INTERNATIONAL TRADE ADMINISTRATION

2016 Top Markets Report Financial Technology

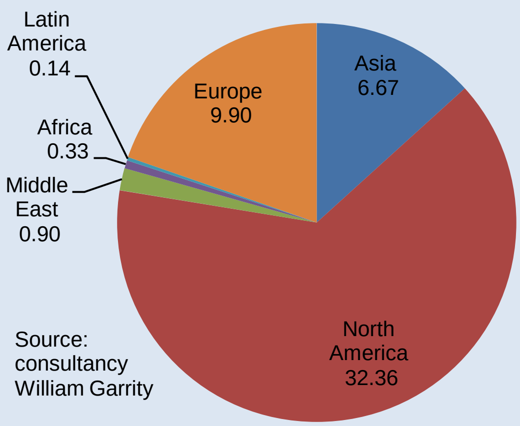
Overview and Key Findings

Introduction

The FinTech "revolution," or the merging of financial services with communications technology, promises to reshape finance by cutting costs and improving the quality of financial services, creating a more diverse and stable financial landscape.[1] From payments to wealth management, from peer-to-peer lending to crowdfunding, a new generation of startups is emerging, with FinTech firms attracting $19 billion in investment in 201 (up from $12 billion in 2013).

A 2015 survey of over 10,000 digitally active consumers suggests that adoption rates of FinTech products could double within the next 12 months.[2] Global FinTech activity has increased substantially in the last couple of years but remains significantly concentrated in the United States (see chart). Goldman Sachs forecasts that ultimately $660 billion in revenue could migrate from traditional financial services to FinTech payments, crowdfunding, wealth management and lending.[3]

Figure 1: 5 Year FinTech investment (2010-2014) (USD billions)



Source: consultancy William Garrity

The emergence of FinTech holds the potential for the rapid growth of well-paying jobs. According to the U.S. Bureau of Labor, the median annual wage for computer and information technology occupations was $79,390 in May 2014, compared to the median annual wage for all business and financial occupations of $64,790 and $35,540 respectively.

Key Findings: Top Markets and Methodology

ITA ranks markets by both projected FinTech payments and overall projected FinTech sector size, as payment trends are leading indicators for the rest of the sector. Overall FinTech sector size provides useful information about general FinTech opportunities. See appendices for additional information on the methodology.

Projected FinTech Payments

ITA ranked markets using consumer to business (C2B) payments in 2017. C2B payments are the largest component of the FinTech sector and are the quickest to respond to industry trends. ITA used nominal GDP (2017) as a rough measure of a country's market and personal consumer purchases as a percentage of GDP (2017) to estimate C2B payments. Finally, ITA used estimated smartphone ownership as a percent of population (2017) to match C2B purchases with their potential FinTech application and rank the country markets. Figure 2 shows the 30 top projected FinTech payments markets.

Projected Overall FinTech Sector

The FinTech sector includes payments, crowdfunding, wealth management, lending and money transfer fees. ITA used nominal GDP (2017) as a rough measure of each market. ITA then used a country's total financial assets as a percentage of GDP to measure its financial development. A larger financial market should have a

Figure 2: Ranking of Projected Export Markets for FinTech Subsector: Payments (2017)				
1. China	7. Canada	13. India	19. Sweden	25. Argentina
2. UK	8. South Korea	14. Mexico	20. Indonesia	26. Israel
3. Germany	9. Australia	15. Turkey	21. Taiwan	27. Austria
4. Japan	10. Spain	16. Switzerland	22. Poland	28. Belgium
5. France	11. Russia	17. Netherlands	23. Hong Kong	29. Denmark
6. Italy	12. Brazil	18. Saudi Arabia	24. Norway	30. South Africa

Figure 3: Ranking of Projected Export Markets - Overall FinTech Sector (2017)				
1. Japan	7. Netherlands	13. Spain	19. Norway	25. Portugal
2. China	8. Australia	14. Belgium	20. Singapore	26. Mexico
3. UK	9. South Korea	15. Taiwan	21. Russia	27. Poland
4. France	10. Switzerland	16. Sweden	22. Austria	28. Israel
5. Germany	11. Hong Kong	17. Denmark	23. Brazil	29. Philippines
6. Canada	12. Italy	18. Ireland	24. Finland	30. Thailand

greater market for FinTech products. Finally, as FinTech development requires internet access, ITA estimated broadband use as a percentage of population (2017) to represent the portion of a country's population able to use FinTech products. Figure 3 shows the 30 top projected FinTech sector markets.

