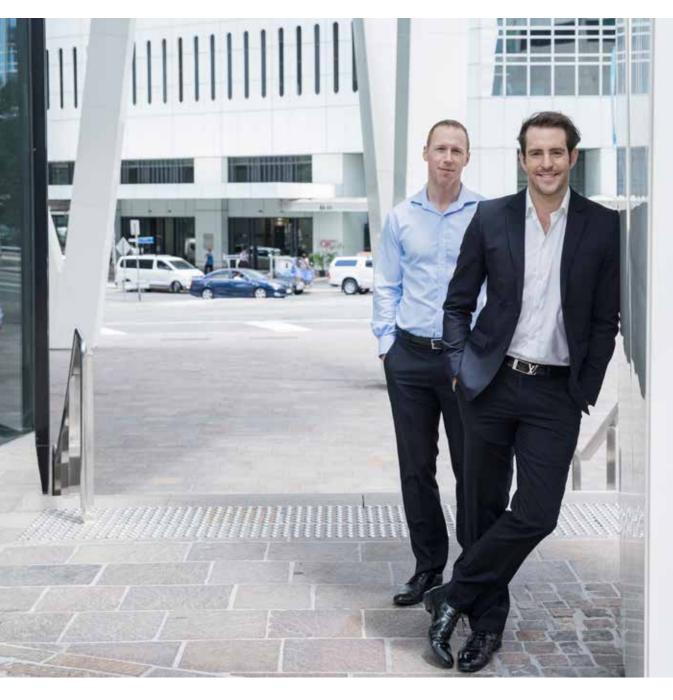
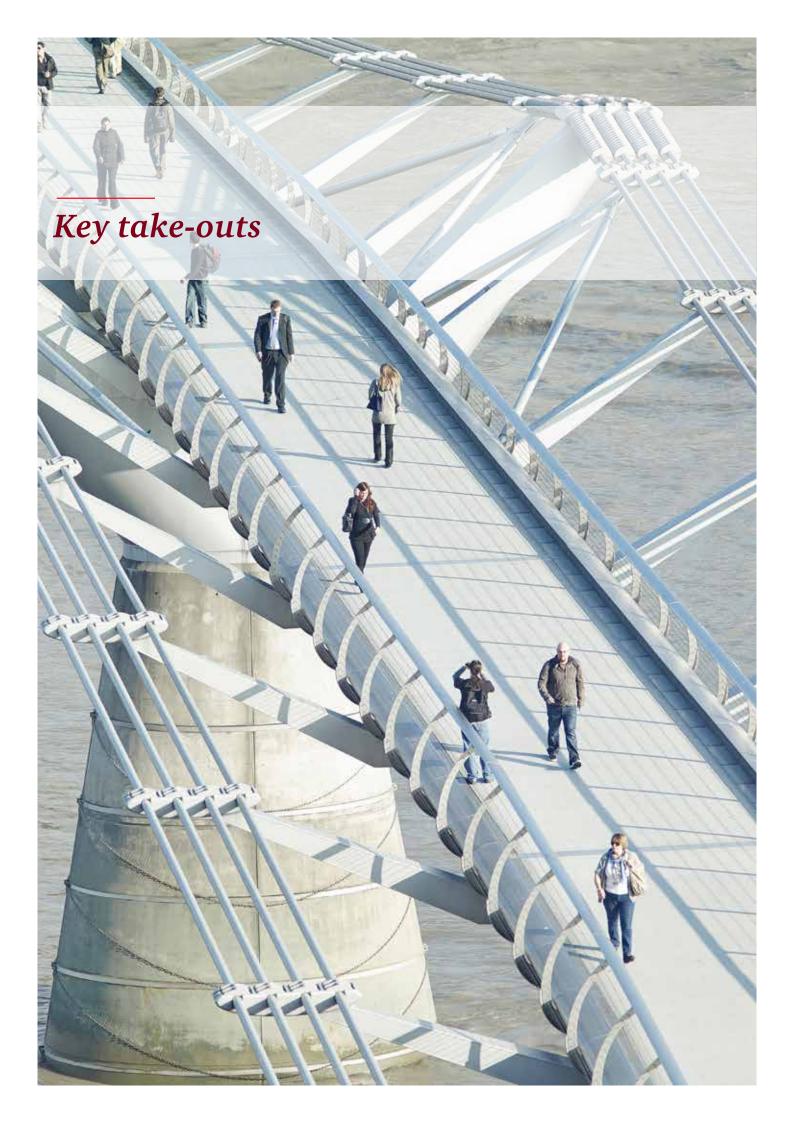
Robo Advisory moves forward in Italy

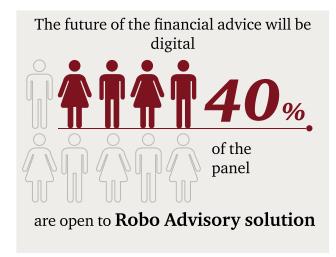


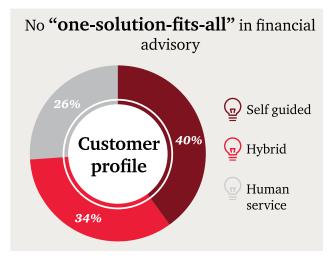




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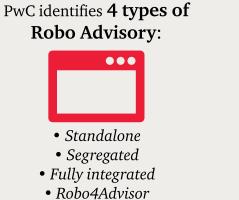






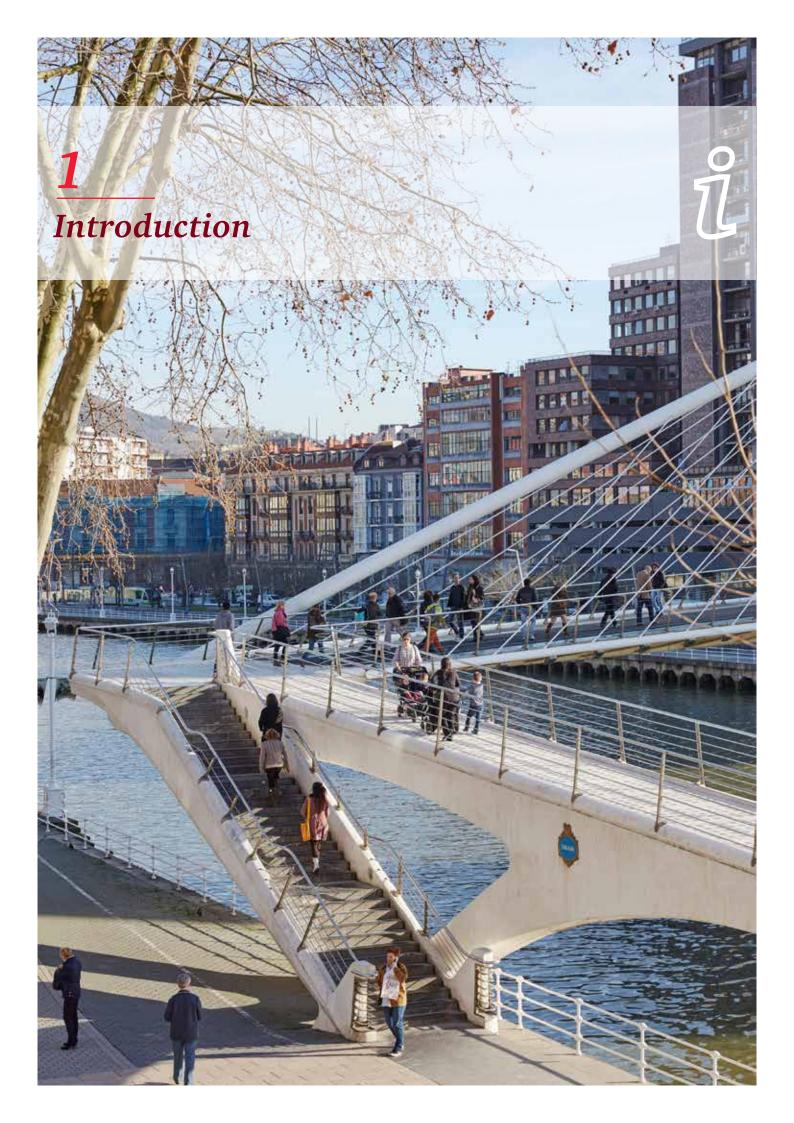






Banks should consider Customer
Base, Service model, Technology

in defining their value proposition in order to develop a Robo Advisory solution



1.1 The landscape of financial advisory and key drivers of change

The Wealth Management industry is in the middle of a crucial transition. Strong regulatory, technological, and economic forces are pushing industry players to revisit their business models and value propositions.

