

# Tackling Hidden Costs in FX Management

November 2019



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## Why read on?

### How much are investors spending on day-to-day FX management and how much could they save?

The answer: much more than they may realise. The subject, typically viewed as an administrative back-office function, often receives limited attention from pension fund trustees and investment seniors in an institution. While FX is a highly liquid market it is also opaque, fragmented and lucrative for its operators, creating challenges for even the most sophisticated asset owners and managers.

**Transaction costs**, comprising **spread and/or fees plus market impact costs**, have received greater attention in recent years. Market impact cost, or the impact on price which a market participant can create when buying or selling a currency, is particularly difficult to quantify and govern. To make life more challenging, spreads and market impact costs tend to have an inverse relationship: a visible saving in the former, which is very achievable for larger investors, may be offset by an invisible loss in the latter. **Robust transaction cost analysis** that addresses all aspects can help investors to understand the true extent of losses.

It is one thing to understand leakage and quite another to reduce it in practice. Manager selection, custodian arrangements and direct trading arrangements can all play a role. Some interesting solutions have recently emerged that enable investors to net their FX trades against each other before going to market. These **“peer-to-peer” netting** services have been introduced by electronic venues, custodian banks, asset managers and other providers.

Evidence suggests that asset owners and asset managers can make substantial savings through this “peer-to-peer” netting. This article features compelling findings from a new study conducted by Siege FX, including data from 11 buy-side investors ranging from some of the world’s largest pension funds (>\$100bn) to small institutional investors (<\$5 billion). This reveals that more than a quarter of these investors’ spot FX trades could be netted inside a one-hour window and that, if these trades had been netted against an independent composite mid-rate, all the participants would have saved money. On average, each million dollars netted translated into a theoretical saving of more than \$100 – a combination of spreads, fees and market impact. In the case of a **\$60-billion pension fund**, for example, potential savings totalled **\$1.3 million per year\*** just on spot transactions.

Yet benefits are hugely dependent on the method of **implementation**. It is crucial to understand the major differences in how various peer-to-peer netting services operate, such as the sources of the FX rates employed in the process and the management of potential conflicts of interest which can taint outcomes. As such, this brief paper also outlines the most important questions that investors should ask when considering peer-to-peer netting possibilities.

\* If an investor considers the proportion of their portfolio in non-local assets and multiplies this by the frequency at which rolling occurs (e.g. monthly, quarterly), the asset base affected by this problem rapidly reaches multiples of total AuM, hence the substantial savings.

## Leakage: the known unknown

FX transaction costs, excluding any fees that investors might be paying for overlay managers and the like, fall into two categories: the semi-visible and the almost invisible.

Spread costs are “semi-visible”, in the sense that there is a visible transaction price, but investors or their asset managers do not necessarily see how this rate is determined in comparison to the prevailing market rate. Proper measurement of spread cost should use a correctly timestamped reference point for each transaction and a neutral, unbiased exchange rate as a comparator rather than one sourced from an execution agent or liquidity provider. Sadly, Transaction Cost Analysis (TCA) does not always meet this standard.

Market impact costs are less visible: an expense which many investors understand conceptually but cannot price effectively. Market impact is particularly problematic for investors or investment management firms that are transacting large sizes. While these players can often obtain more attractive spreads than their smaller peers, their flows are viewed and exploited by market-makers and short-term traders seeking intraday returns. The resulting speculative trading activity consumes even more available liquidity and leads to greater market impact cost.

The conclusion is that cost reduction cannot be achieved through spreads alone. The Bank for International Settlements (BIS) describes this phenomenon in its Working Paper No 405 *“Information flows in foreign exchange markets: dissecting customer currency trades.”*

Scandals, heightened regulatory obligations and a stronger focus on cost control have increased demand for TCA in recent years. This has helped many asset owners to achieve savings on the transaction costs paid by their external asset managers as well as on their own direct trading activity. However, sub-optimal practices such as executing only at the 4pm WMR Fix remain relatively commonplace. In addition, simplistic TCA that does not take market impact into account can be counterproductive: the investor may end up making visible savings on spreads but invisible losses on the market impact side.

### TYPES OF LEAKAGE (EXCLUDING ANY RELEVANT MANAGEMENT FEES)



#### Explicit costs

Fee plus spread. Quantifying spread cost is challenging, since investors and managers do not necessarily see how the rate compares to the rates available in the market at the time.