The differences between the two rankings primarily relate to overall financial development. The projected FinTech payments ranking is independent of overall financial development, which is a rough proxy for economic development. ITA finds that emerging markets, such as Russia, Brazil, Mexico, Turkey and Indonesia, rank much higher in this index. The overall projected FinTech sector rankings follow more closely with general economic development rather than solely market size.

Figure 4: Demographics for Selected Regions

Region	15 to 19	20 to 29	30 to 44	60+
Asia and Australasia	7.4	16.1	22.2	13.5
East-Central Europe	4.7	12.3	23.1	23.2
G7	5.7	12.3	19.2	25.3
Latin America	8.6	16.3	22.2	12.2
Middle East & Sub-Saharan Africa	9.4	16.5	19.1	6.6
North America	6.4	13.7	19.4	21.6
W. Europe	5.2	11.4	19.4	25.9
World	7.3	15.5	21.6	14.8

Source: Economist Intelligence Unit

Industry Overview and Competitiveness

Causes for the FinTech Emergence

Technology

Several factors help explain FinTech's emergence as a growth sector. The first is developments in technology, including social networks, big data analytics and mobile access. Electronic applications, marketplace funding models and people-based marketing are combining to give FinTech options an increasing advantage over traditional financial platforms.[4]

Faster payments networks reduce the time to move money between accounts from two to three days to seconds, and big data allows merchants to increase product sales by combining analytics and marketing to speed new products to market, improve service offerings and make traditional processes more efficient and transparent.[5 6]

Bitcoin and cryptocurrencies allow for the de-centralized transfer of assets without a central clearing authority.[7] The technology – distributed ledgers, also known as blockchains – that underpins Bitcoin, however, may prove highly disruptive to the way the financial services industry works. Most financial transactions require the ability to guarantee and track assets as they move from one ledger to another. There is growing interest in using blockchains as a way to authenticate digital transactions and provide irrevocable proof of ownership with a traceable history.[8]

Finally, social networks facilitate referrals and create communities that lower customer acquisition costs, make possible lower account value marketplaces and facilitate the growth of the sharing economy. All of these developments are spurring innovation in the FinTech sector.[9]

Regulation

The second important FinTech driver is regulation. FinTech companies are benefitting from changes in the competitive and regulatory landscape after the 2008 financial crisis.[10] Larger, more-established financial services providers, particularly banks, must comply with additional regulatory and capital requirements that are at present not required for FinTech companies. A lack of such requirements may make it cheaper or easier to provide particular services or reach certain market niches.[11]

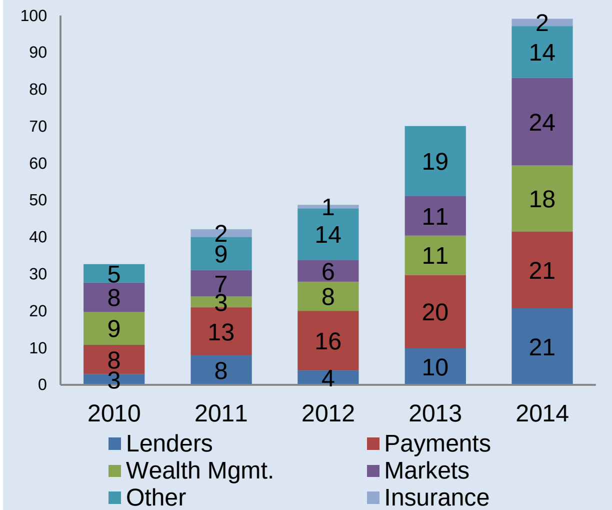
All financial services companies, including FinTech companies, also benefit from strong consumer protections that help insulate consumers from fraudulent charges and identity theft.

