

Oil: The Big Picture



The *Sound Advice* Portfolio is down 6.5 percent this year, as compared to down 5.5 percent for the S&P 500. We have an average profit of 36 percent based on the prices at which each position was recommended.

-- Gray Emerson Cardiff, Editor

The blue line shows production, along with the EIA's forecast for 2016 and 2017. This production includes condensates, which we will discuss shortly, and other liquids from natural gas wells. The brown line shows the world's consumption. The green bars show the difference for each quarter. Until 2014, production and consumption grew rather steadily, with consumption slightly above production most of the time. However, in 2014, production began to run ahead of consumption, and the margin began to widen in the fourth quarter of 2014 when production exceeded consumption by 1.85 million bbl/d (barrels per day). The left is the quarterly tabular data for 2014 and beyond, along with the forecasts for 2016 and 2017.

Oil Market

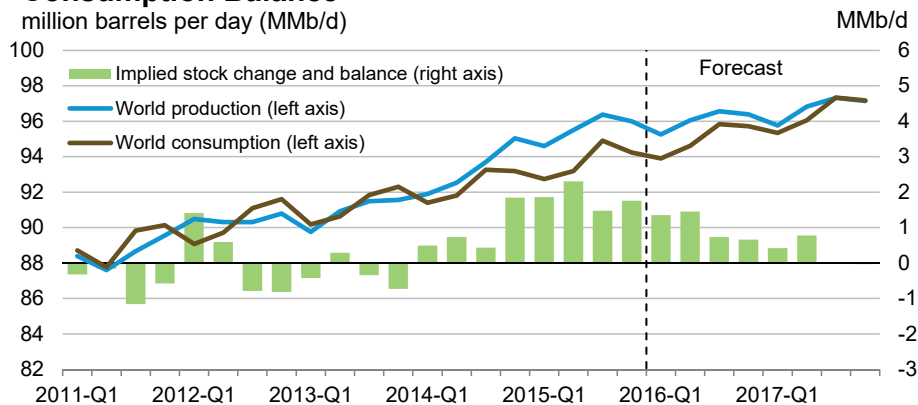
Millions of BBL/day

Quarter	Production	Consumption	Difference
2014-Q1	91.89	91.40	0.49
2014-Q2	92.54	91.80	0.73
2014-Q3	93.70	93.26	0.43
2014-Q4	95.03	93.18	1.85
2015-Q1	94.60	92.74	1.86
2015-Q2	95.50	93.19	2.30
2015-Q3	96.38	94.90	1.48
2015-Q4	96.00	94.24	1.76
2016-Q1	95.25	93.90	1.35
2016-Q2	96.06	94.61	1.45
2016-Q3	96.57	95.83	0.74
2016-Q4	96.38	95.72	0.66
2017-Q1	95.76	95.34	0.42
2017-Q2	96.83	96.05	0.78
2017-Q3	97.32	97.34	-0.02
2017-Q4	97.14	97.17	-0.03

These days, the stock market is moving in concert with the price of oil which is being seen as a reflection of the health of the world economy. The demand for oil is governed by GDP growth, so the oil and stock markets have that parameter in common. Aside from that connection, however, oil is a separate market and is being governed by distinct and identifiable forces.

The US Energy Information Administration (EIA) assembles data to gauge the global supply and demand for oil and gas, along with petroleum products. A snapshot of the world situation is summed up by the following chart.

World Liquid Fuels Production and Consumption Balance



Source: Short-Term Energy Outlook, February 2016.

The EIA estimates that global consumption of petroleum and other liquid fuels grew by 1.4 million bbl/d in 2015, averaging 93.8 million bbl/d. The EIA expects global consumption to continue to grow by 1.2 million bbl/d in 2016, and by 1.5 million bbl/d in 2017. These forecasts are based on relatively slow worldwide growth rates of real gross domestic product (GDP), which increased by 2.4% in 2015, and is assumed to increase 2.6% in 2016 and by 3.1% in 2017.

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In 2015, close to one-half of the world's consumption was from three countries: the US (21%), Europe (15.5%), and China (11.9%). The path of economic growth in these three countries has a large

impact on the demand side of the equation.

On the supply side, the most significant change in recent years came from the US, from the fracking boom which doubled US production and added nearly 5 million barrels a day to world supplies. To put the US increase from fracking into perspective, it was half of Saudi Arabia's output. It was also more than double the largest excess of production of 2.3 million bbl/d in the second quarter of 2015. Accordingly, the future world's supply will be greatly influenced by US frackers.

US frackers produce a very light crude oil. What is not widely known or considered is that a substantial amount of it is so light that is not actually considered oil.

The industry uses specific gravity to measure how heavy or light petroleum is relative to water. The American Petroleum Institute (API) rebranded the measure for oil as API gravity. Lighter crudes have higher API gravities. West Texas Intermediate (WTI) is light crude, with an API gravity in the vicinity of 40. Anything above that, especially above 45 is considered "condensate."

This distinction is important. The financial markets do not consider condensate to be oil. In fact, futures contracts to deliver crude oil forbid condensate to be included in the delivery. Moreover, crude oil price quotes specifically exclude condensate.

However, when the EIA reports quantities of crude oil being produced and brimming in US storage tanks, the distinction is not made. What is actually being reported is crude plus condensate (C+C). Because condensate is included, these figures are over-stating the actual quantities of "honest-to-God" crude oil being produced and stored in the US.

The Great Condensate Con

This is the title of an article published in January by Resource Insights (resourceinsight.com) by Kurt Cobb, where Mr. Cobb's favorite Texas oilman, Jeffrey Brown, is quoted as saying: "*virtually all of the worldwide production of condensate accounts for virtually all of the post-2005 increase in C+C production.*"

If that has been the case, the world's production of honest-to-God oil has been relatively flat. Brown supports this conjecture by the fact that the price of crude oil (not including condensate) was stable from 2011 into 2014, and that prices began to drop only when demand declined.

It is hard to say whether Brown's "Great Condensate Con" is completely accurate in its extreme, but it is evident that a substantial portion of today's oil glut is actually not oil as defined by the financial markets, but condensate.

The "Official" Reports

At 10:30 (ET) each Wednesday, the EIA reports statistics on crude oil production and storage amounts which usually elicits a response from the stock market. Unfortunately, because these volumes also include condensate, precisely how much of America's presumed crude oil production is

actually condensate is not well documented.

