decisions on whether to buy and sell and the emotions that go into that are a big part of it. It is how you get big volatility, it is how you get big blow-off [tops] or [market] bottoms," she says.

After formally studying astrology and markets she was asked by the school to teach a course. "That is when you really learn stuff, when you have to teach it to someone else," she says. "Astrology helps us understand how things happen and why, how the moving planets in the sky are affecting all of us on a regular basis; how we behave and how it could influence how we might make a trading decision."

SOYBEANS' HOROSCOPE

Markets, like people, have a birthday and a horoscope that goes along with it. "The financial astrologers working on the stock side would make sure they always had a good first-trade horoscope chart–the day and time the stock began trading–which is pretty easy to do," Gidel says.

This proved to be harder with commodity markets. "This was the hardest part in getting this book together – finding accurate data," she says. "Basically, the first-trade horoscope chart is like a person's birth chart; [it is] sensitive to where the planets were in that snapshot when the market was born and how the planets triggered those natal planets as they keep moving around in the sky. It is taking the concept of astrology from a human point of view–we all have horoscopes from the day, time and place we were born that is kind of your road map to who you are, how you behave and what you are like– and the same is true of markets."

"That is when you really learn stuff, when you have to teach it to someone else." --*Susan Gidel*

The first-trade data makes a big

"Anyone who trades the S&P 500 should already know they can't go on vacation during the last half of August 2019."

difference. Gidel confirmed this with her study of silver. She noticed that her silver study did not seem to make sense. The major tops and bottoms she calculated did not match up to where she figured they should be. She based her analysis on the Comex first-trade launch date of July 5, 1933. When she examined this closer she discovered that silver futures actually launched two years earlier at a competing exchange that later merged with Comex. "When I ran it [with the real start date], it made more sense," Gidel says.

Gidel's book focuses on six markets: Soybeans, crude oil, gold, the S&P 500, euro FX and the 10-year Treasury note because they are the most liquid markets covering the major sectors.

"I've looked at significant highs and lows in six different markets [from] whenever they started and tried to find similarities in where the planets were in relationship to the first-trade chart for each market," she says. She spotted the dates of major highs and lows using monthly charts and then compared them to major events on the astrological charts to see what similarities she could find. "It is not perfect, there is a lot of room for judgement," she says. "To me this is simply another technical tool. It excels in projecting time forward because you can see when these planetary cycles come up again. Once you identify what you think is important to whatever markets' first-trade charts, you can find dates that are similar."

Gidel points out that using astrology is not magic, but similar to other technical analysis disciplines.

"Like Gann, the signatures for a top or a bottom can be similar and the planets can be close together," Gidel says. "I am trying to make the case that the markets are sensitive to it and have certain signatures [for] highs or lows based on how they have behaved in the past. [You can] project that forward in time to give people dates to pay attention. For example, anyone who trades the S&P 500 should already know they can't go on vacation during the second half of August 2019."

Gidel explains that there are five planets moving into Virgo after they cross the degree of the total solar eclipse that we had last summer during that period. "Both those things are happening in the second half of August (2019). The last time that happened was at the top in 1987," she says. "You have to really pay attention in the second half of August 2019."

CYCLICALITY

"Astrological movement is cyclical, each planet moves through 12 signs in a certain period: Mars takes a couple of years to go through all 12 signs, Saturn takes 29 years to go through all 12 signs, Saturn and Uranus have a 45-year economic cycle where they start together [and] at important periods are at 90 degrees to each other and oppose each other, before they come back [together]," Gidel says. "With planets and astrology you can define the length of [each] cycle."

Those cycles, when matched with long-term market highs and lows, provide direction for market timing. "I can tell you when the cycle perfected to the day and to the minute," Gidel says.

Just like other technical trading inputs, these can be used in concert – the more inputs that indicate a top or a bottom, the stronger the overall signal.

"Astrologically, you always look at any connection between a natal planet (birth planet) and a transiting planet. Just this week (April 2) Mars and Saturn were aligned in Capricorn, this is a strong signature; Saturn rules Capricorn [and]

SIGN OF ENERGY

A recent volume spike in the S&P 500 coincided with a planetary conjunction.

Source: eSignal

"I have a very selfish interest in knowing when the stock market is going to top— and maybe it already has— I don't have time to wait to go through another 2000 or 2008."

Mars is what we call exalted in Capricorn," she says. "It [indicates a] time to take strategic action that has long-term significance, [it displays] real strong energy. I was intrigued to note that big spike in E-mini volume on [April 2] that everybody was talking about, happened four minutes before that Mars Saturn conjunction was exact."

This planetary conjunction led to a huge burst of energy into the market that created a spike in volume created right before that transit happened (see "Sign of energy," left). The natal planets are the ones in the snapshot of when you were born. Meanwhile, transiting planets keep moving around in the sky.

HOW TO USE THE BOOK?

While the idea of using astrology as a guide to trading may seem, well, out there, it takes discipline like all other trading tools. "The best use for a trader is to just get in tune with the dates that I project out. Read the book, understand why it worked in the past [and] what I am looking for going forward," she says. "I have looked out to year-end 2020 and have dates for every market where there is potential for a high or a low. At the very least, it is something to throw into what [other things] you look at."

She compares it to using a monthly chart to define the overall trend and to using the daily and intraday charts for specific trades. And like other technical indicators, if more than one input coalesces at a time projecting a top or bottom, it is a stronger signal.

"That's what you are looking for, when are their multiple clicks going on that are strong and significant, that is when you start looking for what the markets did at that time," Gidel says. "I went backwards and found days when markets peaked or bottomed and tried to reverse engineer it, [looking for] which natal planets where being activated by which transiting planets in the strongest way on these dates."

While not every signal for a high or low is confirmed, the exact nature of the astrological cycles provide specific times, like Gidel's projection for the second half of 2019, more than a year in advance. "The timeframe is significant, that's the deal, to use astrology for what it's best at, which is timing. To be able to move forward in time with precision and [make note of] those dates on your calendar that seem random and see what happens," she says. "The other way to use it is to understand the really large economic cycles that are at play."

This can help in long-term portfolio management. "I am a card-carrying baby boomer. I have a very selfish interest in knowing when the stock market is going to top – and maybe it already has – I don't have time to wait to go through another 2000 or 2008," she says. "I can't wait 10 years for the market to lose 50% and come back to even. That is the long-term perspective planetary economic cycles give me."

Broadly, she has found that a major equity market top will hit between now and 2020. "It could retrace 50% and may not recover until the mid-2020s," she says.

Gidel has spent a lifetime in markets and has married that vocation with her avocation for astrology. "I want to make you aware that the planets seem to have connections to when markets first started trading, and to know when those connections are hot is valuable to traders," she says. "Big things happen at big transits in my life, in my friend's life, and I expect to see similar things in markets." ∆

"I want to make you aware that the planets seem to have connections to when markets first started trading, and to know when those connections are hot is valuable to traders."

Baseline

HOW DOES YOUR TEAM STACK UP?

70 YEARS IS LONG ENOUGH WAIT

Picking winners in major league baseball in the era of extended playoffs can be difficult. Most handicappers have a good idea who the best teams will be, and if you fall into that category, it doesn't necessarily matter if you win your division or enter as a wildcard.

In the end, most of the top teams will play on in October. A couple teams will come out of nowhere and play well; one of them will hang on and qualify for the playoffs. One top team will underperform due to injuries or a couple star players having down years and will miss out.

But how do you explain the Washington Nationals? Arguably the best team over the last few years that consistently come up empty in October.

Some teams tend to make hay when they reach the playoff and some don't. The New York Yankees and St. Louis Cardinals come to mind. Once again CG Technology–the gaming technology company behind the top Las Vegas sports books– provides its opening predictions for win total for all 30 Major League teams. Oddsmakers have put the Yankees at the top, though Houston is favored to repeat depending on where you look.

All the usual suspects – Dodgers, Yankees, Astros, Indians, the Chicago Cubs, Red Sox and Nationals – are selected near the top.

We will rule out teams that have faded in the playoffs recently; sorry Nationals. While the Yankees surprised last year with fresh blood making them many experts' top pick, there is bad mojo in firing a championship manager who took a team much farther than they were expected to go. Rookie phenom Aaron Judge is not likely to repeat last year's numbers, especially with much higher expectations for both him and the team.

The Cubs will be in the mix but they are replacing 40% of their starting rotation that accounted for 60 starts with the departure of Jake Arrieta and retirement of John Lackey.

With that, we expect the Cleveland Indians to finally end its long championship drought, defeating the L.A. Dodgers, coming one game short yet again, in seven. ∆

2018 MLB OVER/UNDER WINS & ODDS

Source: GC Technology & VegasInsider.com

Team (2017 wins)	Over/ under wins	Odds to win NL	Odds to win World Series
Los Angeles Dodgers (104)	96.5	5/2	6/1
Chicago Cubs (92)	94.5	9/2	10/1
Washington Nationals (97)	92.5	4/1	8/1
Arizona Diamondbacks (93)	85.5	12/1	10/1
St. Louis Cardinals (83)	85.5	10/1	20/1
Milwaukee Brewers (86)	84.5	12/1	25/1
Colorado Rockies (87)	82	14/1	33/1
San Francisco Giants (64)	81.5	12/1	25/1
New York Mets (70)	81	10/1	20/1
Philadelphia Phillies (66)	75.5	40/1	80/1
Atlanta Braves (72)	74.5	50/1	100/1
Cincinnati Reds (68)	73.5	50/1	125/1
Pittsburgh Pirates (75)	73	40/1	80/1
San Diego Padres (71)	69.5	66/1	125/1
Miami Marlins (77)	64.5	125/1	250/1

Team (2017 wins)	Over/ under wins	Odds to win AL	Odds to win World Series
Houston Astros (101)	96.5	3/1	6/1
Cleveland Indians (102)	94.5	4/1	8/1
New York Yankees (91)	94.5	11/4	5/1
Boston Red Sox (93)	91.5	6/1	12/1
Los Angeles Angels (80)	84.5	10/1	20/1
Minnesota Twins (85)	82.5	25/1	50/1
Seattle Mariners (78)	81.5	16/1	33/1
Toronto Blue Jays (76)	81	16/1	25/1
Tampa Bay Rays (80)	77.5	33/1	66/1
Texas Rangers (78)	77.5	33/1	66/1
Oakland Athletics (75)	74.5	50/1	100/1
Baltimore Orioles (75)	73	33/1	66/1
Kansas City Royals (80)	71.5	50/1	100/1
Detroit Tigers (64)	68.5	125/1	250/1
Chicago White Sox (67)	68	50/1	100/1

RECORD HIGH

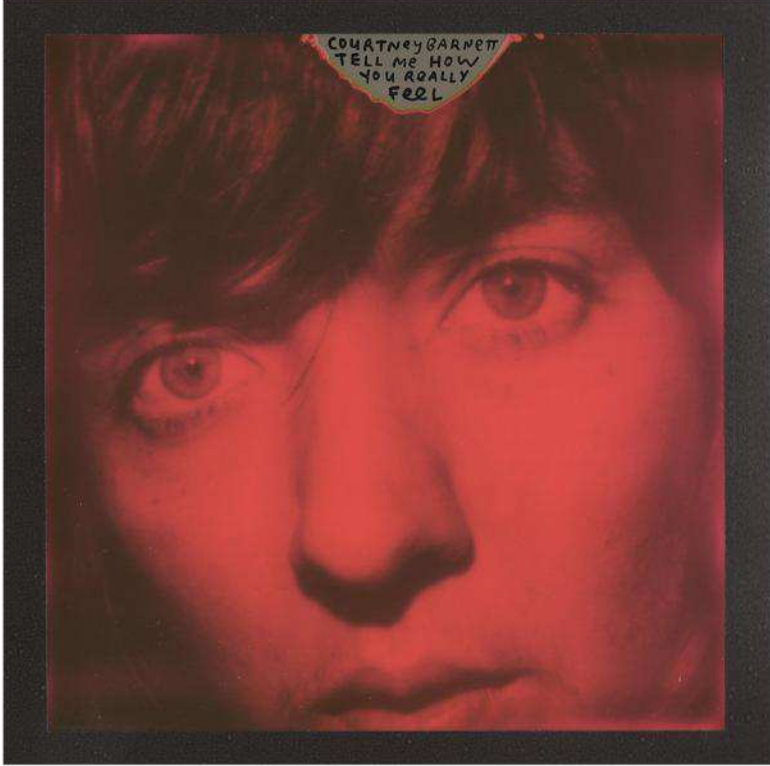
Music Musings & Reviews

Courtney Barnett

Tell Me How You Really Feel

Average – 89
Standard Deviation – 7.4

Albums are scored 1-100 and standard deviation measures the album's breadth of track appeal



Courtney Barnett is on a creative tear right now. She has been since she started churning out albums and EPs since the excellent double EP, ***A Sea of Split Peas.*** The sheer number of fantastic, quote-worthy lyrics are without match over the past five years, except for perhaps Tyler Childers, who is making a run at her. Barnett's first single in the United States five years ago was clearly the best song title of the year: Avant Gardener, whose lyrics matched the wit of the title, "I feel like Uma Thurman, post-overdosing quick-start."

Similarly, her new album is peppered with song titles like ***I'm Not Your Mother, I'm Not Your Bitch***, ***Crippling Self-Doubt*** and a ***General Lack of Confidence,*** that features guest musicians and vocals Kim and Kelly Deal. In addition to her solo work (her 2015 album, ***Sometimes I Sit and Think, and Sometimes I Just Sit***, landed on the top of my Best of 2015 list), in 2017 she released an album with kindred spirit, Kurt Vile, a solid, but not stellar album, though I would argue that when she is able to achieve such creative heights, partnering with almost anyone would drag her down.

