February 2005 • Strategies, News and Analysis for Forex Traders

CURRENCY TRADER

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- **COMBINING PIVOT POINTS** and candlestick patterns
- **HOW DEFICITS** affect the dollar
- **FOREX TRADE JOURNAL:** Diary of a currency trade
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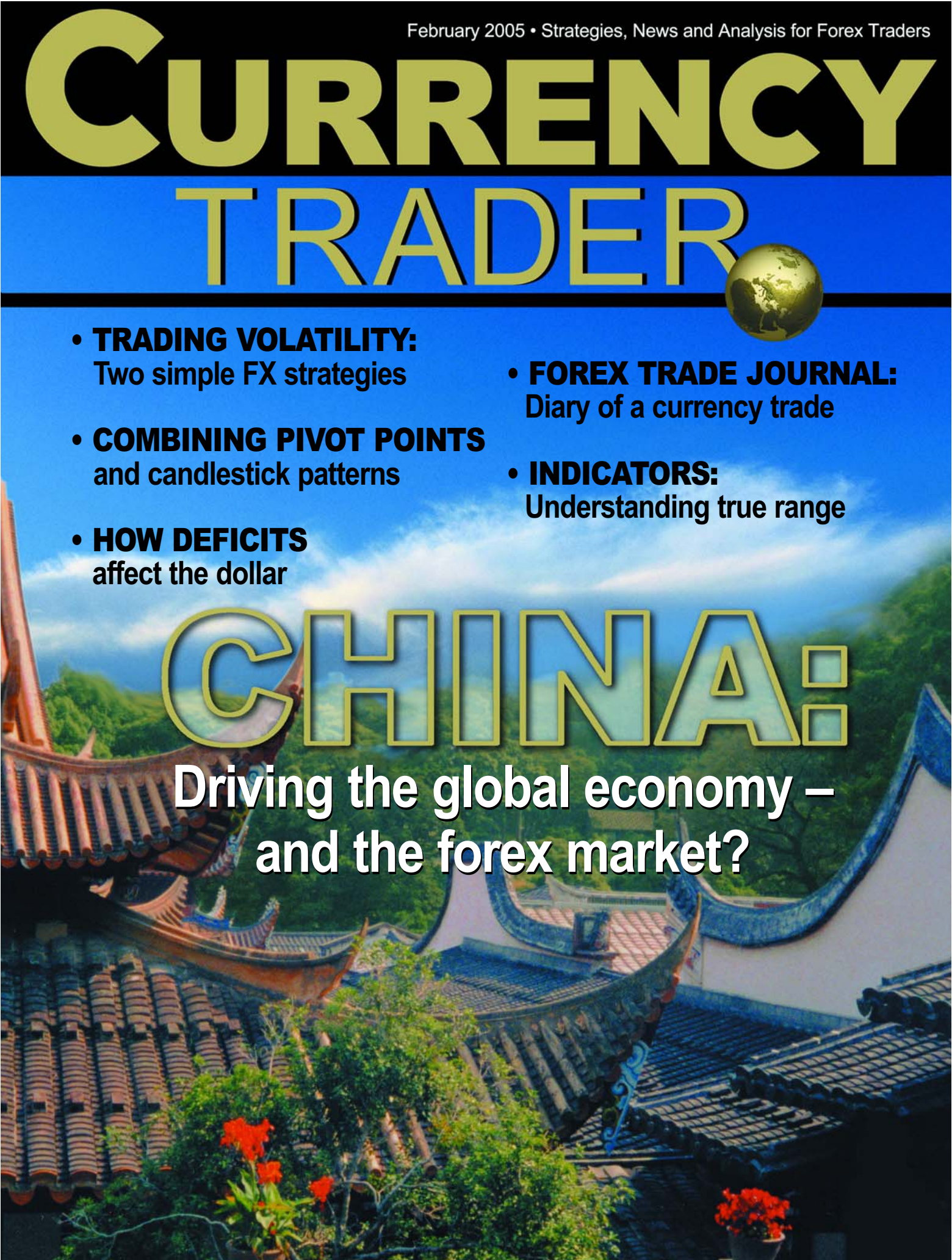

CHINA:

Driving the global economy – and the forex market?

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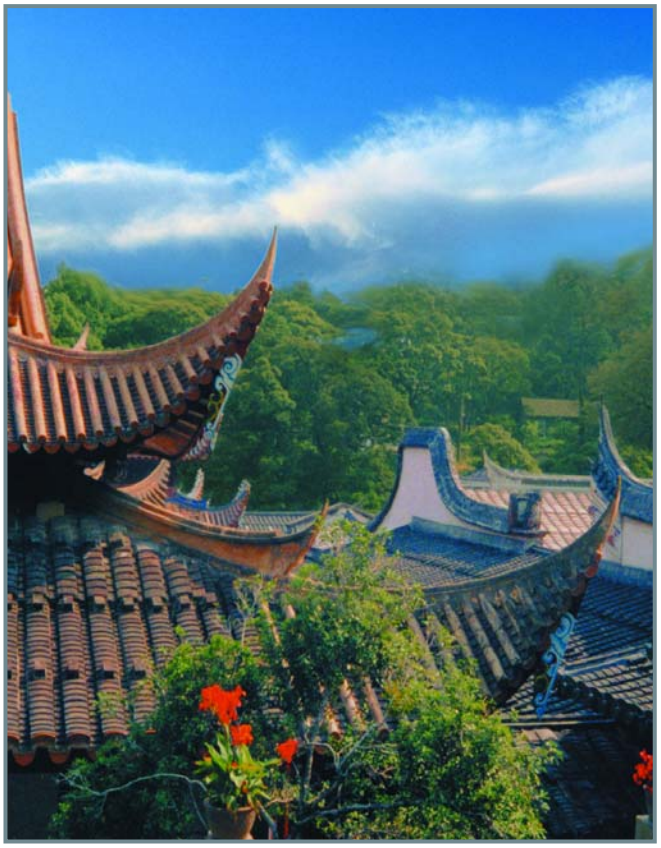

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ITL A0-FX	-	1616.0	-1616.0	1617.0
BEF A0-FX	+	33.68	-33.68	33.69
NLG A0-FX	-	1.8396	-1.8396	1.8403
IEP A0-FX	+	1.5205	+1.5205	1.5210
ATS A0-FX	+	11.488	-11.488	11.492
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HKD A0-FX	-	7.7994	+7.7994	7.8002
AUD A0-FX	+	0.7214	-0.7214	0.7219
NZD A0-FX	+	0.6261	+0.6261	0.6268
North America				
CAD A0-FX	+	1.3696	-1.3696	1.3706
MXN A0-FX	-	11.406	-11.406	11.412
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All the tea in China

Twenty or 30 years ago, it wasn't uncommon to hear the opinion that when (not if) China abandoned communism and a centralized economy for democracy and free markets, it would become an economic 800-pound gorilla.

Western businesses salivated for years at the prospect of tapping into the potentially largest consumer market in the world. They began to make small inroads when the Chinese government started loosening some reins after Mao Tse Tung's death in 1976. But events such as the stand-off in Tiananmen Square in 1989 made clear the old guard was only loosening reins, not letting go of them entirely.

Nevertheless, in 2005 China has managed to gallop to the front of the economic pack without officially disavowing a communist society. As capitalism has gained traction, China's huge populace is producing goods and acquiring possessions like never before, although on a per capita basis it is still earning and spending at rates that would seem austere to most Westerners.

China's economic explosion has been attributed with (amont other things) driving global commodities prices higher, expanding the U.S. trade deficit, and, by association, threatening to upset worldwide currency markets because of its decision to keep the renminbi pegged to the dollar rather than allowing it to float freely.

Whether this will continue — and what will likely happen if it does not — is the subject of "What's on the horizon for the Chinese renminbi?" There are a few scenarios, including a renminbi that is allowed to fluctuate in a fixed range, and different opinions on how this will affect the forex market.

China's economic explosion has been attributed with driving global commodities prices higher, expanding the U.S. trade deficit, and, by association, threatening to upset worldwide currency markets.

In "The Golden Goose Rule," Barbara Rockefeller touches on the issue of China in the context of a larger discussion about a potential reconsideration of the health of the U.S. economy and whether other countries will lose their appetite for our paper assets. Their sustained hunger has been financing our record deficits, but there are those who worry they may be full and ready to pull away from the table.

For now, traders interested in techniques for free-floating currencies can experiment with ideas in the Currency Characteristics and Trading Strategies sections.

"The current account deficit's impact on the U.S. dollar" examines whether the quarterly current account numbers are responsible for regular patterns in the U.S. dollar. In "Volatility based currency trading," contributor Kathy Lien discusses two simple techniques — inside bars and short-term/long-term volatility comparisons — for exploiting volatility characteristics in the forex market.

Mark Etzkorn, Editor-in-chief

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Cornelius Luca is the author of *Technical Analysis Applications*(McGraw-Hill), *Trading in the Global Currency Markets* (Prentice Hall, 2000), *Technical Analysis Applications in the Global Currency Markets* (Prentice Hall, 2004), and *Introduction to Technical Analysis* (Euromone,1997). He teaches several forex and technical analysis classes through New York University, the New York Institute of Finance, and Pace University's Lubin School of Business Graduate Division. He has been trading and consulting since 1983. In 2002, Luca joined Global Forex Trading, where he provides daily, weekly, and monthly commentary on the major foreign exchange markets.

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Central banks shunning the dollar?

Central Banking Publications released a survey in late January revealing that nearly 40 central banks have increased their exposure to the Euro in the past two years, mainly at the expense of the dollar (see "The Golden Goose Rule").

The poll, which surveyed 65 central banks, also found that global central bank reserves were expected to rise to nearly $5 trillion by 2008 from $3.8 trillion in mid-2004.

The survey of official reserves managers controlling $1.7 trillion in assets was conducted between September and December 2004. It found 39 central banks reported an increase in their euro exposure while 29 reported a reduction in dollar exposure. Nine banks did not respond to this part of the poll.

Twenty-four of the banks said they had raised their exposure to sterling while 16 said they had cut their exposure to the yen. Analysts say the survey backs up market speculation that central banks are changing the composition of their currency reserves, mainly to the Euro's advantage, although the survey did not quantify by how much central banks were buying euros or other alternatives to the dollar.

Of the 65 banks surveyed, 16 said they planned to maintain the same proportion of dollars in their reserves in 2005, while eight said they would raise the proportion of other currencies.

At the end of 2003, central banks held 70 percent of their official reserves in dollar- denominated assets and central bank purchases of U.S. securities had financed more than 80 percent of the U.S. current account deficit in 2003. Any reluctance to increased exposure to dollar assets could further cause the greenback to plunge on currency markets.

Despite its recent rebound, the dollar has been in the doldrums in recent months as concerns over the U.S.'s twin deficits combined with talk that central banks around the world are reviewing the structure of their currency reserves away from the U.S. currency.

The survey was sponsored by the Royal Bank of Scotland.

FX Summit highlights oil, "BRICs"

The Chicago Mercantile Exchange hosted its first Global FX Summit on Jan. 19, featuring several foreign exchange industry leaders. Turnout was about 300 people.

The summit began with a one-hour educational seminar geared to those new to FX trading. An opening speech by Diane Swonk, newly appointed chief economist at Mesirow Financial, kicked off the afternoon.

Two simultaneous sessions followed, one for the proprietary firms, trading arcades and individuals, which discussed the latest in trading platforms in the foreign exchange cash markets. The other session, for hedge funds, CTAs, and investment managers, focused mainly on trading strategies and risk management issues.

The last event was a roundtable discussion with Robert Savage, managing director of FX sales at Goldman Sachs; Bill Brown, managing director at Morgan Stanley; Cornelius Luca, author of *Trading in the Global Currency Markets*; Barbara Rockefeller of Rockefeller Treasury Group; and Yra Harris, independent currency trader. The discussion was moderated by Andy Busch, currency strategist with BMO-Harris Bank.

The roundtable participants determined that one of the most important areas to watch in currencies in the future would be oil — specifically, what currencies will increase or decrease in response to higher oil prices. The panelists all pointed toward Asia.

"In the case of Japan and China, their lack of domestic sources of energy and their need to import huge amounts of crude oil, natural gas, and other energy makes them particularly sensitive to changes in oil prices," Morgan Stanley's Brown said.

Goldman Sach's Savage said all eyes should be on emerging-market "BRIC" countries (Brazil, Russia, India, and China).

"The BRICs have large population bases, large natural resources, and unending technical talents as well as large consumer bases, creating huge opportunities for play in the currency markets," Savage said.

Survey says: U.S. and U.K. FX volume dropped in the fall

Currency trading volumes in the two biggest foreign exchange centers appear to have dropped from the record levels recorded earlier in the year, according to two reports.

The triennial survey of the market conducted by the Bank for International Settlements (BIS) showed record average daily volumes of $1.9 trillion through April.

But surveys of the U.K. and U.S. markets by the Bank of England and the New York Federal Reserve show volumes in those two centers dropped to a combined $917 billion a day for traditional foreign exchange products from $1,196 billion in April. The two centers account for almost half of all daily trading activity in the foreign exchange markets.

The two aforementioned reports were the first of what will become regular six-monthly surveys of FX market activity. The Bank of England and the New York Fed participate in the BIS's survey, but the FX committees of both said they felt the market would benefit from reporting of activity levels more than once every three years.

"Our goal in launching this survey is to help market participants identify emerging trends in foreign exchange," says Mark Snyder, chair of the New York Fed's committee and head of foreign exchange at State Street bank.

He says more frequent reporting should help market participants manage risk in the fast-moving market.

Both committees cautioned that their reports were not directly comparable with the BIS survey because of slight differences in methodology. The Bank of England said the BIS habit of reporting trade locations based on the sales desk, rather than where the trade was conducted, could have underreported trading in London, the biggest center of activity.

Many banks have sales teams across the continent but maintain one main trading floor, often in London. However, market participants believe trading volumes might have surged since the surveys were taken.

EBS, the biggest inter-bank spot dealing platform, reported its busiest day in 11 years, worth $203 billion, in November. The platform also reported its busiest-ever week in January with an average $162 billion traded daily.

VOLUME, VOLUME, VOLUME

Volume at two of the larger online currency trading platforms more than doubled in 2004. FXAll reported an increase of 104 percent to $4.9 trillion in volume, while Hotspot FX said its volume totals have gone up almost 150 percent. The rise can be somewhat attributed to the continued decline of the U.S. dollar, which has caused hedge funds to enter the market to protect against other investments.

IN FUTURES, TOO

Futures brokers are enjoying the increase in forex trading as well. Chicago-based Peregrine Financial reported record volume in currency futures trading in 2004 after enhancing its trading platform. Total volume at PFG reached $28.4 billion in 2004 — more than 10 times the 2003 total. For more information on currency futures trading, go to the Currency Futures page.

BIS DOESN'T JUST TAKE SURVEYS

The Bank for International Settlements donated $50,000, or around two million Thai baht, to help ease the grief of tsunami victims.

G7 meeting looms

Policymakers from the Group of Seven (G7) rich nations' club meet in London on Feb. 4-5 in a much-anticipated bi-annual gathering, and are expected to discuss the dollar's three-year slide and the issue of currency flexibility, particularly in Asia.

At the start of the year, speculation that China might revalue its currency after the fall G7 meeting boosted other Asian currencies, such as the yen (see "What's on the Horizon For the Chinese Yuan").

China and India will be included in the meetings this time around. The U.S. dollar's slide vs. the Euro and yen is expected to generate debate at the talks. Recent G7 meetings have called for more flexibility in currency exchange rates in an attempt to encourage parts of Asia — especially China — to relax exchange rates.

Theory has it that if China lets its yuan revalue, others in Asia will be under less pressure to keep their currencies low vs. the dollar to ensure their exports remain competitive in terms of price on world markets. In late January, a news organization reported that a Chinese official said the country needs time before allowing its pegged currency to appreciate.

U.S. Treasury Secretary John Snow said he does not expect G7 ministers to alter the group's position on currencies from last February, when they spoke out against "excessive volatility" in currency markets.

U.S. Dollar: Q1 recovery should precede further downtrend

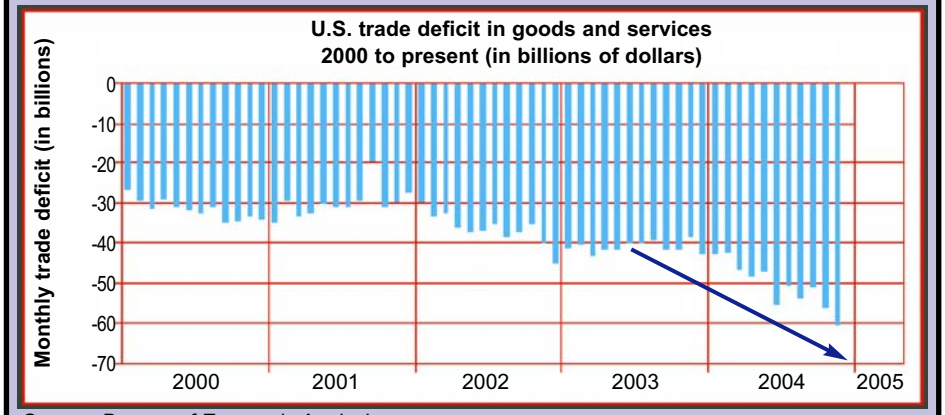
BY CORNELIUS LUCA

The U.S. dollar started 2005 on a strong note, which encouraged traders to take profits on some of their short positions. By Dec. 31 the dollar was severely oversold from both short- and long-term perspectives, although some economists might disagree with this for fundamental reasons. Consequently, some traders ventured to buy the dollar currencies. Where do we go from here?

The dollar should attempt to recover for the rest of the first quarter of 2005 before the next bout of selling will occur. Central bankers made clear how to see the world through the prism of foreign exchange: The European currencies have already experienced the necessary adjustments, so it is now the Asian currencies' turn to strengthen further and help alleviate the U.S. trade imbalance.

FIGURE 1 — TRADE DEFICIT

Between January 2002 and November 2004, the U.S. trade deficit ballooned from around $30 billion to $60.3 billion.



Source: Bureau of Economic Analysis

The U.S. deficit

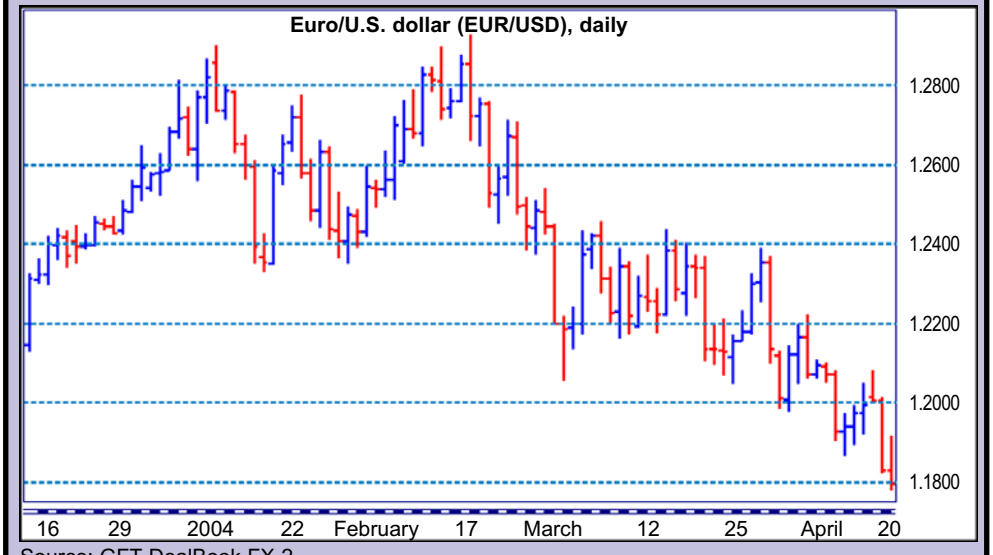
As recently as January 2002, the trade balance showed a gap of $30 billion. By the end of that year, the gap widened by a little over one third to around $40 billion. Between February and November 2004, the gap surged from $42.1 billion to $60.3 billion (see Figure 1).

The easiest way of dealing with this problem is the devaluation of the dollar, but selling the dollar is not always as easy as it should be. Traditionally, the currency that had to be bought against the dollar was the Japanese yen, as exports-loving Japan enjoyed asymmetrically large trade surpluses. But once the U.S. dollar/Japanese yen (USD/JPY) collapsed to the 80 area in spring 1995, the shock was so big on both sides of the Pacific that once the exchange rate rebalanced, no one uttered a word about a "structural problem." So, when the Bank of Japan bought unprecedented amounts of dollars during the second half of 2003 and the first quarter of 2004, there was little complaint from U.S. officials.

The problem is in November 2004 the trade deficit with China reached $16.6 billion — a little more than a quarter of the total U.S. trade gap. Perhaps the U.S. would now love to further debase the dollar against the

FIGURE 2 — EURO DOUBLE TOP

After forming a double top from January to February 2004, the Euro/U.S. dollar (EUR/USD) headed lower for 11 weeks.



Source: GFT DealBook FX 2

currency that causes most of the problem — the Chinese yuan. However, the yuan does not float freely — it is pegged to the dollar. Because the markets cannot possibly exercise their role of shock absorber without free-floating rates, the only way to achieve the same result is for China to revalue its own currency.

Rumors have abounded that China will adjust the yuan by the beginning of 2005, but nothing has happened (no surprise there). It's very hard to gauge what would make China listen to the needs of the G7 economies, particularly since it holds the key to negotiations between North Korea and the U.S. on nuclear weapons, and it also wants to weaken Taiwan.

Otherwise, there is the risk Japan will feel it doesn't have to allow the yen to strengthen below parity (100) with the dollar to single-handedly expose its exports to lower profits. This would translate into another set of massive interventions by the Bank of Japan, and even the Federal Reserve of New York might be convinced to make a mild contribution to propping up the dollar.

Technicals point to a dollar recovery

While China's yuan remains pegged, traders will likely take their cues from charts.

A year ago, the Euro/U.S. dollar rate (EUR/USD) formed a double top in January and February 2004 (see Figure 2). From the second top, the pair headed lower for 11 weeks before stalling and eventually resuming its major uptrend.

In 2005, EUR/USD is on the verge of forming another potentially bearish reversal formation — the head-and-shoulders pattern (see Figure 3). The pair peaked on Dec. 31 and has been declining since.

If it follows the same pattern, EUR/USD should extend its decline for seven or eight weeks, which should take it down through late February or early March. It could slide as low as the 1.2200 area, but it will first have to break below the 1.2600 area, shown in Figure 4. Following this significant low, the pair should resume its major uptrend.

FIGURE 3 — POTENTIAL HEAD-AND-SHOULDERS?

EUR/USD is potentially on the verge of forming another bearish reversal formation — the head-and-shoulders pattern. The pair peaked on Dec. 31 and has been declining since.

Source: GFT DealBook FX 2

FIGURE 4 — PROJECTING THE EUR/USD

From a long-term perspective, EUR/USD should extend its decline for seven or eight weeks, which should take it down through late February or early March — possibly as low as the 1.2200 area, but it will have to break the 1.2600 level first. After that, it should resume its major uptrend.The channel lines connect major highs and lows.

Source: GFT DealBook FX 2

Related reading by Cornelius Luca:

Trading in the Global Currency Markets (NYIF, second edition, 2000).

Technical Analysis Applications in the Global Currency Markets (Prentice Hall, 2004).

What's on the Horizon for the Chinese renminbi?

