FastBreak – 2018 Year in Review

We completed our 23rd year since the initial release of FastBreak back in 1996; we again want to thank all our loyal users. Before we get to a yearly review, along with the performance metrics of a few sample FastBreak systems, we want to take care of housekeeping issues.

Housekeeping Issues

FastBreak/FastGraph No changes to functionality in FastBreak or FastGraph; however, back in July we posted updates on our website for all our products. When we started building our software 20+ years ago computer memory was limited, and we allowed our products to hold 30 years of FastTrack data. At the time, that seemed like forever. Well, as of Sept 1, 2018 that 30 years was reached. The new versions will allow for 40+ years of FastTrack data. The updates have a "1" at the end of the version number. For example, Version 6.7 is the official release version and Beta Version 6.8 is a free upgrade on our website. The updates are now 6.7.1 and 6.8.1

It is quite easy to upgrade. You can find all the updates on our website: https://www.edge-ware.com/upgrade.htm Find the version you are using and download the zipped file to the directory where you have your application installed (typically fbreak, fbreakp, fgraph). Click on the zipped file to extract the exe (ftbreak.exe, ftbreakp.exe, ftgraph.exe). This will become the executable you need to run so you will probably want to change all your shortcuts to run this version. You can either put a shortcut on your desktop, start button etc. Different versions of Windows have various ways of creating shortcuts. Typically, you will right click on the exe and select: Pin to Start, Create Shortcut etc.

As reported last year, we are trying a few new things in a test version of FastBreak. There are some improvements we have wanted to make for a long time. Real-time testing over the past year show benefit of the improvements, but we want to make additional changes and continue testing before releasing a new version.

The vast majority of our technical support requests continue to be related to reinstallation on new computers so check our "installation help guide" that should address the vast majority of issues: http://www.edge-ware.com/FastBreak%20Installation.pdf

As a reminder, we have a new policy regarding providing replacement installation CDs. This new policy will not affect most users: http://www.edge-ware.com/Replacement%20Policy.pdf

PaceMaker update The last few years we have mentioned development of a market timing program named PaceMaker. You are probably wondering if we will ever release the program. Well, we are wondering the same thing! The problem has been real-time testing in a stock market that had that had the longest run in history without a significant decline - that is, until February and October, 2018. Market timing is usually counterproductive when there are few meaningful declines. Having said this, you may be asking how PaceMaker strategies perform in 2018. The short answer is they generally did Okay. Most strategies avoided the worst of the drawdown, but several systems we monitor, after giving a great sell at the beginning of the drawdown, gave a Buy signal before the decline reached a bottom. For example, last year we showed you a signal that got out very near the market high before the

February 2018 swoon. Here is that same signal for the remainder of 2018 and early 2019. Red is SP-CP, Green is VMMXX, and the trading results with the signal are in the "2" chart at the bottom of the chart:

The positive aspects of the signal is that it outperformed Buy & Hold while being invested only 35% of the time. Over the time period shown, the S&P was down -1.26% and the signal trading the S&P was up 3.6% Also, the S&P had an MDD of -19.8% and the signal system MDD was -10.9% Getting out in September and re-entering in November looked really good until the December decline. The signal did sell in mid-December and avoided the worst of the MDD, but we certainly would have been happier if it would have avoided even more of the selloff and perhaps participated in the rapid January recovery. Nobody said market timing was either easy or perfect. We are perhaps too critial of the system when we review how "experts" did in 2018 – see below.

As we have mentioned in previous commentary, we discovered that PaceMaker may, and we want to underscore the word may, be useful in ways we never intended when we designed the program. We found data relationships that resulted in encouraging bond fund trading signals. For example, we have developed signals for high yield, emerging market, and muni bonds. We also developed a strategy to trade a preferred stock ETF that we like. In the case of the high yield bond signal, we used the signal in FastBreak Pro to build a system that trades among a family of high yield bond funds. Here is how that strategy (red) performed in 2018 compared to MLHY- (green):

Gemini Several years ago we built a tool to create synthetic data for mutual funds and ETFs when we lacked long term historical data. We did this to have more historical date for developing FastBreak strategies. The tool also allows us to build inverse fund data or data with different beta values. The tool requires an index or other issue (mutual fund, ETF etc. – we call this the "surrogate") with a high correlation to the vehicle you want to mimic. The tool doesn't simply append actual fund data to the surrogate; it adjusts the surrogate data for differences in beta and alpha between the trading issue and the surrogate issue. Once the actual fund data becomes available it is appended to the synthetic data. Last year we made the tool much more user friendly and named it Gemini ("twin"). We find the tool invaluable for our investing and consulting work, but we don't know if there is a substantial market for such a tool. Below we talk about four strategies we have posted on our website. Gemini was used to extend the ETF data used in optimizing the "style" strategies back to at least 1993 – most of the actual ETF data only exists back to the year 2000. It was used to extend the Rydex bond and dollar funds in the hedged strategy back to 1988. We welcome feedback on interest in this tool.

