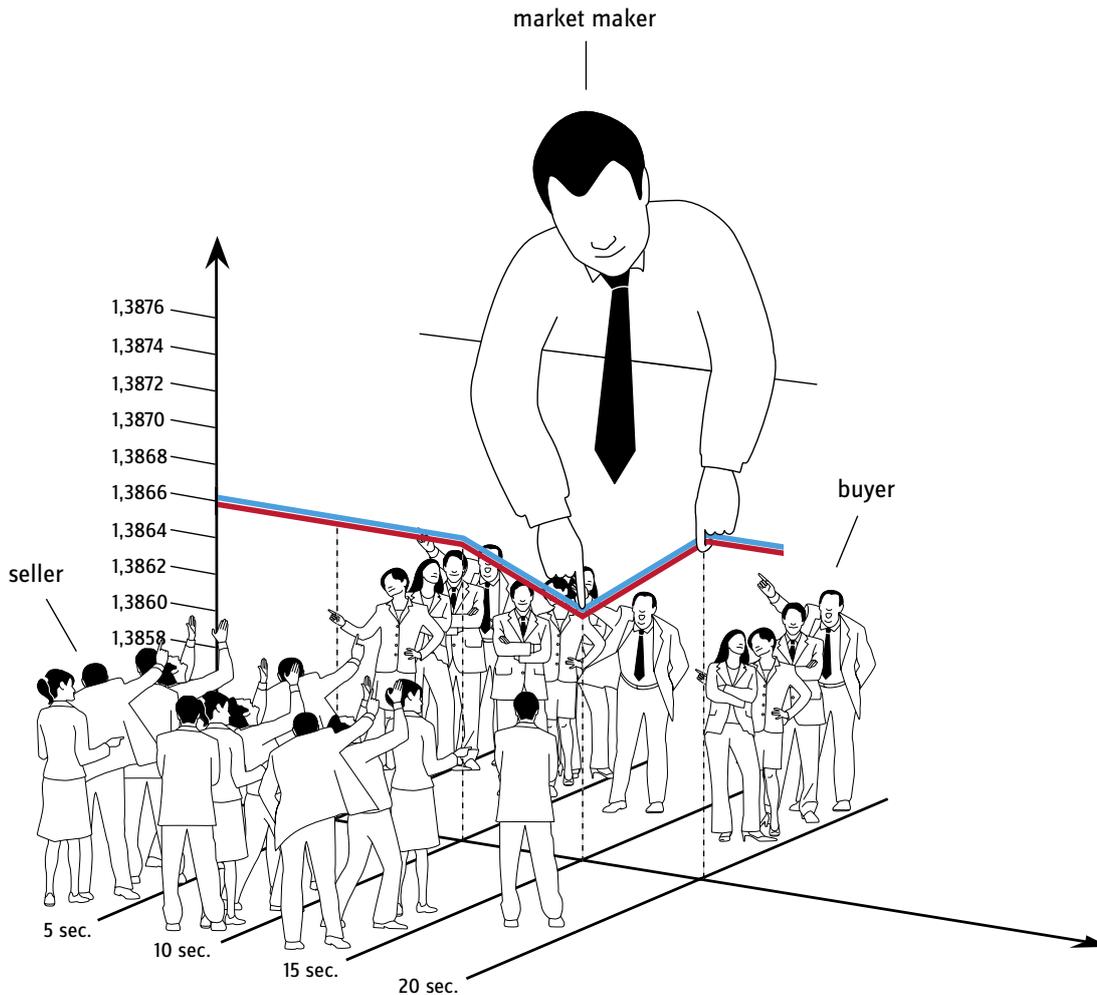


Pricing in the FX Marketplace[®]

Price displacement in the fx market is an artifact of market mechanics that have nothing to do with determining fundamental value. The inefficiency of over-shooting is disruptive, increases risk, and drives uncertainty.

Olsen's investment methodology counters this uncertainty by anticipating imbalances between buyers and sellers and providing liquidity that can restore prices to more reasonable levels.



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Pricing in the FX Marketplace - Finding a foothold in the shifting sand

The potential profitability of currency trading is a given. The trader who takes advantage of just a 0.2% price change once a day can make an annual profit of 40%; succeed at trading a change as small as .05% 10 times a day and your annual profit is 100%. Betting on price moves is one thing, but where, exactly, is value?

