Unsettling: the increase of foreign exchange without settlement risk mitigation

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The foreign exchange (FX) market is global, vast, cross-border, and operates 24 hours per day. Its effective functioning facilitates international commerce and is a pillar of a sound financial system. A disruption to the FX market – particularly a materialization of FX settlement risk – could cause panic in markets around the world.[1] Despite these understood risks, the Bank for International Settlements' (BIS) Quarterly Review (December 2019) suggests that FX settlement risk is on the rise. Further, and of note, FX settlement risk is growing in currencies not eligible for settlement in CLS.[2]

CLS believes now is the time to address and reverse the build-up of FX settlement risk. Without immediate action, FX settlement risk will continue to accumulate and, in parallel, so will the risk to the global financial system. The regulatory community and industry must join forces to reverse the expansion of FX settlement risk before it can inflict damage to markets and the economy more broadly.

This paper outlines the history of FX settlement risk and the response by the industry and regulatory community to date. Specifically, the paper explains:

1. **The history of FX settlement risk, including background on CLS's origin and current activities**
2. **Growing FX settlement risk**
3. **Existing obstacles to CLSSettlement currency expansion**
4. **How to address FX settlement risk**

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1 History of FX settlement risk

Central banks and regulators have debated FX settlement risk, with varying degrees of intensity, over a long period of time. On June 26, 1974, German authorities revoked Bankhaus Herstatt's (Herstatt) license to conduct banking activities. The close of Herstatt at the end of Germany's banking day, while New York markets were still open, resulted in a loss of principal for Herstatt's counterparties. These counterparties had already paid Deutsche marks in Frankfurt, but had not yet received dollars when Herstatt's New York correspondent bank suspended all outgoing US dollar payments from Herstatt's account.

Even though Herstatt was not one of Germany's largest banks, its failure resulted in widespread panic in the markets, a freezing of interbank lending markets, and tremendous distrust in inter-bank relations. This episode gave rise to the term "Herstatt Risk" or "settlement risk". See Figure 1.

The failure of Herstatt was a turning point, and the need to tackle FX settlement risk became a top priority for the international regulatory community. The 1980s and 1990s saw a flurry of central bank activity, largely led by the G-10 central banks of the Committee on Payment and Settlement Systems (CPSS). Extensive research, analysis, and market surveys identified issues and risks raised by cross-border and multi-currency netting arrangements, as well as existing FX settlement practices. At the same time, several other notable bank failures emphasized the need for a solution – Drexel Burnham Lambert in 1990, BCCI in 1991, and Barings Brothers in 1995.

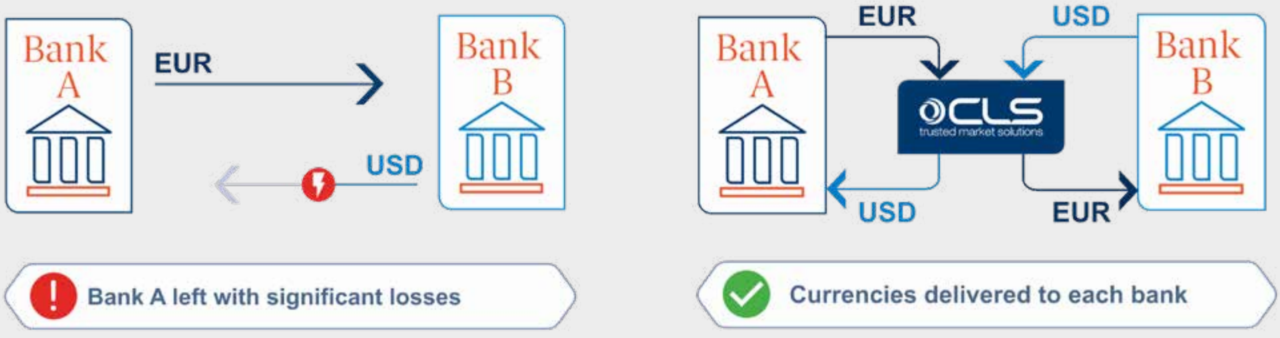
In 1996, CPSS outlined a three-pronged approach for a new partnership between the industry and the central bank community.[3] First, individual banks needed to look within and take steps to apply appropriate credit controls to their FX settlement exposures.

[1] The Committee on Payment and Settlement Systems (CPSS), which was renamed the Committee on Payments and Market Infrastructures (CPMI) in 2014, defines FX settlement risk as the risk that one party to an FX transaction will pay the currency it sold but not receive the currency it bought.

