Global Crypto Onramp Report

February 2023

This report outlines key facts, figures, insights, and trends from the world's largest fiat-to-crypto onramps compiled in the period between January and September 2022.

Cointelegraph Research

onramper

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1 Welcome

Thank you for taking a moment to read this report. It's the world's first comprehensive study on the state of the global crypto onramp market.

At Onramper, we are committed to building a world in which anyone can buy any cryptocurrency, anywhere.

As you will see in this report, however, onramps in their current state are still a long way from reaching that goal.

We have built a turnkey solution that allows businesses to integrate all major fiat onramps in a single easy-to-implement widget & API.

As a KYC compliant, fiat-crypto onramp aggregator, we are able to report on the industry's movement with a birdseye view and neutral perspective.

This report gives token (service) providers insight into the state of the market and helps them improve onboarding success rates across the crypto industry.

Ultimately, we are all after the same thing: a frictionless fiat-crypto onramp experience for anyone, anywhere.

Kind regards,
Thijs Maas, Onramper CEO

2 Executive Summary

Fiat-crypto onramps are essential to reaching mass adoption for crypto and the broader web3 industry.

However, our proprietary data analytics show that currently **50% of users that try to buy crypto still run into failed transactions**.

The performance of individual onramps differs widely based on a range of factors, such as location, trading pairs, payment methods, transaction amounts and/or the specific crypto-fiat onramp being used.

To achieve an optimal, global onboarding process, token (service) providers must do two things:

1. Offer as wide a range as possible of aggregated onramps in a single interface
2. Dynamically route transactions to give each user the best option for their specific circumstances

By aggregating onramps and building the intelligence to make sure the right onramp is used for the right transaction, Onramper is solving this problem.

3 Why Onramps Matter

To unlock the potential of crypto and web3, we must first make sure that users can buy and sell crypto as easily as they do other assets.

As an alternative monetary system, crypto's learning curve can be overwhelming and onramps (aka fiat/crypto onramps or rails) can help both new and experienced users slide in and out of their token of choice with ease.

Our proprietary data analytics show that currently, **more than 50% of crypto payments fail to be approved, while the abandonment rate during the purchase flow can reach up to 90%**. That's simply unacceptable.

By aggregating onramps and building the intelligence to make sure the right onramp is used for the right transaction, we can solve this problem.

For us, a frictionless onramping experience is step 1 in unlocking the potential of the crypto and Web3 space for the masses.

4 The Big Problem: Failed Transactions

Crypto has seen tremendous growth over the past few years. DeFi and NFTs specifically have unlocked new use cases and attracted new users, opening the door to mass adoption.

Unfortunately, the onboarding infrastructure has lagged behind.

At Onramper, we have partnered with 9 of the biggest fiat onramps (more coming soon):

Onramp	Supported Cryptocurrencies	Supported Fiat Currencies	Standard Fees
Coinify	30	34	7%
Itez	7	33	5%
Mercuryo	30	25	3.95%
Moonpay	99	42	4.50%
Transak	119	75	3.50%
Utorg	28	25	6.50%
Wyre	41	28	2.9–3.9%
Xanpool	11	10	2.50%
Indacoin	110	12	4.50%

As you can see, the amount of supported tokens, fiat currencies, and fees varies between onramps.

Moreover, two onramps that quote the same percentage in fees, will not send the same amount of cryptocurrency to the user. This is because each onramp also uses different conversion rates, spreads and network fees.

End users typically choose whichever onramp charges the lowest fees. However, for both the onramp provider and the user, fees often are not the best metric to go for.

A better metric to compare onramps on is authorization rate. After all — if a transaction can't be completed, it doesn't matter what the theoretical fee is.

This leads us into what we have identified as 'The Big Problem' in the onramp landscape, namely that 50% of fiat-crypto transactions currently fail, even after KYC completion.

Our proprietary data shows that currently, 50% of fiat-crypto transactions still fail, even after KYC completion.

If we want to achieve mass adoption, we must work toward successful transaction rates closer to (or better than) traditional finance.

So where does it all go wrong?

Several factors affect the probability of a transaction to be authorized:

- Location
- Fiat currency
- Cryptocurrency
- Payment method
- Transaction amount
- Client type
- **Most importantly, the onramp solution used**
- Over 70 additional factors

As you can see, there are many potential points of failure. We will dive into each of these in more detail in the coming pages.

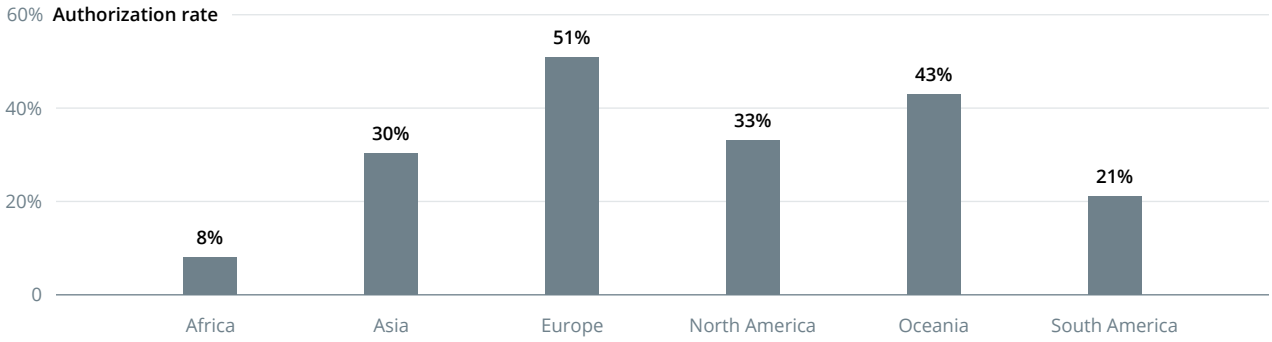
Breakdown: What impacts success rates for onramp transactions?

Where a user is located, impacts the success rate of a transaction. On average, the success rate of transactions is a well-known bottleneck for the onramp industry but some regions are more affected than others.

Success rates in Europe are the highest, while success rates are lowest in Africa and South America.

On the next page, we will give more details about what causes these low rates.