Price is always specific: it enables or disables a transaction; it sets a new benchmark for the pricing of all other positions in the market; and sudden, inexplicable price changes accelerate cascading trends that destroy or dilute value.

So, what really drives currency pricing? And how do we reduce the uncertainty of that process and retrieve value?

The valuation of currencies is a mysterious business. But for the traders who come to the market with distinctly different expectations and time horizons, valuation is beside the point.

In the fastest-moving, most active market in the world, the name of the game is price. Something different, somehow.

With only a tentative connection to fundamental value, currency prices move quickly and for the most opaque reasons. Yet, we rely on the market to exercise some degree of “efficiency”—to perpetuate trading, of course, but ultimately to provide a rational basis for the global investment and allocation of capital. This in the face of the fx market’s well-earned notoriety as the least predictable, most change-direction-at-the-drop-of-a-hat market on the face of the earth.

The problem with currency trading

Let's start with a few harsh realities:

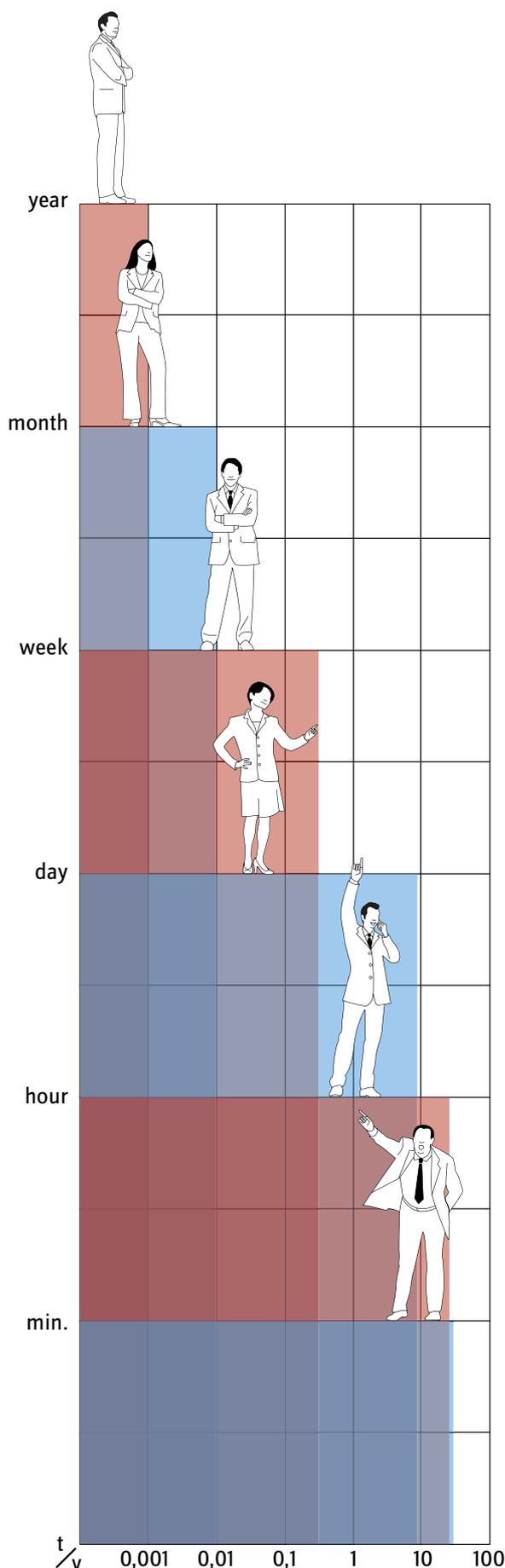
1. There has to be a market, some sort of exchange, to perpetuate global trade and investment.
2. As fx matures as an investable asset class, its risk and return properties will be better understood, but complexity – hidden as well as obvious – will remain.
3. We'd all like to believe in purchasing-power parity, but localized economic and social forces create different pricing regimes for every country and constantly work to distort that parity: for any exchange rate, there is no one, unambiguous, universal number. There is no such thing as a "fair" exchange rate.
4. Logically and in a quite direct way, interest rates should provide consistency of price evolution over time. But yield curves add their own dimension of uncertainty. And, for most traders, interest rates don't matter at all. This perception is false and dangerous; interest rates do matter: 85% of fx volume is intra-day: most market makers pay no interest on these short-term positions and no interest is owed. By removing interest from the buying and selling equation, the market creates an artificial bias toward shorting currencies with higher rates of interest and rewarding buyers of stronger currencies. The result? Distorted pricing flows that upset trends, create valuation havoc, and give rise to bubbles. If you pretend that currencies as diverse as the Euro, the U.S. dollar, the Argentine peso and the Polish zloty are all the same, you're ignoring a basic risk that distorts relative value. The payment of continuous interest, second-by-second, recognizes that currencies are different. That assigning appropriate risk is a rational part of fx trading. (In the future we'll devote an entire article to this important topic.)
5. If we can't know what the absolute value of a currency is right now, how can we possibly predict its future trajectory? These rather dark observations are high-level, looking from the outside in. At Olsen we take a closer look...at who is trading and how often and under what precise conditions.

