DOMESTIC
PAYMENT
SCHEMES
JURY **2021**

TO SURVIVE OR THRIVE?

Domestic Payments Innovation in the Pandemic

CONTENTS

FOREWORDS

It is great to see John Chaplin continuing to dedicate time and effort to the Payment Innovation Jury and Chris Hamilton now joining this effort.

This pandemic brought out in stark relief the fundamental role of digital payments in the functioning of the economy. A recent McKinsey report showed that countries with greater adoption of digital payments, a well-functioning payments market and good ID infrastructure were able to respond to the crisis faster and with greater ambition. Regulators across the world took several measures to enable the smooth functioning and fostering usage of digital payments. These included - adjusting limits for contactless and mobile payments; simplifying onboarding requirements for customers, merchants and agents; and temporary reductions in fees and charges for payment services.

The crisis has only accelerated the major transformation that was well-underway in the payments market, among others - fast payment services, open banking, QR codes, and increased research and pilots around stablecoins and CBDC.

Many domestic payment systems are embracing these innovations and setting themselves on a new trajectory. The recently issued G20 cross-border payments roadmap also refers to the role that well-functioning domestic payment systems and their international linkages can have on improving cross-border payments. At the same time this crisis has also challenged the domestic payment systems in their ability to handle a rapid surge in usage, the effectiveness of their business continuity plans and ability to handle increasing sophistication of cyber threats and social engineering attacks.

This edition discusses the dual theme of how the domestic payment systems are handling the crisis and how they are navigating the rapid shifts underway. I am sure the insights presented in this report will be useful for the various stakeholders following the developments in the domestic payment systems.

Harish Natarajan

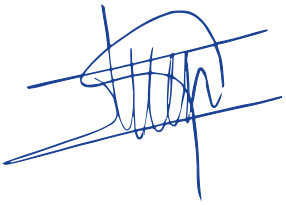
Lead, Payments and Market Infrastructures, Financial Inclusion, Infrastructure and Access, Finance, Competitiveness and Innovation Global Practice, The World Bank

Although the world was turned on its head at the beginning of 2020, card schemes have proved their resilience as one of the key elements at the heart of the retail payments eco-system by continuing to handle "business as usual".

More importantly, domestic / regional schemes have also shown their ability not only to accelerate the use of existing technologies such as contactless payments, but also their agility to support exponential growth in electronic commerce, and, equally importantly, to adapt existing products and launch new services to meet the unprecedented and unexpected challenges posed by the worldwide pandemic.

2500 years ago, Plato coined the adage: "Necessity is the Mother of Invention".

The examples from around the world which are given in this new report on "Innovation in Domestic Payments During a Pandemic" illustrate how true this proverb still is today!



Juan Carlos Martín Guirado

Chair, European Card Payment Association (ECPA)

EXECUTIVE SUMMARY

Record participation in the research

The last study of innovation by domestic payments organisations was made before the world had heard of the Covid-19 virus. At that time, we reported a major increase in innovation activity. All business globally has been dramatically affected by the pandemic, and because domestic payments organisations have often had to fight hard in the past to get budget for new developments, our initial assumption was that innovation would be severely cut back. We set out to investigate this.

The topic is clearly of great interest to the industry. We were delighted that senior executives from 48 organisations made up the Jury, 25% up on previous studies.

Innovation continued throughout the pandemic

Happily, we can say that for most domestic payments organisations, our assumption about innovation programmes being decimated was incorrect. A relatively small number of organisations were forced into severe cutbacks because of pressure from their bank owners, but the overall picture was positive. Many organisations had to make some adjustments to their innovation priorities due to financial pressure but by and large kept their programmes moving forward. And 36% of organisations reported that the pandemic had led to an increase in their innovation activities.

Transaction volumes bounced back after initial steep declines

The impact of the pandemic on transaction volumes was initially severe. Only 13% of organisations reported no reduction and on a global basis, nearly half of the Jury reported a drop of more than 25% in their worst month compared to 2019. The focus on domestic transactions and everyday spending, and the fact that many organisations despite a late start have now developed digital capabilities, helped a rapid bounceback and at the time of writing, almost half the organisations have totally recovered their normal volumes.

Domestic payments organisations were key to Covid-19 relief programmes

The pandemic has reminded the industry and national policy makers of the benefits of domestic retail payment systems. Arguably COVID-19 may turn out to be one of the strongest arguments for ensuring the operational resilience and renewal of domestic retail payment systems, despite global alternatives. The study shows that domestic payments organisations were well positioned to facilitate the Covid relief programmes in different markets, sometimes using existing capabilities and other times using rapidly-developed new services. The Jury reported that in half of the markets supported, the sentiment of regulators to national payment solutions had improved.

Domestic card organisations are diversifying rapidly

The Domestic Payments Jury studies have for many years talked about the logic for domestic card payments organisations to diversify away from a single form factor and a single business model. This trend is now well established and many of the innovations described in this latest report are clearly aimed at such a diversification strategy. Several organisations are looking at becoming players in the rapidly expanding digital identity market and with the help of our guest contributor, David Birch, we look at what is happening, and at some organisations that have already developed services.

Increased non-bank involvement is creating pressure for governance changes

The report shows that most domestic payments organisations have moved far beyond being suppliers only to banks. They are providing services to fintechs, telcos and retailers, among others. However, it may be that ownership and governance models have not evolved at the same rate, if at all. Given the increasing importance of domestic payment systems for the national economy, increased regulatory attention and pressure for change seems likely. It may well be a case of it being better to jump before being pushed.

Move to real-time is gathering pace but the best market structure is unclear

The creation of real-time payments infrastructure and services is a key thrust for many domestic card schemes and switches. The trend is unmistakeable, based on the hard to dispute belief that faster payments are better than slower payments, that the ability to carry additional data opens up product possibilities especially in B2B and that removing some of the rigidities of current retail payment systems has to be a good thing.

But there doesn't yet seem to be a best practice model that has developed. There are overlay schemes on new real-time infrastructure; domestic card schemes and ACHs developing P2P services and new commercial services competing with existing services. No doubt other models will develop.

Difficult choices for regulators caused by evolving market structures

As new market structures evolve, regulators have an important guiding role to play, so as to promote the best economic outcomes. They can promote free market competition as the best way to drive end user costs down and service innovation up. Or they may prefer a more directed approach with fewer domestic systems to encourage more efficient use of limited resources, more economies of scale and more integration. Rapidly evolving market structures, particularly new real-time services, are making the regulator's job a lot harder, leading to some challenging policy choices.

The importance of mobile

The most pressing innovation priority revealed by the study is for solutions that are relevant in a world where over time, more and more payments will be initiated from mobile devices. Apps will become increasingly important in developed markets, but in developing markets, feature phones will be common for some time yet and payment solutions will need to accommodate different technologies. The pandemic has accelerated the need to support e-commerce transactions because physical transactions have suffered as many types of outlet have been shuttered.

Domestic payment systems are positioning themselves by building out and integrating mobile services alongside traditional offerings.

As card payments go mobile, technology and competition are colliding

We are also seeing domestic payments organisations developing QR-based solutions for a variety of reasons including need to work around licensing or technical restrictions maintained by international payment schemes or mobile device manufacturers. The question of whether such 'technical lockouts' are just rewards for innovation or are anticompetitive is another area where regulators need to be continually immersed in the changing technology of payments.

Domestic payments are becoming more international

The name Domestic Payments Jury reveals an obvious truth that domestic payments organisations operate in their own local markets. The report that was published as far back as 2013 said that every domestic payments organisation needed to have an international strategy. The 2021 report shows that many organisations have now taken this from an abstract principle to an active, important strategy. Multiple alternative international strategies are possible, but domestic payment systems need to adopt one. As regional economic groupings become more of a reality, and groupings of Asian and African economies emulate some of the key features of the Single European Payment Area, the previously clear distinction between domestic and international payment systems is likely to erode.

Acknowledgements

We would like to thank the organisations and the individuals that have contributed their views to the study, without which we could not have produced this report. We are also grateful to the Finance, Competitiveness and Innovation Global Practice of the World Bank and the European Card Payment Association (ECPA) for their support.

John Chaplin **Chris Hamilton**

Domestic Payment Schemes Jury, April 2021

THE JURY

The Domestic Payments Jury Reports

The Domestic Payments Jury exists to collate and share insights amongst the world's domestic retail payments systems.

Retail payments infrastructures are critical enablers of the national economies they serve. They often face similar problems, but find many different solutions based on local needs and expectations. If domestic operators know more about the range of possible solutions, they can do a better job of supporting national economies, to the long-term benefit of all.

This 2021 report is the latest in a linked series. In 2018, the "Bridge to the Future" Jury report looked at the role, evolution and priorities of domestic schemes and switches. An important theme was the competitive challenge from International Card Schemes.