How would the dollar benefit from a revaluation of the renminbi?

BY CURRENCY TRADER STAFF

While the early weeks of 2005 ushered in modest strengthening of the U.S. dollar vs. the Euro, a major wild card remains on the currency horizon in the form of China. Throughout 2004, amid continuing weakness in the greenback, governments around the world pointed to the Chinese renminbi's peg to the U.S. dollar as a potentially destabilizing global economic force. A potential revaluation of the Chinese currency vs. the dollar has long been a hot topic in the forex markets and is likely to remain so as long as the bears continue to dominate action in the buck.

While analysts and traders are divided on the likelihood of a potential revaluation for the renminbi in the first half of 2005, let's take a look at the background leading up to the current situation. What form would a revaluation take, and what could it mean for the dollar and the other majors?

Hot growth

China has exploded onto the global economic scene in recent years. With a population of nearly 1.3 billion people, China's huge demand for raw materials as it strives to produce new goods for its burgeoning middle class has helped support tremendous price increases in many global commodity markets. Impressive gross domestic product (GDP) numbers have rolled out of China in recent years, with most analysts believing final growth numbers came in around 9.3 percent in 2004.

Amid concerns of potential overheating late last year, the Chinese government hiked interest rates — for the first time in nine years — by 0.27 percent, bringing its benchmark lending rate to 5.58 percent.

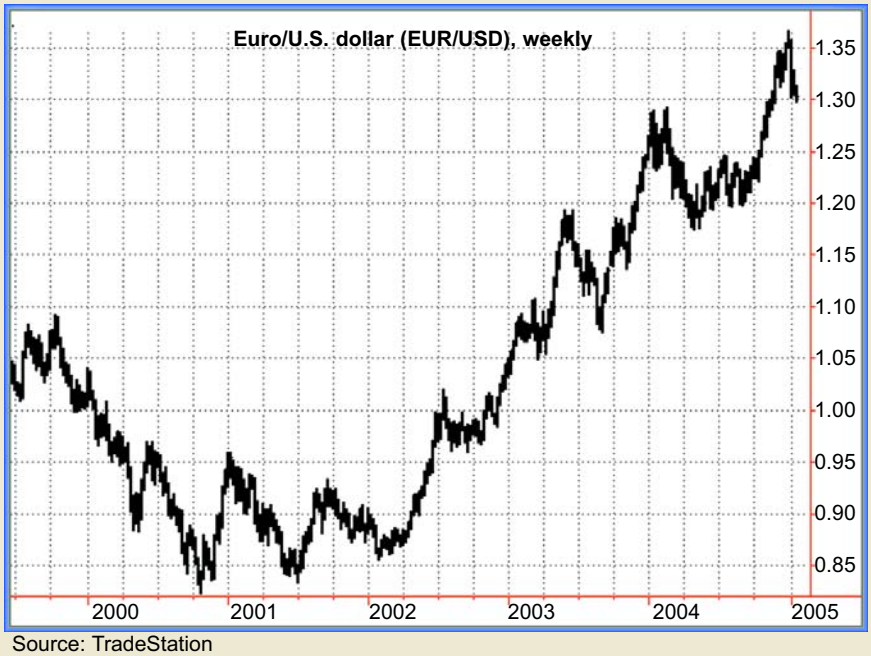
"For a while last year, everyone was worried about a [growth] crash," says Jim Glassman, senior economist at J.P. Morgan Chase in New York. "We don't think those fears make sense."

While a modest slowdown is forecast for 2005, economists still expect growth in the 8.0 to 8.5 percent region for China this year. China is on a rapid growth path.

Much has been written on the hard-working nature of the Chinese, which

FIGURE 1 — DOLLAR DOWN (EURO UP)

Despite having bounced back in recent weeks, the dollar's weakness is evidenced by the EUR/USD long-term uptrend. Some analysts argue a revaluation of the Chinese renminbi could shift capital flows away from Europe and into Asia, which would be bearish for the Euro and bullish for many Asian currencies.



Source: TradeStation

will likely play into speculation regarding the future growth prospects of this nation.

"[The Chinese] are some of the most industrious and financially aggressive people in the world," says Brian Dolan, director of research at Gain Capital. "A lot of them are worker bees where everyone has two jobs. That economy is not going to experience a slowdown of any consequence for many years to come."

The peg

Looking at the currency exchange, however, many in the U.S. and Europe have long argued the renminbi is seriously undervalued, which gives Chinese exporters a strong advantage in the global marketplace.

The Chinese renminbi exchange rate has been pegged to the U.S. dollar at near 8.28/8.30 renminbi (CNY) to the U.S. dollar for the past decade. U.S. government officials have pushed for a revaluation since September 2003. The U.S. has criticized the peg at times, as renminbi appreciation could potentially help trim the mammoth U.S. account deficit.

Why does this matter? Some market watchers have said China's currency peg to the U.S. dollar prevents correction of the U.S. trade imbalance. After all, as the dollar continues to weaken vs. the Euro and other majors, the renminbi falls with it. This helps China maintain an advantage in the world marketplace.

"The growth engine (for China) remained in the export sector in 2004," says John Cairns, head of Asia research for Ideaglobal in Singapore.

Glassman agrees.

"[Continued exporting strength] is a safety net for China, and it's a driving force for much of their growth."

Glassman also notes that U.S. imports about $120 billion annually from China.

Pressure to revalue

Nonetheless, pressure is building in the international community for China to open its currency to market forces.

Throughout 2004, amid continuing weakness in the greenback, governments around the world pointed to the Chinese renminbi's peg to the U.S. dollar as a potentially destabilizing global economic force.

"China is moving from being a small closed economy, where a forex peg is suitable, to a large open economy where a flexible exchange rate is needed," says Cairns. "China is already by far the largest economy in the world with a U.S. dollar peg."

With the U.S. dollar in a massive bear market in recent years, falling from around $0.83 vs. the Euro to around $1.36 in late 2004, the renminbi has been depreciating along with it.

"The Chinese renminbi is undervalued," says Cairns. "The current account balance was 44 billion in 2003 and rose to an estimated $55 billion in 2004 and should hit as much as $65 billion this year. Combined with massive capital inflows, this implies the authorities have to buy more than a hundred billion U.S. dollars a year to keep the peg intact. This, in turn, injects liquidity into the monetary system, leading to much-too-rapid monetary growth."

Europe has been in favor of a revaluation, if only to relieve some of the upward pressure off the Euro, which has been in a massive bull market vs. the dollar since 2002 (see the weekly EUR/USD chart in Figure 1).

Analysts and traders have a wide range of views on potential revaluation of the renminbi. Some economists believe a modest revaluation can be expected in the first half of 2005, while others believe the Chinese will refuse to be pressured into a currency shift.

Won't bow to pressure

Those who contend a revaluation is unlikely in the near term point out that China is benefiting from the peg.

"They could always revalue their currency but what would be the point?" says Glassman. "By linking to the dollar they can offer a stable currency, which is attractive. They can open their economy and say Europeans and Americans are welcome to build factories here. Also, it enables them to become an export platform for the American market and sends them on the road to development.

"[Revaluation] won't happen if everyone keeps asking them to do it. China will only do it if it fits into their long-term plan. It's a very closed system — outsiders aren't allowed in. It's not our choice."

Tom Rogers, senior currency analyst at Thomson Financial, points to the long history of the Chinese as successful traders, going back to the days of the Silk Road.

"There is not much reason for them to change," he says. "I know what the stick is — the international community. But what's the carrot for China to revalue their economy? The Chinese are very good traders. They aren't going to do it without getting something in return. Unless they get some sort of G8 membership or military cooperation pact, it's not going to happen."

The Great Wall

Remember, also, that China is the country that built the Great Wall beginning more than 2,500 years ago to keep out potential invaders. More than 1,500 miles long, it is the only man-made structure that can be seen from outer space.

As Gain Capital's Dolan notes, it is important to view the currency conundrum within the context of the cultural differences that exist between the East and the West.

"They've said they won't make any changes while the rest of the world is breathing down their back," he says.

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"These are the same people who built the Great Wall over several hundred years. Time is on their side. I wouldn't expect any sort of revaluation this year at all."

Modest widening of the band

Others, however, believe a revaluation could arrive scene fairly soon.

"We think the best window of opportunity in the next 12 to 18 months is the first half of 2005," says Kathleen Stephansen, director of global economic research at Credit Suisse First Boston.

There are two major ways the Chinese could revalue their currency. The first is to create a currency basket target or to simply create a valuation band for the renminbi to fluctuate in vs. the dollar. Because of "technical difficulties" surrounding a currency basket target, most analysts believe the more likely scenario would be to create a 3- to 5-percent band for the renminbi to float in.

If this were to occur, it would most likely arrive in the form of an announcement from the Chinese government. One morning, currency traders would simply awaken to the news that a band had been created. The initial announcement, of course, would likely create at least an initial volatility surge in the global forex market.

Stephansen does concede, however, that a revaluation of this nature "won't mean a great deal. Appreciation will be relatively small."

Bob Lynch, currency analyst at BNP Paribas in New York, called the odds 70 to 30 that a revaluation would take place in the first half of 2005, and John Rothsfield, currency strategist at Bank of America, agrees.

"In our view, we think they will give in and do a reval in the first half," he says. "We think it will most likely be a first step."

Bank of America expects a modest band to form around the renminbi/dollar, which would allow the renminbi to appreciate to the 8.03/dollar area.

Nonetheless, Rothsfield also admits that a 3-percent band "would pretty much be symbolic. It wouldn't have much of an economic impact." However, he believes "China is buying into the idea they need to bear some of the burden to keep the global situation stable, in relation to the dollar's losses vs. the Euro."

Alan Ruskin, research director at 4Cast Inc., is another analyst who believes in the possibility of a near-term revaluation.

"At some point in the first half of this year, we will get some kind of adjustment," he says. "China will at some stage adjust the exchange rate moderately."

He believes a 5- to 10-percent band around the dollar would be the most likely scenario. While such a move "would open the door to Asian currency flexibility, an adjustment [of that type] would be too small to make a difference.

"It will usher in a new era," he concludes. "But, I don't think that new era will start with a bang."

A Chinese renminbi revaluation would likely result in the appreciation of a number of other Asian pcurrencies, including those from Japan, Singapore, South Korea and Thailand.

The "reval" trade: Sell Euro, buy Asia

The bottom line for currency traders, of course, is what the impact will be in the global currency markets if a revaluation occurs. Thomson Financial's Rogers says a revaluation could mean "the end of the dollar sell-off against the European currencies." In fact, he says the big play would be to sell Europe and buy Asian currencies.

"There will be a big asset shift in that direction," he says.

Analysts agree a Chinese revaluation would likely result in the appreciation of a number of other Asian currencies, including those from Japan, Singapore, South Korea and Thailand.

Cairns says a revaluation would likely "trigger a fresh wave of speculative inflow into the Asian currencies — at the expense of the dollar. Asia, rather than Europe, should bear the brunt of such an adjustment, since many Asian economies have been attempting to target their currencies against the Chinese renminbi rather than the dollar. We feel this would turn the Euro/yen rate lower — a reversal of price action over the last two years."

Rothsfield agreed that a big play off a reval scenario could be to sell the Euro and buy the Japanese yen.

The bottom line is that China will be the leader for other Asian nations.

"The region as a whole will revalue based on what China does," Dolan says.

Given the huge long-term implications of this scenario, forex traders will need to keep their eyes and ears open in 2005 and be prepared to adjust to an asset-allocation shift away from Europe and into Asia.

Key meetings

Global currency markets will likely see positioning around these key meetings in 2005 as traders watch for news or signals about potential valuation shifts:

G7 Finance Minister and Central Bank Governors Meetings
- London Feb. 4-5
- June 10-11

Asia-Pacific Economic Cooperation (APEC) Finance Ministers Meeting
- Sept. 6-9

Related Reading

"The Great Global Imbalance Hoax," by Barbara Rockefeller, *Currency Trader*, December 2004

Currency trading continues to expand

Volume surges in CME products for 2004

The Chicago Mercantile Exchange (CME) said 2004 marked the fifth consecutive year that volume on futures transactions reached record levels, with electronic trading and currency contracts playing a significant part in the growth.

The nation's largest futures exchange posted annual volume of more than 787 million contracts, with average daily volume up 26 percent year-over-year to more than 3.1 million contracts. Volume on the CME Globex electronic trading platform surged 71 percent on the year to more than 451 million contracts, with average daily volume of nearly 1.8 million.

In a statement, the CME said it set annual volume records in all major groups. Average daily volume in its interest rate products hit more than 1.7 million contracts, up 38 percent from last year. Eurodollar trading on CME Globex grew from 150,000 contracts per day during the first quarter to 855,000 per day during the fourth quarter — representing 72 percent of total CME Eurodollar volume.

"The continued growth in electronic trading — which reached 67 percent of total volume during the fourth quarter — plus our expansion overseas through the successful execution of a number of strategic initiatives, have made our markets more accessible globally to a broader range of market users," said Chicago Mercantile Chairman Terry Duffy in a statement. "What we accomplished in 2004 demonstrates the effectiveness of our growth strategy and lays the groundwork for further progress in 2005."

Despite the normal year-end slowdown, the CME said overall fourth-quarter trading activity remained strong, with average daily volume of almost 3.1 million contracts, up 33 percent from the same period in 2003. Leading the increase was a 79 percent rise in foreign exchange trading, averaging 252,000 contracts per day, and a 42 percent jump in interest rate products, averaging more than 1.65 million contracts per day.

Average daily volume for December was more than 2.8 million contracts, up 27 percent from year-ago levels. CME foreign exchange products had the highest volume month ever, with more than 312,000 contracts per day, up 84 percent from December 2003. Interest rate products grew 29 percent and commodities grew 21 percent compared to the same month a year ago. Overall electronic trading on CME Globex was up 99 percent in December compared to year-ago levels.

CURRENCY FUTURES SNAPSHOT

as of 1/28/05

The information does NOT constitute trade signals. It is intended only to provide a brief synopsis of each market's liquidity, direction and levels of momentum and volatility. See the legend for explanations of the different fields.

Contract	Sym	Exch	Vol	OI	10-day move	% rank	20-day move	% rank	60-day move	% rank	Volatility ratio/rank
*Euro FX***	6E	CME (Globex)	116.1	137.9	-0.42%	11%	-3.76%	78%	1.46%	22%	.09 / 0%
*Australian dollar***	6A	CME (Globex)	9.6	63.6	2.13%	89%	-0.94%	33%	2.27%	31%	.27 / 60%
*Canadian dollar**	CD	CME	25.0	66.8	-3.09%	89%	-2.94%	81%	-1.48%	67%	.22 / 36%
*British pound**	BP	CME	19.0	72.1	0.51%	67%	-1.76%	29%	2.83%	34%	.17 / 14%
*Swiss franc**	SF	CME	20.2	54.5	-1.07%	18%	-4.78%	94%	1.49%	9%	.08 / 0%
*Japanese yen**	JY	CME	35.4	137.9	-0.94%	71%	-0.52%	57%	3.00%	26%	.22 / 32%
*Mexican peso**	MP	CME	12.2	75.8	-0.20%	0%	-0.20%	12%	2.35%	88%	.19 / 0%
Euro/Japanese yen cross rate	EJ	NYBOT	1.4	19.6	-0.29%	0%	-3.91%	77%	-1.31%	71%	.31 / 7%
U.S. dollar index	DX	NYBOT	2.8	19.5	1.16%	38%	3.64%	94%	-1.30%	17%	.10 / 0%
Euro/Swiss franc cross rate	RZ	NYBOT	0.4	8.9	-0.17%	60%	0.29%	21%	1.16%	48%	.21 / 10%

Note: Contracts marked with * or ** have both pit-traded and electronic contracts that are traded through the CME's Globex electronic platform. In these cases, we listed the contract with the highest volume -- * indicates the pit-traded contract had larger volume; ** indicates the electronic contract had larger volume.

LEGEND:

Sym: Ticker symbol.

Vol: 30-day average daily volume, in thousands.

OI: Open interest, in thousands.

10-day move: The percentage price move from the close 10 days ago to today's close.

20-day move: The percentage price move from the close 20 days ago to today's close.

60-day move: The percentage price move from the close 60 days ago to today's close.

The "% Rank" fields for each time window (10-day moves, 20-day moves, etc.) show the percentile rank of the most recent move to a certain number of the previous moves of the same size and in the same direction. For example, the "% Rank" for 10-day move shows how the most recent 10-day move compares to the past twenty 10-day moves; for the 20-day move, the "% Rank" field shows how the most recent 20-day move compares to the past sixty 20-day moves; for the 60-day move, the "% Rank" field shows how the most recent 60-day move compares to the past one-hundred-twenty 60-day moves. A reading of 100% means the current reading is larger than all the past readings, while a reading of 0% means the current reading is lower than the previous readings. These figures provide perspective for determining how relatively large or small the most recent price move is compared to past price moves.

Volatility ratio/rank: The ratio is the short-term volatility (10-day standard deviation of prices) divided by the long-term volatility (100-day standard deviation of prices). The rank is the percentile rank of the volatility ratio over the past 60 days.

The Golden Goose Rule
(or, why the G7 is irrelevant)

As the perception of the U.S. economic situation undergoes a transformation, the implications for the dollar and forex exchange as a whole are enormous. Traders should prepare themselves for several scenarios.

BY BARBARA ROCKEFELLER

In a transforming moment, the foreign exchange market is reconsidering what its driving forces should be. The analysis emerging over the next few weeks is going to color the entire year, and perhaps beyond.

In early February, the Group of Seven (G7) is going to hold one of its two yearly meetings. The G7 host this time, Great Britain, has invited China to attend. Most commentators expect the G7 to put pressure on China to revalue the renmimbi, which would have a small effect on reducing the U.S. trade deficit with China, but a bigger effect if other Asian countries followed suit. But most commentators also expect China will politely refuse, on the perfectly true grounds that its financial system is not yet big or mature enough to handle free market interest rates and exchange rates.

If the G7 were being held while the dollar was still falling, before January 3, China's refusal would have been dollar-negative. After all, the high and rising U.S. trade deficit with China is a key reason the dollar has fallen over the past year.

But this time it will be different, because our understanding of the U.S. economic situation is undergoing a transformation from seeing the glass as half-empty to seeing it as half-full — even a little more than half-full.

FX Economics 101: Deficits and downtrends

In a nutshell, the dollar has supposedly been on a downtrend for the past three years because of what everyone calls an "unsustainable" current account deficit. If you pointed out that "sustainability" has never been defined and agreed upon — and a link between the dollar and the deficit has not been proven — you were drowned out by solemn voices quoting enormous numbers, such as "$600 billion-plus," the amount of the 2004 deficit when all the data finally comes in.

As a result of the deficit, the dollar was supposed to fall by 20 to 40 percent to boost exports and inhibit

imports, which would bring the deficit back down to an acceptable level, say $300 billion, or 3 percent of GDP instead of 6 percent. Meanwhile, foreign capital inflows into the U.S. would be discouraged by the falling dollar, creating a shortfall, which would in turn trigger a crisis that would force the Fed to print money or raise interest rates at an accelerated pace, or both.

Raising rates to lure foreign capital would have the side effect of slowing domestic growth, possibly to near-recession levels, which would be counter-productive — foreign exporters would get a higher rate of return on their money, but they would be turning off the spigot of U.S. demand for their exports. Therefore, foreigners should not kill the goose that lays the golden egg; they should continue to reinvest their export proceeds in U.S. markets.

Critics say the U.S. is vulnerable to foreigners, especially important central banks in Japan, China, South Korea, and Taiwan, which might lose their taste for U.S. paper as the dollar trends downward. Fed Chairman Alan Greenspan voiced doubt about the sustainability of the foreign appetite for U.S. portfolio assets. But in practice, the one with the power is the biggest debtor, not the creditor — just ask Donald Trump, who can all but name his terms to the big banks every time he goes bankrupt.

The U.S. government still wants the dollar to decline to promote its exports, not only in industrial products but in the one area the U.S. has a tremendous competitive advantage — agriculture. Last year will be the first in more than 60 years the U.S. did not run a surplus on agricultural products. Agriculture is like a touchstone for the trade balance. Autos, airplanes, high tech — they can wax and wane, but in agriculture the U.S. dollar has to be at a level to sustain a net export balance.

The foreign exchange market is starting to operate on this new understanding: If exporter nations don't recycle their dollars back to the U.S. as equilibrating capital inflow, they will kill the goose that is laying the golden egg. And yet, the U.S. officially wants the dollar to stay in a downtrend so the underlying cause of the trade imbalance is rectified, at least somewhat. Surplus countries that are recycling their dollars back into U.S. paper have to accept the currency downtrend; in return, the U.S. will give them a better real rate of return than they can get elsewhere, and a rising rate of return, to boot.

Power belongs to the biggest debtor, not the creditor — just ask Donald Trump, who can all but name his terms to the big banks every time he goes bankrupt.

FX Economics 102: Capital flows and feeding the goose

In "Trends, retracements and news in foreign exchange" (*Currency Trader*, January 2005), I wrote that the monthly net capital inflow is the single most important piece of data in the FX market today.

When the capital flow report showed a shortfall in December (for the month of October), the market rushed to sell dollars. When the January report came out — showing a big surplus — the dollar was already rising.

The latest TICS (Treasury International Capital System) report fell on receptive ears. It showed net portfolio investment rose to $81 billion in November from a revised $48.3 billion in October and $61.1 billion in September. Net portfolio flows into the U.S. have averaged $68.5 billion per month in 2004, compared to $57 billion in 2003 and $47.9 billion in 2002. The total net inflow of portfolio investment into the U.S. during the first eleven months of 2004 increased to $753.6 billion in 2004 from $683.6 billion during the first eleven months of 2003, or a 10 percent increase.

The U.S. can clearly attract the capital to fund the current account deficit even with a falling dollar and a yield differential over the closest big competitor (Germany) in the 10-year note of only around 50 basis points. We call this new understanding the "Golden Goose" rule. It's different from the "too big to fail" argument, which implies the creditor accepts a raw deal for the sake of getting any deal at all. The Golden Goose rule means the surplus countries "stuck" with U.S. paper are actually getting something well worth having.

In fact (to mix up the bird metaphor a little), they are killing two birds with one stone. First, they are keeping their citizens employed making products to export to the U.S., which is not a negligible benefit in places where ordinary workers are still saving up for indoor plumbing. Second, they are getting a good real rate of return on their portfolio investments — better than they could in Japan or in Europe, if less than in the U.K., Canada, and Australia.

Not only is it a good real rate of return, it's a rising rate of return. They know that because Mr. Greenspan promised it to them, rate increases will occur at a "measured pace" for an additional 1 percent or more over the next six months. There is nothing unpleasant or involuntary about this deal.

