

India the Future of Fin-tech Boom (A Research on Future Perspective)

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Abstract – The concept of fin tech is gaining momentum in India. Things like UPI (Unified Payments Interface) based payments have been developed. The popularity of the technology used for making payments and transfer of funds and transactions are advancing to meet the needs of the modern business and commerce and industry. Global giants like Google, Samsung, Amazon have introduced (UPI) system in to their businesses. Even digital payment firms like Paytm, PhonePe, Mobwik and Free charge are strengthening themselves. India is largest online payments and mobile wallet company. Even company like Flip kart is planning to invest\$ 500 million dollars to scale up its technology. Even the research companies expect that in India digital platform will be best used by 2023. All these things could be possible because of fin tech technology use. The current research paper focuses on the pros and cons and the future perspectives in India in the field of use of fintech technology.

Key Words: - Technology, Investment, Barrier, Transfer, Percentage, Future etc.

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INTRODUCTION

The fintech space in India is heating up. What's App, the most widely used messaging app in the country, has recently started rolling out a Unified Payments Interface (UPI)-based payments feature here. Developed by the National Payments Corporation of India, UPI is an instant, real-time digital payment system for mobile-to-mobile money transfer between participating banks. With more than 200 million active users in India — the largest anywhere in the world — WhatsApp is expected to drive large volumes on peer-to-peer (P2P) payments and also become a popular platform for merchant payments. India is slated to be the first country globally to get the payments facility from WhatsApp.

Other global giants, too, are zeroing in on this space. For instance, Google has already launched its payments app Google Tez . While Samsung has launched Samsung Pay and Amazon has introduced Amazon Pay. While both Google Tez and Samsung Pay have been UPI-enabled for the past few months, Amazon Pay introduced the UPI feature earlier this week. Apple, too, is looking to introduce Apple Pay in the country in the near future. In a media interview a few months ago,

Meanwhile homegrown digital payment firms like Paytm, PhonePe, MobiKwik and FreeCharge (all are UPI-enabled) are strengthening their arsenal. Paytm,

India's largest online payments and mobile wallet company, has invested Rs. 5,000 crore (\$786 million) in mobile payments to date. Paytm founder Vijay Shekhar Sharma has earmarked another Rs. 5,000 crore for the next three years. In a recent media interview, Sharma said: "As a company, we have invested the most and will continue to be the largest investor in digital payments in the country." PhonePe, the digital payment arm of India's leading e-tailer. Flipkart, is planning to invest \$500 million to scale up its technology platform and expand its merchant network and consumer base. According to CEO Sameer Nigam, PhonePe grew at over 100% every two months in 2017 and this investment will help them "maintain the same aggressive growth rate for the next two years." Interestingly, Flipkart's backers include Chinese conglomerate Tencent which owns WeChat, the largest digital payments service in China.

A report by Google and Boston Consulting Group (BCG) titled *Digital Payments 2020* predicts that digital payments in India will exceed \$500 billion by 2020, up from \$50 billion in 2016. Global digital payments are undergoing rapid transformation and are set to grow four times in value by 2020. India is on an even more exponential growth trajectory. The smart phone explosion will usher in a new era in digital payments in India over the next few years

that will see ... non-cash transactions exceed cash transactions by 2023.

IMPORTANCE OF TECHNOLOGY BEYOND PAYMENT

The boom in India's digital payments is a window into the fintech revolution in the country. *Fintech in India – A Global Growth Story*, a report by India's software and services industry association Nasscom and consulting firm KPMG, notes that India's fintech landscape "has witnessed strong user adoption through 2016, driven largely by the payments sector which has enjoyed a boost post the demonetization of high value currency notes." The report estimates that around 50% of Indian fintech firms are currently focused on payments and trade processing.

Industry analysts expect that payments will be a pathway to other areas such as lending, insurance, wealth management and banking. Most people in India lack credit history. Digital payments give them a credit history which can be leveraged in other areas. Innovative data-driven and behavioral risk management models can overcome barriers that arise from lack of widespread and robust credit scoring of individuals.

