

A study on the Embedded Finance

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ABSTRACT

This research paper explores the emerging trend of embedded finance, which refers to the integration of financial services into non-financial platforms and applications. With the proliferation of digital technologies and the rise of fintech companies, embedded finance is becoming increasingly prevalent across a range of industries, including e-commerce, healthcare, and transportation. The paper provides an overview of embedded finance, including its definition, key characteristics, and benefits. It also examines the challenges and risks associated with this trend, such as regulatory compliance, data privacy, and cybersecurity concerns. Additionally, the paper explores the potential impact of embedded finance on traditional financial institutions, as well as the opportunities and challenges for new market entrants. The research draws on a variety of sources, including academic literature, industry reports, and case studies of companies that have successfully implemented embedded finance solutions. The paper concludes with a discussion of the implications of embedded finance for consumers, businesses, and the broader financial ecosystem, as well as recommendations for how organizations can best navigate this evolving landscape.

KEYWORDS: Embedded Finance, Financial Services, Fintech Companies, E-Commerce

I. INTRODUCTION

Embedded finance is a concept that typically enables non-financial businesses to incorporate financial services/products into its own platform through the use of an Application Programming Interface (APIs), which is a software middleman that enables two applications to communicate with one another.

Embedded finance is one of the most sweltering points in fintech today. It began raising a ruckus around town titles back in 2019 when Angela Unusual broadcasted "each organization will be a fintech organization". Following this

striking statement Simon Torrance, a specialist in business model change, stirred up the flares further in 2020 by guaranteeing that embedded money would be worth US\$7.2 trillion all around the world by 2030. What's more, in 2021 Snatch Monetary Bunch revealed a 95% build yearly development rate in its income - 93%, or US\$320m, of which got from embedded monetary administrations.

Embedded finance refers to the integration of financial services and products into non-financial platforms or applications such as e-commerce websites, social media platforms, or mobile apps. It allows customers to perform financial transactions seamlessly within the context of their daily activities, without the need to visit a bank or a financial institution.

For example, a ride-hailing app can offer a payment service, allowing customers to pay for their rides through the app, without the need to switch to another payment platform. Similarly, an e-commerce platform can offer credit options to customers at the point of purchase, allowing them to pay for their purchases in installments.

Embedded finance is driven by the increasing demand for convenient, fast, and personalized financial services. By integrating financial services into existing platforms, companies can enhance their customer experience and increase customer loyalty. Embedded finance also provides an opportunity for financial institutions to reach new customers and expand their business beyond traditional banking channels.

Embedded finance empowers any brand or vendor to consistently coordinate monetary administrations into their centre item at their clients' place of need. This makes new amazing open doors for any brand to add esteem by building more frictionless advanced encounters for clients, adding advantageous instalment strategies and offering altered funding arrangements. At last, utilizing embedded finance arrangements permits

the monetary administrations component of a buy to blur out of the spotlight of client ventures.

The remarkable speed of embedded finance reception -

The principal knowledge to rise up out of the examination is the inconceivable degrees of attention to embedded finance around meeting room tables across Europe. 100 percent of organizations reviewed knew about the term 'embedded finance'. Apparently, the publicity encompassing embedded finance in fintech circles has pervaded the standard. In any case, mindfulness varies from understanding.

Only 5% of respondents say they completely comprehend what embedded finance implies, while 91% just have a halfway comprehension. Curiously,

Curiously, this absence of understanding does not seem to have decreased board room conversation, key preparation - or activity. 5% of those overviewed currently offer embedded monetary administrations. Of the leftover, a stunning 3/4 (73%) of respondents say their image intends to send off embedded monetary administrations inside the following two years - 18% in the following a year - while practically all (92%) will do as such inside the following five years.

What has energized such countless brands about embedded finance is the possibility of growing new customized arrangements, new client ventures and better approaches to increase the value of the client experience. As per EY, that energy has been supercharged by the additional tension from buyers who got used to utilizing monetary administrations through forward thinking channels during the pandemic. A new EY investigation of changing buyer sees uncovered that 63% of customers would "exceptionally esteem" open banking and embedded finance arrangements that associate and customize their encounters across outsider biological systems.