Tell Me How You Really Feel bursts through the preciousness and self-importance that has been plaguing indie-rock for several years now. It is an indie-rock album that screams and smolders with authenticity and honesty. The subjects of Barnett's songs vacillate among fully developed characters ready for a Netflix original show, social commentary ripped from headlines, and those amazing couplets that draw insight on the human condition. My prediction is that you will hear at least four of these songs on heavy radio rotation, though the first single, ***Nameless, Faceless***, the #MeToo inspired single, will not be the breakout hit. Remember The Wallflowers? When they released their debut single from breakout album, ***Bringing Down the Horse***, it didn't

NOTABLE NEW MUSIC - CHECK THEM OUT!		
Artist	**Album**	**Recommended If You Like**
Trampled By Turtles	Life Is Good On the Open Road	The Gourds, The Jayhawks, Gillian Welch, David Rawlings
Ezra Collective	Juan Pablo: The Philosopher	Note: This is Jazz. Blue Lab Beats, Sam Prekop, Sons of Kemet
Soccer Mommy	Clean	Girlpool, Angel Olsen, Waxahatchee, Big Thief
Parker Milsap	Other Arrangements	John Fullbright, The Deslondes, Justin Townes Earle
Superchunk	What A Time To Be Alive	Sugar, Guided By Voices, Dinosaur Jr., Pavement

do much to spike sales. It was ***One Headlight*** that blew the roof off their album sales. My guess is that ***Tell Me How You Really Feel*** will go through the same process: ***Nameless, Faceless*** will garner some radio support, but will not become ubiquitous. It is a very good song, but it is not the one that will shoot Barnett into the realm of superstar where she deserves to be. There are at least five songs that could do that, ***City Looks Pretty, Need a Little Time, Charity, Help Yourself,*** and ***Walkin' on Eggshells.***

That lead single, ***Nameless, Faceless,*** paraphrases a conversation novelist Margaret Atwood had when asking men why they were afraid of women. Their answer, "that men were afraid women would laugh at them," was followed by her conversation with women and their fear of men, "that men would kill them." While dramatic, there is truth in the words that men often take for granted when stepping inside a cab or walking through a park alone at night.

Tell Me How You Really Feel kicks off with ***Hopefulessness***, a languid bass line that is sustained throughout the entirety of the song except for the lyrics, "I don't wanna, I don't wanna know." The bass line sound influenced from the Kurt Vile collaboration. Guitars and feedback enter and abate, eventually overwhelming the bass in a storm of fury, paralleling the lyrical content.

An excellent guitar player, Barnett can write melodies for voice and hooks on the guitar that match the wit of her lyrics. At times it makes me question how four chords, which have been driving rock and blues songs for about 75 years have never been assembled like this before. One of these tracks, ***Walking on Eggshells,*** starts off with a great guitar hook then dives into a universal human condition, "***Before we get started, I'll clean this up. There's no use drinking from a leaking cup. You know what I mean? Not really it seems... Walkin' on egg shells gets tiring. Pullin' teeth, white knuckling. And I don't want to hurt your feelings, so I say nothing.***"

Barnett writes songs with an urgency I haven't seen in decades. There are stories and characters and insights inside her, fighting to get out – to be heard by an audience who will nod in appreciation of the story and insight, and nod along to the beat. While it is impossible to tell if Barnett can sustain the streak of creativity she is on, there are certainly no signs that she is slowing down. Although some of the characters struggle with life and fitting in, Barnett remains optimistic and realistic, "Darkness depends on where your standin'."

— J Burr Vannatta @jvevanston

J Burr Vannatta, *a life-long music critic with stints at Southern and Super Free Records, has been producing his highly anticipated Best Albums of the Year list for the past 25 years. @jvevanston*

Crypto fund growth

■ By **Daniel P. Collins**

Bloomberg reported that The U.S. Securities and Exchange Commission (SEC) is examining the business practices of a cadre of funds set up to invest in cryptocurrencies and initial coin offerings.

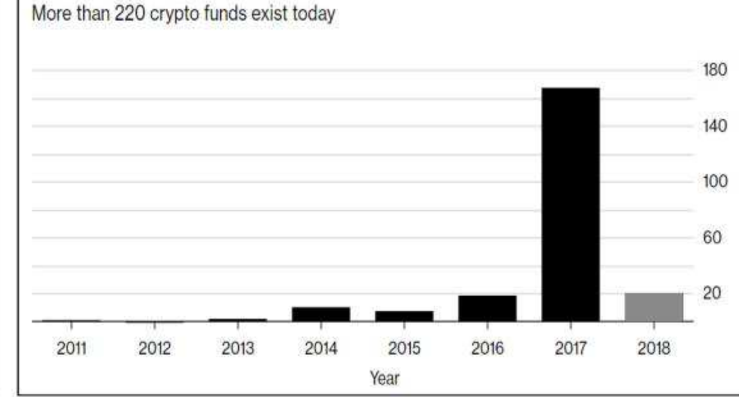
Just as the price of bitcoin and other cryptocurrencies grew exponentially in 2017, the number of cryptocurrency based funds have been exploding. Autonomous Research LLC reports that more than 220 crypto-based hedge funds exist, 167 were launched in 2017, and more funds have been launched in the first few months of 2018, 20, than in all of 2016.

The pace of funds linked to cryptos has the SEC worried, which makes sense and it is hard to imagine there is the necessary expertise to trade an entirely new asset class. ∆

INEVITABLE REVERSION

From Septemer 2016 to February 2018, the VIX settled below 10, 40 times.

Source: eSignal



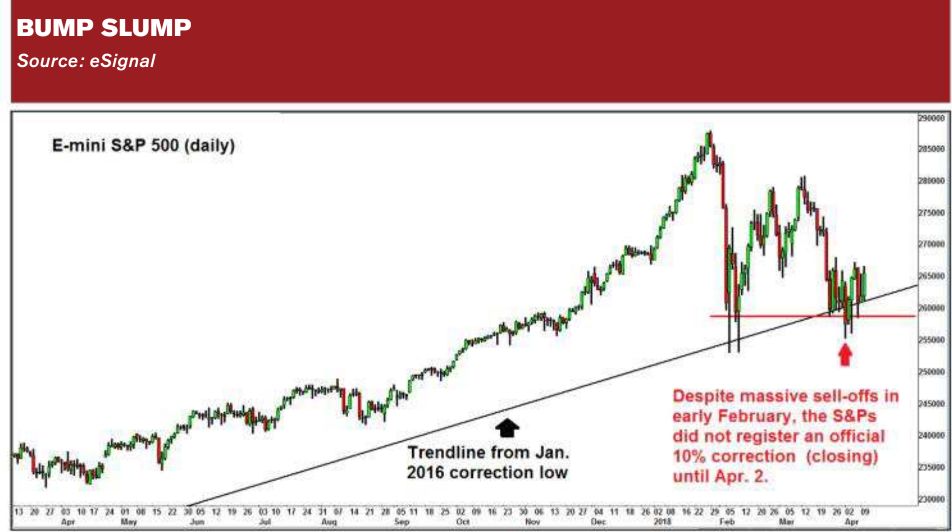
Correction is official

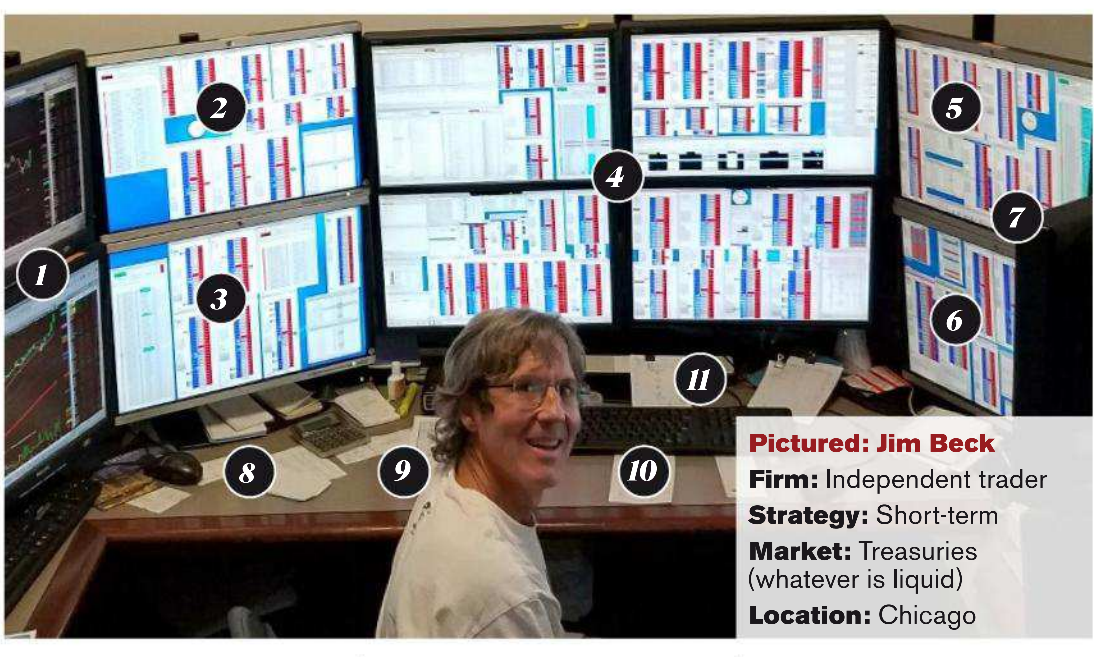
After going through a complete calendar year—2017—without a hint of a correction the S&P 500 officially corrected, and appears, for the first time in a while, to be vulnerable. Surprisingly, the S&P 500 Index didn't register an official correction (a 10% drop measured from close to close) until April 2, 2018, despite its worst single-day drop on Feb. 5.

The market also crossed (on a closing basis) a trendline from the low of the last (Q1 2016) correction. While the market is clearly in a period of higher volatility, it has only settled 10% below its high close once, and only closed below the trendline from its 2016 correction once. Traders should keep an eye on both levels. ∆

BUMP SLUMP

Source: eSignal





Pictured: Jim Beck
Firm: Independent trader
Strategy: Short-term
Market: Treasuries (whatever is liquid)
Location: Chicago

1 TradeStation
2 Trading Technology platform – grains
3 TT platform – metals
4 TT platform Treasury complex
5 TT platform – Stock indexes
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CHART PATTERNS

Applying classic chart patterns to current trading opportunities

Trading Fintech Stocks

By **Suri Duddella**

Financial Technology (Fintech) refers to the technologies used and applied in the financial services sector. During the last decade, due to technological innovations, fintech firms are disrupting traditional financial services sectors in retail banking, investment, mobile payments, loans, fund-raising and asset management. Fintech is also changing customer behavior and expectations as they are now able to access data and information anywhere and everywhere.

Fintech Domain

According to research firm CB Insights, fintech startups in North America received more than $17.5 billion in funding that is valued at more than $84 billion in 2016-2017 dollars.

Fintech innovation is rapidly expanding in open banking, insurance technology, robo-advisors, cybersecurity, blockchain technologies, and cryptocurrencies and digital cash. Mobile payments, crowd-funding and money-transfer services are revolutionizing the small business startup landscape regarding how small companies start and run globally.

Fintech is beginning its wave of disruption, yet it is in the nascent stage. There are many fintech publicly traded companies in the United States; GlobalX FintTech exchange-traded fund (FINX) is a leading ETF that seeks to invest in companies on the leading edge of the emerging financial technology sector.

“Breakout” (page 54) shows the performance of U.S. fintech stocks and ETFs.

CREDIT CRISIS

Visa is in the midst of a bearish ABC pattern dating back to 2010.

Source: SuriNotes

Fintech Stock Chart Patterns

Harmonic trading is based on the premise that patterns repeat themselves, and the symmetry can be exploited to define the geometric and harmonic relationships between price and time-swings using Fibonacci ratios. Harmonic price movements produce symmetric rallies and decline to give traders an advantage to determine the key turning points (pivots) and well-defined and repeatable chart patterns. One of the simplest and most universal chart patterns is the ABC pattern (see “The ABC Chart Pattern: Symmetry, Harmonics & Patterns,” ***Modern Trader***, September 2017).

HEADING LOWER

Paypal has formed a head-and-shoulders pattern, which will signal a short on a close below the neckline of $71.63 with strong volume.

GETTING PRICEY UP HERE

Equifax may still be subject to a Parabolic arc move despite its September 2017 correction.

Source: SuriNotes

"Credit crisis" (page 57) shows an ABC bearish pattern in **Visa Inc.** (V). Visa has been rising since June 2010 and went from a low of $16 to a high of $126 by January 2018, when Visa experienced a retracement and formed a key pivot (A) outside the Fibonacci Band at $126.88. Visa also traded below the mid-Fibonacci band to form "B" ($111.02) and another pivot "C" above the mid-Fibonacci band at $125.20. After forming an ABC bearish pattern, Visa closed below the entry level of $122.79 to signal a short trade with a stop level above $125.30. The target levels are $115 and $109.

Head & Shoulders Pattern

One of the most popular chart patterns in market analysis is the Head and Shoulders (H&S) pattern. The H&S pattern forms near market tops in an established sideways to an up trending or bullish market. The H&S patterns are reversal patterns as they reverse its prior uptrend and follow a bearish or a downtrend from its breakdown. These patterns are signified by three successive peaks resembling two shoulders on both sides and a head in the middle. The head is the largest of the three peaks.

Paypal Inc. (PYPL) is currently forming a H&S pattern with the left shoulder at $79.39 and the right shoulder at $82.17. The pattern's head is formed at the peak of $86.32. H&S patterns are only valid when price closes below the neckline at $71.63 with increased volume. If price breaks below the neckline, a short is signaled in PYPL with price targets of $62 and $57 (see "Heading lower," left).

Parabolic Arc Pattern

Parabolic Arc chart patterns form when a steep rise in prices is caused by irrational buying and intense speculation. Parabolic Arc patterns are rare, but they are reliable and are generated in mega bull trends (see "How to trade Parabolic Arc patterns," ***Modern Trader***, November 2016). These patterns trend, gradually making higher highs and lower lows in the beginning stages, but can be volatile in the exhaustion and reversal stages. Irrational buying from the public generates a strong rally to push prices vertically, followed by a steep sell-off. It captures what traders call blow-off tops. Examples of these market types are the Nasdaq bull market top of 2000 (retraced 80%) and gold prices from 2011 (retraced 62%).

Equifax Inc. (EFX) has been in a steep Parabolic Arc uptrend since 2008, rising from a low of $20 to a high of $147 by September 2017 (see "Getting pricey up here," left). Parabolic Arc patterns are relatively difficult to trade as they may experience a few false breakdowns. EFX did experience a 35% move in September 2017, but has since regained half of that ground and may be still subject to the Parabolic Arc. Most Parabolic Arc patterns are expected to retrace 62% to 79% of the prior range. ∆

Suri Duddella *is a 20-year veteran pattern-based, algorithmic trader and author of "Trade Chart Patterns Like the Pros." @surinotes*

PAPER TRADE

Options come in different styles, and while most traders will concentrate on basic vanilla options, understanding the different styles can help traders understand option pricing.

Trading Vanilla & Exotic Options

By **Lindsay Lu**

Most traders understand the basic definition of options: A contract that gives you the right, but not the obligation, to sell or buy an underlying stock or futures contract.