There is one hard-to-swallow — and potentially dangerous — aspect to this, though. The Fed has done its job too

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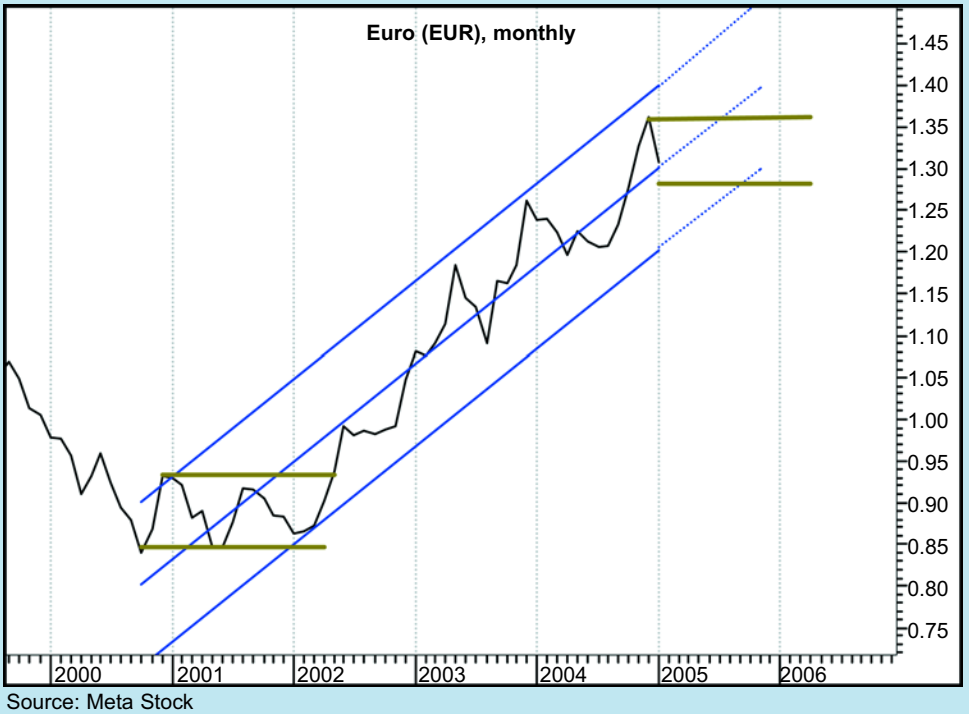
FIGURE 1 — MORE TREND, OR EMERGING RANGE?

The blue lines are a linear regression channel defining the euro/dollar (EUR/USD) rate's long-term uptrend. The horizontal lines depict a potential trading range.



Source: Meta Stock

well: The bond market is not pricing in inflation to the yield on the longer maturity paper, such as the 10-year note. In fact, the yield has fallen progressively lower since the Fed started raising rates in June 2004.

Because we must assume foreign investors are rational, we must also assume they are parking their dollars in shorter-term accounts and instruments. By definition, money that can be withdrawn on a moment's notice (i.e., 30, 60, or 90 days) is "hot money." Therefore, the U.S. is vulnerable to a rapid and punishing withdrawal in the event of another shock like World Trade Center attacks.

This is controllable, in that the Fed can suspend withdrawals, although that would be a last-resort measure. Still, it's something to keep in the back of your mind. Hot money is associated with banana republics, not with the mightiest industrial and military power on the planet.

Some people just don't get it

Not everyone sees it this way — yet. The conventional thinking — that the U.S. is in trouble, rather than in the catbird seat, because of the deficit — is still embraced by many. A London outfit named Central Banking Publications has just published its first annual review of central bank management practices, named Reserve Management Trends 2005 (http://www.centralbanking.co.uk/). The report surveys over 60 managers who control $1.7 trillion in reserves. It found that "Central banks are stockpiling reserves at an unprecedented rate. Their war-chest of foreign exchange, now worth almost $4 trillion, has risen by 65 percent in the last four years alone." The 65 central banks that participated control 45 percent of global reserves, with "up to $250 billion under management," meaning neither China nor Japan were part of the survey.

Some of the main findings: At the end of 2003, central banks held 70 percent of reserves in dollar-denominated assets, financing over 80 percent of the current account deficit that year. However, "The U.S. cannot take support for the dollar for granted…Central banks' enthusiasm for the dollar seems to be cooling off," according to the survey.

Nearly half said reserves growth will slow from the recent torrid pace to only about 20 percent over the next four years. Because the income from reserves is important to just about all of them, the dollar's decline makes it less attractive on a total yield basis, and in some cases, the drop has led to negative real returns. The conclusion is that the central banks will increasingly prefer a stable currency like the euro.

But wait a minute. If the dollar is unstable, why is the euro not equally unstable? After all, unless you are looking at one of the trade-weighted dollar indices, we measure the level and the volatility of the dollar in terms of the euro, which by definition has varied exactly as much as the dollar.

> The Golden Goose rule means the surplus countries "stuck" with U.S. paper are actually getting something well worth having.

Also, it's questionable whether the central bank managers really do care about the net income they receive on their dollar investments. Since when is a central bank a "profit center" within a government? In practice, central banks tend to be profitable, but they are also extremely risk-averse. Reserves are a nation's net savings,

and it's hard to think of central bank managers leaping from an ultra-conservative management style into hedge fund-type activities.

This is not to say the central banks are not diversifying. But to imagine that central bank diversification is going to have a big effect on the day-to-day movements of the FX market is to exaggerate for the sake of sensationalism.

United Nations report, through the first three quarters of 2004, FDI rose 6 percent from 2003 to $612 billion, the first gain in four years.

As we would expect, developing countries got the biggest chunk, up 48 percent from the year before to $255 billion, of which Asia got $166 billion. Of that, China took in $62 billion (and that's only what's reported). Together, China and Hong Kong got 60 percent of overall FDI in Asia.

Foreign direct investment in industrialized countries fell 16 percent to $321 billion, with FDI into Europe down 46 percent to $165 billion. FDI in the U.K. climbed 160 percent to $55 billion, while the U.S. enjoyed a 400-percent gain (to $121 billion dollars) in foreign direct investment, outstripping China to regain the status of the top FDI recipient. Japan, despite efforts to attract investment, saw only a 17 percent rise and only $7 billion.

Balancing the arguments

One theory says the dollar must fall because of the current account deficit. A different theory says the dollar doesn't have to fall as long as foreigners are willing to recycle their export proceeds back into dollar paper (something they just demonstrated their willingness to do in the latest capital flow report).

Meanwhile, interest rates are rising, which can only keep the capital inflow going. This is an equilibrium situation. Traders, of course, hate equilibrium. It deprives them of profit opportunity. They will be casting around for reasons (read: excuses) to push the market one way or the other. Possible "factors" include the price of oil, political turmoil, and statements from important government officials, especially the Fed, disclosing what they want. Does the U.S. government really want a lower dollar? It may be pressed to the wall to say so.

Introducing a technical constraint

If equilibrium is what we are about to see in the FX market, we have to ask what shape it will take on the chart. Last summer traders witnessed a prolonged sideways trading range. That could happen again for a large part of this year, too. The FX market is not always in trending mode.

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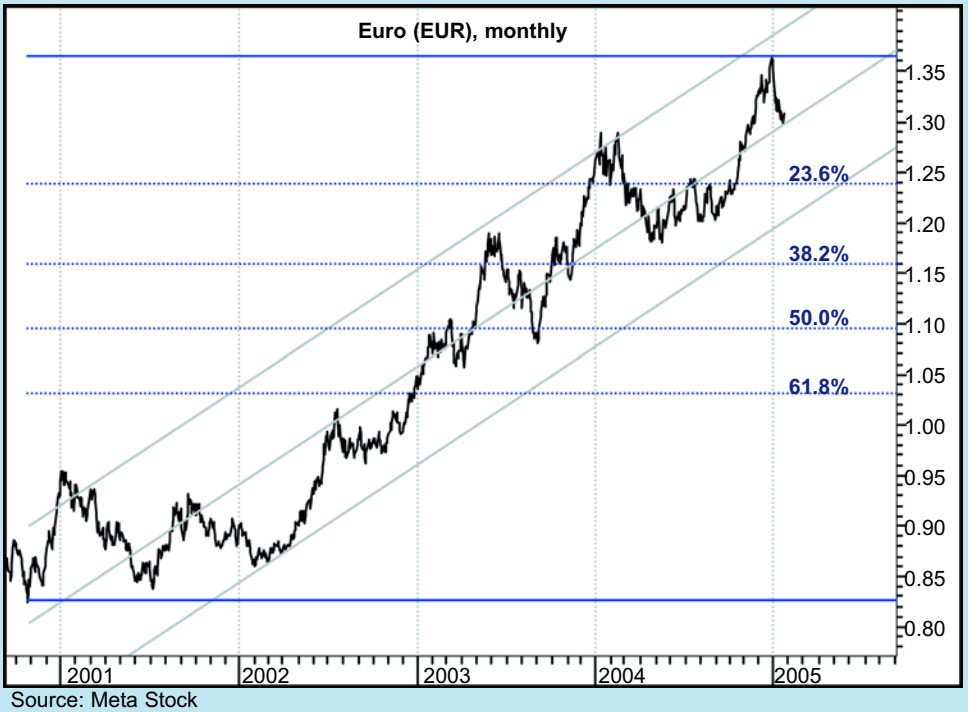
> In the first three quarters of 2004, the U.S. experienced a 400-percent gain in foreign direct investment, outstripping China to regain the status of the top FDI recipient.

Meanwhile, something else is going on that constitutes a vote on the sustainability of the U.S. economy and the relative irrelevance of the short-term level of the dollar. Foreign direct investment (FDI), which is almost exclusively from the private sector, is on the rise again. According to a new

FIGURE 2 — RETRACEMENT SCENARIO 1

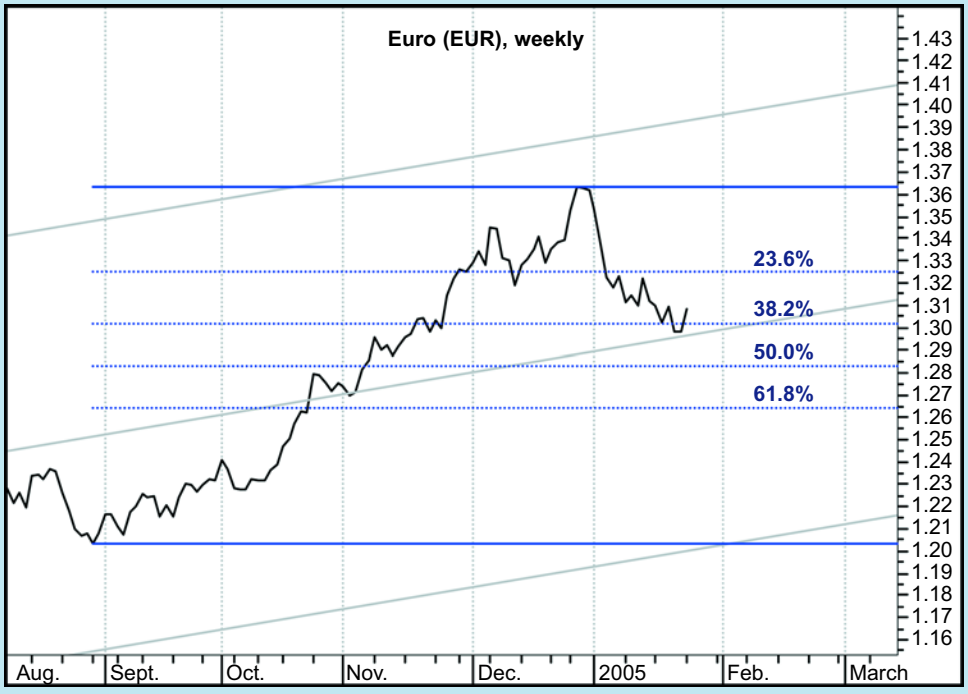
Calculating Fibonacci retracement levels of the uptrend from Figure 1 forecasts a 50-percent retracement to around 109.50.



Source: Meta Stock

FIGURE 3 — RETRACEMENT SCENARIO 2

A 50-percent retracement of the rally that began at the end of August 2004 projects a downside target of 1.2638 in the EUR/USD.



Source: Meta Stock

But before that happens, we need a resolution of the thinking on the current price action. The general feeling is the euro rose over three years, and is now correcting downward on less-negative feelings about the dollar and the U.S. place in the global economy.

Figure 1 shows the big-picture euro/dollar (EUR/USD) rise from the October 2000 low of 82.50. The normal high-low range over several months tends to be .20. We would have to see a downside breakout below 1.2590 (the bottom of the range projected by the regression channel — dotted lines) at mid-year to be convinced the euro uptrend is over; it's just as easy to envision a move to 1.4560 (the top of the channel extension). The middle line is the linear regression, which extends to 1.3570 at the end of June 2005. So what would a sideways movement look like and where would it start? If we are unlucky, it could look like the horizontal lines in Figure 1, which would be a replay of 2001.

In the FX market, a high percentage of analysts like the Elliott Wave theory of price development, and many also like the Fibonacci number sequence as a guide to counting the depth of corrective waves. Everyone can see that price moves look like waves, but I've never had much luck counting waves.

Somewhat more impressive is the Fibonacci retracement concept, which implies after a big impulse wave in one direction, the price will retrace part of its move in the other direction. The retracement will be 23.6 percent, 38.2 percent, 50 percent, or 61.8 percent of the original move. The problem is deciding when the original move starts.

Applying standard Fibonacci retracement lines forecasts a 50-percent retracement of the trend shown in Figure 1 to 109.50 or so (Figure 2). This move would not be a new trend, just a retracement. If you are an economist or a very long-term investor (Warren Buffett, perhaps) you might be willing to consider a move from 1.36 to 1.10 as only a "retracement." But if you are a mere mortal or an actual trader, it would certainly feel like something else.

Now consider Figure 3. This applies the retracement concept to the trend starting at the late-August 2004 low. This chart is a different kettle of fish. On this version, a 50-percent retracement produces a downside target of 1.2638, whereupon (if the euro uptrend is still in place) we expect the temporary, "corrective" dollar rally to end. There are a dozen other ways to show retracement levels. If and when we do get a return to the euro up move, you can bet that you will see analysts claiming to have picked the right retracement level all along.

This kind of chart work is why you see euro forecasts of 1.05 rubbing elbows with forecasts of 1.45. Both can be found on the charts using widely-used charting methods. We tend to think the Golden Goose rule is a powerful concept and that it will throw dust in the face of all the retracement crowds.

If the Golden Goose rule is right, and the market is coming to tolerate the global imbalance, we will get the sideways range-trading market shown in Figure 1. Trading the currency market is about to get very difficult.

For information on the author see p. 8.

Related reading

"The great global imbalance hoax," by Barbara Rockefeller. *Currency Trader*, December 2004.

"The current account deficit's impact on the U.S. dollar"

"What's on the horizon for the Chinese yuan?"

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Legend

CPI: Consumer Price Index
ECB: European Central Bank
FOMC: Federal Open Market Committee
GDP: Gross Domestic Product
ISM: Institute for Supply Management
PPI: Producer Price Index

1
U.S.: ISM report on business; FOMC meeting

Australia: Index of commodity prices

Japan: Account balances

2
U.S.: FOMC meeting

Japan: Monetary base

Germany: Retail turnover; employment

3
ECB: Governing council meeting

4
U.S.: Employment report

Germany: Orders received and manufacturing turnover

5

7
Australia: Official reserve assets; Statement on monetary policy

8
Germany: Production index

9
U.S.: Wholesale inventories

Great Britain: Monetary Policy Committee meeting

10
U.S.: Trade balance

Great Britain: Monetary Policy Committee meeting

Japan: Corporate goods price index

Germany: Foreign trade

11

12

14
Germany: Employment

Canada: Manufacturing survey

Japan: Balance of payments

Italy: Balance of payments

15
U.S.: Retail sales

Japan: Monetary survey

Great Britain: Consumer prices indices

16
Great Britain: Employment

17
U.S.: Leading indicators

ECB: Governing council meeting

18
U.S.: PPI

Canada: Wholesale trade

Great Britain: Capital issues

Germany: CPI; PPI; Bankruptcies

21
Canada: Retail trade

22
Canada: CPI; Leading indicators

Germany: National accounts

23
U.S.: CPI

Japan: Corporate service price index

24
U.S.: Durable goods

25
U.S.: GDP

Canada: Employment; Balance of international payments

26

28
Canada: GDP

Australia: International reserves and foreign currency liquidity

Italy: International reserves and foreign currency liquidity

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Volatility-based currency trading

Market volatility can be a complex subject, but understanding a few basic principles can help you implement strategies to capitalize on volatility extremes.

BY KATHY LIEN

Volatility-based trading approaches have traditionally been popular among hedge funds, commodity trading advisors, and other professional traders. There are many ways to gauge volatility (see "Related reading") and incorporate it in a trading strategy. Of the different ways to characterize and trade volatility, the best are based on the tendency of volatility to "revert to the mean."

The premise behind volatility mean reversion is that periods of extraordinarily high volatility should be followed by periods of lower, more normalized volatility. Similarly, periods of extraordinary low volatility should be followed by periods of higher, more normalized volatility. This tendency is reflected by the familiar progression of a market that meanders in a narrow trading range (a low-volatility condition), only to explode out of the consolidation and embark on a strong price trend (a high-volatility condition). Eventually, the price move exhausts itself, at which point volatility will again fall to a lower level.

We'll analyze the two simple methods for trading volatility in the forex market: inside days and short-term/long-term volatility comparisons.

Consecutive inside bars

An inside bar is a bar whose range is contained within the prior bar's range — that is, the bar's high and low do not exceed the previous bar's high and low (see Figure 1). They are easy to identify visually and should be one of the basic patterns traders should notice immediately.

Inside bars by definition have lower volatility — that is, less price movement — than their preceding bars, and successive inside bars reflect progressively shrinking volatility. Per the mean-reversion theory, the more inside bars, the higher likelihood of a volatility surge or a breakout scenario.

The following volatility trade can be implemented

FIGURE 1 — INSIDE BAR

Because they have lower highs and higher lows, inside bars by definition have lower volatility — i.e., less price movement — than the bars that precede them.

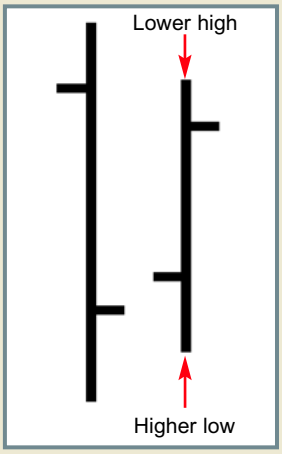
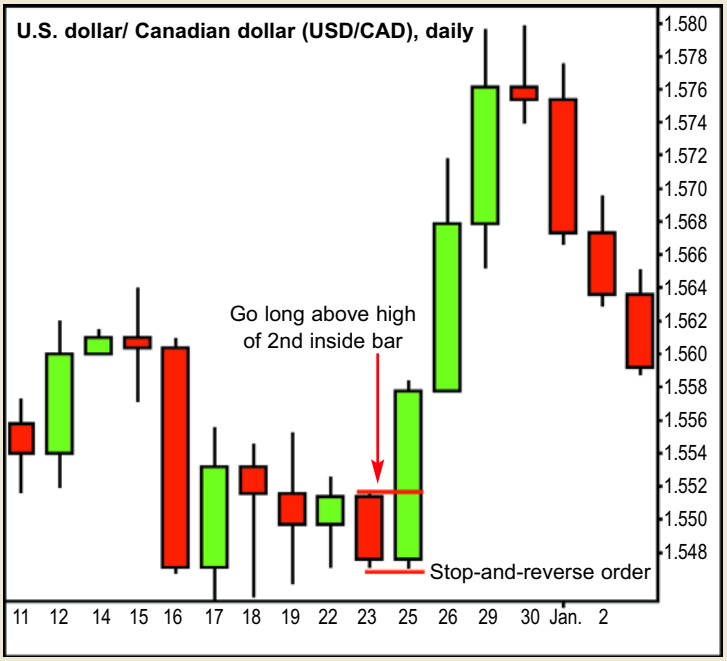


FIGURE 2 — LONG TRADE

A long trade is initiated and is placed above the high of the most recent inside bar, while the stop is placed below the low of the most recent inside bar.



Source: FXCM (www.fxcm.com)

FIGURE 3 — STOP AND REVERSE

Although a long trade was initially entered, the sharp down move triggered the stop-and-reverse order that was placed below the low of the second inside bar. The loss on the long position was around 60 pips, but the new short trade resulted in a much larger profit.

Source: FXCM (www.fxcm.com)

after at least two consecutive inside bars have formed. This type of strategy is best employed on daily charts; the longer the time frame, the more significant the potential breakout.

The strategy works for both longs or shorts. Although entry orders can be placed on both sides of the market, traders should use other tools to determine the bias for a particular trade. For example, if the inside days occur within a bullish chart pattern, such as a developing ascending triangle, this increases the likelihood of an upside breakout. On the other hand, if the inside days are developing within a descending triangle formation, this increases the likelihood of a downside breakout. Here are the rules for a long trade setup:

1. Buy above the high of the most recent inside bar.

2. Place a stop-and-reverse (SAR) order a few pips (approximately 5 to 10 pips, depending on the bid-ask spread) below the low of the most recent inside bar. The purpose of the SAR order is to reverse the position if the initial move turns out to be a false breakout.

3. If the position moves higher by the risk amount (the difference between the entry price and the stop price), sell half the position and replace the SAR order with a trailing stop.

4. If the SAR order is triggered after the entry, place a stop a few pips above the high of the most recent inside bar.

Short trades: For a short trade, the rules are the same except that you enter below the low of the most recent inside day and place an SAR order a few pips above the high of the most recent inside day.

Figure 2 shows two consecutive inside bars in the U.S. dollar/Canadian dollar (USD/CAD) rate. Applying the strategy, a buy order is placed above the high of the most recent inside bar, while a stop is placed below the low of the most recent inside bar. The long order is triggered and a 200-pip rally ensues with virtually no retracement.

Figure 3 shows a more complex trade example in which the SAR order is triggered. Because of the bullish implications of the ascending triangle that was forming when the two inside bars appeared, the long-trade entry rules were executed:

1. We placed an order to go long a few pips above the high (.7660) of the

continued on p. 26

Related reading

Other articles by Kathy Lien:

"Getting a lift from the carry trade," *Currency Trader*, October 2004.

"Forex trading: Understanding the currency market," *Active Trader*, July 2004.

You can purchase and download past Active Trader *articles at www.activetradermag.com/purchase_articles.htm*.

Other* Currency Trader *articles:

"True range"
An analysis of true range and average true range, which are simple volatility calculations.

Other* Active Trader *articles:

"Indicator Insight: Volatility index (VIX)," April 2001, p. 98.
A primer on the volatility index.

"Putting volatility to work," April 2001, p. 42.
A discussion of practical volatility analysis and trading techniques.

"Indicator Insight: Bollinger Bands," July 2003, p. 74.
A primer on Bollinger Bands.

"Technical Tool Insight: Inside days," January 2003, p. 88.

FIGURE 4 — OPTION IMPLIED VOLATILITIES

These current option implied volatilities (which represent percentages) are based upon a survey of interbank forex sources. When the current implied volatility is low relative to past benchmarks (e.g. one- and three-month implied volatilities), the odds of a volatility surge increase.

(IFR Forex Watch)
(FXO implied volumes)

	EUR/USD	USD/JPY	GBP/USD	USD/CHF	AUD/USD
1 week	8.50	8.90	8.00	9.40	10.25
1 month	9.40	9.15	8.45	10.30	10.80
2 months	9.60	9.00	8.55	10.50	10.80
3 months	9.90	9.15	8.75	10.80	10.90
6 months	10.40	9.20	9.00	11.30	11.05
1 year	10.55	9.20	9.20	11.50	11.05

	EUR/CHF	EUR/JPY	EUR/GBP	GBP/CHF	USD/CAD
1 week	3.25	8.15	5.90	6.85	8.50
1 month	3.20	8.70	6.15	7.05	9.05
2 months	3.30	8.75	6.35	7.15	8.90
3 months	3.40	8.95	6.50	7.30	8.85
6 months	3.60	9.15	6.90	7.50	8.80
1 year	3.85	9.35	7.10	7.65	8.75

Last updated 16:09 GMT, Nov. 15, 2004

Source: FXCM News Plug-in (www.fxcm.com)

most recent inside day. The order was triggered.