[2] BIS: "BIS Quarterly Review - International banking and financial market developments", specifically Bech and Holden: "FX Settlement Risk Remains Significant" (December 2019). bis.org/publ/qtrpdf/r_qt1912.pdf

[3] CPSS: "Settlement Risk in Foreign Exchange Transactions" (March 1996). bis.org/cpmi/publ/d17.pdf

Figure 1:
Bilateral settlement versus payment-versus-payment (PvP) protection



Second, the CPSS called on industry groups to develop multi-currency settlement and netting arrangements to contribute to the risk-reducing efforts of individual banks. Lastly, central banks needed to show their support of industry initiatives and cooperate with these groups to bring about timely, market-wide progress.

Following CPSS's recommendation, 20 major financial institutions formed a group which, with support from the central bank community, further refined the linked settlement concept – an arrangement involving simultaneous PvP exchange of each of the two legs of an FX transaction – that would eventually lead to the creation of CLS.[4] CLS's FX settlement service (CLSSettlement) went live in September 2002 with 39 settlement members (many of whom were part of the group of 20 financial institutions) and seven currencies. See Figure 2.

Today, CLS's membership comprises over 70 of the world's largest financial institutions, and CLS is member-owned. Over 25,000 third parties, primarily buy-side institutions, access CLSSettlement via a number of CLS's settlement members. CLSSettlement now settles 18 actively traded currencies, and to carry out these operations CLS has accounts with each of those 18 central banks.[5]

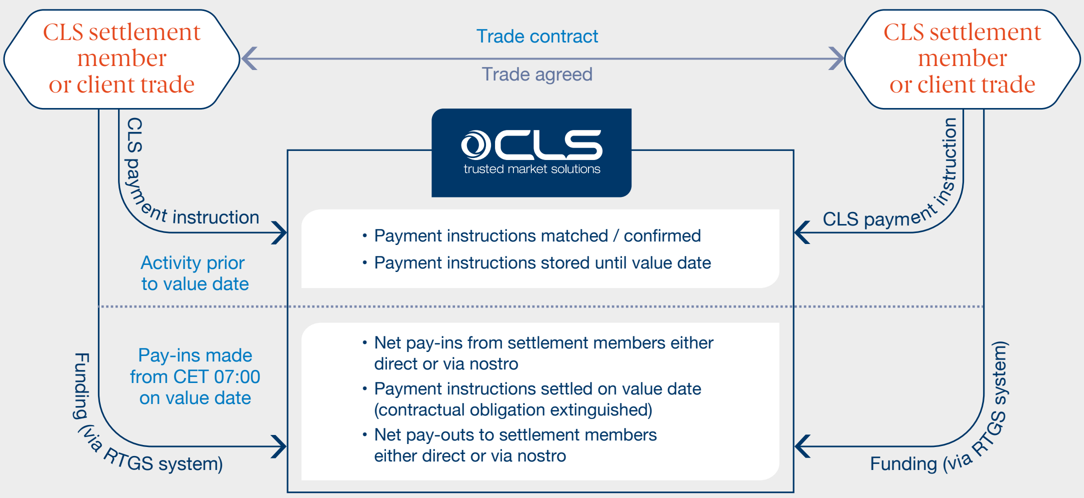
Further, these central banks adjusted their operating hours to accommodate CLS settling in a two-hour settlement window. On average, CLS settles USD6.0 trillion of payment instructions per day. The funding required to settle this amount is determined on a multilaterally netted basis, reducing the amount of liquidity required for settlement by approximately 96 percent.

The global financial crisis of 2008 again reminded the world of the importance of mitigating FX settlement risk. While trading in fixed income, rates, and structured product markets were disrupted or effectively ceased because of counterparty credit concerns, the FX market continued to function smoothly. Major banks continued to trade knowing their trades would settle in CLS with the significant risk mitigation provided by PvP.[6]

Recognizing this important role in the proper functioning of global FX markets, the United States' Financial Stability Oversight Council designated CLS Bank International as a systemically important financial market utility (i.e., DFMU) in 2012.[7]

Recent financial market volatility resulting from the impact of Covid-19 has only reinforced the importance of resilient and well-regulated financial market infrastructures like CLS. In March 2020, CLS volumes reached record-breaking levels. The average value of payments settled daily totalled approximately USD7.0 trillion - about 20 percent higher than normal. CLS processed the added volumes with no issues or delays.

Figure 2:
How CLSSettlement works within the FX trade lifecycle



[4] PvP ensures the final transfer of a payment in one currency occurs if and only if the final transfer of a payment in another currency or currencies takes place.