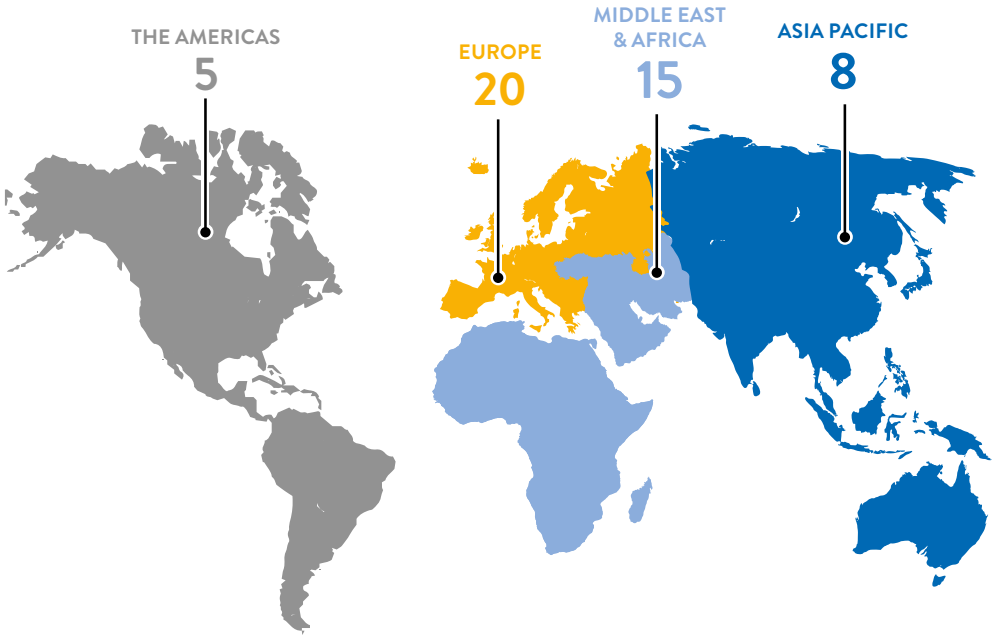
In 2019 "Choosing the Right Route", the Jury focused on innovation as a key driver of sustainability and growth for domestic payments infrastructure. The report emphasised the competitive necessity of using new technology to enhance services, but also noted the domestic scheme orientation towards providing a ubiquitous low-cost service to benefit the national community. The report explored the difficulty in reconciling these two imperatives.

In 2020, everything changed. Economies and lives were massively disrupted by Covid-19. This 2021 report seeks to build on prior insights, but also learn from the unprecedented challenges of the pandemic. Hence our focus this year: the impact of Covid-19 on the innovation programmes of domestic payments systems. The 2021 report collates data on pandemic impacts and systemic responses, but also checks in on innovation programmes and how they have evolved.

The 2021 Jury

There is nothing like a pandemic to focus the mind. The topic seems to have resonated with the world's payment schemes and operators - we have had our largest response ever, with 48 C-level executives (2019: 38) from 40 countries completing the survey for their organisations. Much of the increase comes from Africa which highlights the rapid growth of national payments systems in Africa's 55 nations.

We have also been delighted with the detail provided – many respondents took the time to provide extensive comment, and we have tried to use specific insights where we can. There are quotes from Jury members included throughout the report.



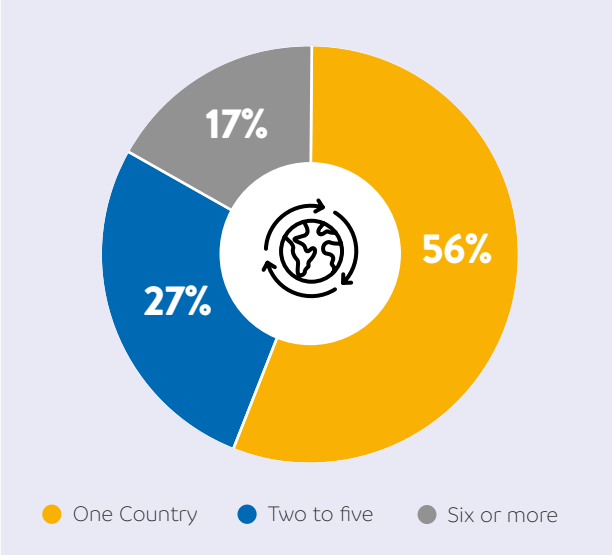
As in previous years, the responses represent organisations that are retail payment scheme managers, operators that process transactions and those who do both to provide an integrated service.

THE CHANGING WORLD OF DOMESTIC PAYMENTS

Changing Geographical Footprints

Historically, payment systems were like airlines; every country had, or wanted, their own. The first report of the Domestic Payments Jury in 2013 said that every domestic payments organisation had to have a strategy in relation to cross-border transactions. The 2021 Jury indicates a clear trend of domestic payment systems seeking cross-border growth opportunities. Nearly half (44%) of surveyed organisations had activity in more than one country.

MULTI-COUNTRY ACTIVITY



This appears to be easier for operators than for schemes, probably because of national regulatory frameworks that tend to focus on scheme management rather than processing operations. In developing economies, policymakers and payment communities rightly see retail payments infrastructure as critical to the national economy and are wary of ceding control to foreign interests. This can make it hard for scheme managers to break into new national markets. But at the same time, users and regulators are often keen to fast-track development of new payment systems by acquiring technology and operations expertise from foreign suppliers. The result is that as schemes tend to be anchored in their home jurisdictions, operators have strategic incentives to expand cross-border.

Some interesting case studies have emerged from the 2021 Jury on pathways for cross-border expansion. While each case is different, at least three general categories can be discerned:

- **Leveraging IP:** Operators seek to leverage their investments in technology, expertise and processing capacity by offering services they perform in their home country to other countries. This is particularly true where there are economic or cultural ties between countries.
- **Following customers:** where participants (e.g. card issuers) or end users (e.g. merchants or card holders) of a payments system are active cross-border or in other jurisdictions, the local payment system may seek to serve both participants and end users better by meeting their needs beyond the domestic market.
- **Regionalisation:** Where countries have themselves formed economic cooperative groupings, the local payments systems have an opportunity to expand, collaborate and perhaps merge regionally as the national economies integrate.

On the following pages, we present some examples to illustrate the cross-border growth pathways.

International Expansion

To understand how domestic payments organisations develop international strategies we got the views of Samee Zafar of Edgar Dunn who has advised on domestic payments in many countries.

"The common goal of all domestic payment schemes is to reach scale and relevance by widening their acceptance footprint and increase consumer adoption within their own markets. But at the same time, these schemes are crossing borders in more than one way. Covid-19 has accelerated the migration of payments to digital channels and consumers are increasingly buying from online merchants from across the world and not just their own markets. Already, major acquirers and gateways offer most alternative payment methods including domestic card schemes brands to their merchants.

"Some domestic schemes are licensing their intellectual assets both to help set up new schemes but also to generate additional revenues. These include licensing technical specifications or adapting operational rule books to local commercial environments so that new schemes can significantly shorten their implementation time frames.

"Initiatives are also underway to interlink domestic schemes to develop regional if not inter-regional payment hubs that use common agreed standards to exchange payments. This way, consumers and merchants will be able to leverage a domestic scheme brand to access other markets. The opportunity to develop interlinked payment networks is significant though there are challenges offered by differences in technical standards and legacy infrastructures and variations in core operational processes such onboarding and dispute management.

"It is also likely that some countries may, instead of developing their own domestic schemes, join a domestic scheme of a regional leader provided the economics make sense and technological innovations cater to regional needs."

Some of the most interesting international strategies are summarised below.

The MIR card scheme and their parent NSPK company has made impressive progress in evolving from a single country operation in Russia into a regional model despite only having been established in 2017. Their formula has been to make it easier for surrounding markets to establish their own domestic schemes. The MIR chip and terminal specifications have been made readily available, and cross-acceptance is facilitated by using the MIR interchange systems for processing transactions between countries. System interconnections have been made with 7 surrounding markets plus Vietnam, and bank by bank agreements are being implemented in a further 6 markets where MIR cardholders wish to transact.

Verve has been the dominant domestic card scheme in Nigeria, Africa's most populous country for many years and step by step, it is becoming more of an African brand. Verve has achieved cross-border acceptance for up-scale customers for many years through cobadging initiatives, first with Mastercard, then with Discover and most recently with a strategic partnership with Visa. But in the long-term the mass market is more important. In Gambia, Ghana, Kenya and Uganda where Interswitch (the Verve parent company) has processing activities, it was a natural development to offer the Verve cards and payment tokens to local financial institutions. The latest step is to follow large Nigerian banks such as First Bank, UBA, Access Bank and GTB to other markets where they have retail business and allow them to issue and acquire Verve thus creating a bridgehead for participation by local FIs. There are already 4 markets live and a further 4 in process.

In Asia, several countries have combined to form the **Asian Payment Network (APN)** which is aiming to achieve many of the same benefits as the Single European Payment Area although without a single currency, or consistent standards, the task is more challenging. The key goal of APN is to facilitate interoperability of domestic systems (initially debit cards) through cross-acceptance agreements although clearly the long-term potential is much greater than this.

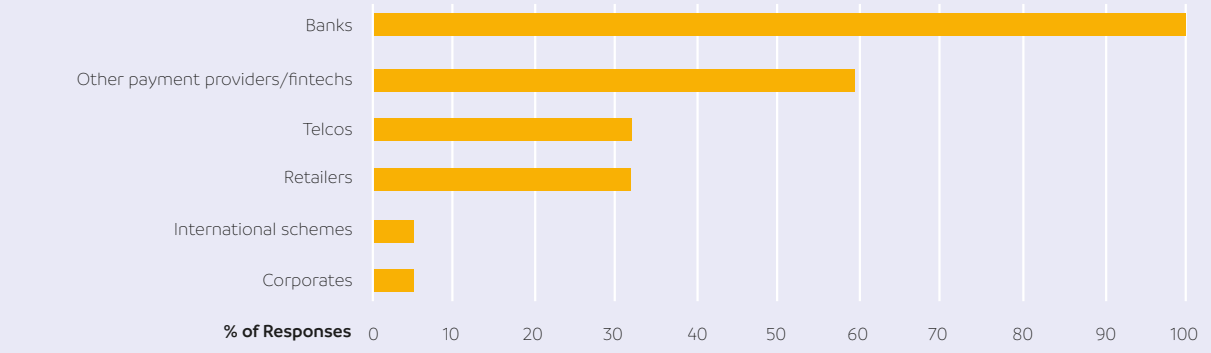
Interac in Canada has provided its chip technology to Jamaica and Norway and is hopeful of future deals. They have also signed an agreement with NYCE regional network in USA to provide POS acceptance in USA. And the reach of their successful P2P service is being extended through agreements with Mastercard and Western Union.

In the processing space, **SIBS** which is the interbank processor for Portugal has been quietly expanding its processing activities beyond the home market. Through license deals and M&A they now have business in 3 African markets and 3 European markets.