There are many kinds of options in the trading world. Vanilla options are the most common types of option contracts known to investors on the market. There are two kinds of vanilla options: European and American style options. European options are the most simple and basic form of option contracts used by equity market players.

There are two general forms of every option contract: call and put options. A call gives you the right but not the obligation to buy an underlying at a certain price (the strike) and a put option gives you the right but not obligation to sell an underlying.

Taking a long call position in a European option gives you the right to buy an underlying asset at a specified strike price on a specified date, known as the maturity date or expiration date. The payoff is the difference between the spot price of the underlying at maturity date, also known as the settlement price, and the strike price.

Meanwhile, taking a short position in a European call means selling the option contract to receive a premium. Unlike option buyers who have an option to decide whether to exercise their rights, sellers of option contracts have an obligation to fulfill the contract if the counterparty demands it. Because of the premium received, you are obligated to sell the underlying instrument at the agreed strike price if the counterparty decides to exercise his right to buy regardless of the market price.

Similarly, buying a European put gives you the right to sell at a specified price on its maturity date, while shorting a European put option is another way of buying the underlying asset for a specified price on the contracted date. However, in addition to locking the purchase price, a short put also allows you to receive a premium from selling the option contract.

The trading of American options is almost the same as European ones, except for one rule. A European option can only be exercised at the end of its life and the payoff is the difference between its strike price and the spot price of the underlying asset at its maturity date. However, American options allow investors to exercise the option at any time between the purchase and the expiration date, meaning that payoff is dependent on any spot price of the underlying during that period of contracted time.

The advantage of American style contracts over European style contracts is the flexibility that they offer. When you own American style contracts, you have the right to exercise at any point up until the expiration date of the contract.

The greater flexibility investors have in exercising American options results in greater implied volatility of the option contracts. Therefore, American options buyers are able to generate a potentially higher rate of return, while sellers are exposed to greater risks. This feature also increases the value of American style options over European style options.

The flexibility that American options offer is an essential feature that makes them attractive to investors. As a result, the majority of the commonly traded options on the standardized equity options exchanges fall into the American style category. The Chicago Board Options Exchange (Cboe) and NYSE option exchanges offer standardized American option contracts.

While American options usually trade on standardized equity options exchanges

American options allow investors to exercise the option any time between purchase and the expiration date.

Asian options … are exclusively traded over-the-counter and are mostly used by commodity firms to hedge ongoing business risks.

OPTION STYLES

Option Contract	Strike Price	Volatility	Premium	Flexibility	Trading
European	Spot price at maturity date	++	++	++	Options on equity index & currency Futures & OTC
American	Any spot price between purchase and maturity date	+++	+++	+++	Equity options exchange + OTC
Asian	Average spot price between purchase and maturity date	+	+	+	OTC

and are easily accessible to the public, European style option contracts are traded on certain options on futures (indexes and currencies) as well as over-the-counter options, and are tailored to the needs of individual investors. In some cases, there are a few European style options available on exchanges, such as the FLexible EXchange Options offered by Cboe.

In addition to the vanilla options discussed previously, there are also options other than common European and American style options. They are classified as exotic options because of their difference in structure from vanilla options in terms of how or when a certain payoff is realized. An Asian option, also known as an average option, is one of them.

The first Asian option was developed in 1987 when David Standish and Mark Spaughton first commercially used pricing formulas for options linked to the average price of crude oil. The contract was named as the Asian option because Standish and Spaughton were working for Bankers Trust in Tokyo when they developed their way of pricing average options.

The intuition behind Asian options is quite similar to that of the vanilla options; the only difference is that the strike price or the settlement price of Asian options is determined by the average value of the underlying asset over a pre-contracted period. When the strike price is averaged rather than specified by the contract before purchase, such an option is called an average strike option. Similarly, when the settlement price is averaged, the contract is referred to as an average price option.

Simply put, for average strike options, no one can know the strike price of the option contract until the expiration date. Payoff from such option contracts is the difference between the averaged strike price and the spot price of the underlying at expiration. However, for average price options, the payoff is the difference between a pre-determined strike price and the average value of the underlying over the contract time instead of the spot price of it at maturity. Either way, the payoff from Asian options is dependent on the average price of the underlying instrument over the contracted period.

Investors with a position in Asian calls or puts are able to buy or sell at the average spot price of the underlying during the contracted period. Because of such features, Asian options are basically averaging the volatility of prices as well as the risks over a certain amount of time. Therefore, compared to vanilla options, Asian options tend to be less expensive, trade at lower premiums as a result of their lower implied volatility and hold less risk for option sellers.

Asian options are most useful for companies using commodities markets to hedge against price fluctuations. Businesses with an ongoing requirement for a specific commodity can lock in a relatively stable price at a lower premium using Asian options.

Because the settlement price for Asian options can be calculated based on the average price of the underlying asset during a period, Asian options can protect investors from the risks of market manipulation of the underlying instrument at contract maturity.

Asian options are not as popular among the general investors as American options because of their relatively lower volatility and flexibility. They are exclusively traded over-the-counter and are mostly used by commodity firms to hedge ongoing business risks. “You can find people who can make the [Asian option] market for you,” says Dan Keegan, the founder of Optionthinker.com, commented. “But it is nowhere near a liquid market.”

While most traders will only utilize plain vanilla options, understanding how exotic options work and are priced can help you to better understand how options are valued. ∆

Lindsay Lu *is a student at Northwestern University’s Medill School of Journalism and an editorial intern for MODERN TRADER.*

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TECHNIQUE

Cotton prices have been trending higher, which has driven up call premiums, but a top may be in sight.

Cotton May be Close to Peaking

By **James Cordier**

Cotton prices have been a prime benefactor of growing world economies and overseas demand. Since a post-harvest low back in October, cotton prices have rallied by nearly 30% (see "Cotton cruises," below).

This has helped inflate call option premiums in the cotton market nicely.

But with spring approaching, a not-so-bullish supply outlook taking shape, and now at least the possibility of import tariffs on U.S. cotton from some nations, cotton prices could soon be facing headwinds. Fundamentally, it's what we would deem a solid set-up for a short position, but given the springtime seasonals, it's a better call selling opportunity.

Springtime Seasonals Favor Bears

Seasonal price tendencies can play a big role in agricultural price forecasting. U.S. agricultural markets have historically tended to strengthen during springtime. This is largely due to the fact that U.S. planting takes place in the spring. Uncertainty over acreage and weather have historically tended to create anxiety in the markets, making bulls more eager to take positions, and making bears more fearful of jumping the gun on successful planting. In grains, this planting anxiety often happens in the late spring (April/May) period. Once successful planting has occurred, however, and crops are deemed safely in the ground, it is not uncommon to see prices weaken as anxiety tends to fade.

Cotton has tended to display this same historical price cycle. However, as the majority of the U.S. cotton crop is planted in the south, planting tends to occur earlier in the year. Thus, the "planting anxiety" premium tends to build into the market earlier. But it also tends to fade earlier. Thus, historically, it is not uncommon to see cotton prices strengthen into March, only to give way to weakness into the spring and summer growing season (see "Cotton seasonals," right).

Look at the chart in "Cotton cruises" and you can see that cotton prices appear to be tracking this seasonal tendency almost perfectly during the last 12 months.

COTTON CRUISES
Cotton has been on a bullish run since making lows in October 2017.
Source: eSignal

2018 Cotton Supplies Burdensome

The latest USDA supply numbers show U.S. cotton supplies at burdensome levels. In the 2017/18 growing cycle, U.S. ending stocks are pegged at six million bales – the highest in a decade and nearly double 2016/17 levels. The U.S. stocks-to-usage level at 33.6% is also a sharp increase from last year and the highest since 2008/09 (see "High cotton," right). This sets a bearish backdrop for U.S. cotton prices in 2018.

Global stocks-to-usage levels are at 73.5%, which is near multi-year highs. While the USDA is expected to lower global stocks slightly in its March 8 report, U.S. planted acreage in 2018 is expected to see a sizable increase over last year. This does not bode well for a longer-term continuation of the recent uptrend.

COTTON SEASONALS

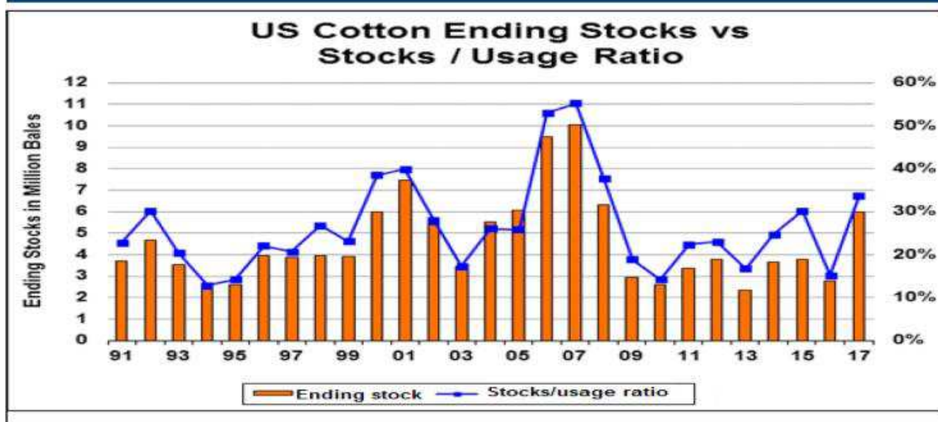
Cotton prices have tended to strengthen through planting season, then give way once the new crop planting is complete based on average prices during the last 15 years.

Source: Moore Research

HIGH COTTON

The 2017/18 U.S. cotton ending stocks and stocks-to-usage ratio will be the highest in 10 years.

Source: Hightower report



Cotton Play

With both seasonal and big picture supply fundamentals appearing bearish, cotton prices should soon begin seeing some resistance to higher prices. Planting is well underway in the U.S. Delta regions. And while a spate of dry weather has brought some buying into the market, it remains very early in the season. In addition, U.S. cotton planted acreage is expected to see an increase over last year.

Any blow-backs from President Donald Trump's plans for tariffs on foreign steel and aluminum remain to be seen. However, agriculture is a big sector of U.S. exports and could potentially become a target should other nations elect to retaliate to the tariffs. Should such tariffs occur in cotton, effects would likely create a further bearish force on cotton prices.

U.S. weather issues, continued strong global demand and a slight lowering of global stocks could all be potentially bullish for prices. However, we feel seasonal pressures and overbearing U.S. supply will be too big of a burden to overcome. The path of greater resistance is higher.

Because there are potentially bullish fundamentals at play, a calling/selling approach is the right strategy for such a fundamental set-up. The seasonal tendencies and supply situation limit the upside, and the bullish factors should help keep premiums at desirable levels.

Fortunately, weather-related volatility has now inflated distant call premium to attractive levels.

The current premium for December 2018 90.00 cotton calls is in the $500 range. If December cotton is anywhere below 90¢ per pound at option expiration, the seller keeps all premium collected as profit.

Traders can consider selling the December 90.00 cotton calls. The margin requirement is approximately $1,130. Thus, should the options expire worthless (in November) the sale would produce a roughly 44% return on equity. While you are tying capital up for a long period, current market conditions are presenting a unique opportunity and a great deal of breathing room. If our bearish fundamental outlook is correct and price declines begin in May, a great deal of profit can be realized well before expiration and could be locked in; then other strikes may be considered.

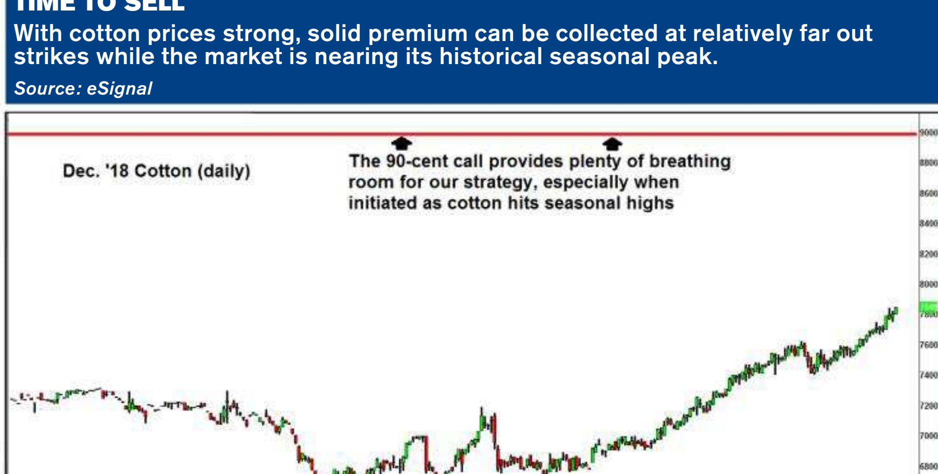
Whether the market treks higher in the short term remains to be seen. Sellers of options don't have to pick highs and lows in the market. They only have to pick price points of where the market shouldn't

"Historically, it is not uncommon to see cotton prices strengthen into March, only to give way to weakness into the spring and summer."

TIME TO SELL

With cotton prices strong, solid premium can be collected at relatively far out strikes while the market is nearing its historical seasonal peak.

Source: eSignal



go. Considering the current fundamentals, the strategy of selling further out out-of-the-money calls fits that criteria nicely (see "Time to sell," left). The 90¢ call provides more than 16% upside room for further strength at a time when seasonals are hitting their peak and with broadly bearish fundamentals. Δ

James Cordier *is author of "The Complete Guide to Option Selling," and president and head trader of OptionSellers.com, a wealth management firm specializing in option writing portfolios.*

TECHNIQUE

Weather players have had a field day with prices this winter, driving up option premiums. With seasonal fundamentals now set to kick in, the table looks set for put writers.

Seasonal Play: Natural Gas

By **James Cordier**

Natural gas is a tough market to call in the short term. Weather forecasts can bring public speculators to the market in mass, causing wild daily fluctuations, especially during the winter months.

This makes pure gas futures trades risky. But if you're an option trader, this is a fantastic market to ply your trade.

Why? Because the public participation and daily swings provide ridiculously deep out-of-the-money option strikes at healthy premiums. And while speculators may drive the daily price whims of this market, it offers some surprisingly reliable demand-led cycles that drive longer-term price direction.

Knowing these cycles can give you a tremendous advantage as an option seller while allowing you to stay above the fray of daily market fits and starts.

Last month, this magazine highlighted how a contributor had warned readers six months prior of the growing trend of shorting equity volatility in a period of historic low volatility. The gas market does not have that problem.