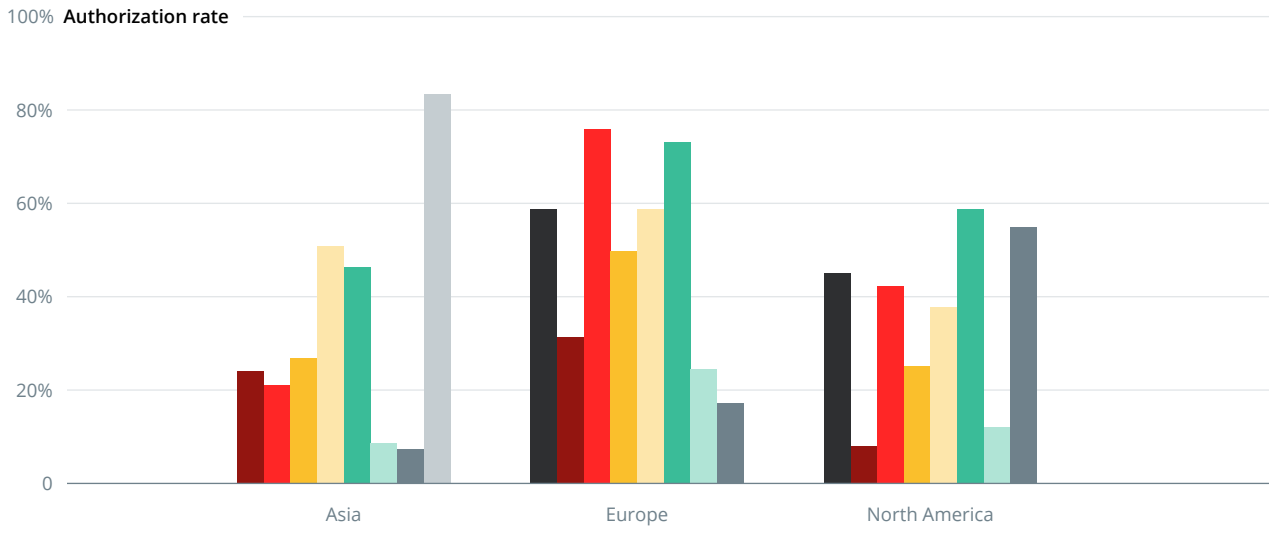
Figure 1 **Authorization rate is highly dependent on the end users' geographical location**



Key takeaways:

- Location heavily impacts success rates
- Developed markets have in general a higher success rate
- The region with the highest average success rate is Europe
- Regions where credit card use is more extensive are negatively impacted

Figure 2 **But not all onramps perform equally in the same region**

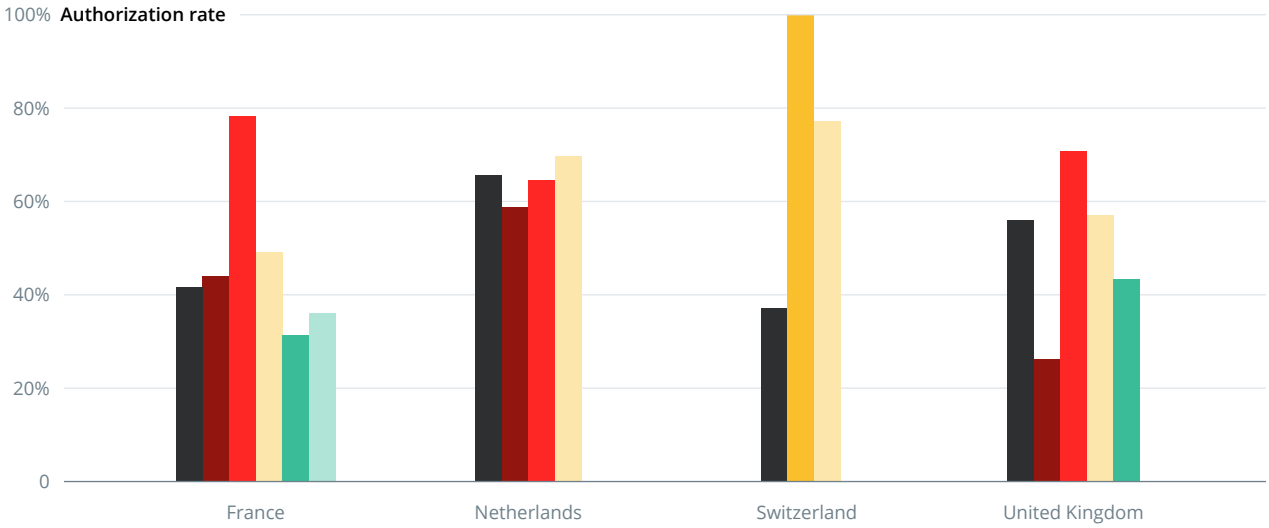


Data from 1st January 2022 to 15th September 2022.
Onramps are masked for anonymity reasons.

Key takeaways:

- An onramp that performs better than the others in every region does not exist
- Some onramps do not even provide their services in specific regions
- Onramps that focus on local payment methods have superior performances

Figure 3 **Even in the same region the offer of services and the onramp success rate vary greatly**



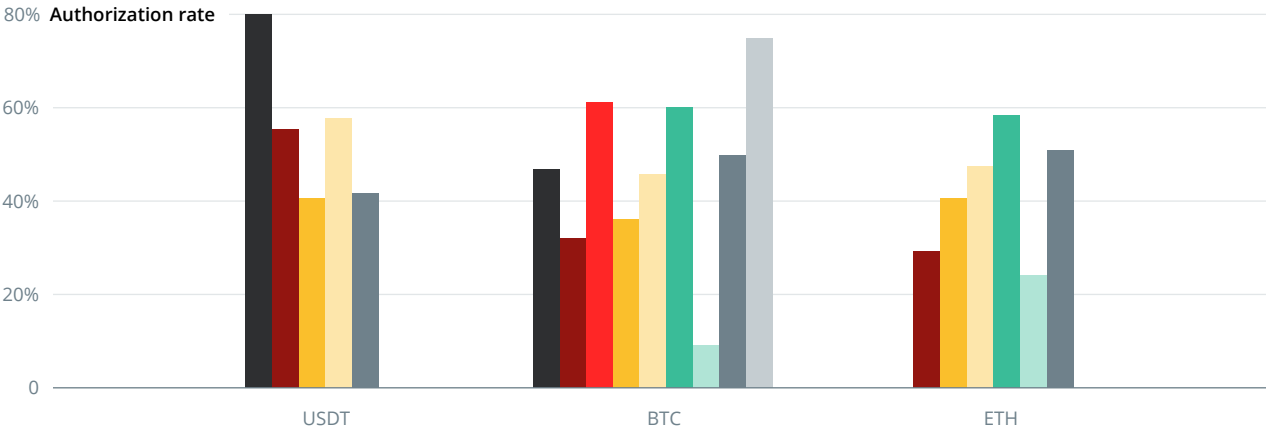
Data from 1st January 2022 to 15th September 2022.
Onramps are masked for anonymity reasons.