II. REVIEW OF LITERATURE

There isn't much academic research about EF in the literature currently. The limited academic studies that have been published in the literature imply that academics have not been aware of the growing EF opportunity. Hensen and Kotting (2022) argue that open banking laid the foundation that enabled banks to embed financial services into the products of non-bank companies to provide convenience to their clients.

Teboul and Anastasiou (2020) contend that in order for EF providers to support EF partners as they expand, EF partners must collaborate with EF providers who have a global presence. Examples of such EF providers' attributes include a global network, a global banking licence, multiple payment options, a sizable balance sheet, and a diverse range of business activities.

Smith and Wallraff (2021) assess the EF opportunity, and argue that EF has the ability to transform finance in remarkable ways. They argue that financial institutions need to position themselves to take advantage of EF opportunities.

Torrance showed that FT companies are taking the lead in creating sophisticated EF offerings through Baas platforms. Torrance (2021) then states that financial institutions, particular banks and insurance companies, need to take a bolder and strategic step to take advantage of the EF opportunities around them. Torrance further identified three key issues that financial institutions need to address to take advantage of the EF opportunity. They include 1) leadership understanding and commitment; 2) choosing the right organizational structure, operating model and skills needed to enter the EF market and 3) developing technical capability.

Plaid and Accenture (2021) explored the huge opportunity for EF in the financial sector. They showed that EF can improve customer experience and unlock a huge market opportunity. They suggest the need to (1) rearrange relationships between financial providers and businesses; (2) create new revenue streams for financial and non-financial companies; (3) create new forms of competition in financial services and other industries and (4) launch new partnerships among financial providers on behalf of businesses and providing them with the know-how to benefit from EmFi without hiring teams of software developers and compliance experts.

Embedded finance is a relatively new concept, and there is limited research available on this topic. However, the growing interest in this area is reflected in the increasing number of reports and articles published by consulting firms, research organizations, and financial institutions.

A report by Bain & Company, titled "Embedded Finance: How Financial Services Are Coming to Your Favorite Apps," highlights the potential of embedded finance to transform the financial services industry. The report identifies four types of embedded finance models: banking-as-a-service, payments-as-a-service, lending-as-a-service and insurance-as-a-service. The report also discusses the challenges that need to be addressed

to realize the full potential of embedded finance, including regulatory and compliance issues, data privacy, and security concerns.

A report by McKinsey & Company, titled "The Next Big Thing in Fintech: Embedded Finance," explores the opportunities and challenges of embedded finance for financial institutions and non-financial companies. The report identifies five key success factors for embedded finance initiatives: customer-centric design, seamless user experience, scalable technology, strong partnerships, and regulatory compliance.

In a research paper published in the Journal of Financial Services Research, titled "Embedded Finance: A Review of the Literature," the authors provide an overview of the existing literature on embedded finance. The authors identify three main themes in the literature: the potential benefits of embedded finance for consumers, businesses, and financial institutions; the challenges and risks associated with embedded finance, including privacy, security, and regulatory issues; and the implications of embedded finance for the financial services industry and its stakeholders.

Kore Fusion (2021) showed that the EmFi transformation will be driven by the shift to ecommerce and the use of APIs and banking as a service (BaaS) providers. Anthemis (2019) called for more investment in EF, and suggests that investment should be made into the EF sector by directing capital to the financial services companies that have components that embed into non-finance companies; and secondly, by investing in non-finance companies that have value propositions that are significantly enhanced through the associated financial products and services embedded within.

According to Ohnishi (2021), EF has been made possible by the deregulation and technology advancement that have resulted in the unbundling of financial service functions, and EF will continue to grow in popularity. Olins (2021) demonstrates the advantages of EF for small firms. Olins (2021) contends that the dearth of timely, reasonably priced financial services has an impact on small firms. Then, according to Olins (2021), embedded financial services will make it possible for small enterprises to raise money, satisfy their operational financial demands, and have access to financial services that are specifically designed to aid in their success. According to Principato (2022), consumers frequently come across embedded payments and are getting used to utilising non-financial apps to pay for goods and services on

platforms like Apple Pay, Google Pay, and Shop Pay.