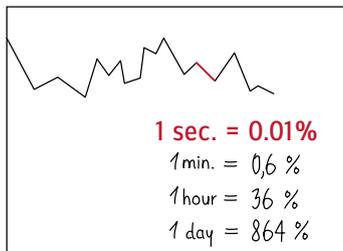
The mechanics of any market drives price evolution, but in fx—compared to equity and fixed-income markets, where institutional constraints continue to drive a long-only bias – we find a unique kind of uncertainty. The mechanics of fx makes more obvious sudden moments of disequilibrium that result in the unwilling reversal of positions (for example, when pricing moves against a trader who is long, gets a margin call or hits her personal stop-loss, and is forced to close out her position).

As buyers and sellers move out of proportion, pricing can quickly jump to new extremes.

The players and the gatekeeper

Currency investors range in a steep hierarchy from central bankers and large institutional traders to professional traders and CFOs managing cross-border capital exposures, to importers and exporters, to intra-day speculators. And what a mad cast they are. Across this hierarchy of diverse agents only a few things are certain: they will take positions of dramatically different sizes, for periods ranging from less than a minute to two years, with totally different perceptions of risk and reward.





1 year = 315'360%



It's not the price, it's the change

Let's say that in one year the price of USD goes up or down by 15%; this gives us a framework to speak of its "value." But the more closely you analyze price changes, the greater interim displacement you find. If USD goes up or down by 0.01% in one second –which can happen several times every week–the annualized price change is 315,360%. Where, then, is the equilibrium value of the dollar? In fx there is no fixed frame of reference, and so traders get by with bidding and asking more than a rational assessment of value would dictate. They over-shoot.

Over-shooting is a fact of life in fx, but it is hardly an efficient way to determine price. Olsen believes the excess volatility of pricing is unnecessary, costly, and distracting–because it suspends the definition of value.

As we mentioned in the introduction, different players in the market are subject to different imperatives: some are voluntary...the trader can wait for an acceptable price; some are opportunistic...the trader is in a big hurry to profit from a micro-trend. But the most damaging imperatives are involuntary: traders who get a margin call or hit predefined limits, or market makers who hit hard limits and have to move prices in order to comply with their exposure controls.

All of these events are quite real, and each contributes to pricing uncertainty. In the most dramatic cases, this uncertainty can tip the scales and move pricing action into a new orbit, creating a completely different price history. But in the daily moments of imbalance, we see opportunity. Traders who have stayed on the sidelines can trade against the flow, taking the informed risk that they will be rewarded for providing indispensable liquidity. Because over-shooting exists, "flow traders" can make money. More altruistically, Olsen believes this strategy can rein in unnecessary volatility and, by extension, reduce the incremental costs of capital and investments that are tied to exchange rates.

Buyers, sellers and market makers provide quite different kinds of energy to propel the market. But it comes in fits and starts and tends to go too far in one direction. There is no fixed frame of reference that suggests one "right" price.

In the accurate proportions of the price change, this arrow would be 4 times the length of the leaning tower of Pisa in Italy!



The uncertainty principle

We know from physics that determining the exact position and momentum of a particle is always imprecise. In financial markets there is analogous imprecision in determining value (position) and price (momentum). For fx this indeterminacy comes about because the underlying “property” or “good” serving as the basis of the transaction is two currencies. Two contracting parties are required (a buyer and a seller), and their acceptance or rejection of a proposed transaction depends on their momentary “states.” “States” (frames of mind...objectives...the urgency of the need to trade...and whether that need is voluntary or invoked by, say, a margin call) are diverse and uncertain.