2. We placed an SAR order a few pips below the low of the most recent inside day at .7600 for a risk of approximately 60 pips. The SAR was triggered when the market broke out of the bottom of the triangle, and we sold the original long position and entered into a new short position.

3. When the market moved lower by the risk amount (60 pips), we sold half the position (at .7540). We then used a 30-pip trailing stop on the remaining position.

The low on April 14, 2004 was .7299, and we exited the remaining half of the position at .7329.

Volatility comparison

Currency option volatilities measure the rate and magnitude of the past and potential future changes in a currency's price, and they can be a useful tool for timing currency movements.

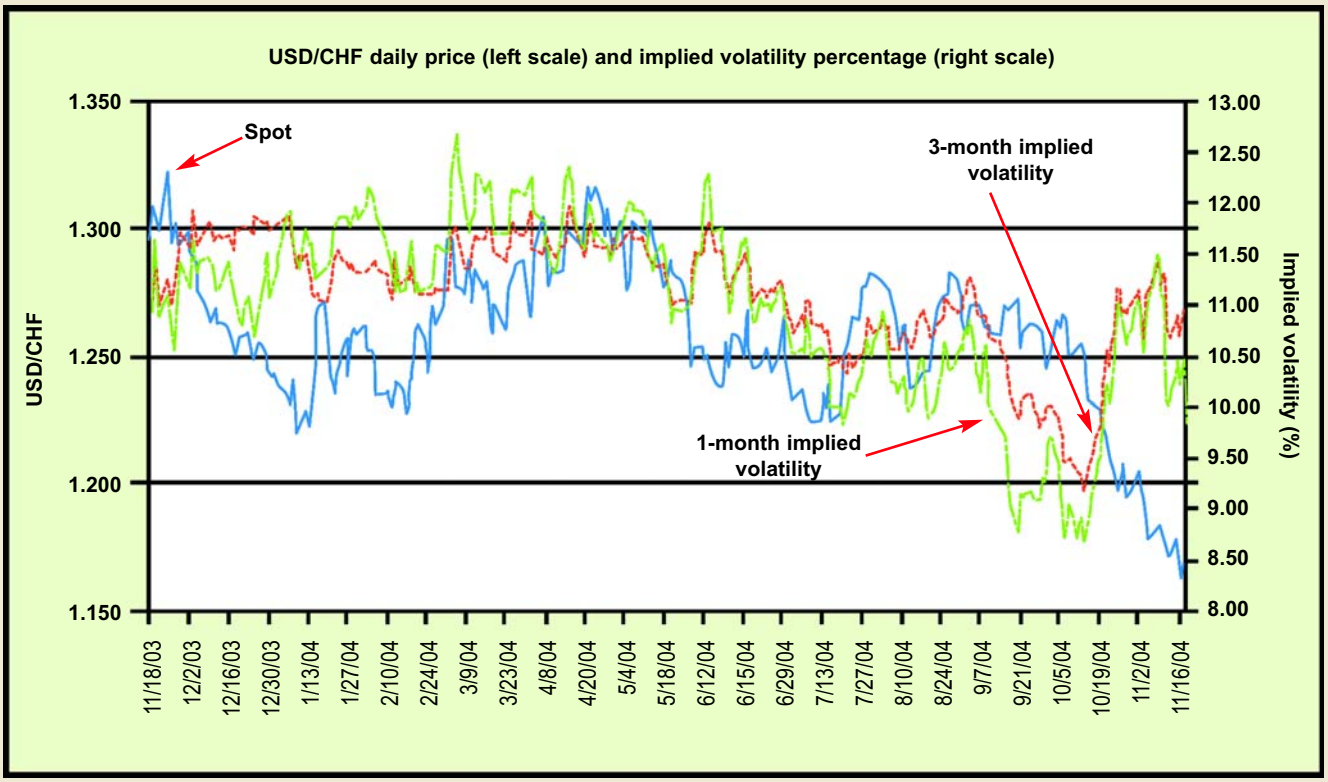
Implied option volatilities, which are reflected in option premiums, are the market's current estimate of the future fluctuation of a currency's price. Historical (or statistical) volatility, which reflects past price movement, is typically measured by calculating the annualized standard deviation of price changes over a given period (e.g., 20 days, 100 days).

Figure 4 shows only current option implied volatilities (which are based upon a survey of interbank sources). Traders implementing this strategy would need to keep a journal tracking historical implied volatilities. One-month and three-month implied volatilities are two of the most commonly benchmarked time frames.

When option volatilities are low, traders should look for potential breakouts. Current implied volatility should be at least 25 percent lower than historical implied volatility. (It is

FIGURE 5 — VOLATILITY SPIKES

Because implied volatilities can have long downward trends, traders should look for sharp volatility moves, not gradual ones. Here, the one-month volatility was below the three-month volatility for most of December 2003, which coincided with the development of sharp down moves in USD/CHF. But between Feb. 24 and March 9, 2004 the one-month volatility spiked above the three-month volatility, which coincided with a period of range trading.



Source: FXCM (www.fxcm.com)

best to measure against actual historical volatility, but that data is not always readily available.) Conversely, when option volatilities are high, traders should look for range trading opportunities.

Typically, when a currency trades in a range, its option volatility will decline, because by definition range trading means lack of movement. When option volatilities make a pronounced down move, it is usually a sign of a significant potential price move and upcoming trade opportunity.

This characteristic is very important for both range and breakout traders. Traders who usually sell at the tops of ranges and buy at the bottoms can use this approach to predict when their strategy could potentially stop working, because if volatility becomes very low, the likelihood of continued range trading decreases.

On the other hand, breakout traders can monitor option volatilities to make sure that they are not buying or selling into false breakouts. If volatility is at average levels, the likelihood of a false breakout increases. Alternatively, if volatility is very low, the probability of a real breakout is higher. However, traders must be careful because volatilities can have long downward trends, as they did between June and October 2002. Therefore, declining volatilities can sometimes be misleading. What traders need to look for is a sharp move in volatility, rather than a gradual one.

Figure 5 shows an example in the U.S. dollar/Swiss franc rate (USD/CHF). The blue line is price, the green line is the one-month (or short-term) volatility, and the red line is three-month (or longer-term) volatility. For most of December 2003 the one-month volatility was below the three-month volatility, which coincided with the development of sharp down moves in USD/CHF. Between Feb. 24, 2004 and March 9, 2004, the one-month volatility spiked above the three-month volatility, which coincided with a period of range trading.

All shapes and sizes

Volatility is expressed many ways — on different time frames and in terms of option prices and past price fluctuations in an underlying market. Understanding some simple volatility principles, such as mean reversion, can help you time trades when a volatility shift is likely to occur.

For information on the author see p. 8

Pivot points and candlesticks

Augmenting pivot point analysis with candlestick formations helps determine potential turning points in the forex market.

BY JOHN PERSON

Trade setups confirmed by independent techniques or tools — or those that occur simultaneously on different time frames — naturally carry more weight than those signaled by a single input. The trade examples outlined here combine pivot points with candlestick patterns to better pinpoint forex trade opportunities.

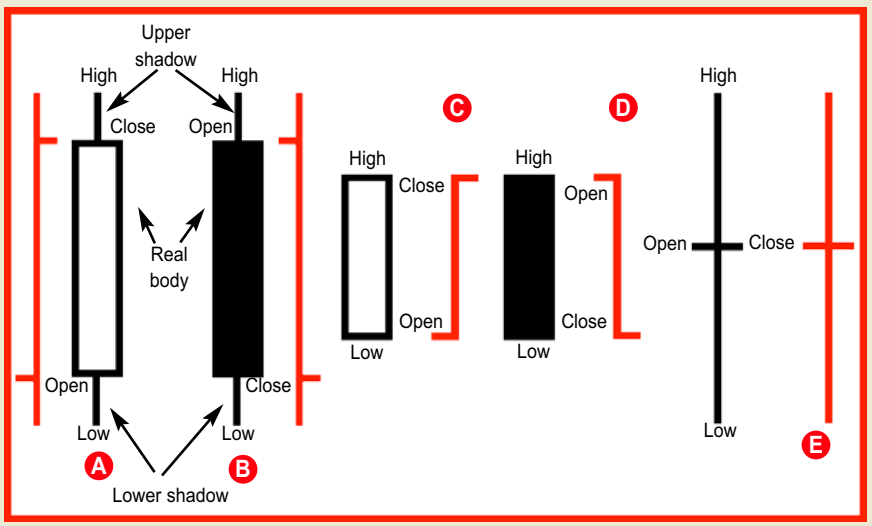
Pivot point analysis is based on mathematical calculations used to determine future support and resistance levels. The pivot point value is derived from the high, low and closing prices of the previous price bar, and is then added to and subtracted from the previous bar's reference points to determine support and resistance levels for future trading. The pivot point (PP) formula is:

1. PP = (H + L + C)/3
2. First resistance level (R1) = (PP*2) - L
3. Second resistance level (R2) = PP + (H - L)
4. First support level (S1) = (PP*2) - H
5. Second support level (S2) = PP - (H - L)

There is some debate about which value should be used for the closing price in the virtually 24-hour forex market. In forex, all trades must be settled within two business days, which is established at the close of banking business at 5 p.m. ET. As a result, this is the time typically used for the closing price.

FIGURE 1 — CANDLESTICKS

Candlesticks reflecting upward and downward momentum are shown alongside their bar chart counterparts.



Using pivot points

Some traders use the pivot numbers to estimate the upcoming high or low, or to simply identify a level at which a market might change direction on an intraday basis.

A popular pivot-point approach is to cover any short positions and go long at either of the two support levels, or

sell any long positions and go short at the projected resistance levels. Accordingly, while these price levels provide points at which to enter or exit the market, they also indicate where *not* to make trades. For example, you should not buy just below either of the resistance levels.

It is beneficial to use multiple time frames — e.g., monthly, weekly, and daily — to identify multiple pivot point support and resistance levels. A particular level has more significance when pivot points on two or more time frames coincide.

Combing pivot point levels with the price moves implied by candlestick patterns improves your odds of identifying favorable trade points.

Candlesticks

The components of a candlestick are derived from the same open, high, low, and close data that make up standard bar charts. The main component we are concerned with here is the relationship between the open and close of a session, which is called the candle's "body" or "real body." The color of a candlestick does not indicate whether it closed higher or lower than the preceding candle; rather, it reflects where the candle closed relative to the open.

In Figure 1, the trading period's high and low are represented by the highest and lowest points of the candlestick, while the session's open and close are represented by the top and bottom of the wider part of the candlestick. The thin lines at the tops and bottoms are called "shadows" (or wicks), and the wider parts are the real bodies. The candle is typically white (or hollow, or green) if the close was above the open and black (or red) if the close was below the open. Candle A closed higher than the open and candle B closed below the open. Candle C closed above the open — the open was the low price of the day, and the close was the high price of the day. Candle D illustrates the opposite condition. Finally, candle E opened and closed at the same price and is identical to its bar-chart equivalent.

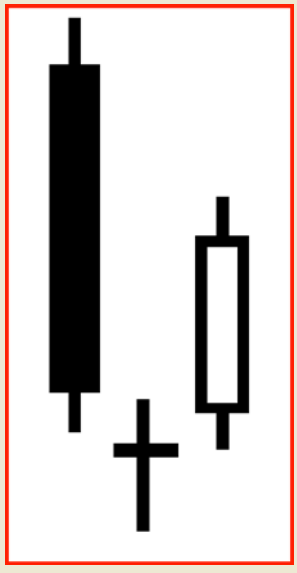
Doji-based patterns: Indecision and reversal

Candlesticks are designed to make bullish and bearish momentum more evident on a price chart. This can highlight certain patterns, such as the high-close doji, that help determine a change in market direction or reversal.

A doji is a candle that opens and closes at (or very near) the same price — look again at Candle E in Figure 1. Such candles indicate indecision or uncertainty. Both buyers and sellers have lost confidence from the time the market opens, as price has pushed both higher and lower, only to end up where it started. Indecision is the last thing you want to see in a trending market. Rejection or failure from a high or low is a sign potential changes in the market are on the horizon.

FIGURE 2 — THE MORNING DOJI STAR

A doji (middle candle) represents indecision. In the morning doji star pattern, this indecision marks the change from down move to up move.



In a strong downtrend, a market will usually close near its low as highly-capitalized traders hold or add to short positions overnight. If these big-money traders are not confident the market will close lower, the market may have the tendency to close back near the open.

Dojis sometimes appear as part of more reliable two- and three-candle formations, such as the morning star pattern, that highlight reversals. The basic morning star is a three-candle, bottom reversal pattern. When the pattern's middle candle is a doji, it is called a morning doji star, as shown in Figure 2.

The first candle has a long, black real body (a lower close than open); the second candle has a small body that gaps below the first candle's body. The third candle is a white candle (a higher close than open), and closes above the midpoint of the first candle's real body. The third candle's body may sometimes gap higher than the second candle's body, as is the case in Figure 2.

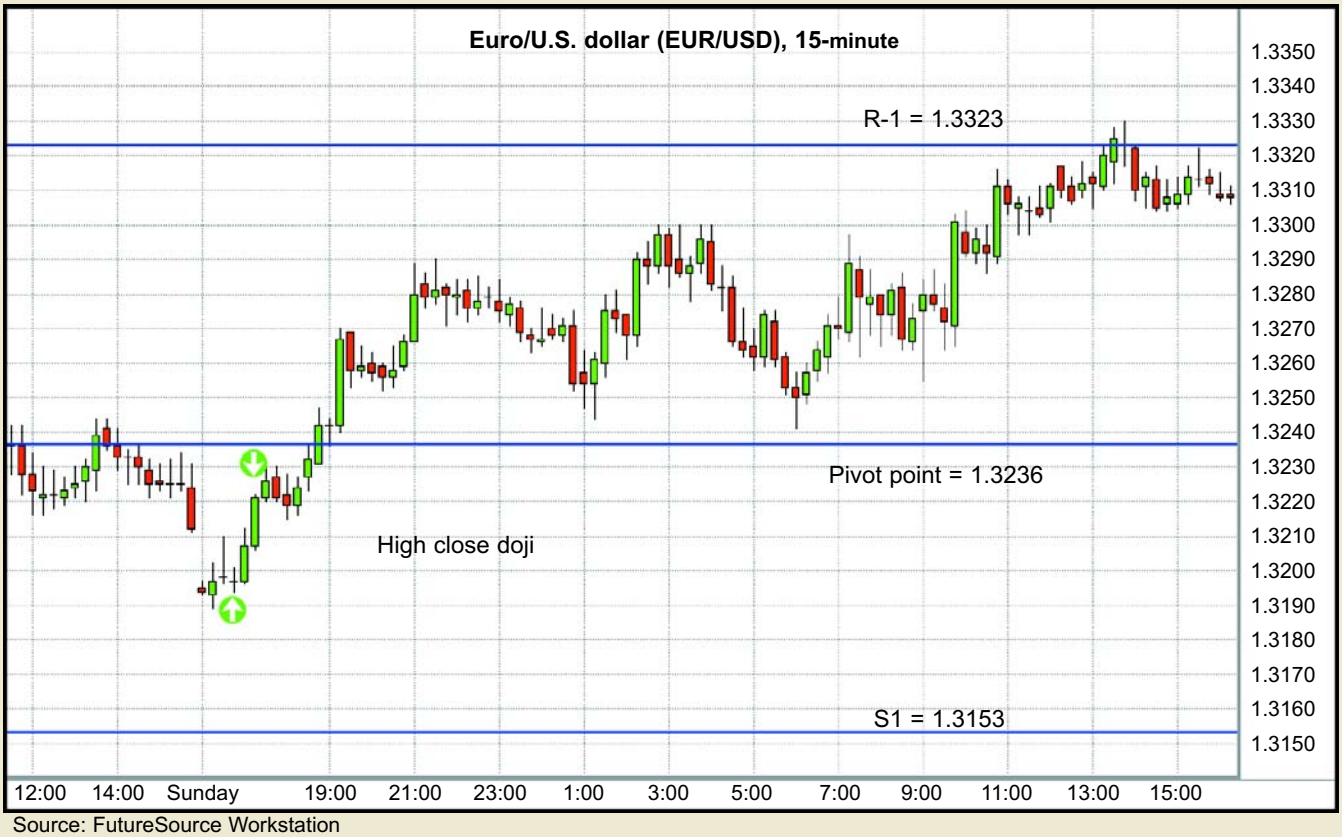
There are several variations to this textbook description. For example, the initial black candle might have a small real body and the real body of the long white candle might entirely engulf the long dark candle or simply just partially penetrate its real body. The most important thing to notice is what happens after the doji candle. A candle after a doji that closes above the doji's high confirms a directional change has occurred.

When either a morning doji star or simply a doji develops after a downtrend — especially if it is near an important tar-

continued on p. 30

FIGURE 3 — PIVOT POINT SUPPORT AND RESISTANCE LEVELS

Although price didn't precisely hit the S1 level, the low occurred almost exactly at the midpoint (1.3194) of the pivot point (1.3236) and S1 (1.3153). If a market is bullish, it often holds between the S1 and the pivot point. This is the price level at which to look for a reversal setup such as a doji pattern.



Source: FutureSource Workstation

get, such as a pivot point support level — it is likely if the next candle closes above the doji's high, a reversal of the recent trend will occur. To trigger an entry, it is important for price to close above the doji's high. This confirms the breakout and positive momentum should develop within a few bars.

Trade examples: Combining pivots and dojis

Lining up the pivot points on your screen before the beginning of a trading session prepares you for when a setup like a doji or morning doji star pattern develops.

Figure 3 is a 15-minute chart of the Euro/U.S. dollar rate (EUR/USD). On Dec. 10 (a Friday) the high was 1.3318, the low was 1.3148, and the close was 1.3241. The resulting pivot point levels for the following trading day (Dec. 13) are:

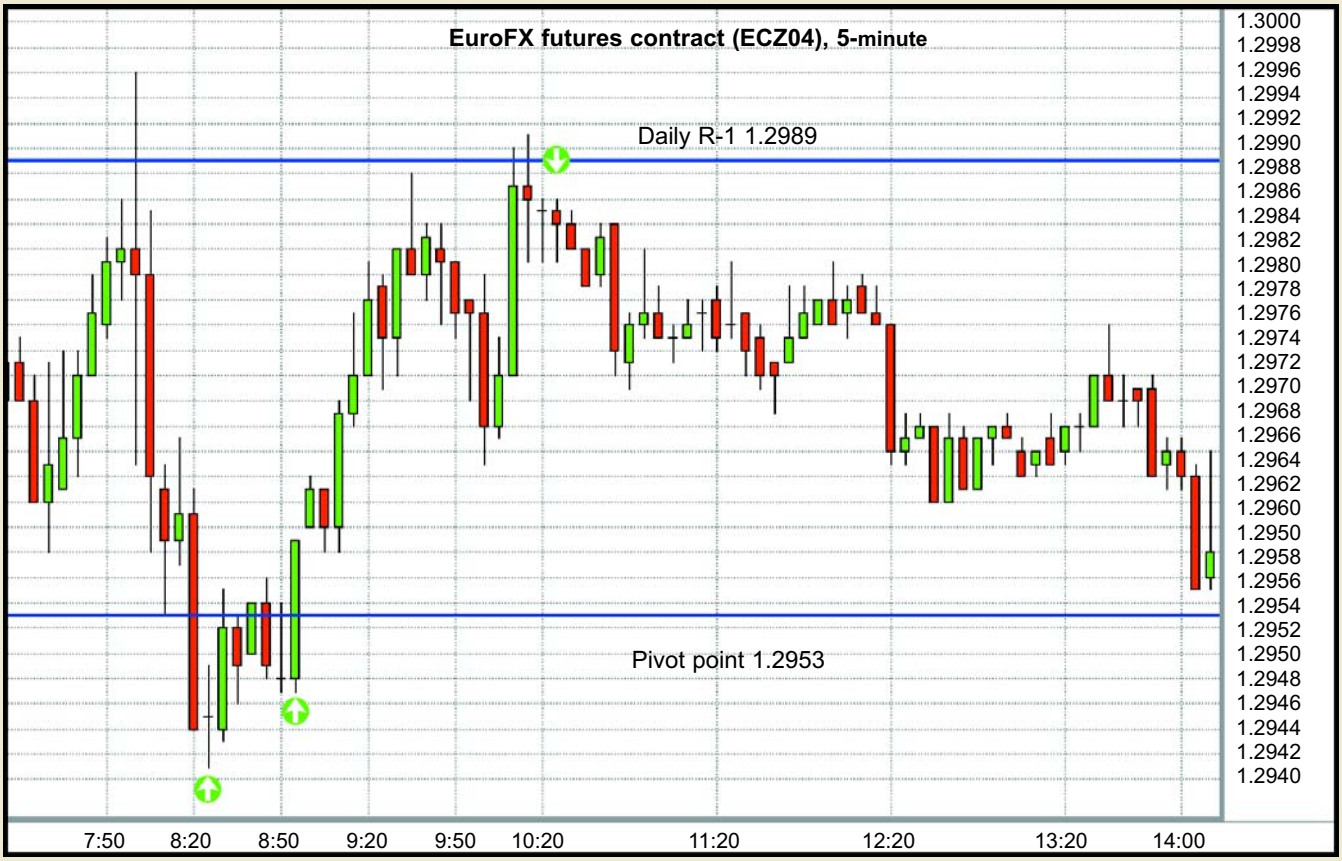
Pivot Point = 1.3236
R2 = 1.3406
R1 = 1.3323
S1 = 1.3153
S2 = 1.3066

On Dec. 13 the high turned out to be 1.3325, the low was 1.3192, and the close was 1.3313. The market did not precisely hit the S1 target number, but the low occurred almost exactly at the midpoint (1.3194) of the pivot point (1.3236)

Combing pivot point levels with the price moves implied by candlestick patterns improves your odds of identifying favorable trade points.

FIGURE 4 — STOPPING AT RESISTANCE

The first doji candle, which set the low of the day (the first green arrow), was part of a morning doji star pattern. The up move that followed stalled around the R1 pivot resistance level at 1.2989.



Source: FutureSource Workstation

and S1 (1.3153). In a bullish market, the market will often hold between the S1 and the pivot point. It is at this price level you should look for setups such as the doji.

Figure 4 is a five-minute chart of the December 2004 EuroFx futures contract (ECZ04) from Nov. 16. Note that once the candle closes above the second doji candle's high (see the green arrows), price has clearly changed direction.

This chart also provides a good example of how the market reacts near pivot point levels. On the previous day (Nov. 15), the high was 1.2999, the low was 1.2916, and the close was 1.2943. The pivot point was 1.2953 and the support and resistance levels were: R1 = 1.2989; R2 = 1.3036; S1 = 1.2906; and S2 = 1.2870. The high on Nov. 16 was 1.2996, the low was 1.2920, and the market closed at 1.2966.

There were two opportunities to trade from the long side using the doji method. The first doji, which made the low of the day (the first green arrow), was a morning doji star pattern. It formed below the daily pivot point. Notice that once the market closed above the doji's high it triggered a long position. This up move stalled around the R1 level at 1.2989. (Also notice a doji appeared immediately after the high, and the market proceeded to trade lower.)