[5] Australian dollar, Canadian dollar, Danish krone, euro, Hong Kong dollar, Hungarian forint, Israeli shekel, Japanese yen, Korean won, Mexican peso, New Zealand dollar, Norwegian krone, Singapore dollar, South African rand, Swedish krona, Swiss franc, UK pound sterling and US dollar.

[6] Levich: "Why foreign exchange transactions did not freeze up during the global financial crisis: The role of the CLS Bank" (July 2009). voxeu.org/article/clearinghouse-saved-foreign-exchange-trading-crisis

[7] CLS Bank International is the legal entity operating CLSSettlement.

2 Growing FX settlement risk

Although the launch of CLS in 2002 reduced the amount of FX settlement risk in the market, a 2008 CPSS report demonstrated that banks were not mitigating this risk as much as they could and urged banks to do more.[8] The need for an industry response was re-emphasized by the Basel Committee on Banking Supervision (BCBS) in February 2013 via its "Supervisory guidance for managing risks associated with the settlement of foreign exchange transactions" (commonly referred to as BCBS 241). Following its publication, the BCBS expected banks and national supervisors to implement BCBS 241 in their jurisdictions while also considering the size, nature, complexity, and risk profile of banks' FX activities. Seven years later, more work is required to implement BCBS 241 into national supervisory practices. The BCBS recognized this shortcoming in October 2019, and publicly acknowledged the need for further measures to mitigate FX settlement risk.[9]

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The BIS Quarterly Review (December 2019) concluded that a significant portion of the global FX market continues to be settled without PvP protection.[10] Of the USD18.7 trillion of daily gross FX payment obligations, USD8.9 trillion of payments (approximately half) are at risk. While the decline in the proportion of FX transactions settled with PvP protection is partly explained by the growth in currencies not currently eligible for settlement in CLS, a significant percentage of trades in CLS-eligible currencies are also settled without PvP protection. Independent analysis reinforces the BIS's conclusions.[11]

CLS conducted its own analysis, leveraging the BIS Triennial Surveys, to better understand growing FX settlement risk in both CLS-eligible currencies and currencies not settling in CLSSettlement (non-CLS currencies). For CLS-eligible currencies, total volume equates to USD5.34 trillion. CLS settles approximately 31 percent of those FX transactions, while the remaining 69 percent falls into two broad categories:

Category 1
Approximately 31 percent of the USD5.34 trillion can be attributed to "related party trades" and "give-up trades of prime brokers" – trade types not usually sent to CLS.[12]

Category 2
Approximately 38 percent of the USD5.34 trillion are trades that may be eligible for CLSSettlement. The BIS data does not provide sufficient granularity to make an eligibility determination. These trades may include internalized trades, low value corporate trades, some portion of retail, and same-day trades.[13]

Category 1 and 2 trades have grown significantly (39 percent and 17 percent, respectively), between 2013 and 2019.

Trades in which a non-CLS currency is on at least one side of the trade equate to approximately USD1.25 trillion – an increase from approximately USD930 billion (or 35 percent) since the BIS 2016 Triennial Survey. While USD and EUR are on one side of the vast majority of these trades, without PvP, both sides carry FX settlement risk for CLS settlement members and other market participants.

3 Existing obstacles to CLSSettlement currency expansion

Conscious of these market evolutions and derived challenges, CLS continually assesses ecosystem systemic risk mitigation measures it can bring to the market. In 2018, CLS launched CLSClearedFX as the first PvP settlement service specifically designed for OTC cleared FX derivatives. In Q3 2019, CLS launched CLSNow – a same-day FX PvP gross settlement service. For the first time, CLS settlement members are able to mitigate FX settlement risk in the same-day market for Canadian dollar, euro, UK pound sterling, and the US dollar. Plans are underway to expand to more currencies.

Few remaining currencies can meet currency onboarding standards, which derive from the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions' (IOSCO) Principles for financial market infrastructures (the PFMI), other applicable regulations, and CLS's own standards.[14] Principle 1 (legal basis) and Principle 8 (settlement finality) of the PFMI have presented the greatest challenge to onboarding additional currencies to CLSSettlement, in particular matters relating to availability and enforcement of settlement finality legislation.[15] For example, in 2019, CLS and Banco Central de Chile announced efforts to onboard the Chilean peso. This work is now possible following changes to Chile's settlement finality legislation. If successful, the Chilean peso will be the first CLS-eligible currency from South America. However, many countries seeking PvP protection for FX settlement may not be able to obtain it under the current regulatory regimes applied to FMIs offering such services.

