



This consists of the **development of financial services based on technological innovation**.⁽¹⁾ Foremost among them is the new payment services like **Paypal's online payment system**, which offers the possibility of doing business on the Internet, such as buying products, payment for services and receiving money through the connection of a PayPal account to a bank account or a credit card; and **NFC (Near Field Communications) technology** which allows purchases to be made by placing a mobile telephone near a payment terminal, without making contact. There are also other ways to try to **facilitate transactions through the use of technology**. For example, card readers for mobiles that resemble existing traditional card payment terminals in the way that they are used.

ORIGIN OF THE INVESTMENT OPPORTUNITY



The **digital revolution**, the growing **proliferation of payments via the Internet** and especially mobile telephone is changing the face of industry payment methods worldwide. Currently, banks have a dominant position, but it has been affected by the emergence of powerful new competitors (technology giants, telecoms operators, mobile manufacturers, distribution companies, start ups ...), that, by expanding their business portfolio, have started to provide services that were exclusively done so by banks.

The current prevalence of the **use of cards and cash is decreasing** and **virtual cards, contactless technology, mobile apps or mobile payment** are beginning to gain momentum.

In addition, companies that sell their products **via the Internet** see that many users **abandon the shopping process at the time of payment**. One of the main reasons is because of the **complex sequence of steps** that they face. For this reason, these companies have the challenge of offering their customers a **simple payment process** and one which users can trust.

LOCATION OF THE INVESTMENT OPPORTUNITY IN THE SECTOR VALUE CHAIN



FinTech is found within the services link. They are **financial services** ranging from payments and transactions, online banking, trading markets, raw materials management, collective financing, development of financial security systems and online advice, to virtual wallets. It is true though that within the FinTech opportunity the services that have been more widely accepted in Spain are payment methods.

DIFFERENTIATING FACTORS OF THE INVESTMENT OPPORTUNITY

CONSUMER/USER	COMPANY/INNOVATION	SOCIETY
<ul style="list-style-type: none"> ● ● ● Innovation ● ○ ○ Price ● ● ● Quality 	<ul style="list-style-type: none"> ○ ○ ○ Operations ○ ○ ○ Supplies ● ● ○ New business lines 	<ul style="list-style-type: none"> ○ ○ ○ Environment ● ● ○ Well-being ● ● ○ Safety

The benefits to consumers of using **new payment methods** are:

- **Speed** and simplification of the payment process.
- No need to carry a wallet.
- **Innovative** way to pay.
- **Immediate confirmation of payment**.
- **Easier** than payment by card or cash.

- FinTech provides businesses with the possibility to open **new business lines** to adapt to users' needs.
- In addition, new means of payment in most cases allow the use of **Big Data**. That is to say, the possibility of using data from users to develop new products such as savings plans adapted to their situation.

- Laws to combat financial fraud and the underground economy favour the **control and recording of operations** when analysing payment methods linked to technology. Something that not only benefits the government in the study of fraud, but also affects the financial control of the people themselves.

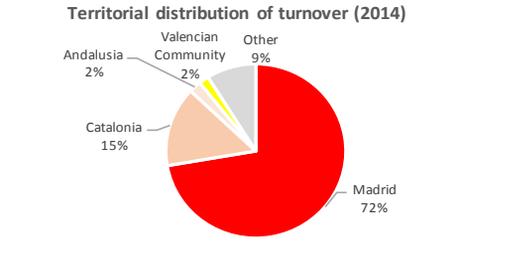
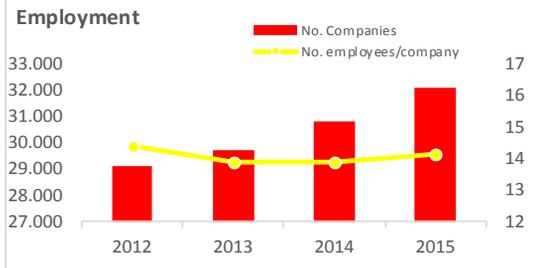
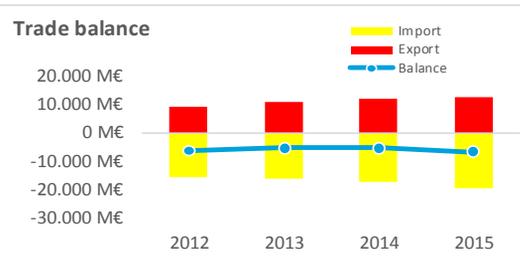
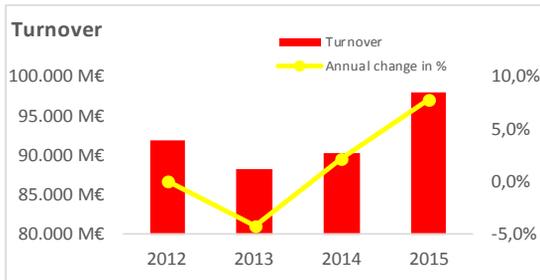
INVESTMENT OPPORTUNITY LIFE CYCLE