As natural gas has seen just such a speculator-led bout of volatility, prices now appear out of synch with their core fundamentals, and may be in an ideal position to benefit from a strong historical price tendency. This could provide a lucrative play for option sellers this spring. But first, let's understand this seasonal price tendency and how it is setting up this year.

Natural gas prices have historically tended to peak in the fall and again in early summer, well ahead of the peak retail demand periods.

Seasonal Natural Gas Demand Cycles

Natural gas, like many commodities, has certain times of the year when demand is higher or lower. In gas, these cycles are based on the weather. Winter is the peak time for natural gas usage due to heating needs. But natural gas also has a secondary demand season. In summertime, electricity demand surges as U.S. consumers power up air conditioners. As many electric plants in the United States are now powered by natural gas, demand for gas surges.

Because traders understand and study these tendencies, price often precedes consumption. This is because commodity futures values are more reflective of prices at the wholesale level, not at the retail level. Thus, natural gas prices have historically

GAS SEASONALS

Natural gas prices (measured over 28 years of the September contract) have historically tended to strengthen into the spring and early summer as distributors begin re-stocking inventories to meet summer demand needs.

Source: Moore Research

GAS GOES ROGUE

The weather-inspired spike in gas this winter goes counter to seasonal tendencies.

Source: eSignal

tended to peak in the fall and again in early summer, well ahead of the peak retail demand periods.

In the winter months, while retail demand is at a peak, wholesale demand is often slack. This is because distributors have typically already accumulated enough supply to meet winter demand needs. Thus, it is not uncommon for natural gas prices to show weakness through winter months. This tendency, of course, can be interrupted by exuberant speculators betting on weather, as we've seen in Q1 2018.

By the end of winter, however, distributors' supply levels are often depleted. Thus, they begin aggressively rebuilding inventories to both meet summer electricity needs as well as next year's heating needs. As a result, even though the springtime in the United States can be a period of low natural gas usage, it can bring a surge in natural gas demand at the wholesale level. This is why, on average, springtime can be a time of firming natural gas prices (see "Gas seasonals," above).

Bears Overplayed Their Hand

While seasonal average charts can be of tremendous benefit to option writers, you must remember that these are just average tendencies. Markets can and do vary widely on price patterns in any given year. This is often driven by the weather speculators we discussed earlier.

Natural gas prices saw a counter seasonal surge from late December through early February. This was based largely on a series of highly publicized winter storms in the Northeast during that period. Large trend following strategies helped drive the rally.

A slew of media coverage and the newly created tradition of "naming" winter storms brought out the public to speculate on natural gas prices.

However, when the storms passed and weather forecasts began to mitigate in February, the market found itself perilously overbought. Funds and small speculators liquidated aggressively. This brought the market right back down to where it should be this time of year (see "Gas goes rogue," left).

Or Should It?

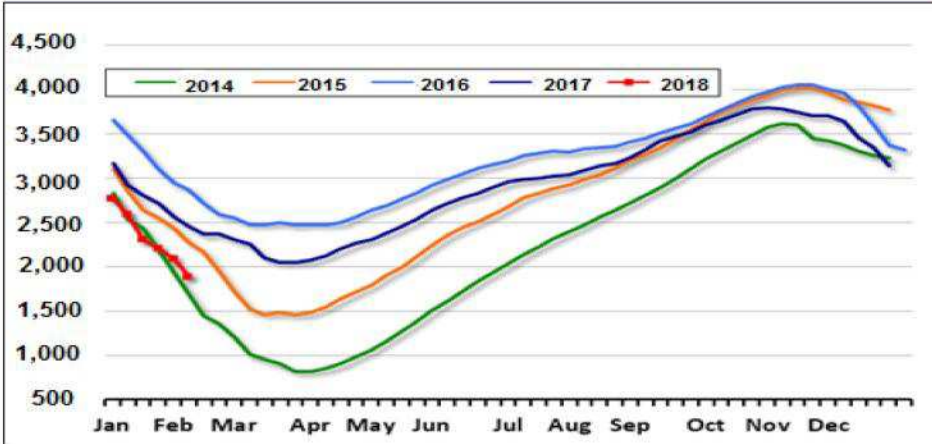
Weather may look benign, but the supply situation in natural gas does not appear to be bearish. In fact, headed into peak demand season in natural gas, the market could now actually be underpriced. The liquidating bears could have overshot.

End of Winter Supplies Down

Speculators and funds unwinding long positions are most likely missing the bigger picture. Natural gas was overbought in February for sure. But current inventory levels could support a seasonal rally in March or April.

The latest Energy Information Administration's (EIA) Natural Gas Storage Report (released Feb. 9) shows 2018 inventory levels at 1,884 billion cubic feet (bcf), down 23% from the same time last year, and down 19% from the five-year

DEPLETED STOCKS
Winter storms depleted gas stocks below seasonal norms.
Source: EIA



VALUE PLAY
Puts can be sold at a safe distance within the current price as natural gas moves into a bullish seasonal period.
Source: eSignal

average (see "Depleted stocks," page 68). Natural gas storage levels have declined by an additional 700 bcf in the month following the report.

While supplies have dwindled this winter, the EIA projected record U.S. demand of 27,633 bcf for natural gas in 2018. This is due not only to increasing industrial production but also to older coal fired electrical generating facilities being replaced by modern natural gas powered plants.

While we are not in the business of calling highs or lows in the market, the natural gas market now appears to be in prime position to take advantage of a seasonal tendency for higher prices. In addition, fundamentals appear supportive for price firming into the spring and summer months of 2018. Supplies are below five-year averages and the demand outlook is strong.

Does that mean we bet prices will move higher? Of course not. Option sellers don't bet. All factors appear supportive through the spring. That doesn't mean prices can't move lower. That is why– particularly in the natural gas markets–we don't try to predict such things. But we don't have to. We simply pick a point well below current prices where we believe the market most likely won't breach, and then we get paid to wait.

In this case, that means selling puts at nicely inflated premiums. We'll be selling a series of strikes we feel won't be challenged. Consider selling the September 2.25 puts for premiums of $500 or higher (see "Value play," left). The options expire Aug. 28. The margin requirement is approximately $1,150 per option.

With an August expiration, these options should show significant time decay with any type of natural gas price firming into the spring.

The weather players have had their day in January. They have set a nice table for fundamentally based option sellers this spring. Put premiums are available at a solid price going into the higher demand cooling season, leaving put sellers with a valuable seat at the table. ∆

The natural gas market now appears to be in prime position to take advantage of a seasonal tendency for higher prices.

James Cordier *is author of "The Complete Guide to Option Selling," and president and head trader of OptionSellers.com, a wealth management firm specializing in option writing portfolios.*

TECHNIQUE

The Coppock Curve is a smoothed momentum oscillator that can independently signal market turns.

Trading the Coppock Curve

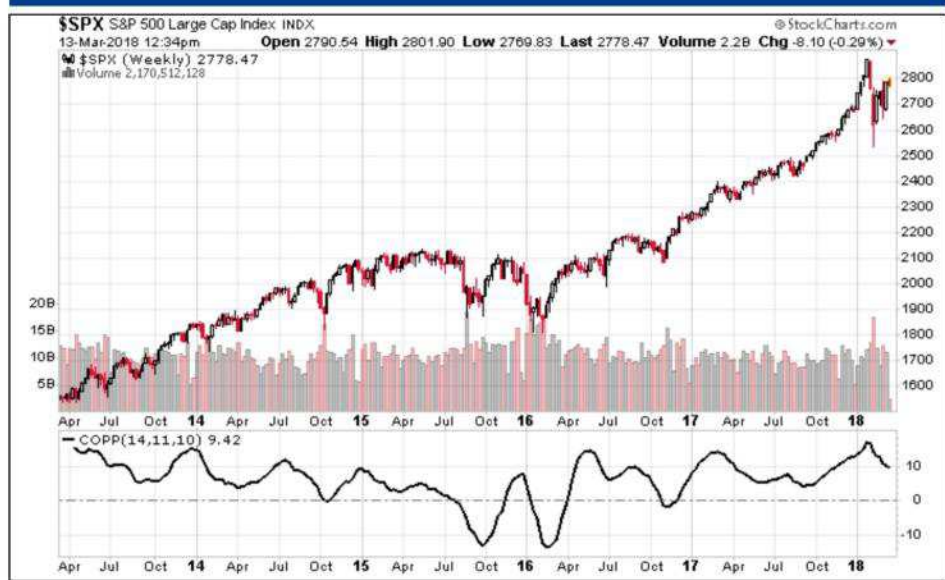
By **Bramesh Bhandari**

E.S.C. Coppock introduced the indicator in Barron's in October 1965. The goal of this indicator is to identify long-term buying opportunities in the S&P 500 and Dow Jones Industrial Index. The signal is very simple. Coppock used monthly data to identify buying opportunities when the indicator moved from negative territory to positive territory. Although Coppock did not use it for sell signals, many technical analysts consider a cross from positive to negative territory as a sell signal. The Coppock Curve is a smoothed momentum oscillator and can be used on any timeframe while investors can choose based on their desired trading/investing style and time horizon. The Coppock Curve is similar to one of the most popular indicators, the moving average convergence/divergence indicator, or MACD.

COPPOCK MOMENTUM

Here is the Coppock momentum oscillator on the S&P 500 during the last five years. Notice that the oscillator dropped below the zero line prior to its late 2015 sell-off.

Source: StockCharts.com



Calculation

The calculation for the Coppock Curve is very simple. It is calculated as a 10-month weighted moving average on the sum of different periods as a momentum oscillator that oscillates above and below the zero line.

After being commissioned by the Episcopal Church to find long-term investment opportunities, Coppock, a burgeoning economist, reportedly asked bishops how long it took for people to get over the death of a loved one. He theorized that market downturns were similar to bereavement periods and would require a certain amount of time to mourn. He developed a series of calculations based on the responses he received and settled on 11 and 14-month periods. Coppock theorized that the recovery period for stock market losses would be similar to this timeframe. The weighted moving average places more weight on recent data and less weight on older data by multiplying the first data point by one, the second data point by two, and so forth.

Coppock Curve = 10-period weighted moving average of 14-period rate-of-change + 11-period rate-of-change

Calculations for the rate-of-change (RoC) look like this:

ROC = [(Interval Close - Interval Close N periods previous) / (Interval Close N periods previous)] x 100

For the Coppock Curve, the "N" variable used in the RoC calculation can be substituted by 11 and 14 (the interval period for the short and long RoC measurements). Two individual RoC calculations are taken. The oscillator is then plotted on a chart (see "Coppock momentum," left).

The weekly charts produce many more signals than the monthly chart. Likewise, an intraday chart would form more signals than the weekly or monthly charts.

A buy signal is generated with a crossover into a positive territory while a sell signal is generated when it enters into a negative territory.

Apart from choosing the timeframes, parameters can also be adjusted based on the trader's choice. Traders can choose whether they want to go for a faster or a slower Coppock Curve indicator. A shorter RoC setting would make the Coppock Curve more sensitive and faster, which would be best for intraday traders. Meanwhile, a longer setting would make the Coppock Curve less sensitive and slower, which could be a favorable indicator for swing traders.

The CC Trading Strategy

The key aspect of the Coppock Curve is the zero line. This is the region that acts as a trigger for trading signals. A positive bias (for long positions) is seen when the Coppock Curve is moving above the zero line. The bias is negative (for sell positions) when the Coppock Curve falls back below the zero line.

1. Bullish Centerline Crossover
A bullish centerline crossover occurs when the Coppock Curve moves above the zero line and into positive territory indicating that momentum has changed from bearish to bullish.

2. Bearish Centerline Crossover
A bearish centerline crossover occurs when the Coppock Curve moves below the zero line and into negative territory, indicating that momentum has changed from bullish to bearish.

Centerline Crossover

There is a center zero line and above which there is a positive territory and below which is seen as a negative area. A buy signal is generated with a crossover into a positive territory while a sell signal is generated when it enters into a negative territory. In the monthly chart, you will not get many signals using the Coppock Curve but these limited signals are very strong either way.

"Amazing opportunities" (below) shows Amazon Inc. (AMZN) on a weekly time frame with the Coppock Curve. While some traders might think that if you missed getting long Amazon in 2014 or 2015 you were out of luck, there were several consolidation periods and corrections that would have provided a profitable entry point, and the Coppock Curve spotted these opportunities. Amazon surged several times following a bullish centerline crossover. This shows extraordinary strength.

While trading off of crossovers is a great signal, the zero line also serves as a pivot. A failure to take out the zero line following a test of it can also signal a reversal. This occurred with **Caterpillar** (CAT) on a daily timeframe several times over the last year (see "Playing defense," right). The Coppock Curve generated a profitable buy signal in CAT in April 2017 preceding a long-term uptrend. On numerous occasions in 2017, CAT retreated back to the zero line in the Coppock Curve, but did not cross it. It defended the zero line once it crossed in April. Traders were able to ride the whole move, getting back in or adding to their long position each time the zero line was successfully tested. That's the extraordinary power of Coppock Curve.

Alternatively, the oscillator can also be used as a tool for knowing when to take profits. For example, long positions should be closed if the Coppock Curve turns negative; short positions should be closed if the Coppock Curve rises into positive territory. We can see an example of this in "CC profit taking," right. The

AMAZING OPPORTUNITIES
Despite a long bull trend in Amazon, the Coppock Curve alerted traders to bull moves following consolidation periods and corrections.
Source: StockCharts.com

A failure to take out the zero line following a test of it can also signal a reversal.

monthly **Apple** (AAPL) chart, shows the CC indicating several long entry points. The CC also provides profit taking signals when the CC drops back near the zero line. Traders could have taken profits before Apple hit the low of each correction.

The Coppock Curve is simply a smoothed momentum oscillator. Even though it was originally designed for monthly charts and long-term analysis, it can be used on intraday, daily or weekly charts, and the settings can be adjusted to suit one's style. The main signals are generated with crosses above and below the zero line. More aggressive chartists can consider looking for bullish and bearish divergences to anticipate such crossovers. Be careful, though. Divergences do not always result in trend reversals because the trend can simply slow and continue in the same direction. The zero line works as a pivot, which means it can signal a trade in either direction depending on whether it is broken or holds.

