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INVESTMENT MANAGERS

Embedded finance: the ultimate battle for the client

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Specialisation and scale are the most logical steps forward. Not every traditional financial institution will succeed.

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Key points

- The term embedded finance means integrating financial services with products offered by non-financial businesses. Those businesses have the clients and own the data, but financial institutions ultimately execute the transactions. This is where the ultimate battle for the client begins.
- Although not a new concept, embedded finance has grown more efficient in recent years thanks to technological advances. It started within the banking industry, is quickly penetrating insurance, and will probably become more important within asset management.
- We anticipate that traditional financial institutions will face an increasing competitive threat as tech-savvy rivals start offering these services. We have outlined the potential winners and losers, and we explain how we make portfolio decisions to benefit from the trend.

We anticipate that traditional financial institutions will face an increasing competitive threat from embedded finance, as anyone with a desire to offer financial services can now find a tech-savvy partner to supply the missing pieces.

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A compromise for banking

"Banking is necessary, banks are not", Bill Gates famously said in 1994.

Well, yes and no. The dynamics of FinTech do not make it easy to fulfill the promise implied by Gates's words. It is true that from a technical standpoint, banks are not needed for banking. However, when it comes to regulation, they are the only entities licensed to offer financial services. If a tech company were to acquire a banking license, it would then essentially become a de facto bank – thus disproving Gates's statement.

Enter embedded finance, which offers a compromise between the "everyone can be a bank" and the "only banks can bank" camps. It involves providing white-label financial services through a variety of technology solutions and platforms.

Although not a new phenomenon, embedded finance has been made hyper-efficient in the last couple of years through technological advances such as cloud computing, big data and APIs. The platform has the clients and owns the data, but the financial institution is the ultimate executer of the transaction.

Incumbents face an increasing competitive threat, and no longer just from other established financial institutions. Now, anyone can offer financial services if they team up with the right license holder.

The railway industry offers a useful analogy. Financial institutions have traditionally sought to be both the rails and the train – i.e., to own the infrastructure and provide the service. We believe this is about to change, and that specialised, tech-savvy financial institutions will increasingly offer white-label infrastructure services to a wide variety of "train operators".

It has become very clear, given the new standards created by the big tech platforms, that it is no longer feasible to invest all the money required for state-of-the-art rails, while also spending to acquire customers and provide optimal service. One requires solutions at the back end, and the other at the front end. Specialization and scale are the most logical steps forward, with the implication that not everyone will succeed.

What is embedded finance?

Embedded finance refers to the integration of financial services in the products and processes of non-financial institutions. You are using embedded finance when you pay for an Uber ride, use your phone to pay at the point of sale, use buy-now-pay-later on an e-commerce website, pay for your parking space via Google maps, or invest in global ETFs while buying groceries – to give just some examples.[1]

Non-financial institutions offer these products and services to their clients. The execution is ultimately still handled by the financial institutions themselves, but it is unlikely the client will know which one. What was once a direct B2C offering by financial institutions has become a B2B2C one: those that hold licenses sell their services to those that have the clients and can integrate the service into their product.

Embedded finance started within the banking industry with payments, lending, and foreign exchange. It is quickly penetrating the insurance industry and will most likely become more important within asset management over time.

If we use the banking industry as a blueprint, we can outline four models for offering financial services:

1. The first model is that of **traditional banks offering the full stack** from brand to license. This is the rails-and-train model, where the bank owns and operates the infrastructure while also managing the client relationship. To remain competitive, the institution needs to invest in state-of-the-art solutions at the back end, as well as at the front end to best service clients. There are not many that have the resources (money and people to run these applications) to do both.
2. In the second model, **banking as a platform**, some of the consumer-facing services are executed by FinTech companies. They offer state-of-the-art solutions for processes such as the user-interface, products, and customer service. The traditional bank uses these technologies to offer their services, as they still operate under their own brand and within their technology ecosystem.
3. With the **FinTech model**, two important things change. First, the client relationship is no longer with a traditional bank, but rather with FinTech. These FinTech companies own the brand and all the consumer-facing products and services, but often do not hold a full tech-stack – the core operating platform, databases, and analytics – or a financial services license. Therefore, the second difference is that, in this model, they outsource those products and services to BAAS providers and traditional licensed banks. Many challenger banks start like this.