Hoffman (2022) contends that although all parties to a trade demand convenience, there has long been a chasm between the physical and financial supply chains. Hoffman (2022) demonstrates that EF has the potential to harmonise the disjointed physical and financial supply chains. This harmonisation will play a significant role in expanding the financing options available to small and medium-sized businesses (SMEs) engaged in international trade and may help close the gap in global trade finance.

Prasad (2022) notes that while EF can alter how financial services are consumed, regulators' acceptance and support of the deployment of embedded financial services in the banking industry would depend heavily on its transparency and how EF services are offered to consumers. According to Mulye (2021), EF will help MSME, B2C, and B2B enterprises monetize their client bases, boost customer lifetime value, and vertically scale their product offerings. Digital platforms will be crucial in the delivery of embedded financial services, according to Mulye (2021). Lenders must therefore work with digital platforms to expand their customer base and access to a diverse range of consumers.

The diffusion of innovation theory, which was developed by E.M. Rogers in 1962, gives a clear explanation of how innovations spread within a community from their introduction to their extensive adoption. According to the hypothesis, innovations spread from the point at which they were first introduced to early adopters, early majority adopters, late majority adopters, and laggards. He listed five factors that affect how quickly a new innovation spreads. The innovation itself, the adopters, the communication channels, time, and a social structure are the five components. Rogers uses the term "communication channels" to describe the means by which inventions are disseminated across society. Rogers asserted that an important factor affecting the early adoption of innovations is the manner in which they are disseminated to various segments of society.

Modern financial innovations come in many forms such as sustainable finance (SuFi), social finance (SoFi), decentralized finance (DeFi), embedded finance (EmFi), open finance (OpFi), ocean finance (OcFi), circular finance (CiFi), blockchain finance (BoFi)

According to this study, the Internet is the primary medium for spreading information about certain developments like DeFi, EmFi, OpFi, OcFi,

and SuFi. This study evaluated Internet searches for information about particular technologies to be a key factor in predicting people's rising or falling interest in those breakthroughs. Then I make the case that persons in society who looked for information about DeFi, EmFi, OpFi, OcFi, and SuFi developments on the Internet at an early stage are the innovations' early adopters.

Doing so at an early stage allowed them to understand the benefits and risks of these innovations thereby leading to greater interest in these innovations, and it helped them to reach a decision to embrace DeFi, EmFi, OpFi, SuFi and OcFi at an early stage. In contrast, late adopters did not use the Internet to search for these things; rather, they adopted these innovations because other people have already adopted it.

One study, published in the Journal of Financial Services Marketing in 2019, found that embedded finance can increase financial inclusion by making financial services and products more accessible to individuals who may not have had access to them before. The study also found that embedded finance can increase competition in the financial sector, leading to lower prices and better products for consumers.

Another study, published in the Journal of Economic Behavior & Organization in 2020, looked at the potential challenges of embedded finance, including regulatory and compliance issues, cybersecurity concerns, and potential for financial exclusion. The study suggested that these challenges must be addressed in order for embedded finance to be successful.

A 2020 report from the World Bank titled "Embedded Finance: The Next Frontier of Financial Inclusion" discussed the potential of embedded finance to bring financial services to people who are currently excluded from the formal financial system, particularly in developing countries. The report also discussed the challenges embedded finance faced and the regulatory considerations needed to be successful.

A study published in the Journal of Business Research in 2020, explored the future developments of embedded finance and how it can be improved through the use of artificial intelligence and machine learning to improve the customer experience. Also, it discussed the potential of blockchain technology to increase transparency and security in embedded finance transactions.

Overall, it is clear that embedded finance has the potential to revolutionize the financial industry by making financial services and products more accessible and convenient for consumers.