Changing Participation

While banks still dominate usage of payments infrastructure, (all of the 2021 Jury provide services to banks), the days of banks being the sole participants in payments systems are clearly over. Three quarters (75%) of the Jury identified at least one other category of customer; more than half (58%) provide services to fintechs and specialist providers (see chart below).

DIRECT CUSTOMERS



It seems likely that as national regulatory frameworks are updated to allow or even require broader direct participation in the payments system, infrastructure providers must adapt to accommodate a wider range of participants. Non-bank payment service providers are already very common.

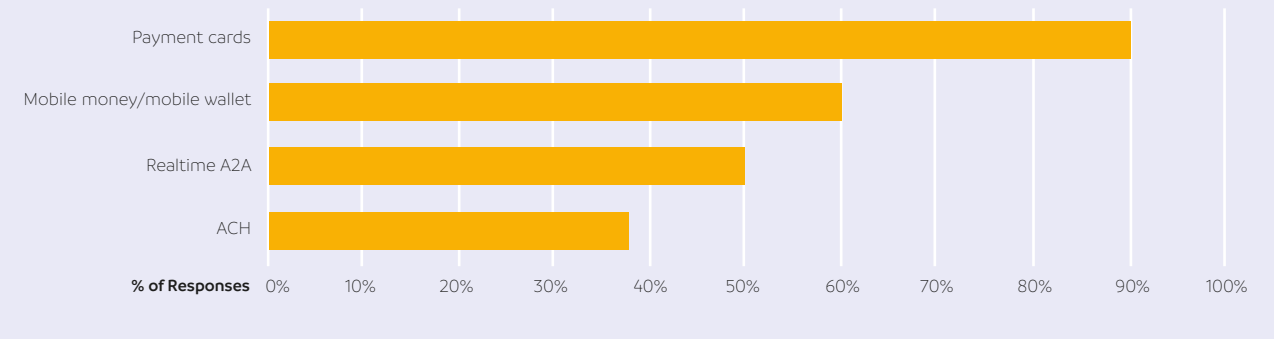
Evolving Services

The historical origin of many domestic retail payment schemes was card-based: either integration of ATM access, or facilitation of retail purchases at point of sale. But in 2018, 94% of the Jury saw the need for evolution of retail payments beyond card payments. In 2021, we therefore wanted to check on this evolution.

The 2021 Jury reinforces the trend towards opening up other payment streams and/or integrating multiple offerings from a common platform. As in 2018, cards remain central but facilitation of payments to and from mobile wallets to support e- and m-commerce is an important development pathway; and for the first time, we clearly see the growing importance of real-time account to account ("real-time A2A") services as well.

Previous Jury reports have concluded that continuous innovation is critical to the long-term survival of domestic retail schemes. The 2021 findings on integration and addition of payments streams represents structural innovation for long-term survival. This pre-existing trend may have been given even greater urgency by the pandemic, as discussed later. We explore some of the innovation pathways at the end of the report.

PAYMENT STREAMS SUPPORTED



The 2021 Jury was asked specifically about the integration of payment streams onto a common platform, particularly real-time A2A and card services. So far, only 1 market in 5 (20%) has consolidated; but nearly three quarters (72%) of the Jury saw this as something that is likely to occur within 5 years, if it hasn't already. In addition, most (72%) thought that integration could increase opportunities for innovation and new services.

The questions about new non-card services elicited much divergent comment. Some Jury members saw consolidation as strengthening the domestic scheme or operator and increasing operational efficiency. Others were concerned that lack of competition might stifle innovation and reduce choice.

> "Convergence will bring about convenience which will increase transactions in the real-time space."

> "The card is a trusted and secure instrument … if instant payments is to provide a matching payments proposal then it needs to be brought up to the same level of control and trust inherent in the card."

In some countries, real-time and app-based services are being delivered as overlays on card platforms. An example is Interac's real-time service in Canada. One of the earliest developments, Faster Payments in the UK, adopted the card messaging standard, ISO 8583, on the logic that this would facilitate integration of real-time A2A inside the bank.

Often, a new and separate real-time platform has been built alongside card rails, usually with the intent to migrate batch/ACH services to real-time. Examples of this are UPI in India and NPP in Australia. Typically, a consumer-oriented scheme product then uses the new platform to serve the customer, such as PayM (UK), PayTM (India) or Osko (Australia).

A third, more disruptive pathway is for an existing consumer platform – such as a telco (Safaricom in Kenya) or social media company (WeChat in China) to bring payments and accounts fully "in house", bypassing banks entirely.

All three pathways have enjoyed success in different markets. It is beyond the scope of the current research to paint this complex picture in full. But the three models have widely differing implications for the national economy, the national operator and participants, particularly banks. In some countries, banks have questioned the value of building entirely new A2A infrastructure alongside card systems that, from the bank's perspective, work very efficiently.

Some detailed follow up research would be timely.

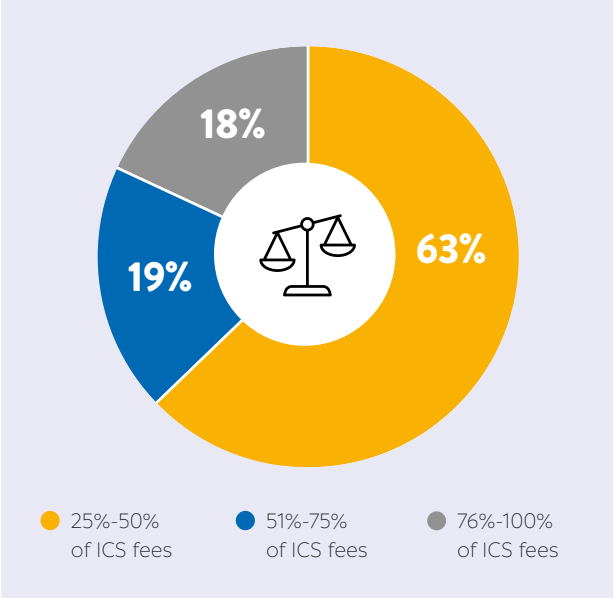
Competitive Dynamics

In the view of the 2018 Jury, a key advantage of domestic schemes was the ability to charge a low utility price relative to international schemes. Over 80% of the 2018 respondents reported domestic scheme fees at 25-50% of the international scheme fees. In 2021, however it appears that the competitive picture is becoming more complex. Most of the 2021 Jury still report lower fees, but the percentage of respondents that are charging 25-50% of ICS fees has declined to 63%, suggesting that the danger of having fees too low to fund innovation has been recognised by many organisations.

> "Having more than one rail is crucial for a country with a large population…having all solutions in one platform may actually stifle the ability to innovate."

> "Each player in one or the other domain will have to innovate more in order to fight the wider competition."

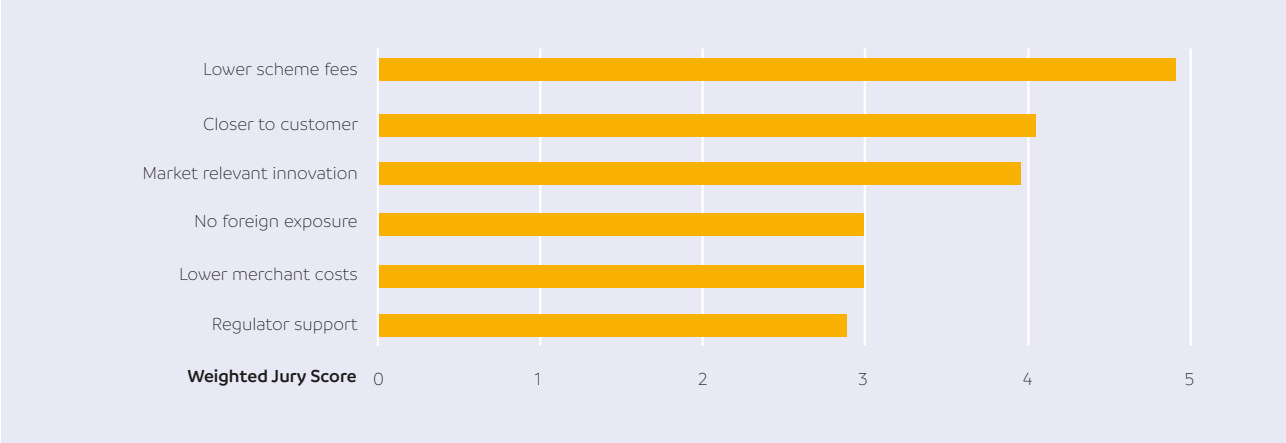
DOMESTIC SCHEME FEES V. ICS FEES



The 2021 Jury's views on competitive advantages are evolving. While lower scheme fees remain the single most important factor versus the international schemes, being close to the customer and being able to innovate for the local market are also important. These elements of local differentiation may offer a response to increasingly aggressive competition from the international schemes, who can struggle to tailor services for each market. Domestic schemes have realised the necessity of investing in innovation for long-term sustainability and this is the explanation for the relative fee increases.

It has long been a paradox that regulators are highly interested in card scheme interchange and seek to reduce it whereas international scheme fees which are increasingly close to the same level as interchange in Europe (according to CMSPI, the leading consultancy in this area) remain outside of the regulatory net. This is an area where domestic payments organisations have an opportunity to explain the real transaction economics to regulators.

DOMESTIC SCHEME ADVANTAGES



New competitors are also emerging. As mentioned above, different models for real-time payments are evolving simultaneously, with complex competitive implications.

Where a country has invested in a new real-time A2A platform, (e.g. Australia, Canada and in due course the US), the goal is usually cash replacement and facilitation of P2P payments rather than retail commerce. But once a new scheme is established, it can move in that direction. Where a non-bank consumer network such as a telco or social media firm has been successful at expanding payment services into the underbanked community, they can put competitive pressure on incumbent card schemes (e.g. WeChat and Alipay competing with UnionPay in China). Yet another possibility is that through pro-competitive regulatory policy, national payments platforms and the banks that use them become open for competitive use by new non-bank commercial payments schemes (as is happening in India).

