

TradeShark

MARKET TECHNOLOGIES, LLC

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Product: Predictive trading tool

Price: \$2,900 with choice of three markets. Other markets and options available for additional cost.

by Sunny J. Harris, PhD

One of the things you will note right from the start about TradeShark, the newest analytical software program from Market Technologies, is how intuitive it is — easy to use and obvious what the next step should be. That's not the case with some of today's complicated analytical software packages, which open to a page that leaves you wondering what to do next.

FEATURES AND TOOLS

Let's start right at the top with TradeShark, which has a row of tab-type menu items that invite you to click on them to see what happens. The first tab menu is *markets*, a natural first inquiry for traders. One click brings up an extensive list of markets:

- Eight categories of futures covering major US and foreign markets and hundreds of monthly contract symbols
- All major forex pairs and cross-rates
- Seven categories of exchange traded funds including commodities, currencies, and a number of country and international indexes
- 12 sectors of US stocks plus stocks in Canada, Australia, India, and the UK — hundreds of stocks in all.

My favorite — and the most actively traded — market is the S&P 500 index emini. A couple of clicks and TradeShark produces an emini S&P 500 continuous futures chart with some of the most

impressive graphics I've ever seen in a trading program (Figure 1). All of the drawing tools and other chart features are there, and price displays, indicators, and strategy templates can be tailored to almost any look a trader wants.

Prices and charts are updated automatically at the end of each trading day by TradersOnly.com, the data center that supports TradeShark's global data requirements. But all of the markets and graphics are what is visible on the surface. What sets TradeShark apart from other analytical software programs is what is happening behind the scenes to turn what are typically lagging indicators using past prices into predictive indicators that make short-term price forecasts, which can give traders a decisive edge by providing early alerts about trend changes.

The underlying engine behind TradeShark's trend forecasts is intermarket analysis. In today's global marketplace, most traders realize that markets are influenced by each other. You may not be able to spot these relationships with the naked eye on a chart, but you can be sure they are there.

Letting a computer do all the analytical work, a neural network process uses pattern-recognition techniques to determine which markets most affect a

target market and to what degree. Data goes through thousands of iterations to find, analyze, and learn these hidden relationships, and markets are regularly retrained to arrive at the most accurate predictions in the future.

The result of this extensive training and testing is a weight matrix of intermarket relationships within the data that is used to forecast a few days into the future and is the basis for creating various predictive indicators. These include predicted moving averages using the look-ahead data and the next day's predicted trading range (in the shaded area on the right side of Figure 1) as well as other predictive indicators such as stochastics or relative strength listed in a pull-down menu.

TradeShark also includes a proprietary predictive indicator, called the *Neural Index*, which makes short-term predictions of market trend direction, comparing a predicted medium-term moving average to an actual medium-term moving average. If the trend forecast is higher, the Neural Index block is green; if the trend forecast is lower, it's red; and if the trend forecast is mixed or neutral, the block is yellow. It's all clear and intuitive like other TradeShark features.

TradeShark further refines the intermarket data by comparing predicted

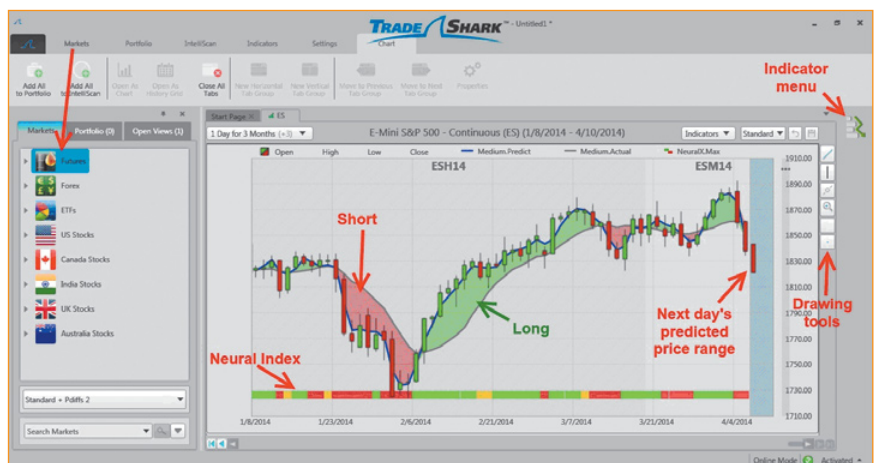


FIGURE 1: FEATURES AND TOOLS. On this chart of the emini S&P 500 continuous futures contract, when the shading between the predicted moving average and traditional lagging average is green, the trend is forecasted to be up. If the shaded region is red, the trend is predicted to be down.