[1] Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or securities. It should not be assumed that the recommendations made in the future will be profitable or will equal the performance of the securities discussed in this document.

N26, Monzo and Revolut,[2] for example, began by partnering with fully licensed banks, brokers, and insurers. After a couple of years, several of these FinTech companies received a full banking license, which implies they no longer need a partner and can offer products and services on their own. The FinTech model, therefore, can be seen as a breeding ground for future financial services providers. They can focus on the client relationship and building the user base, while working on obtaining licenses and full technology stacks in the background.

4. With the **embedded finance model**, non-financial institutions own the brand, the user interface and some products and services, but they outsource the rest to FinTech companies, BAAS providers, and other licensed financial institutions. The appeal of this model is that most non-financial institutions want to embed financial services into their offering without becoming a fully licensed bank. Most Big Tech companies have only acquired payments licenses (arguably the lightest form of banking license available in most jurisdictions). BAAS providers and FinTech companies that can offer the rest of the products and services stand to benefit from the growth in embedded finance. It is not a business for the faint-hearted, though, given the nature of the tech industry. Banking partners must keep up with product cycles, upgrade their systems, and be able to plug-and-play into the tech provider's ecosystem. Only tech-savvy banks and FinTech companies with scale will be able to meet those requirements.

FIG 1. THE BREAKUP OF BANKING SERVICES THROUGH BAAS

TRADITIONAL BANKING STACK	BANKING AS A PLATFORM	FINTECH MODEL	EMBEDDED FINANCE MODEL
BRAND	BRAND	BRAND	BRAND
USER INTERFACE	USER INTERFACE	USER INTERFACE	USER INTERFACE
PRODUCTS	PRODUCTS	PRODUCTS	PRODUCTS
CUSTOMER SERVICE	CUSTOMER SERVICE	CUSTOMER SERVICE	CUSTOMER SERVICE
PAYMENTS	PAYMENTS	PAYMENTS	PAYMENTS
COMPLIANCE	COMPLIANCE	COMPLIANCE	COMPLIANCE
RISK MANAGEMENT	RISK MANAGEMENT	RISK MANAGEMENT	RISK MANAGEMENT
FRAUD/AML	FRAUD/AML	FRAUD/AML	FRAUD/AML
TREASURY/FUNDING	TREASURY/FUNDING	TREASURY/FUNDING	TREASURY/FUNDING
ACCOUNTING/GL	ACCOUNTING/GL	ACCOUNTING/GL	ACCOUNTING/GL
LICENSE	LICENSE	LICENSE	LICENSE

Non-FS player **Fintech** **BAAS provider** **Licensed bank**

Source: KoreFusion 2021. For illustrative purposes only.

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A snapshot of companies operating in this large ecosystem can be found in Figure 2.

Market estimates for embedded finance vary, but in most cases it is considered to be twice as big as the traditional banking industry and similar in size to current Big Tech platforms. Of course, it is difficult to isolate the value of embedded finance once it is integrated into an institution's offerings, but it is clearly a substantial sub-industry.

The question should be, why is embedded finance taking off now? To reiterate, the concept is not new. We have seen examples of embedding financial services in non-financial products for many years – lending products in the car industry are yet another example. Even so, the market is a bit different now.

Recognition of the value of customer data has increased drastically during the last decade. For example, many banks saw payments as a cost center in the period right after the global financial crisis and started to sell off those assets. We have since learned that it is possible to construct a very accurate profile of clients from analysing their payments.