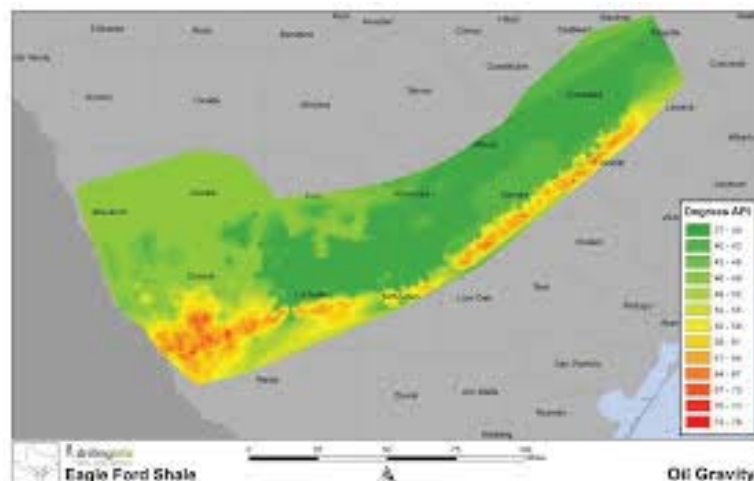
In early 2014, the EIA made its first effort to categorize US production by API. Although the EIA noted that data was lacking and inconstant because many state-level regulators did not collect it, the EIA estimated that approximately 2 million barrels per day of US production was in the API 40-45 range.

The other problem with the EIA data is that it was only looking at natural gas wells for condensate. Later in 2014, energy consultancy Bentek Energy estimated the national condensate output at around 1.45 million barrels per day, with only about a third coming from gas wells.

The Eagle Ford Shale

The Eagle Ford Shale is one of America's quintessential oil shale plays where fracking has produced prolific amounts of oil and gas. This shale formation stretches 400 miles southwest from Houston to Mexico. In 2014, the EIA estimated that as much as one-half of all Eagle Ford production might fall into the condensate category.

The map below shows the various API levels coming from the Eagle Ford. The first two (darkest green) categories have an API of 43 or below, which is honest-to-God crude oil. The areas with an API above 46 are producing condensate. An API of 43-46 is a borderline mixture.



In 2015, more than 1.5 million barrels of oil and condensate per day came from the Eagle Ford according to the EIA, which adds up to close to 500 million barrels. If the EIA's estimate is close, as much as 250 barrels of condensate were produced in 2015 from this shale formation alone.

In September, 2014, RBN Energy (rbnenergy.com) published an article called *Condensate City – Finding a Home for Eagle Ford Crude*. RBN noted that the Eagle Ford was suffering from a high percentage of condensate output. RBN estimated Eagle Ford's production was 45 percent condensate, close to the EIA's estimate.

The Condensate Glut

To put this into context, according to the EIA, there are currently close to 500 million barrels of crude oil (which includes condensate) sitting in all of the storage tanks in the

US. Prior to the glut in 2014, there was as little as 356 million barrels in US storage tanks. The difference, 144 million barrels, defines the glut of crude plus condensate. More condensate than that, close to 250 million barrels, came from the Eagle Ford in 2015 alone.

A Refining Problem

Back in August 2014, RBN Energy noted *“US refiners are not able to process as much light crude and condensate as the shale revolution is producing because many refineries are geared toward processing heavy crude. So if refineries cannot process all the light shale crude then at some point new production will outrun refining capacity. For most oil producing countries, such a development would not be a problem because excess production is simply exported. Here in the US however, regulations dating back to the 1970’s restrict the export of crude oil except to Canada and under a few specialized circumstances. The bottom line – with rising production, refineries geared towards heavy crude processing and a ban on exports, it looks like we are headed for a day of reckoning.”*

Of course, this was a prophetic prediction because crude oil prices had just begun to slide below \$100 a barrel.

Lifting the Ban

Back in December 1975, Congress enacted the Energy Policy and Conservation Act which made it illegal for anyone in the US to export crude oil abroad. The Act was in response to the 1973 Arab oil embargo to protect US consumers from oil price volatility by keeping as much oil in the country as possible to meet domestic needs.

The exception was Canada, where the US was allowed to import crude oil and condensates. Exports to Canada have grown from 47,000 barrels a day in 2011 to 500,000 barrels a day today. This was the highest and best use of condensate. Canadian oil from tar sands is so heavy (API of 20 and lower) that it needs to be blended with condensate just to get it to flow through a pipeline.

Most of the oil sitting in US oil storage tanks is blended. However, blends lack the chemical characteristics of non-blended crudes of comparable API. As a result, refiners discount the price they will pay for crude-condensate blends. To parse the problem, US refiners have recently been constructing condensate splitters to separate condensate from the oil coming from US frackers, especially from the Eagle Ford.

Mr. Brown also believes that US refiners hit the upper limit of the volume of condensate that they could process in late 2014. That coincides with the first time, June, 2014, the

federal government granted permission to two Texas energy companies to sell condensate abroad.

Then in mid-2015 the regulatory body, US Commerce Department’s Bureau of Industry and Security (BIS), began changing the definition of crude oil to exclude condensate, making it legal to export condensate from the US to anywhere in the world. As a result, cargo ships began leaving the US loaded with condensate (primarily from the Eagle Ford), destined mostly for Europe, Latin America, and Brazil.

Finally in December 2015, the long-standing ban on exporting crude oil was lifted by Congress, opening outlets for the glut of crude and condensate sitting in America’s oil storage tanks. Venezuela and Mexico are eager customers. Venezuela can replace the light crude it imports from West Africa to blend with its ultra-heavy crude. Mexico has less sophisticated refineries that can only process light crude because it is easier to refine.

The Saudi Price War

The Saudis spearheaded the current price war. They will not agree to cut production until they’re confident that US frackers are out of business, and therefore, are not able to step up production when prices rise again. Without the fracker’s 5 million bbl/d on the world’s markets, supplies will be below consumption, putting Saudi Arabia and its OPEC allies back in the driver’s seat again.

The strategy is working. US oil-and-gas producers have written down the value of their drilling fields by more in 2015 than in any full year in history, even more than the previous record set in the 2008 melt-down. Forty-eight oil companies filed for bankruptcy in 2015. Capital budgets for new exploration have been cut back severely. Although these cuts will not impact supplies immediately, they will in 2018 and beyond.