exponential moving averages to actual simple moving averages to find optimal combinations for short-term, medium-term, and long-term periods. Again, if the shading between the predicted moving average and the traditional lagging moving average is green, as in Figure 1, the trend is forecasted to be up, suggesting it's time to be long; if red, be short.

Figure 2 provides another way to look at the differences between predicted and actual moving averages to indicate the momentum of the market. The black vertical line highlights an area where the difference between the predicted and actual medium-term moving averages has narrowed (blue line), causing that line to cross above the difference between the predicted and actual long-term moving averages (green line). This is an early clue that momentum is shifting to the upside.

That warning is followed on the price chart by the predicted medium-term moving average (blue line) turning higher several days before the actual medium-term moving average turns up. These clues suggest it's time to look for a place to get into a long position that then needs to be managed through the uptrend. Note that a crossover of the predicted differences to the downside and below the zero line (red circle on right edge of chart) suggests a short position.

These indicators and charts speak to you. You don't have to be intimidated by what might seem to be a complex process because all of the research and development on the indicators has been done for you in TradeShark — no programming and no messing with parameters to find the right fit.

To be clear, however, as intuitive as the program might be, TradeShark is not a trading system and does not provide specific buy/sell signals. Instead, TradeShark is a predictive trading tool that uses the power of the computer and neural network pattern-recognition analysis to present innovative technical indicators that forecast their readings several days into the future. In other words, you still have to interpret TradeShark's clues and apply your trading skills to implement this tool.



FIGURE 2: MARKET MOMENTUM. Here, the black vertical line highlights an area where the difference between the predicted and actual medium-term moving average has narrowed, causing the blue line to cross above the difference between the predicted and actual long-term moving average (green line). This is an early indication of momentum moving to the upside.

ACCURACY TESTING

Just how accurate are these indicator clues? The only way to find out is to test them on real market data. As part of an independent assessment of the accuracy of TradeShark software, I selected 60 popular indexes, commodities, and stocks with which I am familiar, many of which I have traded with varying success. I downloaded three years of market data from the TradersOnly data source. The accuracy of the predictions from each market was assessed using an Excel spreadsheet, comparing the forecast from TradeShark to the three-day average of the following day's actual trading.

My analysis found that the predictive accuracy rate over these 60 markets is an average of 79.7%. The highest accuracy rate is 83% (on several contracts) while the lowest accuracy is 75%. Most of the markets are in the 79–83% range.

The results obtained through these tests are quite astonishing. In Las Vegas, the house has a 2% edge. I can only imagine the edge gained through nearly 80% accurate predictions. Knowing the next two days' average direction with 80% accuracy is unheard of. I am truly impressed by this new product. The markets I analyzed can be seen in the sidebar "The Markets I Analyzed."

THE MARKETS I ANALYZED

Forex: GBP/USD (British pound/US dollar), EUR/USD (euro/US dollar)

Futures: HG (copper), ZC (corn), ES (emini S&P 500 continuous), HO (heating oil), NG (natural gas), SPU10 (S&P 500 June 2010), S&P 500 continuous, NG (natural gas), NK (Nikkei 225 USD continuous), NQ (emini NASDAQ continuous), ZS (soybeans), ZL (soybean oil), SB (sugar 11 continuous), OJ (frozen orange juice continuous), KC (coffee continuous), KW (wheat), YG (emini gold continuous), TY (10-yr Treasury notes), ED (eurodollar), US (Treasury bonds)

Exchange traded funds: DIA (DJIA diamonds), XLV (S&P Health Care SPDR), IAU (iShares Comex Gold), IVE (iShares S&P 500), IBB (iShares NASDAQ Biotech), PPH (Pharmaceuticals HOLDERS), QQQ (PowerShares QQQ Trust), XLP (Consumer Staples), DIVY (iShares DJ Select Dividend), IYT (iShares DJ Trans), IWN (iShares Russell 2000)

