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## Algorithmic Trading's New Frontier: Retail Foreign Exchange

- Little guys break into high-speed FX trading
- Retail investors are fast-growing segment of currency market
- Explosive growth of "expert adviser" algo programs

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NEW YORK (Dow Jones)-While Walter Peters was enjoying a hike during a recent holiday in Tasmania, a computer back at his Sydney home was keeping an eye on the U.K. pound, executing trades, and ensuring that he made enough money to pay for the vacation.

The 38-year-old American living in Australia is an early adopter of the latest, and some say risky, trend in the rapidly growing world of retail online foreign-exchange trading: algorithmic trading for little guys.

Known in the online retail foreign exchange world as "expert advisers," or EAs, new programs are now available for individual investors that will automatically determine the ideal moment to trade based on historical prices and then execute the transaction without the owner's involvement in the decision. Costing as little as \$108 to install, the software is bringing mom-and-pop investors into a world that until now was dominated by hedge funds and investment banks that had access to expensive proprietary high-frequency trading systems.

"I had it running while on vacation," said Peters, a trained experimental psychologist who now makes all his income managing money for his own account and those of clients. His expert adviser makes some 30 trades a week for him, but he typically only checks the account's performance twice a week. EAs also allow customers to get away from their computers to avoid the sleep deprivation that can result from trying to stay on top of a 24-hour-a-day currency market, Peters said.

If the idea of a magic machine making money while the owner sleeps and pursues leisure activities seems too good to be true, that's because there are real risks that something could go wrong. And if it does, the losses can be amplified by the high leverage that's needed to make retail foreign exchange trading viable in a market dominated by large institutions.

For now, however, many investors are ignoring those risks and enthusiastically adopting the new systems.

"EAs have really exploded on the scene in the last two years," said Robert McKeon, senior vice president of markets and liquidity at New York-based online retail trading platform FXDD.

Interbank FX, which operates a global retail trading platform out of Salt Lake City, sees about 40% of its trades executed by automatic orders instead of the more traditional hands-on execution by investors, with about a fifth of its customers using expert advisers. Because of the way the technology works, these customers account for a far higher proportion of transactions. "We might see 100 to 200 trades a day [from an algorithmic trader] versus one to two for a regular customer," said Todd Crosland, CEO of Interbank FX.

Now accounting for 8% to 10% of all spot foreign-exchange transactions, or about \$125 billion to \$150 billion a day, retail trading is the fastest-growing segment of the \$4 trillion-a-day currency trading market, according to the 2010 triennial foreign exchange survey from the Bank for International Settlements. That's creating an appealing

target market for developers of the new algorithmic trading systems.

A quick online search brings up millions of options for expert advisers, most associated with foreign exchange-related trading programs. Program names include ZuluTrade and Kangaroo EA.

"There is a cottage industry of programmers creating algos" for foreign exchange traders, said Interbank FX's Crosland.

There are two main reasons traders are gravitating toward automated execution, said Javier Paz, senior analyst at research firm Aite Group: a lack of experience in the fast-paced, unpredictable foreign-exchange market, and a desire to shorten the amount of time devoted to trading in a market that doesn't sleep as it shifts between time zones.

Expert advisers, which are typically purchased independently of the online trading platforms on which they operate, are based on the same principles that define many price-triggered algorithmic trading programs used by institutions in high-speed and high-frequency trading systems.

A computer program is written that is based on historical trading data and set up to automatically place orders when a currency pair breaks through a set of parameters. This allows for execution at a much faster speed than a human could input and click through a trade online. In theory, that allows for better pricing and the ability to take advantage of smaller moves in markets.

But the EAs can also make mistakes, potentially costly ones. The two biggest risks, says Aite Group's Paz, are that the computer stops working and fails to signal trades to be completed or that low levels of market liquidity leave trades executed at less favorable prices than their trigger points. Because retail foreign exchange trades are typically ordered on margin -- traders can usually complete trades with as little as 2% down -- such failures can result in substantial losses.

The rapid drop in the dollar against the yen on March 17 offers an example of how a retail algorithmic trader might find themselves caught out. In that scenario, the expert adviser might have triggered a loss-minimizing sell order when the price hit Y79.75. But because the dollar was dropping so fast, there would have been too few people to accept the offer, leaving the order unfilled until the dollar had reached its new record low of Y76.25, where buyers returned to the market. By contrast, someone trading manually could have waited out the rapid price moves and sold after the dollar recovered.

"Some [expert advisers] work very well in certain market conditions. Some work very poorly in certain market conditions," said FXDD's McKeon. Some retail traders "expect them to be successful in all markets, but unfortunately they are not."

Peters, the trader in Australia, has run through his share of EAs, having purchased some and built others himself. He said many "collapse at some point," often within a year of their creation. From those experiences, Peters has come up with specific criteria to minimize the inherent risks in a program that he said becomes "almost an afterthought" once it is up and running.

Peters said he limits the money managed by EAs to 10% of his total trading accounts. This way, "it's not going to hurt that much if the sky falls," he said. And he often runs multiple EAs at a time and then turns them off at specific periods, such as in late December when markets are slow and illiquid or a few hours before major central bank interest-rate decisions or U.S. employment reports. He also takes profits out of them each month so as to minimize his losses when they do "blow up."

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