In mature geographies, payment mechanisms are already evolved and basic banking services are a given. However, in countries like China and India, digital payments are evolving in tandem with the growth in ecommerce. Payments can be an entry point for other financial services, especially lending and banking. For instance, an e-commerce retailer who offers payment services might find ways to lend to customers online to fund the purchases. Similarly, fintech companies that offer payment services to small businesses could offer loans based on the fintech company's visibility into how the small business is performing. In China, payments led to areas like lending. This could happen in India, too, as one of the key places for fintech growth. The only player which is more interesting than India at present. China is currently the world leader in fintech.

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Fintech Trends India 2017, a report by professional services firm PwC and fin tech accelerator Startup boot camp, notes that venture capital-backed global fin tech investment in 2016 was \$12.7 billion. This was 13% less than \$14.6 billion in 2015. On the other hand, fin tech investments in Asia increased to \$5.4 billion in 2016, up 12.5% from \$4.8 billion in 2015. This increase was driven mainly by China and India. Further, India offers the highest expected return on investment on fin tech projects at 29% versus a global average of 20%. While in terms of market size, unicorns and investments, India is still

small compared to geographies like the U.S., Singapore and Israel, it has carved a niche for itself in terms of fin tech innovation."

The number of fin tech startups in India at around 1,500. Almost half of these were setup in the past two years. According to information and analysis firm Venture Intelligence, in 2016 and 2017 there were around 103 private equity/venture capital investments in the fin tech sector in India amounting to \$2.39 billion. The biggest investment in 2017 was \$1.4 billion in Paytm by the Japanese conglomerate Soft Bank. Others who received funding include insurance marketplace Policy Bazaar (\$77 million), SME lending platform Capital Float (\$45 million) and payments firms Mswipe Technologies (\$31 million) and Razorpay (\$20 million).

The Nasscom-KPMG report estimates that the total fin tech software and services market in India was around \$8 billion in 2016 and likely to grow 1.7 times by 2020. The Indian fin tech software market alone is expected to touch \$2.4 billion by 2020. The report adds that the transaction value for the Indian fin tech sector was approximately \$33 billion in 2016 and slated to reach \$73 billion in 2020 growing at a five-year compound annual growth rate of 22%. The report describes payments as quite mature in India. P2P lending, robo-advisory, bank-in-a-box, security and biometrics as "striding fast towards mass market implementation, and block chain as having a promising future.

CHOICE OF MULTIPLE OPTIONS

Multiple factors are driving fin tech growth in India. These include inefficiencies in the country's banking system, a large unbanked and underserved population, steep smart phone penetration, increasing access to the internet, a booming ecommerce market, and availability of a large talent pool which understands both technology and financial services. A key pillar is the strong support from the government by way of initiatives such as the financial inclusion program Jan-Dhan which aims to ensure that every Indian has a bank account, the biometric and iris-based Aadhaar which aims to give every Indian resident a unique identification number, and the Unified Payments Interface.

Launched two years ago by the National Payments Corporation of India, a not for profit organization owned by a consortium of major banks, UPI has emerged as one of the fastest-growing payments instruments since the demonetization of high value bank notes in November 2016. UPI reported 145 million transactions in December 2017. At the time of its launch, describing UPI as "the most sophisticated public payments infrastructure in the world. For a number of years, we have been saying we need a revolution in banking in India. I think we can confidently say the revolution is upon us .The

challenge is to innovate at different income levels and be able to customize at scale.

The national payments structure we have is world class. The low-cost, large scale interoperability is unparalleled. Pointing out that large chunks of the population in India have been underserved because they were deemed to be unprofitable. Now there is an opportunity to crack that with innovative business models and make it profitable and sustainable. With initiatives such as UPI, Jan-Dhan and Aadhaar, India now has an underlying infrastructure core on which many fin tech firms can blossom and a lot of innovation can happen. These provide a good foundation for fin tech companies to permeate last-mile touch points.