Standard FastBreak Demo Available

The Standard FastBreak 30 day demo on our website is based on V6.2 of Standard FastBreak that contains most of the functionality of the latest release. There isn't a demo for FastBreak Pro, but all our user manuals are available at our website if you want to take a look.

Contact and other information

Our contact email address is email2ew (put @ here) edge-ware.com for all inquiries and tech support. We recommend you put the word "FastBreak" in the title of your emails so our spam blockers don't block your message.

Visit www.edge-ware.com for more information.

2018 Markets and Performance Review

This commentary will review several different types of trading systems.

The first version of FastBreak, now called Standard FastBreak, was released in early 1996. Potential users of any investment software product should always ask the question "What is actual performance?" Soon after the initial release, we developed example trading systems that could be monitored for "real time" performance. We don't modify trading system parameters during the performance reporting period and report on the systems on a yearly basis. If you would like to review all reports since 1997 visit our web site www.edge-ware.com and go to the Strategies page. We tell you the good, bad, and sometimes ugly performance for some trading systems.

The example FastBreak trading systems on the Strategy page of our web site may provide users and potential users a starting point on the different types of trading systems that FastBreak can build. It also allows us to provide an honest benchmark for real time performance. Users of both Standard and Pro versions can download these systems. The Standard FastBreak 30 day demo (Note: The current demo is based on Version 6.2) that can be downloaded from the web site can also run most of these strategies but will not display the last 60 market days of trades. Many of these systems are several years old. We can now build better trading systems, but we keep these systems on our web site to show that many trading systems are effective for long periods of time.

Note 1: We tend to research what we trade, and for the past few years, we have been very happy with bonds. Anticipation of the end of the 30+ year bond rally is one of the factors driving us to develop PaceMaker and return to more actively trading stock equity funds. <u>Last year have added a couple new ETF strategies and a strategy to hedge the S&P Index – more later about how they performed in 2018. This year we are adding a "style" strategy, similar to the EFT strategies posted last year, that was specifically built for the Nationwide (formerly Jefferson National) Annuity product.</u>

Note 2: The example strategies should not be considered investment advice. We don't often post or change the example strategies on our web site because we believe investors' needs are very unique and users of our software should feel confident developing their own trading systems. Edge Ware, Inc assumes no responsibility for anyone trading these strategies. In addition, these systems are not rigorously maintained and with the demise of funds or symbol changes the systems may be affected. For example, several of the bond systems used the Shearson Treasuries Bond Index (STBI-) as part of the strategy. This index symbol became inactive in 2009 requiring strategy modification. Another example are strategies we posted in 2003 (15 years ago!) that traded zero coupon bond funds. These funds had a limited life, i.e., 2005, 2010, 2015 etc. The fund manage elected not to add new funds past 2025 as the old funds were eliminated so this is the last year we will comment on the strategies and they will be removed from the website.

Note 3: All maximum drawdown (MDD) values reported below are daily values. In the investment industry you will typically see reported MDD values that are monthly values. Monthly values are very often substantially less than daily values.

<u>The **US Stock Market**</u> – This was basically the first losing year in the market since 2008. The market swooned in February and then indexes recovered and many reached new highs in September, before the

bottom fell out at year-end. The small cap stocks, as measured by the Russel 2000, were especially hard hit.