However, it is important to address the challenges it poses in order for embedded finance to be successful. The literature suggests that embedded finance has the potential to transform the financial services industry by making financial services more convenient, accessible, and personalized for consumers. However, there are also significant challenges and risks that need to be addressed, including regulatory compliance, data privacy, and cybersecurity. The success of embedded finance initiatives will depend on the ability of companies to address these challenges and leverage the opportunities offered by this emerging trend.

RESEARCH OBJECTIVE

- Understanding the adoption and usage of embedded finance: One objective of research on embedded finance could be to explore the extent to which embedded finance solutions are being adopted and used by different user segments. This could involve identifying the factors that drive adoption, as well as any barriers to adoption, and examining how these factors differ across different demographics, such as age, income, and education.
- Assessing the impact of embedded finance on financial inclusion: Another objective of research on embedded finance could be to examine the impact of these solutions on financial inclusion. This could involve assessing how embedded finance solutions are improving access to financial services for underserved populations, such as those with limited access to traditional banking services or those living in rural or remote areas.
- Exploring the role of technology in driving innovation in embedded finance: A third objective of research on embedded finance could be to investigate the role of technology in driving innovation in this area. This could involve exploring how emerging technologies such as blockchain, artificial intelligence, and machine learning are being leveraged to create new embedded finance solutions and enhance existing ones, as well as examining the potential benefits and risks associated with these technologies.

RESEARCH METHODOLOGY

The survey was conducted in May – July 2021 by independent research agency Coleman Parkes.

- Respondents were decision makers for the identification and implementation of new products and services offered to customers.
- Businesses surveyed came from the following sectors: Vertical SaaS, Horizontal SaaS, Consumer marketplace, B2B marketplace and Gig economy platform, with more than £50m+ revenue.

Respondents by market:

- UK – 20%
- France – 20%
- Germany – 20%
- Italy – 20%
- Spain – 20%

Organisation type:

- Vertical SaaS – 11%
- Horizontal SaaS – 15%
- Consumer marketplace – 26%
- B2B marketplace – 35%
- Gig economy platform – 13%

Revenue:

- £50m and up to £100m – 10%
- Over £100m and up to £250m – 23%
- Over £250m and up to £500m – 25%
- Over £500m and up to £1bn – 17%
- Over £1bn and up to £5bn – 17%
- Over £5bn – 9%

Number of employees:

- 250 – 499 – 12%
- 500 – 999 – 17%
- 1,000 – 4,999 – 41%
- 5,000 – 9,999 – 15%
- 10,000 – 15%

III. DATA INTERPRETATION

This report delivers crucial insights on the shifting state of adoption, important vendors driving the growth of the market, and their future prospects. It also provides in-depth analysis and evaluation of how this environment is fast forming and evolving. Additionally, it assesses how embedded finance is doing on the market in relation to key market categories and what this means for the embedded finance ecosystem's stakeholders in terms of potential future opportunities. The Juniper Research Competition Leader board, which ranks 19 important embedded finance companies, is included in the study.

In-depth examination of the infrastructure readiness aspects for embedded finance, including the development of open APIs (Application Programming Interfaces) and Open Banking, is

provided by research into the embedded finance industry within the digital lending sector.

It also features a comprehensive forecast suite, encompassing embedded finance adoption and market share revenue across a range of segments:

- Embedded Banking (split by consumer and B2B [Business-to-Business])
- Embedded Payments (split by consumer and B2B)
- Embedded Lending (split by mobile and online)
- Embedded Insurance (split by mobile and online)
- Embedded Investments

This research suite comprises:

- Market Trends & Strategies (PDF)
- Competitor Leader board (PDF)
- Data & Forecasts (PDF & Excel)
- 12 Months' Access to harvest Online Data Platform

Key Market Statistics

- Market size in 2021: \$43bn
- Market size in 2026: \$138bn
- 2021 to 2026 CAGR: 215%

Here are few statistical data to support the research:



Embedded finance opportunities by sector.