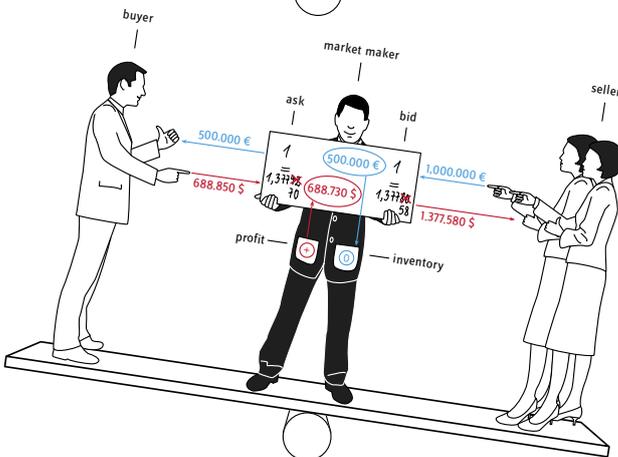
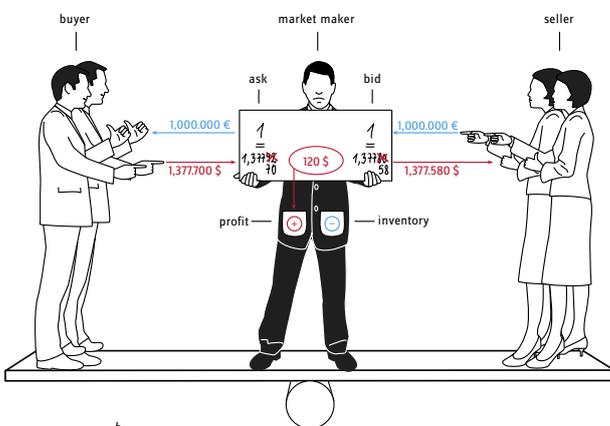
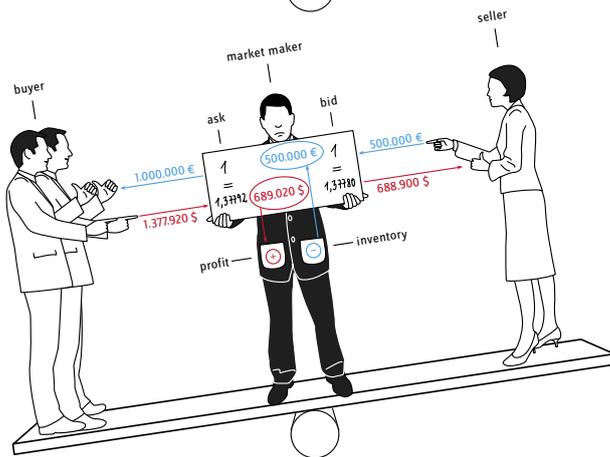
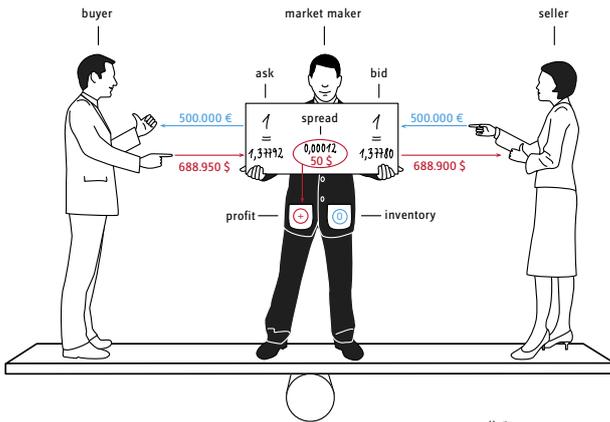
The infrequent trader who is in the market to hedge the value of assets in a foreign currency may be more accepting of price and more willing to wait; the speculative trader looking to take advantage of a 0.2% price change has to act now.

So, do price changes reflect new perceptions of intrinsic value ... or a more personal necessity?