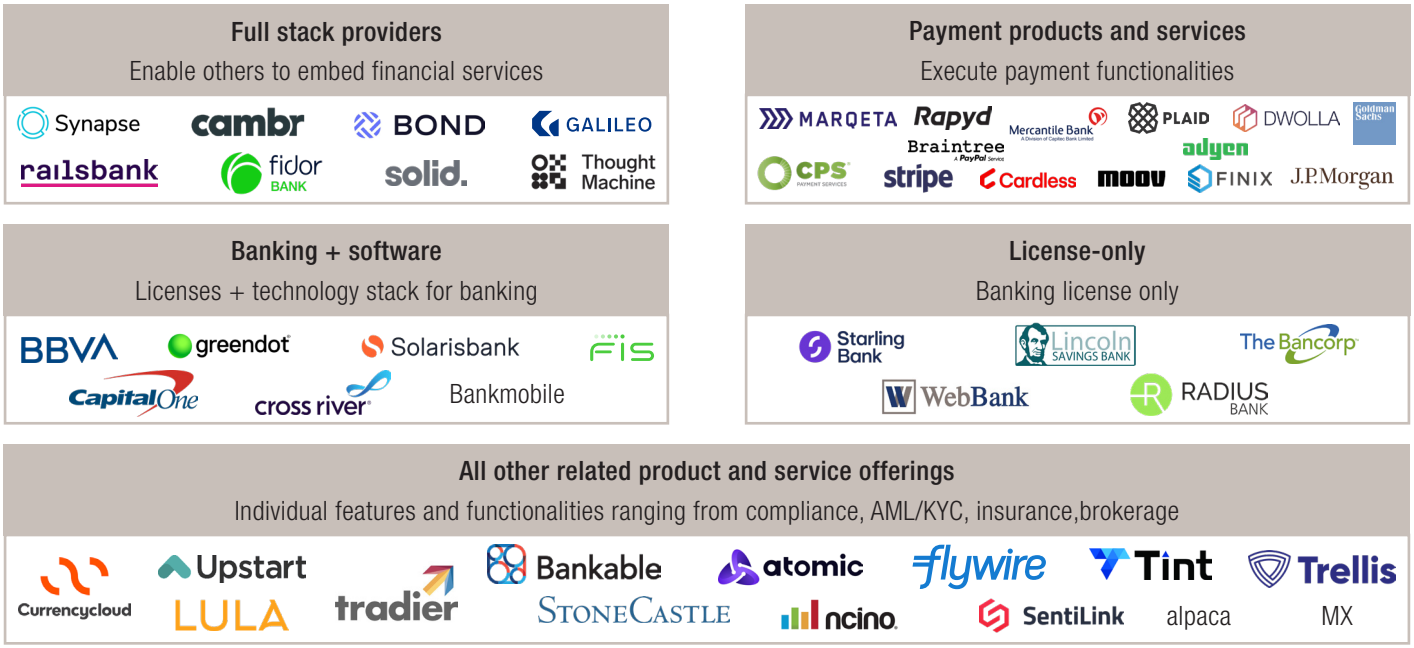
Improvements in big data (the storage of data) and artificial intelligence (the interpretation of data) have made it possible to extract such analytics. The infrastructure is also more inter-connected than a decade ago, thanks to the ability of APIs to integrate systems. Cloud computing enables processing power to be increased to match the requirements of a particular moment. Further technological advances in areas such as blockchain will very likely lead to evolutions in embedded finance too.

The possibilities are vast from a technical point of view. But just because something is technologically possible does not on its own justify investment. It also needs to increase the active users on your platform and their value for your business. Embedded finance should imply larger stickiness, greater engagement and, ultimately, a higher long-time value per active user. For this, customer acquisition costs (CACS) are the starting point.

As Figure 4 shows, banking/insurance has among the highest CACS. The implication is that customers coming in from other industries with lower CACS (such as e-commerce or retail) are much more profitable than those acquired the traditional way. This lowers the break-even point for many financial services. Robo advice, for example, has not worked for businesses other than large asset managers because the CACS are too high relative to the fees. By cutting the CACS, you boost the profit potential.

Walmart's[3] recent decision to go into financial services makes sense in this context. The retailer has a huge installed base of clients and among the lowest CACS across industries. If clients start purchasing financial services from Walmart, they are likely to be profitable for the company from the start because of the low cost of getting the clients in the first place. That will be true even if Walmart's lending book might be of lower quality than those of banks, and if the take-up rate on its branded payment card is lower relative to traditional payment providers.

FIG 2. EMBEDDED FINANCE ECOSYSTEM



Source: Cathay Innovation, FinTech Insights, Forbes, KoreFusion, Lombard Odier Investment Managers, 2021. For illustrative purposes only.