The shared infrastructure network will drive the next wave of fin tech adoption in India because it gives fin tech players ready and free access to a huge customer base. For instance, they don't need to do anything around identification because they can leverage Aadhaar. They don't need to build any payments technology because they can leverage the UPI. And thanks to the Jan-Dhan program there a large number of people with bank accounts.

In order to lend to small and medium businesses and bring new retail financial services online, it is important for fin tech service providers to be able to connect to an ecosystem online. The need for an application programming interface (API) to allow deep linking between multiple categories of service providers is paramount. Robust and widely adopted APIs transform disparate services into linked ecosystems and enable the emergence of highly versatile platforms. UPI plays a vital role in this, as does the India Stack. India Stack is the world's largest application programming interface. It allows the government, the citizens and entrepreneurs to interact with each other through an open digital platform and is being developed to enable Indians to get access to goods and services digitally.)

While a large percentage of India's population is unbanked and roughly 80% of transactions are carried out by cash, at the same time, India has about 800 million mobile phones with over 430 million having Internet connectivity. By 2027 the Internet users in India will amount to more than 900 million. There is no compelling reason why new retail financial customers must go through the same sequence of physical banking channels, credit and debit cards, Internet and mobile financial services such as e-wallets, apps, and money transfer mechanisms. An entire generation of Indians leapfrogged the use of personal computers and laptops to connect to the Internet via mobile devices. A similar leapfrogging could take place in certain categories of financial services such as payments, lending and wealth management. With the increasing penetration of low-cost smart phones India has the potential to get "an additional 100 million plus people in the next few years into relationships with financial

institutions such as those that provide working capital loans against transactional data mortgage providers, insurance and brokerage. This is a major boom that is unique to India at this time."

A report titled *Fin tech in India: Ready for Breakout* by consulting firm Deloitte says that fin tech firms can reshape the financial services landscape in the country in three critical ways. One, they can reduce costs and improve quality. These firms are not burdened with legacy operations, IT systems, and expensive physical networks and can pass on the benefits of leaner operating models to customers. Two, they can develop unique and innovative models of assessing risks. By leveraging big data, machine learning, and alternative data to underwrite credit and develop credit scores for customers with limited credit history, they can improve the penetration of financial services. Three, being less homogenous than incumbent banks, fintech firms can "create a more diverse, secured and stable financial services landscape."

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Interestingly, while regulators are typically seen as hindering innovation, in India it seems to be less of a challenge at present. Most important thing is how regulators view financial services companies in mature markets, they are more risk averse than firms in a growth market. The willingness to innovate in India and China, is much higher. While traditionally the Indian regulator is quite conventional, in the case of fintech "they have allowed experiments to flourish and when they have seen that it is working they have brought in the required guidelines." Citing the example of P2P guidelines introduced in last October by the RBI, the absence of regulations can make things complex and be a deterrent. Guidelines give the players credibility."

BARRIERS TO GROWTH

Lack of proper regulations is a major obstacle for fintech in India. RBI and Securities & Exchange Board of India (SEBI) are yet to come out with a comprehensive and separate guideline for the fintech industry. The fintech sector is still regulated by banking regulations. Although RBI has allowed small banks and payment banks in the recent past, a lot of impediments still remain in the path of innovative fintech players. It's like asking them to operate with one hand tied behind their backs."

Most fintech players can sustain in the long run only if they collaborate with the big banks. The banks can leverage the technical know-how and flexible structure of the fintechs and reduce their costs substantially whereas the fintechs can scale and reach out to a wider audience at minimal investment. Alone, the fintech companies,

excepting a few big players, can only operate at the fringes.