In fx you have a wide range of players...with a correspondingly wide range of perceived opportunity sets. But the player with the shortest-term interest is the market maker. And as a counterparty to every trade, he is the master. The market maker earns his profit from an infinitesimally small spread, and that spread has an oh-so-brief shelf life. If at a given price equal portions of buyers and sellers come into the market, the market maker has it easy.

But this is a fast, over-the-counter market; buyers and sellers don't come in regular, offsetting waves, and when they do come, they all have to deal through the market maker. Whose primary objective is to limit risk (his own) and cover costs (his own). He needs to clear his books as quickly as possible; to reduce his risk he will lay off trades within five seconds, 10 seconds, or 10 minutes. And to offload his inventory he will move the price to attract buyers and sellers.

The information is in the price, but what is it telling us? Any up-tick or down-tick is a signal, but an ambiguous one. Is this just a break in supply and demand, or does it signal a fundamental redefinition of “value”? No one will know whether this is a refreshing breeze or the beginning of a hurricane. But every change in price redefines the playing field for everyone, undermining tacit assumptions about value.



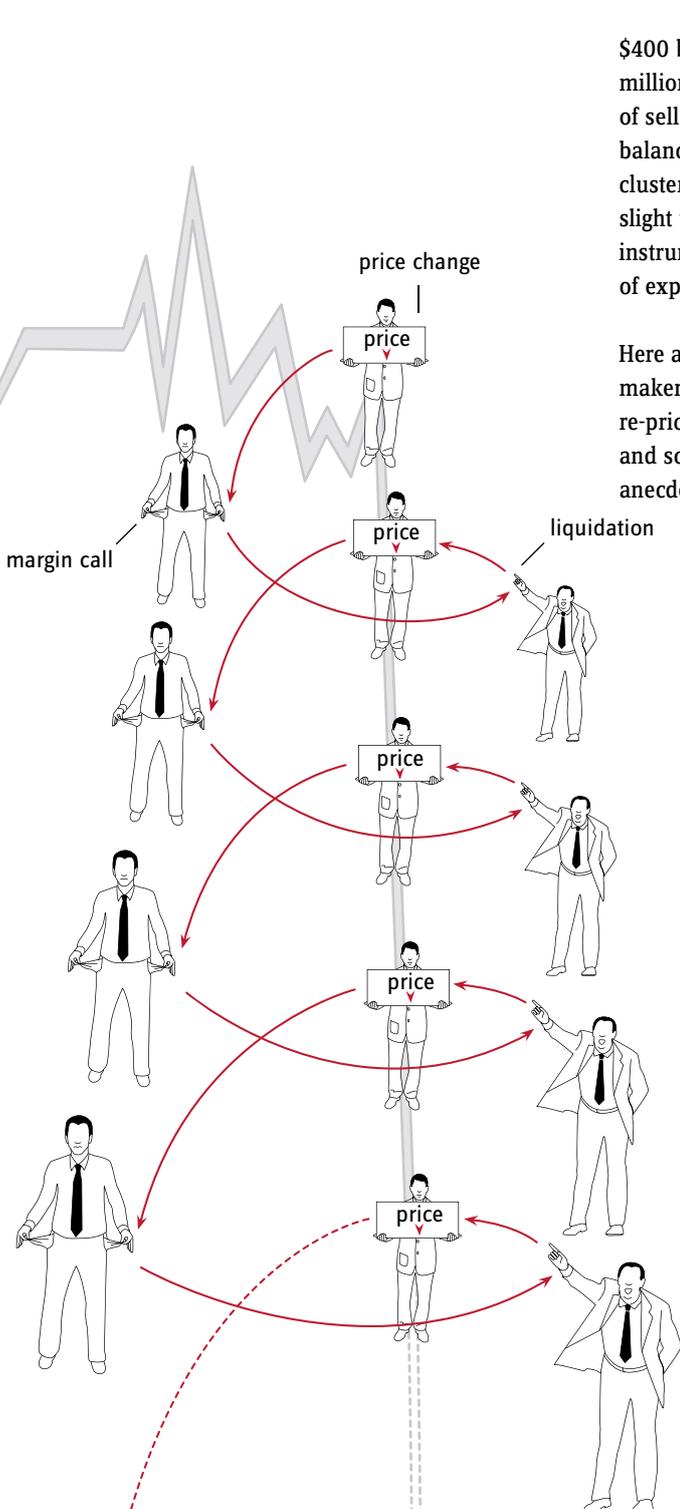
Tail wags dog

To demonstrate how relatively small volume can displace pricing in fx, let's look at what's really happening:

Take the volume for a busy trading day in fx, \$2 trillion. About two-thirds of that volume is swaps—not real currency transactions. Of the one-third that remains—\$650 billion—roughly half is brokers hedging with other brokers, leaving, let's say, \$400 billion of customer-driven volume for the day. (This is the “slack” where pricing happens.)