Onramp: 1 2 3 4 5 6 7 8 9

Key takeaways:

- So far no onramp reached market leadership in every country
- European onramp offer is highly fragmented, regardless if countries are in the Single Market, in the European Union or in the euro area
- Bank transfer can reach 100% success rate

Figure 4 **The purchased cryptocurrency also impacts the success rate**



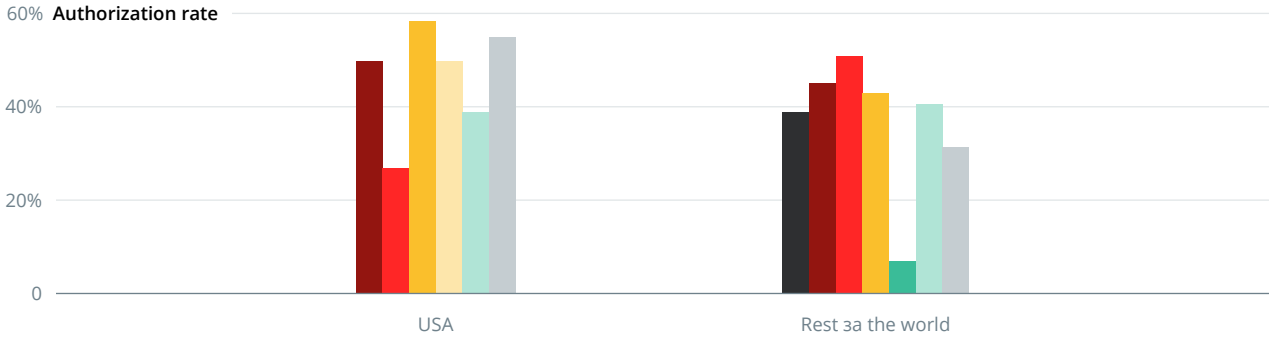
Data from 1st January 2022 to 15th September 2022.
Onramps are always shuffled for anonymity reasons.

Onramp: 1 2 3 4 5 6 7 8 9

Key takeaways:

- Bitcoin is the most purchased cryptocurrency and the one offered in combination with most fiats
- As in previous cases, onramps offering local payment methods achieve superior success rates
- No onramp achieves higher success rate for most of the cryptocurrencies
- Some highly performing onramps in one crypto might not offer the possibility to purchase other less common cryptocurrencies
- The offer of purchasable cryptocurrencies is largely different between onramps.

Figure 5 **The dollar has a primary importance among fiats and its success rate differs whenever a purchase is performed in the United States or in other countries**



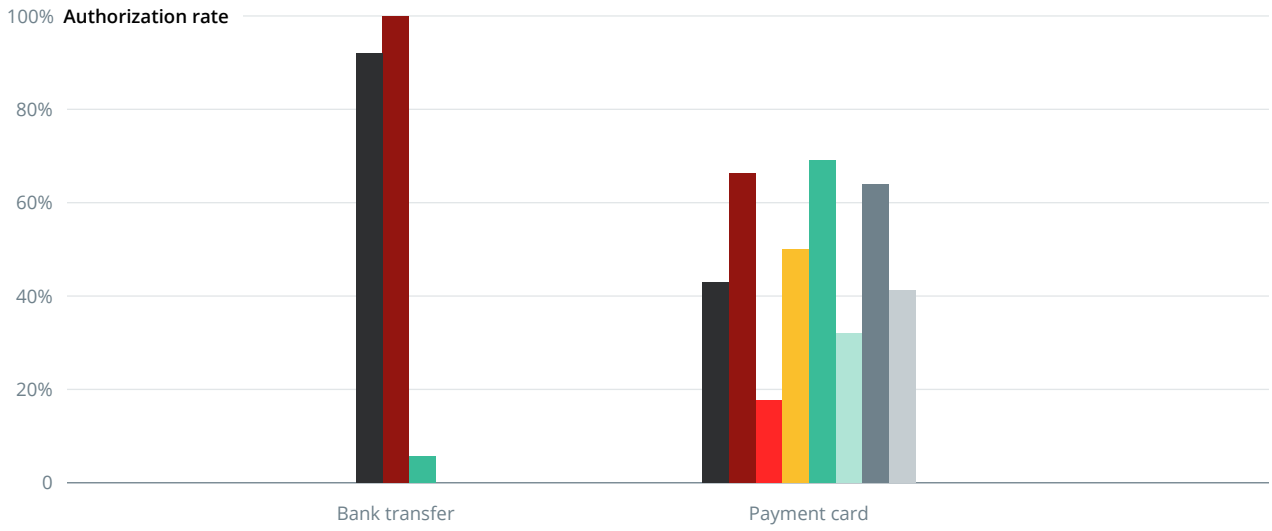
Data from 1st January 2022 to 15th September 2022.
Onramps are always shuffled for anonymity reasons.

Onramp: 1 2 3 4 5 6 7 8 9

Key takeaways:

- Onramp performance varies wildly based on whether the fiat currency matches the location of the user
- Not every onramp supports buying with USD
- Buying with USD is not possible in every country

Figure 6 **The impact of payment methods on the success rates of onramp transactions**



Data from 1st January 2022 to 15th September 2022. Onramps are always shuffled for anonymity reasons.Card payments include debit and credit cards.

