

# Ripple vs SWIFT: Payment (r)evolution

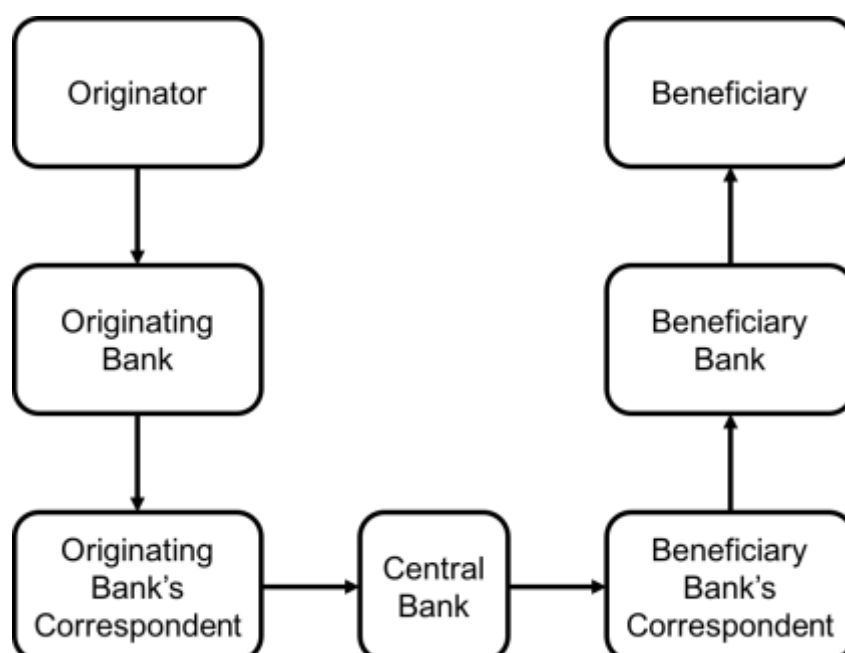
## Summary

*Cross border payments are currently slow, expensive and opaque. Ripple offers sub second efficiently priced payments using a variant of blockchain technology. In response, SWIFT has launched GPII, same day credit of funds, up front pricing and payment tracking. This article explores the two solutions, and what they mean for treasurers.*

## Status quo

Currently, cross border payments go through the 600 year old correspondent banking system (much constrained by regulators clamping down on KYC and AML), facilitated by SWIFT messages like MT101 and ISO20022 pain (payment instruction).

This requires getting 6 players linked up – payer, payer’s bank, payer’s bank’s correspondent, beneficiary bank’s correspondent, beneficiary bank, beneficiary.



Since the messages (generally) flow sequentially, and not all banks do STP (Straight Through Processing), this takes a while. Worse, over time banks have got into the habit of sitting on our money for arbitrary lengths of time (called float which is a euphemism for regulator sanctioned theft). Even worse, the banks along the chain also help themselves to arbitrary and often material deductions, with confusing names like lifting fees and in lieu fees. So when the money finally arrives, we just have to be grateful some of it got through the system at better than walking speed.

(I exaggerate a little. I do see cross border payments going through current channels with only one (or two) fee deductions and within 24 hours. But that feels lucky. All elements of my exaggeration remain regrettably common practice.)

In these times of Venmo and PayPal and instant everything, this feels antediluvian. How is it that Amazon can delivery physical goods faster than banks can deliver a credit entry, which is basically a secure email – only bits and bytes?

In fintech parlance, this looks like a market ripe for disruption.

## Ripple

[Ripple](#) is disrupting this model with sub second cross border payments with automated best pricing from its network. Since Ripple payments are nearly instant, their model removes credit and liquidity risk from the process, thus lowering bank (and societal) costs considerably. Since the network finds the best price for exchange (converting from one currency to another) and liquidity (delivering the beneficiary currency), pricing is optimised and customers are no longer locked in to the wide spreads currently reflected in bank board rates.