Today’s low price of oil is also inflicting pain on Saudi Arabia, which is now grappling with a record \$134 billion budget deficit (15 percent of GDP). The Kingdom must cut government spending. It is also reducing energy subsidies for its residents by charging them more for their consumption. At midnight on December 30, petrol and other fuel products were hiked 50 to 80 percent. The International Monetary Fund warns that Saudi Arabia, as well as Oman and Bahrain, will run out of cash in 5 years or less with oil under \$50. Accordingly, the Saudis will not be able to keep up the price war indefinitely, but they know it will not be necessary.

Without a substantial amount of new wells, US production will continue to fall off as a result of the natural steep production curve of fracked oil wells. Production drops 70 percent during

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the first year from the typical fracked well. This means US production will continue heading down, and the decline is bound to become more rapid. The Saudis are banking on it.

The reason US oil production has not fallen off faster is that it costs frackers in the vicinity of \$10-\$20 per barrel to operating existing wells. Once the investment is made to drill and frack, it still makes sense to operate and produce oil from existing wells. However, with the price of oil substantially below the cost to drill and frack new wells, US drilling has fallen off sharply, as evidenced by the 50 percent plunge in the domestic drilling rig count since October 2014. US production has declined to 9.2 million bbl/day from its peak of 9.7 million bbl/day. But the Saudis want to see it fall to 8.5 million bbl/day.

The Iranian Connection

Estimates are that Iran is currently capable of producing approximately 100 million bbl/d, with somewhere in the vicinity of 500 bbl/d coming in a year or so. Although Iran will add to world supply, it does not have the ability to flood the market even if it wanted to.

Iran's oil industry needs resuscitating. Decades with little foreign involvement and the devastatingly long Iran-Iraq war in the 1980s crippled Iran's oil industry. Its largest fields have been in production for more than 50 years without adequate attention and maintenance since the Islamic revolution in 1979. Substantial amounts of foreign investment, along with western technology, will be required to raise Iran's production significantly.

Saudi Arabia's price war also targets Iran. Low oil and gas prices make foreign investment in Iran less attractive and impractical. Moreover, with oil companies everywhere dialing back their own capital expenditure budgets in order to survive, it is unlikely that the massive amounts of necessary capital will come to Iran until energy prices have recovered and the outlook becomes favorable.

Iran also claims to have oil in storage, but the vast majority of that oil has sulfur and mercury content that is too high to be competitive on world markets.

Conclusions

At least part of the US oil glut was due to a refining problem. US refineries were not set up to process all of the light shale crude and condensate coming from frackers. With supplies outrunning refining capacities, storage tanks filled up and caused a glut.

There may not be much of a glut of honest-to-God oil. The US glut is 144 million barrels of crude plus condensate. With close to 250 million barrels of condensate coming from the Eagle Ford in 2015 alone, a substantial portion of the glut (if not all of it) is not actually oil, but condensate. The reported amount of honest-to-God oil sitting in US oil tanks is substantially over-stated. In any case, lifting the export ban opens new avenues for US crude and condensate, which should go a long way to alleviating the current imbalances.

Even using slow GDP growth assumptions, consumption

will still be on the rise, by 1.2 to 1.5 bbl/d in 2016 and 2017. If monetary stimulus programs in Europe and elsewhere gain traction, these estimates may prove to be low.

We have already seen the peak in oil production from US frackers. As their production continues to decline, the world's daily supply/demand balance will shift significantly. The largest excess supply of 2.3 million bbl/d in the second quarter of 2015 was only 2.4 percent of world production, a relatively thin margin. In the second half of 2016, the excess is projected to be less than one percent, with no excess by the second half of 2017.

Energy Selections

Financial markets anticipate major events ahead of their actual occurrences. As soon as the markets get the first whiff of a decline in the oil glut, energy-related stock prices are bound to rise.

As it has in past cycles, a recovery in oil and gas prices translated into stellar profits. Here are our energy selections, in alphabetical order.

Chesapeake Energy (CHK) has taken a beating from the crash in oil and gas prices. CHK's debt load makes it an aggressive investment in the current environment of low oil and gas prices, and the risks increase with an extended period of low oil and gas prices.

CHK has \$1.8 billion in debt payments coming due through 2018, but has a \$4 billion credit facility to tap. In addition, CHK has more asset sales planned, is slashing spending, and renegotiating pipeline contracts.

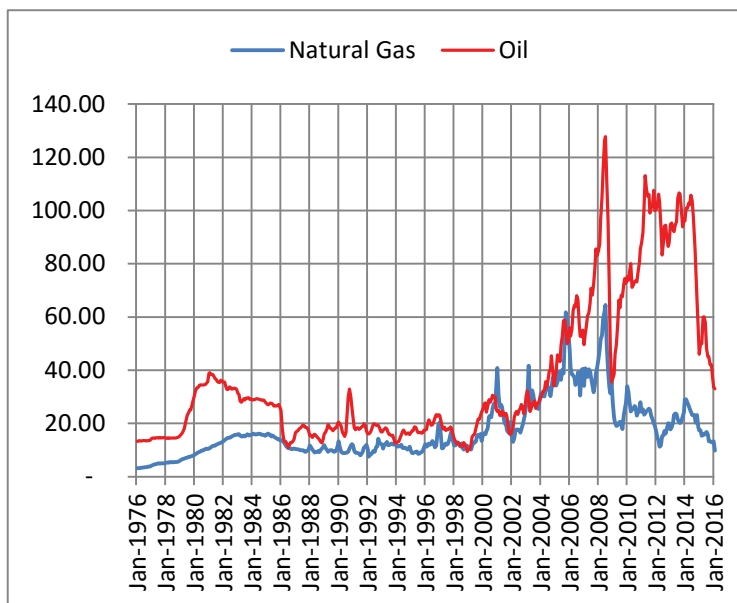
Assuming the likelihood of CHK surviving low energy prices, the upside from a recovery is substantial. Morningstar (<http://www.morningstar.com>) shows CHK's current fair market value valuation at \$12 per share – close to 5 times the current stock price.

Chevron (CVX) is a vertically integrated oil company which means it has operations in all phases, from exploring and drilling, to transporting and refining, and even to retail sales at its gas stations. Profits vary from these various stages of production, depending on price demand for oil and for refined products. High oil prices boost margins from drilling but squeeze margins from refining. When oil prices are low, profit margins expand from refining, but not nearly enough to offset declines in drilling profits. However, the fourth quarter was an exception. Even the refining divisions reported a loss. Although the company's earnings obviously do not cover the dividend, management has pronounced the annual dividend of \$4.28 per share as "sacrosanct."