Onramp: 1 2 3 4 5 6 7 8 9

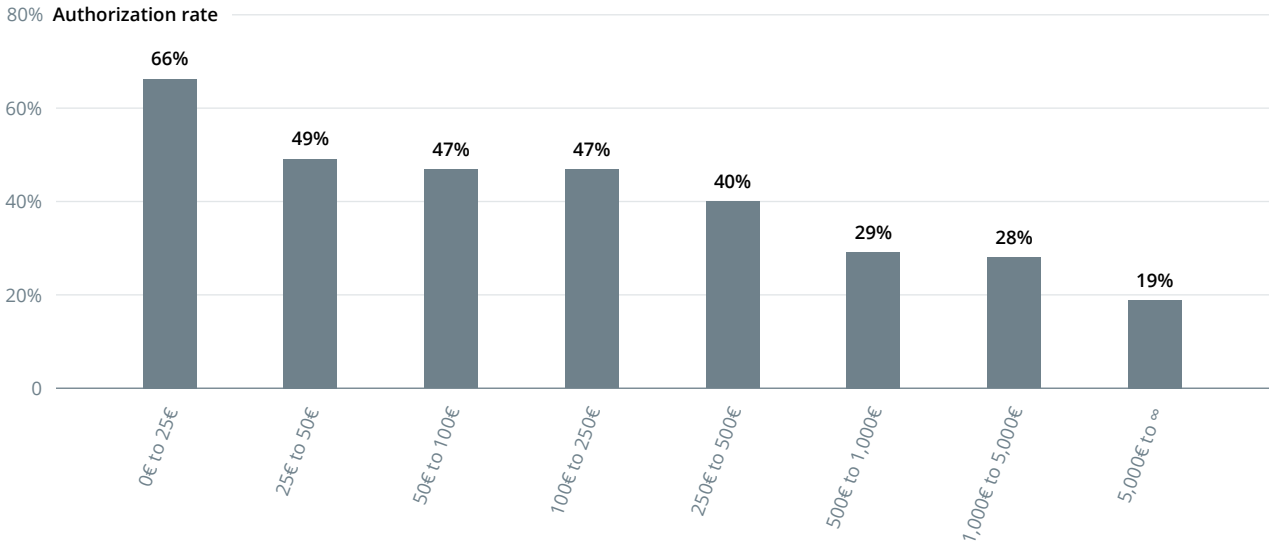
Key takeaways:

- The payment method also has a large impact on the success rates of onramp transactions
- Bank transfers achieve superior success rate but they are mostly common in Europe
- Local payment methods achieve good success rates

Breakdown: Authorization Rate By Transaction Value

Transaction value is another factor that deeply affects the authorization rate of a fiat-to-crypto transaction. Overall, authorization rates decrease as the value of the transaction increases.

Figure 7 **Authorization rate decreases as the value of the transaction increases**



Data from 1st January 2022 to 15th September 2022. The x-axis displays the range of the transaction value. i.e. [50€ to 100€) means a transaction with a value between 50 € (included) and 100 € (not included).

Our data shows that very small transactions (< €25) have a very high authorization rate but it is worth to note that some onramps do not allow transactions below a certain threshold.

The success rate decreases as the amount of the transaction increases, moving from a 66% in the first bucket to a 19% for transactions of at least €5,000. In order to compare success rates, all transaction amounts are converted to euro from their native currencies.

Key takeaways:

- The higher the transaction volume, the lower the success rate
- Transactions above €5,000 have the lowest success rate of all
- The transaction amount also has a large impact on success rates of various onramps
- Smaller transactions have a larger likelihood of being successful

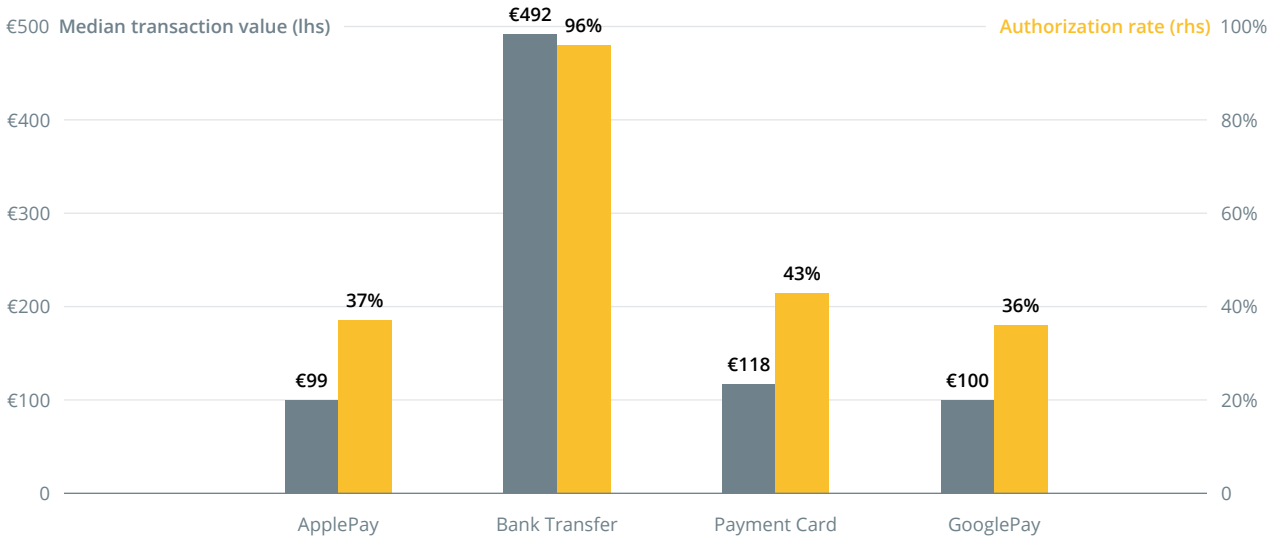
Breakdown: Authorization Rate By Transaction Value

Payment methods are another factor impacting authorization rates. The most used payment methods are ApplePay, bank transfers, payment cards, and GooglePay.

The median transaction value for bank transfer is by far the highest with a median value of €492 while for the other three methods the median transaction value is between €99 and €118.

While Onramper offers a wide range of payment methods, the majority of users still make payments with payment cards. This is unfortunate, since bank transfers almost always succeed compared to other payment methods.

Figure 8 **The median transaction value and the authorization rate differ across payment methods**



Data from 1st January 2022 to 15th September 2022. Onramper also provides other payment methods (15 in total) but their volumes are not statistically representative.