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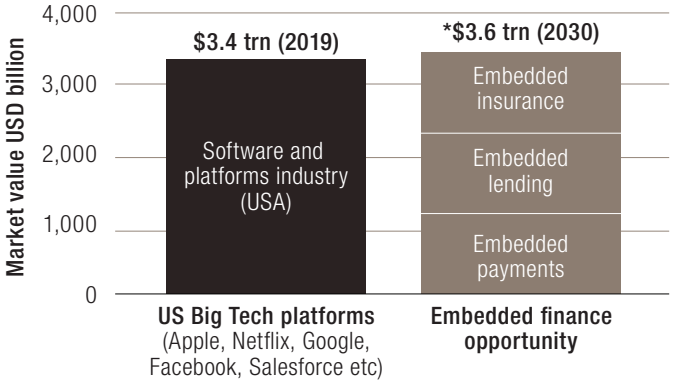
FIG 3. MARKET OPPORTUNITY FOR EMBEDDED FINANCE BY 2030



Source: CX Lab, 2022, based on Bain Capital research for the US market.

* Based on current adoption trends continuing, and assuming that 40% of payments volume, 20% of lending volume and 20% of insurance volume moves to an embedded finance model by 2030.

Once customers have been acquired at the right price, they need to be engaged, and the number of active users needs to grow steadily over time. A good example is e-commerce platform Alibaba[4] in China. Figure 5 shows the growth in active consumers on the Alibaba platform from 2016 through 2021. The main reason why people continue to use the platform and spend more time on it is because the number of functionalities embedded in the service has drastically improved over the years. What started out as just an e-commerce platform has quickly grown into a one-stop-shop for consumers, with a wide variety of products and services (including embedded finance), as shown in Figure 6.

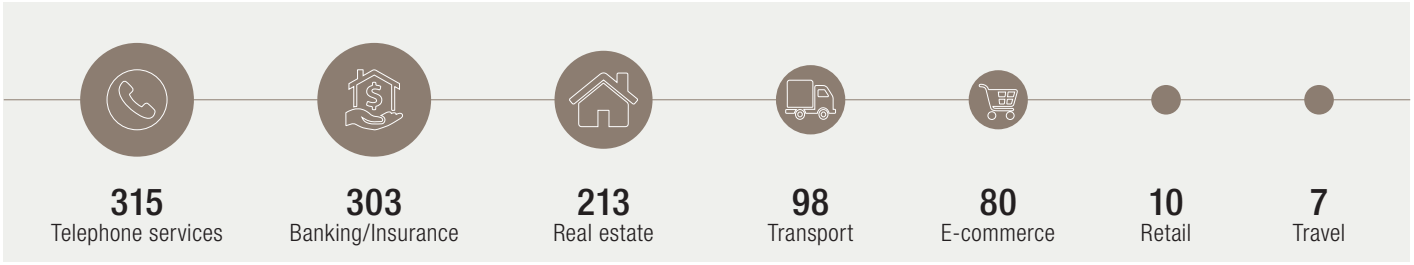
Alibaba is an interesting example because it shows that there is a limit to how big these large technology platforms can become before the government/regulator steps in. The Chinese government now wants to set stricter rules for platforms and open the embedded finance services to a multitude of providers instead of concentrating it in the hands of a few. Similar considerations have been made in Europe, where work on a template to regulate Big Tech is progressing, and there is also a movement in the US to counter the ever-increasing power of large tech companies.

As it becomes easier to embed financial services, it becomes easier to lock customers into a particular ecosystem. However, the ease of integrating financial products and services also implies that competitors can integrate these functionalities at low cost. Every platform wants to increase the number of active customers and convert them into revenue streams. Embedded finance is a way to achieve those goals, but it comes with limits and regulations.

Embedded finance is not only a B2C opportunity, and demand from the B2B side is also growing. Figure 7 outlines how small and medium-sized enterprises (SMEs) can benefit from these functionalities along with consumers – either directly (e.g., insurance and working capital financing), or indirectly in a B2B2C offering. A lot can be gained on the B2B side from digitalisation. For example, in payments there is still a large administrative workload because of traditional cheques. Bill payments can also be handled much more efficiently and integrated into service offerings.

With accounting software, embedded finance would allow the user to get paid and make payments within the same ecosystem, using data previously entered in the system. Big Tech companies are looking into embedded finance because they can increase engagement numbers, as previously discussed. SMEs are seeking ways to work more efficiently and, ultimately, increase margins by outsourcing and integrating financial services.