All this presents incumbent domestic payment schemes – usually card-based – with a challenging strategic landscape. Banks may not see the busines case to invest in new services and payment streams; but if they don't, new real-time technologies and regulatory support for open markets may force competition anyway. Incumbent schemes in developed economies enjoy powerful positive network effects: they already "touch" all the major market participants – something a start-up can't easily match. And they also have up to 50 years of experience dealing with queries, complaints, disputes, fraud and all the complexities of consumer-facing systems. This gives them time to use innovation to develop their own new services and compete successfully. The Jury findings suggest that this is well under way.

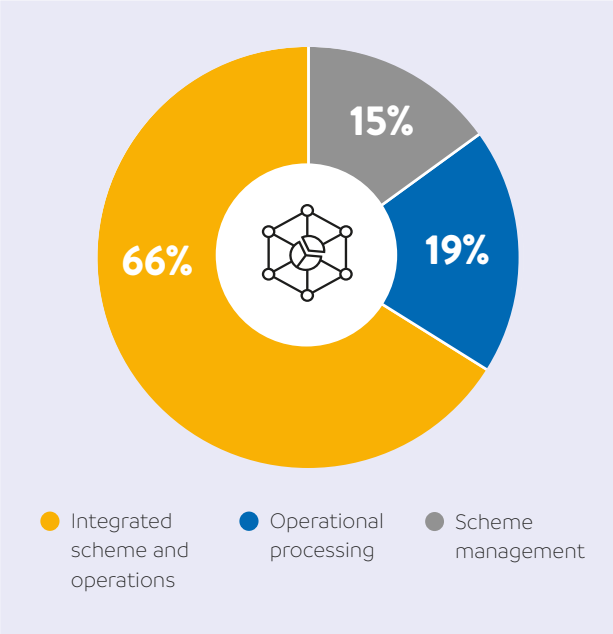
> "ICS are much more expensive for small merchants with no market power and difficult for us to access. Technical lock out is the main impediment."

Market Structure Implications

Regulators have an important role to play. They must encourage an overall market structure which best supports the economy for which they are responsible. Historically, payments policymakers have tried to balance promotion of competition (which leads to lower prices and better services) with recognition of very large network efficiencies in unified payments systems. But it has always proved difficult to achieve both at once.

This balancing approach led European and British regulators to force separation between infrastructure operators and schemes. It does not appear that newer markets have adopted this approach, with two thirds of the Jury operating an integrated service. It may be that the economic or innovation benefits that were envisaged by regulators may not in reality exist, at least in the short/medium term.

DOMESTIC PAYMENT SYSTEM BUSINESS MODELS



The rapid evolution of geographies, participants, new services (particularly real-time A2A) and competitive dynamics as described above has made the regulator's job a lot harder. There are many more dimensions to manage, and rapid technological change can quickly upset established policy.

Examples of such challenges are:

- whether to mandate interoperability between commercial, competing payment systems.
- whether to introduce an open banking model (which forces standardisation but opens competition).
- whether to intervene on bank ownership and governance of key infrastructure.
- how to "future proof" policy in the face of changing consumer behaviour.

SYSTEMIC INNOVATION

The Importance of Systemic Innovation

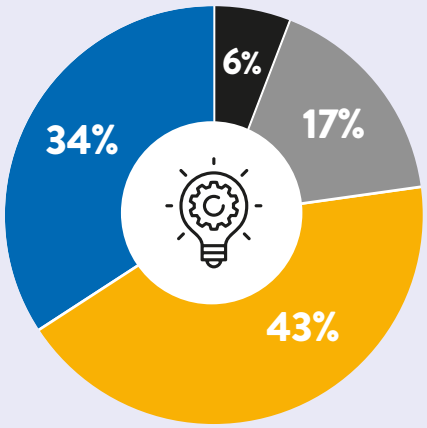
In the 2019 Jury, competition, customer demand and expectations of owners and board members were all seen as drivers that made innovation strategy critical.

As we saw above, a rapidly evolving landscape is likely to confront domestic retail payment providers in the next few years. They will see:

- national borders becoming increasingly permeable, so that neighbouring systems begin to eye each other's home markets
- the range of market participants diversifying, with the increasing participation of telcos, retailers and fintechs and
- proliferation of payment streams and simultaneous convergence to increase competition.

According to the 2021 Jury, the clear response is a strong focus on systemic innovation to secure a future. More than three quarters of the Jury (77%) described their pre-pandemic innovation programme as "ambitious" (e.g. developing a new payments stream) or as involving significant service enhancements:

PRE-PANDEMIC INNOVATION PROGRAMME



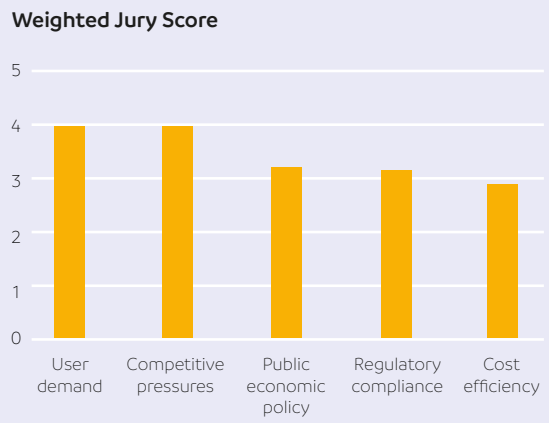
- Cyclical maintenance and renewal
- Incremental enhancements to existing services
- Significant enhancements to existing services
- Ambitious innovation programme (e.g. a new payment stream)

Drivers and Impediments

The more challenging market environment is indicated by 2021 Jury's view of innovation drivers. The top two drivers are user demands and competitive pressures. There is also recognition of public economic policy goals especially financial inclusion and economic development. This highlights the unusual market position of many domestic payment schemes: they are increasingly expected to compete with commercial and international offerings, while at the same time supporting the economic policy of the national government.

Increasingly, national policy makers see efficient digital payments as an economic necessity, and in developing markets there is a requirement for the domestic operator to play a leading role in meeting local needs. Clear examples of this are Meeza in Egypt and Rupay/NPCI in India which are both key facilitators of the national agenda and there are similar cases in many African, Asian and Americas markets.

PRE-PANDEMIC DRIVERS FOR INNOVATION

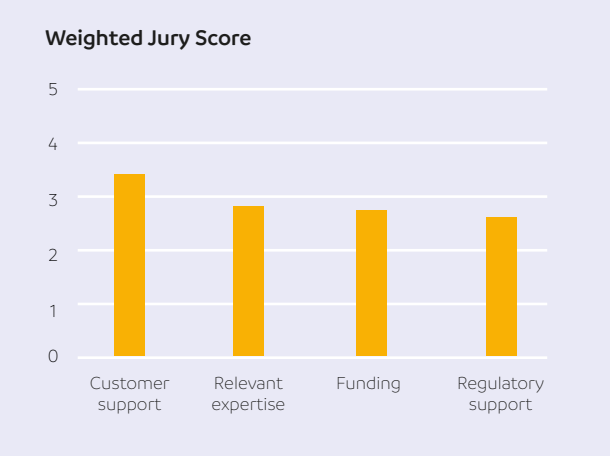


The relatively low score for cost cutting/efficiency programs is another indicator of increasing strategic orientation towards competitive innovation.

The key impediment to innovation remains the same as in 2019. As always, a critical mass of customer support is needed for systemic innovation to succeed.

This is because of the strong network effects in payments systems. A new payments stream cannot be sold to participants piecemeal; multiple customers must all decide at the same time to use the new ervice. Even where there is extensive consultation and expressions of commitment, it is often hard to ensure this.

PRE-PANDEMIC INNOVATION CHALLENGES



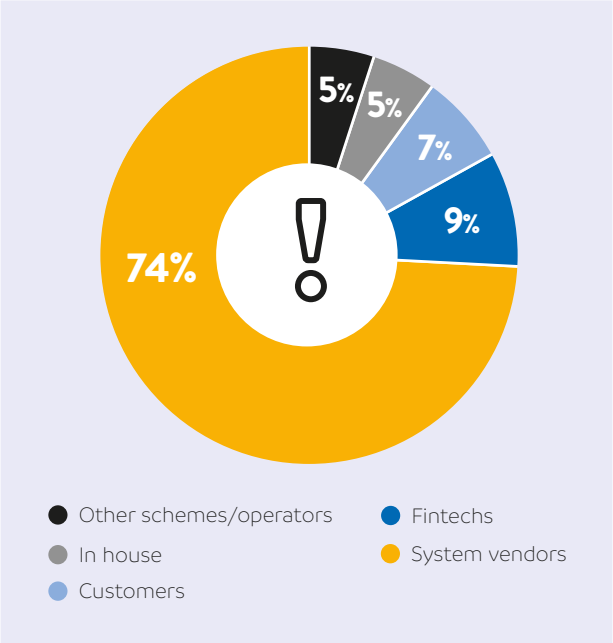
Innovation Methods

In 2019, the Jury reported a wide range of methods and preferred partners for undertaking innovation, with a majority still preferring in-house development. But the 2021 Jury appears to be telling a different story. Three quarters (74%) of the Jury prefer to partner with software and other technology vendors in systemic innovation.

> " We are an integrator of solutions. Separate vendors support [multiple different services] Our role is to design customer solutions/propositions and integrate capabilities."

> " Strong technology support from established players; we also collaborate with other clearing houses around the world to exchange information and learn from each other. We will start exploring opportunities with FinTechs as well...."

MOST IMPORTANT INNOVATION PARTNERS



Jury members offered extensive and sometimes divergent commentary on this evolution. But several observations can be made:

- The global market for developed software and systems to support domestic schemes has matured rapidly.
- The advent of open networking technologies like APIs and increasing prevalence of global standards like ISO 20022 are assisting this trend.
- With this maturity, the price/value/risk proposition for major systems development has tilted away from "build in house" and towards "buy and integrate".
- Domestic providers and schemes retain their unique value proposition by focusing on understanding and responding to the needs of the local market and on expert and low risk integration of new products into the existing stack.
- Domestic providers are starting to think of themselves as platforms for services rather than as service providers. Their core value-add is a flexible and ubiquitous network platform.