#### Implicit costs

Even more difficult to calculate. Market impact is particularly significant for larger sequenced or routine FX execution patterns which can be identified.

Source: bfinance. A conceptual illustration: size of each slice is unrelated to size of expense.

# The rise of peer-to-peer netting

## Going off-market

A number of ‘peer-to-peer netting’ solutions are emerging for FX trades in response to the challenges above.

In some ways it is an obvious solution: the benefits of transactional netting in financial markets are well known and documented. Trading at an agreed mid-rate can reduce spread costs, while market impact can be avoided by being “off-market.” Even a relatively small percentage of netting can deliver disproportionately large savings, due to the sequential nature of execution; as trading unfolds, the resulting market impact spurs an increase in transactional costs, meaning that the tail-end tends to be the most expensive.

In other ways, it is obviously problematic. Investors wishing to net their currency trades must establish a rate for each transaction that is attractive to all parties and not open to manipulation, in a sector where all available rates are highly susceptible to manipulation. They must be confident of a sufficient overlap in their transactions, such that there are enough investors on each side of enough trades to make a real difference. They must have meaningful privacy, such that the room is not run by (or accessible to) firms that may exploit the data.

The range of peer-to-peer netting solutions now available span a variety of provider types: electronic venues, custodian banks, asset managers and others. Few of them can appropriately cover all of the bases noted above. The concept is enticing, but its implementation is more complex than appears at first glance. Implementation is explored further on pages 8-9. First, however, we must establish the realistic size of the potential savings.

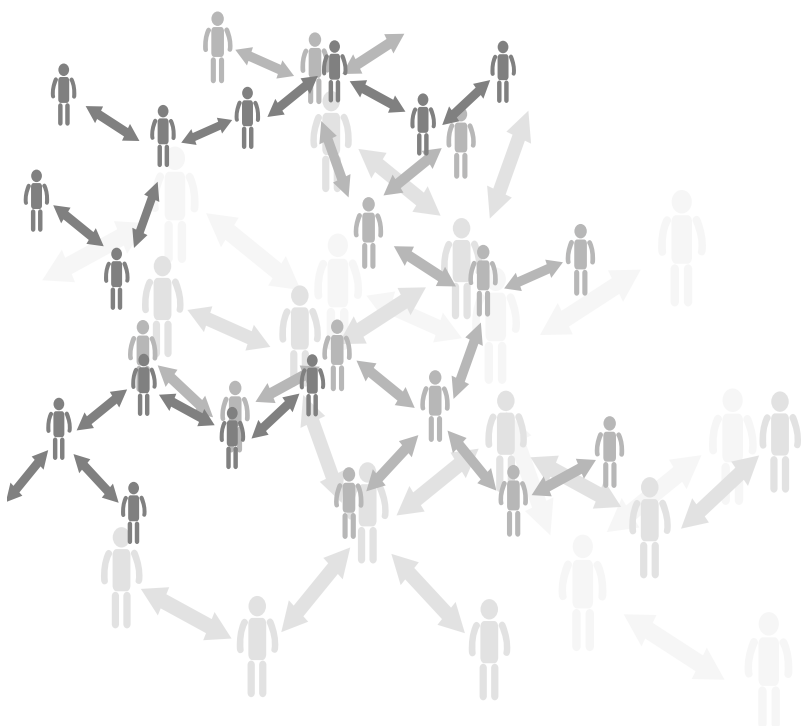
## Jargon buster

### Currency spot trades and currency swaps

An FX spot trade is the exchange of currencies at the current rate for “spot” settlement, usually taking place two (and sometimes up to seven) business days after the transaction.

An FX swap is an agreement between two parties to exchange a given amount of one currency for an equivalent amount of another currency based on the initial FX rate, and then exchange back at a later date based on a specific forward rate. The determination of the forward rate is based on the interest differential between these currencies over the period of the contract and applied to the exchange rate. They are often used to hedge FX risks for tenors beyond spot settlement.

The netting study results shown in the following segment apply only to FX spot trades.



# The rise of peer-to-peer netting

## What could investors save?

Establishing the potential savings available through peer-to-peer netting (and, by extension, the true cost of conventional FX management) can help investors to determine an appropriate strategy around this subject.