FIG 4. AVERAGE CACS IN USD ACROSS INDUSTRIES



Source: Solarisbank, 2021.

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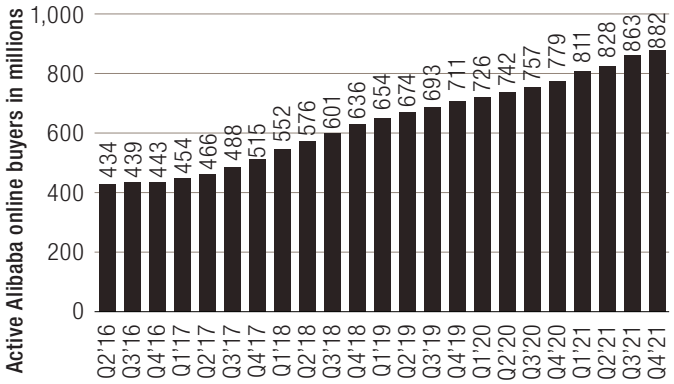
FIG 5. NUMBER OF ANNUAL ACTIVE CONSUMERS ACROSS ALIBABA'S PLATFORM



Source: Statista, 2022. For illustrative purposes only.

How to invest

Trends investing ultimately involves the ability to capitalise on solutions to inefficiencies in the market, where the impact and pace of change is widely underestimated. This change results from three distinct drivers, or a combination thereof: Technology, socio-demographics, and policies/regulations. From an investment perspective, however, these drivers of change are not equally auspicious.

Socio-demographic change, for example, is slow-moving and very transparent for everyone to incorporate in their models and predictions. Policy and regulatory change can be very impactful, but here the predictability is lacking, and we therefore see more reactive, rather than predictive, price movements. Finally, technological change provides the trained professional with ways to exploit behavioral biases resulting from the market's tendency to overestimate these developments in the short term and underestimate them in the long term. This is often referred to as "Amara's law".[5]

Applying this trend methodology, we believe traditional financial institutions will face much more competitive pressure in the years ahead. Financial institutions will have to make choices: Do they want to own the rails and be an efficient provider to whoever wants to use them, or do they want to have the client relationship and outsource the rails?

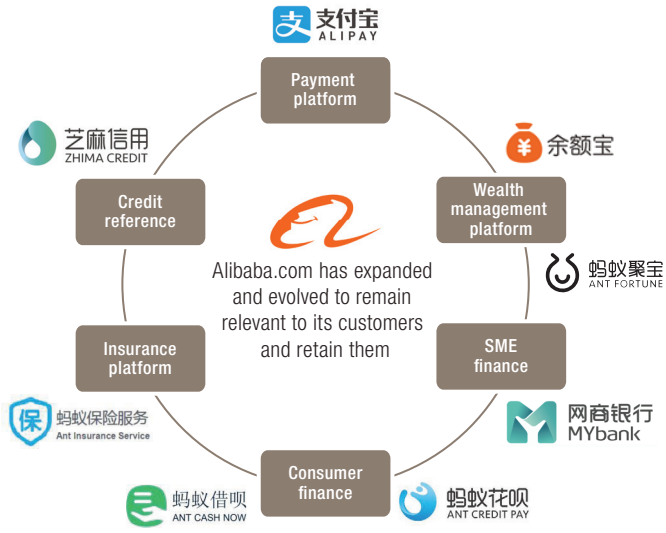
At the moment, there is only a very limited number of traditional financial institutions responding to the embedded finance opportunity/threat. In our view, there are several explanations for this:

1. Financial institutions have a history of being managed from a risk perspective.
2. They are fully regulated, and hence require approval for every change suggested.
3. Their tech stacks are outdated.
4. Employees can lack tech expertise and/or willingness to embrace change.
5. Shareholders can demand dividends instead of reinvestments.

These conditions apply not only to banks, but to a wide variety of financial incumbents. Whereas in the past, regulations were able to protect incumbents from non-financial institutions entering financial services, that has changed. In principle, everyone with a desire to offer financial services is now able to partner up with a provider that brings the missing parts. In most cases, that will be the licenses and tech stack, but it might also include front-end solutions. The costs of becoming a financial institution have drastically come down thanks to this "as-a-service" model.