Demographics

The third factor driving FinTech's growth is favorable demographics. Increasing mobile-first habits, the willingness of consumers to share experiences and the desire for very specific information characterize the millennial demographic (roughly those between the age of 18 and 34). Millennials constitute a significant portion of the population in most countries.[12]

A 2014 survey on consumers and mobile financial services indicates that mobile banking use (among those that have both mobile phones and bank accounts) is 60 percent for those in the 18-to-29 age range and 54 percent for those in the 30-to-44 age group. By comparison, only 13 percent of individuals age 60 or older reported having used mobile banking.[13] Another survey found that the use of FinTech services is greatest among younger, wealthier customers. Early FinTech adopters tend to be younger, urban and higher-income customers.[14] Figure 4 roughly shows how developing market demographics (compared to the G7 countries) favor these trends.

Figure 5: Number of Fintech Deals in NYC by Sector



Transition from Cash Economy

Before smart phones and social networks, governments' decisions on how to pay their transfer payments were already driving trends in the FinTech sector. Only 25 percent of developing countries process their cash transactions and social benefits electronically, yet 90 percent of governments see the need to improve the overall efficiency of their payment systems.[15] The World Bank found that governments can save up to 75 percent by using electronic payment programs to eliminate the handling, transportation and distribution fees associated with cash-based payments and help eliminate the risk of fraud and theft. Electronic payments reduce corruption, increase accountability and are quicker in response to a natural disaster.[16] Electronic payments also expand the consumer market, increase banking access to the unbanked, improve macroeconomic efficiency and encourage entrepreneurial activity.[17]

FinTech Subsectors

There are four main roles that financial services companies perform in any economy: facilitate payments, create credit, manage wealth and manage risk.[18] Payment services, with a 17.6 percent of the FinTech market share, have the highest adoption rate among FinTech products, followed by savings and investments at 16.7 percent, insurance services at 7.7 percent and online borrowing at 5.6 percent.[19] Figure 5 demonstrates that the NYC market for FinTech generally confirms the relative shares of these subsectors, which are described in greater detail below.[20]

Figure 7 on page 5 provides additional information on ways in which FinTech companies in any subsector can compete, complement or merge with existing financial service providers. This ability to cause change in the market is why FinTech companies are often described as disrupters.

Payments

Banks extract over $1 trillion in revenues a year from over $400 trillion of annual payments, according to the Boston Consulting Group. As consumers in both rich and poor countries increasingly pay with credit cards or online and on their mobile phones, that figure could reach over $2 trillion by 2023. Banks currently dominate this ecosystem, which includes technology providers and payments networks—mainly Visa and MasterCard.[21] FinTech newcomers, however, are increasing the size of the overall payments sector and may be cutting into bank margins. The next payment frontier is online payments, particularly mobile, as payment systems that are easy to install on a website and help boost the conversion rate from browser to buyer are attractive company investments.

Figure 6: Status of Payments Modernizing

Pre-Design	Design Phase	Build Phase	Live	
	Neth.		UK	Korea
	Norway		Brazil	Japan
	Turkey		Poland	Switz.
Canada	Colombia	Australia	India	Denmark
Kazakhstan	Spain	Saudi Arabia	South Africa	Sweden
Indonesia	Bahrain		Mexico	Czech Republic
Thailand	U.S.		Chile	Taiwan
	Finland		China	Nigeria
	EU		Singapore	

Source: McKinsey Global Payments Map, Global Payments 2015.

The payments ecosystems will evolve largely according to local circumstances. Every country has its own payments system based on traditions and consumer preferences. Figure 6 shows that regulators can and do upend entire payments systems. USG regulators are planning to speed up bank payments, after putting pressure on the banks to reduce their credit and debit card fees.[22] Figure 6 above shows the status of payment infrastructure modernization. Four of the five countries discussed in this report have recently modernized their payment system. The other case study country, Australia, is in the build phase.