This is a major structural shift that would benefit from more research.

> " We have alliances worldwide and locally to differentiate our value proposition."

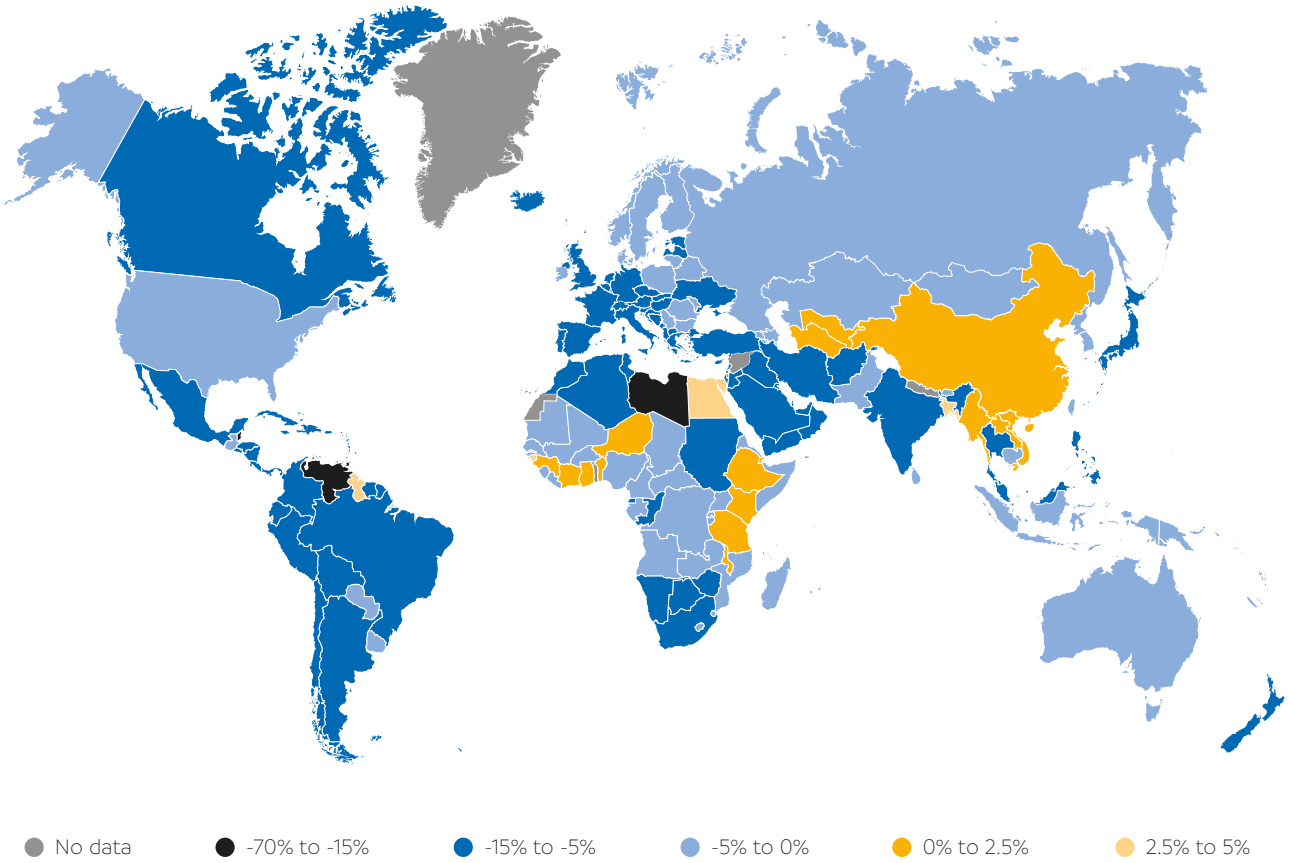
THE PANDEMIC STRIKES

Economic Impacts

A great deal has already been written about the economic and financial impacts of the pandemic. It is obvious that the activity restrictions imposed in most global economies to contain the virus have been severely damaging, tipping all major economies except for China into recession, and even curtailing China's previously rapid growth, as indicated by IMF data:

MAJORITY OF COUNTRIES IN RECESSION

Real GDP growth

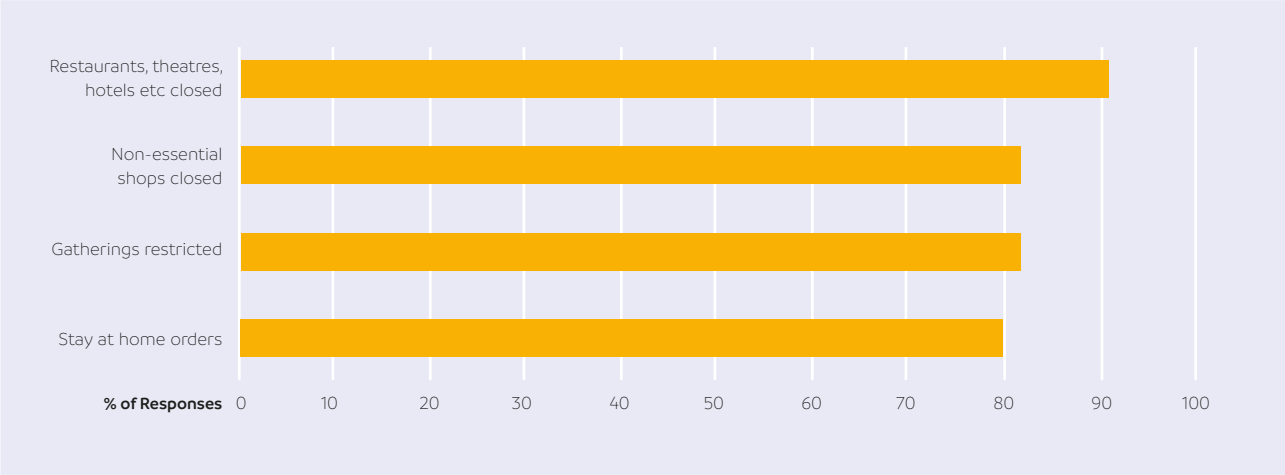


Source: International Monetary Fund

Around the world, joblessness has increased, financial markets have had unprecedented volatility, and industry sectors have crumbled (Hospitality, Leisure, Physical Retail) or prospered (Pharmaceuticals, Logistics, Digital Commerce).

The 2021 Jury reinforces these perceptions for the economies they serve. All of them reported severe government-imposed restrictions on economic activity.

PANDEMIC ECONOMIC RESTRICTIONS

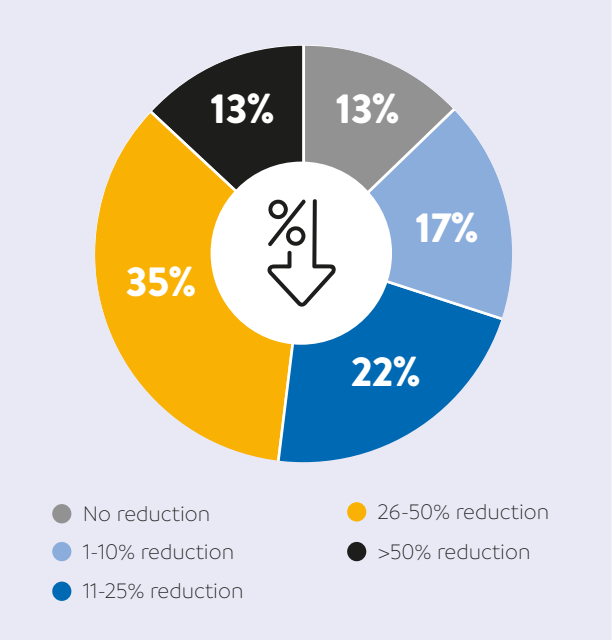


Impact on Payments Activity

As might be expected from the economic carnage, payment activity declined precipitously in the early stages of the pandemic. McKinsey's Global Payments Report 2020 estimated a 20% drop in industry revenues in the first 6 months, with a rapid rebound leading to an overall decline of 7% for the year.

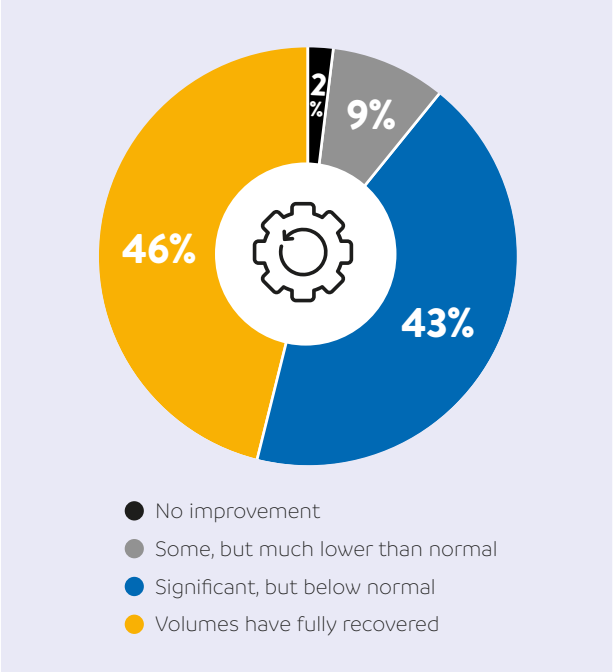
The 2021 Jury noted comparable effects. Nearly half (48%) reported declines in payment volumes of more than 25%.

LARGEST MONTHLY REDUCTION IN VOLUMES VS. 2019



But as restrictions eased and industry sectors adapted, the recovery in volumes was also quick; 89% reported significant or full recovery.

RECOVERY IN MONTHLY VOLUMES SINCE LARGEST REDUCTION



"Very few people went out often to spend; a lot did bulk buying; others preferred to hold cash and use it for purchases."