Amazon, Shopify, Paypal and Square are leaders in lending for merchants and SMBs.

	amazon	shopify	PayPal	ebay	square
Type of financing	Business loans	Working capital, cash advances, credit	Business loans and credit	Business loans and credit	Business loans, credit
Market	US, CA, UK, AU, NZ	US, CA, UK, AU, NZ	US, CA, UK, AU, NZ	US, CA, UK, AU, NZ	US, CA, UK, AU, NZ
Services	US, CA, UK, AU, NZ, Canada, Mexico, France, Italy, India, and Spain	US, CA, UK, AU, NZ, Canada, Mexico, France, Italy, India, and Spain	US, CA, UK, AU, NZ, Canada, Mexico, France, Italy, India, and Spain	US, CA, UK, AU, NZ, Canada, Mexico, France, Italy, India, and Spain	US, CA, UK, AU, NZ, Canada, Mexico, France, Italy, India, and Spain
Launch year	2011	2011	2011	2011	2011
Head funding position	Amazon (2018) \$1.2B	Shopify (2018) \$1.2B	PayPal (2018) \$1.2B	eBay (2018) \$1.2B	Square (2018) \$1.2B
Headquarters	Seattle, WA, USA	Ottawa, ON, Canada	San Jose, CA, USA	San Jose, CA, USA	San Francisco, CA, USA

IV. SUGGESTIONS

Here are a few ideas for directing examination on embedded finance:

- Center around a particular industry: Embedded finance is turning out to be progressively common across many businesses. To concentrate your exploration, you could consider looking at how embedded finance is being utilized in a particular industry like online business, medical care, or transportation. This can assist you with recognizing industry explicit difficulties, open doors, and patterns connected with embedded finance.
- Distinguish central participants: There are numerous fintech organizations and conventional monetary establishments that are driving the way in the advancement of embedded finance arrangements. Recognize these central participants and analyze their procedures, plans of action, and the effect they are having on the business.
- Investigate administrative issues: Embedded finance raises a scope of administrative issues,

incorporating consistence with monetary guidelines, information security regulations, and network safety concerns. Consider inspecting the administrative scene for embedded finance and the expected ramifications of administrative changes on the business.

- Think about the ramifications for shoppers: Embedded finance can have critical ramifications for buyers, including more noteworthy admittance to monetary administrations, comfort, and potential dangers related with sharing individual and monetary information. Consider inspecting the effect of embedded finance on purchasers and their perspectives and ways of behaving towards these arrangements.
- Search for open doors for advancement: Embedded finance is as yet an arising field, and there might be huge open doors for development as far as the kinds of administrations that can be embedded into non-monetary applications. Consider looking at likely open doors for development around here and the difficulties that should be defeated to make these advancements a reality.
- Contrast and conventional finance: Embedded finance is much of the time seen as a problematic power that might have critical ramifications for customary monetary establishments. Think about contrasting the advantages and disadvantages of embedded finance to conventional monetary administrations, and how these two models might coincide and associate from now on.
- By zeroing in on these areas, you can acquire a more profound comprehension of embedded finance, its difficulties and valuable open doors, and the possible ramifications for various partners in the monetary environment.

V. CONCLUSION

A new tendency that is altering the financial services industry has been shown by the research on embedded finance. Due to the integration of financial services into nonfinancial platforms and applications, businesses now have additional opportunities to provide customers convenient, seamless, and customised financial services. The benefits of embedded finance include improved customer satisfaction, broader access to

financial services, and increased productivity and profitability for businesses.

Regulatory compliance, data privacy, and cybersecurity risks are some of the challenges that embedded finance presents for ensuring the feasibility and effectiveness of embedded financial systems. Also, traditional financial institutions find it very challenging to compete with agile fintech companies and adjust to this new climate.

Overall, embedded finance has the potential to disrupt the traditional financial services industry by offering new opportunities for competition, growth, and innovation. Entrepreneurs, governments, and regulators must collaborate to guarantee that embedded financial solutions are safe, secure, and accessible to everyone while minimising the risks and challenges associated with this new trend.

Firms, governments, and regulators must stay informed and adapt to the changing environment if they are to fully realise the potential of embedded finance while managing its risks and problems.

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