\$400 billion of daily volume (for all exchange rates) reduces to about \$330 million per minute or \$50 million every 10 seconds. That means \$25 million of sellers and \$25 million of buyers have to be matched or the market is imbalanced. (We recognize that volume is not evenly distributed over time; it clusters. Nevertheless, at any moment a change in market price—no matter how slight the volume—triggers the re-pricing of all open positions in the underlying instrument. And this short-term disruption further triggers a recalculation of exposure: are margin requirements still being met?)

Here at the heart of the action, trickling volumes have to pass through the market maker. But as he re-prices, the trickle can become a flood. As all positions are re-priced, margin calls close out positions; involuntary sales add momentum and scope to the unexpected change; market imbalance accelerates; an anecdotal effect has become a fundamental cause.



The bad news is that such relatively small amounts of volume can have such disproportionate and irrational effects; the good news – especially for flow traders like Olsen – is that small interventions can have a meaningful effect by restoring balance and reducing the extremes of price movement.

To repeat: there is no fixed frame of reference, no “fair price,” and any change in price redefines value. Any price is biased by the specific states of the traders who take part in the transaction. The market maker has no psychological attachment to any price level; he only wants to balance his book and exit the position as quickly as possible. In the face of an instantaneous imbalance between buyers and sellers, the market maker will move the price as far as he needs to, in either direction, to solicit the trading action he desires. In extreme cases he will not only move prices but also widen spreads to fend off unwanted increases in position – an action that compounds uncertainty.

This self-interested action moves markets. The new price becomes the reference point for every other position in the marketplace. With way disproportionate consequences: a \$200-million trade (which, with leverage, might require only \$20 million in equity) can move EUR/USD, with cascading effects of triggering stop-losses that push prices well outside any “rational expectation.”

And the problem is not just volatility, but that the volatility is unnecessary. Olsen believes that instead of just accepting uncertainty, we can take a contrary position to stabilize prices and restore them to a more appropriate level.

Whether the fx market is efficient or inefficient, the players assume that it works. We believe it does not. Because the over-shooting created by the market-maker effect inflates spreads, distorts orderly pricing, and discourages productive volume.

Unnecessary volatility constrains market makers as well as traders. Because the market maker, too, can tolerate only so much risk at one time. As the narrow valve at the heart of the market, his limited capacity for risk is out of proportion with the total potential volume. Incapacity at the core limits the market’s ability to absorb and match trades without causing disproportionate price moves.

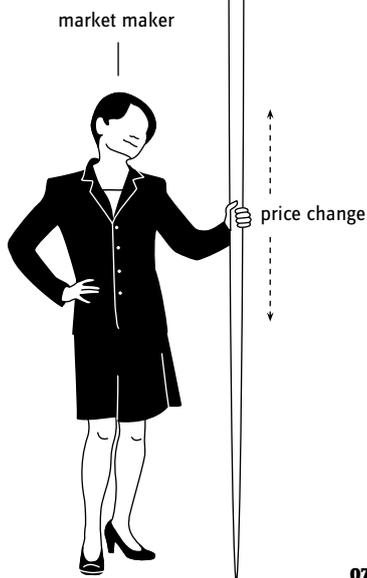
risk capacity

Passing through the eye of the needle

Market makers post prices and have to be good for them. But the total risk capacity for all market makers is only about \$1 billion. Compared to the daily fx trading volume of about \$800 billion...or \$2 trillion on a really busy day.