Money Management

A number of automated wealth managers offer financial advice for a fraction of the price of a real-life adviser. The platforms work by using algorithms to suggest a mix of assets (usually index funds) to invest in based on a customer's investment characteristics.[23] New entrants are using automated advising strategies and viral customer acquisition strategies to efficiently scale asset gathering efforts. The platforms also benefit from changing demographics and consumer behavior that favor automated and passive investment strategies, a simple and transparent fee structure and attractive unit economics that allow low or no investment minimums.[24]

These "robo-advisers" are doubling the assets under their management every few months, but their combined assets still run to less than $20 billion compared with $17 trillion for traditional money managers.[25]

Equity Crowdfunding

Equity crowdfunding is sourcing funding across a network of supporters and is potentially the most disruptive of all of the new FinTech platforms. Equity crowdfunding is empowering networks of people to control the creation of new products, media and ideas and is raising funds for charity or venture capital. Equity crowdfunding reached roughly $10 billion in 2014, up from $1.5 billion in 2011.[26]

Equity crowdfunding is an appealing option for small and medium-sized companies (SMEs), some of which have struggled to raise capital in recent years as increased capital requirements on larger banks make SME lending less appealing.[27] A range of FinTech ventures are trying to fill the gap in SME financing. Applying FinTech's data-heavy model for consumer lending to SMEs is difficult as there is much less readily available information to determine a business's creditworthiness.

Equity crowdfunding attractiveness is as much about a less onerous and faster application process as about accessing better interest rates. On the other hand, usury laws that cap interest rates for consumer loans do not apply to business credit, so FinTech rates can be higher than those provided by traditional banks as many borrowers turn to peer-to-peer funding only after their banks have rejected them. New models are emerging (e.g., Square) that enable small businesses and individuals to process credit-card payments. Some of these platforms have started offering cash advances to their customers. FinTech companies are also moving invoices onto electronic platforms, allowing the invoices to be auctioned on a platform or securitized.[28]

FinTech companies that are able to leverage payment and other diverse data with faster processing, higher approval rates, reduced collateral requirements and lower risk of default will be very attractive sources of capital for SMEs that traditionally are neglected by established financial institutions in many markets.[29]

Crowdfunded equity money usually involves handing a stake in the business to the new backers. In the United States, it is common for entrepreneurs to use credit cards to fund their new businesses. This may be about to change as equity crowdfunding is popularized.

Figure 8: Equity Crowdfunding	2011	2012	2013	2014
	$1.5 billion	$2.7 billion	$5.1 billion	$10.0 billion

Source: Crowdfund Insider

Marketplace lending

The rapid growth of marketplace lenders or "peer-to-peer" lenders has been one of FinTech's most visible successes. Marketplace lenders are similar to other pioneers of the "sharing economy." Like ride sharing companies such as Uber, market lenders are making available a commodity (in this case, money) they do not provide themselves. The FinTech platforms make a profit from arrangement fees rather than from the spread between lending and deposit rates.[30]

Figure 7 : How Disrupting Financial Technology Schemes will Change the Role of Traditional Financial Institutions

1. Compete with an alternative network of financial providers

- A network of innovative financial services providers emerge around alternative schemes
- These services provide customers a meaningful alternative to financial institutions by keeping money entirely within the alternative schemes

2. Facilitate alternative financial services schemes as complements

- Traditional Institutions launch financial products that are connected to alternative finance scheme ecosystems.
- Financial institutions may also act as a gateway to alternative financial scheme.

3. Provide leaner, faster financial services options within existing financial institutions

- Alternative financial schemes act as a catalyst for traditional institutions to develop new solutions
- Leveraging elements of alternative schemes, traditional institutions build more streamlined rails for the financial service
- These solutions reduce the advantages of alternative financial schemes and retain the financial service within the traditional financial network