Trade management

A risk-control strategy to accompany this pattern might include placing a stop-loss order below the doji's low by an amount that is 120 percent of the 10-day average range. You could also use a stop-close-only order (which is triggered only on the market close) below the doji's low for the time period you are trading in.

All time frames

This method is applicable to both the forex market and currency futures, as well as different time frames. (The five-, 15-, 30-, and 60-minute time periods are especially useful in forex trading.) The confluence of trading signals can help identify points at which a market is likely correct or reverse, which is useful for entering trades as well as taking profits.

For information on the author see p. 8.

The current account deficit's impact on the U.S. dollar

In many traders' minds, the growing U.S. account deficit is tied to the U.S. dollar's long-term slide. Find out how the dollar has behaved surrounding quarterly current account releases since 1994.

BY DAVID BUKEY

Over the past three years, the U.S. current account balance and the U.S. government's annual budget have hit record deficit levels, and since these twin deficits are crucial to the U.S. dollar's value, economists can't stop worrying about how these debts may continue to affect the buck.

The current account not only tracks the U.S. trade balance, or the difference between U.S. imports and exports, but also includes income from foreign investments and payments to foreign investors. Therefore, it's the best measure of how much the U.S. now owes foreign countries.

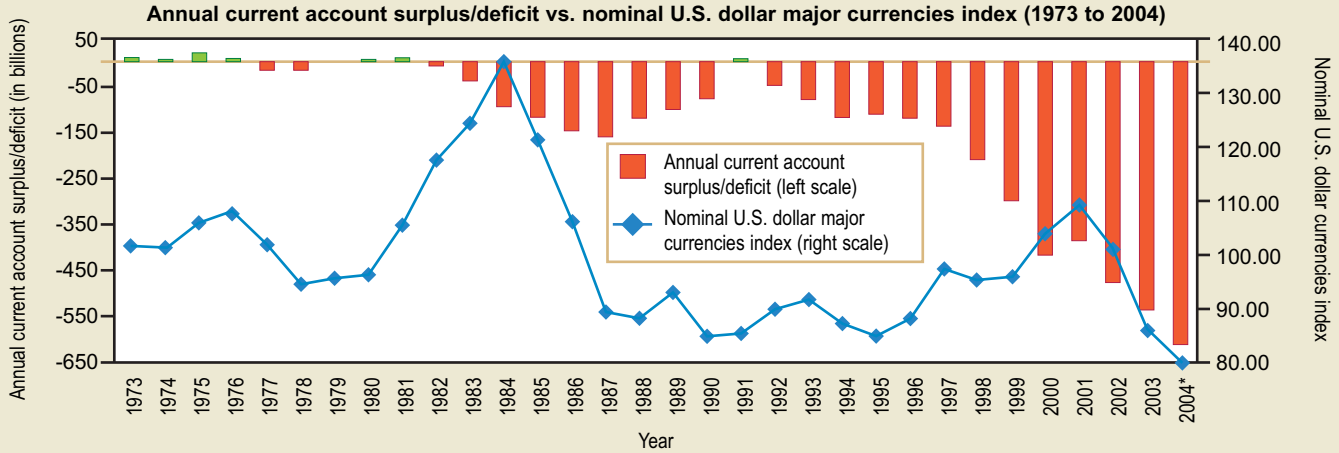
While the current account has been at a deficit over much of the past 25 years, this figure has more than doubled to -$608.7 billion since 1999, or 5.3 percent of the Gross Domestic Product (GDP), according to Deutsche Bank estimates. Most economists agree these unprecedented levels can't continue indefinitely without further damaging the U.S. dollar.

The following analysis, however, focuses on short-term patterns (i.e., less than three months) in the dollar surrounding the quarterly current account balance report, officially titled "U.S. International Transactions." (For an explanation of the report and how the current account is calculated, see "What is the Current Account Balance?")

In addition to analyzing how the U.S. dollar fared before and after all 43 quarterly releases since June 1994, we also studied the dollar's response to

FIGURE 1 — CURRENT ACCOUNT SURPLUS/DEFICIT VS. U.S. DOLLAR, 1973 TO 2004

This figure compares the annual current account balance to the Fed's U.S. dollar major currencies index over the past 31 years, and shows several key patterns. First, the dollar's rally from 1980 to 1984 occurred either during a surplus or only at the beginning of significant deficits. Also, the U.S. dollar's two steep multi-year declines (1984 to 1987 and 2001 to 2004) began as the deficit grew to record levels. However, the dollar's climb from 1995 to 2001 is an exception to this rule.



Source: Bureau of Economic Analysis (BEA), Federal Reserve

* 2004 current account estimate from Deutsche Bank

rising and dropping current account deficits as well as its behavior following larger- and smaller-than-expected deficit numbers.

The study used both the Federal Reserve's nominal U.S. dollar major currencies index as a proxy for the dollar and the New York Board of Trade's (NYBOT) U.S. dollar index continuous futures contract (DX). While the indices' price moves aren't identical because they use different weighting schemes, our comparison shows only minor differences between them.

Overall, the U.S. dollar tended to rise from the beginning of the quarter to the announcement, which the Bureau of Economic Analysis (BEA) releases roughly two weeks before the quarter's end, and then fall in the following month. Surprisingly, the dollar dropped more after news of shrinking deficits than growing ones. However, the dollar initially gained ground after smaller-than-expected deficits compared to hefty losses following larger-than-expected deficit figures.

What is the Current Account Balance?

The quarterly U.S. International Transactions report is the ultimate measure of how much the U.S. is now in debt to foreign countries. The release tracks trade in goods and services, foreign investment income and payments, foreign aid, private and government-owned foreign assets (equities, bonds, currencies held as reserves, etc.), and the investments other countries hold in U.S. dollars or securities.

The report's three main sections include the current, capital, and financial account balances. Traders focus on the current account because it tracks the gaping trade deficit, or the difference between the value of goods and services the U.S. imports (including income payments to foreign investors) and the value of exports (including dividends and interest received from investments abroad). The current account also shows foreign aid.

The capital account is relatively small and lists fairly rare transactions, such the assets of recent expatriates. The financial account breaks down all U.S.-owned securities and currencies as well as foreign-owned assets.

The Bureau of Economic Analysis (BEA) releases this data for the prior quarter at 8:30 a.m. (ET) roughly two weeks before the current quarter's end. The report tracks changes on a quarterly basis.

Although the report is quite extensive, its quarterly release means that much of its relevant data comes from previously released reports such as the BEA's monthly International Trade in Goods and Services announcement.

The BEA collects investment data from the U.S. Treasury and both publicly traded and private companies; travel information typically comes from surveys filled out by people traveling abroad.

Source: Bernard Baumohl's *The Secrets of Economic Indicators: Hidden Clues to Future Economic Trends and Investment Opportunities* (2005, Wharton School Publishing).

The big picture: 1973 to 2004

Figure 1 compares the annual current account surplus or deficit (in billions, left scale) to the Federal Reserve's nominal U.S. dollar major currencies index (right scale) from 1973 to 2004. The current account balance was tiny between 1973 and 1982, ranging from an $18.1 billion surplus to a -$14.3 billion deficit. In 1983, however, the deficit began to increase, reaching -$160.7 billion by 1987.

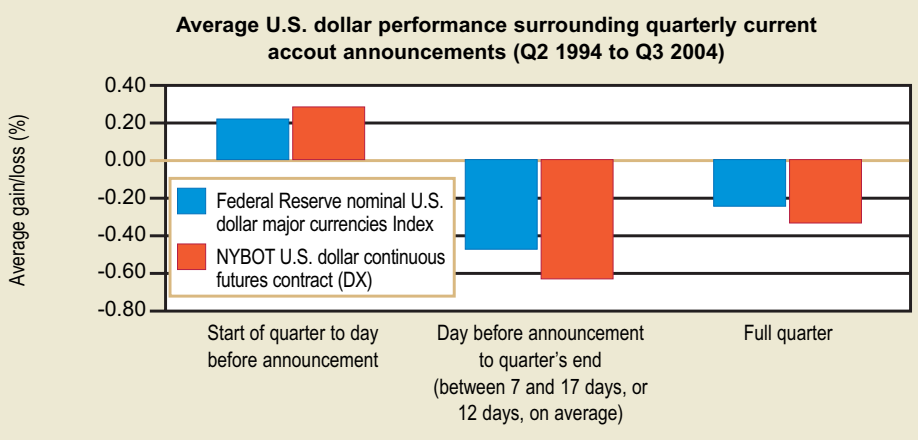
Over the next four years, the current account deficit shrank and even posted a slight surplus in 1991, but it has grown dramatically larger over the past 13 years.

The dollar's sharpest rally

continued on p. 34

FIGURE 2 — QUARTERLY ANNOUNCEMENTS AND THE U.S. DOLLAR, 1994 TO 2004

This figure compares the average performances of the Fed's nominal U.S. dollar major currencies index to the NYBOT's U.S. dollar index futures contract around the current account's quarterly release. Both indices headed higher prior to this announcement before dropping at least 0.46 percent, on average, from its release to the quarter's end (roughly 12 days).



Source: Bureau of Economic Analysis (BEA), Federal Reserve

TABLE 1 — QUARTERLY STATISTICS, 1994 TO 2004

Overall, the Fed's nominal U.S. dollar major currencies index moved in line with the NYBOT's U.S. dollar index futures contract. While this table's comparison of average and median values shows that these announcements don't affect quarterly performance as much as Figure 2 suggests, the dollar's sell-off from announcement day to the quarter's end is fairly reliable.

	Quarter's begin to day before release	Day before release to quarter's end (between 7 and 17 days, or 12 days, on average)	Full Quarter
Federal Reserve nominal U.S. Dollar Major Currencies Index			
Avg:	0.23%	-0.46%	-0.23%
Med:	0.66%	-0.37%	0.57%
Pct >0:	60.47%	37.21%	58.14%
Quarterly Benchmark:			**-0.19%**
NYBOT U.S. Dollar continuous futures contract (DX)			
Avg:	0.29%	-0.62%	-0.32%
Med:	0.98%	-0.62%	0.34%
Pct >0:	60.47%	37.21%	58.14%
Quarterly Benchmark:			**-0.29%**

Sources: Bureau of Economic Analysis (BEA), Federal Reserve, New York Board of Trade (NYBOT)

(35.9 percent from 1980 to 1984) occurred while the current account deficit went from being mostly insignificant to ballooning to nearly -$100 million. The dollar's largest sell-off (-38.92 percent from 1985 to 1987) erased those gains as the deficit continued to grow.

Many economists view today's surging account deficit as one of the principal factors behind the dollar's 29.4 percent slide over the past three years, which seems to parallel its steep drop in the late 80s. However, the dollar's 28.5 percent climb from 1995 to 2001 is an important exception to this rule, because the current account deficit tripled from -$109.5 billion to -$385.7 billion during this period.

Quarterly reports: 1994 to 2004

The analysis of quarterly current account reports spanned 43 quarters from the first quarter of 1994 to the third quarter of 2004. The current account carried a deficit throughout this entire period, increasing from the previous quarter 30 times, shrinking 12 times and remaining the same once.

Figure 2 compares the average performances of the Fed's U.S. dollar index to the U.S. dollar index futures

TABLE 2 — CURRENT ACCOUNT REPORT BREAKDOWN

This table shows average and median returns for 11 periods surrounding quarterly current account announcements. "Day -1" and "Day 1" represent the prior day and announcement day, respectively; "Day -20 to -1" shows the dollar's performance from twenty days before the announcement to the prior day, and "Day -1 to 20" shows its reaction from the prior day to twenty days following it. The final three categories list each report type: growing deficits, shrinking deficits, and same as prior month.

	Close location	Day -20 to -1	Day -15 to -1	Day -10 to -1	Day -5 to -1	Day -1	Day 1	Day -1 to 5	Day -1 to 10	Day -1 to 15	Day -1 to 20	Day -1 to 40
Overall (43 instances)												
Avg:	40.49	-0.01%	-0.02%	-0.37%	-0.04%	-0.07%	-0.13%	-0.21%	-0.40%	-0.65%	-0.70%	-0.38%
Med:	32.47	-0.09%	-0.02%	-0.22%	0.01%	-0.03%	-0.12%	-0.21%	-0.19%	-0.36%	-0.65%	-0.41%
Benchmark:		-0.12%	-0.09%	-0.06%	-0.03%	-0.01%	-0.01%	-0.03%	-0.06%	-0.09%	-0.12%	-0.23%
Pct. > 0:		46.51%	48.84%	41.86%	51.16%	46.51%	34.88%	41.86%	41.86%	38.10%	35.71%	50.00%
Current account deficit increases (30 instances)												
Avg:	43.15	-0.03%	-0.09%	-0.37%	0.10%	-0.01%	-0.06%	0.02%	-0.31%	-0.51%	-0.56%	-0.31%
Med:	41.45	-0.09%	-0.03%	-0.23%	0.18%	0.05%	-0.11%	0.15%	-0.08%	-0.14%	-0.72%	-1.48%
Pct. > 0:		46.67%	46.67%	43.33%	60.00%	56.67%	40.00%	60.00%	46.67%	44.83%	37.93%	44.83%
Current account deficit decreases (12 instances)												
Avg:	36.28	0.12%	0.36%	-0.15%	-0.32%	-0.20%	-0.30%	-0.72%	-0.45%	-0.79%	-0.69%	-0.28%
Med:	24.98	-0.10%	0.43%	-0.17%	-0.43%	-0.25%	-0.33%	-0.69%	-0.37%	-0.73%	-0.54%	0.57%
Pct. > 0:		50.00%	58.33%	41.67%	33.33%	25.00%	25.00%	0.00%	33.33%	25.00%	33.33%	66.67%
Same as prior month (1 instance)												
	11.11	-0.80%	-2.66%	-2.89%	-1.11%	-0.54%	-0.07%	-1.14%	-2.26%	-2.99%	-4.77%	-3.33%

Sources: Bureau of Economic Analysis (BEA), Federal Reserve, New York Board of Trade (NYBOT)

contract during three time intervals: from the quarter's start to the day before each announcement, from the day before each announcement to the quarter's end, and the full quarter (51, 12, and 63 days, on average, respectively).

Although the U.S. dollar index futures contract was more volatile than the Fed index (i.e., rising higher before the report and dropping more after it), both indices followed a clear pattern, climbing an average of at least 0.23 percent before reports and dropping at least 0.46 percent from announcement day to the quarter's end.

Figure 2 also shows that the dollar's sell-off following current account releases seems to have had a dramatic effect on average quarterly performance. While both indices posted solid average gains before these announcements, the dollar's slide in the subsequent 12 days led to an average quarterly loss of at least 0.23 percent.

Table 1 compares both indices' average and median values for each of the three periods shown in Figure 2. The table also shows the percentage of positive moves for each period (Pct. > 0), as well as the indices' quarterly benchmarks, which are the average 60-day price moves over the past 10 years.

Both the Fed index's and U.S. dollar index futures contract's average and median moves are out of sync — the average moves are negative while the median moves are positive — for the full-quarter period, which suggests the dollar's average move has been skewed lower by a few large losses. (For a more detailed explanation of these statistics, see "Average and median.") The specific pre- and post-announcement periods show consistent positive and negative returns, respectively (albeit of different magnitudes).

Average and median

The mean (or average) of a set of values is the sum of the values divided by the number of values in the set. If a set consists of 10 numbers, add them and divide by 10 to get the mean.

A statistical weakness of the mean is that it can be distorted by exceptionally large or small values. For example, the mean of 1, 2, 3, 4, 5, 6, 7, and 200 is 28.5 (228/8). Take away 200, and the mean of the remaining seven numbers is 4, which is much more representative of the numbers in this set than 28.5.

The median can help gauge how representative a mean really is. The median of a data set is its middle value (when the set has an odd number of elements) or the mean of the middle two elements (when the set has an even number of elements). The median is less susceptible than the mean to distortion from extreme, non-representative values. The median of 1, 2, 3, 4, 5, 6, 7, and 200 is 4.5 ((4+5)/2), which is much more in line with the majority of numbers in the set.

Short-term price moves

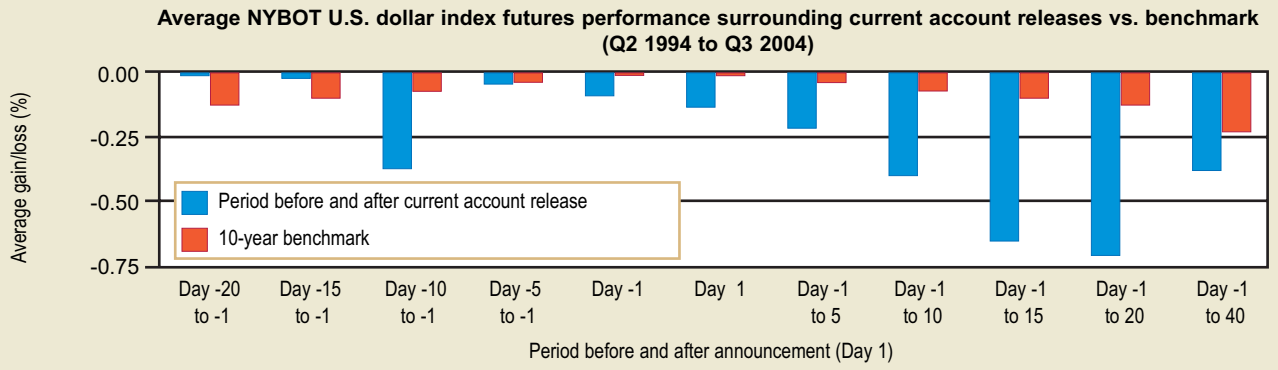
The study also analyzed the U.S. dollar index futures contract's price moves in the 20 days before and 40 days after all current account reports to see if shorter-term patterns existed.

The analysis measured the gain or loss from the close 20, 15, 10, and five days before each announcement to the close on the day prior to its release, as well as the gain or loss from the close of the day prior to each report to the close five, 10, 15, 20, and 40 days after them. Figure 3 shows the results for all 43 current account reports from June 21, 1994 to Dec. 16, 2004 and compares them to the average same-length price moves during this period. For example, "Day -5 to -1" represents the dollar's average gain or loss from the fifth day before reports to the day before them; "Day -1 to 5" is the performance from the day before reports to the fifth

continued on p. 36

FIGURE 3 — AVERAGE NYBOT U.S. DOLLAR INDEX PRICE MOVES: ALL QUARTERLY REPORTS

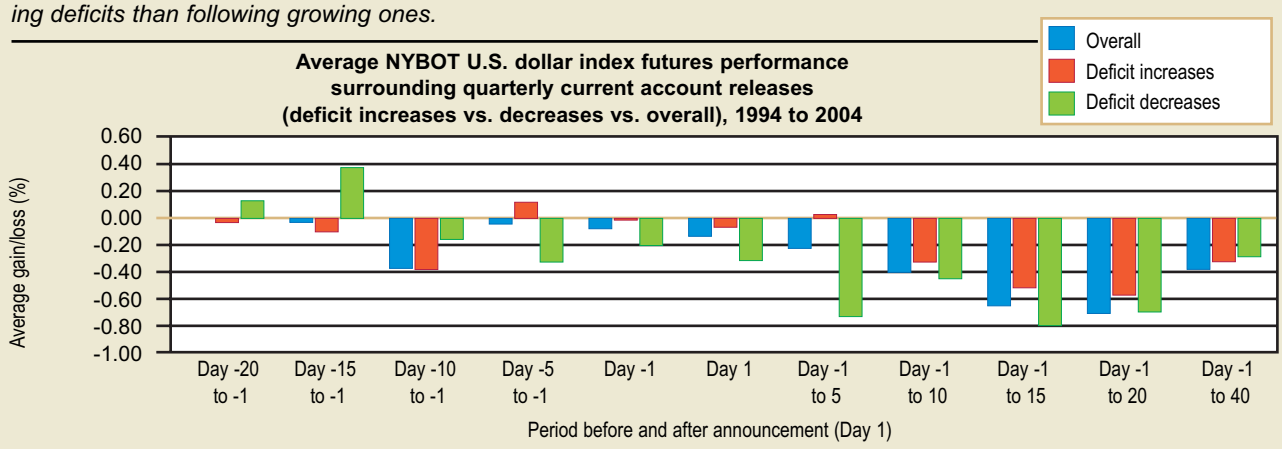
The U.S. dollar dropped both before and after quarterly current account releases, but it sold off more dramatically in the month following them.



Source: Bureau of Economic Analysis (BEA), New York Board of Trade (NYBOT)

FIGURE 4 — CURRENT ACCOUNT DEFICIT CHANGES

This figure shows average U.S. dollar moves surrounding all current account reports and compares them to deficit increases and declines. The dollar's performance is mixed prior to these releases, but it tends to drop further after news of shrinking deficits than following growing ones.



Source: Bureau of Economic Analysis (BEA), New York Board of Trade (NYBOT)

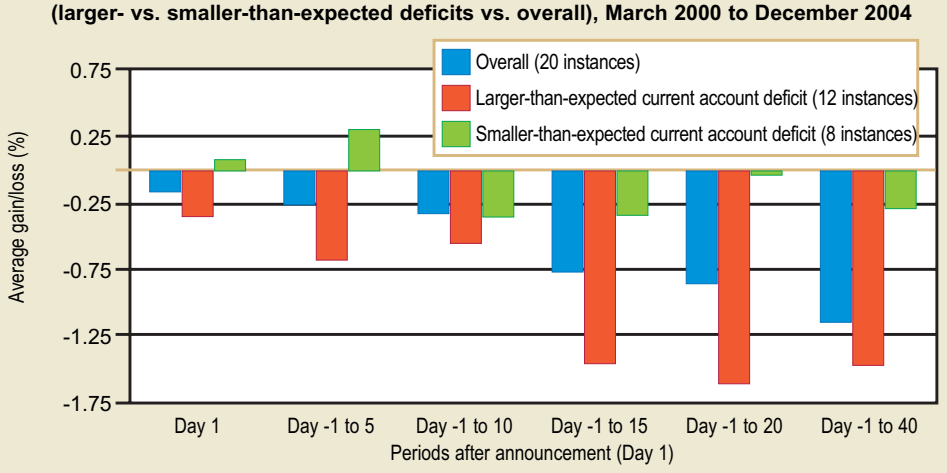
day after them, and so on. "Day -1" and "Day 1" show the moves on the day before announcements and announcement day, respectively.

Overall, the U.S. dollar was flat or posted small average losses before current account releases, but then sank consistently in the following month — a pattern that reinforces Table 1's statistics. The dollar traded sideways in the 20- and 15-day periods preceding announcement days, and then fell an average of 0.37 percent in the 10-day period before reports. The dollar pared its losses in the final pre-announcement week before sliding 0.07 percent the day before reports.

The dollar declined an average 0.13 percent on announcement day and continued to drop in subsequent weeks, culminating in a 0.70-percent loss by day 20. By day 40, it recovered roughly half these losses.

FIGURE 5 — SURPRISE REPORTS — MARCH 2000 TO DECEMBER 2004

The U.S. dollar index's only average gains appeared in the week after smaller-than-expected quarterly current account deficits. The dollar sank following larger-than-expected deficits, culminating in an average 1.60 drop by the 20th day.



Source: Bureau of Economic Analysis (BEA), New York Board of Trade (NYBOT), and Briefing.com

Current account changes

Table 2 compares the U.S. dollar index futures contract's average gains and losses shown in Figure 3 to its median values, and breaks down current account deficit reports by whether the deficit increased, declined, or remained the same from the prior quarter. Each period's benchmark move and percentage of gains are also shown for each category.