[8] CPSS: "Progress in reducing foreign exchange settlement risk" (May 2008). bis.org/cpmi/publ/d83.pdf

[9] BIS: "Basel Committee discusses policy and supervisory initiatives and approves implementation reports" (October 2019). bis.org/press/p191031.htm

[10] Bech and Holden: "FX Settlement Risk Remains Significant" (December 2019). bis.org/publ/qtrpdf/r_qt1912x.htm

[11] Money and Banking: "Foreign Exchange Trading: 2019 Edition" (December 2019). moneyandbanking.com/commentary/2019/12/15/foreign-exchange-trading-2019-edition

[12] Related party trades are trades between two legal entities of a global bank. In a Prime Brokered model, give-up trades are the second trade that is created where the counterparty transitions to the Prime Broker.

[13] Internalization is the process whereby a dealer seeks to match client orders against its own books instead of immediately hedging the client order in the inter-dealer market.

[14] As a DFMU, CLS must comply with regulations and standards applicable to infrastructures of systemic importance, which is the Federal Reserve's Regulation HH. The PFMI applies to all FMIs determined by national authorities to be systemically important.

[15] Principle 1 requires FMIs to have "…a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions". Principle 8 states "An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time."

4 Addressing FX settlement risk

CLS believes immediate action is required to address the apparent growth of FX settlement risk. Specifically, CLS and the industry more broadly, with support of the regulatory community, should focus efforts on: 1) further promotion and adoption of PvP settlement amongst banks and non-banks; and 2) mitigation of growing FX settlement risk in non-CLS currencies.

1. Promotion and adoption of PvP settlement:
The BIS 2019 Triennial Survey data and the BIS Quarterly Review (December 2019) demonstrate the industry can do more to promote and adopt PvP settlement solutions. One potential course of action is for banks and non-banks to evaluate existing operations and identify which transactions are and are not settling via PvP, and for what reason. Following this type of analysis, these market players would be in a position to consider ways to maximize the use of PvP settlement solutions. Additionally, relevant industry codes or regulatory guidance could be reviewed and amended to further promote PvP as a best practice for market participants.[16]

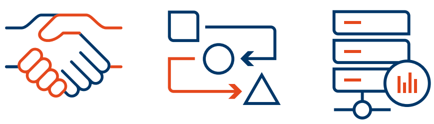
2. Solutions for non-CLS currencies
If FX settlement risk in non-CLS currencies is to be mitigated, a fundamental consideration is whether a new model is better than the outright risk taken today by financial market participants in trading these currency pairs. Further, trade-offs and choices in design elements, which must be different to CLSSettlement, should be considered to achieve a model that can be implemented and can maximize broad-based risk mitigation.

70+
settlement members

25,000+
participants around the world use our services indirectly through our settlement members

6.0+ USD trillion
average settled each day

18
of the most actively traded currencies globally



Settlement Processing Data

Preventing further growth of FX settlement risk is not an impossible task, and mitigation of this risk should be at the forefront of the industry and regulatory agenda globally.

Creating a solution for mitigating FX settlement risk will require evaluation and debate of a number of factors and related questions that include, but are not limited to:

Model: What is the optimal model? Gross settlement versus bilateral netting? Central bank versus commercial bank money?

Finality: What degree of finality is acceptable?

Operator: What type of operator is best placed to run such a system (e.g., oversight arrangements, governance, operations at scale, and network)? Is an industry-led solution more appropriate than a central bank-operated model?

Technology: Should the use of a specific technology be prioritized? Further, how will interoperability be considered? Is there a use case for tokens or central bank digital currencies (i.e., CBDCs)?

Standards: Is a new, separate set of risk management standards required for FMIs? If so, could there be parallel standards for systemically important and other FMIs? How would issues relating to enforceability and settlement finality be addressed? Alternatively, are uniform standards necessary or should focus be placed on connectivity between different local systems?

Conclusion

Preventing further growth of FX settlement risk is not an impossible task, and mitigation of this risk should be at the forefront of the industry and regulatory agenda globally. While CLS is encouraged by recent acknowledgments that more work is needed to mitigate growing FX settlement risk, a cooperative effort between the industry and regulatory community is required to take this work forward and to ensure its success. Together, the unsettling increase of FX without settlement risk mitigation can be addressed.

[16] For example, there may be scope to strengthen Principle 50 of the FX Global Code (relating to FX settlement risk mitigation) to better emphasize the use of PvP settlement solutions.

CLS helps clients navigate the changing FX marketplace – reducing risk and creating efficiencies. Our extensive network and deep market intelligence enable CLS specialists to lead the development of standardized solutions to real market problems. Our innovative, forward-looking products make the trading process faster, easier, safer and more cost-effective – empowering our clients' success.

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