

Agpaytech's Research
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Workflow for Accessing UPI Platforms from Foreign Countries



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Introduction

The UPI, a significant digital wallet in India, has expanded its reach to other countries, marking a notable integration. Recognized as the foremost digital payment system in the region, UPI, alongside credit and debit cards, has been instrumental in propelling this expansion. Moreover, the Bharat Bill Payment System (BBPS) is experiencing maturation as a platform, witnessing a shift towards electronic bill payments by customers and the inclusion of new billers.

The proliferation of acceptance points for digital payments, including QR codes and physical point-of-sale (PoS) terminals, has seen a remarkable nationwide surge. India's digital payment infrastructure, epitomized by the Unified Payments Interface (UPI), is progressively gaining global appeal by facilitating seamless cross-border transactions. This advancement effectively reduces the costs associated with fund transfers and remittance payments.

Purpose and scope

The report's primary aim and scope encompass fulfilling the necessities for integrating access to the UPI in foreign nations. Its focal points lie in elucidating the UPI's structure, fundamental aspects, and strategies for international interactions and collaborations.



The UPI, a significant digital wallet in India, has expanded its reach to other countries, marking a notable integration. Recognized as the foremost digital payment system in the region, UPI, alongside credit and debit cards, has been instrumental in propelling this expansion.

Understanding of the UPI platform

The Unified Payments Interface (UPI) is a swift, real-time payment system enabling seamless inter-bank transactions. Created by the National Payments Corporation of India (NPCI), which oversees all retail payment systems in the country, UPI empowers users to transfer funds between any two bank accounts using diverse identifiers such as mobile numbers, Aadhaar numbers, or even QR codes.

▶ Linking the Bank Account:

To use UPI, users must first link their bank account to a UPI-enabled mobile application like BHIM, Google Pay, or PhonePe. The UPI platform is integrated with over 200 banks in India.

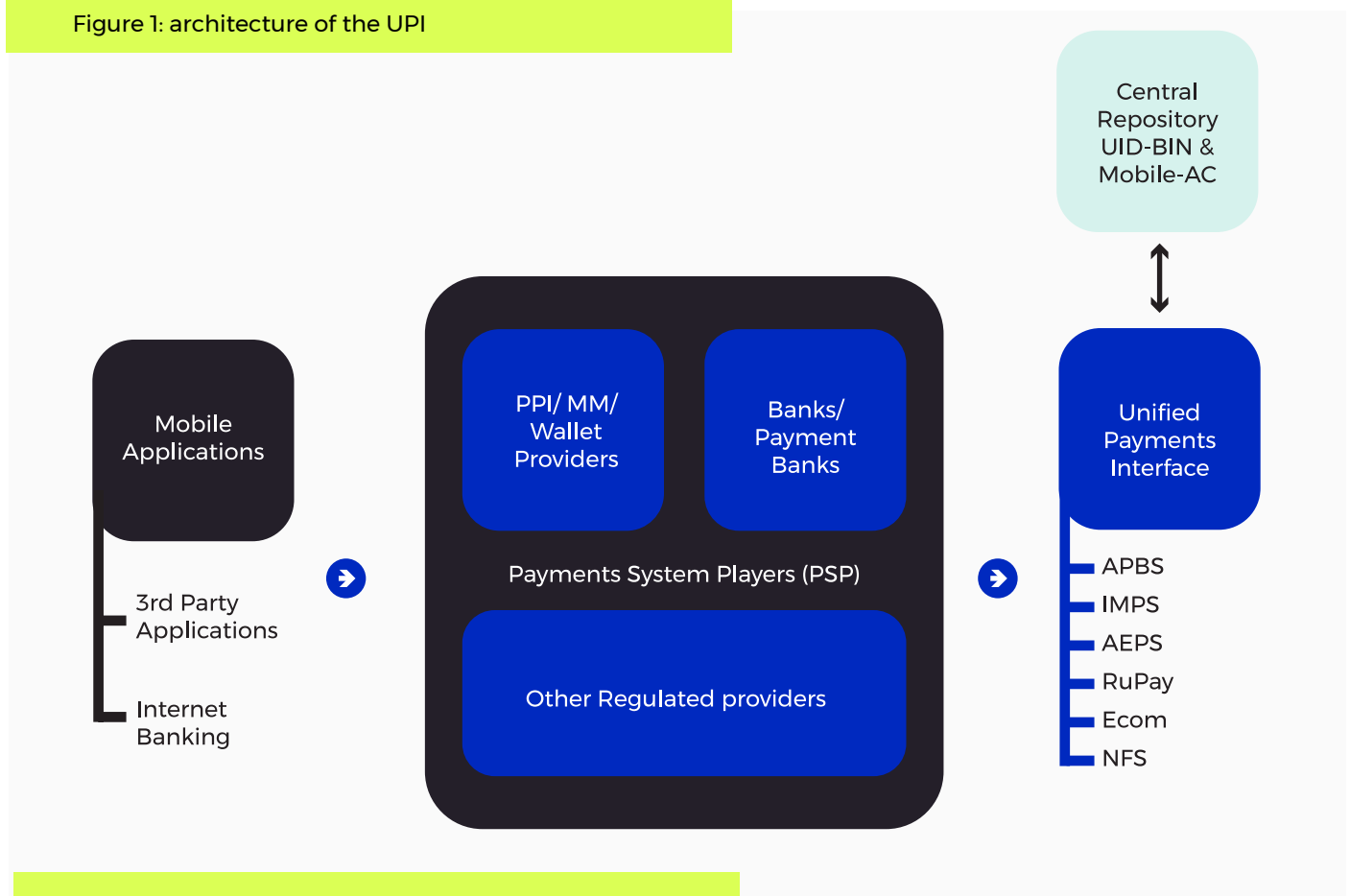
▶ Creating a UPI ID:

After linking the account, users create a UPI ID, often a combination of their phone number and the service provider's name (e.g., 1234567890@upi). This ID serves as their financial address, eliminating the need to remember lengthy bank account numbers and IFSC codes.

▶ Making Transactions:

When making a payment, users can choose the UPI option, enter their UPI ID, and confirm the transaction using a secure Personal Identification Number (PIN). Money can be sent or requested 24/7 across banks, with the transaction completed in real time.

Figure 1: architecture of the UPI



Source: Medium.com

The regulatory framework concerning UPI transactions originating from foreign locations.

As per the Reserve Bank of India's circular no, RBI/2022, foreign nationals and Non-Resident Indians (NRIs) visiting India are permitted access to the UPI, enabling them to conduct payments using this system within the country. Union Minister for State for Finance, Dr. Bhagwat Kisanrao Karad, highlighted this information in a written response during the Lok Sabha session. The Minister elaborated that this access has been expanded to travellers from G-20 countries at specific international airports (Bengaluru, Mumbai, and New Delhi) for making merchant payments.

Furthermore, the RBI has introduced provisions to grant UPI access to NRIs possessing international mobile numbers linked to their NRE/NRO accounts. The National Payments Corporation of India (NPCI) has confirmed that this facility is available in 10 countries: Singapore, Australia, Canada, Hong Kong, Oman, Qatar, USA, Saudi Arabia, UAE, and the United Kingdom.

Table 1: The Volume and Value-wise UPI transactions since 2018

Year	Volume (in core)	Value (in lakh core)
2018	374.63	5.86
2019	1078.75	18.37
2020	1888.09	33.88
2021	3873.31	71.58
2022	7403.97	125.94
2023	5183.85	83.20

Source:RBI

NPCI, established as a non-profit organization by the Reserve Bank of India (RBI), manages retail payment systems across India. Beginning in 2020, NPCI has proactively pursued measures to facilitate the global utilization of UPI for international peer-to-peer and merchant transactions. NPCI mandated that all involved parties such as member banks, third-party application providers, and other payment service providers to integrate UPI Global by December 31, 2021. Initially extended to September 30, 2022, to accommodate additional members needing implementation at the issuer and UPI app levels, NPCI has granted no further extensions.