Source: "The Future of Financial Services," *World Economic Forum*

Figure 9: Leading Global FinTech Innovators

Payments	Lending	Wealth Management
Adyen (Amsterdam)	Funding Circle (San Francisco)	Wealthfront (Palo Alto)
FangDD (Shenzhen)	Avant (Chicago)	Robinhood (Palo Alto)
Klarna (Stockholm)	Credit Karma (San Francisco)	Motif Investing (San Francisco)
Qufenqui (Beijing)	Kabbage (Atlanta)	Personal Capital (Redwood City)
iZettle (London)	Lending Club (San Francisco)	Betterment (New York)
TransferWise (London)	Lufax (Shanghai)	LearnVest (New York)
Square (San Francisco)	Ondeck (New York)	EToro (London)
Stripe (San Francisco	Prosper (San Francisco)	Motifinvest (San Francisco)
	Affirm (San Francisco)	
	Sofi (San Francisco)	
	Prospa (Sydney)	
Digital Currencies	**Crowd Funding**	**Retail Banking**
Coinbase (San Francisco)	Circleup (San Francisco)	Kreditech (Hamburg)
	OurCrowd (Jerusalem)	Atom (Durham, UK)
Insurance/Health	**Other**	
ZhongAn (Shanghai)	IEX (New York)	
Oscar (New York)	Secure Key Technologies (Toronto)	
Collective Health (San Mateo)	Xero (Wellington, NZ)	
Policybazaar (Gurgaon, India)		
Knip (Zurich)		

Source: FinTechinnovators.com

Marketplace lending has grown quickly since the financial crisis, benefitting from low interest rates, low default rates, an improved lending process and a scarcity of consumer credit during the economic recovery. Marketplace lenders' efficient cost structure allows also for interest rate arbitrage. The five biggest platforms for consumer lending (Lending Club, Prosper and SoFi, all based in San Francisco, and Zopa and RateSetter in London) have so far issued nearly a million loans at the rate of well over $10 billion in loan amounts a year. These numbers are still dwarfed by the $3 trillion of consumer debt outstanding in the United States alone. The sector's lending, however, is doubling roughly every nine months, expanding into SME, student loan and mortgage lending. Goldman Sachs estimates that when the marketplace lending industry comes of age, it could reduce profits at America's banks by $11 billion, or 7 percent.[31]

Although most of the money for marketplace lending comes from institutional investors, the FinTech model is very different from a regulatory point of view, as those who lend money through peer-to-peer platforms are not guaranteed by the state (unlike depository institutions deposits that support lending) and are not susceptible to runs.[32]

A good example of marketplace lending's allure is using customer transaction history to underwrite loans when other credit information is scarce. In Australia, OnDeck has partnered with local companies to lend on the basis of accounting data. In China, e-commerce site JD.com recently partnered with U.S.-based ZestFinance to offer micro loans to SMEs and entrepreneurs by using machine-learning technology to score small businesses on the basis of diverse data. The result is faster processing, higher approval rates, reduced collateral requirements and lower risk of default. The customers also gain through convenience, accessible loans and favorable interest rates.

By contrast, banks across Asia have traditionally neglected the SME segment, largely due to the difficulty of assessing risk. If they are not able to support market-place like lending practices, incumbent banks risk ceding dominance of this profitable segment to digital innovators.

Top FinTech Companies

Some of the most innovative FinTech companies are listed in Figure 9. Many of these companies are located in the United States, principally in Silicon Valley and New York. Others are located across the globe, with headquarters in China, the UK, India, Canada and Germany, among other countries.

FinTech Infrastructure

The infrastructure needed to support a vibrant FinTech sector includes telecommunications and widespread electronic payment acceptance. Big-data-supported credit information systems, consumer education programs and sound and efficient regulation that support innovation and provide sufficient consumer protection are also important.

Wireless technology is permitting the leapfrogging of financial services over outdated telecommunication infrastructure. For many FinTech services, smartphones and access to broadband connections will be the big catalyzers of FinTech adoption. Consumers will more quickly embrace FinTech innovations following broader retail level acceptance.

FinTech companies often rely on credit information systems that include non-traditional information, such as rent, utility and employment records. They, however, also depend on traditional credit information that can be improved with the inclusion of both positive and negative borrower records. Financial literacy initiatives promote safe and responsible habits as new FinTech instruments are introduced.[33]

Global Industry Landscape

Global Financial Centers

Cities and countries with robust financial services infrastructures are best positioned to incubate emerging FinTech companies. A global financial center (GFC) is typically home to a cluster of nationally or internationally significant financial services providers, such as banks, investment managers, insurance companies and stock exchanges, which funnel investment towards innovation and growth. A strong financial center connects the wider economy to a global network. All five of the FinTech country cases that are highlighted in this report have at least one financial center, as recognized by an online survey.