"Primarily because of the lockdown, consumers shifted from cash to digital. Also, regulatory intervention to make account to account transfers free ... caused volumes to increase as well..."

Judging from extensive commentary provided by the Jury, there are some important nuances to this story:

- Most economies observed a "digital shift" away from cash so that retail payment systems could position themselves to benefit from migration of cash transactions into card, mobile or other digital contexts, as soon as economic activity rebounded;
- Domestic providers were not always well positioned relative to competitors to support the digital shift. That said, it is clear that many domestic operators have done enough to digitise their services in the last few years so that the global lockdown was far from fatal.

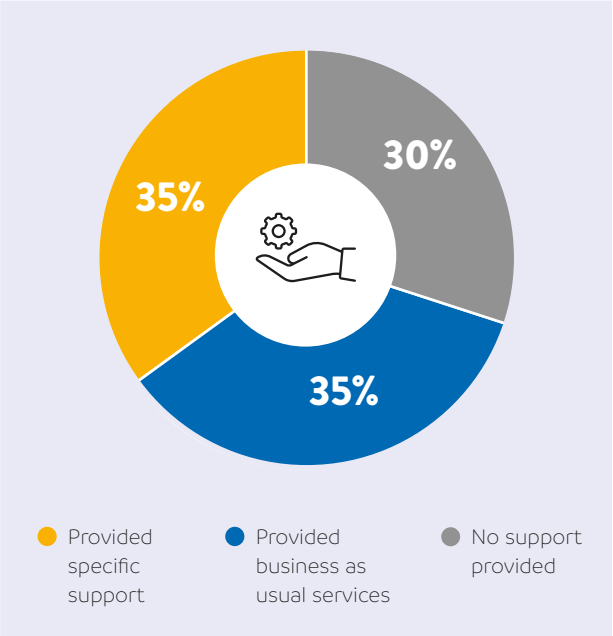
In a number of jurisdictions, international schemes used the digital shift as an opportunity to capture a larger share of volumes through various initiatives such as tokenisation programmes and issuer incentives. Equally, digital-native competitors such as telcos and fintechs saw opportunities for new volume that were harder for legacy card schemes to capture.

"Shift to e-commerce favoured global schemes, and volume was disproportionately suppressed with traditional issuers."

Emergency responses

As noted earlier, one advantage of a domestic retail payment scheme is its ability to innovate in response to local needs. In the context of a national emergency such as a pandemic, two thirds of domestic schemes and operators were able to offer emergency support to government efforts to contain the pandemic and/or manage the adverse effects on the economy.

SUPPORT FOR GOVERNMENT PANDEMIC RESPONSE



This capability to respond to acute public policy needs may well have reinforced the value of domestic payments infrastructure for both users and regulators, as explored later.

"Besides keep the payment rails running 24/7 we also helped with direct benefit transfer, government scheme to help the needy etc."

EFFECT ON INNOVATION

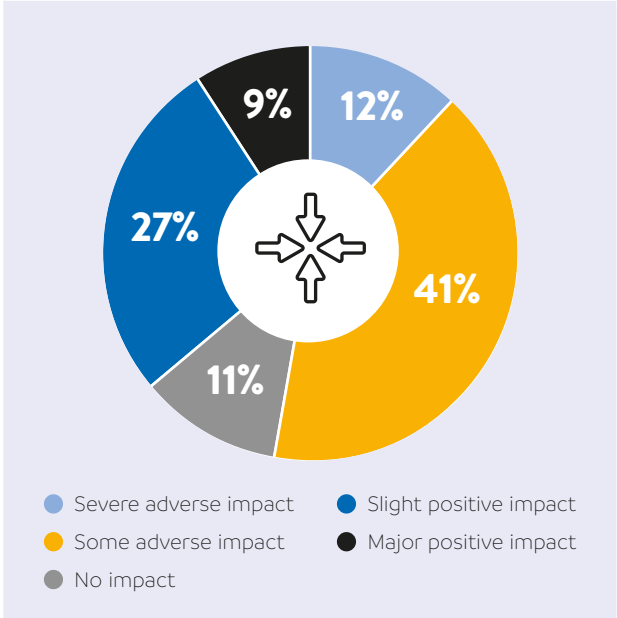
Innovation Continued

When disaster strikes, it is natural to reduce focus on the future and allocate thought and effort to dealing with the crisis. We can certainly see this in the way payments innovation programmes have been affected by the pandemic. Some 12% of domestic payment systems experienced a severe adverse impact, and more than half (52%) experienced some adverse impact although it appears that in most cases the challenges were managed, and programmes stayed more or less on track.

Examples of adverse impacts were:

- Schemes and operators lost access to resources.
- Operators felt obliged to reallocate available resources away from innovation to minimising operational risk.
- Banks and other users withdrew support and curtailed development effort to focus on their own operational challenges.
- Business cases for innovation were adversely affected by sudden changes to economic activity.
- Increased economic uncertainty reduced customer and management appetite for the risks of systemic innovation.

PANDEMIC IMPACT ON INNOVATION PROGRAMMES



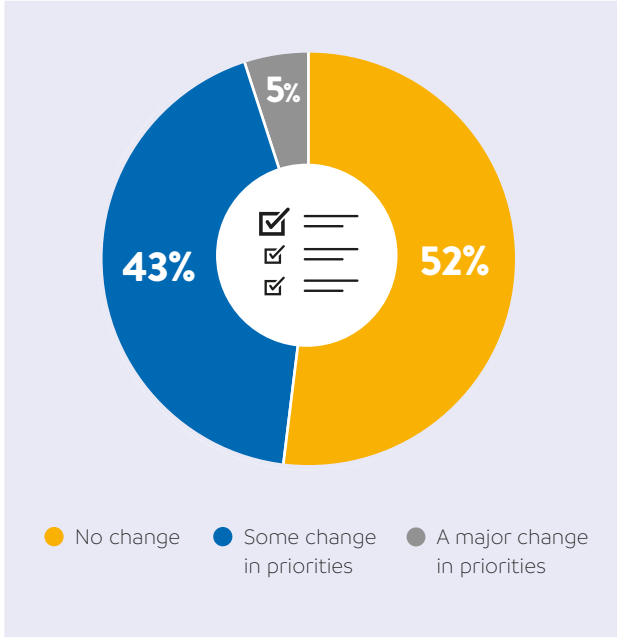
But there is more to the story. More than a third of the Jury (36%) experienced some positive impact from the pandemic:

- Some reported a productivity lift from a rapid shift to digital teleworking.
- The pandemic graphically illustrated the importance of automation/digitisation efforts for long-term economic resilience.
- Short-term demand for service enhancements in response to the pandemic – such as contactless and remote payment services - forced new innovation efforts.
- Innovation designed to reduce operational risk received greater attention.

The resilience of domestic innovation programmes is impressive. It suggests a recognition amongst communities and regulators of the economic importance of national payments infrastructure.

The 2021 Jury overwhelmingly endorsed pre-pandemic innovation drivers as remaining important, thus reinforcing the resilience observed above:

POST-PANDEMIC CHANGES IN PRIORITIES



" Due to the uncertainty and loss of business, most innovative products were either deferred or delayed..."

The 2021 Jury responded to our survey while still grappling with the pandemic. Short-term effects are still in evidence, and long-terms effects are still developing. There has not been time yet for a careful and complete analysis of impacts. In most cases, domestic schemes "rolled with the punches" and got on with the job of innovating for their participant community, adapting programmes as they needed to.

It will be interesting for future studies to measure the ongoing interplay of these drivers, as short-term effects fade.

" We accelerate the development of digital payments through mobile wallets...Most of our mortar clients went digital..."

" [Lockdown] made sure we lifted internal comms, had tighter prioritisation and balanced short and longer term business drivers."

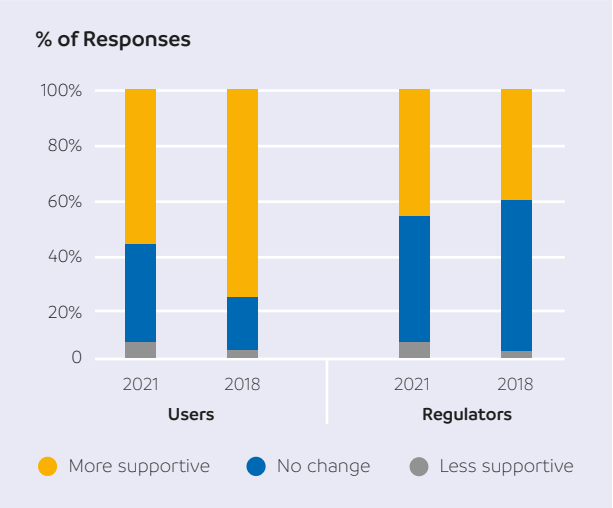
" We didn't lose momentum and support from the community. Despite the challenging time for the banks, they realised how important and transformative our agenda is ..."

" Customer demand for innovative digital services has increased since the pandemic."

Changing Attitudes

The 2021 Jury gave us a spot check on levels of support for domestic infrastructure amongst both users and regulators. As in 2018, both groups are generally becoming more supportive over time. Less than 10% of domestic systems report declining support.

ATTITUDES TOWARDS DOMESTIC PAYMENT SYSTEMS



There is some evidence of increased central bank support for non-cash payment methods because of the pandemic, and this may be a factor. A recent joint study by Currency Research and Lipis Advisers found a majority of central banks adjusting policy to promote contactless transactions, lower barriers for fintech and other measures. This is consistent with the findings of the Jury.

Many jurors provided commentary on their response, and these provide some insights. One repeated observation is that crisis events such as the pandemic remind users and regulators of the value of reliable, responsive domestic infrastructure. On the other hand, increasingly competitive ecosystems (see 3) may make both regulators and users more carefully neutral in their attitudes to domestic schemes.

Without reading too much into these results, it seems that positive market sentiment in most countries will give domestic schemes and operators a fair chance to innovate and thereby prove their worth.