The biggest hurdle to successfully providing financial services today is trust. Startup FinTech companies entering the sector might be only a mild threat to traditional institutions because there is still a wide difference in the levels of trust in these two players (which will probably narrow over time). However, well-established technology companies have already built trust among their customers. Competition from these institutions could prove to be much bigger than anticipated. Because of these tough market conditions for traditional financial institutions, we do not invest in them because we think they are structurally challenged.

FIG 6. ALIBABA EMBEDDED FINANCE ECOSYSTEM



Source: The Digital Insurer, 2019.

[5] Roy Charles Amara (7 April 1925 – 31 December 2007) was an American researcher, scientist, futurist and president of the Institute for the Future, best known for coining Amara's law on the effect of technology. He held a BS in Management, an MS in the Arts and Sciences, and a PhD in Systems Engineering, and also worked at the Stanford Research Institute.

There are also very strong regional variations. In China, for example, the government and local regulators are actively managing the activities of Big Tech platforms. In other Asian countries, like Thailand and India, we see a similar picture.

In Europe, regulations have already set the ground rules for embedded finance. PSD2, GDPR, EPI and open banking are good examples. In theory this should allow non-financial companies to move fast. In practice, we see that Europe is still very segregated and it is not that easy to roll out embedded financial services in one go across the region.

In the US, the embedded finance wave is led by FinTech and technology companies, in combination with a select group of large US banks. Regional banks and mutuals, in particular, seem to lag far behind. There is very little overarching regulatory clarity on the limits of platforms, and the US market is much more business-driven (versus rule-driven).

For our FinTech strategy, purity is very important. This implies that investing in those Big Tech companies that integrate financial services is often not possible. We would only consider including a technology company in our investible universe if the contribution of FinTech activities were high enough in terms of revenue and earnings.

If embedded finance really takes off and we see more technology companies entering financial services, we will need to regularly update our investible universe and check eligibility. This does not mean we cannot benefit in the meantime, however. Our universe already includes "as-a-service" providers, with investments in BAAS (banking as a service) and IAAS (insurance as a service). Besides the technology providers, we are also able to invest in the upcoming FinTech companies.

To us, it is very important to invest in quality growth at a reasonable price. Many companies that offer single solutions to embedded finance (e.g., card issuing, online lending, or buy-now-pay-later) have been focusing on winning market share at the expense of profitability. That model worked for a while, but with rising financing costs, the business and profit models become more of a focus point.

In our portfolio process, we select profitable companies with high-quality management and well-structured profit models. We also think it is important to diversify. This is the case not only when investing in FinTech startups, which still have to prove their relevance in the long run, but also with "as-a-service" providers. Competition is intense, and external events like government regulations and macro-environmental factors, as well as threats like cybersecurity hacks, can affect every company at the crossroads of innovation and digitalization. We therefore diversify within the type of exposure (established companies versus newcomers) and over countries.

Conclusion

Ultimately, we believe the financial sector will change dramatically in the decade ahead. We think the barriers to entry are decreasing because of embedded finance. Only the most tech-savvy financial institutions will play a role in this new world. We expect a very long trail of traditional financial institutions to become less relevant over time and ultimately disappear through mergers, bankruptcies, or the simple realisation that the costs to get back on track outweigh the benefits.

Our investible universe is constantly changing because of these industry dynamics, and we anticipate that the structural trend of FinTech innovation will continue for many decades.

FIG 7. EMBEDDED FINANCE FUNCTIONALITIES FOR CONSUMERS AND SMES

CONSUMERS			SMES		
Customer experience	**Financial services**	**Other**	**Marketing –sales, customer services**	**Finance, Administration, Legal/compliance**	**Operations, production, logistics**
Customer service Customer engagement	Current account	Fiscal assistance	Customer service and engagement	Treasury management, risk management, foreign exchange	Procurement, sourcing, supply chain management
Onboarding –KYC- identity management	Payments	Comparison website/ brokers	Marketing, CRM, Web Mktg, VAS	Funding: credits, financing, cash management, equity, crowdfunding	Security
	Insurance	security		Multi-banking relationships	
	Investments			Invoice, legal, compliance, reporting	
	Mortgages			Payments	
	Pensions			Insurance	

Source: thecxlab.io, 2021.