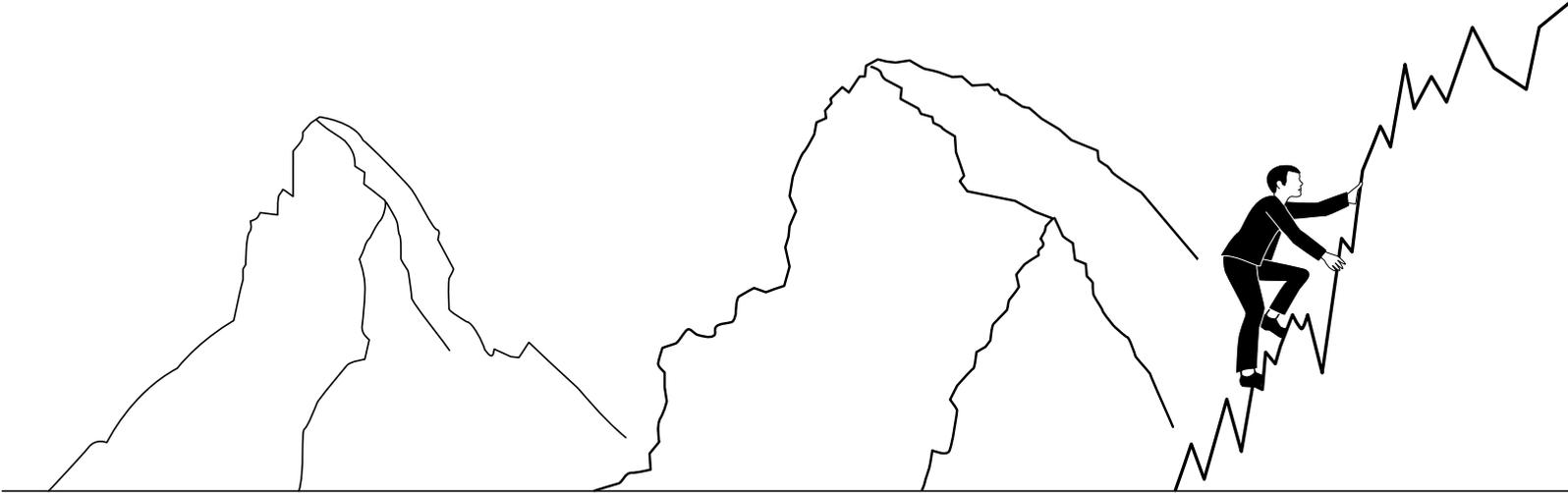
Unnecessary pricing volatility—the result of the market-maker effect—needlessly consumes market energy by overburdening capacity for risk at the core. With greater capacity for risk, over-shooting wouldn’t be necessary.

Every transaction away from the equilibrium price works to the disadvantage of at least one party.



What Olsen does

Because pricing is dynamic, we focus on how different market participants' reactions unfold over time in response to every change in price. We do not obsess over any one price change (as the beginning, end, or perpetuation of a trend); we anticipate how different components of market participants are likely to align in front of the next price change. When our trading model perceives a likely imbalance between buyers and sellers, it takes a counter-position to provide the liquidity required by the market.



Science, not magic

Over longer periods of time, price changes are flatter and show fewer trends than in short-term intervals. The higher the resolution and the shorter the interval, the greater the number of relevant price changes. Thus, long- and short-term traders have different trading opportunities: the shorter the trading horizon, the greater the opportunity set. But perceived opportunity sets—and the response to outside events—are a function of the particular agent's horizon (time being the most important factor determining why he is in the marketplace).

Both in our research and in our active trading experience, we confirm persistent properties that reveal the absence of a fixed frame of reference: every trader or group of traders serves as its own frame of reference. These phenomena or “relativistic effects” manifest as volatility clusters, trend persistence, and the lag between interest-rate adjustments and fx-rate adjustments.

Among these effects lie profit opportunities.

Why do we do this?

1. We can earn a net incremental positive return on our trades.
2. The risk-adjusted quality of the return is higher than that available from other active strategies, such as trend-following or macro-economic analysis and longer-term market-timing.
3. Our trading activity counters the market-maker effect by moderating temporary imbalances (giving the market maker less cause to push rates to irrational extremes) ...
4. Which has the effect of narrowing spreads ...
5. Which generates persistent, productive volume ...
6. And reduces uncertainty by honing the dynamic benchmarks (volatile currency prices) to serve market reality (the ongoing need for liquidity and more reasonable pricing).