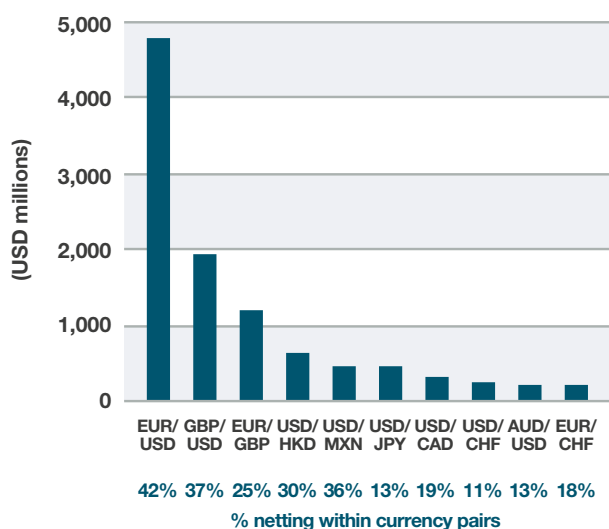
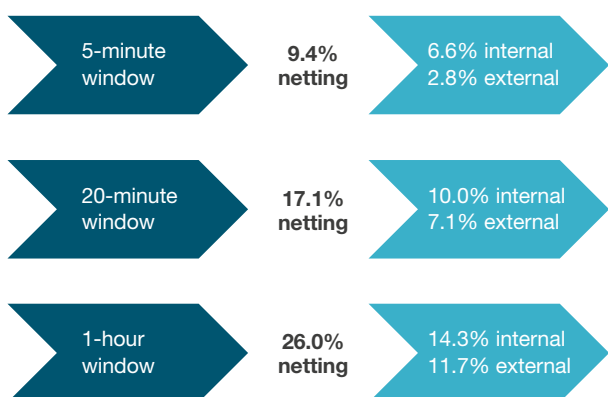
Putting a price on FX management is no easy task. Yet a recent buy-side netting study conducted by Siegfried FX does help to shed some light on this relatively obscure subject and quantify potential savings for participants.

This piece of research examined historical trading data recorded between March 1st and March 29th 2019 from eleven buy-side firms. They spanned a range of segments – asset management, pensions, insurance, corporate – and ranged in size from the relatively small investor (<\$5 billion) to the pension giant (>\$100 billion). These eleven participants submitted roughly 23,000 FX spot transactions, totalling just under \$43 billion in volume. Seven of the participants submitted 5,000 FX swap transactions, totalling \$314 billion in traded volume.

### Calculating the cost

Having gathered the data, the team measured FX transaction costs incurred by the participants. Spread cost was measured by comparing execution rates with independent rates supplied by New Change FX. The average spread paid across currency pairs was roughly \$70 for each million transacted, with smaller investors paying over \$700. Market impact cost, measured using the methodology developed by the independent quantitative surveillance firm Raidne, was estimated at a further \$70 per million transacted, with larger participants bearing the bulk of those costs. Taken together, the average cost is estimated at \$140 per million transacted.

### NETTING IN FX SPOT (LEFT) AND TOP TEN CURRENCY PAIRS IN ONE-HOUR WINDOW (RIGHT)



Source: Siegfried FX. "Internal" applies to netting within an institution, such as different funds within an asset management firm. "External" applies to netting between different institutions.

# The rise of peer-to-peer netting

## What could investors save? continued

Over a one-hour window, this data shows that 26% of FX spot trades could have been netted. At first glance, this may seem – in the manner of the Birthday Paradox – like a surprisingly high number, given the small size of the group and its predominantly European composition. It seems even greater when one considers that the orders are, on average, only available for half of the time window (assuming orders are evenly submitted through time).

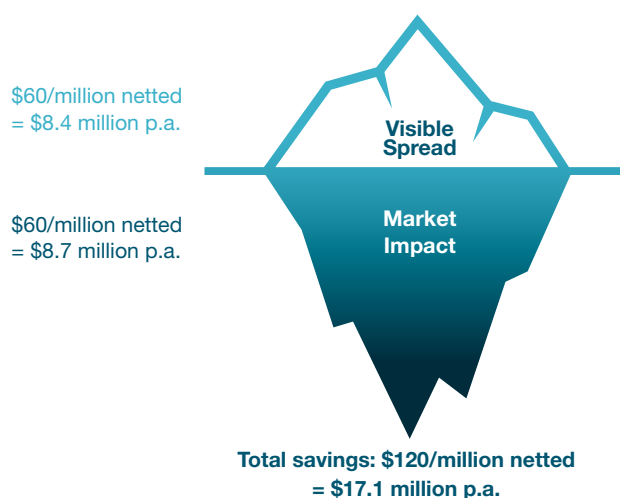
More intuitively, the results also indicate that longer netting windows produce larger netting opportunities. For this reason, peer-to-peer netting is particularly attractive for investors who are trading FX in a more passive, transactional way. Such trades are often left with a custodian or other operator for several hours, meaning that a one-hour window for netting would not impose any meaningful delay on the investor's activity.