Key takeaways:

- Bank transfers have the highest median transaction volume and the highest authorization rates
- Majority of users around the world still make use of payment cards when buying crypto
- Local payment methods have higher chances of being approved

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> There's an additional **70+ factors** that our proprietary data analytics indicate impact success rates.

*— **Leeroy Hendricks**, Head of engineering at Onramper*

5 The Solution: Dynamic Transaction Routing

As you can see by the figures shown above, individual onramps cannot always optimally serve their users. An onramp that's optimal for one trading pair might be among the worst options for another.

It's therefore of vital importance that users can select from an aggregated pool of onramps to optimize their success rates.

But *just* aggregation is not enough.

Even if a user has access to all the onramps available to them, how do they know which one to choose?

At Onramper, we've developed a dynamic transaction routing system that automatically suggests the onramp with the highest probability of making the transaction succeed.

In the next section, we will give a comparative analysis to show how this works in practice.

Figure 9 **Onramper's dynamic transaction routing engine. How it works?**

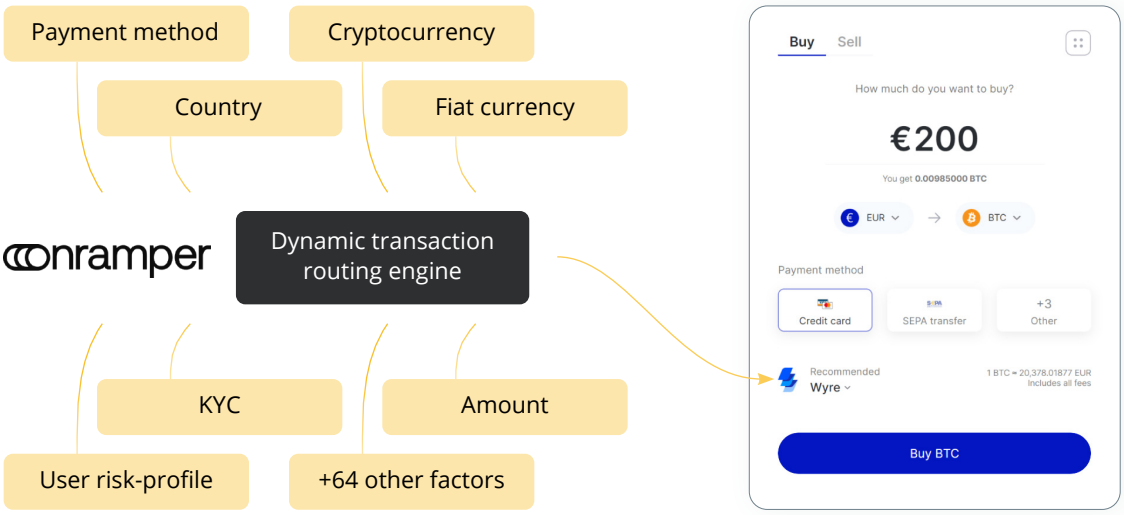


Figure 10 **Inside DTR...**

Dynamic Transaction Routing smartly finds the right onramp for the authorization of end user whitch helps increase authorization rate and also increases possibility of a successful transaction increasing overall successfull transaction rate.

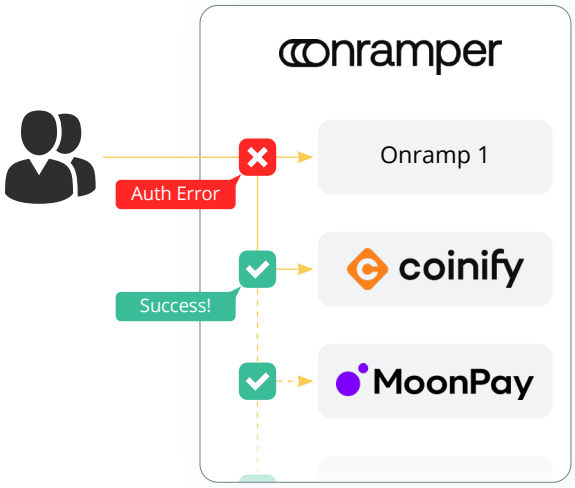
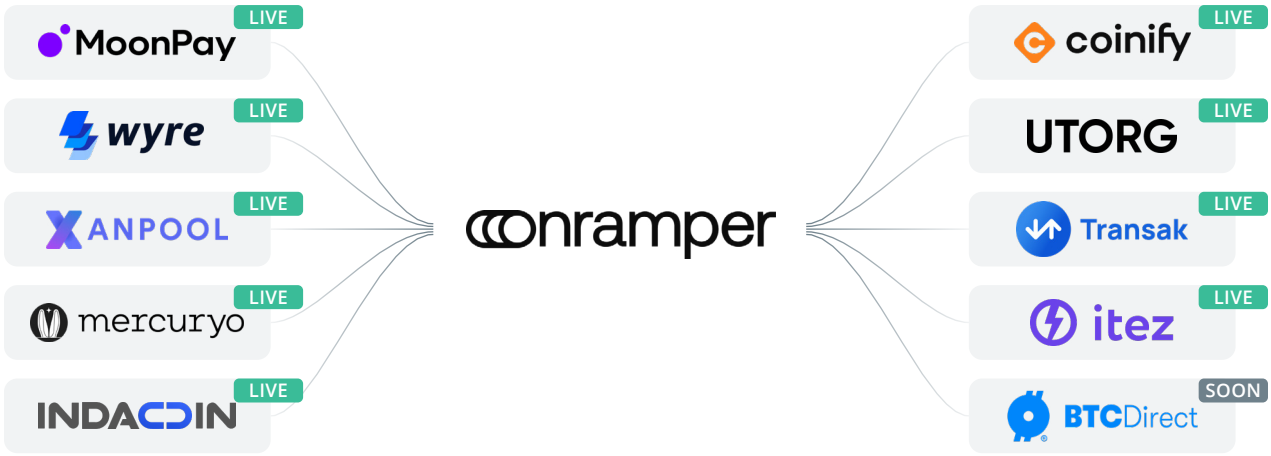


Figure 11 We're onboard with...