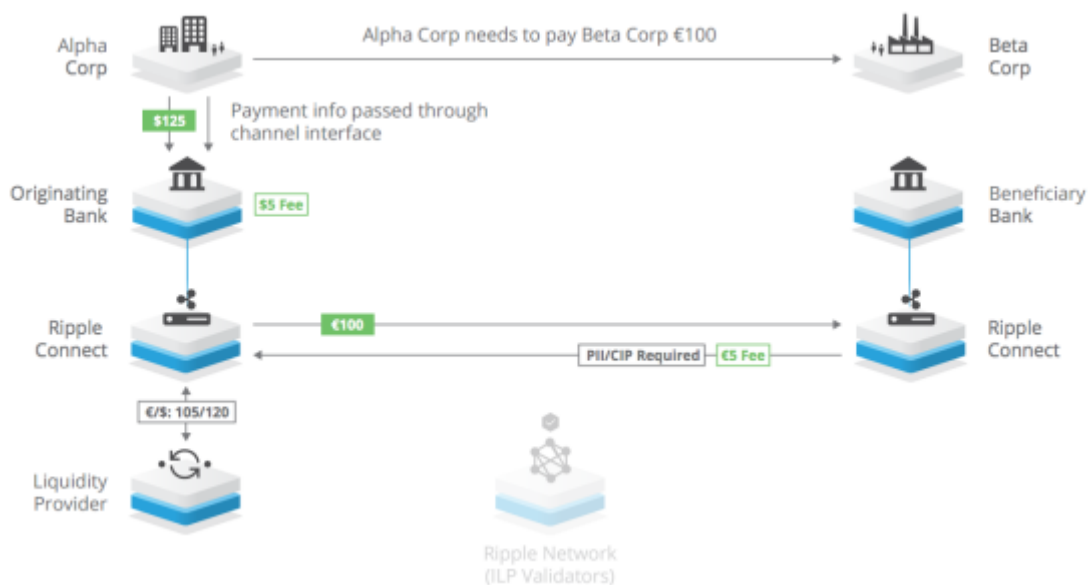
The benefits for corporates (and other customers) is clear in terms of price and speed. Corporates will also appreciate the elimination of settlement risk. Further, Ripple uses industry standard ISO and

MT messaging, and because participants are directly and multilaterally connected there is no loss of corporate data in the payment messages. Known fees and complete messages make for much higher auto reconciliation rates.

Unlike some other fintechs, Ripple is bank centric. Banks connect to the Ripple network not their customers. This has two big benefits. First, customers are used to trusting banks (which is better than having to get comfortable with entrusting your money to some fintech you never heard of). Second, regulators are comfortable with banks (which means they will not pull the plug on Ripple as they might with non bank fintechs).

## Ripple technology

Although Ripple is also a blockchain company, and has its own currency code XRP, the cross border payments are using a subset of [blockchain technology](#). Ripple uses the consensual validation of encrypted hashes to secure the messages across the Ripple network, but does not hold the ledger. Ripple calls this [ILP](#) (Inter Ledger Protocol) and they have [open sourced](#) it to public domain.



ILP allows Ripple to connect existing bank ledgers (ie their traditional databases). This lowers barriers to entry. In effect, banks

connect their core systems to the Ripple network – analogous to how they currently connect their core systems to the SWIFT network.

## Ripple process

Although it happens within seconds, the [Ripple process](#) is holistic, including rich information exchange, liquidity provision (ie providing the funds at the beneficiary end), and currency conversion (ie FX). By contrast, the TT method provides minimal information, liquidity through correspondents, and no conversion (and takes hours or days, and costs more).

Instead of using fixed correspondents (as used for TTs), Ripple implements an automated instant auction for liquidity provision and FX, thus assuring best price execution. Banks can restrict their requests for quotation to counterparties matching specific requirements like rating and regulatory standing. KYC and AML compliance is of course covered.