The first column shows where the dollar index futures closed on announcement day relative to its daily range. For example, if the dollar closed at the midpoint between its intraday high and low, the "Close location" is 50; if it closed at its low, the value is 0, and so on.

The table's overall median and average moves are relatively consistent, which confirms Figure 3's patterns. Nine of the 11 periods also have a better chance of losses than gains, including a 65-percent probability of losses on announcement day.

The dollar seemed to anticipate shrinking deficits by rising 0.12 and 0.36 percent in the fourth and third weeks before current account releases, but these gains turned to losses as the release date approached.

Figure 3 also reveals a surpris-

ing twist: The dollar posted its steepest average drop (0.30 percent) upon news of smaller deficits, and it continued to decline over the following 15 days. Figure 4 shows the average performance of the table's three main categories (overall, deficit increases, and decreases) and confirms that the dollar initially dropped further after news of shrinking deficits than growing ones. However, these price moves are based on a relatively small sample size (12).

Catching economists off-guard: 2000 to 2004

To find out whether the dollar index futures contract performed differently when the current account number missed analyst expectations, we compared actual quarterly current account deficits to economists' forecasts complied by Briefing.com over the past five years.

Of the 20 times the BEA released quarterly current account reports since March 15, 2000, the deficit was larger than expected 12 times and smaller than expected eight times. Figure 5 shows the dollar welcomed smaller-than-expected deficits and rose in the first five days following them. In contrast, it declined 0.67 percent by the fifth day following larger-than-expected deficits.

Although the dollar fell over the next six weeks, its losses were milder after smaller-than-expected deficits. It slipped just 0.28 percent by the 40th day after smaller-than-expected deficits, but it dropped 1.19 percent further following surprisingly large ones.

Conclusion

Given the anxiety surrounding the ballooning current account deficit, the dollar's drop in the weeks (and months) after its quarterly release makes sense, yet its steep decline following shrinking deficits seems counterintuitive. However, the dollar behaved as expected and lost much more ground when reports disappointed economists.

These historical patterns are certainly compelling, but current market conditions, including the dollar's tendency to trend over long periods, should always take precedence when making trading decisions.

Related reading

"The dollar and the deficit," *Currency Trader*, November 2004, p. 22.
An overview of how the current account and trade deficits affect the U.S. dollar.

"Elections and the U.S. dollar," *Currency Trader*, November 2004, p. 34.
An analysis of how the U.S. dollar fared surrounding U.S. elections since 1973.

FOREX (vs. U.S. DOLLAR)

Rank*	Country	Currency	Current price vs. U.S. dollar	1-month gain/loss	3-month gain/loss	6-month gain/loss	52-week high	52-week low	Previous rank
1		Taiwanese dollar	0.03153	1.55%	6.06%	6.85%	0.03153	0.02801	11
2		Thai baht	0.02602	1.31%	6.80%	6.30%	0.02604	0.0239	9
3		Japanese yen	0.00973	0.75%	4.16%	6.65%	0.00983	0.0087	14
4		Canadian dollar	0.8171	0.67%	0.87%	7.34%	0.8532	0.7138	16
5		Brazilian real	0.3723	0.51%	6.37%	12.03%	0.3765	0.3103	6
6		Australian dollar	0.7692	0.30%	3.55%	7.75%	0.8005	0.6773	15
7		Singapore dollar	0.612	0.20%	1.91%	5.23%	0.6158	0.5775	12
8		Indian rupee	0.02294	0.09%	4.45%	5.71%	0.02304	0.02145	2
9		New Zealand dollar	0.7133	0.01%	2.38%	10.92%	0.7266	0.591	10
10		Hong Kong dollar	0.1282	-0.23%	-0.16%	0.00%	0.1289	0.1281	13
11		Russian rouble	0.03563	-0.90%	3.03%	3.45%	0.03609	0.03414	5
12		British pound	1.8783	-2.45%	2.63%	2.43%	1.955	1.7479	4
13		Euro	1.3049	-3.56%	2.74%	7.24%	1.3667	1.1758	3
14		Swiss franc	0.8437	-3.64%	2.01%	6.45%	0.8879	0.7559	8
15		Swedish krona	0.144	-3.89%	3.12%	8.61%	0.152	0.1283	7
16		South African rand	0.1678	-6.20%	2.68%	3.69%	0.1783	0.1361	1

As of Jan. 24, 2005 *based on one-month gain/loss

INTEREST RATES

Rank	Country	Rate	Jan. 24	1-month	3-month	6-month	Previous
1	U.S.	10-year T-note	112.115	0.71%	-1.00%	1.68%	5
2	Germany	BUND	119.88	0.50%	3.09%	6.20%	1
3	Japan	Government bond	139.42	0.27%	1.63%	3.96%	2
4	UK	Short sterling	95.19	-0.06%	0.11%	0.60%	4
5	Australia	3-year bonds	94.67	-0.07%	-0.03%	N/A	3

NON-U.S. DOLLAR FOREX CROSS RATES

Rank	Rate	Symbol	Current	1-month gain/loss	3-month gain/loss	6-month gain/loss	52-week high	52-week low	Previous
1	Canada $/Euro	CAD/EUR	0.6281	4.35%	-1.67%	0.38%	0.6497	0.5916	20
2	Real/Euro	BRL/EUR	0.2854	3.92%	3.71%	5.15%	0.2909	0.2575	11
3	Aussie $/Franc	AUD/CHF	0.9121	3.79%	1.58%	1.40%	0.9894	0.8547	15
4	Aussie $/Euro	AUD/EUR	0.5897	3.73%	0.81%	0.56%	0.6358	0.5643	18
5	Canada $/Pound	CAD/GBP	0.4363	3.32%	-1.54%	5.27%	0.454	0.397	19
6	Real/Pound	BRL/GBP	0.1983	2.92%	3.88%	9.83%	0.1993	0.1714	9
7	Aussie $/Pound	AUD/GBP	0.4096	2.69%	0.95%	5.44%	0.4264	0.372	17
8	Pound/Euro	GBP/EUR	1.4399	1.07%	-0.17%	-5.19%	1.5279	1.4057	10
9	Canada $/Yen	CAD/JPY	84.2291	0.18%	-3.16%	0.99%	89.7805	78.0564	16
10	Real/Canada $	BRL/CAD	0.4572	0.13%	5.84%	5.31%	0.4684	0.4212	1
11	Franc/Euro	CHF/EUR	0.647	-0.02%	-0.68%	-0.80%	0.665	0.6297	14
12	Real/Yen	BRL/JPY	38.2762	-0.26%	2.32%	5.74%	39.3067	34.3301	6
13	Aussie $/Yen	AUD/JPY	79.018	-0.50%	-0.67%	1.11%	85.559	74.28	12
14	Aussie $/Canada $	AUD/CAD	0.9395	-0.63%	2.48%	0.18%	1.0534	0.8863	7
15	Franc/Pound	CHF/GBP	0.4493	-1.16%	-0.62%	4.12%	0.4647	0.4179	13
16	Pound/Yen	GBP/JPY	193.07	-3.22%	-1.71%	-4.52%	208.03	189.5	5
17	Real/Aussie $	BRL/AUD	0.4843	-3.61%	2.93%	4.63%	0.5018	0.4276	3
18	Euro/Yen	EUR/JPY	134.09	-4.38%	-1.49%	0.60%	141.59	125.81	4
19	Franc/Yen	CHF/JPY	86.7375	-4.43%	-2.24%	-0.24%	91.6645	80.5368	8
20	Franc/Canada $	CHF/CAD	1.0305	-4.59%	0.92%	-1.24%	1.1054	0.9952	2

GLOBAL STOCK INDICES

Rank	Country	Index	Current	1-month gain/loss	3-month gain/loss	6-month gain/loss	52-week high	52-week low	Previous
1	Egypt	CMA	1292.54	6.46%	15.24%	27.22%	1292.54	829.84	11
2	Italy	MIBTel	23892	1.75%	9.82%	14.31%	24036	19655	4
3	Switzerland	Swiss Market	5750.5	0.96%	6.25%	4.67%	5941.7	5264.5	10
4	Singapore	Straits Times	2074.24	0.90%	5.17%	10.80%	2099.92	1690.35	13
5	UK	FTSE 100	4812.5	0.66%	4.10%	10.10%	4863.5	4283	14
6	France	CAC 40	3847.71	0.65%	4.17%	7.29%	3897.36	3452.41	15
7	Australia	All ordinaries	4047.6	-0.04%	8.08%	13.64%	4094.8	3263.9	6
8	Mexico	IPC	12743.58	-0.46%	11.91%	22.25%	13145.44	9362.45	2
9	Japan	Nikkei 225	11289.49	-0.67%	3.83%	0.90%	12195.66	10299.43	3
10	Germany	Xetra Dax	4201.89	-1.18%	6.35%	9.63%	4325.77	3618.58	8
11	Canada	S&P/TSX composite	9078.2	-2.30%	3.28%	7.65%	9287.4	8099.06	9
12	U.S.	S&P 500	1163.75	-3.99%	5.84%	6.66%	1217.9	1060.72	7
13	Hong Kong	Hang Seng	13386.99	-6.04%	2.78%	7.72%	14339.06	10917.65	12
14	India	BSE 30	6106.43	-6.41%	7.62%	16.92%	6696.31	4227.5	1
15	Brazil	Bovespa	24198	-6.94%	6.05%	10.77%	26492	17601	5

ACCOUNT BALANCE

Rank	Country	2004	Ratio*	2003	2005+
1	Hong Kong	16.404	10	16.697	16.598
2	Taiwan	21.3	6.9	29.202	19.378
3	Germany	118.525	4.4	52.933	129.726
4	Japan	159.402	3.4	136.238	148.931
5	Denmark	4.289	1.8	6.327	4.543
6	Canada	28.195	2.9	17	25.243
7	France	-12.761	-0.6	5.474	-13.246
8	Italy	-18.074	-1.1	-21.942	-13.315
9	UK	-43.338	-2	-33.39	-43.098
10	Spain	-33.066	-3.4	-23.549	-36.462
11	U.S.	-631.268	-5.4	-530.669	-641.678
12	New Zealand	-4.102	-4.4	-3.267	-4.151
13	Australia	-32.036	-5.3	-30.212	-30.248

Totals in billions of U.S. dollars
**Ratio: Account balance in percent of GDP; +Estimate*

Source: International Monetary Fund, World Economic Outlook Database, October 2004

True range

True range provides a more accurate reflection of the size of a price move over a given period than the standard range calculation, which is simply the high of a price bar minus the low of a price bar.

BY CURRENCY TRADER STAFF

True range (TR) is a measure of price movement that accounts for the gaps that occur between price bars. The true range calculation was developed by Welles Wilder and discussed in his book *New Concepts in Technical Trading Systems* (Trend Research, 1978).

Calculation

True range can be calculated on any time frame or price bar — five-minute, hourly, daily, weekly, etc. The following discussion uses daily price bars for simplicity.

True range is the greatest (absolute) distance of the following:

1. Today's high and today's low.
2. Today's high and yesterday's close.
3. Today's low and yesterday's close.

Average true range (ATR) is simply a moving average of the true range over a certain time period. For example, the five-day ATR would be the average of the true range calculations over the last five days.

Key points

True range is a simple volatility calculation — it reflects the degree of price movement over a given period by measuring the total price change from one price bar to the next. The higher the TR or ATR value, the greater the price movement.

Figure 1 shows how standard range and true range compare over a six-day period. Notice that the standard (high minus low) range of each of the first three price bars is five points and, accordingly, the average range for these three days is five points, suggesting the price volatility over this period is neither increasing nor decreasing.

However, the true range calculation for the second day is 8 points, because it factors in the gap between the first and second bars, calculating the range as the distance between the close of bar 1 and the high of bar 2. Similar discrepancies occur between the standard range and true range calculations for the subsequent days. This relationship is further reflected in the average standard range and average true range figures for days four through seven.

The difference is obvious: The standard range calculation only tells you about the price movement for each individual bar. The true range numbers accurately reflect the price movement you would have experienced had you been in this market from one day to the next.

Figure 2 shows a daily bar chart with the 30-day ATR plotted below the price. As the market continued to trade sideways through an extended trading range, the ATR steadily dropped, reflecting the declining volatility. When the currency pair embarked on an uptrend, the ATR moved back up.

Figure 3 is a weekly chart with 12-week ATR. Notice the dramatic increase in ATR/volatility in the GBP/USD that began at the beginning of 2004 — on the heels of a very smooth uptrend from September to December 2003, during which the ATR actually declined.

FIGURE 1 — TRUE RANGE

The true range calculation shows much price has actually moved over a multi-bar period by incorporating the gaps that occur between bars. By comparison, the standard range calculation (high minus low) only tells about the price movement that occurred for an individual price bar.

Day	High	Low	Close	Range	True range	3-day average range	3-day average true range
1	50	45	49	5			
2	57	52	55	5	8		
3	60	65	63	5	10	5.00	
4	58	54	58	4	9	4.67	9.00
5	56	54	55	2	4	3.67	7.67
6	53	51	53	2	4	2.67	5.67
7	48	43	48	5	5	3.00	6.00

Interpretation and uses

By increasing or decreasing the number of days in the average, you can use the ATR to monitor volatility on longer- or shorter-term time frames. For example, a five-day ATR would reflect the recent, short-term volatility, while a 50-day ATR would reflect intermediate- to longer-term volatility.

Because it represents the level of price movement in a market, true range can alert you to the trend of volatility (whether it is increasing or decreasing) as well as to when markets are at volatility extremes and might be likely to make significant moves or enter stagnant periods.

Comparing shorter-term ATR to longer-term ATR is one way to do this. For example, a 100-bar ATR provides an indication of a market's longer-term volatility; a 10-bar ATR gives an indication of the short-term volatility. When the short-term ATR becomes very low or high relative to the longer-term ATR, it can suggest a volatility extreme.

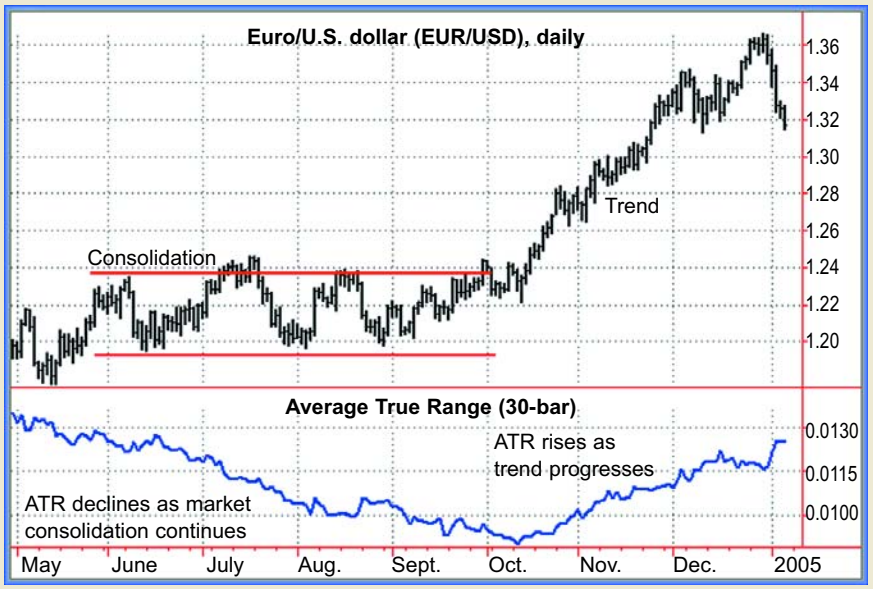
For instance, you could test if any noticeable price patterns occur when the short-term ATR falls below a certain percentage (say, 50 percent) of the longer-term ATR. This is simply a way of quantifying the market conditions that exist when a market enters a very narrow consolidation and the resulting breakouts that can result.

Figure 4 shows a 15-minute chart with a line below it that represents the five-bar ATR divided by the 100-bar ATR. Notice the two lowest ATR ratio values corresponded with very tight consolidations, both of which were followed by strong price moves. Naturally, these examples were chosen to demonstrate a point, but the relationships they represent can be quantified, researched and tested.

True range also can be used to estimate the placement of stop orders or exits. For example, if the five-day ATR is 10 points and your typical trade lasts five days, a stop-loss order that is only one point away runs a high risk of being hit since it falls well within the natural level of fluctuation the market has recently exhibited.

FIGURE 2 — AVERAGE TRUE RANGE

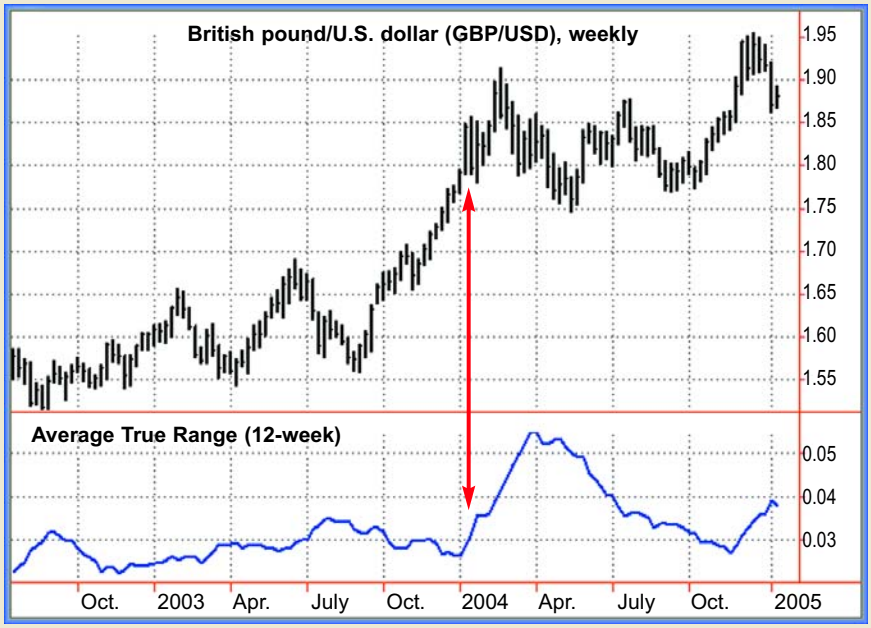
Average true range (ATR) is a commonly used market volatility measure. As the market stagnates in a consolidation, the 30-day ATR declines; when price breaks out of the consolidation and embarks on an uptrend, the ATR climbs — a reflection of the increased price volatility.



Source: TradeStation

FIGURE 3 — WEEKLY AVERAGE TRUE RANGE

The 12-week ATR calculation surged in early 2004 as volatility increased and a long-term uptrend came to a close.



Source: TradeStation

Similarly, in a strongly trending market, you might set a larger profit target — say, two or three times the ATR — to take advantage of the directional market conditions. However, in a market that is not trending, a smaller profit

continued on p. 42

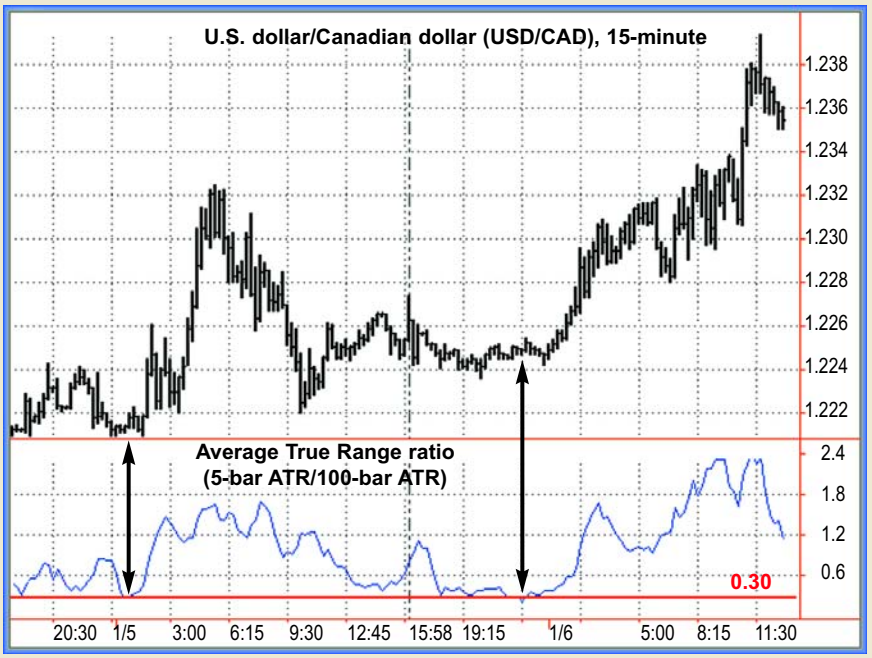
target — say, 1 to 1.5 times the ATR — might be more appropriate, given that the market is not indicating it will follow through in any particular direction. (For an example of this kind of approach, see "Doubly adaptive profit targets," *Active Trader*, December 2000, p. 78.)

Bottom line

True range more accurately reflects price movement than the standard range calculation because it includes gaps that may occur between price bars. True range and average true range are volatility calculations that can be used in a variety of trading situations — to measure the level of volatility in a market and determine where to place stops and price targets. The shorter the ATR calculation, the shorter-term the volatility it reflects; the longer the calculation, the longer-term the volatility it tracks.

FIGURE 4 — AVERAGE TRUE RANGE RATIO

Dividing the five-bar ATR by the 100-bar ATR creates a ratio that shows when the short-term volatility is high or low relative to the long-term volatility. The two times the ratio dropped below .30 (which means the five-bar ATR was less than 30 percent of the 100-bar ATR) preceded price thrusts.



Source: TradeStation

AMERICAS

▼ **A computer error caused Canada to re-release its trade surplus numbers for November,** as the original total of more than $7 billion (Canadian) was wrong. The real figure was $5.4 billion (Canadian), an increase of only $200 million from October. The U.S. has said it may need to re-release GDP estimates because of Canada's error.

▼ **The Bank of Canada's Monetary Policy Report Update** indicated the Canadian economy is expected to operate a little further below its full production capacity in 2005 than was anticipated when the last report was issued in October. This expectation largely reflects the effects of the Canadian dollar rising in value. Growth is projected to gain just more than three percent in 2006, assuming the economy will return to production capacity in the second half of 2005 and core inflation can again be contained to two percent by the end of 2006.

▼ **Brazil's jobless rate** rose 0.1 percent to 10.6 percent in November compared to the previous month, but remained unchanged from the same month in 2003.

▼ **Restrained spending and increased tax revenue allowed Brazil** to meet a budget target set by the International Monetary Fund. The budget surplus was 81.11 billion reais (more than $30 billion), easily besting the 71.5 billion reais target set by the IMF as part of a $40 billion loan given the company.

▼ **Mexico's foreign currency credit rating** was raised by S&P in late January, a move that sent prices on the IPC stock market to all-time highs and helped the peso gain value. It is the second credit-rating boost by a rating agency this year.

▼ **Mexico's annual GDP** in 2004 grew 4.2 percent, according to preliminary estimates.

** All GDP is real, at current prices and seasonally adjusted unless otherwise stated.*

** GDP is expressed as a growth/loss percentage and not as an exact rate.*

** Unemployment rates refer to Q3 2004 or December 2004 numbers, unless otherwise stated.*

• • • • • •GOING GLOBAL• • • • • •

▼ The World Bank is considering charging fees for countries seeking its advice as the need for developing countries to take out loans with the Bank is dwindling, said Peter Woicke, who is retiring as executive vice president of the bank's International Finance Corp. Woicke said the Bank will need to find alternative means of revenue as smaller, middle-income countries in Asia and Eastern Europe are becoming increasingly wealthy.