" Users and regulators have realised of the need for a reliable payment system and the importance of interoperability."

" Regulators want more competition in the market."

FUTURE PROSPECTS

Economic Prospects

As we move into 2021, economic sentiment is improving, in part because the rollout of vaccines raises hopes for a return to something approaching "normal life". But another important factor is the sense that some economic sectors are learning to adapt and prosper in a new normal of enduring structural change. The World Economic Forum's Chief Economists Outlook for 2021 sees a "brightening" outlook for the global economy but warns of some lasting economic effects of the pandemic:

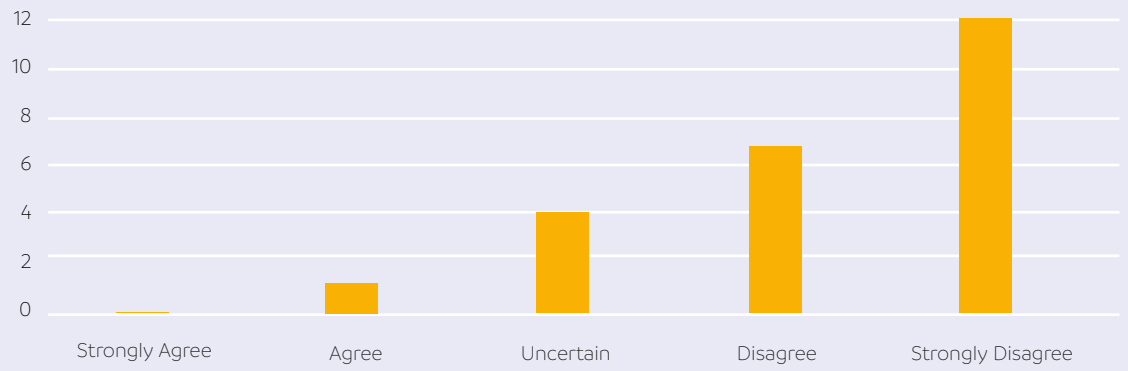
- complex effects on productivity of a permanent shift to remote work
- worsening income inequality
- the acceleration and concentration of the digital economy (leading to monopoly power risks)
- bigger (and therefore more intrusive) government
- deglobalisation – enduring reduction and restriction of global trade.

Nevertheless, the Chief Economists are concerned about the ongoing risk of a "k-shaped" recovery – divergent recovery rates between high and low income countries.

So, while most domestic payment systems can expect rebounding volumes based on rebounding economies, the challenge will be to identify where the enduring structural changes are, and shape innovation programmes to meet them. Some are obvious, such as increased reliance on digital commerce and remote payments. Others, like the realignment of entire value chains in large industries like tourism, hospitality and logistics, have more complex implications for payment systems and will be harder to respond to.

The sheer uncertainty of economic prospects remains a major factor in planning.

"THE SOCIAL FABRIC IN MY COUNTRY HAS IMPROVED AS A CONSEQUENCE OF THE PANDEMIC."



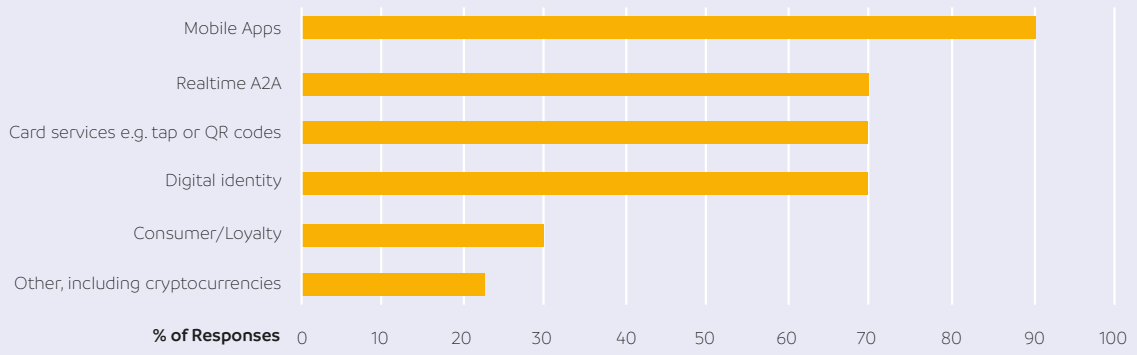
Source: World Economic Forum, Chief Economists Survey, January 2021 (24 responses).

Innovation Focus Areas

In this challenging environment, there is a wide range of innovation priorities. Nearly everyone recognises the importance of supporting mobile and app-based services, making this the clear winner. But the Jury also expects plenty of work on enhancements to card services, particularly those that facilitate remote and non-contact usage such as QR codes. Real-time account payments will continue to receive significant focus, but the Jury also expects digital identity to be a major focus in coming years.

This amounts to a challenging agenda of long-term systemic change for domestic payments infrastructure. Pandemic impacts have been complex and, in some cases, severe, but are not perceived as leading to an overall decline in innovation activity. Rather, the pandemic appears to have refocused priorities towards systemic innovation that increases resilience and further supports the digitisation of the economy.

MOST PROMISING AREAS FOR INNOVATION



Many of the Jury shared with us some information about their major projects. In the following pages we showcase two interesting innovation pathways: new directions in mobile commerce, and the rise of digital identity.

New Directions in Mobile Commerce

Mobile and specifically app-based payments have been high on the innovation agenda for several years. Previously, the main driver was for domestic schemes to respond to Visa and Mastercard's investment into the mobile space. More recently the competitive challenge has evolved to include rapidly developing payment options from telcos, fintech and social media.

In markets where smartphones are commonplace and data is cheap, apps will become increasingly important. But in developing markets, feature phones will be common for some time yet and payment solutions will need to accommodate different technologies.

When viewed on a global basis, behind the mobile device will be a wide variety of funding sources (card accounts, bank wallets, bank accounts, telco wallets, telco accounts, retailer wallets and many more) with the payments made through a more limited number of payment solutions.

There have been at least 3 cases of domestic schemes acquiring or merging with mobile wallets that have already developed acceptance in online merchants. In some developing markets there is a real risk that parallel payment networks – one for banks and the other for mobile money providers – lead to no interoperability. As a result, some central banks are seeking to design out such problems before they become established.

A review of the payments newsfeeds suggests there are a plethora of new, agile, app-based fintech offerings developing alongside existing services. Domestic schemes are responding by building out customer services that facilitate retail commerce from the mobile device, in both face to face and remote contexts.

The callout box looks at a number of strategic responses.

In Angola, the domestic operator **EMIS** has launched a multibank app, MCX Express, to support use of the domestic card scheme, Multicaixa (MCX) for mobile commerce. Local banks get communal access to world-class mobile technology (supplied by EMIS tech partner, Portugal-based SIBS) to support rapid expansion in the mobile space; the Angolan community gets a single, consistent customer experience that can rival the convenience of emerging mobile payments from telcos and social media. In smaller, developing markets such solutions are likely to gain critical mass much faster than individual bank solutions.

In developing economies where mobile money is already a vital enabler of financial inclusion, interoperability between banking networks and mobile money networks is rightly seen as highly important. And yet having a policy that allows interoperability to develop when the major players see it as beneficial has been shown to be ineffective; the situation in Kenya shows clearly that a dominant player in any payments ecosystem (in this case m-PESA) is never going to be enthusiastic about moves that they think will help their competitors.

For that reason, some central authorities/regulators are planning to avoid the highly difficult negotiations about interoperability by designing it out of the model. In Morocco, the Bank Al Maghrib having forced the banks to sell the national card switch to an independent operator, is planning that all mobile money interchange transactions between different mobile money players and between mobile money providers & banks must go through the same national switch **(HPS Switch)** utilising a common message format. In this way, the risk of parallel networks developing is avoided and interoperability is automatically enabled. If successful, this could become a much more common model in future.

In more developed markets, where banks have started multiple, competing wallets it is frequently the case that a winner has emerged. Belgium is such a market although Norway has a similar story. In Belgium, the "Payconiq by Bancontact" app had emerged as the leading mobile wallet with P2P, e-commerce and instore payment capabilities. Bancontact was the domestic debit scheme which some years earlier had been saved from being discontinued when retailer pressure against a move to international scheme products led to regulatory action. Bancontact had also created its own mobile app. But in 2018, the decision was taken to merge the leading debit card scheme with the local reseller of the Payconiq payment system to form the Bancontact Payconiq Company, and to integrate the Bancontact (card based) wallet and Payconiq (SEPA Credit Transfer based) wallets in the single "Payconiq by Bancontact" app. The resulting combination effectively ensures interoperability between banking systems and mobile wallets and with the solutions firmly rooted in the Belgian market.

The Rise of Digital Identity

The Jury responses show a rapidly growing interest in digital identity amongst the world's national payments organisations. We asked global expert and respected author, Dave Birch, to discuss this phenomenon, and his observations appear in the callout box.

Digital Identity by Dave Birch

Given the intimate link between digital payments and digital identity it is no surprise that payment schemes around the world are exploring the adjacency of identity as a place to grow, expand and add value. This is particularly true of the national payment schemes who have relatively limited room for growth in their domestic markets for the obvious reason that pretty much everyone already has one of their products.

A few years ago, the direction of travel across most players was to mobile and online commerce (this was their no.1 priority in our 2019 survey) whether through card and tokenisation routes, and developing retail and P2P offers using the parallel instant payments networks that were emerging. Now, however, the focus is shifting to identity. In some markets this is an opportunity for value-adding on top of existing (largely government) identity schemes or population registers of one form or another. However, there are many markets where the digital identity opportunity is open for competition.

One obvious category of player standing ready to take advantage of that competition is, of course, banks. It is fairly straightforward to see why banks might become natural providers of digital identity infrastructure. An identity ecosystem that goes beyond the financial sector — in the absence of a highly centralised implementation as in (for example) India — needs interconnection and interoperability. For one thing, banks are already compelled to do exhaustive and expensive KYC and would be remiss in not exploring methods to monetise on those sunk costs. In a great many countries, the domestic payment schemes already have the interconnection and interoperability in place and are ready for strategic extension into digital identity.