From corporate treasury perspective, this is analogous to using an eFX platform to get quotes from multiple banks (except that it is purely bank to bank).

There are four key stages:

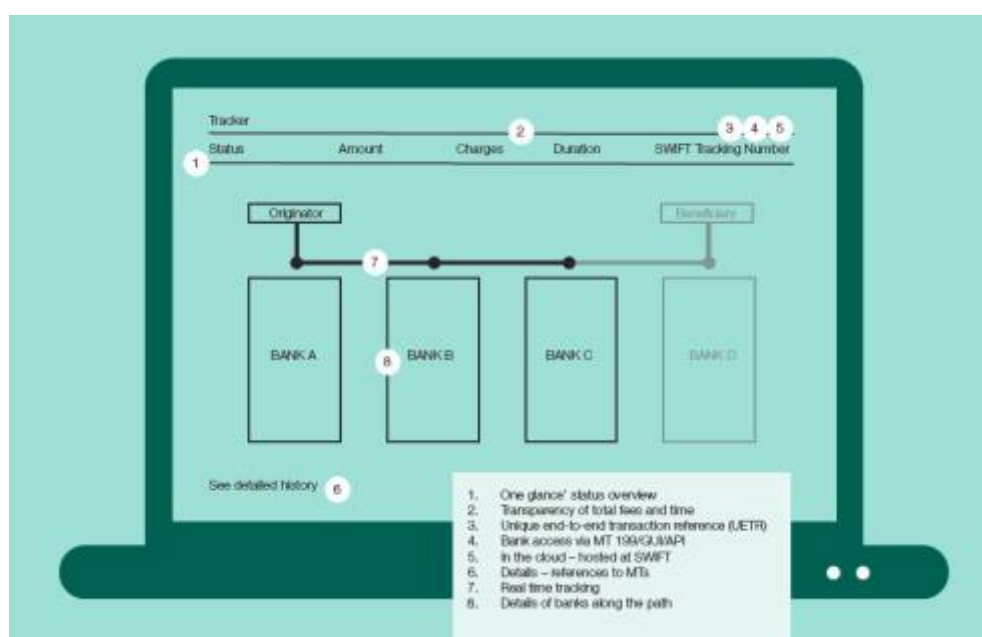
1. **Get Quote:** The originating bank sends out a request for quotation across the Ripple network for the payment in question. Quotes received in reply include FX rates and fees as well as compliance requirements.
2. **Accept Quote:** The originating bank accepts the best quote for which they can meet the compliance requirements. The beneficiary bank can then lock the quote. At this point Ripple blocks funds in the two banks' ledgers – something like a sub second escrow arrangement (without transfer of title at this point).

3. **Submit Sending Payment:** The originating bank transfers the funds out of the payer's account and through ILP to the beneficiary bank.
4. **Submit Receiving Payment:** The beneficiary bank confirms that funds have been credited to the beneficiary's account.

The **Submit Receiving Payment** signifies that funds have been credited to the beneficiary's account. All of this happens within 1 or 2 seconds. As noted above, this is both more holistic and less complicated than the current TT process, not to mention much faster and cheaper.

## GPII

In response to the challenge from Ripple, SWIFT have launched their [Global Payments Initiative](#) (GPII). Leveraging the current SWIFT messaging and correspondent banking that are the backbone of old cross border payments, GPII is basically a set of rules to commit banks to behave more reasonably in cross border payments, supported by payment tracking and data to monitor adherence to these new rules.



The rules are encapsulated in the SLA (service level agreement) that banks must sign to join GPII. This SLA discourages banks from float (theft of value days), opaque charging, and delays.

To support this SLA, SWIFT have built an “observer” system so that partner banks can monitor the SLA compliance of their partners across the system.

To entertain the payment originators, SWIFT have developed a payment tracker, on which the payment’s progress can be viewed in near real time. This will be white labelled by banks for their clients.