Fidelity Select Natural Gas Fund (FSNGX) is a diversified way to participate in the recovery of the natural gas industry through strong companies. Natural gas provides the same energy as oil for pennies on the dollar, and natural gas is more environmentally friendly.

The drop in the price of oil brought the energy-equivalent costs of oil and natural gas closer, but a substantial disparity still exists. One barrel of oil provides approximately 5.8 million

The Cost of Energy Equivalents of Oil and Natural Gas



British Thermal Units (BTUs) of energy. At \$33 a barrel, that is the cost of 5.8 million BTUs. However, with the current market price for natural gas close to \$1.70 for one million BTUs, 5.8 million BTUs will cost \$9.86. So the same amount of energy is available for 30 cents on the dollar, if it is in the form of natural gas rather than oil.

The updated chart shows the historic relationship between the costs of these two forms of energy. The red line shows the price of a barrel of oil since the mid-1970s. The blue line shows the price of natural gas multiplied by 5.8 to approximate the same amount of energy contained in a barrel of oil. Most of the time, the costs of the two forms of energy have been closely aligned. They have moved closer together, but remain substantially apart. This difference still translates into an expanding natural gas industry.

ICON Energy Fund Class S (ICENX) is also a diversified way to participate in the recovery with a basket of substantial companies. The hallmark of this fund has been its ability to look for changes within the energy sectors to capture value, rather than simply depending on rising oil prices. This fund is a good way to capture today's values and profit from the recovery and changing landscape on a diversified basis with professional management.

Transocean (RIG) makes deep-water drilling rigs and leases them to major oil producers around the world. RIG has been sharply impacted because the utilization of its rigs has fallen along with the drop in oil prices. We continue to recommend RIG because of its prospects of survival.

In February, RIG reported a decline of 17 percent in revenue for the fourth quarter, but earnings were \$1.68 per share versus \$0.95 one year ago.

Deep water drilling is still a necessary source for the US and the world's oil needs, especially as US fracking drops off. Long-term profits from RIG should be stellar from here.

Valero Energy (VLO) is the largest oil refiner in the US. It owns 15 refineries with a capacity for 2.9 million barrels per day. The company also has 7,400 retail outlets in the US, Canada, UK, and Ireland. Valero is one of the few energy companies that can benefit from lower oil prices because refining margins generally expand during such times. Valero's has the most flexible refineries, allowing the company to capture the highest margins among its competitors. Valero's refineries are also well positioned geographically, even for accessing the low-cost Maya crude from Mexico, heavy sour oil that Valero buys for an even larger discount than from glutted US oil.

In February, VLO retreated as a glut of gasoline hit the mid-west and forced cut backs in refining volumes. This is likely a temporary condition.

Real Estate Selections

Low interest rates for so many years have pushed down real estate capitalization (cap) rates (the yield before debt payments are considered) to historically low levels. As a result, commercial real estate prices are historically high, and the average real estate investment trust (REIT) does not present a particularly good value.

In the longer run, a rising economy will push up rental rates which will more than compensate for added interest expenses caused by rising interest rates. However, this benefit is most likely to translate into profits only on real estate stocks offering an extraordinary value now.

Hersha Hospitality (HT) reported in February that funds from operations (FFO) growth in 2015 was 18.7 percent. HT is selling at a discount to its hotel assets. Based on the latest fourth quarter financials, we value HT at \$27.09 per share. We expect this value to increase because most of HT's major properties have been undergoing renovations and not producing their full income potential. Income is rising from new acquisitions and completed renovations.

Retail Opportunities Investment Corp (ROIC) began as an IPO in October 2009, just after the REIT sector had been decimated by the 2008 melt-down. It started with a fresh slate in a real estate market replete with bargains. ROIC buys distressed retail properties with high-quality demographics, refurbishes them, and then leases them at a premium. As new properties are added, along with tenant upgrades, FFO is bound to continue rising.

This trend continued through the fourth quarter. In February, ROIC reported a 19 percent increase in FFO from one year ago. The dividend was also increased by 5.9 percent. This attractive dividend lowers its risk profile.

Third Avenue Real Estate Value Investor Fund (TVRVX) is replete with stellar values substantially below NAV with strong growth prospects.

Management has a similar approach to ours because it is very price conscious, especially in relation to net asset value, in making decisions on whether to buy, hold, or sell a particular company. The managers expend great effort analyzing financial statements, visiting companies and their properties,

and assessing management teams to come up with their estimates of intrinsic value. An additional similarity to *Sound Advice* is that members of management eat their own cooking – they invest a substantial amount of their personal assets into their recommendations by investing into the funds they manage.

TVRVX has a number of distinguishing characteristics. This is a global real estate fund. Management looks for growth more than current income by focusing on real estate operating companies which, unlike REITs, can reinvest profits back into the business. Management also looks for opportunities in different points of a real estate company's capital structure by investing in senior debt in addition to a company's equity. Also unlike the typical REIT, management will go to cash when asset prices are generally high. Cash is preserved for scooping up opportunities in distressed times.

Specifically, the management team looks for 4 fundamental characteristics before making investments:

- 1) The issuer has an especially strong financial position.
- 2) The common stock is selling at a price that reflects at least a 20% discount from Net Asset Value ("NAV").
- 3) There is comprehensive disclosure including reliable audited financial statements.
- 4) The prospects are that over the next three to seven years, NAV will be increasing by at least 10 percent annually (including dividends).

Medically-Related Selections

This sector is defensive because medical needs persist regardless of financial conditions. The world's inexorable demographic aging trends and the commensurate increase in medical care needs translate into strong growth prospects for this industry.

Boston Scientific (BSX) produces medical products that are well suited for an aging population. The company's mission is to transform lives through innovative medical solutions that improve the health of patients around the world. BSX has been a global medical technology leader for three decades by providing a range of high performance solutions aimed at addressing medical needs and reducing healthcare costs. BSX has more than 900 US patents.

Pfizer (PFE) has an arsenal of new pharmaceutical products, with 88 in clinical development and 30 in late stage development or registration. PFE has rebuilt its pipeline and transformed its R&D approach. The company is well positioned with several break-through drugs and treatments.