PhonePe emerged as the pioneer among Indian fintech companies in supporting cross-border UPI payments. Through PhonePe, users can utilize their Indian bank accounts to make payments at merchant outlets or points of sale in countries including the UAE, Singapore, Mauritius, Nepal, and Bhutan. Additionally, Paytm has announced the forthcoming support launch for UPI Global payments.

Challenges in Accessing UPI from Foreign Countries

The deployment of the UPI payments interface in multiple countries is poised to increase operational clarity as its implementation progresses. Two primary advantages will unfold: Indians residing abroad can utilize UPI payments from their Indian bank accounts connected to their international mobile numbers. Additionally, Indians travelling overseas can conduct UPI payments through their Indian bank accounts linked to their international mobile numbers. Moreover, Indian travellers abroad will have the capability to make forex payments via UPI.

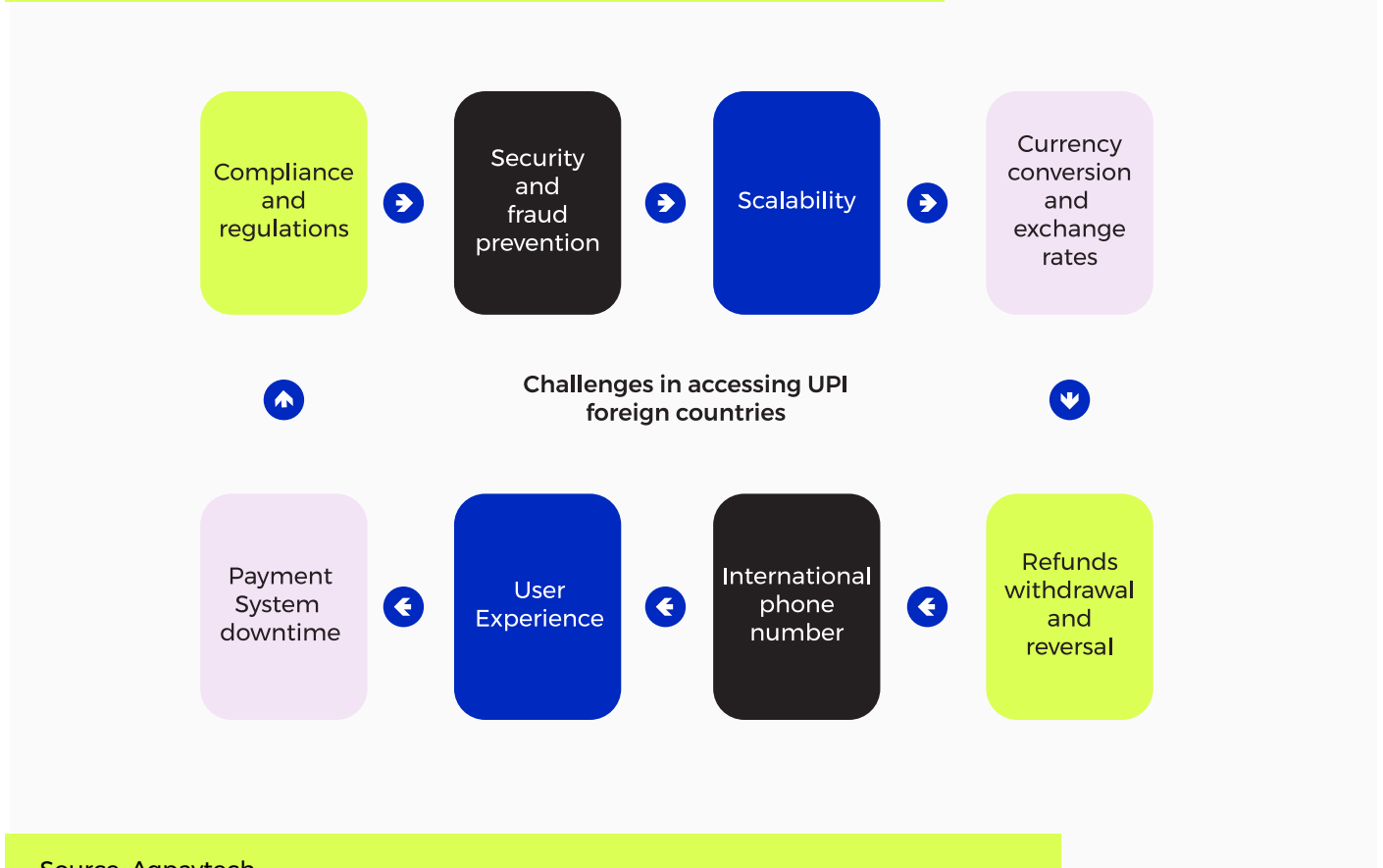
To engage in international UPI transactions, users must possess a UPI-enabled mobile application connected to their Indian bank accounts. The initial step involves converting the transaction amount from the source currency (e.g., INR) to the destination currency (such, USD). The issuing bank plays a crucial role in authorizing the transaction, ensuring compliance with the regulatory requirements of both countries. This authorization process is facilitated by intermediaries involved in the transaction process.