World Markets -   Major world markets, as measured by EFA the MSCI EAFE ETF, were generally weak throughout the entire year.
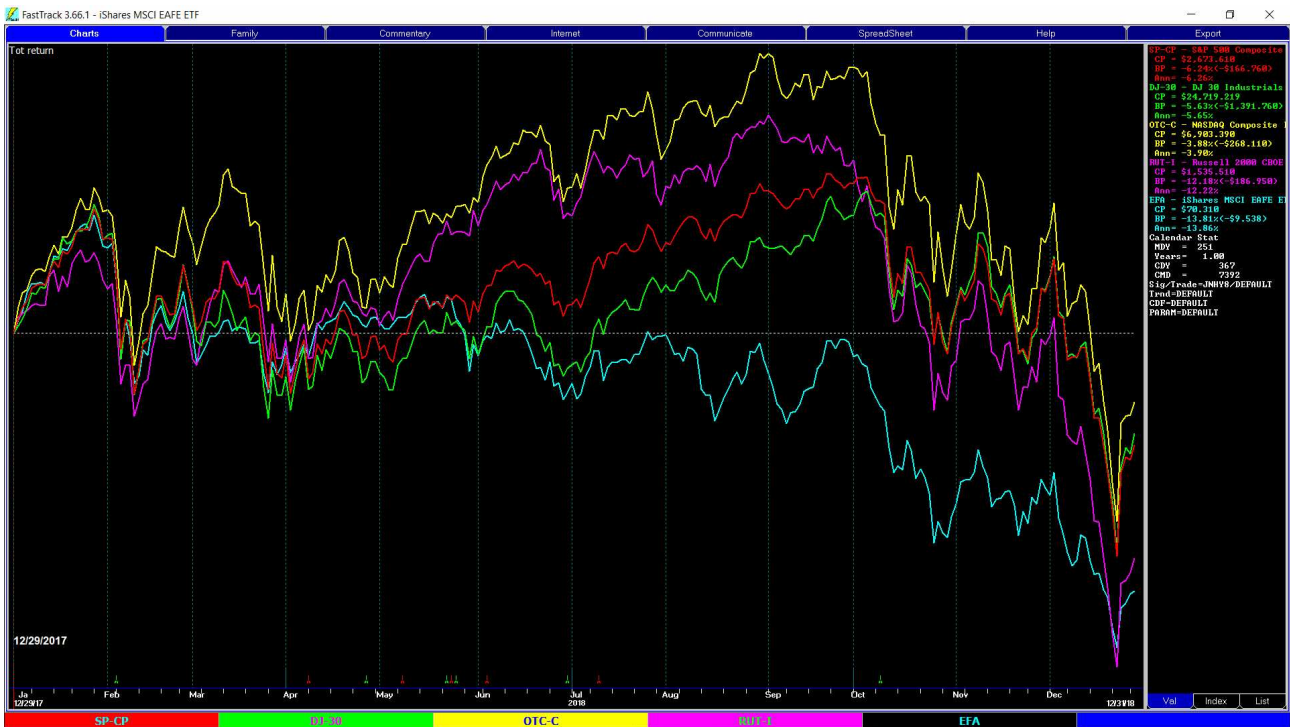
Bonds and US Dollar   Bonds had a difficult year due to a booming US economy and FED tightening; however, with talk of an economic slowdown and a rush to safety with the stock market selloff, there was a bit of a recovery in some bond funds late in the year. High Yield bonds often move in tandem with the stock market (and oil prices) and that was generally the case in 2018. The US dollar (DXY-Z) was generally strong due to rising US interest rates and a strong economy. Muni bonds were not immune to rising interest rates; however, they held up, possible because high income individuals didn't get a break in the new tax law so tax free muni bonds continue to be attractive.
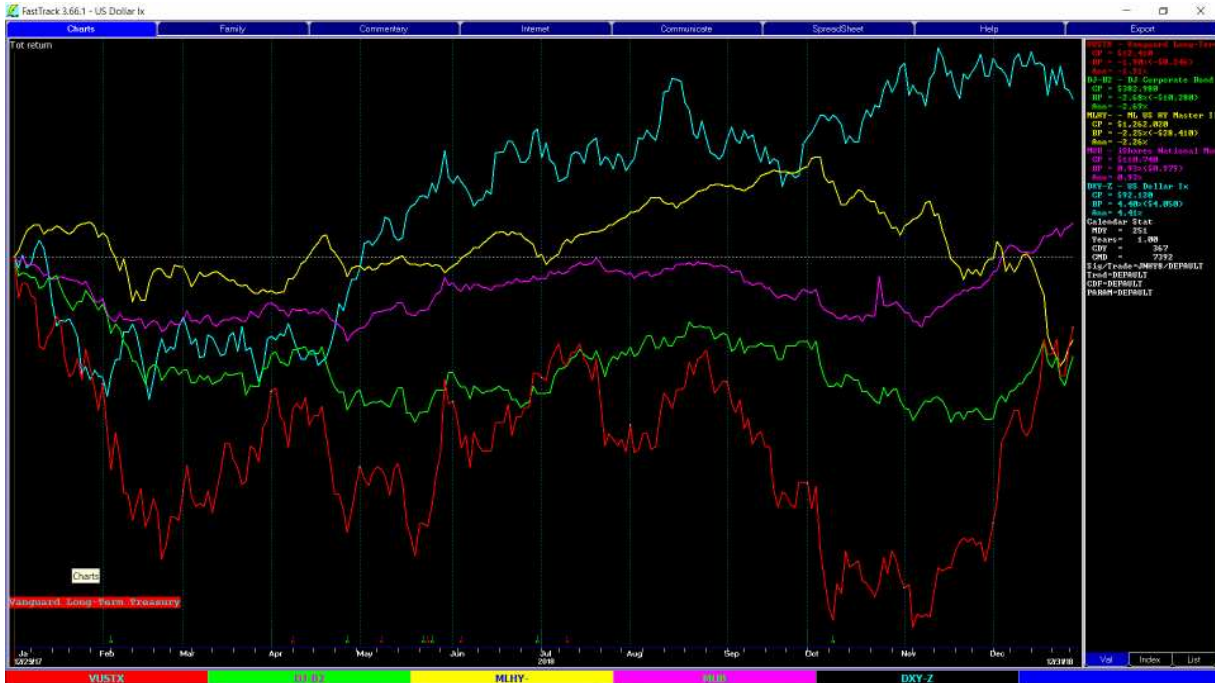
**Summary of common benchmark performance for 2018.
Generally, there was no place to hide in 2018 except for cash:**