6 Explanation of dynamic routing algorithm

70+ factors are taken into consideration by our smart onramp recommendation engine

The key problem that our engine solves is how to act on changing patterns continuously while taking into account vast amount of data both from the end users and from the processors. This requires combining different types of datasets (transaction, crypto currency, blockchain, payment method, localization) into one unified dataset that can be utilized to train AI/ML algorithms.

On a high level dynamic transition routing is essentially a Java, Python and Scala powered ingestion layer with access to multiple databases. It is key to mention here that to account for the above problem we're relying on sub 10 millisecond latencies. This infrastructure is in constant learning mode with the goal of routing end users to the most appropriate onramp.

Besides technical orchestration, our dynamic routing engine also combines commercial integration. This mean working alongside the different fraud detection engines built by each partner. While we work with a select few at the moment, we aim to grow and learn with more and more partners with localized knowledge in different parts of the world.

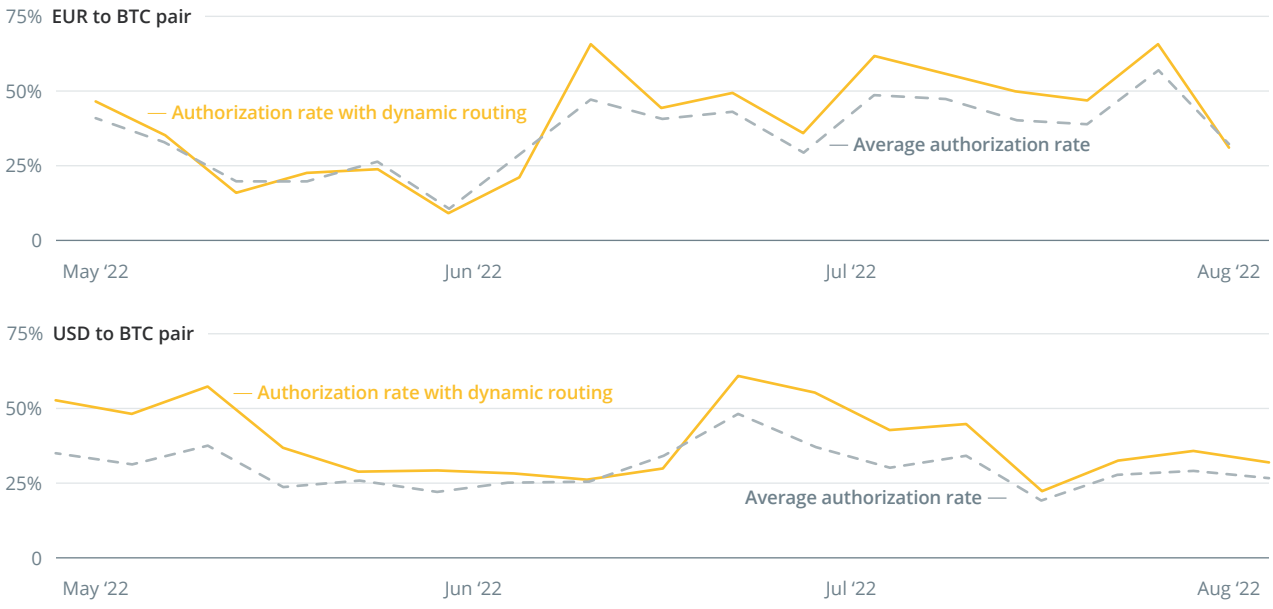
7 Comparison: Trading Pair Authorization Rates

Now that we have a theoretic understanding of dynamic transaction routing (DTR), let's see how it performs in practice.

The charts below show the weekly average authorization rate across onramps (red), versus the average authorization rate with DTR.

> Already, our smart onramp recommendation engine improves success rates by **30–80%**. The more transaction volumes we do, the bigger the improvements become.
>
> — ***Thijs Maas***, *Founder and CEO at Onramper*

Figure 12 **Improvements with Dynamic Transaction Routing**



Data from 1st May 2022 to 21st August 2022. Weekly frequency.

As you can see, DTR significantly outperforms on average authorization rates, in recent weeks by as much as 50%.

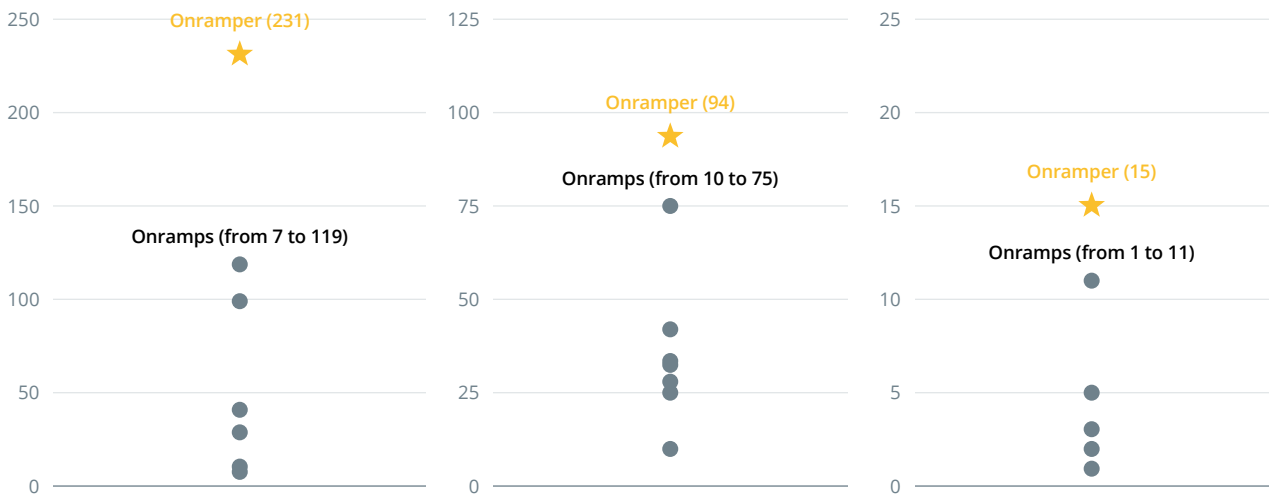
Key takeaways:

- Onramper's smart onramp dynamic transaction routing engine improves success rates by 30–80% compared to the average
- Our dynamic routing engine steadily learns and improves.