EUROPE

▼ **The United Kingdom's economy** grew 3 percent compared to the same quarter a year earlier and 0.4 percent compared to Q2, primarily spurred by retail and wholesale increases.

▼ **The United Kingdom's unemployment rate** of 4.7 percent from September through November didn't change compared to the previous three-month period, but it dropped 0.2 percent when compared to the same three-month period in 2003.

▼ **France's jobless rate** remained stable at 9.9 percent in November compared to year-to-year and previous month percentages.

▼ **Unemployment in Germany** rose 0.5 percent from the previous month to 10.8 percent and 0.4 percent compared to December 2003. However, according to a press release from Germany's Federal Statistical Office, "The service sector as a whole (trade, hotel and restaurant services, transport and other services) recorded job gains in 2004, which more than offset the job losses in other industries."

ASIA & THE SOUTH PACIFIC

▼ **India's Q2 GDP** (not seasonally adjusted) rose 4.5 percent compared to Q2 2003 and 1.4 percent compared to the previous quarter.

▼ **Australia's jobless rate** dropped 0.1 percent to 5.1 percent compared to November and 0.7 percent compared to December 2003.

▼ **Unemployment in Hong Kong** fell 0.2 percent to 6.5 percent — a 35-month low — compared to the previous month and dropped 0.9 percent from the same month in 2003, according to preliminary data. "The overall atmosphere of the labor market continued to improve, as evidenced by the high level of vacancy and job placement figures recorded by the Labor Department," said a government spokesman in a press release. "New initiatives to speed up the urban renewal process and improve the maintenance and management of old buildings will create employment opportunities for the construction, property management and related industries in the next few years."

▼ **Japan's jobless rate** fell 0.2 percent to 4.5 percent compared to October and decreased 0.4 percent compared to November 2003.

▼ With the Group of Seven meeting looming in early February, **China announced in late January it was in no hurry to change its foreign currency policy,** where the yuan is pegged to the U.S. dollar (the currency of most other countries is floating, meaning it changes based on fluctuations in the economy). Chinese officials said currency reform is inevitable, but the country is going to do things at its own pace.

Moving average trend-following system

System concept: This trend-following breakout system attempts to confirm market conditions and then trades in the direction of the trend.

The system defines the current trend by determining if the 5-day simple moving average (SMA) of intraday highs is above the 28-day exponential moving average (EMA) of closing prices (uptrend), or if the 5-day SMA of intraday lows is below the 28-day EMA of the closes (downtrend). Using high and low prices (instead of closing prices) to calculate the SMA helps the system to react to trend changes quicker.

Figure 1 shows several of the system's sample trades in the AUD/USD currency pair, and demonstrates that its signals produce more profitable trades during longer-term trends, such as the pair's rise from late September to late November 2004, than in consolidating markets.

Rules:

Enter long and exit short on the next day's open if the trend is bullish, which means the 5-day SMA of highs crosses above the 28-day EMA of closing prices, the latest close is above the 5-day SMA of highs, and the 5-day moving average's current value is also higher than its value the prior day.

Enter short and exit long on the next day's open if the trend is bearish, which means the 5-day SMA of lows crosses below the 28-day EMA of closing prices, the latest close is below the 5-day SMA of lows, and the 5-day SMA moving average's current value is also below the previous day's value.

Exit any trade if there is a trend change or if a position loses 20 percent.

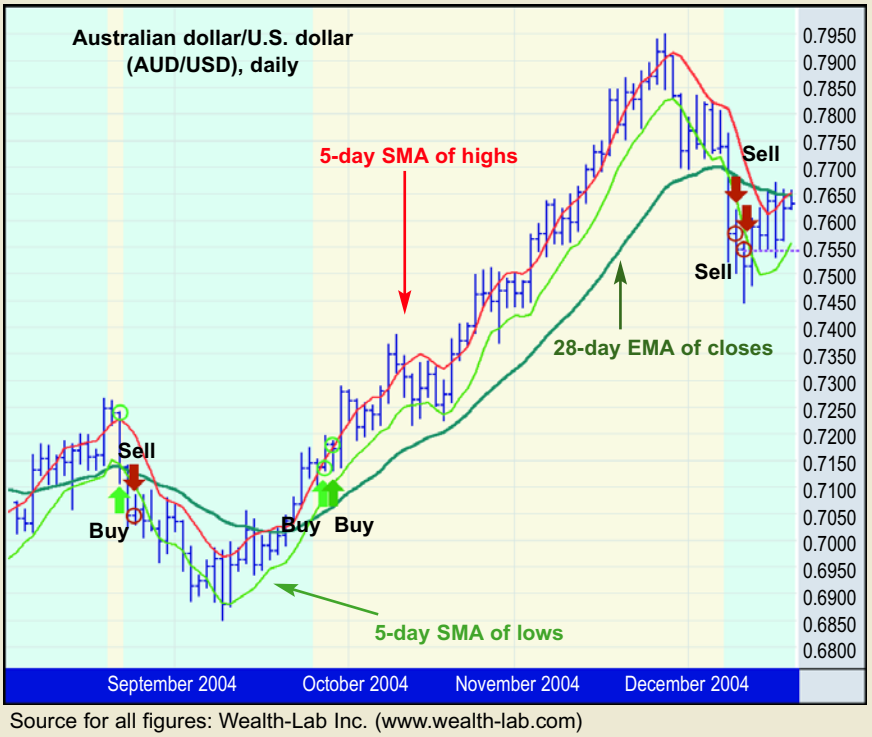
Money Management: Risk 2 percent of total capital for every trade.

Starting equity: $1,000,000. Deduct 4 pips (0.0004) round-turn commission for every 100,000 units traded in the base currency and 1 pip (0.0001) slippage per 100,000 units when entering and closing a position.

Test data: The system was tested on daily FX data in the following currency

FIGURE 1 — SAMPLE TRADE

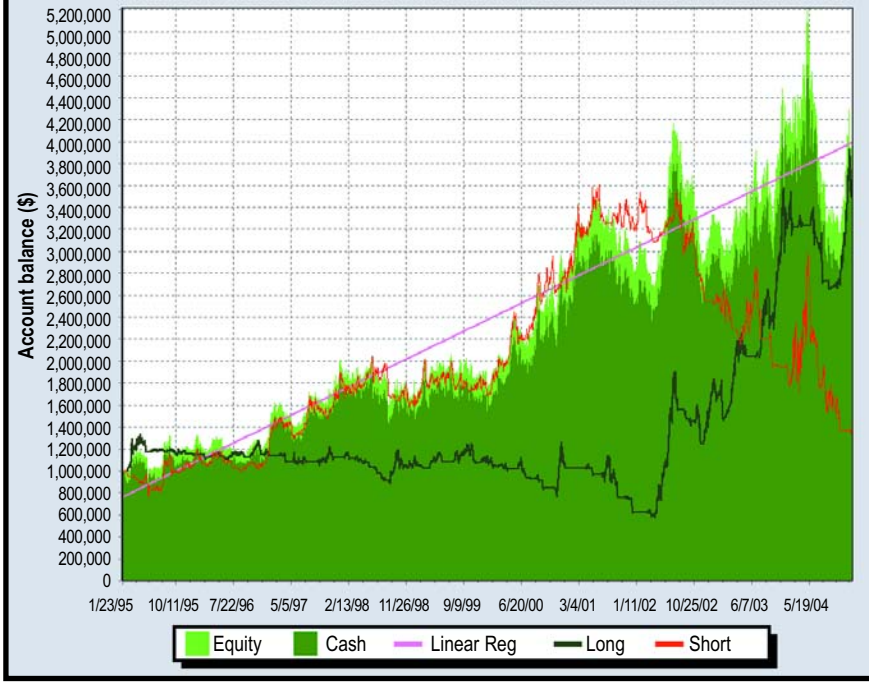
This trend-following system didn't perform very well when the AUD/USD lacked a clear trend in early September 2004, but it caught most of the currency pair's subsequent up move from October to December.



Source for all figures: Wealth-Lab Inc. (www.wealth-lab.com)

FIGURE 2 — EQUITY CURVE

This equity curve shows the system is profitable, but also quite volatile.



pairs: Australian dollar/U.S. dollar (AUD/USD), Euro/U.S. dollar (EUR/USD), British pound /U.S. dollar (GBP/USD), U.S. dollar/Swiss franc (USD/CHF), U.S. dollar/Japanese yen (USD/JPY), and U.S. dollar/Brazilian real (USD/BRL).

Note: Currency pairs for which the U.S. dollar is the base currency (e.g., USD/JPY) were inverted (e.g., JPY/USD) to enable portfolio testing in terms of dollars. Data source: Comstock/FXtrek (www.fxtrek.com).

Test period: December 1994 to December 2004 (except the Brazilian real, which spanned December 1999 to December 2004).

Test results: Figure 2's equity curve shows the system's volatile nature, and Figure 3's drawdown curve, which featured a 40-percent drawdown in November 2004, confirms this trait.

The system's drawback, as with most trend-following systems based on moving averages, is that it's only effective during long-term trends. The system lost ground in sideways markets. Trend-following systems tend to create many small losing trades, and require large winners to offset these. Figure 4's

continued on p. 46

FIGURE 3 — DRAWDOWN CURVE

The system experienced several large drawdowns over the past three years, and didn't recover from its 40-percent drawdown in the test period's final month.

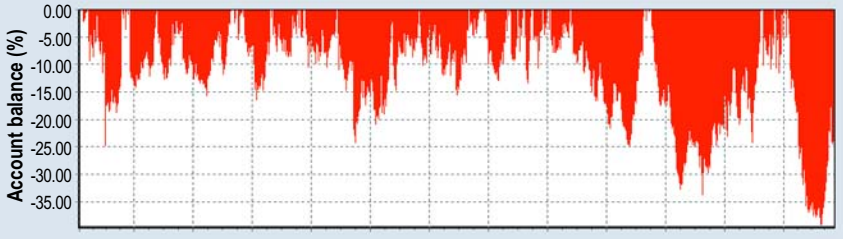
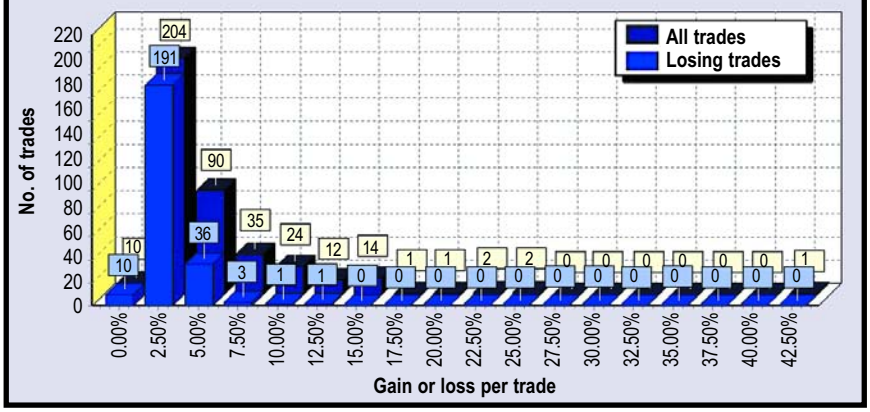


FIGURE 4 — MAXIMUM FAVORABLE EXCURSION (MFE) CHART

This MFE chart shows that many of the system's losing trades began as winners, which suggests a closer stop may help improve profitability.



STRATEGY SUMMARY

Profitabilty		Trade statistics	
Net profit ($):	2,928,280.85	No. trades:	396
Net profit (%):	292.83	Win/loss (%):	38.89
Exposure (%):	9.51	Avg. gain/loss ($):	0.55
Profit factor:	1.35	Avg. hold time (days):	32.37
Payoff ratio:	2.48	Avg. winner (%):	3.89
Recovery factor:	1.41	Avg. hold time (winners):	56.52
Drawdown		Avg. loser (%):	-1.57
Max. DD (%):	-39.73	Avg. hold time (losers):	17
Longest flat days:	484	Avg. consec. win/loss:	9/19

LEGEND: Net profit — *Profit at end of test period, less commission* • Exposure — *The area of the equity curve exposed to long or short positions, as opposed to cash* • Profit factor — *Gross profit divided by gross loss* • Payoff ratio — *Average profit of winning trades divided by average loss of losing trades* • Recovery factor — *Net profit divided by max. drawdown* • Max. DD (%) — *Largest percentage decline in equity* • Longest flat days — *Longest period, in days, the system is between two equity highs* • No. trades — *Number of trades generated by the system* • Win/loss (%) — *the percentage of trades that were profitable* • Avg. trade — *The average profit/loss for all trades* • Avg. winner — *The average profit for winning trades* • Avg. loser — *The average loss for losing trades* • Avg. hold time — *The average holding period for all trades* •Avg. hold time (winners) — *The average holding time for winning trades* • Avg. hold time (losers) — *The average holding time for losing trades* • Avg. consec. win/loss — *The maximum number of consecutive winning and losing trades*

PERIODIC RETURNS

	Avg. return	Sharpe ratio	Best return	Worst return	% profitable periods	Max. consec. profitable	Max. consec. unprofitable
Weekly	0.34%	0.64	12.04%	-18.09%	55.68	8	7
Monthly	1.41%	0.66	22.70%	-13.48%	54.17	5	5
Quarterly	4.18%	0.68	38.80%	-21.60%	65.00	6	3
Yearly	16.24%	0.79	49.40%	-9.58%	80.00	5	1

LEGEND: Avg. return — *The average percentage for the period* • Sharpe ratio — *Average return divided by standard deviation of returns (annualized)* • Best return — *Best return for the period* • Worst return — *Worst return for the period* • Percentage profitable periods — *The percentage of periods that were profitable* • Max. consec. profitable — *The largest number of consecutive profitable periods* • Max. consec. unprofitable — *The largest number of consecutive unprofitable periods*

Currency System Analysis strategies are tested on a portfolio basis (unless otherwise noted) using Wealth-Lab Inc.'s testing platform. If you have a system you'd like to see tested, please send the trading and money-management rules to editorial@currencytradermag.com.

Disclaimer: Currency System Analysis is intended for educational purposes only to provide a perspective on different market concepts. It is not meant to recommend or promote any trading system or approach. Traders are advised to do their own research and testing to determine the validity of a trading idea. Past performance does not guarantee future results; historical testing may not reflect a system's behavior in real-time trading.

Maximum Favorable Excursion (MFE) chart shows that many losing trades began as winners, which indicates that it's a good idea to add a stop to lock in profits at a certain point. However, stops must be loose enough to allow big winning trades to develop.

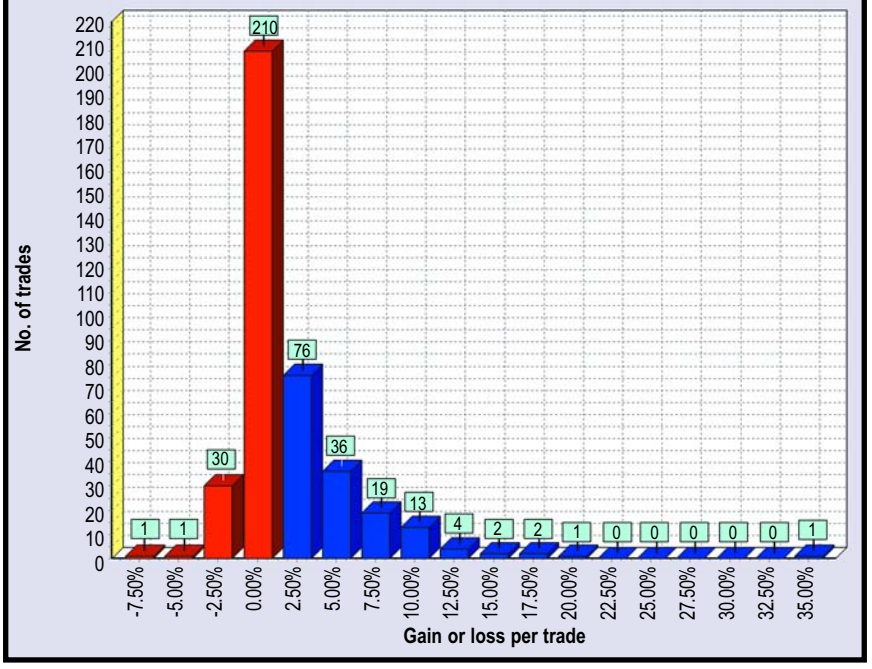
Figure 5 shows the system's profit distribution and confirms that more than half of all trades (210 of 396) were very small losses.

The original 20-percent stop was practically worthless since none of six tested pairs reached that point during the test period. We applied a few random stop-loss percentages as well as several profit-taking stops after the initial results were calculated, but every change diminished profits and failed to reduce the drawdown.

Table 1 shows the results of the portfolio test as well as retests of each of the six individual currency pairs (under the same conditions) to see which approach was more efficient. Single currency pairs had much lower drawdowns than the original test, but their annual profits were much smaller. The original portfolio approach was able to smooth out losses, which is what we wanted it to do.

FIGURE 5 — PROFIT DISTRIBUTION

The largest group of trades were small losers.



Bottom line: This system was profitable, but its large drawdowns make it hard to recommend to traders who want to avoid volatility. Experimenting with tighter stop-loss rules or using profit-taking stops may improve this system's performance.

Overall, basing trades on moving average crossovers provides good entry points, but it's sheer luck whether the market will continue to trend after this breakout, and whether that trend will be profitable enough to overcome all the system's small losses.

Idea submitted by Antonio Martinez from Karlsruhe, Germany.

—Michael Schneider of Wealth-Lab

TABLE 1 — PORTFOLIO VS. INDIVIDUAL CURRENCY PAIRS

This table compares the system's annual performance and maximum drawdown to a retest of the six individual currency pairs. Overall, the portfolio had larger profits, but also had higher drawdowns than each currency pair.

Portfolio System			USD/JPY		GBP/USD		EUR/USD		USD/CHF		USD/BRL		AUD/USD	
Period Starting	% Return	% Max DD	% Return	% Max DD	% Return	% Max DD	% Return	% Max DD	% Return	% Max DD	% Return	% Max DD	% n Retur	% Max DD
1/16/95	18.98	-24.89	28.18	-11.53	-9.4	-13.11	5.21	-9.75	-2.77	-9.87			-0.12	-4.3
1/1/96	6.15	-15.75	3.23	-4.89	4.43	-9.39	-4.9	-7.2	11.05	-3.46			-6.03	-8.85
1/2/97	49.4	-16.55	13.87	-4.47	7.11	-9.26	14.44	-7.21	-1.62	-9.44			10.27	-3.09
1/2/98	-9.58	-24.47	0.74	-9.5	-8.79	-16.8	-2.33	-8.15	-1.07	-6.89			2.8	-6.35
1/4/99	12.86	-12.97	-0.13	-8.16	1.95	-7.92	9.75	-9.06	5.03	-6.24	6.9	-7.52	-10.08	-10.77
1/3/00	47.79	-14.18	0.51	-6.85	8.58	-8.81	14.89	-6.68	5.48	-3.57	2.61	-3.68	9.31	-3.38
1/2/01	1.21	-19.31	4.48	-9.57	-4.88	-10.24	-3.78	-6.73	-1.9	-5.05	8.1	-3.89	-0.5	-7.58
1/1/02	7.16	-32.76	1.81	-6.85	-7.33	-20.37	4.17	-8.15	3.79	-6.45	11.71	-4.43	-0.06	-3.78
1/1/03	32.08	-17.45	-4.35	-9.83	16.21	-7.01	6.6	-9.64	-0.71	-8.38	0.42	-3.81	12.21	-3.8
1/1/04	-3.63	-39.73	-0.35	-8.34	8.67	-14.43	-6.16	-15.99	-2.41	-7.87	-0.38	-3.52	0.51	-7.26

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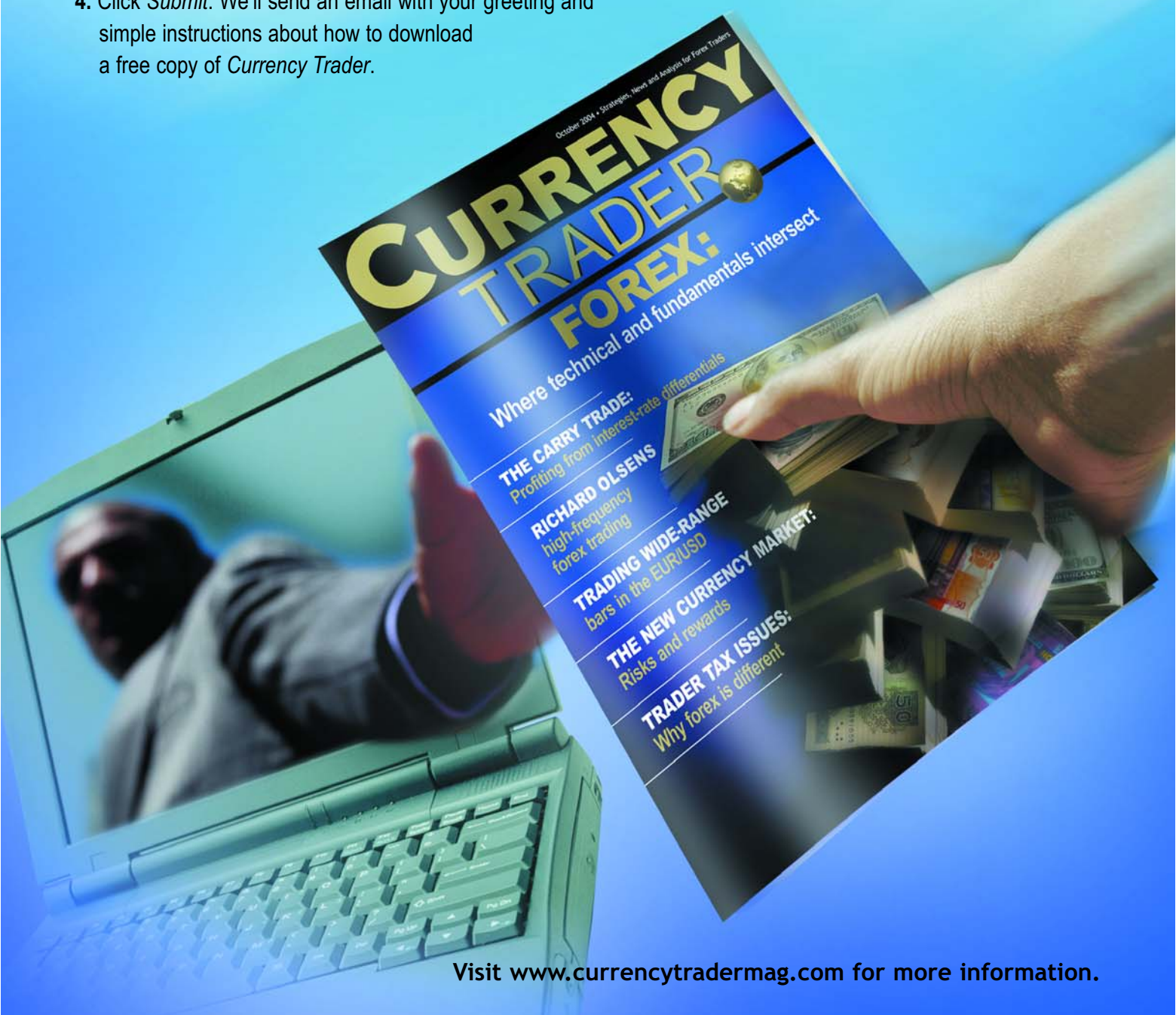

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Definitions and formulas for some of the tools referenced in this issue of *Currency Trader.*

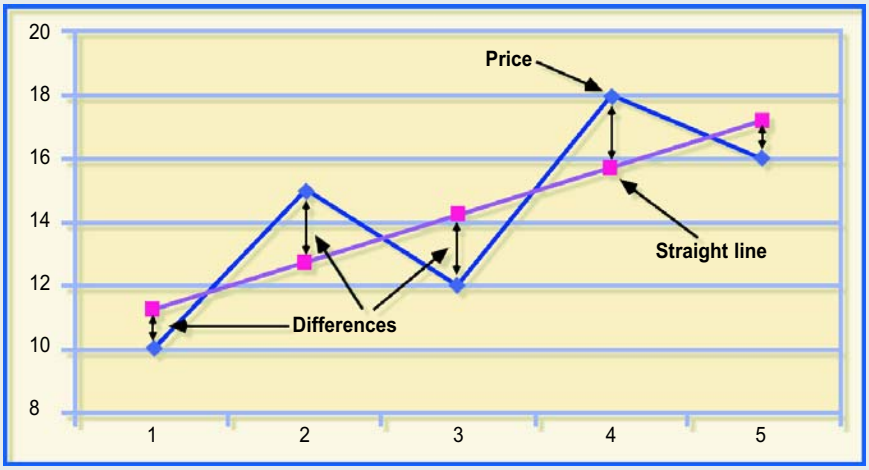
Linear regression line

Linear regression is a way to calculate a straight line that most accurately reflects the slope, or trend, of prices over a given time period. Because it is mathematically derived, a regression line, or "best-fit" line, is not based on subjective visual analysis, as are standard trendlines.