Regulation

Regulators are increasingly putting pressure on Wealth Management players. Whilst regulations, such as MiFID II, pose several new challenges to financial institutions, they can also be seen as an opportunity as they force industry players to re-invent their economic proposition. The new envisioned independent advisory model pressures players to redesign and simplify their fee structure. This is an opportunity for those players that adopt the advisory fee-only revenue model since they are recognised as the ones with no or limited conflict of interests when advising clients. Their independence from product providers' rebates may make them the first choice advisors for clients.

Technology

The combination of smarter apparels, more powerful algorithm-based engines, sharper analytics techniques, as well as social networks technology do enable new ways to interact with clients and respond to their needs. FinTechs and Wealth Managers see in digitisation a way to enhance the customer experience, by leveraging on the greater amount of data available, and to make efficiencies to the end-to-end process with artificial intelligence and machine learning.

Demographic trend and wealth distribution

Millennials and, even more so, digitally native generations, given the greater amount of information at their disposal, have begun demanding greater transparency, in line with that demanded by institutional investors, and highly personalised investment solutions. The aging population requires the development of new high value-added solutions such as financial planning and succession that allow for greater stability during retirement and a smooth and efficient transmission of wealth.

Furthermore financial institutions need to tackle the margin squeeze. Players will need to revise their offering aiming for high value-added solutions, that best cater clients' needs and in particular, corporate advisory and financial planning with particular focus on complimentary retirement solutions.

The rise of Robo Advisory

Many FinTechs have further accelerated this process by delivering investment platforms that use algorithms

to support the entire investing process - from setting financial goals to portfolio re-balancing and monitoring - whilst bringing more transparent, traceable, efficient and customer centric standards along the overall value chain.

Robo Advisory stems from a wider FinTech movement seeking to disrupt the financial services industry and to make the service accessible to a wider range of customers. It provides investors with low cost Wealth Management solutions defined by algorithm-based asset allocation. This kind of platform profiles customers via short questionnaires, usually online or via mobile app, supports them in financial planning and delivers personalised investment recommendations based on risk management and portfolio optimisation techniques.

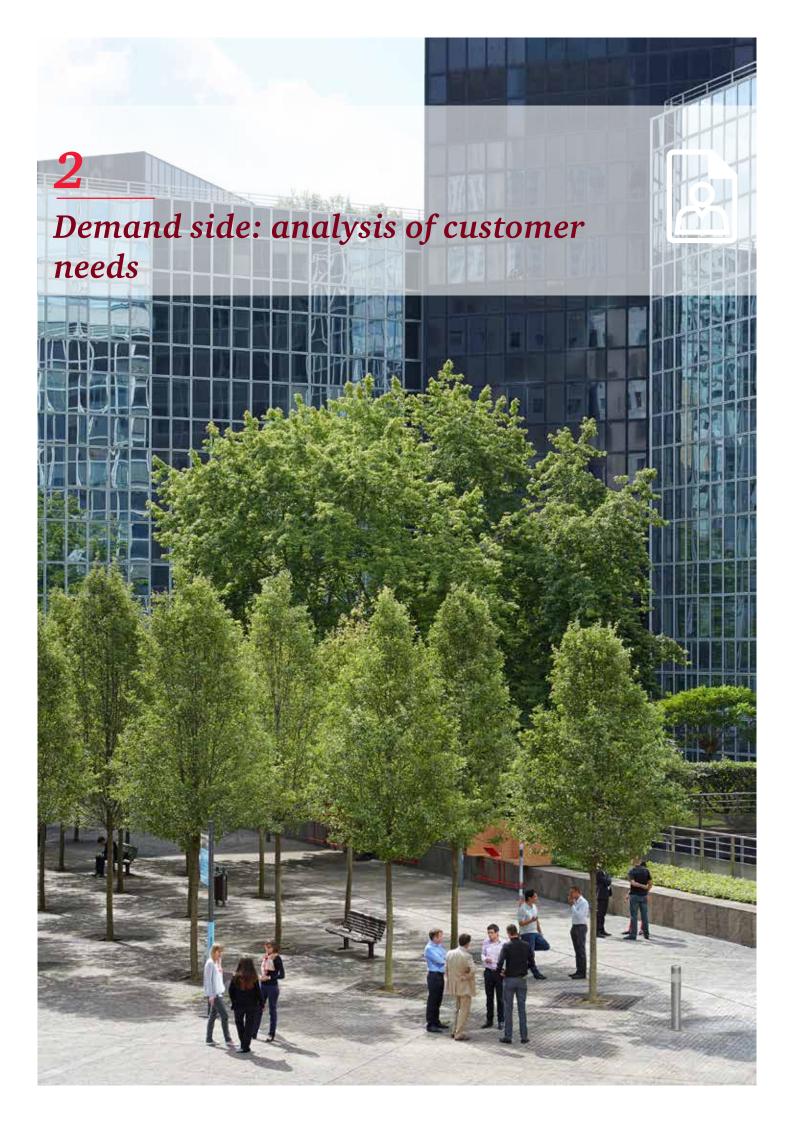
Robo Advisors seek to disrupt the traditional asset and Wealth Management model by disintermediating the service with Direct-to-Consumer (D2C) platforms. These platforms provide an easier, faster, and more user-friendly investment based solutions to both end investors and asset and wealth managers.

D2C platforms propose ETF or mutual fund asset allocations with other asset classes offered in more premium services. The heavy focus on ETFs is explained by the fact that, like mutual funds, these offer access to a wide range of instruments yet they allow for greater transparency, as they are listed and thus their price is readily accessible and have both lower management fees and entry requirements and allow investors to increase their portfolio diversification.

Based on this, PwC tried to look at the effective market possibility of that and guide the banking market on the effectiveness of this new technology.

The report is structured so to anylse to focus on the main variable that could change the market. In particular:

- **Demand side (chapter 2):** PwC conducts a research on the market in order to understand the main potential Robo Advisory users and the customer expectations in terms of service model and activity
- Supply side (chapter 3): we look at the the different market platforms and business models active in the market and particular focus on the pioneer (US/UK).
- **Regulation (chapter 4):** we analyse the different regulation applicable to the topic in order to look at constraint for the bank
- Business model (chapter 5): the combining anylsis of the previous chapters define the future change in the advisory market. PwC analysed the different business models applicable to the bank and what could be the best solution for the Italian market at this stage.

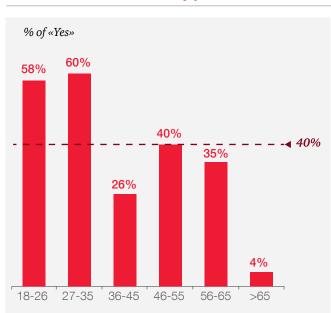


PwC conducted a customer survery* in Italy to understand what kind of advisory services people expect and whether they are ready to adopt a fully automated advisory solution. The analysis shows that:

- The future of advice will be digital: 40% of interviewees are positive of the adoption of fully automated advisory services. We expect this percentage to grow in the future since new generations are more likely to adopt automated advisory services.
- 2. In Italy retail customers reveal different behaviors and needs in investing. They form three main groups with specific profiles.
- 3. No "one-solution-fits-all" solution may fit the needs of all 3 customer profiles. Therefore, we would not recommend Financial Institutions build only one advisory model unless they target one customer profile.

2.1 The future of advice will be digital

Would you receive investment recommendations from an automated advisory platform?



Our research shows that the future of advice will be digital. New generations are more likely to adopt Robo Advisory services.