	Total Return %	MDD%
S&P 500 (SP-CP)	-6.24	-19.78
DJ-30 (DJ-30)	-5.63	-18.77
OTC (OTC-C)	-3.88	-23.64
Small Cap (RUT-I)	-12.18	-27.22
World Markets (EFA)	-13.81	-22.05
Treas. Bonds (VUSTX)	-1.90	-9.64
DJ Bond Index (DJ-B2)	-2.68	-4.43
High Yield (MLHY-)	-2.25	-5.55
Muni Bonds (MUB)	0.93	-2.29
Dollar Index (DXY-Z)	4.40	-4.26
Cash (VMMXX)	1.95	0

Two measures of investment returns for professional managers:

https://www.barclayhedge.com/	Return%
Managed Futures Funds (CTAs)	~ -3
Hedge Funds	~ -5

The above values are approximate because of the difficulty obtaining consistent information on these programs; but clearly, performance was not especially good as has been the case since 2008. Also, large numbers of funds continue to close so "survivor bias" may make the above numbers look even better than actual performance due to poorly performing funds closing and not included in the above numbers. Note on Commodity Trading Advisors (CTAs): By some measures, CTAs as a class have only had three positive years since 2008.

How did the FastBreak strategies posted on our web site perform? *Note: The date in the table below indicates when the system was posted on our web site. In most cases the system was trading real-time well before posting*.

	System Return%	MDD%
Bond system (3/2001)	-0.3	-5.52
International funds (2/2002)	-11.22	-20.0
Bonds LT Gov and HY (12/2002)	-2.77	-4.85
Bonds Conservative zero coupon (12/2002)	-0.37	-4.21
Bonds Aggressive zero coupon (12/2002)	-3.47	-5.54
Income Strategy (1/2009)	-3.97	-6.5
Muni Bond (2/2010)	+2.21	-1.55
Hedge only (1/2/2017) Hedge with S&P (50%/50%) Hedge with 2X S&P (75%/25%)	+13.85 +3.92 +7.08	-6.93 -7.43 -6.39
ETFstyle11 (1/2/2017)	+3.10	-10.56
ETFstyle13 (1/2/2017)	-11.34	-19.94

Bond systems – Generally, not much to say about the bond strategies - nothing bad, nothing outstanding in a generally trendless bond market. *Note: As mentioned earlier, because of the demise of zero coupon bond funds we are removing these two strategies from the website and this is the last time we will report on them.*

The International system has been around since 2002 and has great long-term performance. However, most world markets were very weak in 2018 as reflected by the strategy.