This survey also scores each financial center's business environment, finance, infrastructure, human capital and reputation.[34]

Figure 10 shows how cities rank in each of the five categories for global financial centers. The United States has several strong GFCs, including New York (#2), San Francisco (#9), Washington DC (#10), Chicago (#11) and Boston (#12).Los Angeles (#49) is also in the rankings.

Challenges and Barriers

Figure 10: Global Financial Centers – Areas of Competitiveness

Rank	Business Environment	Financial Sector Development	Infrastructure	Human Capital	Reputational & General
1	London	London	London	London	London
2	New York (2)	New York (2)	New York (2)	New York (2)	New York (2)
3	Hong Kong	Hong Kong	Hong Kong	Hong Kong	Hong Kong
4	Singapore	Singapore	Singapore	Singapore	Singapore
5	Tokyo	Tokyo	Tokyo	Tokyo	Tokyo
6	Seoul	Boston (12)	Seoul	San Francisco (9)	Sydney
7	Zurich	Chicago (11)	Zurich	Zurich	Chicago (11)
8	Luxembourg	Washington DC (10)	Luxembourg	Chicago (11)	Toronto
9	Toronto	San Francisco (9)	Toronto	Washington DC (10)	San Francisco (9)
10	Chicago (11)	Zurich	Chicago (11)	Boston (12)	Boston (12)
11	Sydney	Seoul	Sydney	Toronto	Zurich
12	Dubai	Sydney	Dubai	Seoul	Vancouver

Source: The Global Financial Centres Index 18, 2015

Figure 11: Regional Financial Inclusion

	Account (% age 15+)	Borrowed from Financial Institution (%)	Mobile Accts (%)	Received Domestic Remittances/ past year (%)	Used Internet to Pay Bills or Purchase (%)	Saved to Start or Expand Business (%)
East Asia & Pacific	69	11	0	21	16	21
Europe & Central Asia	51	12	0	16	12	5
High Income OECD	94	18	0	-	54	9
Latin America and Caribbean	51	11	2	11	7	11
Middle East	14	6	1	11	2	5
South Asia	46	6	3	12	1	7
Sub-Saharan Africa	34	6	12	37	2	23

Source: World Bank Financial Inclusion Data, Global Findex, 2014

Global Barriers for the Adaption of FinTech

Product awareness may still be an obstacle for FinTech's growth. According to a survey for digitally active respondents who have not used two or more FinTech products in the past six months, 53 percent said they were unaware the products existed, 33 percent said that they do not have a need to use the products, 28 percent preferred to use a traditional financial services provider, and 21 percent said they do not understand how the products work. Trust, however, has not been a major obstacle to FinTech use, with only 11 percent of respondents saying they do not trust FinTech products.[35]

Understanding consumer culture is also important for U.S. FinTech companies looking to enter a new market. For example, in the United States, McKinsey has identified five different consumer segments for digital wallets. According to the report, each of these niche markets requires FinTech companies to present a differentiated marketing and business approach to be successful.[36]

Regulations to support a sound FinTech system include regulations addressing consumer protection issues and promoting competition in the marketplace. There is also the danger of the regulatory environment within a certain country becoming less favorable to FinTech. If regulations ease for traditional financial services companies or tighten for emerging ones, the balance of growth could change dramatically.[37]

The U.S. government (USG) can play a role in stimulating greater U.S. competiveness in these markets through participation in trade and investment agreements, such as the Trans-Pacific Partnership (TPP), the Transatlantic Trade and Investment Partnership (T-TIP) and the Trade in Services Agreement (TiSA). Additionally, the United States can work to lower or remove trade barriers to FinTech business through bilateral engagement and informal dialogues in select FinTech markets.