The SLA is essentially a commercial challenge for banks. The increased transparency will limit their rent extraction. (Some banks’ internal processes may be so weak that they genuinely have trouble complying with the SLA, but most corporate cash management banks can do same day reasonably priced cross border payments when they want to.)

The tracker is more of a technical problem. First, some banks may have difficulty tracking payments through their systems at all (though that would be worrying from a control and regulatory perspective). Second, it requires the creative use of MT199 free format messages (with formatted data inside them) to achieve the requisite updates. (Trade for corporates similarly uses MT798 free format messages to send L/C related messages.) Although it is notionally good old fashioned SWIFT messaging (MT was designed for telex in the 1970s), implementation is akin to a new system.

Although SWIFT’s 10,000 bank members would appear to give GPII a big head start, it is far from clear how many banks will end up joining GPII. The take up rate amongst banks for SWIFT for Corporates has been agonisingly slow; ditto for trade.

## Ripple vs GPII

It should be clear by now that Ripple offers a faster, cheaper, and more complete process. The inclusion of FX gets customers away from the exorbitant “board rates” that banks currently apply for cross border payments. The auction process will result in better rates and fees for both banks and their customers.

The speed and upfront fees facilitate auto reconciliation and will open up new ways of doing business. It could even eat into credit card flows.

Here is a comparison between Ripple and GPII:

	<b>RIPPLE</b>	<b>GPII</b>
Speed	Seconds	Hours or days
Fees	Lowest possible	Disclosed
FX	Best possible	Determined by bank board rate
Data	Full delivery	Full delivery
Tracking	Not needed	Yes
Technology	Ripple & ILP	SWIFT + new messages
No of banks	45	80
Difficulty	Roughly equal	Roughly equal

GPII is clearly an improvement on the status quo. Since it is just an SLA with a tracker layered on top of existing correspondent banking arrangements, it does not fundamentally change cross border payments. There is a risk for banks that sticking to GPII instead of opting for Ripple exposes them to even greater disruption (and possibly complete disintermediation) in the future. At least Ripple is bank centric. Other disruptors may be more aggressive. (Additionally, the current correspondent banking system is already severely weakened by regulators KYC and AML concerns.)

## **Caveat emptor**

A word of caution about the current state of cross border payments. Current generation cross border payments (aka “TTs” or “SWIFT



payments”) are too often slow and expensive, as described above. Bank pricing is opaque and often exorbitant. Here are some tips:

- Cross border payments should cost USD5-10 (or less for high volumes);
- Percentage fees are unacceptable;
- So called “lifting fees” (aka “in lieu of exchange”) are unacceptable;
- Correspondent banking fees taken by intermediary banks are unacceptable (your bank has commercial relations with its correspondent that ensure their remuneration; there is no need for additional fees);
- Float is theft – the payer account should be debited on the same value date as the beneficiary account is credited; the payment may take time to execute, but there should be no loss of value;
- Board rates (for FX conversion) can be negotiated, and banks can apply pre-agreed spreads on live market rates when motivated to do so.

If you have large volumes of low value cross border payments, ask your bank about cross border ACH. This is a solution to reduce cross border payment costs (though it may be slower to execute) whereby the bank arranges a local low value payment (ACH) in the beneficiary’s country. (TT / SWIFT payments usually go through the RTGS which is more expensive – though faster.)

## Conclusion

In a rational world, because it is faster and cheaper and no more difficult to implement, I would expect Ripple to grow faster than GPII. Logically, regulators should prefer Ripple because near instant transfers vastly reduce liquidity and credit risks.

But we do not live in a rational world, and GPII has the benefit of incumbency. Being driven by SWIFT and based on existing



correspondent banking arrangements, GPII may seem less frightening to banks.

The good news for treasurers is that whoever prevails (or if they co-exist), cross border payments will get faster and cheaper – and that is worth celebrating, and encouraging.

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