- A big portion of the population in Italy is currently positive to the adoption of an automated solution in investing, although the supply in the country is still limited and immature.
- If we sort the sample in the range of 18 35 years of age, adopters grow from 40% to 59%. In 10 years' time the majority of the population under 45 will be willing to adopt Robo Advisory services more than
- Even within the elderly population there is a subsegment (22%) whose propensity to Robo Advisory services is similar to the youngest, i.e. 59%.

The key reasons why adopters opt for a fully automated advisory service (self-guided) is the need of an always-on-service, more reliable, transparent and independent than the one delivered by a financial advisor.

Conversely, non-adopters would reject a fully automated service because there is no human interaction when handling finances. They feel uncomfortable to interact with the bank via digital channels, need reassurance of their investment decisions and cannot understand the rationale behind the given recommendations (i.e. Robo Advisors are a black box).

2.2 Customer profile

Our customer research confirms that only ¼ of the population (the Traditional customer) is best served by the traditional financial advisory model whereas the remaining ¾ of the population requires that Banks innovate the advisory model through use of digitisation and automation.

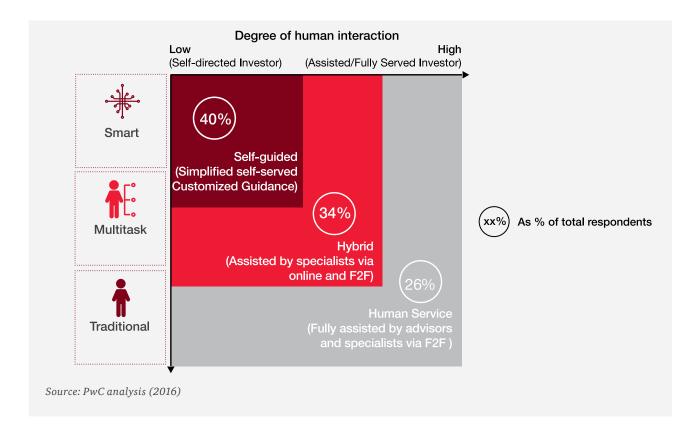
In Italy retail customers reveal 3 different profiles with different behaviours and needs in investing:

- 40% of the respondents is Smart
 - The Smart customers search for easy, simple and digital investment services. They are not satisfied with the current banking services levels, and do not accept low-quality solutions. These customers look for smart advice to optimise the use of their liquidity, when available, as well as to obtain better performance than market portfolios. They feel comfortable with investing on their own across the complete spectrum of products.
- 34% of the respondents is Multitask

The Multitask customers search for multi-channel investment services. They are "almost" satisfied with the current banking services levels. However, they expect financial advice to be delivered on digital channels, not just face-to-face. These customers look for advice to improve their mediumlong term wealth with medium-to-low appetite. They do not feel extremely comfortable with investing on their own, yet need to take control over their investments. They show a preference not only for bonds, but also for securities and funds.

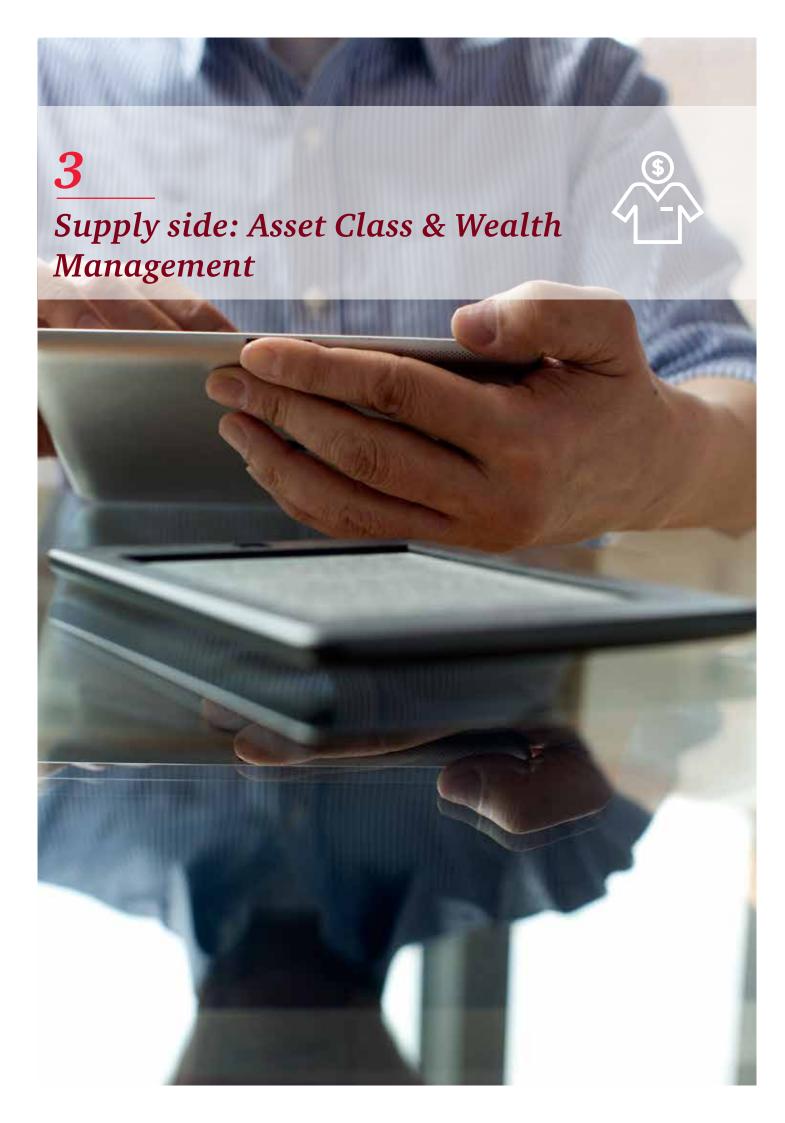
- 26% of the respondents is Traditional
 - The Traditional customers search for face-to-face investment services. They are satisfied with the current banking services levels and expect a closer relationship with a trusted financial advisor. These customers look for advice to maintain the value of their wealth, since they have low appetite to returns and risk. They feel uncomfortable with investing on their own. However, they need reassurance that the financial advisory process and products are transparent and safe.

2.3 No "one-solution-fits-all" in advisory



Banks should deliver more than one advisory model to best respond the 3 customer profile needs.

- A Self-guided advisory model is appropriate for Smart customers. This model delivers financial advice in a self-service mode through a fully automated process (Robo Advisory) that guides customers from self-profiling, to financial planning, portfolio optimisation and order execution. A selfguided advisory model is an algorithm-based system that matches portfolio models to customer financial targets and risk profile, and rebalances customer portfolios against market changes, liquidity events, etc.
- A Hybrid advisory model is appropriate for Multitask customers. This model delivers financial advice both in self and help mode to give customers the option to validate the financial plan and portfolio rebalancing proposals through discussion with a virtual Financial Advisor. A Hybrid model is an algorithm-based system that works with the same rules of the Self-guided model previously described, yet delivers a human based customer experience through a digital interaction.
- A Human-touch advisory model is appropriate
 for Traditional customers. This model delivers
 financial advice through human beings. However,
 we recommend that Banks build algorithm-based
 tools to manage the end-to-end advisory process
 (robo-for-advisory). In this case the algorithm-based
 system may work with simpler rules than those
 underpinning the Self-guided model previously
 described since they will not replace the financial
 advisor role.



3.1 Overview of the Robo Advisory offering

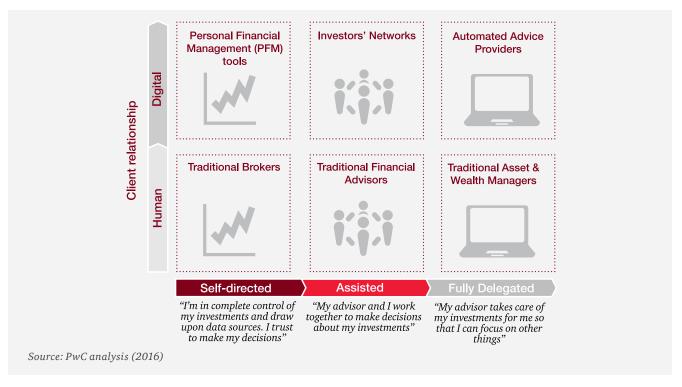
The following analysis, which seeks to compare US players, which are the pioneers in the sector, with EU and Italian players, aims to help banks define their own service model and the pricing of such service.