Since **2014** a **mass launch of contactless payment technologies** have appeared. The **new means of payments** such as virtual cards, contactless technology, mobile applications, and mobile payment are beginning to break through into Spain, where cash is still mainly used. In Spain, payments via mobile applications are in an **earlier stage** of development than mobile banking or of money transfers via mobiles. However, NFC technology emerged in 2002 as a result of the cooperation of Philips, Sony and later Nokia. Systems like Paypal began to appear in 1998.

Sources: (1): BBVA Innovation Centre - What Fintech is and how startups want to innovate in financial services.

CHARACTERISTICS OF THE ICT SECTOR (2)



SUPPLY

TOP 5 COMPETITORS

#	Company	Net sales	Last available data
1	Paypal*	N. avai.	-
2	BBVA*	N. avai.	-
3	Apple	€237.85 M	2014
4	Kantox	€0.739 M	2013
5	Peer-to-peer lending*	N. avai.	-

* Data not available in the queried database, SABI.

DEMAND

GROWTH

- Payments via mobile telephone have increased **over last years**. In 2015, of the **600-650 million telephones equipped with the NFC system**, it is estimated **5% might be using at least once a month** to make contactless payments in shops ⁽³⁾.
- B2C e-commerce in Spain has seen continuous growth. Thus, the estimated total volume of B2C **increased by 27.5% in 2015** compared to the previous year, reaching 20,745 million euros in absolute terms ⁽⁴⁾

SUCCESS STORIES

Yaap

Yaap is the first company in the world which brings together banks and operators (CaixaBank, Santander and Telefonica) for the development of businesses that are digital, global and open to all. Yaap offers services that are accessible to all people regardless of their bank or mobile operator. Yaap Money allows money to be sent from mobile to mobile easily, quickly, safely and **without providing bank details to third parties**. Yaap already has over 130,000 registered users and 350,000 downloads have been made for different operating platforms (iOS, Android and Windows Phone).

BBVA Wallet

BBVA Wallet allows users (currently restricted to Android smartphone users version 4.4 or higher installed and NFC system) to make **contactless payments by placing their device close to Near Field Communication (NFC)** contactless readers, like those used for contactless credit cards. These applications can be used to pay in shops or on public transport. Money is preloaded on the account using a credit card or debit card. In addition, with this application, card can be configured from the phone and notifications regarding purchases received.

kantox
Tomorrow's FX today

Kantox, pioneering platform in currency exchange. Kantox is dedicated to currency exchange between companies, that is, without bank intermediation (peer to peer), through its online platform. Kantox offers SMEs a solution that, until now, was only available to large companies. Through its platform, it gives customers access to the mid-market exchange rate, updated in real time, allowing for operations without hidden spreads to be performed, thus ensuring complete transparency. Kantox, was one of the **winners of the V Entrepreneurs Campus**. With 7.5 million euros invested since 2011 and a billion euros exchanged, it has become one of the stars in the panorama of the startups in Spain and, thanks to its international vision, also in Europe.



POSITIVE FACTORS FOR INVESTING IN SPAIN

Favourable factors in Spain for the development of the opportunity

High penetration rate of smartphones

In Spain smartphone is the favourite device to access the Internet, with 88.2% and followed by computer with 78.2%. The increase of people who use the Internet stands out. It has increased from 76.1% of Internet users in 2014 to 80.8% in 2014⁽⁵⁾.