All traders can benefit from experimenting with these technical tools. When combined with additional technical analysis tools such as pattern analysis or momentum indicators, Coppock curve can become an integral part of a sound trading strategy. The Copper Curve also comes with its own shortcomings and gives relatively weak sell or short position signals as compared to the buy or long positions signal. The Coppock Curve could be used by intraday traders to identify the bullish trends. The indicator could also be traded along with other indicators for confirmation. Δ

Bramesh Bhandari *is a veteran trader of the Indian stock market who provides insight and tutoring on technical analysis.*

PLAYING DEFENSE

The Coppock Curve generated a profitable buy signal in Caterpillar Inc. (CAT) in April 2017, preceding a long-term uptrend.

Source: StockCharts.com

COPPOCK CURVE PROFIT TAKING

The Coppock Curve can also be used to take profits by exiting long positions when it crosses back below zero line, as shown here with a monthly Apple chart.

Source: TradingView

ADVANCED TECHNIQUE

Cryptocurrencies are growing exponentially in their number and value. It is time to examine price and hunt for opportunities.

Cryptocurrencies: Price & Pairs Trading

By **Paul D. Cretien**

Comparing cryptocurrencies to traditional government-issued currencies may seem a stretch at first, but really does not require much effort when you consider that few countries back their currencies with gold or any other valuable commodity. The key to acceptance of any form of money – fiat currencies or the new cryptocurrencies – is trust.

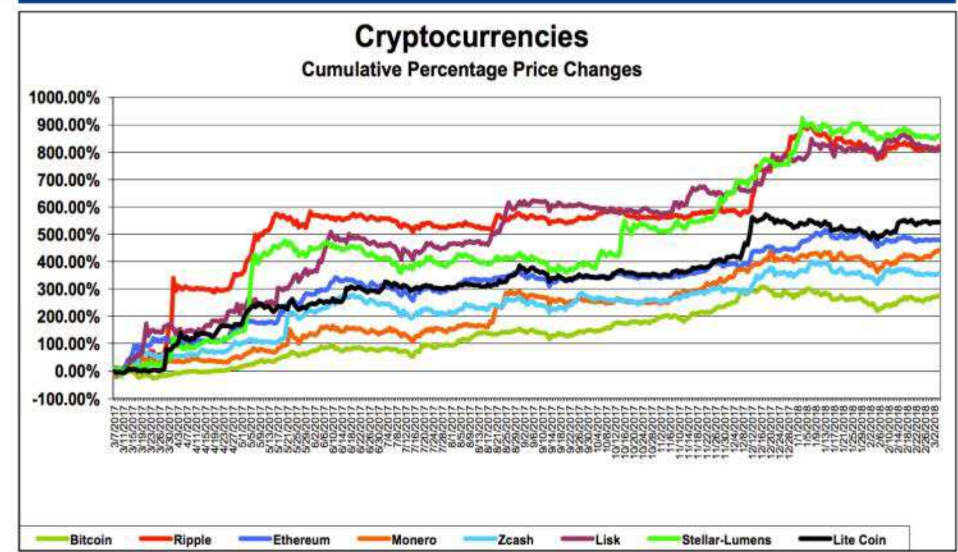
Development and use of blockchain technology has enabled many organizations to issue virtual currencies that in some regions of the world are the equal of government issues – lacking only the government stamp of approval for complete authority.

Cryptocurrencies have an important added advantage over money issued by most countries in that there is no monetary authority attempting to lower the value of the currency to assist a country's export trade.

Early in the process of the development of blockchain use, one might have imagined that the fate of cryptocurrencies would be similar to that of any such fad. However, the number of new cryptocurrencies continues to increase. While the debate over the value of bitcoin and cryptocurrencies continues, from early on in the development of bitcoin and other cryptocurrencies the underlying blockchain technology has been a hit. The number of virtual currencies now trading smoothly as legitimate investments and a means of capital raising has established them as a new asset class, if not a growing monetary instrument. There is little doubt that a completely new form of money has been created.

Although bitcoin had an early lead in pricing and trading, "Cryptocurrencies" (left) shows that other currencies have entered the field with strong competition for growth in pricing and total value. The randomly chosen sample of eight cryptocurrencies including bitcoin describes a year's cumulative percentage change in price in which bitcoin has the slowest rate of price change when calculated on a daily cumulative basis. It

CRYPTOCURRENCIES
When measured by its daily cumulative percentage change, bitcoin underperformed other cryptocurrencies.

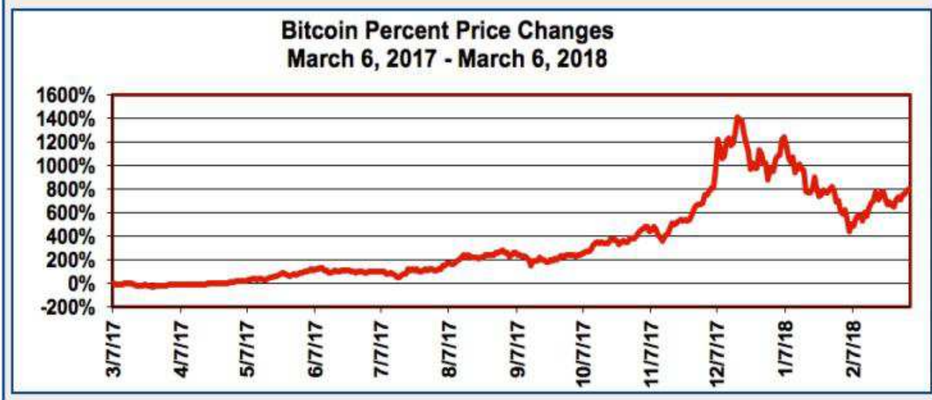


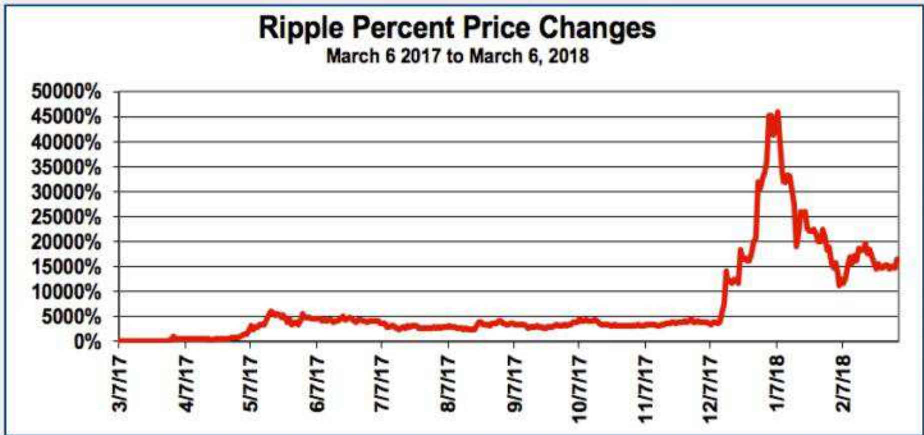
Bitcoin & Ripple Price Changes

The daily cumulative method calculates each day's percentage gain or loss and accumulates the positive and negative results as daily cumulative percentage price changes, as opposed to the net percentage changed during the same period. We used the daily cumulative methods because it is easier to compare multiple cryptocurrencies and various stages of their growth curve.

The two charts below show the percent price changes for Ripple and Bitcoin from March 6. 2017 to March 4. 2018. For both currencies, the price increases were slow in taking off until the last months of 2017. Bitcoin began to increase exponentially in October and November. Its increases were followed in December by sharp gains in Ripple's price.

The percent changes for bitcoin and Ripple are shown on separate charts because of the great differences in total percentages. Ripple's price in March 2017 was very small relative to the price of bitcoin – 0.6¢ for Ripple versus $12,77.01 for bitcoin. The difference between beginning prices caused large differences in percent gains during 12 months.





Cryptocurrencies have an important added advantage over money issued by most countries in that there is no monetary authority attempting to lower the value of the currency to assist a country's export trade.

appears that bitcoin also experienced the lowest price volatility during the 12-month period that began on March 7, 2017.

Price Changes & Value

While the price change for bitcoin rises to approximately 200% for the year, several currencies are in the 800% range and several others at 400% to 500%, when measured on a daily cumulative basis.

The picture does shift somewhat when the percentage price changes start at the first of January 2018. As shown on "Cryptocurrencies' 2018 performance" (page 72). Ripple's price changes begin to sink while the stability of bitcoin pricing puts it in the middle of the group at the first of March 2018. Those of you closely following bitcoin pricing know that it actually grew by well over 1,000% in 2017 at one point, but the daily accumulative method allows us to better compare multiple cryptocurrencies that are at different stages in their evolution (see "Bitcoin & Ripple price changes," left).

The charts present closely coordinated price changes for this group of cryptocurrencies, which suggests that various pairs trades in the sector are possible. Various potential pairs trading opportunities are shown in "Crypto pairs" (page 73). We examine the relationships between Bitcoin and Monero, Ethereum and Litecoin and Ripple and Lisk.

Crypto Pairs

The pair trade charts are not presented as suggested current trades, but as notices to traders that several virtual currencies have close price movements. This means that at any time in the future if there is a significant spread between the two price changes, a pairs trade opportunity may exist. The trade depends on the two prices closing the gap as they have in the past. One potential problem noted by one crypto trader is a lack of liquidity outside of bitcoin. Currently, it is necessary to trade every cryptocurrency against bitcoin, so a pairs trade of Ripple and Lisk, for example, would require trading each against bitcoin to establish a long position in one and a short in the other. This could become expensive but as liquidity improves, it will likely become unnecessary for the top cryptos.

A major need currently exists for futures contracts, options, and exchange-traded funds (ETFs) in the cryptocurrency market. At present, the pricing of the currencies shown on the charts presented above would make even simple pairs trading difficult. For the eight currencies in our sample, the beginning and ending prices (March 2017 to March 2018) are shown on the following table:

	Beginning Price	Ending Price
Bitcoin	$1277.01	$11,504.40
Ripple	$0.00604	$1.00
Ethereum	$19.75	$864.83
Monero	$15.30	$368.69
Zcash	$39.49	$409.94
Lisk	$0.1087	$18.30
Stellar	$0.00182	$0.3624
Litecoin	$4.05	$213.36

The pricing of ETFs, is typically arranged so that the price per share is in an easily traded range similar to the price of a share of common stock. The ETF price would follow the cryptocurrency price changes closely since that is the normal objective of an ETF.

In addition to the pairs trades suggested above, the price changes show potential for Stellar–Ripple, Monero–Zcash, and Bitcoin–Zcash combinations. All of these are worth observing in the future in case a gap occurs between the two price changes. For a closely coordinated pair, the distance between the two prices should grow smaller, giving the trader a relatively low risk profit.

Crypto Derivatives

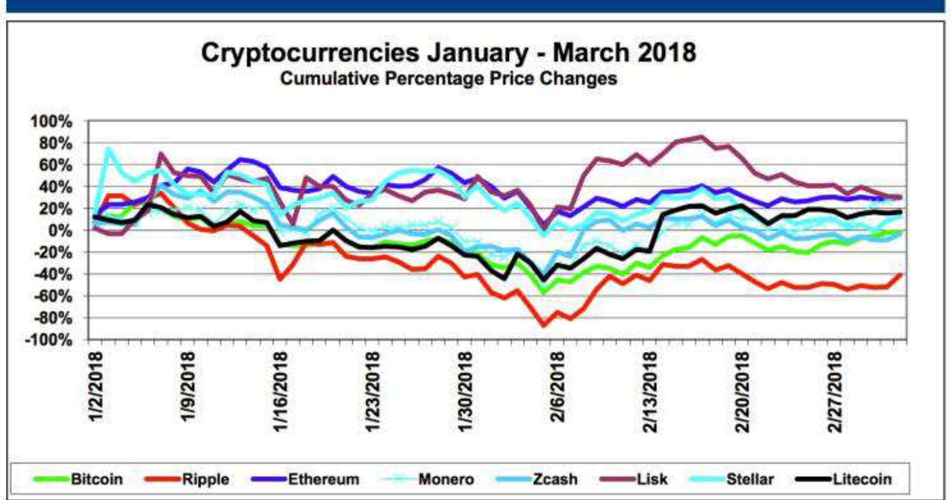
In the recent past, it seems that bitcoin has been considered to have a relatively volatile price, while the charts shown above appear to indicate the opposite. Cboe Futures Exchange (CFE) and CME Group now have futures trading for bitcoin, with additional cryptocurrency futures planned. On March 9, the prices quoted for CFE bitcoin futures (XBT) included was $9,040 for the March 2018 contract; $9,100 for the April 2018 contract; $9,120 for the May 2018 contract; and $8,950 for the June 2018 contract. The price shown in the previous table is $11,504. It seems that the futures market is forecasting a dropping price for bitcoin.

Perhaps in the not-too-distant future we will have a full complement of futures contracts, options, and ETFs for all major cryptocurrencies. Until that time, we can trade possible movements in bitcoin. Also, we want to keep the potential pairs trades in mind, with Stellar, Lisk, Ripple and Litecoin playing lead roles – looking for price separations and predicting a return to closeness to reduce the price gap for a spread profit.