Stryker (SYK) provides a diverse array of innovative medical technologies, including reconstructive, medical and surgical, as well as neuro-technological and spine products, although SYK is best known for its orthopedic devices for artificial knees and hips. Continued growth is assured by accelerating demand for joint replacements on aging US

baby boomers. As life expectancies continue to increase (and obesity trends continue), more and more hip, knee, and spinal procedures will be needed.

Tekla Life Sciences Investors (formerly Hambrecht & Quist Life Sciences Fund - the symbol is still HQL) is in our portfolio because the most explosive profits in the entire healthcare industry can be found in biotech companies. Over the last 10 years, biotechnology has become a major industry which now provides the world's top drugs. This sector has outperformed the broad market during the last one, five, and ten year periods.

Biotech companies tend to be high risk and high reward investments which makes diversification essential. This fund is an excellent way to invest in this sector.

Small Caps

Numerous studies show that small caps perform better over the long run than the market as a whole. This is especially true during a recovering economy. Small-cap stocks perform better than large-cap stocks because they are pure plays on the early stages of new industries and inventions. They have more dynamic and entrepreneurial management, and they are much more likely to be the target of an acquisition or merger which is usually quite profitable. They also tend to be domestic companies without substantial overseas exposure, and therefore are not buffeted by the currency fluctuations that currently haunt larger companies. Here more than ever, attention to value is paramount.

Third Avenue Small-Cap Value Investor Fund (TVSVX) invests in companies with small capitalizations using the same value-oriented approach as it does with its real estate value fund. TVSVX management scours the investment universe for companies that combine the three main features: creditworthiness, a meaningful discount to a conservatively estimated net asset value (NAV), and the ability to consistently grow NAV, with an initial targeted holding period of three to five years. A patient and price conscious acquisition is a critical first step in both protecting capital and in realizing an attractive investment return. In December there was a distribution of \$2.7566 per share.

Special Situations

The rest of our portfolio falls into other market sectors, with companies that are presenting extraordinary values within their respective industries. Here they are in alphabetical order.

Agrium (AGU) is a Canadian company offering a broad mix of agricultural products, from wholesale fertilizers to retail farm products, aimed at increasing the efficiency of food production. AGU products will be in growing demand as arable land continues to disappear around the world while population and per-capita income increases. This translates into a need for greater crop output per acre through the use of AGU's products.

Alcoa Aluminum (AA) is a fully integrated aluminum producer, which means it operates in all phases of production,

starting with its mining operations (upstream) and ending with its finished products (downstream). Alcoa's full integration gives it control over the supply chain, and makes it possible to enjoy larger profits from its downstream operations when aluminum prices are low.

In the first half of this year, Alcoa will be splitting its upstream and downstream operations into two separate companies. Management is making this move to unlock value, and we believe it is certain to do just that.

Disney (DIS) released its widely anticipated *Star Wars: The Force Awakens* in December in more than 4,500 theaters (the most ever) along with the exclusive use of every IMAX screen in the US. The box office gross of over \$1 billion in the first two weeks eclipsed the previous record held by *Jurassic World* which had the benefit of opening simultaneously in China. *Star Wars* opened in China, the second largest market, on January 9.

Disney plans several more episodes and related offshoots of the *Star Wars* franchise into 2019, along with more *Indiana Jones* movies. More *Avengers* and *X-men* movies are also in the making for 2016.

The success of these movie franchises will add to investor enthusiasm and make DIS less dependent on its cable TV stations, especially ESPN, which are under pressure from cable platforms offering skinnier bundles.

Ford (F) is in our model portfolio because it is an extraordinary value. Earnings have been depressed because of down time and preparation for 24 new or refreshed vehicles, including Ford's new all-aluminum F-150 truck which weighs 700 pounds less than last year's model and gets close to 30 miles to the gallon. The F-150 is Ford's best-selling vehicle in the US and the company's most profitable product, even as volume has been held back by production capacity.

On the cost side, Ford is reducing the number of platforms it uses to produce its models, from 27 in 2007 to 9 by 2016, which will save billions of dollars through economies of scale, and give Ford more agility to adapt to changes in demand.

Freeport-McMoRan Copper & Gold (FCX) is the world's largest copper producer. It also has significant oil and gas assets which it acquired at the top of the market in 2013. This was particularly unfortunate because FCX took on a large amount of debt to make the acquisition. The added leverage, along with sinking prices on these commodities, has decimated FCX.

The crash in energy and copper prices has thrown FCX into hard times, especially with the company's debt load of \$20.4 billion, \$2.0 billion of which matures over the next 24 months. Management is focusing on selling assets to reduce debt, not only the oil and gas assets but also mining assets. As we have reported previously, activist investor Carl Icahn has a stake of 88 million shares of FCX, which makes him its largest shareholder. Mr. Icahn usually has a plan in mind aimed at fixing the current problems, and coercing management into adapting his ideas.

NCR Corp (NCR) makes automatic tellers (ATMs), retail point-of-sale (POS) workstations, self-service kiosks, and other self-service checkout systems. 485 million people use NCR products every day, and there is room for substantial growth in the US and around the world.

Blackstone recently purchased \$820 million in convertible preferred stock that is perpetually convertible into NCR common stock at \$30 per share. This gives Blackstone equity in 27.3 million common shares when it rises above \$30. This is a dilution of close to 14 percent. However, the dilution was more than offset by NCR's purchase of \$1 billion in NCR stock in the recent Dutch auction.

The overall transaction should be positive for NCR in the longer run. This is because Blackstone will have an on-going stake in NCR. Blackstone has a successful track record with investments such as this. Blackstone is a savvy private equity and advisory firm, and evidently sees that it can accelerate NCR's transformation into a software-driven business, and add significant value to NCR above \$30.

We have noted that NCR is an undervalued stock, even at \$30. Blackstone obviously agrees. NCR expects 2016 earnings to be in the range of \$2.72-2.82, which puts the stock below 10 times earnings, far below the market average of approximately 15.5.

Symantec (SYMC) is the dominant supplier of software for computer security and protection against viruses and other nuisances through its leading flagship brand, Norton. Nearly all of the Fortune 500 companies are Symantec customers. According to Symantec's latest annual Internet Security Threat Report, cyber-attacks against large corporations have jumped by 40% this year. If there ever was a more certain growth industry, protection from cyber espionage is it.

Tetra Tech (TTEK) is a leading company in water technologies and environmental remediation with a healthy balance sheet for growth in strategic markets.

TTEK recently purchased Coffey International which is a good fit and should improve TTEK's growth in the next few years.