The comparison of the different services seeks to define market standards and best practices as well as possible differentiating factors, which could be adopted to increase value.

Four dimensions have been taken into consideration: Availability, Target Customers, Product, Terms of service.

Players analysed include both FinTechs, players with a strong technological imprint that seek to disrupt the traditional advisory models, as well as traditional players developing or acquiring Robo Advisory platforms.

The aim of the section is to analyse the digitalisation of the Wealth Management sector as a whole, meaning that Personal Financial Management Tools, investors' networks and automated advice providers have all been taken into consideration.



The main takeaways form the analysis:

- In the US, players mainly compete on price and have low entry requirements so as to target a larger client base
- European players still have more traditional models and service offerings, with online players mainly target HNWI, however the investors network model is growing
- The Italian market is in its early development stages: 2015 seems to have been a pivotal year with several traditional players entering or assessing the Robo Advisory market segment

Analysis of the different fee structures among the different geographies highlights that US players have the lowest fees. The lower fees of US players may be justified by the lower sophistication of the services offered. Most US players, unlike European and Italian players do not offer the aid of traditional human advisors. The focus of US players is to achieve the lowest possible price as to target the largest possible customer base. Even in periods of higher volatility, as was the case towards the end of August of 2015, client interaction was minimal.

European and Italian players seem to target more high-end costumers as demonstrated by both the higher minimum initial required investment and the higher fees. In particular, Italian players show the highest fees as Italian players have the strongest ties with the traditional Wealth Management model.

High fees and high minimum initial required investment are typical also in the Swiss market.

3.2 US market, a low cost solution to professional financial advisory

	Player 1	Player 2	Player 3	Player 4	Player 5	Player 6	Player 7
Fees (% on AuM)	0% - 0.25%	0.15% - 0.35%	0.49% - 0.89%	0.5%	none	0.30%	\$9.95
Minimum deposit	\$500	\$0	\$25k	\$10k	\$5k	\$50k	\$250
Channels	Pc, mobile, tablet	Pc, mobile, tablet	Pc, mobile, tablet, apple watch	Рс	Pc, mobile, tablet	Pc, mobile, tablet	Pc, mobile, tablet
Country of availability	Only US	Only US	Only US	Only US	Only US	Only US	Only US
Customer Target	Retail, affluent	Retail, affluent, B2B	High/Very Ultra net worth individuals	Retail, affluent	Affluent, upper affluent	High/Very Ultra net worth individuals	Retail, affluent, B2B
Products	ETF	Fund & ETF	Fund, ETF, securities	ETF	ETF	Fund & ETF	Stocks 8 ETF

PwC analysis on the following players: Wealthfront, Betterment, Personal Capital, Future Advisor, Charles Schwab - Intelligent Portfolios Vanguard, Motif Investing

Initial evidence of the Robo Advisory model began emerging in 2008 as a consequence of the Lehman Brothers bankruptcy and fall in confidence in the traditional financial services model.

In particular, US players are characterised by:

- Availability only to US residents as it is mandatory to have either a US address or a US ID. Despite that, US players are planning to go abroad in order to boost their revenue stream by increasing AuM. The confined availability of these services is to be attributed both to the differences in the regulatory landscape and to the cost of acquiring clients. The first players to offer automated advisory services were FinTechs that were able to attract clients' money thanks to the support of rounds of funding by venture capital firms. Attracted by the success of these online players, traditional players, such as Charles Schwab and Vanguard, have developed their own automated services.
- Targeted customers are millennials with a propensity towards the use of technological tools. Online user-friendly platforms, as well as apps for both smartphones and tablets have been implemented to allow users to follow and manage their investments. That stated, the number and diversity of players allows for no specific customer target, which can be based on client's wealth range in terms of minimum required deposit.

- **Product:** most players offer ETF-based portfolios as to offer well diversified and bespoke solutions at a low cost. The use of ETFs over single instruments allows the reduction of transaction costs, if and when charged, by reducing the need of portfolio rebalancing. Robo Advisory firms make their profit by applying a fee on assets they manage their masses. The average fee starts from 0,14% for an AuM ranging between \$0 and 10k, 0,28% for an AuM between \$50 and 100k, reaching 0,24% for an AuM above \$100k. An exception to what previously stated is Charles Schwab's Intelligent Portfolios where customers only pay for the underlying ETFs and have to open a bank account within the firm.
- **Terms of service** have to be analysed as there are both differences in terms of taxation and services offered. If the Robo Advisor offers advice then clients may or may not act upon such advice and have to make sure they are able to minimise taxation. On the other hand, if a portfolio management service is offered, as is the case for Wealthfront and Personal Capital, the client fully delegates any aspect of portfolio management to the Robo Advisor, including, if this is the case, tax optimisation. Robo Advisors mainly offer two kinds of services: auto rebalancing and tax harvesting.

In the US, the Robo Advisory market has been tackled both by new FinTech online players and by traditional players. In particular, FinTechs are the pioneers in the field, while traditional players have either developed their own service, or acquired an existing one.

FinTechs

The first Robo Advisory services were developed thanks to sponsorships by venture capital funds. Betterment. Wealthfront and Personal Capital are the pioneers in the sector, and thanks to the first mover advantage, have gathered the greatest success. These firms are considered pioneers as they democratised the Wealth Management industry by limiting human touch, thus lowering the cost of service. The offering is based on algorithms developing portfolios based on information regarding clients' financial situation and risk tolerance, as well as risk management concepts.

Three models have emerged from the FinTech's offering:

- A low cost portfolio management solution targeted to retail clients in need of professional investment services. This model has low minimum investment requirements and low fees, and is based on model ETF portfolios, and tax harvesting offerings. Players such as Betterment and Wealthfront are driving down fees to attract more clients.
- A premium service, closely matching that of traditional wealth managers, in which the financial advisor is supported by technology to obtain an aggregated view of all of the clients' accounts and offer Wealth Management services such as retirement planning, tax harvesting, investment in private companies and discretionary and nondiscretionary advisory services.
- Investment communities, similar to social networks, in which users propose their own investment strategies and can benefit if their strategy is adopted by other users.

Traditional Players

Traditional players are rushing in the Robo Advisory market driven by the success of online players, and are either developing their own services or acquiring existing players:

- BlackRock has acquired FutureAdvisor, which offers both advisory and portfolio management services, based on the selected account type. FutureAdvisor's recommendations can be integrated into existing accounts and are generated by a proprietary algorithm based on client's information. The service is targeted to retail clients as both minimum investment required and fees are low.
- Vanguard and Charles Schwab have developed the service-in-house. The two players have managed to grow AuMs by shifting assets of existing users to the new service; Vanguard in particular reached \$17 billion in AuMs by shifting \$10 billion belonging to existing clients' into its Personal Advisors Service.

2015 has seen great disruption in the US Robo Advisory segment with traditional players entering the market and increasing competition, both in terms of offering and services. As of December 2015 AuMs of Robo Advisors passed the \$30 billion mark and are set to continue growing as more players enter the market, especially if more traditional players enter the market and decide to shift existing clients' account into the new service.

Key Message



US players focus on portfolio management services targeted towards disillusioned investors. The main targets are millennials, which are the most tech savvy.

The US market standard offering is characterised by a simplified direct-to-investment low cost approach that allows clients to have an ETF portfolio in just a few clicks.

While FinTechs seem to focus on developing automated asset allocation solutions, traditional players, and in particular Vanguard, have digitalised the advisory process allowing clients to have access to their investments and their financial advisors via remote solutions.

Traditional players also offer more premium services such as the support of a human advisor and have higher entry requirements.

3.3 EU market, a mix between social networks and traditional Wealth Management services

Following the success and growth in the US, the European market began developing in early 2011 with Nutmeg in the UK being the first proponent. As of today Nutmeg is one of the largest players in the market, with £600/700m in AuM. Other players have developed and grown all across Europe but, given that most players are private companies, the size of the market can only be estimated.