### Finding the savings

The next stage of the research illustrated what could have been saved if the netted transactions had been executed at a neutral composite mid-rate (supplied by New Change FX) and without market impact (in a closed peer-to-peer setting). The figure: **\$120 saved** per million dollars netted – a large figure in the context of the costs calculated on the previous page. Emerging market currencies provided larger savings, such as \$177 for the USD/MXN pair.

The split of savings across spread and market impact reflects the diverse nature of the group: it includes some of the world's largest asset owners and managers, who incurred more savings on the impact side, as well as small investors and corporates that tended to save more on spreads.

### POTENTIAL SAVINGS FOR FX SPOT TRANSACTIONS USING HOURLY WINDOW



Source: Siege FX

## Jargon buster

### The Birthday Paradox

The “Birthday Paradox” is well known in probability theory. In a room of 23 people there's a 50/50 chance of at least two people having the same birthday. In a room of 75 there's a 99% chance of at least two people matching. This can be hard to believe because it conflicts with the way that our brains perceive probability: we tend to think in a linear way and struggle to grasp compounding.

## Implementation challenges Asset owners and FX trading

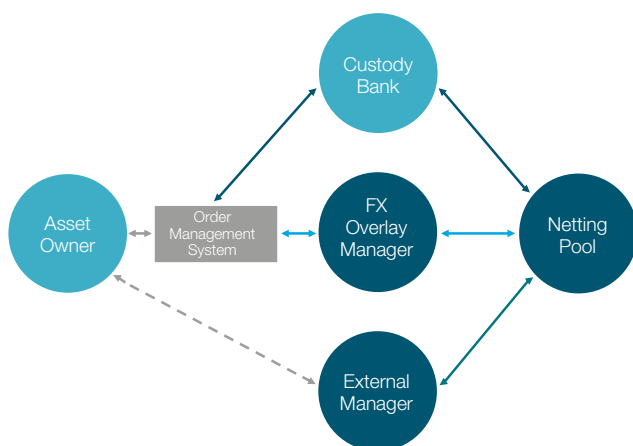
Asset owners, such as pension funds and endowments, execute FX trades in a range of different ways.

Generally speaking, smaller funds tend to adopt a passive approach, often mandating an agent – such as their custodian bank or an external overlay manager – to handle their execution. Larger investors or those with a higher proportion of internally managed assets are more likely to use in-house expertise and trade directly with liquidity-providing banks.

Irrespective of the approach, every asset owner is exposed to performance erosion arising from the costs of transacting FX, whether it is experienced directly or passed down in the form of fees, spreads and reduced returns. High quality Transaction Cost Analysis should cover all aspects of this subject – whether executed internally or externally.

The asset owner's existing structures and workflow will affect the way in which that investor can access peer-to-peer netting. Depending on the solution, it may be possible to plug netting functionality into an investor's external managers, custodians, FX overlay managers or direct trading.

### ACCESSING A NETTING POOL: ORDER ROUTING EXAMPLES



Note: this diagram illustrates one potential structure through which netting may be integrated into multiple different FX management arrangements using a 'pass-through' arrangement.

## Comparing peer-to-peer netting solutions

Peer-to-peer netting solutions mainly fall in two categories: internal trade compression netting and external netting, with some offering both.

'Internal compression netting' applies to asset managers running multiple legal entities (e.g. funds). Asset owners should pay close attention to this subject when assessing their external asset managers. In brief, the different funds' FX orders are matched at group (firm) level to produce a 'net' position which is transacted in the market. Once executed, the achieved rate is applied to all. This type of netting is available through services such as FX Connect or some Electronic Communications Networks (ECN). While this approach is used by many asset managers across their various funds and mandates, the mechanism has several limitations: it does not remove market impact, it does not use an independent composite rate, and the netting gains are not equally distributed amongst participants – larger open funds rarely benefit while smaller funds make gains.