The banks and fintech firms can be partners and amplify each other's strengths. But he cautions that for this happen, the behemoth government-owned banks need to work with fintech companies. They must not try to seize the emerging business through regulatory capture. Regulations can be a double-edged sword, he warns. Regulations that increase transparency, lower risk of fraud and increase trust will accelerate the adoption of fintech. However, regulations that protect the business turf of public sector banks and seek to route more profitable fintech businesses to government banks, will greatly impede the growth of fintech. Another challenge that is seen for fintech growth in India is around telecom infrastructure. It is observed that cloud-based systems can deliver significant efficiency gains in processing lending requests, automating transactions and assessing risk, but these systems are only as good as the connections to them.

There are three areas of concern. One, literacy, both in terms of adoption and security. Citing the example of mutual funds, he says that most people don't understand the digital model and have security concerns. As a result, they prefer to go to a financial consultant who is given commissions by the mutual fund companies rather than trust a digital platform which gives unbiased advice. Two, most of the funding at present is going to the top few players. It needs to be more broad-based. Three, while India has a strong IT services DNA, fintech is a lot about innovative products and India's record in creating world-class product organizations is not very strong. It requires a different mindset and a lot of patience from all stakeholders.

India still lags the rest of the world in democratizing the access to capital to entrepreneurs. For instance, there is no majorly active equity crowd funding platform in India. This could be a barrier for fintech entrepreneurs. Raising funds at regular intervals, giving the investors above average returns and keeping the cost low will be prove to be challenging in the medium to long run. India is an important and significant test bed for frugal innovation.

Fintech innovation and adoption at present, he feels, is primarily targeted towards the urban elite and the rich and the same products are being shoved down to consumers of lower income levels. India has a huge diversity in terms of income levels and financial needs. The challenge is to innovate at different income levels and be able to customize at scale. The success of fintech and the ability to drive financial inclusion at scale through fintech will depend on that.

Can Indian fintech players serve other geographies? Not necessarily. There is no strong evidence of this as yet. At present, fintech is growing in India to serve the domestic market. This is good

Does India have the potential to be a global hub for fintech innovation? Absolutely because of areas such as UPI, immediate payment service (IMPS) for real time transfer of money, e-wallets, and the use of sound waves for last-mile payments. India is carving out a niche for itself in low-cost, large-value product distribution as well as transactions. Around eight to 10 global banks are actively engaged with the fintech ecosystem in India. It is an important and significant test bed for frugal innovation. India has made a good beginning and is moving in the right direction, but to be a powerful force in fintech innovation globally we need to develop a strong ecosystem."

Industry comprising companies that use technology to offer financial services. These companies operate in insurance, asset management and payment, and numerous other industries. According to the report of The National Association of Software and Services Companies (NASSCOM), India has a presence of approximately 400 companies in the fintech industry, with an investment of about \$420 million (in 2015). The NASSCOM report also estimated the fintech software and services market to grow.

The Indian fintech landscape is segmented as follows – 34% in payment processing, followed by 32% in banking and 12% in the trading, public and private markets. Accelerators and incubators tapping the startup ecosystem include PayPal's Star Tank, Yes Bank's collaboration with T-Hub, among others. Visakhapatnam is being developed as fintech hub and the local government of Andhra Pradesh, had opened Fintech Valley

Tower to promote the investments in this area.

India FinTech Forum represents the Indian fintech firms as part of the Global FinTech Hubs .

CONCLUSION

1. Only about a third of these 50+ companies will survive.
2. All of them are burning humongous amounts of cash. As interest rates rise, and liquidity tightens, their runway gets shorter. We are already seeing decreasing PE investments year on year.
3. Credit costs are still very high, compared to sectors like Microfinance, and vehicle finance, with very high default rates.
4. Systemic Delays in Traditional Banking System in not being able to process People Requirement for Credit at the desired speed and when required.

5. Additionally, there is too much paper work requirement in Traditional Banking.
6. Liberalization has also permitted Private NBFC Companies to start lending on their own in Autonomous Manner (after RBI approval though).
7. Advent of Smart Phone & Internet Penetration in India has further made the use of FinTech Services very fast and easy. However FinTech has a Bright Future in India.