8 Comparison: Tokens, Currencies & Payment Methods

If we look a little deeper, we start to see why aggregation + dynamic routing is so powerful. Onramper supports more tokens, more fiat currencies and more payment methods than any individual onramp.

Figure 13 **Onramper supports more tokens, fiat currencies and payments methods than any onramp solution**



Data as of 15th September 2022. The gray dots correspond to the supported tokens/fiats/payments of each onramp. Gray dots may overlap with each other.

Key takeaways:

- Onramper's aggregation approach leads to more supported tokens, currencies and payment methods than any individual onramp

9 Trends And Expectations

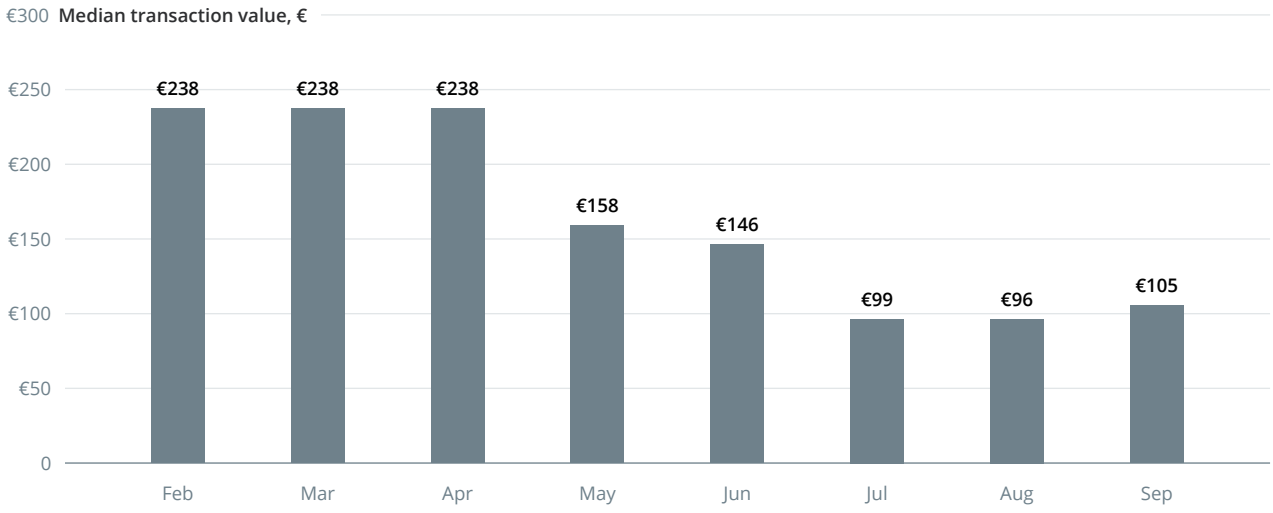
Now that we have a good overview of the state of the onramp market, let's have a look at some trends and upcoming catalysts that will (continue to) shape the wider industry in the next 12–24 months.

Impact Of The Luna Collapse

On May 9th 2022, the Terra (LUNA) token crashed 99.9% after the stablecoin attached to it, UST, depegged from its dollar value. UST investors lost almost $45 billion in a matter of days.

The aftermath of this collapse has had an impact on the onramping industry too. In the following months, median transaction volume continued to declined. It wasn't until September that median transaction volume has broken the downtrend.

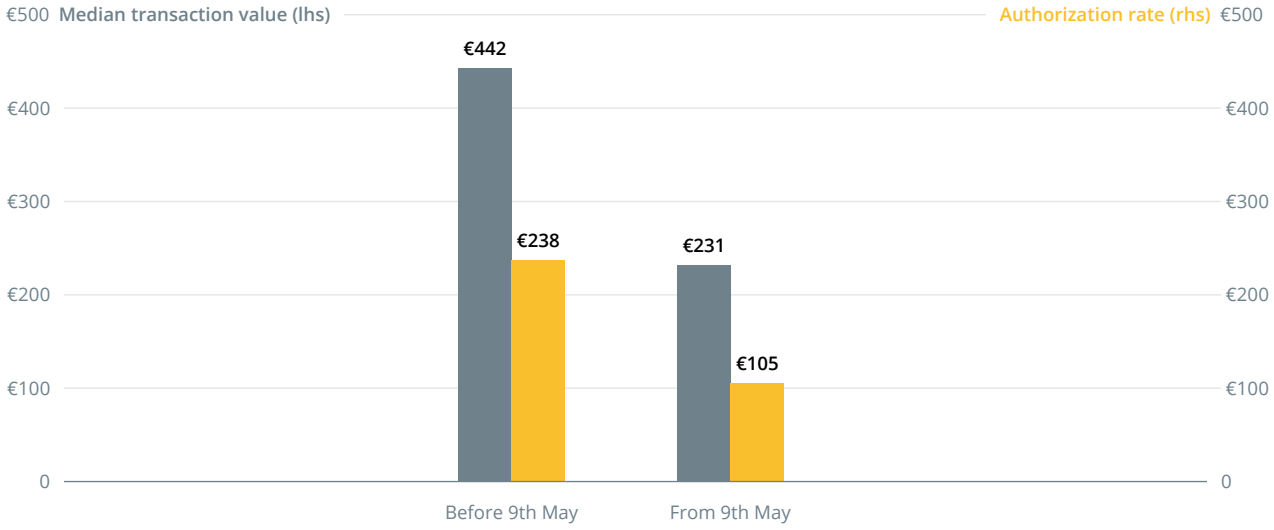
Figure 14 **The median transaction value plummeted in May**



Data from 7th February 2022 to 15th September 2022. Monthly frequency.

The impact of the collapse has had consequences for the industry as a whole. Both median and average transactions values have more than halved since May 9th.

Figure 15 **Average and median value of a transaction before and after the Luna crash**



Data from 7th February 2022 to 15th September 2022.

Against the macro-economic backdrop of central banks raising interest rates to combat inflation and quantitative tightening pulling liquidity from the global economy, we expect the median transaction volume to fluctuate around the current median value €105 for the year ahead at least. This assumes the crypto sector stays somewhat stable and doesn't experience another black swan event like a $LUNA crash.

Key takeaways:

- The $LUNA crash had a big impact on median transaction volumes, which more than halved in the following three months. It's showed first signs of recovery in September.