Indexes: FDAX (DAX), ZD (DJIA), YM (emini DJIA), TF (mini Russell), ND (NASDAQ 100), ZD (DJIA), HHA (Hang Seng)

Stocks: Alcoa (AA), Barrick Gold (ABX), Allergan (AGN), Astrazeneca (AZN), Amazon (AMZN), Coeur d'Alene Mines (CDE), Capital One (COF), Computer Sciences (CSC), Ford (F), Frontier (FTR), IBM, WellPoint (WLP), Cheesecake Factory (CAKE), GameStop (GME), Google (GOOG), Home Depot (HD), 3M (MMM), Starbucks (SBUX), Target (TGT)

Currencies: AD (Australian dollar), BP (British pound), JY (Japanese yen)

—S. Harris

PRODUCT REVIEW

SYMBOL / PERCENTAGE ACCURACY

AA	78%	ABX	80%	ADZ	76%	AGG	80%
AGN	80%	AMZN	80%	AZN	77%	BP	81%
CAKE	79%	CDE	78%	COF	79%	CSC	79%
DIA	79%	DVY	77%	EC	83%	ES	82%
EUR/USD	83%	F	82%	FDAX	82%	FTR	83%
GBP/USD	80%	GME	79%	GOOG	79%	HD	79%
HG	82%	HHA	77%	HO	80%	IAU	79%
IBB	79%	IBM	77%	IVE	79%	IWN	77%
IYT	79%	JY	78%	KC	79%	KW	79%
LZ	79%	MMM	79%	NG	76%	NK	78%
NQ	80%	OJ	81%	QJ	78%	XLE	77%
QO	80%	QQQ	80%	RWR	79%	SB	81%
SBUX	75%	SP	82%	TF	81%	ZD	76%
TY	80%	WLP	79%	TGT	75%	ZL	79%
XLP	76%	YM	75%	XLY	78%	ZS	81%

FIGURE 3: HOW ACCURATE ARE THE INDICATOR CLUES? Here you see the predictive accuracy rates for the markets I analyzed.

Here is the procedure I followed:

- Installed TradeShark and its data source, TradersOnly, on my computer.
- Downloaded data for a one-year period.
- Ran TradeShark on all 60 markets to collect predictive indexes for each trading day.
- Exported history file to an Excel spreadsheet.
- Calculated typical price for each data point, that is, typical price = (High + Low + Close) / 3.
- Created columns and equations for three-day simple moving average (SMAS3), actual strength (SMA two days ahead—SMA today), and the actual Neural Index (“up” if the actual strength is positive, “down” if the actual strength is negative).
- I then compared the actual Neural Index to the Neural Index and counted the number of matches. This signifies the number of times the prediction matches the actual market direction.
- Next, I divided the total number of matches by the total number of data points, which is the accuracy percentage.

The individual results are displayed in the table in Figure 3. I think you can judge the predictive capability of TradeShark from these results.

Sunny J. Harris is an author, trader, computer programmer, and mathematician who has been trading since 1981. She has written five books on trading: Trading 101—How to Trade Like a Pro, a financial bestseller after its sellout release in 1996; Trading 102—Getting Down To Business, released in 1998; Electronic Day Trading 101, addressing the basics of trading online and through direct-access brokerages; Getting Started In Trading, released in 2001; and TradeStation Made Easy! released in 2011. She may be contacted via her website MoneyMentor.com.

FURTHER READING

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‡TradeShark (Market Technologies),
‡TradersOnly.com

‡See *Editorial Resource Index*



TradeShark gives traders a decisive edge by providing early alerts about trend changes.

A LITTLE BACKGROUND ON MARKET TECHNOLOGIES, LLC,

Market Technologies was started by Lou Mendelsohn in 1979, during the early days of technical analysis and personal computers. His son Lane Mendelsohn later joined the company. Lou Mendelsohn contributed several articles to *STOCKS & COMMODITIES* magazine in 1991–93 on neural networks and was a pioneer in the development of neural networks as applied to the financial markets. Past S&C articles by Lou Mendelsohn can be found in the article archive at the S&C website, Traders.com. Those articles are mentioned in the following list of additional related reading for those who may be interested.

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—Editor