Hedge strategy – We are extremely happy with this strategy - it did exactly want we intended. We reported on how this strategy was developed in the 2017 Commentary. This was our attempt to develop a system that zigs when the market zags without trying to go short the stock market. The system was built in FastBreak Pro using the Composite functionality assuming a 50/50 split between this system and the S&P. The strategy is posted our strategy page. Here is how the system (red) by itself compares to the S&P (green) and if you had a 50/50 mix between the system and the S&P (yellow):
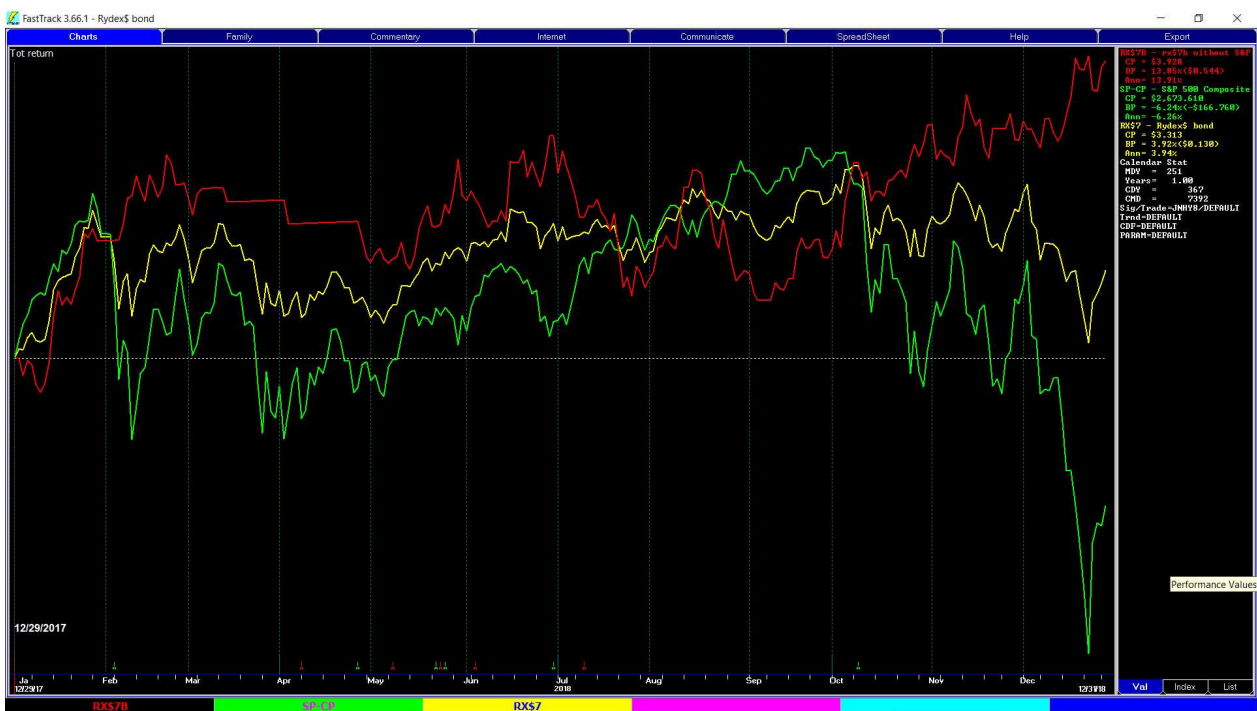
The strategy by itself returned over 13% as reported in the table above. Combined with a 50/50 balance between the strategy and the S&P the return was 3.92% with a -7.43% MDD – easily beating the 6% loss and nearly 20% MDD of the S&P. If you use the hedge strategy with a 2X Beta S&P fund in a 75%/25% ratio we have found that the historical return increases about 2% per year with a slight increase in MDD. Using this strategy in 2018 would have returned over 7% with less than a 7% MDD.

ETF Style Strategies – Last year we introduced two new ETF Style strategies and posted them to our website. We are very happy with ETFstyle11, but somewhat disappointed with ETFstyle13. See chart below. Both strategies outperformed the S&P until October, but ETFstyle13 (green), the more aggressive of the two strategies, kept trying to buy back into the correction and followed the market (yellow) down and sold near the bottom and didn't participate in the recovery rally. Only time will tell if it performs well in the longer term. ETFstyle11 (red) did well with a 3.1% gain with an MDD approximately half that of the S&P.