Opportunities

Technical Assistance & Promotion

As Figure 11 shows, the FinTech market varies across regions as well as across individual markets and has different characteristics globally. Within the United States, for example, New York and California operate as distinct FinTech clusters. Outside the United States,

International Trade Administration staffs that understand these market differences are in a good position to provide a starting point for FinTech companies looking to meet business partners and get more information about the regulatory structure in a

Figure 12: Benchmarked Ranking of FinTech Markets

Region	Talent	Capital	Policy	Demand
California	1	1	6	2
New York	3	2	7	1
UK	2	3	1	3
Singapore	4	7	2	6
Germany	6	4	5	5
Australia	5	5	3	7
Hong Kong	7	6	4	4

Source: UK FinTech on the Cutting Edge, Ernst Young, 2016.

new market.

Figure 12 shows how the two principle U.S. FinTech clusters compare to other leading markets. Figure 13 provides further information about the demand, capital and talent for these markets. The figures show that the United States competes very favorably in talent, capital and demand. The following discusses government actions that promote FinTech markets in the United States and other markets.
The UK has a very helpful regulatory interface for budding FinTech entrepreneurs. The UK's Project Innovate helps innovative FinTech startups navigate the regulatory landscape.

For example, Project Innovate helped influence the creation of four different "levels" of licensing for nonbank payments providers that help FinTech firms adapt to their specific profiles. The UK's licensing structure is designed to be risk-based and not a formulaic solution imposed across the board on all payments companies.

In Europe, a company established in a European Union Member state may 'passport' the licensing rights obtained in one country to another, meaning they can set up their business in London and work in Berlin, Madrid, Paris and Rome without the need for further licenses. This means a payment-oriented FinTech can grow in Europe much more quickly than it can in the United States.

The UK even encourages FinTechs to comply with regulation early, so they can influence regulation in the future and simplify the sector. The government knows that FinTech competitiveness boosts the UK economy, and FinTechs value the government's support as it helps create consumer trust in their services.

The portability of data (banking and other financial data) will likely emerge as a significant issue. FinTech companies seek to link their products to existing financial data to create greater efficiencies or innovative services. The UK has an Open Banking Working Group in progress that would enable customers and SMEs to access bank data.

Low startup costs

According to VentureBeat, FinTech firms need $2 million and two years to start up in the United States, given the number of licenses, audits and waiting times required to comply with FinTech regulations. In the UK and the rest of Europe, a startup requires much less money and time. Tech City UK estimates that London-based FinTech startups benefit from tax breaks and programs designed to foster growth, such as R&D tax incentives that are available to companies that employ fewer than 500 people.

In London, a FinTech company can reasonably expect to go from idea to operation much more quickly than in other countries. More generally and across industries, Figure 14 below shows how the United States compares to other markets in the ease of starting a business. Although the United States is seventh overall (the UK is sixth) in the World Bank's Doing Business, the UK is significantly stronger in its ease of starting a business.

The UK not only has many accelerators and a well-developed FinTech ecosystem but also supports Innovate Finance, an independent non-for profit. Innovate Finance serves as a single point entrance to the FinTech ecosystem; helping connect interested parties to policy officials, regulators, investors, customers, educators and key human talent and commercial partners.

Figure 13: Size, Talent, and Investment for Selected Markets

Region	Market Size ($ millions)	Investment ($ millions)	Staff
California	6,500	5,000	74,000
New York	7,800	1,900	57,000
UK	9,200	730	61,000
Singapore	834	61	7,000
Germany	2,502	539	13,000
Australia	973	275	10,000
Hong Kong	834	64	8,000

Source: UK FinTech on the Cutting Edge, Ernst Young, 2016.