Looking at a few examples from around the world to illustrate these points I think there are some useful lessons to be learned from the pioneering work already undertaken. I'd like to highlight three examples.

In Norway we have what we might generally term "the Scandinavian model" of digital identity whereby the banks work together to provide a digital identities used far beyond financial services and in particular for access to government services. In Norway the digital identity, instant payments and domestic debit systems have already merged into a single business **(Vipps).**

In Australia we see a framework-based approach, as has just been adopted in the UK. This is quite different from the European approach (eIDAS, which is based on existing national identity schemes). The framework sets out the rules under which identities can be created and used used throughout the economy for a variety of different purposes. Work is well-advanced and eftpos is already piloting their "connectID" solutions that positions **eftpos** as a broker between identity providers such as Australia Post and merchants or government departments that need to verify who they are dealing with.

In Canada we see the bank-centric Verified.Me approach built on the privacy-enhancing "blinding" solution from SecureKey alongside Federal and State efforts. **Interac** purchased digital id provider 2Keys back in 2019, and continues to explore the possibilities in the sector. Canada also has a framework approach (the Pan-Canadian Trust Framework, PCTF).

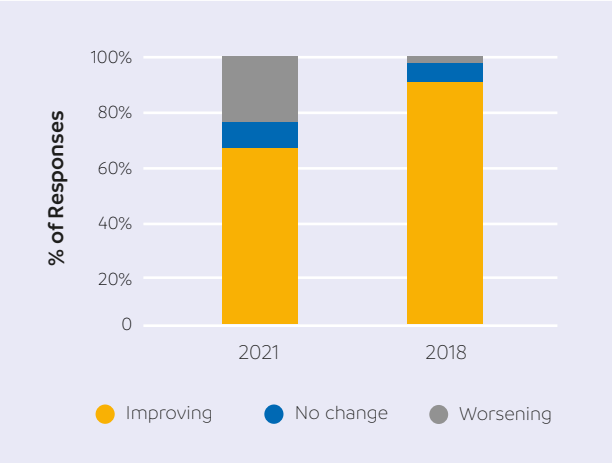
Mark O'Connell, the President & CEO of **Interac** recently wrote that "digital ID is a bedrock" for a digital economy. I wholly agree with Mark's view that digital ID is not the end in itself, but the enabler of e-government, inclusive financial services, online health, real-time payments and the connected smart cities of the future. Around the world, domestic payment schemes have a pressing and obvious role to play in bringing the new opportunities to all.

Overall Prospects

Domestic retail schemes – historically mainly card-based – went through a tough time in the late noughties/ early teens. Traditionally operated as non-profit utilities, domestic schemes struggled when faced with aggressive competition from newly commercialised and rapidly expanding international schemes. But they responded. By 2018, most schemes had reorganised to face the threat, rebuilt relationships with owners/customers and regulators, and most importantly embraced service innovation as a pathway to the future. In 2018, domestic providers were overwhelmingly bullish about their future prospects.

2021 Jury data on overall prospects of domestic schemes and operators continues to bear this out. The bulk of domestic schemes and operators continue to see their future prospects as improving.

OVERALL DOMESTIC PAYMENT SYSTEM PROSPECTS



Given the cataclysm of the pandemic, this is a remarkably upbeat overall sentiment, even though around 1 in 4 organisations felt that their prospects were worsening.

Exploring the comments provided by the Jury, almost no organisation has an ongoing preoccupation with the pandemic. Its short-term impacts have been severe, and there are longer term economic impacts that are not yet fully understood. But at this stage it does not look like a game-changer for payments infrastructures.

International scheme competition remains a threat to domestic schemes, but much bigger pressures have built up in the background and are now making themselves felt. These can be summarised as: globalisation, participant diversification and service proliferation.

These trends have been around for some time, but the effects are now becoming obvious. Since around 2015, millions of consumers in developing economies like China and the East African nations have adopted mobile payments that never touch a bank let alone a card scheme. It can be argued that this phenomenon is relevant only to developing economies with large underbanked populations. But this would be a brave assertion, given the rapid expansion and increasing influence of social media platforms in developed economies. A few members of the Jury point to cryptocurrencies, both private (Bitcoin) and public (central bank digital currencies or CBDC) as major emerging challenges and opportunities. It would be surprising if these did not have an impact in coming years.

Future Pathways

So, in the face of rapid eco-system evolution, what is a domestic payment scheme or operator to do? The traditional role as a ubiquitous non-profit domestic network has disappeared in many economies, as Visa, Mastercard, telcos, social media platforms and fintechs vie for payments market share. The domestic payments offering is expected by customers and regulators to stand on its own two feet in a rapidly evolving marketplace.

But at the same time, the domestic provider's point of difference – that it brings its national payments community together – remains important. It comes to the fore in two circumstances: when national interest is suddenly threatened, as we saw in the pandemic; and when national development goals loom large, as they increasingly do in developing economies.

The best strategic response for domestic schemes and operators may be a programme of systemic innovation that delivers value-added payment services, and at the same time demonstrably enhances the domestic marketplace and supports domestic public policy goals. In this way, the domestic provider exploits its unique point of difference: commitment to and engagement with the domestic community. For each domestic system, the key is to understand which of the menu of beneficial innovations will deliver the greatest value to the domestic community, and the domestic economy.

ADDITIONAL INFORMATION

The Payments Innovation Jury

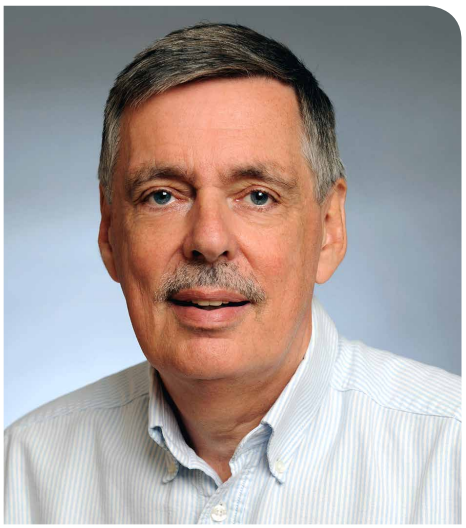
The Payments Innovation Jury was established by John Chaplin in 2008 to collect and analyse the views of successful payments industry leaders on how innovation happens and then to share their insights for the benefit of the industry. The Payments Innovation Jury, which is a not for profit initiative, produces reports in 3 main areas:

- The Global Payments Innovation Jury, looking at consumer and B2B payments innovation across all 5 continents
- Regional Innovation Juries, so far looking at Africa and China
- The Domestic Payments Jury, looking at domestic payments in a series of reports since 2013

The Jury programme is supported by Missive, an award-winning communications consultancy specialised in tech and fintech. Missive and its team have extensive experience across the global payments industry. Working closely with John, Missive help curate the research, source the Jury and present the findings.

All Jury reports are available to download from: **https://innovationJury.com**

About the Authors



JOHN CHAPLIN

> **John Chaplin is adviser to several leading payments organisations in Africa, Asia, Europe and Middle East.**

He previously held senior roles at both Visa and First Data where, amongst other responsibilities, he gained experience of providing domestic switching & processing services in multiple markets. More recently he has advised domestic payments schemes and/or switches in Australia, India, Morocco, Nigeria, Norway, South Africa, Turkey, UAE and Vietnam.

John is Chairman of Global Processing Services in Europe, Chairman of T-Pay Mobile in MENA, a board director of Interswitch in Nigeria, and a board director of Sentenial in Ireland. He has been actively involved with African private equity as Payments Adviser to Helios Investment Partners since 2011.

CHRIS HAMILTON

> **Chris is a specialist adviser in design of national payments infrastructure through his own consultancy, Hamilton Platform.**

For more than 25 years he has encouraged competitors in financial services to collaborate for social good. He is quite patient. He has been the CEO of BankservAfrica, Africa's largest payments clearing house, and of the Australian Payments Clearing Association (now Australian Payments Network), Australia's payments self-regulatory body. He started his career in Sydney, Australia initially as a solicitor and then with the Australian Securities Exchange.

DAVID BIRCH

David G.W. Birch is an author, advisor and commentator on digital financial services.

Principal at 15Mb, his advisory company, he is Global Ambassador for secure electronic transactions consultancy Consult Hyperion, Fintech Ambassador for Digital Jersey and Non-Executive Chair at Digiseq Ltd. He holds a number of board-level advisory roles. Dave graduated from the University of Southampton with a B.Sc (Hons) in Physics. After graduating he spent several years working as a consultant in Europe, the Far East and North America. More information is available at www.dgwbirch.com and you can follow him **@dgwbirch** on Twitter.

About the Sponsors

World Bank

The Financial inclusion and Infrastructure unit of the Finance, Competitiveness and Innovation Global Practice of the World Bank works to improve the safety, reliability and efficiency of payment systems and Financial Market Infrastructures by providing financial and technical assistance and policy advice to client governments and public authorities. The Bank contributes to international standard-setting, assessment and implementation and advances and disseminates payment-system knowledge.

ECPA (EUROPEAN CARD PAYMENT ASSOCIATION)

As an industry association founded in 2014, ECPA represents regional card schemes and other organisations managing essential card scheme functions within the European Economic Area (EEA).

- Bancontact Payconiq Company (Belgium), Borica-Bcard (Bulgaria), Cartes Bancaires “CB” (France), Nets-Dankort (Denmark), SIBS MB (Portugal), Sistema de Tarjetas y Medios de Pago (Spain), and Vipps-BankAxept (Norway)
- UK Finance, the Dutch Payments Association (Betaalvereniging Nederland), and the Pan-Nordic Card Association.
- BKM/Troy (Turkey) and NSPK/MIR (Russia) are Business Associates.

More : **www.europeancardpaymentassociation.eu**

innovationJury.com