New Style Strategy for Nationwide Annuity

We were pleased with the ETFstyle11 strategy last year and built a similar system (NW_style2) to trade within the Nationwide (formerly Jefferson Nation) Annuity. We have posted the strategy on our website. The strategy doesn't perform quite as well as the ETF strategy over the long run (the strategy was real-time in 2018 and actually slightly outperformed the ETF strategy with a 4.7% return), and could likely be improved with a better choice of funds from the extensive number of funds available in the annuity product. Below we compare this new strategy (red), with the ETF strategy (green), and the S&P (yellow). The style strategies underperformed the S&P during the big 10 year run prior to 2018; however, the strategies were built to keep the MDD less than 20%, and as we have pointed out, anytime there are few market corrections it is difficult to beat buy & hold. Also, if this new strategy is combined with the Rydex Hedge strategy (which can also be traded in the annuity) it makes for an even smoother equity curve. ***Note: Most of this performance is back-tested results. The strategies have only been real-time since 2017.***

Summary

With great respect due to the late John Bogle - 2018 shows us why Buy & Hold isn't necessarily always a good idea. FastBreak systems did Okay in 2018 but nothing much to brag about except for the Hedge and ETF Style strategy. As this is written in early 2019 there has already been much turmoil: trade issues, FED issues, world economies, Europe slowing etc. It could be another interesting year. Good trading!

What is FastBreak and Who needs FastBreak

Unlike other trading methods, the FastBreak "mechanical" trading strategies gives specific buy and sell recommendations. Mechanical trading systems leave no room for historic "revision". These types of trading systems may not be for everyone, but we believe they should be considered if you recognize yourself in the following:

- Do you have trouble "pulling the trigger" on trades, e.g., selling your losers, taking profits on your winners, waiting for a bounce to get out of a bad trade ...?
- Do you have a limited amount of time to devote to your investments? If you are a full time investor, or enjoy sitting in front of CNBC and your computer all day, you may be able to do better with other investment methods. However, if you have limited time (or better things to do with your time!) a few minutes an evening is all you need to download your FastTrack data and run your FastBreak strategies.
- We have stopped reporting on some of the older FastBreak systems for a variety of reasons: Many of the mutual funds used in these old trading system families have since been discontinued, the market timing signals (unrelated to FastBreak) used did not stand the test of time, and we can build much more effective strategies with the functionality added to FastBreak in recent years. We felt that those systems don't accurately reflect the performance that FastBreak can produce.

Standard Disclaimer

As the saying goes, "Past performance is not a guarantee of future results."

Ordering information - PLEASE READ CAREFULLY

Standard FastBreak

- New user purchase: $499
- Current user upgrade: $199 (If you have purchased ANY previous version of Standard FastBreak – even if it was 20 years ago!)
- Save up to $125 on FastGraph (see commentary 8163) when purchased with Standard FastBreak: add $125

FastBreak Pro

- New user purchase: $1900
- Current user upgrade: $400 (If you have purchased ANY previous version of FastBreak Pro even if it was Version 1 back in 2000!)
- Save up to $125 on FastGraph when purchased with FastBreak Pro: add $125

FastGraph

- New user purchase: $250

If you have any questions contact us at [email2ew (put @ here) edge-ware.com](mailto:email2ew)

When ordering include:

1) New user or Upgrade
2) FastTrack account number (not your password)

If you purchase Standard FastBreak and later decide to purchase FastBreak Pro within 60 days, we will credit your full purchase price toward the FastBreak Pro purchase.

Order by check or money order, send check to:

Edge Ware, Inc
118 Bartlett St, #D
Marietta, Ohio 45750

All orders receive an installation CD and hardcopy manuals. New users will also receive a 60 minute DVD. The video is to help you get started faster with the basic functionality of Standard FastBreak and FastGraph. Although the DVD doesn't cover FastBreak Pro it will help you with general functionality in FastBreak Pro.

FastBreak **IS NOT** offered with a money back guarantee. If you are not sure FastBreak is for you, we recommend going to our web site (www.edge-ware.com) and download the user manuals and 30 day Standard FastBreak demo program. You can also download the sample trading system from our web site and run them in the demo.

Compatibility with Windows®

We get inquires asking if FastBreak is compatible with the latest versions of Windows® and is it compatible with Apple OS? FastBreak has been successfully installed on both the 32 and 64 bit versions of the Windows® 7 operating system, Windows® 8, and Windows® 10. However, there can be a few quirks, but if you read the guidelines at this link you shouldn't have any installation or reinstallation problems: http://www.edge-ware.com/FastBreak%20Installation.pdf As for Apple OS, we are aware of users running FastBreak on Apple OS, but we have no direct experience.

If you have additional questions we can be contacted at [email2ew (put @ here) edge-ware.com](mailto:email2ew) **DO NOT CALL INVESTORS FASTTRACK for information!!**