Public Administration support

The **General Telecommunications Act** seeks to develop the digital economy and employment, and promote new digital services. In addition, the **SME ICT and e-commerce Plan** aims to get companies to make more efficient and intensive use of digital technologies.

Increased number of Internet buyers

According to the index of Internet buyers, the absolute number of Internet buyers has **increased by 10%** from 18.6 million in 2014 to **20.4 million in 2015**. The total number of Internet users reached **31.7 million**, representing **80.8%** of the Spanish population over 15 years old ⁽⁴⁾.

Social factors and habits

The average expenditure on online purchases stood at €1016, 16% more than in the previous year.
The estimated turnover of the sector in 2015 is 20,745 million euros, which means an increase of 27.5% respect to year 2014 ⁽⁶⁾.

Favourable factors for the sector in Spain

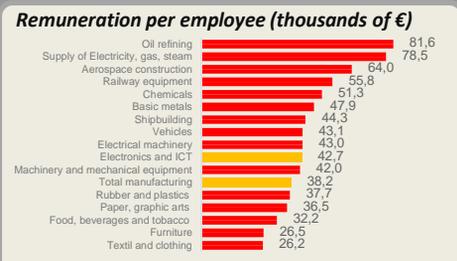
Macroeconomic situation

The Added Value of the information technology and communications sector in 2015 was 45,296 million euros, representing 4.9% of the added value of the Spanish economy.

Sector exports totalled **13,032 million euros**. ⁽²⁾

Labour market

The **average productivity per employee** in the ICT sector is **52,100 euros per year**. Their **average individual remuneration** is **42,700 euros per year**. The **Unit Labour Cost** accounts for **81.8%** of the ratio between the remuneration per employee and the individual productivity (productivity defined as value added per employee). ⁽⁷⁾



Graph created using data from the Sectoral Presentation: Electronics and ICT.

Incentives

The Ministry of Energy, Tourism and Digital Agenda allocated **80 million euros to R&D in the ICT sector in 2016 to promote high value technologies** in industries of the future (Components and Systems, Internet of the future, High Performance Computing (supercomputing), robots and autonomous systems, Internet of Things, cloud computing solutions for mass data processing...), Cybersecurity and digital trust, agrifood and environmental management, energy efficiency, transport and logistics, and digital content.

I+D+i

There are 15,736 **innovative companies** and the **percentage of innovative companies** is roughly **28.5%**, spending a total of **13,6747 million euros** on innovation.⁽⁶⁾

Talent

Installs in Spain Google Campus to the world's largest entrepreneurs, ahead of London, Seoul and Tel Aviv, demonstrating confidence in the creativity and talent in the country by leading companies the sector. These facilities provide work areas and technical advice for the implementation of new projects. TechHub is involved in this project which manages a global community of digital entrepreneurs.

Geographic location

Spain is **within reach of three main regions**: the **European** region, the **Mediterranean** region and the **Atlantic** region. Spain is considered to be the **gateway between North Africa and Europe**, and a key link to **Latin America**, not only because of its geographical location but also because of its strong historical and cultural ties with the region. In Spain the **Canary Islands** play a key role with regards to **maritime traffic with West Africa**.

Technological and research infrastructure

Spain has a very advanced technological infrastructure as shown in areas such as: the presence of **84 technology parks** that house more than 5,000 technology companies and a **broadband coverage of 96.5%**, one of the few OECD countries that has had included in its legislation since 2012 the **universal obligation of 100 Mbps broadband supply**. In the **business** arena, broadband penetration exceeds that achieved in the European Union. In 2016 **99%** of **companies in Spain** that access the Internet do so by broadband ⁽⁹⁾.



Graph created using data from Spanish Foundation for Science and Technology.

Transport infrastructure and logistics networks

There are **250 airlines** operating in Spain in its 47 airports; its high-speed rail network is the 2nd best in the world and the best in Europe; it is ranked **1st in the EU for its motorway network**; and it has excellent sea connections to its **46 ports** distributed along the Atlantic and Mediterranean coasts.

Sources: (4) Study of B2C e-commerce 2015. ONTSI 2016 edition. (5) The Information Society in Spain 2015-Telefónica. (6) Study of B2C e-commerce 2016. (7) Electronics and ICT Sectoral Presentation. April 2015. MINETAD (8) Innovation in companies Survey 2016 (9) ONTSI.