The Payee's bank overseas is responsible for receiving the authorization and verifying transaction details.

However, this process might involve multiple banks and various systems, contingent upon the country and the agreements established by India with those nations. Moreover, France has joined a growing roster of countries where users can register for UPI linked to their non-resident external accounts, enabling payments in India. This expansion includes countries like the United States, UAE, Saudi Arabia, Singapore, and others. Consequently, bilateral arrangements with France and other nations, such as Singapore and the UAE, play a pivotal role in the global expansion of UPI. A significant portion of payment network revenues is derived from cross-border transactions. India has forged UPI tie-ups internationally, facilitating money transfers with countries like Singapore, the US, Australia, Canada, and more.

Countries like Hong Kong, Oman, Qatar, Saudi Arabia, UAE, and the UK are among those where India has extended UPI services. Additionally, the Indian government aims to onboard all G20 members to facilitate international UPI payments. Non-resident Indians (NRIs) must link their mobile numbers with NRO or NRE accounts to activate UPI using international mobile numbers. It's important to highlight that the availability and functionality of international UPI transactions can differ across various UPI apps and banks. Some banks and apps might have specific partnerships with international banking entities, while others may impose limitations or constraints on specific countries or transaction categories. Hence, users are advised to consult their respective banks or UPI app providers for comprehensive details regarding international UPI transactions.

Figure 2: Challenges of the UPI foreign



Source: Agpaytech

Workflow for Accessing UPI Platforms from Foreign Countries

India's Unified Payments Interface (UPI) has gained immense popularity due to its swift, convenient, and secure digital payment capabilities. This system ensures smooth transactions, allowing individuals to make payments using a UPI ID or bank account number. Initially intended for domestic use, UPI has significantly expanded its user base and become the favoured payment method nationwide. Consequently, there's an increasing demand for its accessibility beyond India's borders.

To meet this growing need, the Indian government has initiated measures to broaden UPI payments to various international destinations, including countries like France and the UAE. This initiative aims to ease and expand transaction capabilities for Indian nationals living abroad. Furthermore, UPI services have been extended to Non-Resident Indians (NRIs), enabling them to conduct international transactions conveniently and securely. This expansion of UPI's global presence is anticipated to streamline cross-border payments and enrich the digital payment landscape for Indians worldwide.

► **How to use UPI in other countries**

- **Step 1:** Download or open your UPI-enabled mobile app, such as PhonePe, Google Pay, or Paytm, which allows international UPI transactions in the country.
- **Step 2:** Register your Indian bank account with the app.
- **Step 3:** Once your bank account is linked, you must provide the recipient's details, including their bank account number, IBAN, and BIC, together with the transfer amount and currency.
- **Step 4:** You will receive a confirmation once the transaction is complete.

Your transactions will continue to incur conversion and foreign exchange fees. Additionally, the system's implementation in foreign countries is being phased in gradually, meaning it might not be accessible in all listed countries.

► **How NRI can use this app**

- **Step 1:** Download a UPI-enabled mobile app such as PhonePe, Google Pay, or Paytm.
- **Step 2:** Register your NRE or NRO account with the app.
- **Step 3:** You must provide your Indian mobile number and bank account details.
- **Step 4:** Once your account is linked, you can use UPI to pay for anyone in India with a UPI ID.
- **Step 5:** You can also use UPI to pay for goods and services at merchant outlets in India.