Xerox (XRX) is continuing to transform from a seller of printers and copiers to a company providing business services in the form of business process outsourcing, information technology (I.T.) services, and document outsourcing (printing as a service). The services side now amounts to 55 percent of revenue. We have been emphasizing that XRX is very cheap relative to the rest of the market, and a good value.

Carl Icahn agrees, as evidenced by his recent purchase of 82 million XRX shares. Icahn is splitting the company into two, one company with the printers and other equipment, and the other offering the I.T. services, to improve management efficiency and focus.

ETFs for Rising Interest Rates

We are recommending three ETFs designed to benefit from the normalization of interest rates and long term bond yields. These ETFs differ in the amount of leverage used, and you

can choose among them depending on your investment objectives and risk tolerance.

The **Direxion Daily 20 Plus Year Bear 3 Shares (TMV)** uses 3:1 leverage.

The **Proshares UltraShort Lehman 20 Plus Year Treasury (TBT)** uses 2:1 leverage.

The **Proshares Short 20 Plus Year Treasury (TBF)** uses no leverage.

The price action of these ETFs is based on the changes in long-term treasury bonds, specifically BlackRock's iShares 20+ Year Treasury Bond ETF (symbol TLT) which holds a portfolio exclusively of long-term Treasury bonds. The prices of these ETFs fluctuate in accordance with the daily fluctuations of TLT, only in the opposite direction, multiplied by the leverage each uses. For example, a decline of say, 1.0 percent in TLT will cause TMV to increase by 3.0 percent, TBT by 2.0 percent, and TBF by 1.0 percent. Conversely, an increase in TLT will cause these ETFs to drop in the same fashion.

We can project the movements of these ETFs based on any given scenario. In its December meeting, the Federal Reserve's Federal Open Market Committee (FOMC) unanimously decided to begin normalizing interest rates. As part of the FOMC's economic projections, each of the 17 members makes a prediction regarding the future path of interest rates. Those predictions are plotted in the so-called "Dot Plot", and medians are taken to formulate the Federal Reserve's official prediction.

The most recent Dot Plot taken at the December meeting predicts that the Federal funds rate will be 1.375% by the end of 2016. Of particular interest in the details of these Dot Plots is the sharp difference in the predictions among this group of informed FOMC experts. The lowest prediction was that the Federal funds rate would end 2016 at 0.875 percent. The highest was 2.125 percent.

Long-term Treasury bond yields generally move in accordance with changes in short-term rates because investors usually want a real rate of return (above the inflation rate) in the proximity of 3 percent. Such is the case today. Inflation, including food and energy, has been bouncing around at zero to 0.3 percent annual rates during the last several months. Long-term Treasury bond yields closed at 2.62 percent on February 29 with the Federal funds rate at 0.25 percent, for a real return of 2.51 percent.

A conservative forecast would use the lowest points of the December Dot Plot, which predicts that the Federal funds rate will be 0.875% by the end of 2016, 1.875% by the end of 2017, and 2.125% by the end of 2018. Assuming long-term

Treasury bond yields move in accordance with these lowest points (to preserve the same as today's real return), long-term Treasury bond yields would be yielding 3.245% by the end of 2016, 4.255% by the end of 2017 and 4.495% by the end of 2018. With inflation reaching the Federal Reserve's target of 2%, long-term Treasury bond yields would be yielding 1.385% over the inflation rate at the end of 2016 and 2.385% over the inflation rate at the end of 2017. These are historically low real rates of return.

Here is what would happen to each ETF:

TMV would rise to \$29 by the end of 2016, to \$48 by the end of 2017, and to \$53 by the end of 2018.

TBT would rise to \$46 by the end of 2016, to \$63 by the end of 2017, and to \$68 by the end of 2018.

TBF would rise to \$25 by the end of 2016, to \$30 by the end of 2017, and to \$31 by the end of 2018.

The Erosion Factor

As we have pointed out in the past, these ETFs suffer from erosion because they decline slightly faster than they increase with an equivalent change in bond yields, particularly with higher leverage. To gauge this factor, we can assume that Treasury bond yields simply tread water, rising and falling by an unusually large amount, say, 0.04 percent (4 basis points) every day, and thus go nowhere for the next two years. Here is what would happen to each ETF:

TMV would decline to \$20 by the end of 2016 (5.9%), and to \$18.7 by the end of 2017 (12.1%).

TBT would decline to \$35.9 by the end of 2016 (2.9%), and to \$34.7 by the end of 2017 (6%).

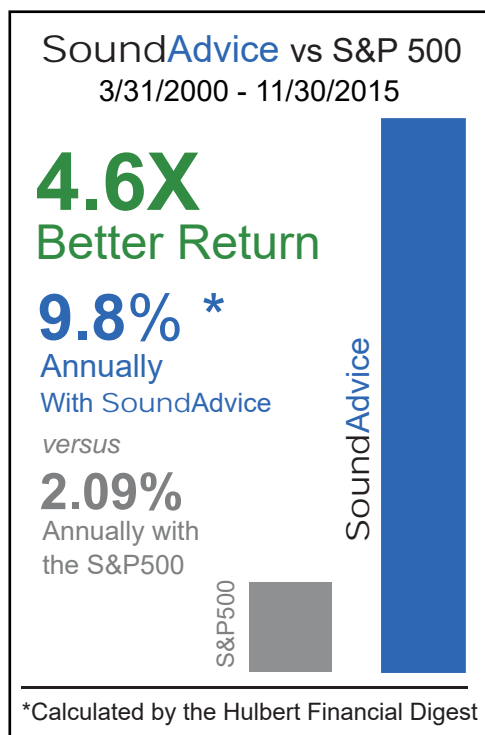
TBF would decline to \$22.4 by the end of 2016 (0.9%), and to \$22.3 by the end of 2017 (1.9%).

While not insignificant, this erosion factor is nominal in comparison to the price swings caused by a change in bond yields.

Hedging the Portfolio

Since June 2015, our *Sound Advice* Diffusion Index of Lagging Indicators (page 11) has been issuing a caution signal. At times like this, it is vital to confine portfolio selections to special situations and focus on value.

The **ProShares UltraShort S&P 500 (SDS)** is a reverse ETF that is designed to produce two times the daily fluctuations of the S&P 500 index. A decline of say, 1.0 percent in the S&P 500 will cause SDS to increase by 2.0 percent. Conversely, an increase in the S&P 500 will cause SDS to decline in the same fashion. We have been tracking SDS and confirmed that it performs as it should, with daily premiums and discounts within 0.5 percent. It is also very liquid.