Figure 1 shows a group of five closing prices on a price chart. A straight line that goes through the "middle" of those five prices — a line for which the difference between it and each of the zigzagging prices is as small as possible — is a regression line.

FIGURE 1 — FITTING A STRAIGHT LINE TO PRICES

A regression or "best-fit" line is calculated to minimize the difference between price points and the line. In doing so, the line approximates the slope (trend) of the prices.



Calculation: A regression line is calculated using the "least squares" method, which refers to finding the minimum squared (x*x, or x^2) differences between price points and a straight line. For example, if two closing prices are 2 and 3 points away (the distance being calculated vertically) from a straight line, the squared differences between the points and the line are 4 and 9, respectively.

Why are the squared differences used, instead of just the differences? Figure 1 shows that some differences are negative (for points below the line) and others are positive (for points above the line). Squaring the differences creates all positive values and makes it possible to calculate a formula for the straight line.

The best-fit line is the line for which the sum of the squared differences between each price and the straight line are minimized.

The formula for a straight line (y) is:

$$y = b + m^*x$$

where

x = the "time" of the price (the x-axis value)

b = the initial value of the line when "x" equals zero (the "intercept" value — i.e., the point at which the line intercepts the vertical axis);

m = the slope of the line, which is the rate at which the line rises or falls. In other words, b is how much y changes for a one-unit change in x (e.g., .75 points per day).

As prices change, the slope of the line also changes. When a market is rising sharply the slope (b) has a high value and the line will be steep. As the market slows down, the slope value decreases and the line will slope upward more gently. When calculating a straight line to N prices, the "best-fit" coefficients b and m can be solved for by:

$$b = [(4N + 2)/(N^2 - N)] \sum_{x=1}^{N} p(x) + [6/(N^2 - N)] \sum_{x=1}^{N} x^* p(x)$$

$$m = [12/(N^3 - N)] \sum_{x=1}^{N} x^* p(x) - [6/N^2\text{-}N)] \sum_{x=1}^{N} p(x).$$

where

p(x) is the price at point x.

N is the number of prices used to calculate the coefficients — e.g., N = 5 for a five-day regression calculation. In this case, the first day p(1) in the price series is 1 and the last price p(N) in the series is 5.

$\sum_{x=1}^{N} p(x)$ is the sum the prices for p(1) through p(N). For example, if N = 5 and the prices for days 1 and 2 are 10, 11, 12, 13 and 14, respectively, the sum is 60.

$\sum_{x=1}^{N} x^* p(x)$ is the sum of the products of time (x) and price (p). For example, the products of the prices used in the previous calculation are 10 (1*10), 22 (2*11), 36 (3*12), 52 (4*13), and 70 (5*14), and the sum of those products is 190.

Figure 2 shows the calculations and chart of three five-day regression lines calculated at different points over a 10-day period: Line A covers days 1 through 5; line B represents days 4 through 8; and line C is days 6 through 10. The linear regression estimates for the slopes (b) and intercept values (a) are listed in the third and fourth columns. The values for each of the five points that make up regression lines A, B and C are in the final three columns.

The slope for line A (days 1-5), which accompanies an upward trend, is 0.60. Price continued to rally higher in days 6 through 8, but at a slower rate, which resulted in a slope of .43 for line B. For line C, when price moved sideways to lower, the slope was -0.07.

Standard error channel (linear regression line)

The linear regression line is a straight line that minimizes the distance between itself and every data point in the series you are working with. A standard error measures the variance from the linear regression. Subtracting the standard error from the linear regression line yields the bottom of the standard error channel, and adding it to the linear regression value gives you the top of the channel.

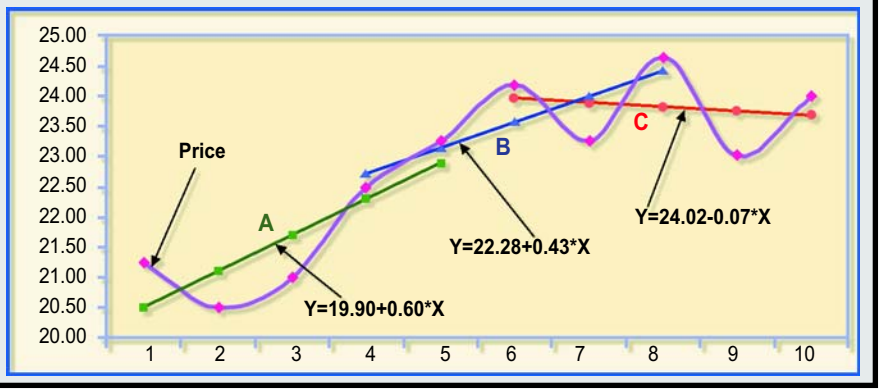
The standard error channel is a parallel concept to Bollinger bands, which use the standard deviation calculation to set boundaries above and below a moving average to capture variance away from the average. Because the moving average is a wavy line, the Bollinger bands are wavy, too, and also widen or narrow as variability rises or falls. The standard error does the same thing, only with straight lines.

The critical difference is that you don't need to choose a starting and ending point for Bollinger bands, because they track a moving average that constantly discards old data and refreshes itself with new data. To construct a useful linear regression channel, however, you have to pick reasonable starting and ending points. It's still "mathematics" and thus a better way to draw a trendline than using your eye alone, but your choice of starting and ending points is inherently judgmental. Most practitioners chose an obvious lowest low or highest high.

FIGURE 2 — REGRESSION LINES

The following calculations resulted in the three different five-day regression lines on the chart below.

Day	Price	Slope (m)	Intercept (b)	Line A	Line B	Line C
1	21.25			20.50		
2	20.50			21.10		
3	21.00			21.70		
4	22.50			22.30	22.71	
5	23.25	0.60	19.90	22.90	23.14	
6	24.20				23.57	23.95
7	23.25				24.00	23.89
8	24.66	0.43	22.28		24.44	23.82
9	23.00					23.76
10	24.00	-0.07	24.02			23.69



Elliott Wave basics

BY ACTIVE TRADER STAFF

Elliott Wave is a descriptive form of technical analysis based on the concept that price action unfolds in identifiable, structured waves that define both trend and countertrend moves.

Ralph Nelson Elliott (1871-1948) introduced his ideas through a series of letters to Charles J. Collins, who help Elliott published *The Wave Principle* in 1938. Also with Collins' aid, Elliott published a series of articles in *Financial World* magazine in 1939.

Today, Elliott Wave theory is probably best known through the work of Robert R. Prechter Jr., who in 1978 coauthored with A.J. Frost the book, *Elliott Wave Principle: Key to Stock Market Profits* (John Wiley & Sons, 10th edition, 2001).

Waves and fractals

Elliott Wave theory contains elements of a mathematical concept known as a fractal, which is an object or shape that has self-similarity on different scales.

Fractals are found in a variety of phenomena. For example, if you look at a mountain from a distance you see a peak with relatively smooth sides leading up to it. As you move closer, you begin to see how the sides of the mountain are actually made up of smaller sub-peaks and sides, which consist of even smaller peaks and sides, all sharing a similar basic structure or pattern.

Similarly, part of wave theory is the idea that any wave cycle is part of a larger wave cycle that adheres to the same rules, and is also composed of smaller wave cycles with the same structure.

Many devotees of Elliott Wave consider price action to be a natural phenomena driven by human emotion, which makes the fractal aspect of wave patterns an effective way to understand and describe the price movement.

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Types of waves: Impulses and corrections

Because Elliott Wave is a descriptive, rather than quantitative, analytical approach, it is really a type of visual pattern recognition. Figure 1 shows the basic Elliott Wave count, which consists of two phases: The first consists of numbered price moves, or waves, while the second contains lettered price waves. Numbered phases are "impulse" or trending waves; the lettered phases are called "corrective" or countertrend waves.

Impulse moves are composed of five waves (1 to 5), with waves 1, 3 and 5 in the direction the dominant trend, and waves 2 and 4 against the trend. A basic rule of wave identification is the bottom of wave 4 cannot overlap the top of wave 1.

Corrective moves consist of three waves, labeled a, b, and c. A five-wave impulse move followed by a three-wave corrective move completes one wave cycle.

Figure 2 , which shows how wave patterns are subdivided into smaller-degree patterns or expanded into patterns of a higher degree, illustrates the fractal aspect of Elliott Wave.

The following examples are described in terms of an uptrend, but the same patterns are used if the trend is down.

Interpreting waves

There are psychological and practical interpretations associated with the wave patterns shown in Figures 1 and 2. For example, Wave 1 is the first advance in a trend move and usually will be driven by short covering and professional buying, indicating a turn from bearishness to bullishness.

Wave 2, which corrects wave 1, is often accompanied by a high degree of pessimism. For example, if this wave count was occurring on a weekly chart of the stock market, a wave-2 bottom might coincide with dire forecasts about both the economy and the stock market.

Following the wave-2 low (which must be above the wave 1 low), a rally above the peak of wave 1 (signaling a wave-3 advance) will be considered a very bullish event, most likely occurring in tandem with news that has suddenly turned favorable. At this point, investor sentiment will be optimistic.

Wave 4 corrects wave 3. Now, the mood of the market will likely remain stable. Wave 5 can be considered the last hurrah, a peak in optimism immediately before a decline that corrects the entire five-wave impulse advance. The typical target for the subsequent a-b-c corrective phase is the wave-4 low. Sometimes wave 5 will take the form of an upward diagonal triangle.

Regarding impulse waves: Wave 3 can never be the shortest impulse wave in a valid wave pattern, but either wave 1 or 5 can be longer than the other.

Regarding the relationship between corrective waves 2 and 4 within an impulse move: According to Elliott Wave theory, if corrective wave 2 was long and complex, corrective wave 4 should be simple and swift, and vice-versa — a concept referred to as "alternation."

The Fibonacci connection

Fibonacci ratios (i.e., 38.2 percent, 61.8 percent, 138 percent, and so on) play an import role in Elliott Wave analysis. (See "The Fibonacci series," for an explanation of Fibonacci numbers.)

In Elliott analysis, one price wave should typically be able to be described in terms of a Fibonacci relationship to another wave — for example, the length of wave 3 might be 138.2 percent of the length of wave 1, or wave 2 could bottom at the 61.8-percent retracement level of wave 1.

This material was excerpted from the article, "The Elliott Wave challenge," from the March 2004 issue of Active Trader *magazine.*

FIGURE 1 — THE BASIC WAVE COUNT

The impulse (trend) move consists of waves 1 to 5. The corrective (countertrend) move consists of waves a, b, and c.

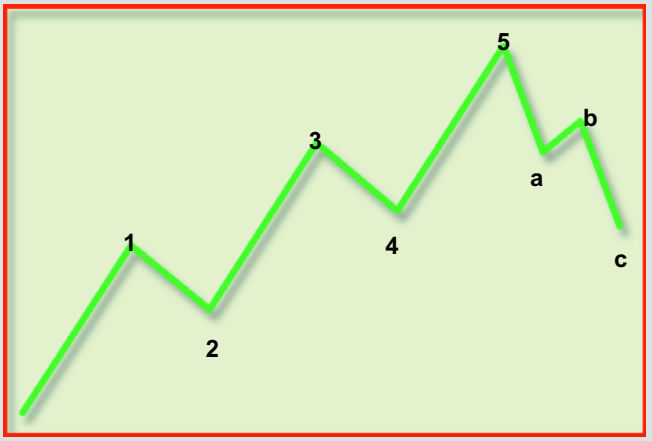
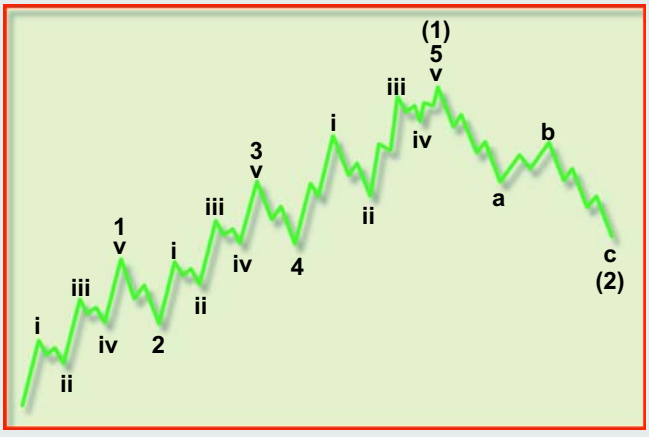


FIGURE 2 — SUBWAVES: THE "FRACTAL" NATURE OF ELLIOT WAVE

This chart shows how any wave consists of subwaves with the same structure. For example, wave 1, which is the first upwave in an impulse wave, is made up of five smaller impulse waves.



The Fibonacci series

The Fibonacci series is a number progression in which each successive number is the sum of the two immediately preceding it: 1, 2, 3, 5, 8, 13, 21, 34, 55, and so on.

As the series progresses, the ratio of a number in the series divided by the immediately preceding number approaches 1.618, a number that is attributed significance by many traders because of it appearance in natural phenomena (the progression a shell's spiral, for example), as well as in art and architecture (including the dimensions of the Parthenon and the Great Pyramid). The inverse, .618 (.62), has a similar significance.

Some traders use fairly complex variations of Fibonacci number to generate price forecasts, but a basic approach is to use ratios derived from the series to calculate likely price targets.

For example, if a stock broke out of a trading range and rallied from 25 to 55, potential retracement levels could be calculated by multiplying the distance of the move (30 points) by Fibonacci ratios — say, .382, .50 and .618 — and then subtracting the results from the high of the price move. In this case, retracement levels of 43.60 [55 - (30*.38)], 40 [55 - (30*.50)] and 36.40 [55 - (30*.62)] would result.

Similarly, after a trading range breakout and an up move of 10 points, a Fibonacci follower might project the size of the next leg up in terms of a Fibonacci ratio — e.g., 1.382 times the first move, or 13.82 points in this case.

The most commonly used ratios are .382, .50, .618, .786, 1.00, 1.382 and 1.618. Depending on circumstances, other ratios, such as .236 and 2.618, are used.

Additional reading

The following articles have more information about Fibonacci numbers:

"Technical Tool Insight: Fibonacci ratios" (*Active Trader*, April 2002). This is a detailed primer on the properties of Fibonacci numbers.

"Absolute price projections," by Tom DeMark and Rocke DeMark (*Active Trader*, July 2004). This article explores the authors' unique application of Fibonacci ratios to determine potential price targets.

You can purchase and download past Active Trader *articles at www.activetradermag.com/purchase_articles.htm*.

Triangle patterns

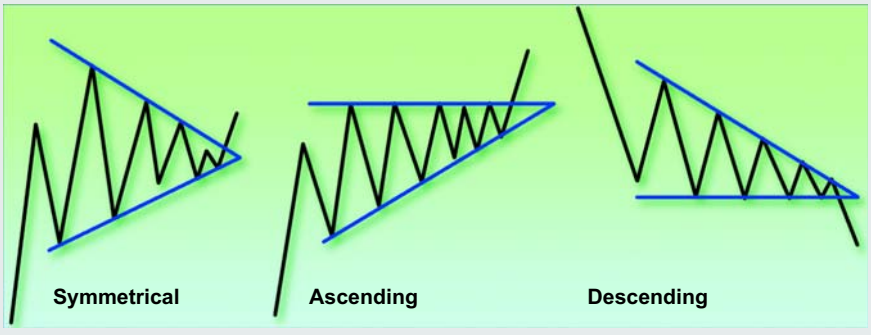
A triangle is a pattern in which price trades in an increasingly narrow range. It represents a period of market congestion or consolidation, and has the same implications as trading ranges ("rectangles"), flags, and pennants.

Triangles and pennants are identical except for their length: Pennants might typically consist of approximately five to 15 bars, while triangles can span dozens of bars.

The most important aspect of triangles is that they represent market contraction (i.e., decreasing volatility), a condition typically followed by price thrusts or trends.

FIGURE 1 — TRIANGLE VARIETIES

There are three basic types of triangle patterns: symmetrical, ascending, and descending. All triangles represent market consolidation.



In technical analysis parlance, there are three types of triangles: symmetrical, ascending, and descending (see Figure 1). Symmetrical triangles consist of progressively lower highs and higher lows, so that the upper trendline of the pattern (which represents resistance) slopes downward and the lower trendline of the pattern (which represents support) slopes upward.

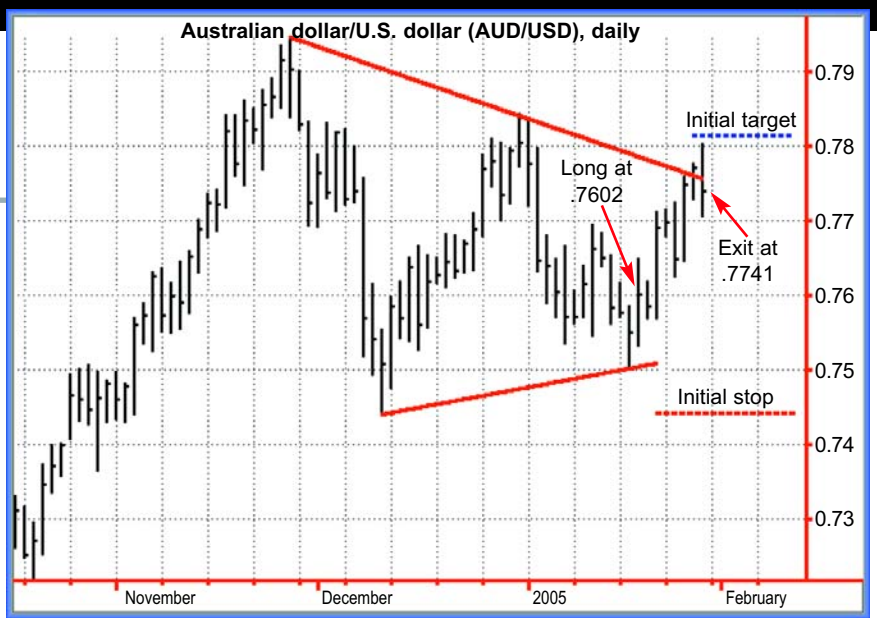
An ascending triangle is characterized by a rising support line that reflects progressively higher lows and a horizontal resistance line that reflects equivalent highs.

A descending triangle is the opposite: It consists of a falling resistance line that reflects progressively lower highs and a horizontal support line that reflects equivalent price lows.

Oscillators

Oscillators (or "momentum oscillators") are tools such as the relative strength index (RSI), commodity channel index (CCI), and stochastics. They are typically used to identify shorter-term "overbought" and "oversold" levels — points at which a market has presumably moved too far, too fast and is ripe for at least a correction. These indicators typically compare the current price to a past price (or price range) to determine how relatively high or low the current price is. While these indicators can sometimes seem to generate remarkably well-timed signals in trading range markets, they will trigger repeated false signals in trending markets.

Statistics and market context point to an up move in the Aussie dollar.



Source: TradeStation

TRADE

Date: Wednesday, Jan. 19, 2005.

Entry: Long the Australian dollar/U.S. dollar (AUD/USD) currency pair at .7602.

Reason(s) for trade/setup: After its September - November 2004 rally (which nearly reached the early 2004 record high), the AUD/USD rate made a lower high at the end of December before sagging and consolidating in early 2005.

Technical traders will likely see the recent price action as a developing symmetrical triangle pattern, which, because of the downside bias over the past several weeks, would imply a breakdown below the formation's lower trendline and a continued downtrend.

We will fade this premise and go long. Even if the dollar bears seem to be losing some of their conviction and the buck is on the verge of reversing its longstanding weakness, another slump for the greenback (vs. a stronger Aussie dollar) seems likely at this juncture. Ironically, the previous day's low triggered oversold readings on many momentum oscillators, which means we are trading against popular technical analysis interpretation on one level (the triangle pattern) and in synch with it on another.

However, this technical information is simply a prelude to the fact that the majority of situations similar to the two-day pattern concluding on Jan. 19 — the previous day's low being the lowest of the past 20 days, the current high being the highest in three days, and the current day closing in the upper 50 percent of the range — were all followed by up moves.

Historically, trading was mixed the first three days after this pattern, but by the fifth day (and continuing for the next 15 days) the currency pair was higher in all cases, with an average maximum gain after 10 days of roughly 3 percent. (However, there were only five other examples over the past 18 months on which to base conclusions.)

Initial stop: The historical analysis showed the largest down move after entry was -2.1 percent. We'll use this amount (which translates to 160 pips) to set the initial stop at .7442.

Initial target: We'll shoot for a little less than the average gain we discovered in testing (2.75 percent), which results in an initial target of .7811.

RESULT

Exit: .7741.

Reason for exit: The market sold off after nearly reaching the initial profit target.

Profit/loss: +139 pips (1.8 percent).

Trade executed according to plan? No.

Lesson(s): It's not quite accurate to say the trade wasn't executed according to plan. Although we exited before the market hit the initial price target, the move to .7803 was a *de facto* fulfillment of that goal. The rally occurred in the evening (Central Time) on Jan. 27; if we'd been following the market at that time, we likely would have exited the trade.

However, by the next morning the currency pair had sold off sharply and had traded as low as .7707 — forming an outside bar with a potentially lower close. We bought on an intraday bounce, deciding the market had made its anticipated move and was now more likely to turn lower in the coming days — despite the technical breakout out of the top of the triangle.

TRADE SUMMARY

Date	Rate	Entry	Initial stop	Initial target	IRR	Exit	Date	P/L	LOP	LOL	Trade length
1/19/04	AUD/USD	.7602	.7442	.7811	1.31	.7741	1/28/04	+.139 (1.8%)	1.13	0	7 days

Legend: IRR — initial reward/risk ratio (initial target amount/initial stop amount); LOP — largest open profit (maximum available profit during lifetime of trade); LOL — largest open loss (maximum potential loss during life of trade).