	Player 1	Player 2	Player 3	Player 4	Player 5	Player 6	Player
Fees (% on AuM)	0.30% - 0.95%	0.99% - 0.49%	€0 B2C €300/month B2B	0.50% - 0.90%	none	n/a	n/a
Minimum deposit	£1k - £50/month if AuM<5k	none	none	CHF205,000	CHF70/month	n/a	n/a
Channels	Pc	Pc	Pc, mobile, tablet	Рс	Рс	Pc, mobile, tablet	Pc, mobile, tablet
Country of availability	All Europe (Late 2016)	All Europe	Europe, US	All Europe	All Europe	Globally	Globall
Customer Target	Retail, affluent	Affluent, upper, affluent	Retail, affluent, B2B	High/very/ Ultra investors	Upper, affluent, high, B2B	Retail, affluent, B2B	Retail, affluent
Products	Funds & ETF	Funds	Stocks, funds & ETF	Stocks, bonds & ETF	n/a	Funds & ETF	Stocks, ETFs, index, forex
Country	United Kingdom	Germany	Spain	Switzerland	Switzerland	Israel	Israel

The European Robo Advisory market is characterised by:

- Availability: the greater harmonisation of the regulatory environment among EU countries allows players to extend their reach beyond the boundaries of their home country. Several services are available in more than one country and some are also targeting the US market. Financial communities, not being limited by regulation pertaining investment advice, and in particular not being limited to offering suitable recommendations, having their users engage in forms of do-it-yourself trading, are available globally.
- Targeted costumers: high fragmentation with most players have developed B2C platforms, but several have begun developing B2B platforms targeting banks and asset managers with automated solution helping them render their processes and client experience more efficient and user friendly.
- Products: given the wider range of services offered, also the product range is broader. Most players offer equity, fixed income, mutual fund and ETF-based portfolios, though ETFs seemed to be the preferred product as to allow the construction of low cost porfolios.

 Terms of service: european players tend to offer advisory solutions, thus services inherent of portfolio management are less common. In particular tax harvesting and auto rebalancing are features of premium service.

Two models have emerged withing the European market:

- A growing interest towards financial communities enabling clients to share investment ideas and track/mimic more experienced investors.
- The Swiss market still has strong ties with traditional Wealth Management services targeted to high end costumers. In particular, Swiss players have adopted the hybrid advisor model whereby the traditional financial advisor is aided by technology and clients have access to their investments via multiple channels.

Key Message



As noted, the European market is highly fragmented with players offering both B2B and B2C services and with only Nutmeg and Vaamo offering services similar to those of their US counterparts. Given the fragmentation of the market there is no set fee range, though most players have low fees and low or no minimum initial investment requirement for retail clients and higher fees for institutional clients. Moneypark, however stands as an exception requiring a minimum initial investment or 250,000 CHF with fees almost double as those of other players (Nutmeg requires a 0.3% management fee for accounts over £500,000 and Vaamo requires a 0.49% fee for accounts over €50,000 while MoneyPark fees range from 0.5% to 0.9%).

Financial communities, blogs and other medium of client engagement are the norm in the European market, as are hybrid advisory models with traditional financial advisors playing an important role.

Traditional banking services such as account aggregation also are offered in more premium service.

The usability of platforms depends on the targeted customer and service offered with per se Robo advisory platforms and financial communities having the most user-friendly platforms. Trading platforms offer a wide range of tools targeted to more experienced users while financial communities are similar to social networks with users being able share content.

A wide range of financial instruments including mutual funds, equity and fixed income is used in developing portfolio recommendations. Pure Robo Advisors such as Nutmeg build portfolios with a wide range of products, some being sector or market specific.

3.4 Italian market, focused on a structured investment approach and human advisor

	Player 1	Player 2	Player 3	Player 4	Player 5
Fees (% on AuM)	0.50% - 1.25%	n/a	Depends on selected strategy	0.30%	Depends on AuM and % of equity
Minimum deposit	100€/month without deposit	n/a	n/a	€20k	n/a
Channels	Pc, mobile, tablet	Pc	Pc	Pc. app in progress, branches	Pc
Country of availability	Italy, United Kingdom	Italy	Italy	Italy	Italy
Customer Target	Retail, affluent	Retail, affluent, B2B	Retail, affluent	Retail, affluent	Upper affluent high very inv.
Products	ETF	Stocks, bonds, ETFs,funds	ETFs, Ishares	n/a	Stocks, bonds, ETFs, funds

The Italian Robo Advisory market is characterised by:

- **Availability:** Italian players are mostly available only locally. The size of the players is limited and most have been developed only recently, thus they focus nearly exclusively on the Italian market. This characteristic is similar to the behavior of traditional boutiques that focus on niche market segments, with only larger firms expanding internationally. One player, and in particular the one having the first mover advantage, has been expanding into the UK market, but this is an isolated case.
- Targeted customers: Italian players can be divided into two categories: those targeting mass and affluent investors, which compete on price and offer prepackaged solutions, and those targeting high net worth individuals offering highly customized solutions and complex fee structures. Players targeting mass and affluent investors have fees higher than those offered by US players: 0,56% for accounts under €15.000 compared to 0,14% for accounts under \$10.000. Furthermore, like US players, Italian robo advisors target millennials, however, analyzing customer data, the typical user of these services is male in his 40s-50s coming from the northern part of the country.
- Products: Wider product range, including equities, ETFs, and fixed income, though the strong ties with the traditional Wealth Management model leads players to the use of mutual funds. The strong ties with the traditional model are also reflected in the highly structured investment approach.

Terms of service: most players tend to offer advisory solutions in one form or another. Only one player offers portfolio management services. However even players offering portfolio management solutions do not focus on tax loss harvesting or on auto-rebalancing, but rather on client relationship.

Two models emerge out of the Italian Robo Advisory market:

- Online platforms with prepackaged, ready to use solutions, based on common investment objectives and not on clients' preferences, with little to no personalization of service, that most rarely require the registration of the user but that is usually in partnership with an execution platform such as an online supermarket for mutual funds
- A hybrid advisory model whereby the human advisor is a key selling point and the user has the possibility to manage his investments on the go via apps. Usually this model uses blogs as a mean of educating clients on hot economic and financial topics and also to raise awareness on how the service differentiates itself from the traditional financial services sector

Key Message



In general, the Italian market is still strongly tied to the traditional Wealth Management model with players only willing to offer generic advice solutions as a means to introduce clients to professional investment services and to their advantages. All players combine digital solutions to cater for the needs of more tech savvy investors who wish for a limitless access to their investments, with traditional human advisors to guide clients.

Structured investment policies along with high and complex fee structures lead to virtually no direct to investment solutions, if not by subscribing to prepackaged solutions offered in partnership with online supermarkets of mutual funds.

ETFs are also used, MoneyFarm, which most closely matches the US Robo Advisory models builds ETF based asset allocations, while IB Navigator has partnered with iShares to develop ETF based mandates. Other smaller players have also started following Invest Banca's example and are signing partnership to develop ETF or index fund based mandates.

Given the wider adoption of advisory models, extra services such as tax loss harvesting and auto rebalancing are less common, though more high-end services, such as SoldiExpert offer access to legal and tax experts.







4.1 An evolving regulatory framework

The European Securities and Market Authorities (ESMA) recognised the lack of a specific regulation for electronic investment services and the need to provide a tailored regulation landscape. So far there is no specific regulatory framework related to Robo Advisory except to the Joint Committee Discussion Paper on Automation in financial advice of ESMA, EBA, and EIOPA. However, there are different regulations which are not directly related to Robo Advisory that can be entirely or partially applicable: MiFID (Markets in Financial Instruments Directive), MiFID II*, the Regulatory and Implementing standard related to MiFID II, and two Italian Regulations: Legislative Decree 196/2003 "Codice in materia di protezione dei dati personali" and Deliberazione 12 Maggio 2011 "Prescrizioni in ambito bancario e di tracciamento delle operazioni Bancarie".