Although UPI transfers within India are typically free, utilizing UPI for international payments incurs charges. When employing UPI for transactions abroad, you initiate an international transfer via your bank. Therefore, while platforms like Google Pay or PhonePe do not impose fees for UPI International transactions, the expenses arise from the international transfer fees levied by your bank.

Apart from your bank's international transfer fee, an additional expense to be mindful of is a surcharge applied to the exchange rate during the conversion of INR to foreign currency. Banks typically convert currencies at forex rates that exceed the mid-market rate displayed on platforms like Google and the rates employed by services like Wise for international transfers.

Technical requirements and compatibility considerations

The guidance on UPI codes and associated UPI reference data, collectively known as the UPI, has been developed by CPMI (committee on Payment and Market Infrastructure) and IOSCO (International Organisation of Securities Commissions). This Technical Guidance aims to offer adaptability and expandability to accommodate the changing landscape of markets, including introducing new products, variations in regulatory regimes, and alterations in messaging standards. Given the global trading of OTC derivatives across markets, CPMI and IOSCO anticipate that this guidance is universally accessible, utilizes pertinent international technical standards when accessible, and remains impartial to specific jurisdictions. During the development of this Technical Guidance, CPMI, and IOSCO:

- ▶ Examined the technical principles essential for UPI, considering factors like uniqueness, persistence, consistency, and generation to meet the authorities' requirements.
- ▶ Engaged with authorities to understand their UPI use cases and considered the industry representatives' perspectives and expectations communicated through industry workshops and responses to the UPI Consultative Reports.
- ▶ This Technical Guidance does not cover governance arrangements for the UPI, as these aspects are anticipated to be addressed by the Financial Stability Board (FSB) and will be subject to additional consultations.

The primary goal of the UPI is to provide a distinct identification for every OTC derivative product mandated by an authority for reporting to a TR. It consists of a UPI code and UPI reference data. The UPI reference data encompasses components pertinent to various OTC derivative instrument types and their underliers. Each reference data element comprises a range of permissible values. For instance, the "Asset class" data element may include values such as "Credit," "Rates," "Commodities," "Equities," or "Foreign Exchange."

Guidance on the UPI code structure

As detailed in the preceding section, CPMI and IOSCO have determined that the UPI code should lack semantic meaning. Additionally, it's proposed that each UPI code be paired with a human-readable alias to aid its public dissemination. The length of these semantically meaningless UPI codes should be sufficient to encompass any potential new OTC derivative products anticipated in the foreseeable future. However, the codes must remain concise enough to enable practical manual entry into data systems. While the precise length of these semantically meaningless UPI codes may be addressed in future implementation efforts, it is recommended that all codes issued by UPI service provider(s) maintain uniform length.

Conclusion

India's digital payment systems, particularly the Unified Payments Interface (UPI), are gaining global attention as efforts are made to facilitate smooth cross-border transactions. The introduction of international UPI payments has simplified the process for businesses involved in cross-border trade. Utilizing the UPI platform allows businesses to promptly transfer funds to their international partners, thereby enhancing the efficiency of international trade. This development has led to substantial investments in the Indian Fintech industry, with numerous startups capitalizing on the UPI platform to deliver inventive financial services that have garnered considerable investor interest.

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- ▶ Indians can benefit from using UPI abroad. But there are some gaps that you have to keep in mind. (2023).

ABOUT AGPAYTECH LTD.

Agpaytech Ltd. is a company pioneering in the Fintech space with a focused approach to building robust technologies for e-commerce Card Processing Solutions for Payment Service Providers (PSPs). Additionally, we provide Compliance and Regulatory Umbrella, Remittance-as-a-Service (RaaS), Banking-as-a-Service (BaaS), Foreign Exchange, Cross Border Payments, and digital currency technology.

We also provide practical white paper research support to central banks, government and private institutions, economic organizations, and NGOs in Africa. Our services expand from research projects, state-of-industry reports, project assessment, data collection, and consulting services in the fintech space.

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