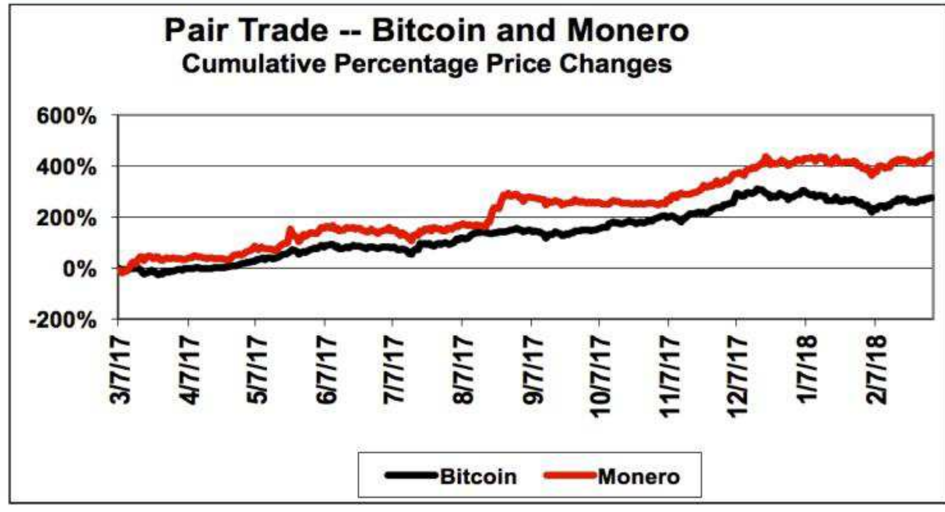
In terms of volatility, bitcoin futures may

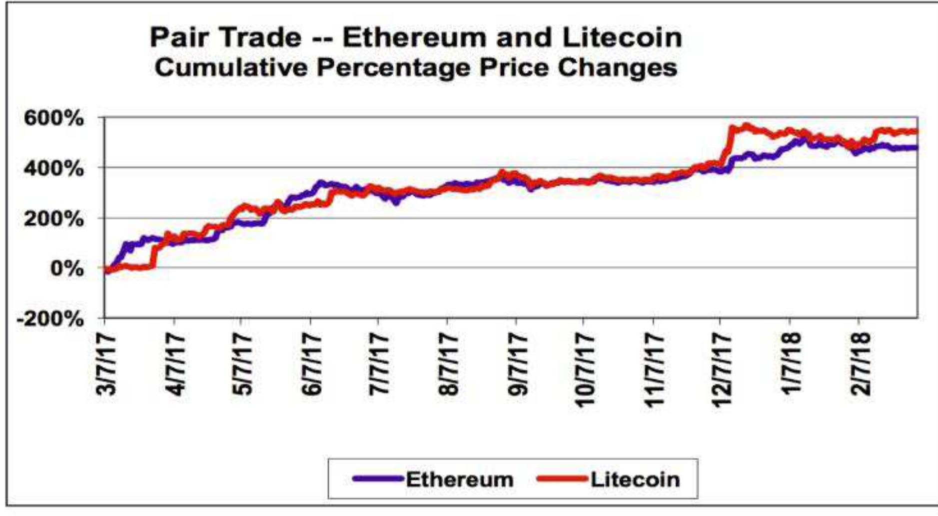
CRYPTOCURRENCIES' 2018 PERFORMANCE

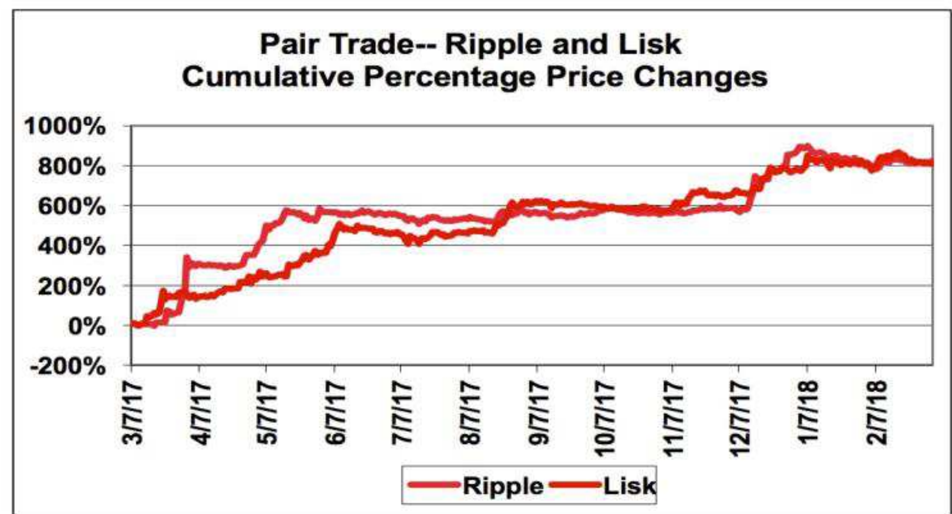
Cryptocurrencies experienced a long awaited correction in 2018 and bitcoin proved to be more stable than most.



CRYPTO PAIRS
The close relationships between these cryptocurrencies pairs suggest opportunities for pairs trading.







Perhaps in the not-too-distant future we will have a full complement of futures contracts, options and ETFs for all major cryptocurrencies.

give the appearance of high volatility simply because of high dollar prices. For example, on Dec. 18, 2017, the March 2018 bitcoin CFE contract, BGH18, ranged from a high of $20,500 to a low of $18,490. On Feb. 6, 2018, the price range was $7,780 to $5,940, and on March 9, 2018 from $9,450 to $8,380. If these prices seem unruly, try dividing each one by 1,000. This will bring them down to a size comparable to a potential exchange-traded fund's price per share – comfortable for trading with price changes that match changes in the futures contract.

As mentioned earlier, cryptocurrencies are at present trading outside of government influence or interference, but it would be possible for a country – perhaps an emerging nation – to adopt a virtual currency as its official money. Such a plan would avoid the need for massive printing and minting real currency and – issued in small denominations – would provide the liquidity for normal business.

This may seem far-fetched for Americans, but there are numerous countries experiencing hyperinflation that are close to losing faith in their domestic currency. While it may be too early to make assumptions regarding the basis between certain cryptocurrencies and trade them in earnest, it is certainly not too early to monitor their interactions and to be prepared for the trading opportunities they present. Δ

Paul D. Cretien *is a financial analyst and case writer for the Graduate School of Banking at Louisiana State University.*

MODERN TRADER provides cutting-edge actionable market research while holding analysts accountable. And, when we publish specific recommendations, we also will let you know how we did.

Observing rates

By **Daniel P. Collins**

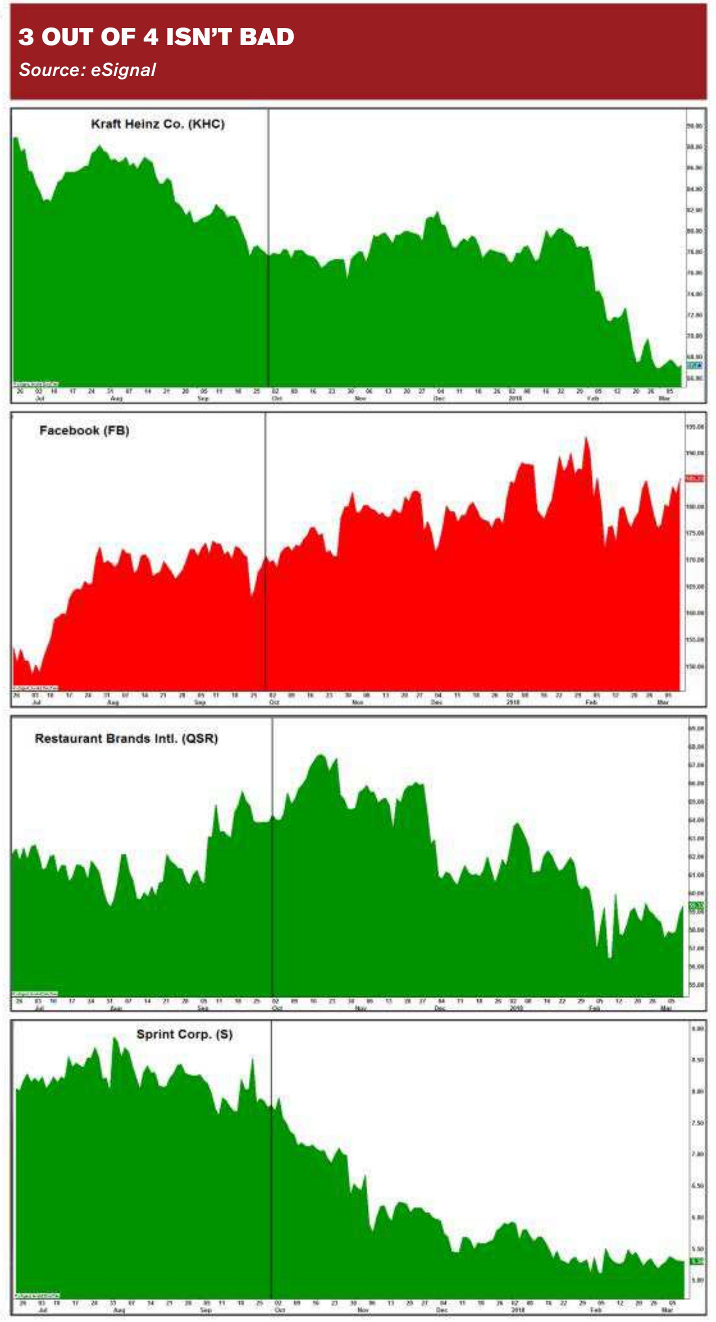
End of bond bull?

November 2017

In our November 2017 issue interview with James Grant, founder of *Grant's Interest Rate Observer*, we focused on his contempt for the extraordinary central bank policy measures that dominated the decade following the 2008 credit crisis. Grant shared that he believed a top in the decades-long bull Treasury market was probably made in 2016. He also noted that with moves measured over several decades, which is common with bonds, it would take several more years to confirm. So far, his analysis is looking good as the long bond has continued to slide (see “New trend?” page 77).

Grant's shorts

While Grant saw few opportunities on the long side, he also shared with us his four potential short opportunities: **Kraft Heinz Co.** (KHC), **Facebook Inc.** (FB), **Restaurant Brands International Inc.** (QSR) and **Sprint Corp.** (S). Grant is batting .750 on those four picks, which is extremely impressive considering the broad market (S&P 500) is up roughly 10% since we published his picks. (see “3 out of 4 isn't bad,” right).



3 OUT OF 4 ISN'T BAD

Source: eSignal

Drinking decaf

James Cordier highlighted a hot seasonal coffee trade that could not have turned out any better. With the threat of a freeze and a recent shot of volatility, Cordier suggested selling a series of March or May 2018 calls above recent strong resistance levels from $1.70 to $2.00. Coffee seasonal tendencies indicate that price hits a peak in October and then tends to drop sharply into year-end. Coffee acted accordingly dropping consistently during the last six months, allowing trade to collect $500+ in premium with little tension (see “Decaffeinated profit,” page 77). ∆

NEW TREND?

The long bond could be entering a long-term bear trend.

Source: eSignal

DECAFFEINATED PROFIT

Coffee has traded consistently lower since the summer rally increased the value of option premiums.

Source: eSignal

November 2017

SIX-MONTH LOOKBACK

Below are the department trade recommendations from our November 2017 issue, along with an analysis and grades on how they worked out.

Dept.	Author(s)	Security or Sector	Forecast	Value at the Forecast's Publish Date	Grade	Outcome
Buy	Doug Busch	Pure Storage Inc. (PSTG)	Bullish	$15.99	ΔΔΔΔΔ	PSTG's buy entry was triggered on publication and the stock rallied more than 25% since Oct. 1.
Buy	Mike Dudas	Chicago Bridge & Iron (CBI)	Bullish	$16.80	ΔΔΔΔ	While much of CBI's recovery occurred prior to publication and the stock dipped 15% below its Oct. 1 price, it reached the $20 target in January.
Sell	Joseph Parnes	Advanced Auto Parts (AAP)	Bearish	$99.20	ΔΔ	AAP did drop 20% from our short entry, but did not reach the profit target and reversed higher through the stop loss target.
Cycles	John Rawlins	Google (GOOG)	Bullish	$973.72	ΔΔΔΔΔ	The CPO (Quant Cycles) accurately predicted the bullish move in the fall, the late November correction and January rally, however, it did not foresee February sell-off.
		Crude Oil	Whipsaw	$51.64	ΔΔΔΔΔ	The CPO (Quant Cycles) predicted an October sell-off followed by a sharp rally that would reverse around Jan. 1. This is precisely what happened.
		10-year Treasury note	Whipsaw	127-01	ΔΔΔΔ	The CPO (Quant Cycles) forecasted a sharp downturn in the 10-year followed by a reversal higher, then a more severe downturn. It happened, though the late year rebound was extremely modest.
Industries	John Blank	The Brinks Co. (BCO)	Bullish	$84.25	ΔΔ	BCO, which rallied sharply in 2017, peaked in late October and set a double-top in January before dropping roughly 15%.
		Broadridge Financial (BR)	Bullish	$80.81	ΔΔΔΔΔ	BR continued its 2017 strength into 2018, increasing its value by 33% since Oct. 1, 2017.
		TriNet Group (TNET)	Bullish	$33.61	ΔΔΔΔΔ	TNET rallied 20% on a positive Q3, 2017 earnings report released Nov. 2 and another 10%+ on its Q4 report.
COT	Andy Waldock	Silver	Bearish	$16.67	ΔΔΔΔ	The COT ratio correctly called a long-term top in silver.
		Dow Jones	Bearish	22,423	Δ	Dow maintained its strength despite huge speculative long positions.
		USD	Bullish	92.96	ΔΔΔΔ	The huge speculative long dollar position that signaled the sell-off in 2017 had reversed provided a buy signal.
Spin-Offs	Joe Cornell	Nacco (STUB)/ Hamilton Beach (HB)	Bullish	$19.59 (after 9/2 split)	ΔΔΔΔ	A Nacco stock split on Oct. 2 has made the math difficult, but after a few rough calculations the sum of the parts value for NC and HBB has met Cornell's $100 target.

** Signal initiated prior to publication date. Note: Forecasts are scored Δ (weakest) to ΔΔΔΔΔ (strongest) based on actual outcomes.*

The Saudis are determined

By **Paul Kuklinski**

Saudi Arabia is focused on reducing surplus oil inventories, and the extension of production cuts along with growing global demand is helping.

WTI crude is $61 per barrel, with a $4 per barrel discount to Brent (as of March 15). WTI increased 36% from $49 in 4Q 2016 when the Organization of the Petroleum Exporting Countries (OPEC) announced its agreement with Russia and other non-OPEC producers to cut production to the late January peak near $67. It averaged $51 in 2017 and $43 in 2016. The Brent premium blew out to more than $7 in December and has contracted since. Brent averaged $3.10 higher than WTI in 2017 and $2.45 higher in 2016 (see "Crude spread," below).

How we got here

The run-up in crude to the January peak mirrored the decline in surplus the Organization of Economic Cooperation and Development (OECD) inventories had targeted by the OPEC cut. The OECD surplus to the five-year average declined 84% from 318 million barrels (MMB) in early 2017 when the cut was implemented to 50 MMB in January by OPEC's estimate. The International Energy Administration (IEA) calculated a surplus of 53 MMB, down from 264 MMB a year ago. The OECD accounts for 48% of total world oil demand.

OPEC is pleased with its performance and the result. Compliance during the period has been high. February production was 32.10 million barrels per day (MMBD) compared to an average of 32.34 MMBD in 2017. It is 1.3 MMBD less than 33.40 MMBD produced in Q4 2016 when the cut was announced.

OPEC's June meeting will be a checkpoint

Saudi Arabia recently said it "Hopes OPEC and its allies (primarily Russia) will be able to relax production cuts next year and create a permanent framework to stabilize oil markets after the current agreement on supply cuts ends." It also said it hopes to announce a new target at OPEC's next full meeting on June 22 in Vienna. OPEC and Russia account for 45% of world crude supply. The OPEC meeting will provide a very important checkpoint for U.S. producers and the market in general. Oil traders may choose to be cautious until the meeting.