The rapid growth of the Robo Advisory market has sparked the interest of Authorities, which are now assessing how and to what extent to regulate this market. Opportunities and impacts of regulation will need to be closely monitored.

Two main issues have to be considered in the digital advisory services: how to comply with Suitability and Appropriateness rules as defined by MiFID and MiFID II, and how to deal with Privacy rules.

The need for specific rules with respect to the above mentioned topics apply to both human and digital advisors and are a means of building trust between client and advisor as well as avoiding possible conflicts of interests.

From a regulatory point of view, Robo Advisors can satisfy all the requirements in order to protect clients' personal information. However, this is not enough to ensure a total protection since personal data can be affected by system disorders. For this reason, Robo Advisors should implement best practices to control and monitor their platforms, like the provisions recommended for algorithmic trading in the Regulatory and Implementing Standards related to MiFID II.

Current rules

Currently, in Italy, Robo Advisors mainly provides investment advice and transmission of orders in execution only regime. Stand-alone entities that operate as Robo Advisors are authorised Investment firms (the so-called Italian "Società di Intermediazione Mobiliare" / SIM); it is worth noting that these services can also be directly provided by online banks.

MIFID I

Regulation	Applicability	Description
Conflicts of interest (Art.18)	Entirely applicable to Robo Advisors	Conflicts of interest may also arise within different Robo Advisory models. It is important to take into account the distinction between independent and not independent Robo Advisors.
Conduct of business obligations when providing investment services to clients (Art.19)	Entirely Applicable to Robo Advisors	Robo Advisors shall perform the assessment of suitability and appropriateness as art.19 envisages.
Legislative Decree n.196/2003 Privacy Code Informativa (Art.13)	Entirely applicable.	Italian Robo Advisors shall comply with the Privacy Code and provide, in the Privacy Policy document, all the information described in art.13.
Treatment through electronic devices (Art.34) "Banking provisions and traceability of banking operations" Del.192/2011	This deliberation can be considered partially applicable to Robo Advisors	It is not directly addressed to Robo Advisors but suggests some best practices that can be applied to Robo Advisors if it is integrated in a bank.

MiFID II however makes reference to online banking services, specifically with respect to the possibility of making available the Statement of Assets via dedicated sections within the e-banking platforms.

Focus



Preliminary regulatory consideration: the Discussion Paper on Automation in Financial Advice

The Discussion Paper focuses on 2 aspects: defining what is meant by automated advisory services and what are the benefits and risks both for firms and investors.

The Joint Committee identifies the Robo Advisory as a service where human intervention is replaced by an automated process, such as algorithms or decision trees which are based on 2 key inputs:

- 1. clients' personal information collected through a questionnaire (K&E, Financial Situation, Investment Objectives, Risk Tolerance, Ability to bear losses and Time Horizon and;
- 2. the logic of the algorithm, that "decides" which products or services should then be recommended to the client on the basis of the questionnaire responses. The user may also personalise the budget further, changing or adding costs.

The Joint Committee is assessing whether automated advisory services provide personalised investment solution taking into account appropriateness and suitability rules.

The benefits for retail clients include cost savings and a faster, consistent and up-to date advice

- Costs savings. Customers pay less than for a traditional advice and this leads to a wider access to financial advice. Financial advice is not limited to high net worth individuals or to professionals anymore.
- Access to a wider range of advice providers and facilitation to any transactions.
- Easier and faster advice.
- More consistent advice: the algorithm can be more accurate than human analysis and can ensure an impartial judgment.
- Advice based on the most up-to-date market information.
- Easier record-keeping of the whole advice process.

Lack of information and standardised options are the main risks for the customers

 User's limited access or limited ability to process information. Consumers can make unsuitable decisions as a result of lack of information and reduced opportunity to fill the gaps or seek

- clarifications. Consumers could also have limited or unclear information about the extent to which the tool produces recommendations tailored to them and they also do not understand who is providing advice because of the fragmented nature of the advice process.
- Less customised advice or widespread use of automated financial advice tools. Consumers lose out with automated advice tools being based on similar algorithms. As a result many consumers will take the same actions in relation to the same types of products/services or might no longer be given the opportunity to access human financial advice.

Financial institutions which provide automated advice can benefit from lower costs and potential client base increase

- Financial advice will cost less than traditional face- to-face advice.
- The potential client base will increase with the increase of Robo Advisors and this will lead financial institutions to access to a wider range of customers.
- Financial institutions use automated tools to deliver a consistent consumer experience (more standardised by removing the potential for differences due to human interpretation) and the provision of automated advice is more easily auditable because automated tools are more easily interrogated.

The undefined regulatory framework is the main risk when providing Robo Advisory services

- The Regulators have not defined a clear framework for Robo Advisors yet. More restrictions could be applied in the future.
- Exposure to litigation and subsequent reputational risk due to faulty automation.
- Legal disputes may arise due to unclear allocation of liability; the use of technology causes a disintermediation in financial services, different financial institutions are responsible for different parts of the service. However the distinction between distributor and advisors is not so clear anymore.

4.2 Robo Advisors: a breed of natural-born independent advisors

MiFID II seeks to increase investor protection by imposing greater transparency, especially with respect to inducement, which now has to be justified. The Directive is an opportunity for Robo Advisors given that recommended financial instruments are non complex products and Robo Advisor's fee structure is clearer than in the traditional Human Advice service. However, it is important to take into account the distinction between different Robo Advisory business models.

Robo Advisors may claim independence also in MiFID II terms by

Informing the client that advice is provided on an independent basis.

- A sufficient range of products and providers which should not be limited to those with which there are legal or economic relationships.
- Restriction on the possibility to accept inducements.

Stand-alone Robo Advisors (such as MoneyFarm, but not only) are compliant with all these key requirements, therefore they are one of the first example of independent advisors in the market with a wide client base.

4.3 Building Client's trust in digital advisory services

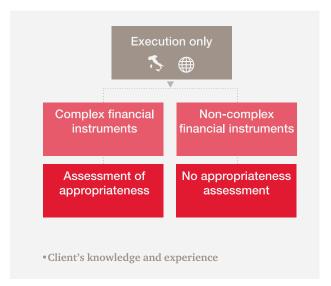
Suitabiliy and Appropriateness for a Robo Advisor

Robo Advisory significantly changed the way investment advice is provided: from face-to-face client assessment to a digital interaction, which involves the use of questionnaire for collecting clients' information. What is important to assess is whether Robo Advisory can properly assess clients' profiles and whether this assessment is as reliable as traditional Advisory services. Profiling the client is essential to provide investment advice and MiFID II introduced additional obligations in order to protect investors: investment firms are supposed to collect clients' information in order to perform the

assessment of suitability and appropriateness. Suitability and Appropriateness refer to two different types of assessments that investment firms have to perform on the basis of:

- Service provided. 1.
- 2. Product recommended (complex-non complex product).





Robo Advisors have to assess Suitability when providing investment advice and, if the case, portfolio management. The assessment of Appropriateness can be required for collection and transmission of orders in Execution Only regime. However, appropriateness is not required for Execution only services where the financial instruments offered are included among those defined as non complex in MiFID II.

Italian Robo Advisors mainly provide investment advice, and transmission of orders in execution only regime services where clients decide to execute the recommended transaction, as such they are required to comply with MiFID II suitability rules. Future developments could envision the development of execution only services and thus the compliance with appropriateness rules, especially if and when dealing with complex products.

Dealing with privacy in a digital environment

The use of automated devices to collect individual personal information allow an easier and higher circulation of information among parties. For this reason Italian and European Regulators are more concerned with the protection of users' personal information and require each kind of company to provide a privacy policy document to disclose how personal data are managed.

The most regulatory sensitive phases in the Robo Advisory processes include:

- Access to the platform.
- Personal data collection and storage.
- Client profiling.
- Management of client subscriptions.
- Transmission of client's personal data to third parties involved in the investment or advisory process.