Figure 14: Doing Business: Starting a Business

Market	**2015**	**2016**	**Change**
France	27	32	-4
Germany	107	110	-3
U.S.	44	49	-5
UK	43	17	+26
Australia	7	11	-4
China	127	136	-9
Brazil	166	174	-8
Chile	58	62	-4
India	164	155	+9
Honk Kong	8	4	+4
Japan	81	77	+4
Singapore	6	10	-4
Sweden	32	16	+16

Source: World Bank, Doing Business

[1] "The FinTech Revolution, a Wave of Startups is Changing Finance – for the Better," *The Economist (*May 9th, 2015).
[2] "Adoption of FinTech Could Double Among Digitally Active Consumers within Next 12 Months," *Malta Today* (December 24, 2015).
[3] 'The Future of Finance Part 3: the Socialization of Finance," *Goldman Sachs Global Investment Research* (March 13, 2015).
[4] Ibid.
[5] "The Future of Financial Services: How Disruptive Innovations are Reshaping the Way Financial Services are Structured, Provisioned and Consumed," *World Economic Forum* (June 2015).
[6] "The Future of Finance Part 3: the Socialization of Finance," *Goldman Sachs Global Investment Research* (March 13, 2015).
[7] "The Future of Financial Services: How Disruptive Innovations are Reshaping the Way Financial Services are Structured, Provisioned and Consumed," *World Economic Forum* (June 2015).
[8] "Why Bitcoin May Herald a New Era in Finance," The Economist (May 9, 2015).
[9] "The Future of Finance Part 3: the Socialization of Finance," *Goldman Sachs Global Investment Research* (March 13, 2015).
[10] Ibid.
[11] "The Future of Finance Part 2: Redefining the "Way We Pay" in the Next Decade," *Goldman Sachs* (March 10, 2015).
[12] 'The Future of Finance Part 3: the Socialization of Finance," *Goldman Sachs Global Investment Research* (March 13, 2015).
[13] "Consumers and Mobile Financial Services," *Board of Governors of the Federal Reserve System* (March 2015).
[14] "Adoption of FinTech."
[15] Benjamin D. Mazzotta and Bhaskar Chakravorti, "Who Pays More to Use Cash?," Institute for Business in the Global Context, The Fletcher School at Tufts University, Medford, MA 02115, USA "Received: 15th December, 2013.

[16] "The Journey Toward 'Cash Lite'" *Better Than Cash White Paper* (Accessed in August 2014).
[17] Mark Zandi, Virendra Singh, and Justin Irving. "The Impact of Electronic Payments on Economic Growth, Moody's Analytics. (February 2013).

[18] "Tyro Chief on FinTech Startups bloom in Australia in Next Two Years". *StartUpSmart.* (May 27, 2015).
[19] "EY FinTech Adoption Index" *Earnest & Young Report*. (December 21, 2015).
[24] Graph information. Account Management, Accounting and Finance. Source: Accenture, Partnership Fund analysis of CB Insights
[21] "A Penny Here, a Penny There If You Have Money—and Even If You Don't," *The Economist* (May 9th, 2015).
[22] Ibid.
[23] "Ask the Algorithm: Human Wealth Advisers Are Going Out of Fashion, "*The Economist* (May 9th, 2015).
[24] 'The Future of Finance Part 3: the Socialization of Finance," Goldman Sachs Global Investment Research (March 13, 2015).
[25] "Ask the Algorithm:" The Economist (May 9, 2015)
[26] "'The Future of Finance Part 3: the Socialization of Finance," Goldman Sachs Global Investment Research (March 13, 2015).
[27] "Crowdfunding: Cool, Man," *The Economist (*May 9, 2015).
[28] Ibid.
[29] "Payments in Asia: At the Vanguard of Digital Innovation," *McKinsey on Payments* (October 2015).
[30] "Peer-to-Peer Lending: From the People, for the People," *The Economist* (May 9th, 2015).
[31] Ibid.
[32] Ibid.
[33] The Journey Toward 'Cash Lite." *Better Than Cash Alliance Research*. (August 19, 2015)

[34] Mark Yeandle, "The Global Financial Centres Index 18," Z/Yen Group and Qatar Financial Centre Authority, Long Finance, Financial Centres Future (September 2015).
[35] "Adoption of FinTech Could Double."
[36] Digital wallets in the U.S.: Minding the consumer adoption curve"," *McKinsey on Payments,* Volume 8, #22 (October 2015).
[37] 'The Future of Finance Part 3: the Socialization of Finance, Goldman Sachs Global Investment Research, (March 13, 2015).