The options for 'external netting,' while still relatively restricted, are expanding. We have seen examples emerging from custodian banks, from asset managers (e.g. fiduciary managers white-labelling their internal netting solutions to other clients) and from independent providers. As discussed above, these offerings can be flawed; an implementation checklist is included on the following page. Yet, when done well, we believe that netting arrangements are strongly aligned with our philosophy - a potentially disruptive approach that helps to counter harmful information asymmetry, improving outcomes for asset owners and other buy-side entities.



# Implementation challenges

## Implementation checklist: what should you ask?

When considering peer-to-peer netting solutions for FX management, there are a number of crucial questions which investors should explore.

**1. What rate is being used?** Some solutions execute at a 'top-of-the-book' rate – an available rate from a market-maker at that point in time; these rates can be subject to manipulation. Others use a 'benchmark rate' such as the so-called London WMR 4pm fix, which tends to be very expensive. A third (rarer) approach is to use an independent composite rate – not one from a sole liquidity provider or venue.

**2. How is the order information used?** As mentioned previously, information leakage is a key driver of costs. Any interaction with a market participant that involves 'expressing an interest' effectively produces information. Any disclosure, even anonymous, may produce market impact. It is preferable that buy-side participants' interests are never disclosed at any point, even after the transactions have been executed, cleared and settled.

**3. What rules govern the pool and who is in it?** FX is a decentralised OTC market where transactions happen in milliseconds and simultaneously across

multiple venues. This creates risks, such as the potential ability to 'poll' and reveal existing interests to trade against them elsewhere, or the practice of 'last-look' which is used to avoid transacting once interests are disclosed and market impact has occurred. There should be appropriate rules of engagement to govern the behaviour of participants. These rules are even more important, we would argue, than any restrictions governing the type of firm that should be allowed in the room.

**4. Is the outcome fair to all participants?** Do all orders share in the benefit, as a proportion of their netted volume, or is there a preferential approach?

**5. When is the netting pool accessed?** Whether FX execution is performed directly or through a third party such as an external manager, custodian bank or even an FX overlay manager, integrating the netting process in the stages immediately following the order generation will help investors optimise potential savings.

**6. Is it providing the targeted savings and how can I measure them?** Thorough, effective, independent TCA is an important precursor and should also be used to assess results.

## Expert insight



**Claude Goulet**, Chief Executive Officer, Siege FX

When carrying out this research on transaction costs and potential savings, the most interesting aspect to me was to see how investors reacted to the figures. For example, we have been working with large, sophisticated investors who absolutely understand the concept of market impact, and know it's something they must deal with, but only a few have a clear sense of the costs involved. Some were quite shocked by the figures, showing how opaque this subject still is! Even those firms who are convinced they're doing well because they get tighter spreads can see from the data that FX costs cannot be controlled through spreads alone.

I hope that by increasing awareness the broader community of investors will get over the mindset that managing FX trading costs is of secondary importance. Unfortunately, this is still a widespread problem in the industry. As investors become better-informed on this subject, it should hopefully lead to a more rigorous assessment and better governance of these costs.

## Key takeaways

Asset owners - whether they engage in FX trading through asset managers, custodians or direct trading - should be aware of the meaningful performance erosion arising from visible and invisible costs including spreads, fees and market impact.

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Transaction Cost Analysis can be helpful in achieving proper visibility and governance of these costs, and determining how to manage them. Yet many forms of TCA do not reach an appropriately high standard due, for instance, to the use of non-independent rates for benchmarking.

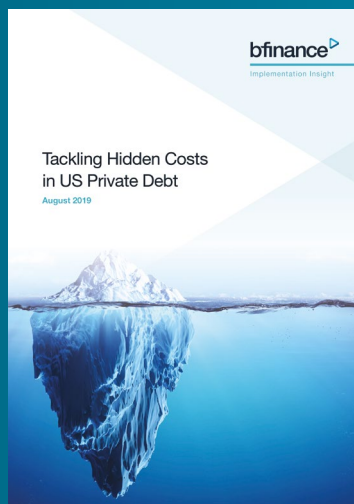
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Once proper visibility is achieved, investors can consider how to address the challenge. Approaches may include refining manager selection, reducing the amount of FX trading done via custodians and more. We note a recent proliferation of “peer-to-peer “ netting solutions and urge investors to consider these with care. The potential savings are meaningful, but maximising the benefit depends on the rates used, the rules applied and the range of ways in which netting can be plugged into existing processes.

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