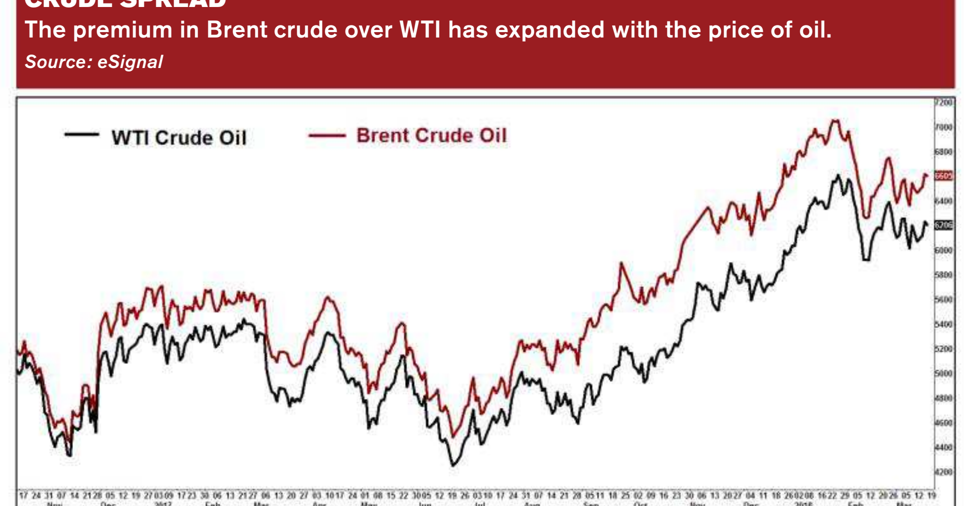
The Saudis plan to cut March and April production by 100 (thousand barrels per day) MBD from 9.98 MMBD in February and keep exports below seven MMBD as it "remains focused on working down excess oil inventories." It may continue to cut in May.

Higher oil prices would benefit its historic initial public offering of Saudi Aramco shares expected sometime in 2019. It requires $70 Brent crude oil prices to balance its state budget in 2018.

CRUDE SPREAD

The premium in Brent crude over WTI has expanded with the price of oil.

Source: eSignal



Where the road is pointing

In the run-up to the June OPEC meeting, oil prices are likely to remain relatively stable the next few months because the seasonal increase in inventories will be quite small.

For OPEC, the outlook for the second half of 2018 is both promising and challenging. Demand growth is very strong. It is projected to increase in the second half of this year by 1.4 MMBD from 99.0 MMBD in Q2 2018 to 100.4 MMBD in Q4 2018.

Non-OPEC production growth is also very strong. U.S. liquids production is projected to increase 935 MBD during the same period. Other non-OPEC supply

Inventories are likely to remain relatively balanced the rest of the year stabilizing oil prices near current levels.

adds 700 MBD, primarily from Brazil, Canada, and Kazakhstan, where the super giant Kashagan Field is expected to reach 370 MBD from 250 MBD at the end of 2017.

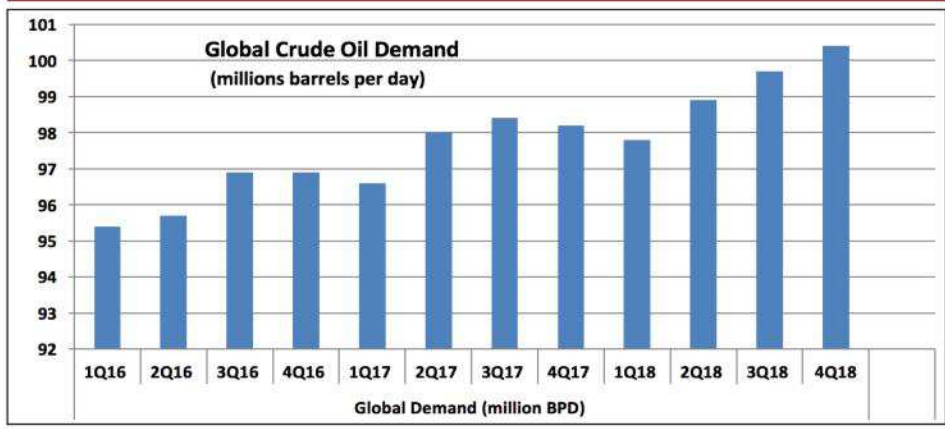
Inventories are likely to remain relatively balanced the rest of the year stabilizing oil prices near current levels. However, downside oil price risk may emerge in Q4 2018 from a potential acceleration in the growth of Permian production.

For the year, the IEA estimates world oil demand will average 99.3 MMBD, up 1.5 MMBD from 2017; following an increase of 1.57 MMBD in 2017 and 1.22 MMBD in 2016 (see “Demand growth”). China, India and Africa lead demand growth. Global economic growth is strong. Since 2015, global oil demand has grown about five MMBD, twice as fast as the previous three years.

For the year, U.S. oil and liquids production will average 15.01 MMBD, up 1.96 MMBD year-over-year, following an increase of 702 MBD in 2017 and a decline of 348 MBD in 2016. In Q4 2018, it may reach 15.78 MMBD, a level, which may put downward pressure on oil prices.

Permian oil production is likely to increase well over 30% this year, about 930 MBD, to average 3.35 MMBD, with a December exit rate of 3.85 MMBD based on an anticipated flattening of the Permian rig count around 450 in May or June. The current Permian rig count is 436, up from 398 in December. The production estimate is supported by guidance provided by the 10 largest producers in the basin. They accounted for 35% of Permian oil production in 2017.

DEMAND GROWTH
Global crude oil demand has steadily increased during the last several years.
Source: EIA



All other U.S. oil production will increase about 490 MBD in 2018, while gas liquids increase 540 MBD. Higher oil prices this year are stimulating increased drilling activity.

The Permian Basin is the main growth driver in the second half of 2018. The cost per well continued to decline in 2017. New wells are producing double or more the initial rate that for years was the standard for a good unconventional well, significantly improving return on investment for producers and reducing the oil price needed to break even after offsetting the cost of oilfield services inflation. The new U.S. tax law will reduce breakevens in U.S. resource plays by $2 per barrel and $4 per barrel on average in the Gulf of Mexico. Permian oil production will account for 31% of U.S. oil production in 2018.

In 2018, other non-OPEC production will average 45.22 MMBD, up 227 MBD from 2017, following a 32 MBD decline in 2017 and a 433 MBD decline in 2016. Δ

Downside oil price risk may emerge in Q4 2018 from a potential acceleration in the growth of Permian production.

Paul Kuklinski *does an in-depth analysis of latest monthly data for a detailed road map and forecast of 2018 oil prices. He has selected equity investments in the energy sector for some of the largest financial institutions since 1992.*

Floor trader comes full circle

■ By **Daniel P. Collins**

Bob Moss had not even turned 21 when he began trading on the MidAmerica Exchange (Midam), and it wasn't his first career choice. Moss was taking pre-med classes at Knox College but secretly wanted to be a professional race car driver.

Moss left school in the early 1970s after his father fell ill to help him with his real-estate development business. By the time he helped complete all of the remaining building projects, he missed the start of the next school year and was looking for work. His father mentioned that the son of a friend of his was making good money in live cattle. Moss was perplexed. "I said I am studying to be a doctor, I don't want to be slaughtering livestock. I [assumed] that his son was carving up cattle at the stockyards."

When he mentioned his plans to become a race car driver, his dad simply said, "Good luck with that."

However he had friends who worked at a Lamborghini dealership on the North Shore of Chicago and he had a plan. "I got a job at the dealership that was putting together Formula One racing cars," Moss says. "I had my plan. After about six to seven weeks I am still sweeping floors out there and I was getting frustrated."

"Five years ago when I really wanted to trade overnight markets the volume wasn't there to put the positions on."

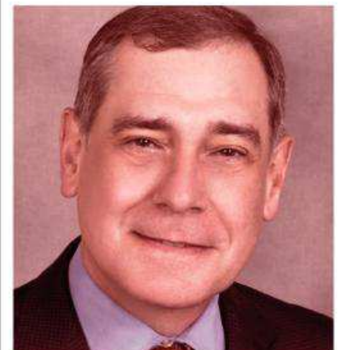
--Bob Moss

He did notice a lot of young guys coming in with beautiful girlfriends and spectacular cars. "I asked, 'What do those guys do? Who is that guy?' Someone said, 'That is Barry Lind.'"

Lind came in driving a Lamborghini. Moss asked his friend what Lind did for work and his friend responded, that he was involved in live cattle. Another guy came in and Moss asked what he did for a living, and he was told he was involved in pork bellies. "I thought, maybe I ought to go back and talk to my father about this."

He did, and his father set up a meeting with his friend at the Chicago Mercantile Exchange.

"The elevator doors opened up to the trading floor, and it is wild; it is spectacular. Colorful boards, high-intensity lighting; I thought this is really cool," Moss says about his first trip to the floor.


Bob Moss

He saw what was going on and said, "I can do this." He got a job as a runner for $50 a week. After three months, he began clerking for a broker and thought he was ready to trade. However, a membership was $75,000.

"I went to my dad and said I am ready to go. I want to get a membership, I know these guys are good but I am really good," Moss says. "My father asked, did you see your buddy who took you down to the floor? He lost all the money he made, and another $500,000!"

Moss said, "I would never lose money like that," but his father offered a different game plan. "Did you hear of the Chicago Open Board of Trade (the precursor to the MidAmerica Commodity exchange)?" his dad asked.

Moss visited the Midam and was unimpressed. "The entire exchange was 30 X 60 feet. There were no pretty girls, there were no bright lights, there were 10 guys under 30 years old and a few people 65 or older. A guy with only one tooth was marking the board. I thought, I am not going there."

Moss returned to clerking at the Merc. One day his boss asked him to take some visitors from the MidAm around the floor. He met the two guests; a heavy-set gentleman and a smaller guy. They were older than I was, maybe 23 or 24.

"I asked them if you could make any money [at the MidAm]. The shorter guy asked the bigger guy to tell me how much money he had made this year. He said a shade under seven figures."

Moss' opinion of the MidAm changed. The larger fellow was Richard Dennis and the shorter fellow was Tom Willis, and this chance meeting with two future trading legends would alter the trajectory of Moss' life.

WALKING THE WALK

Ram tended to produce strong returns in weak periods for CTA performance.

Source: RAM

Year	RAM Conservative	RAM Aggressive (X3)	Barclay CTA Index
1993	9%	NA	NA
1994	12%	NA	-1%
1995	11%	NA	14%
1996	7%	NA	9%
1997	11%	NA	11%
1998	4%	-5%	7%
1999	-1%	-12%	-1%
2000	13%	45%	8%
2001	3%	19%	1%
2002	1%	0%	12%
2003	6%	13%	9%
2004	-1%	-5%	3%
2005	12%	38%	2%
2006	-6%	-19%	4%
2007	17%	58%	8%
2008	23%	72%	14%
2009	3%	4%	0%
2010	12%	39%	6%
2011	3%	7%	-3%
2012	9%	28%	-2%
2013	-13%	-35%	-1%
2014	-5%	-14%	8%
2015	-5%	-15%	-1%
2016 YTD	-5%	-19%	0%
TOTAL	**197%**	**256%**	**185%**

"We became very close friends," Moss says. "The insight that those guys had was phenomenal. During the next six or seven months I needed to shut up and just try and learn."

It didn't quite work out that way as Moss had a few blow-ups before seeking their help. After Moss had several frustrating days, Willis invited Moss to a trading seminar Dennis was holding at his apartment. "All you had to do was bring a six pack of beer," Moss says. "I go out there and Rich starts talking about the edge theory and statistics and what a true edge is. After an hour we broke into small groups."

Moss, who up to this point had been toying with technical trading methods, became a pure edge trader, looking to scalp one-lot orders. His first day following Dennis' methods was his best day up to that point and he was on his way.

"I traded nothing but one-lots and made 60 trades. At the end of the day I made $800 just trading one-lots with very little exposure," Moss says.

He would go on to trade at the Chicago Board of Trade and then became a market maker at the Chicago Board Options Exchange (CBOE).

Simultaneously, Dennis' trading business, C&D Commodities, was growing rapidly. He wanted to expand to options at the CBOE, so he asked Moss to execute his stock options. "I traded his options book," he says.

C&D Commodities was growing and its co-founders, Dennis and Bill Eckhardt were launching an interesting experiment in training traders, who they dubbed "Turtles." The experiment – which legend has was spawned from a nature/nurture argument between Dennis and Eckhardt over trading expertise – launched many professional trading and money management careers.

At the time, Moss already knew how to trade. "Dennis said I was much more valuable trading his strategies than as a Turtle," Moss says. He did participate as an instructor at one of the seminars teaching the Turtles about large order execution.

Dennis had bigger plans for Moss. He asked him to move to New York to execute his trend trades on the various New York futures markets. Moss traded Dennis' New York book from 1984 to 1988. "That was the heyday, he was making million and millions of bucks and the Turtles were involved," Moss says. "I was doing half of all the order flow that came through the C&D Commodities desk in New York. I filled about 1.6 million contracts a year."

He was filling orders in sugar, gold, heating oil and crude oil. All the New York futures markets were traded at the World Trade Center at the time and he would go from pit to pit fill Dennis' orders.

Anyone who spent time on a futures exchange at that time learned the drill of spotting the Richard Dennis broker. No one was close to trading the size Dennis was, so traders on the floor would identify those brokers and try to see what direction they were looking to trade.

"Everyone was watching us. We really were 10 times larger than anybody else that was down there," Moss says. "We had positions of 10,000 to 15,000 (contracts) in gold, and the same in crude oil. Remember, there were 24 Turtles that were trading along with Rich and Bill Eckhardt and Tom Willis (Willis & Jenkins)."

"I would walk in there and the market would go bid or offered depending on what they thought I would do."

--Moss

His new system reads the market the way he would read the trading pit.

It got so big that Moss would only execute Dennis' positions. "Everything that I did down there was discretionary. I could buy 6,000 [contracts] and sell 1,000 just to be able to make a market and not let people run in front of me," Moss says. "They would see us buy 10,000 gold and know we are long gold. I had overflow brokers that I would use to disguise our positons. Sometimes I would walk in there and the market would go bid or offered depending on what they thought I would do."