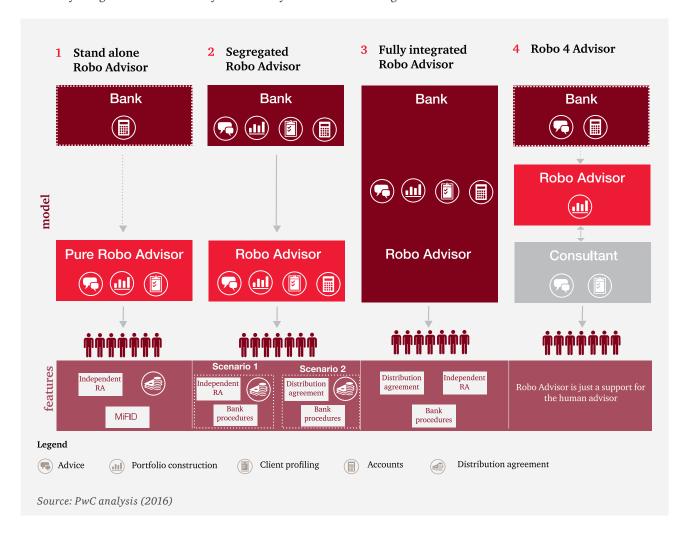
From a regulatory point of view, Robo Advisors can satisfy all the requirements in order to protect client's personal information. However, this is not enough to ensure total protection since personal data can be affected by system disorders. For this reason, Robo Advisors shall enact best practices to control and monitor the system like the provisions recommended for algorithmic trading in the Regulatory and Implementing Standards related to MiFID II.

4.4 Regulatory differences among Robo Advisory models

4 types of Robo Advisory frameworks

Robo Advisors can differ according to their degree of independence, inducement allowance, human intervention, bank participation, and the type of agreement applicable.

There are three types of Automated Advisors (Independent Robo Advisor, Segregated Robo Advisor and Integrated Robo Advisor) and one type where Robo Advisory platforms are used only as a tool – Robo 4 Advice. Only Segregated and Fully integrated Robo Advisory models may have distribution agreements.



Stand Alone Robo Advisor: the independent advisor

This is a pure Robo Advisory Model. It is a stand alone legal entity characterised with a high degree of independence. This model allows to provide independent advice according to MiFID II.

The accounts are created in a bank chosen by the Robo Advisor or by the client. The Robo Advisory firm is in charge of client profiling, portfolio construction and maintenance (in terms of periodic rebalancing) and the clients sign an investment advice and transmission of orders in execution only regime agreement.

The independent Robo Advisor cannot receive inducements from the Product Manufacturer. All the policies such as privacy, suitability, systems and risk control need to be defined by the Robo Advisor itself. Risk factors include the structural costs, client acquisition costs and greater compliance requirements.

Potential developments of the model include:

- The provision of portfolio management services, though authorisation by the local regulator is required. In Italy there are no restrictions but specific authorisations are needed (in accordance with TUF and Consob Regulation).
- Development of financial planning services whereby the focus is not only the sale of investment products but also an atomisation of retirement solutions, with an eye on the minimisation of the fiscal impact.
- Tackling traditional Wealth Management services including succession planning.

Segregated Robo Advisor: in a banking Group but not integrated

In this case the main issue concerns the level of independence of the Robo Advisor. The bank in-fact may hold distribution agreements with the product manufacturer. In the segregated model, there are two scenarios:

- The bank does not retain inducements and the Robo Advisor, which can be used as the bank's Wealth Management division, is independent - here the bank provides investment advice and transmission of orders in execution only regime services by means of the Robo Advisor.
- The bank keeps inducements and the Robo Advisor, being only a financial advisory division, is not independent - The bank provides investment advice and portfolio management by means of the Robo Advisor, while it keeps inducement being a distributor.

Integrated Robo Advisor: part of a wider service range

This is a model where the Robo advisor is just a part of the on-line services the bank provides. The clients of the Robo Advisor are clients of the bank. It is neither an independent advisor nor a separate legal entity and does not exist outside the bank's service offering. The Robo Advisor is integrated in the bank's business model. No restrictions on additional services are applicable.

The Robo Advisor can provide portfolio management, since it is part of the bank and no additional authorisations are necessary. The Robo Advisor can rely on bank procedures in order to regulate privacy policy and all the issues connected with monitoring and alerting systems.

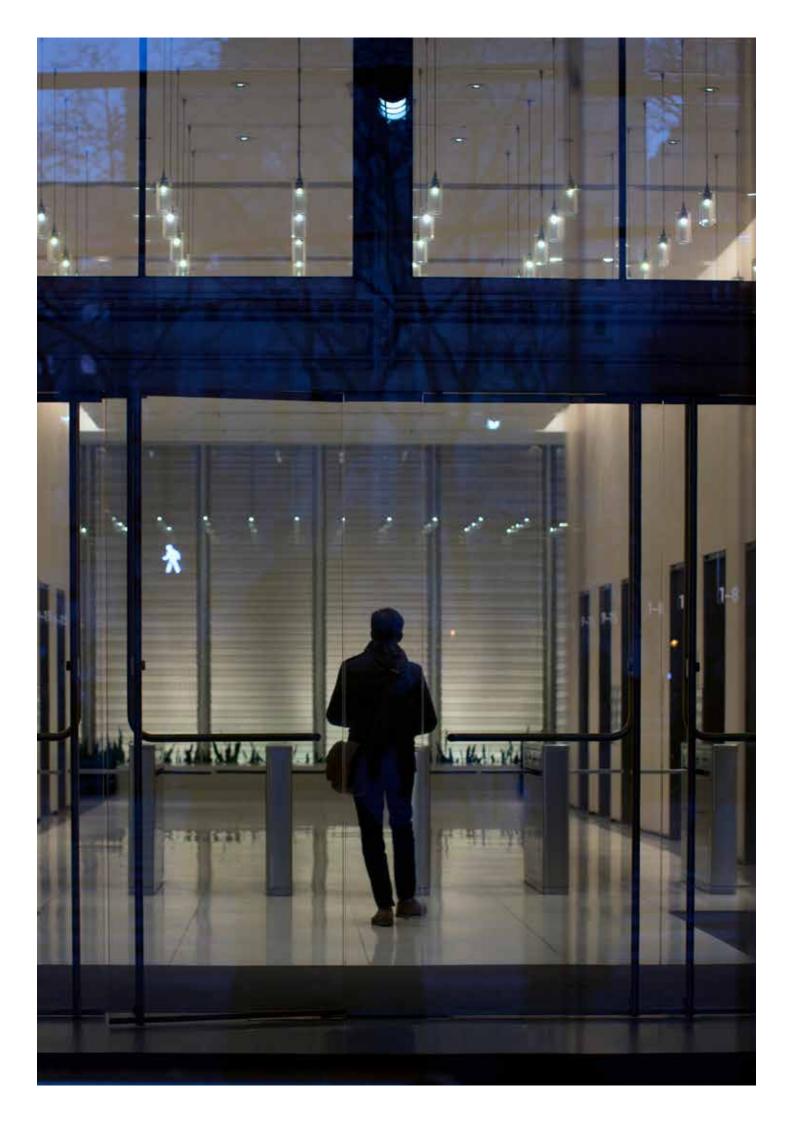
The Robo Advisor is highly connected with the bank and its independence depends on bank decisions - it is independent only if the bank wants to provide independent advice.