REFERENCES

- Arnold, Martin (2015) Investment in financial technology groups triples to \$12bn in year, Financial Times Online 26th of March, available at: http://www.ft.com/intl/cms/s/1245ce84-d314-11e4-a792-00144feab7de,Authorised=false.html?siteedition=uk&_i_location=http%3A%2F%2Fwww.ft.com%2Fcms%2Fs%2F0%2F1245ce84-d314-11e4-a792-00144feab7de.html%3Fsiteedition%3Duk&_i_referer=&classification=conditional_standard&iab=barrier-app#axzz3alE3VQfP financial-technology-startups
- Backes, Michael (2014) The Financial Technology Frontier is ripe for start-ups, Guardian Online, 13th May, available at: <http://www.theguardian.com/media-network/media-network-blog/2014/may/13/fintech->
- Bakker, Evan (2015) TOP PEER-TO-PEER LENDING MARKETS: The leading countries for alternative finance and the next high-growth markets, 11th June, available at: <http://uk.businessinsider.com/peer-to-peer-lending-markets-the-leading-countries-for-alternative-finance-and-the-next-high-growth-markets-2015-05?r=US&IR=T>
- Blumberg, B., Cooper, D.R., Schindler, P.S, (2011) Business Research Methods. 3rd edn. McGraw-Hill Higher Education
- Bryman, A., Bell, E (2015), 'Business Research Methods' 4th edn. Oxford: Oxford University Press Built on talent Ireland's International Financial Services Industry, Irish Independent, in association with FSI & IBEC, 4th June 2014, available at: [http://www.fsi.ie/Sectors/FSI/FSI.nsf/vPages/Media_and_Publications~built-on-talent---ireland's-international-financial-services-industry/\\$file/Built+on+talent.pdf](http://www.fsi.ie/Sectors/FSI/FSI.nsf/vPages/Media_and_Publications~built-on-talent---ireland's-international-financial-services-industry/$file/Built+on+talent.pdf)
- Caldbeck, Ryan (2012) The Top Five Financial Technology Companies of 2012, 19th December, Forbes Online, available at: <http://www.forbes.com/sites/ryancaldbeck/2012/12/19/the-top-five-financial-technology-companies-of-2012/>
- Cara S. Lown, Carol L. Osler, Philip E. Strahan, and Amir Sufi, October 2000, the Changing Landscape of the Financial Services Industry: What Lies Ahead? Available at: <http://www.fednewyork.org/research/epr/00v06n4/0010lown.pdf>
- Citi Accelerator Hub to provide office space for start-ups, IDA Ireland online, 18th June, (2015) available at: <http://www.idaireland.com/newsroom/citi-accelerator-hub-to-p/>
- Conwell, Seamus (2015), UK & Ireland becoming a force in "FinTech", 17th April CNBC Online, available at: <http://www.cnbc.com/2015/04/17/uk-and-ireland-becoming-a-force-in-fintech.html>
- Cottrell, S. (2010) Skills for Success, Personal Development and employability. 2nd Edn. Palgrave Macmillan
- Egan, John (2014) Innovation in Banking, A Lafferty Thought Leadership Report, available at: [file:///C:/Users/jg/Downloads/Innovation_in_Banking%20\(1\).pdf](file:///C:/Users/jg/Downloads/Innovation_in_Banking%20(1).pdf)
- Engaging Financial Services Customers in an Omni-channel world (2014), Adobe Online, available at: <http://www.images.adobe.com/content/dam/Adobe/en/solutions/financial-services/pdfs/overview-fsi-omni-channel.pdf>
- Deloitte, (2015) Why FinTech collaboration with Financial Services can drive job creation in Ireland, available at: <http://www2.deloitte.com/content/dam/Deloitte/ie/Documents/FinancialServices/ie-deloitte-ireland-fintech.pdf>
- Federal Trade Commission, Gramm Leach Bliley Act, available at: <https://www.ftc.gov/tips-advice/business-center/privacy-and-security/gramm-leach-bliley-act>
- Freedman, Roy. S, (2006), Introduction to Financial Technology, Elsevier Finance Dublin (2015), The IFSC Story, available at:

- http://www.financedublin.com/the_ifsc_story.php
- Financial Services, Enterprise Ireland, 2010, available at: <http://www.enterpriseireland.com/en/Source-a-Product-or-Service-from-Ireland/Sector-and-Company-Directories/Financial-Services-Sector-Profile.pdf>
- FinTech Futures, The UK as a World Leader in Financial Technologies A report by the UK Government Chief Scientific Adviser, 2015, available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/413095/gs-15-3-fintech-futures.pdf
- Gach, Robert and Gotsch, Maria, (2014) The Rise of FinTech, Accenture, available at: <http://pfny.org/wp-content/uploads/2014/06/NY-FinTech-Report-2014.pdf>
- Hancock, Ciaran (2015), Ireland could add 5,000 jobs in FinTech by 2020, says Deloitte, 23rd march Irish Times Online, Available at: <http://www.irishtimes.com/business/financial-services/ireland-could-add-5-000-jobs-in-fintech-by-2020-says-deloitte-1.2149133>
- Honey. P, and Mumford, A. (2006), The Learning Style Questionnaire, Revised Edition, Peter Honey Publications
- Holden M.T., Patrick L. (2004), Choosing the Appropriate Methodology: Understanding Research Philosophy, WIT, Waterford, available at: http://rikon.ie/images/publications/Choosing_the_Appropriate_Methodology_Understanding_Research_Philosophy_RIKON_Group.pdf
- IFS 2020, A Strategy for Irelands International financial services sector, (2015), available at: <http://www.finance.gov.ie/sites/default/files/IFS2020.pdf>
- Ireland is becoming a hotbed of FinTech innovation (2015) Irish Times Online, 9th July Available at: <http://www.irishtimes.com/sponsored/ireland-is-becoming-a-hotbed-of-fintech-innovation-1.2278250>
- Jankowicz, A.D., (2005) Business Research Projects. 4th edn. Thomson Learning Jones, Horgan Jack., Burke, Roisin and Kehoe, Ian 12th of April 2015, Ireland plays for high stakes in FinTech game, 20th October, available at: http://www.fintechireland.com/uploads/3/5/1/4/3514373/20150412_sunday_business_post_-_ireland_plays_for_high_stakes_in_fintech_game.pdf
- Kay, Jon (2015), Artificial Intelligence in the FinTech sector, Harrington Starr Online, 12th of May available at: <http://www.harringtonstarr.com/artificial-intelligence-fintech-sector/>
- Kenny, Enda (2015) An Taoiseach, CurrencyFair Online, available at: <https://www.currencyfair.com/about-us/>
- Kennedy, John (2014). Two-thirds of Irish start-ups warn of lack of early stage funding, Siliconrepublic, online. Available at: <https://www.siliconrepublic.com/start-ups/2014/10/20/two-thirds-of-irish-start-ups-warn-of-lack-of-early-stage-funding>
- Kolb, A. D, (1984) Experimental Learning, Experience as the Source of Learning and Development, Prentice Hall
- Lee, Peter, (2015), FinTech: Is DueDil a Bloomberg for the private markets? 11th of March Euro Money Online, Available at: <http://www.euromoney.com/Article/3434334/Fintech-Is-DueDil-a-Bloomberg-for-the-private-markets.html>
- Leslie, Joseph. 16th June 2015, Etsy Tests Crowdfunding Venture, Wall Street Journal Online, Available at: <http://www.wsj.com/articles/etsy-tests-crowdfunding-venture-1434427261>
- Levine, Matt (2014) Lending Club Can Be a Better Bank than the Banks, 27th August, Bloomberg View online, available at: <http://www.bloombergview.com/articles/2014-08-27/lending-club-can-be-a-better-bank-than-the-banks>
- Mackenzie, N. & Knipe, S. (2006), Research dilemmas: Paradigms, methods and methodology, Issues in Educational Research, 16(2), 193-205 available at: <http://www.iier.org.au/iier16/mackenzie.html>
- Mason, J. (2002). Qualitative Researching (2nd edn.). London: Sage, available at: https://us.sagepub.com/sites/default/files/upm-binaries/28285_02_Boeije_Ch_02.pdf
- McAuley, Daniel, (2014), What is FinTech, Wharton FinTech Online, 4th September, available at:

<http://www.whartonfintech.org/blog/what-is-fintech/>

- McLoughlin, Gavin (2014) "Start-up Grid Finance aims to transform Irish banking sector, Irish Independent Online, 9th October available at:
<http://www.independent.ie/business/small-business/latest-news/startup-grid-finance-aims-to-transform-irish-banking-sector-30650154.html>
- Motif Investing Wins, "Most Disruptive" at 2015 Bezinga FinTech Awards, 9th April, 2015, MarketWatch Online, available at:
<http://www.marketwatch.com/story/motif-investing-wins-most-disruptive-at-the-2015-benzinga-fintech-awards-2015-04-09>
- Newenham, Pamela (2014) Irish founded payments start-up Stripe now valued at \$3.5 billion, 3rd December Irish Times Online, Available at:
<http://www.irishtimes.com/business/technology/irish-founded-payments-start-up-stripe-now-valued-at-3-5-billion-1.2023112>
- O'Brien, Ciara (2015), CurrencyFair raises €10 million in latest funding round, 16th April Irish Times online, available at:
<http://www.irishtimes.com/business/technology/currencyfair-raises-10m-in-latest-funding-round-1.2177036>
- Patton, M.Q. (2002) Qualitative Research and Evaluation Methods, 3rd edition, Thousand Oaks, CA: Sage, available at:
https://mthoyibi.files.wordpress.com/2011/10/qualitative-research-practice_a-guide-for-social-science-students-and-researchers_jane-ritchie-and-jane-lewises_20031.pdf
- Peer pressure, How peer-to-peer lending platforms are transforming the consumer lending industry, February 2015, PWC, available at:
<http://download.pwc.com/ie/pubs/2015-peer-pressure-how-peer-to-peer-lending-platforms-are-transforming-the-consumer-lending-industry.pdf>
- Pozin, Illya, 14th December, 2014, 15 FinTech Start-ups', To Watch In 2015, Forbes Online, available at:
<http://www.forbes.com/sites/ilyapozin/2014/12/14/15-fintech-startups-to-watch-in-2015/>
- Regan, P. M, Robo Advisers to Run \$2 Trillion by 2020 if This Model Is Right, 18th June 2015, Bloomberg Online, Available at:
<http://www.bloomberg.com/news/articles/2015-06-18/robo-advisers-to-run-2-trillion-by-2020-if-this-model-is-right>
- Retail Banking 2020 Evolution or Revolution? (2015), PWC Report online, available at:
http://www.pwc.com/et_EE/EE/publications/assets/pub/pwc-retail-banking-2020-evolution-or-revolution.pdf
- Realex Payments acquired by US firm in €115m deal, 25th March 2015, RTE News, available at:
<http://www.rte.ie/news/business/2015/0325/689653-realex-payments-acquisition/>
- Robinson, Edward (2015), Fears of a bubble growing in peer-to-peer loan outfits, it's the hottest new way for an SME to get money, but could a bubble be brewing in peer-to-peer lending in the US? 12th August, Irish Independent Online, Available at:
<http://www.independent.ie/business/fears-of-a-bubble-growing-in-peertopeer-loan-outfits-31228593.html>
- Saunders, M., Lewis, P., Thornhill, A. (2012) Research Methods for Business Students. 6th edn. Essex: Pearson Education Limited
- Scally, Anna (2015) FinTech, KPMG Online, available at:
<http://www.kpmg.com/ie/en/industry/fintech/pages/default.aspx>
- Scally, Derek (2015), Ireland looks to Berlin in effort to grow financial technology sector, The Irish Times Online, 20th March, available at:
<http://www.irishtimes.com/business/financial-services/ireland-looks-to-berlin-in-effort-to-grow-financial-technology-sector-1.2145820>
- Sentifi launches artificial intelligence based FinTech service, 12th June 2015, Start-up Ticker, available at:
<http://www.startupticker.ch/en/news/june-2015/sentifi-launches-artificial-intelligence-based-fintech-service>
- Shaul, David (2015) Asset Management: The Next Frontier for FinTech, UK FinTech, Online available at:
<http://www.ukfintech.com/future-of-fintech/asset-management-the-next-frontier-for-fintech>
- Stripe's inclusion in Apple's pay service a coup for Collisions', 17th September 2014, Irish Times online, available at:
<http://www.irishtimes.com/business/technology/stripe-s-inclusion-in-apple-s-pay-service-a-coup-for-collisions-1.1932246>
- Stripe valued at \$5bn after Visa joins new funding round, 28th July 2015. Irish Times Online, Available at:

<http://www.irishtimes.com/business/economy/stripe-valued-at-5bn-after-visa-joins-new-funding-round-1.2299573>

Swinderman, Amy (2015), Are mortgages the new 'fin tech' frontier? 31st March Inman Online, available at: <http://www.inman.com/2015/03/31/are-mortgages-the-new-fin-tech-fronti>

The Evolution of the Customer Experience in Financial Services. Siegel & Gale, available at http://www.siegelgale.com/white_paper/the-evolution-of-the-customer-experience-in-financial-services/

Wallace, Benjamin (2011), The Rise and Fall of Bitcoin, Wired Online, 23rd November, available at: http://www.wired.com/2011/11/mf_bitcoin/

Towers Watson (2012), Investing in private markets, The right strategy, the right geography, the right manager, Available at: file:///C:/Users/jg/Downloads/Investing_in_Private_Markets.pdf

Trends in Financial Technology Investing, 12th February, 2015, ACE Portal Online <https://aceportal.com/insights/trends-in-financial-technology-investing/>

Tuchman, Mitch (2013) What Is Investment Management? A Primer, 5th July 2013, Forbes

Online Available at: <http://www.forbes.com/sites/mitchelltuchman/2013/07/05/what-is-investment-management-a-primer/>

Walker, Andrew (2014) Banking without banks: Exploring the disruptive effects of converging technologies that will shape the future of banking, 30th July, available at: <http://eds.b.ebscohost.com/eds/pdfviewer/pdfviewer?sid=8d062d7c-615d-4494-aeb0-8649ac6e9dc1%40sessionmgr114&url=login.aspx%253fdirect%253dtrue%2526pr%253dfile%253dhost%2526scope%253dsite%2526auth%253dcrawler%2526jrnl%253d17531802%2526AN%253d99589279&hid=111&vid=0>

Walsh, John, (2015), Financial Services 'has potential to create 10,000 jobs', Irish Examiner Online, 12th March, Available at: <http://www.irishexaminer.com/business/financial-services-has-potential-to-create-10000-jobs-317907.html>

Weckler, Adrian (2015) Collison brothers' online payments firm Stripe in major European expansion, 15th June, Irish Independent Online, available at: <http://www.independent.ie/business/technology/collison-brothers-online-payments-firm-stripe-in-major-european-expansion-31303052.html>

Wellers, Dan (2015), Beyond Bitcoin: How The Blockchain Could Disrupt Our Financial System, 11th August, Forbes Online available at: <http://www.forbes.com/sites/sap/2015/08/11/beyond-bitcoin-how-the-blockchain-could-disrupt-our-financial-system/>

Werneck, Bruno (2015) What are the biggest FinTech trends in 2015? Quora Online, Available at: <http://www.quora.com/What-are-the-biggest-FinTech-trends-in-2015>

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