Managing money

In 1988, Moss left Dennis' operation to develop his own proprietary strategy. After several years of development and trading, Moss launched RAM Management Group, Ltd; a pattern recognition-based systematic commodity trading advisor that used both trend and countertrend trading methods.

While at times the RAM programs resembled trend followers, they produced solid returns in some of the worst performing years for the Barclay CTA Index (see "Walking the walk," page 79). RAM had a 0.4 correlation to the Barclay CTA Index. It produced strong returns in 2008 along with the broader CTA universe, and managed to retain those gains in 2009, which was one of the worst performing years in the index. In fact, it produced solid returns from 2009 through 2012, which included three negative years for the index. Its run from 2007 through 2012 was arguably the best for any CTA during that period.

That run came to an end in 2013, and after several years of underperformance, Moss believed something fundamentally had changed in the markets. He closed down the RAM program in 2016 and began researching ways to improve it.

After extensive back-testing over six years, Moss and his team developed the Alpha Macro Technology (AMT) trading system. The AMT is a medium-term, 100% systematic, quantitative trading system containing trend/countertrend, momentum and pattern recognition components.

The strategy is similar to RAM, but has been modified to trade 24 hours a day. Moss identified a lot of the execution problems RAM experienced as a consequence of the move to electronic trading and 24-hour markets.

Even after the market went electronic, the majority of trading occurred during regular trading hours and most systems were based on the traditional open/high/low/close metrics. As markets expanded to 24 hours, some of the opportunities could not be exploited because they occurred after hours without sufficient liquidity.

"Five years ago when I really wanted to trade overnight markets the volume wasn't there to put the positions on," Moss says. "It was a dilemma, but now it is much different. There are a lot more high-frequency systems that are creating volume. If you had to do 1,000 contracts in heating oil, for example, you couldn't do it. [Now there] is more liquidity overnight," Moss says.

And the large traders aren't moving the market; the high-frequency algorithms are.

"We actually depend on the fact that the high-frequency guys are there," Moss says. "The fact that the algorithms are there and there is dependable trading volume helps in our execution."

In a sense, Moss' trading has come full circle. His new system reads the market the way he would read the trading pit. "It is not that different from what we did on the floor," Moss says. "With these algorithms, you've got the front-running algorithms and you got the algos that want to be the first to sell it back on a mean reversion after the big order ends. It is one or the other. That is the same thing that used to happen on the floor."

Moss identifies and exploits these tendencies through his algorithm. "The psychology of what we are doing is integrated in what we have designed. To understand the logistics of these new high-frequency systems, you have to figure out what they are trying to do," Moss says.

He is reading the HFT algorithms the same way he would read floor traders. They are trying to anticipate what the market is doing and be in position to take advantage of that. He has designed a system to take advantage of those algos and to recognize the patterns those algos create.

The system provides a signal based on patterns and volatility.

Moss has backtested his system back to 2012 and it is showing promising results. But he does not plan to launch a new CTA. Moss and his partners plan on offering the AMT as a software package and are looking for a portfolio manager to partner with.

As an order filler for Richard Dennis, Moss faced the dilemma of having to execute huge orders without tipping off the market of his intentions. He was constantly being watched and had to develop strategies to get his position on with limited slippage. In navigating these market minefields over the years, he has learned how markets work and what levels to be wary of. In short, he learned the tells of the various players in the market and has now created a strategy that exploits all the lessons he has learned over the years. ∆

U.S. economic data & select global influences

May: Will selling take hold?

By **Daniel P. Collins**

A year ago, we had pointed out that despite May's reputation as being a time to sell equities, the prior four years produced positive returns in all three equity indexes in May. Make that five years in a row now. Though, when you take a closer look at recent equity performance in May, each year there has been some volatility in the markets during May and the overall gains have been only marginal. The question appears to be – as has been the case throughout the current bull market – will the initial selling take hold?"

The broader implication of the "Sell in May and go away," strategy is not necessarily expectations of a spring market crash, but the signaling of a traditionally weaker six-month period in equities. So perhaps traders should not be looking to spot weakness, but hoping for strength where they can find a level to take a percentage of their portfolio off of the table heading into the weaker performance period. The three worst months for both the S&P 500 and Dow Jones Indexes are June, August and September (not in that order) so May is a good time to grab some profits and take a breather from the market. ∆

Vital May Statistics

	DJIA	S&P 500[1]	NASDAQ COMP.[2]
Rank	9th	8th	5th
Average % Change	0.02%	0.23%	0.97%
Up	36	40	29
Down	32	28	18
Best & Worst % Change			
Best	1990 8.3%	1990 9.2%	1997 11.1%
Worst	2010 -7.9%	1962 -8.6%	2000 -11.9%

Courtesy of Stock Trader's Almanac
[1]1950 [2]1971

Modern Trader Monthly Trading Calendar - May 2018

Date	Events
	Reserve Bank of Australia Interest Rate Decision & Policy Statement
1	PMI Mfg. Index | ISM Mfg. Index | Redbook
2	EIA Petroleum Status Report
3	PMI Services Index | ISM Non-Mfg. Index | EIA Natural Gas Report | Intl. Trade | Jobless Claims
4	Employment Situation| Treasury STRIPS
7	Consumer Credit | 3-Month Bill Auction
8	Redbook | JOLTS
9	PPI| Wholesale Trade | EIA Petroleum Status Report | Bank Reserve Settlement
	Bank of Japan Summary of Opinions | Reserve Bank of New Zealand Monetary Policy Statements
10	CPI | EIA Natural Gas Report | Jobless Claims | Fed Balance Sheet
11	Import & Export Prices | Consumer Sentiment
14	3-Month Bill Auction
15	Redbook | Retail Sales |Housing Market Index | Business Inventories | Treasury Intl. Capital
16	Housing Starts | Industrial Production | EIA Petroleum Status Report
17	EIA Natural Gas Report | Jobless Claims | Fed Balance Sheet
18	Canada CPI | Canada Retail Sales
21	Chicago Fed National Activity Index | 3-Month Bill Auction
22	Redbook | Richmond Fed Mfg. Index
	FOMC Minutes
23	Bank Reserve Settlement | EIA Petroleum Status Report
24	Jobless Claims | EIA Natural Gas Report | Fed Balance Sheet
25	Durable Good Orders| Consumer Sentiment
28	Dallas Fed Mfg. Survey
29	Consumer Confidence | 3-Month Bill Auction
	Bank of Canada Interest Rate Announcement
30	GDP | Redbook | Farm Prices
31	Jobless Claims | Chicago PMI | EIA Natural Gas Report | EIA Petroleum Status Report |Fed Balance Sheet

Guest Editorial

The Dow topped in January

By **Jeff Greenblatt**

The January high in the Dow Jones Index came during a 610-day window to its 2015 bottom. Since that occurred on Jan. 26, the market has not behaved well.

The first challenge was approximately a week later when markets tanked in the largest one-day point loss in the Dow. It's significant because in 2017, it was the Teflon Dow. Markets steamrolled higher despite any number of bad news events. Since the 610-day window, markets have been annoyed by every problem. Trade wars and data mining scandals, not to mention higher interest rates. In March, markets had a chance to stabilize at the annual Gann seasonal/annual change date on March 20-21, which just so happened to also be the Federal Reserve's quarterly press conference. Everything seemed fine until new Fed Chief Jerome Powell told financial markets he not only raised rates now but planned on a total of three in 2018 and 2019.

There is now a very good case for a bear phase or an all-out bear cycle in the Dow.

Given the choice of stabilizing now or getting a leg down, markets opted for a leg down and have technically been questionable ever since. So where does that leave traders and investors? Because markets did turn on a key time cycle, which is now more than two months old, it needs to be taken seriously. What most people don't realize is all markets respond to a combination of price and time squaring. For example, the Dow top is 26,616. One-hundred sixteen hours after making that high, the Dow created a vibration zone near 25,000 where it stayed for a whole month. Not only that, when it hit 216 hours off the high, it was at the same price level as 116 hours off the high. Since March 21, the Dow had the chance to find a low at 116-180-minute bars off the high – but it was violated. In a better market like 2017, that is the kind of price/time combination that not only holds but creates a whole new leg up.

There is now a very good case for a bear phase or all-out bear cycle in the Dow. What many are wondering is how much price and time damage could manifest. When it comes to time, this is now a move against a 610-day top. In terms of Fibonacci time resistance it's important to look at 144, 233, or even 261 trading days, in length. In terms of a ratio, 61% of 610 days is 377 days. Looking at this from a more pessimistic perspective, this cycle could last 616 days because it would vibrate perfectly with the top.

Price targets are tricky. One can look to the conventional Fibonacci retracement levels but let's look deeper (see "Current bull cycle"). The chart shows the standard retracement levels in the Dow, but also the Dow bear from 2007-09, which has a range of 7,729 points. According to square out/vibrational methodology, the most important point on this chart is the 77th month, which was late July early August 2015 and the tipping point for that correction. This is also very close to the breakout point after Brexit in June 2016. What that means is the Dow defended its 77-balance bar very well. What generally happens is these kinds of bars act as "strange attractors" that first attract then repel the action. Strange attractors are a key part of markets that are non-linear. As you look at this chart, it is also near the 38% retracement of the move up from the bottom in 2009. Is this a firm price target? To put that in perspective, the longer a correction lasts, the more complex is the result. On a simpler note, the 61.8% correction from the high roughly equals the 2007 high.

The 2009 bottom in the SPX is 666.79. The cycle from the top of the 1987 crash leg is 258 months. The square root of 666.79 is 25.8! The best we can do is look to important levels. The market usually comes up with a creative conclusion. Δ

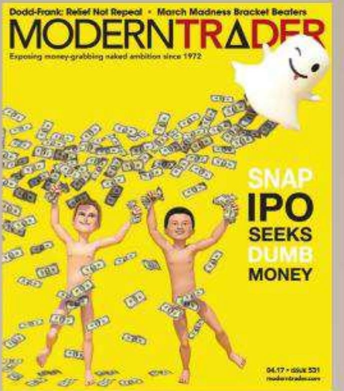
CURRENT BULL CYCLE

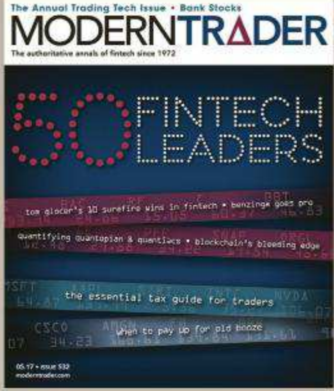
Technical and cyclical analysis indicate the Dow set a major top in January and the current bull cycle may be coming to an end.

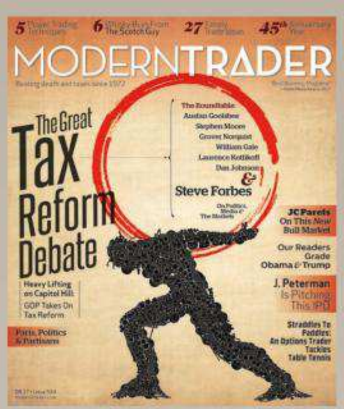
Source: eSignal

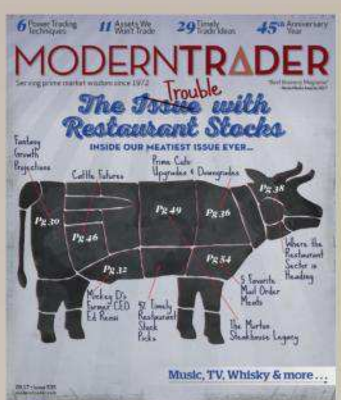
***Jeff Greenblatt** is the author of "Breakthrough Strategies For Predicting Any Market," editor of the Fibonacci Forecaster, director of Lucas Wave International LLC., and a private trader.*

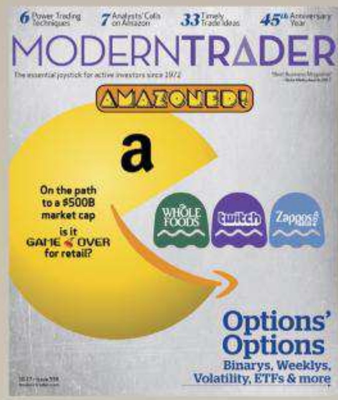
The Past 12 Months of MODERN TRADER...

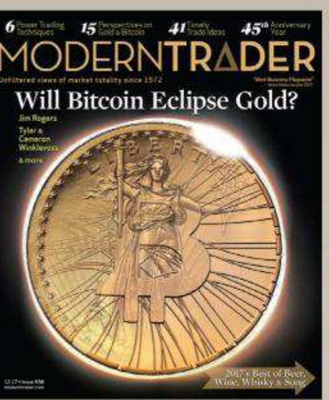


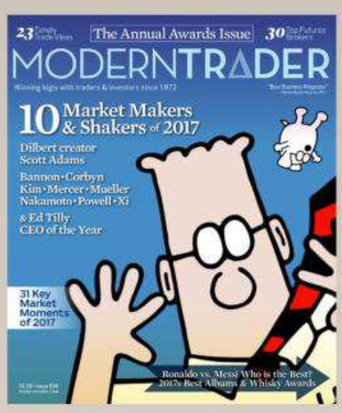


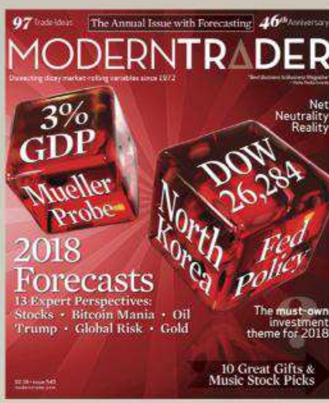


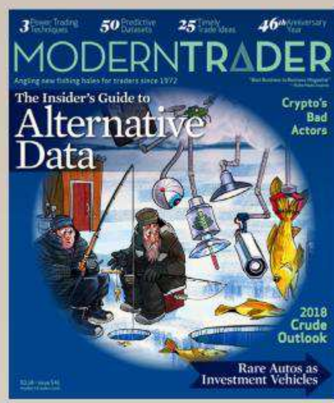


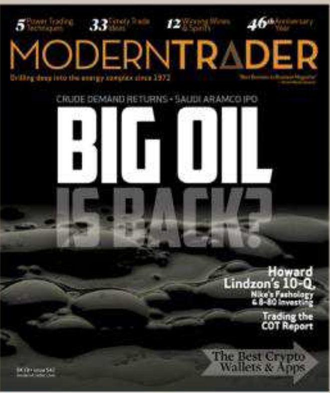












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