Income With Growth	Symbol	Price / NAV	Yield	Action	Limit
Hersha Hospitality Trust	HT	\$20.13	5.56%	BUY	\$21.00
Retail Opportunity Investment Corp	ROIC	\$18.38	3.92%	BUY	\$20.00
Diversified Growth					
Agrium	AGU	\$85.93	4.07%	BUY	\$95.00
Alcoa	AA	\$8.93	1.34%	BUY	\$9.70
Boston Scientific	BSX	\$16.98	0.00%	BUY	\$19.50
Disney	DIS	\$95.52	1.43%	BUY	\$99.00
Ford Motor Company	F	\$12.51	5.60%	BUY	\$15.00
NCR Corp	NCR	\$23.36	0.00%	BUY	\$25.00
Pfizer	PFE	\$29.67	4.04%	BUY	\$33.00
Stryker Corp.	SYK	\$99.88	1.52%	BUY	\$105.00
Symantec	SYMC	\$19.31	3.11%	BUY	\$23.00
Tekla Life Sciences Fund	HQL	\$16.98	0.00%	BUY	\$20.00
Tetra Tech	TTEK	\$27.53	1.16%	BUY	\$28.00
Third Avenue Real Estate Value Investor	TVRVX	\$25.70	1.71%	BUY	\$28.00
Third Avenue Small-Cap Value Investor Fund	TVSVX	\$17.64	0.00%	BUY	\$20.00
Xerox	XRX	\$9.61	2.91%	BUY	\$11.00
Energy/Natural Resources					
Chevron	CVX	\$83.44	5.13%	BUY	\$95.00
Fidelity Select Nat. Gas Fund	FSNGX	\$17.82	0.00%	BUY	\$20.00
ICON Energy Fund Class S	ICENX	\$10.15	0.00%	BUY	\$11.00
Transocean	RIG	\$8.65	0.00%	BUY	\$11.00
Valero	VLO	\$60.08	3.99%	BUY	\$65.00
Aggressive Growth					
Chesapeake Energy Corp	CHK	\$2.61	0.00%	BUY	\$3.00
ETF - Direxion Daily 20+ Yr Bear 3X	TMV	\$21.28	0.00%	BUY	\$28.00
ETF - ProShares Short 20+ Year Trsry	TBF	\$22.68	0.00%	BUY	\$25.00
ETF - ProShares UltraShort 20+ Year Trsry	TBT	\$36.96	0.00%	BUY	\$44.00
Freeport-McMoRan	FCX	\$7.63	0.00%	BUY	\$8.50
S&P 500 ProShares Ultra Short ETF	SDS	\$21.73	0.00%	BUY	\$24.00

Notes to the table:

Prices are as of 2/29/2016. See our website for live pricing and buy limits:

<http://www.soundadvice-newsletter.com/members>

The right hand column is the highest recommended price limit for purchases.

This table has live prices, charts & buy limits on our website: <http://www.soundadvice-newsletter.com/members>

General Comments:

Our statistics are based on the assumption that \$10,000 is invested in each position. When a new position is added, we assume the same \$10,000 amount is invested in the new recommendation. When we recommend adding to a particular position, as we have done over the years, we assume another \$10,000 is invested again in that position.

If you are picking and choosing, you can focus on the sector of the portfolio that matches your investment objectives. The table above divides the portfolio into four sectors; Income with Growth, Diversified Growth, Energy and Natural Resources, and Aggressive Growth.

Alternatively, you may have a higher degree of comfort with certain industries, funds, or stocks because of past experience or your profession. In that case, you may want to invest more heavily in one sector, or in one or more individual recommendations.

As always, broad diversification will temper volatility, add to safety, and improve long-term performance.

Capital Competition: Real Estate versus Stocks: The SoundAdvice Risk Indicator

There are few forces that are more important to a market's destiny than the amount of capital that is available to it. In a normal situation, capital will flow easily between markets as their underlying conditions change. But if a market becomes dangerously superheated, it will absorb a larger proportion of available investment capital than economic conditions and market demand can justify. This change will be reflected not only in the rising market's prices but also in the prices of competing markets, which will be lower than their underlying fundamentals would indicate they should be. Over the last 100+ years, we can see this titanic struggle between the stock market and its foremost competitor for investment dollars: real estate.

To reveal this phenomenon, we have set up an equation in which we divide the Standard and Poor's 500 Stock Index average by the median price of a new house for each month over the last 100+ years. This equation exhibits an elegant financial minuet as each market has taken turns outperforming the other.

As we look at the historical data, we find that there is a range in which the price disparities are so strong that they are too great to be accounted for by the fundamental economic conditions underlying each market. Every time prices get into these danger zones it has meant that the prices in one market or the other have gone too high, and that they are in imminent danger of falling.

We can, therefore, label this new tool the SoundAdvice "Risk Indicator," since it will allow us to locate the point at which prices are so high when

compared to competing markets that they have come loose from their moorings and are on the verge of declining or underperforming the other market.

What is too high? When stock prices are very high relative to house prices, the SoundAdvice Risk Indicator will rise over the line marked 2.0, revealing a high-risk time for stocks. In contrast, when the indicator drops below the line marked 1.0, it means that it is a very low-risk time to buy stocks. Notice from the chart how the SoundAdvice Risk Indicator has oscillated back and forth, revealing the ongoing struggle between Stocks and houses for investment capital. We have labeled these long vacillations Supercycles.

The figures show that over the entire century-plus, stock prices have outperformed housing prices. Just based on the price growth of each investment market and assuming no leverage was used, a \$25,000 investment would have grown to \$11.3 million in stocks and to \$1.6 million in houses.