Upcoming Catalysts And Expectations

Fiat-crypto onramps don't exist in a vacuum. There are various upcoming catalysts that will severely impact the industry in the next 12-24 months. Here are the most important ones to things to look out for.

Decentralized Identifiers (DIDs)

Decentralized identifiers (DIDs) are a new type of identifier that enables verifiable, decentralized digital identity.

In a decentralised identity framework, the user receives credentials proving their identity from multiple Issuers (e.g., Government, Employer, University etc.) and stores them in a digital wallet.

Rather than a central authority managing the user's identity, a blockchain-based distributed ledger acts as the source of truth. The identity information itself is not held on the ledger but within a wallet managed by the user.

How it affects the onramp industry:

Because DIDs are stored on a (public) blockchain, they are more transparent and are arguably more secure because data is of higher integrity and less likely to have been tampered with.

Theoretically this could lead to better authentication and therefore authorization rates, because payment processors/regulators have a trustless method of verifying a user's credentials.

In practice, this means that users in regions that have historically been largely excluded, such as Africa, will benefit from greater accessibility. We expect that DIDs will dramatically increase the amount of people making use of fiat onramps globally in the next 12–24 months.

Key takeaways:

- Decentralized Identifiers (DID) will enable new, more secure way of authenticating and verifying user credentials.
- Regions traditionally excluded from the global financial marketplace, such as Africa, will benefit disproportionally from DIDs.
- Ultimately, DIDs will enable more financial inclusion and increase transaction volumes and authorization rates.

Crypto laws & regulations (MiCa)

As cryptocurrency usage has increased, so too did the call for regulations by governments around the world.

Despite a large number of cryptocurrency investors and blockchain firms in the United States, the country hasn't yet developed a clear regulatory framework for the asset class.

Some countries like Russia, China and India have thusfar opted for stricter laws and regulations or outright bans, whereas the the European Union has chosen a more pragmatic approach.

In September 2020, the European Commission proposed the Markets in Crypto-Assets Regulation (MiCA)—a framework that aims "protect investors and preserve financial stability, while allowing innovation and fostering the attractiveness of the crypto-asset sector."

Under the provisional agreement reached on 30 June 2022, crypto-asset service providers (CASPs) will need an authorisation in order to operate within the EU. National authorities will be required to issue authorisations within a timeframe of three months.

How it affects the onramp industry:

Regulations are often met with cynicism by crypto natives but good regulation is necessary to legitimize and advance the sector. For better or worse, regulation provides clarity and stability.

We will have to wait to see how regulations like MiCa play out in practice, but we predict it will ultimately benefit investors as more standardization, compliance and cooperation throughout the EU means more access, better service and higher authorization rates for fiat onramps.

Key takeaways:

- The EU reached a provisional agreement on regulation in June 2022: Markets in Crypto-Assets Regulation (MiCa).
- The practical implementation of MiCa over the next 12–24 months will heavily impact the European (as well as global) crypto market.
- In the worst case scenario, stringent application will stifle industry growth, including onramp demand and authorization rates.
- In the best case scenario, a comprehensive legal framework will lead more access, better service and higher authorization rates for users.

Central Bank Digital Currency (CBDC)

A Central Bank Digital Currency (CBDC) is a digital currency issued by a central bank.

Instead of printing money, the central bank issues electronic coins or accounts backed by the full faith and credit of the government.

CBDCs are currently mostly in the consideration/ development stage, with some in proof-of-concept programmes. According to ECB's chief Christine Lagarde, more than 80 central banks are currently looking at digital currencies.

How it affects the onramp industry:

Depending on the country, CBDCs might pose a threat to the onramping industry, as their centralization and government backing directly oppose the foundational ethos of decentralization and disintermediation of cryptocurrencies. Most importantly, CBDCs are at odds with stablecoins, cryptocurrencies which price is designed to be pegged to a reference asset, usually fiat money.

If central banks across the world decide to promote their CBDCs, it stands to reason that they would find ways to discourage or ban the purchase of

cryptocurrencies, heavily impacting the onramp industry at large.

China has (in)famously opted for a ban on crypto, pushing for the massive expansion of the Digital Yuan instead. It is one of the few practical examples we can currently point to, but it does paint a bleak picture for cryptocurrencies if other countries adopt the model.

On the other hand, CDBCs could also accelerate the adoption of cryptocurrencies. For example, they normalize the idea of digital currencies for people that would otherwise be out of scope. If the wallet or app that hosts CBDCs ends up hosting other cryptocurrencies like Bitcoin and Ethereum, that would greatly increase the need and reach for fiat onramps.

Most CBDCs are still in the exploratory phase, but expect to see more of them come to life in the next 12 to 24 months.

Key takeaways:

- More than 80 central banks are currently looking at digital currencies (CBDCs). We expect to see more of them come to life in the next 12 to 24 months.
- In the worst case scenario, CBDCs compete directly with cryptocurrencies and lead to restrictions on access to and demand to fiat onramps.
- In the best case scenario, CBDCs will accelerate crypto adoption and demand for fiat onramps by normalizing digital currencies for non-crypto-native users.

10 Conclusion

Fiat-crypto onramps are an essential part of the crypto industry and have provided an invaluable service to millions of users around the world.

However, each individual onramp has many potential points of failure, as we've seen in this report. On average, these lead to an average authorization rate of just 50% across the world.

The performance of individual onramps differs wildly based on a range of factors, such as location, trading pairs, payment methods, transaction amounts and/or the specific onramp solution being used.

To achieve an optimal, global onboarding process, token providers must do two things:

- Offer a wide range of aggregated onramps in a single interface
- Dynamically route transactions to give each user the best option for their specific circumstances

By aggregating onramps and building the intelligence to make sure the right onramp is used for the right transaction, Onramper is solving this problem.

Our free, easy-to-use widget allows users to buy your token without leaving your app or website. Moreover, by integrating all major fiat onramps in a single flow, our widget and API ensure that users always get the lowest fees and highest success rates.

If you want to learn more about Onramper, please reach out to our Head Of Sales Rick Thomas rick@onramper.com.

Ready to increase your customer's onboarding success rate by up t0 80% right away? Our widget is free and can be integrated in as little as 60 minutes.

If you want to sign up for a free test API, click here.

Thank you to everyone who helped realize this report

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