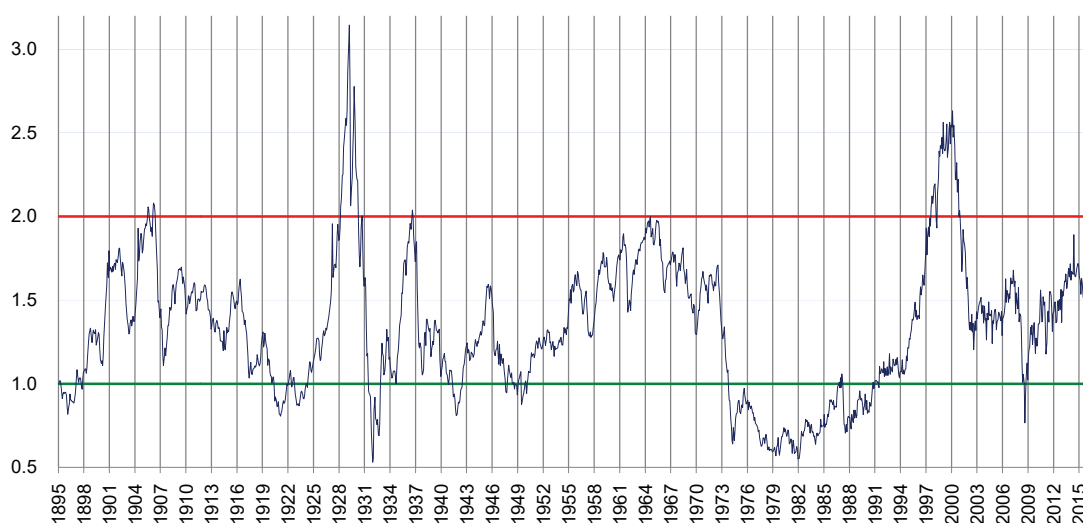
But though an investment beginning with \$25,000 in 1895 could have made money being in either stocks or housing and simply leaving it there over such a long period of time, had the investor followed the signals of the SoundAdvice Risk Indicator he would have made \$452 million, or 39.7 times more money—the difference between profits the buy-and-hold stock market strategy would have yielded by itself and the profits that the SoundAdvice Risk Indicator would have provided.

These figures illustrate why it is so important to remain aware of the Supercycles that are at work within markets.

The SoundAdvice Risk Indicator

The latest reading for the SoundAdvice Risk Indicator is 1.53. This reading reveals that stock prices are close to average in relation to house prices. The February 2009 reading of 0.77 marked the low for this cycle as well as the beginning of Supercycle 6.

See *The Science of Making Money in Turbulent Markets* for a complete explanation of the SoundAdvice Risk Indicator and its track record. (You received a copy of this book with your subscription, and you will also receive an updated copy when you renew your subscription.)



Business Cycles and Stocks: The SoundAdvice Diffusion Indexes

If the Supercycles identified by our Risk Indicator are the solemn, inexorable seasons that roll across the market's landscape, business cycles are the highly visible, sometimes serene but frequently blustery fronts and storms that we actually perceive as weather. The Risk Indicator has given us a reliable tool to determine the investment season in the stock market. This information is all-important; there will be no heat waves in January, no blizzards in July. But in our search for fair winds, we need to know more than the season. We also must be able to predict the shorter-term weather -- the bull and bear markets that fluctuate along the path of Supercycles.

The data we need is contained in the leading and lagging economic indicators published monthly by The Conference Board. We have hand picked the most sensitive of these economic indicators to produce our "Diffusion Indexes" which function with amazing accuracy as predictors of the birth of cyclical bull and bear markets in stocks.

To construct our SoundAdvice Diffusion Indexes, we observe changes in each of our selected indicators over a six-month period. For every indicator that is unchanged from its value during the six-month span, we will attach a value of one half point (0.5). If an indicator falls below its level six months prior, it will be given a value of zero. If an indicator is higher than it was six months before, it is assigned a value of 1.0. The sum of all of these figures will be expressed as a percentage of the total number of indicators. If, for example, one indicator is up (+1) at the end of a six-month period, one is unchanged (+0.5), and one is down (0), the diffusion index will be (1.5)/3 or 50 percent.

When the SoundAdvice Diffusion Index of LEADING Indicators drops to zero, it is time to buy stocks aggressively, regardless of how negative the atmosphere may be. This is not just an empirical coincidence. It is also logical. In order for all of the leading economic indicators to be giving off a zero value compared to six months before, it is nearly certain that the soft economy is providing an atmosphere for stable or declining interest rates.

This Diffusion Index gave us a zero reading in March, 2015.

The previous zero reading was in April, 2009, close to the bottom, officially giving us an "Aggressive" signal. That signal came at a time when the Risk Indicator was below 1.0, which revealed that Supercycle 5 came to an end, and that Supercycle 6 was born.

However, the March 2015 signal was usurped by the SoundAdvice Diffusion Index of LAGGING Indicators, which gives "Caution" signals when all three

of its individual lagging economic indicators rise above their respective levels of six months earlier, providing a 100 percent reading. This reading reveals that the US economy is strong enough to put upward pressures on interest rates.

This has been a critical indicator in the past and has aided in avoiding severe declines, most notably the crash of 2008-09.

The most recent Caution signal came in June 2015, based on the June 2015 release of the May lagging economic indicators. This was just after the S&P 500 peaked at 2,130.82 on May 27, 2015.

We are still in Caution mode. Our next signal will come from a zero reading from the SoundAdvice Diffusion Index of LEADING Indicators, which will reverse our current Caution signal. This Diffusion Index read 33.3 percent based on the most recent January 2015 leading indicators (released in February). It is interesting to note that a zero reading would occur in April (released in May) if all of the underlying leading indicators remained unchanged.

Track Record of the SoundAdvice Diffusion Indexes

If we had followed the signals from our Diffusion Indexes over the years, we would have done very well indeed. The results are shown below. After each "Aggressive" signal, the S&P 500 climbed an average of 31.5 percent. During "Caution" signals, the S&P 500 increased an average of 2.0 percent.

Aggressive	S&P	Caution	S&P
Sep-74	68.1	Apr-76	101.9
Jul-76	104.2	Dec-76	104.7
Oct-78	100.6	Jun-79	101.7
Nov-79	100.0	Oct-83	167.7
Aug-84	164.5	Jun-85	188.9
Jul-86	240.2	Aug-87	329.4
Feb-88	258.1	Jun-88	270.7
Mar-89	280.0	Mar-93	449.7
Mar-95	493.2	Dec-98	1,141.0
Jun-00	1,429.4	Dec-00	1,320.3
Jun-03	974.5	May-05	1,191.5
Jun-06	1,276.7	Mar-08	1,325.4
Apr-09	848.2	Mar-12	1,370.3
Mar-15	2,080.0	May-15	2,111.9
Ave +/-	31.5%		2.0%

See *The Science of Making Money in Turbulent Markets* for a complete explanation of the SoundAdvice Diffusion Indexes and their track record. (You received a copy of this book with your paid subscription, and you will also receive an updated copy when you renew your subscription.)

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