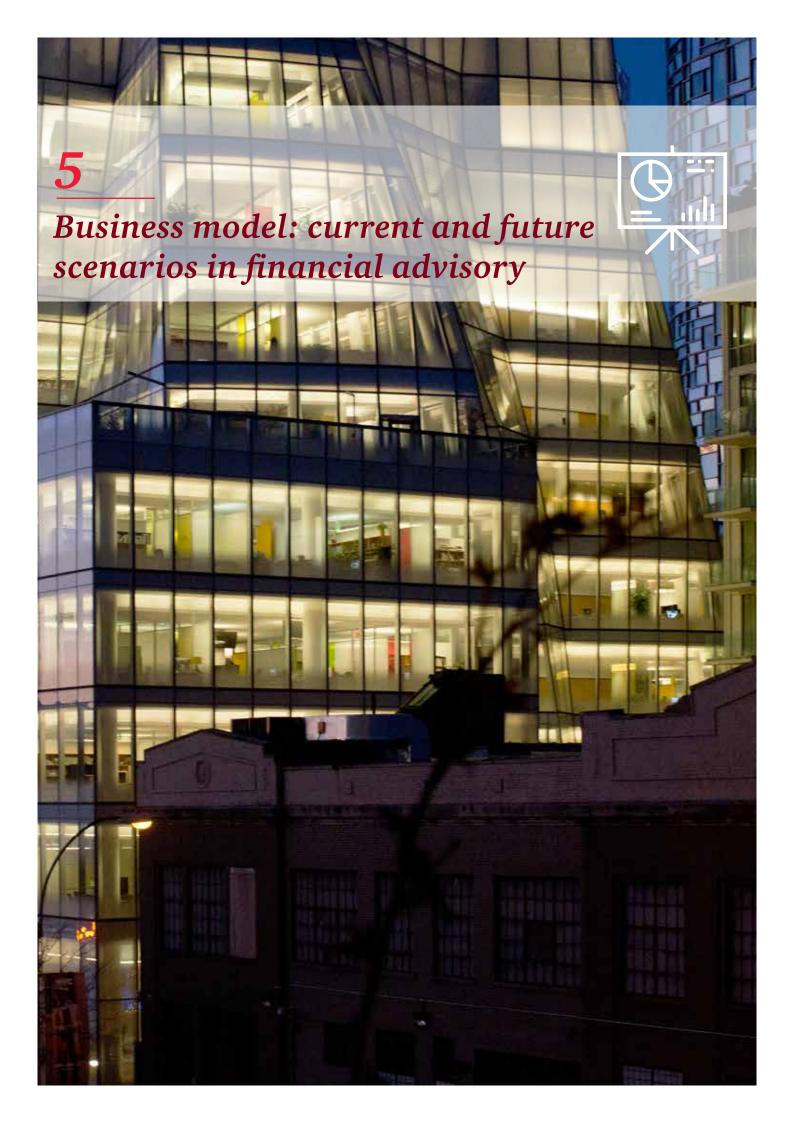
Robo 4 Advice: digital advice for human advisors

The platform of Robo Advisors is used just as a supporting platform used by a human advisor who provides recommendations. The advice is not fully automated, since the provider of advice is the consultant, not the platform. However the platform itself can be used by the final customer as a digital channel to the bank.

Independency concerns the human advisor status, not the platform's one. The Robo Advisor is only portfolio manager – it chooses among different portfolios. The suggested portfolio can be accepted or not. Portfolio management can be facilitated by the Robo Advisor and it depends on the restrictions of the platform. The suitability of the advice is ensured by the consultant.

There is no obligatory connection between the Robo Advisor and a bank. The advice agreement is between the consultant and the client. Commission fees are paid to the consultant for the advice.

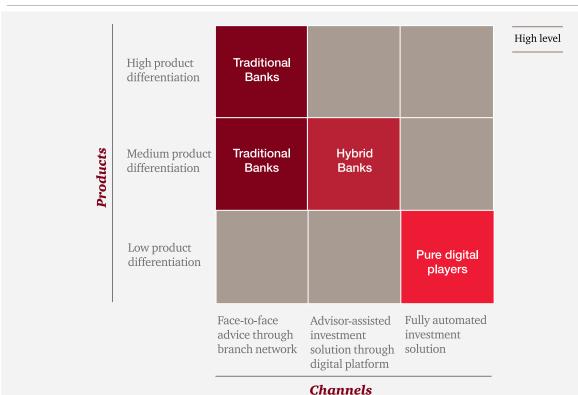




5.1 Segregation of channels and roles

Considering the degree of product differentiation and the channel as variables, a general view of the market leads to identify three main group of operators wich offers a different type of advisory service.

AS-IS model product & channel



Source: PwC analysis (2016)

Traditional banks

Traditional banks have a dedicated Financial Advisor with full range of investment choices and so they are still focused on human interaction with a high product differentation. Digital solutions are offered to track clients' investments and they serve both retail and private clients.

Hybrid banks

The hybrid banks are those that have adopted digital platform solution to be combined with advisor relationship, but they still have and use a more traditional channel to deliver advice. In these banks, the Financial Advisor assists the client especially at the beginning of the investment to guide him in choosing the right products and gather information, then investors could control and monitor their investments through the digital platform. In the hybrid banks clients are more active and involved in the process.

Pure digital players

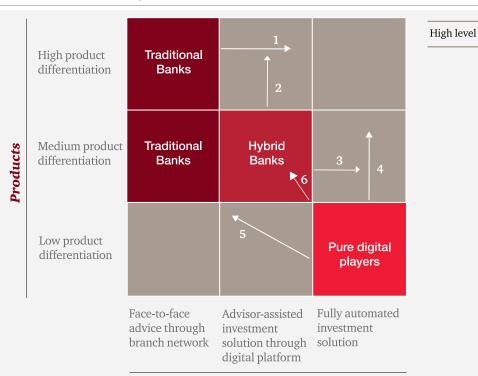
In Italy online banks and SIM* are pioneers in launching the Robo Advisor. Consequently, for these operators, competition is on prices, products are low differentiated and low customised and investors are completely involved in the process. These online platforms are accessible anytime and anywhere, the activities are always accessible from all devices, from a simple smartphone or pc, where clients can easily control their investments.

SIM: Società di intermediazione mobiliare - Securities firms

After having analysed the AS-IS model, PwC developed the TO-BE model, in order to describe how the Italian players will probably act in the next few years.

In particular, it has been identified which players will adopt the Robo Advisor and in which direction the ones that have already implemented it will go.

Increasing competition on the digital channel (TO-BE model)



Channels

Source: PwC analysis (2016)

Traditional banks

Traditional banks will still focus on face-to-face relationships, that are seen as vital by specific client segments. Nonetheless the operating model will likely evolve and exploit digital opportunities. Online platforms will allow clients to monitor their investments and interact with their advisor in order to have a clearer idea on how their investments are going, both in terms of performance and in terms of investment objectives. The interaction with their clients will not only be based on a face-to-face relationship, but banks will start to communicate more with their clients with online solutions. If traditional banks want to introduce a Robo Advisor in the near future, this will likely be a hybrid model.

Hybrid banks

Hybrid banks will increase their product differentiation in order to attract more customers and offer them a more personalised set of products and service.

These banks can implement a Robo Advisor solution in order to attract part of the population that is now underserved with the traditional financial advisory model.

Pure digital

Pure digital players that have already launched their Robo Advisory platform will increase their product differentiation in order to become more competitive on the market and to attract new clients. If the channel remains digital, the competition will likely be based on prices and to solve this problem, banks and SIM will have to provide these services more efficiently to cut costs and maximise profitability. In other words, the key will be to invest in activities supporting the customers and in getting as more information as possible to profile them better.

Otherwise, these players could choose to move to a more traditional channel in order not to compete on too low margin, to increase the clients' loyalty even further, customising the service and the quality of it. By becoming traditional, they will, of course, increase their product differentiation.

Finally, FinTech players can decide to become hybrid banks. In this case, they will increase their product differentiation using not only a fully automated channel, but a also online platforms that combine human and Robo Advisory.

5.2 Robo Advisory: a trend not an hype

Digital and automated advice will likely become a standard expectation for the affluent and mass-market segments and we have seen only the beginning of what automated advice can become. In particular the traditional customer segmentation does not fit anymore with the real customer behavior due to the higher expectations with regard to the advisory services, performances on investments and confidence in digital interaction compared to the human one: all wealth management firms should take into consideration this phenomenon. However, it also true that Robo Advice could impact all the investor segments, not just the mass-market and mass-affluent ones; all Wealth Management firms should take into consideration this phenomenon.

Traditional Customer Base

Private and HNWI market

In this segment, looking at the behavioral segmentation, banks are considering to catch the opportunity of a Robo4Advisor, so the Robo Advisor is implemented to support financial advisors. In this case, the platform is used by the financial advisors as a support for their

financial activities in order to give their HNWI clients a better service.

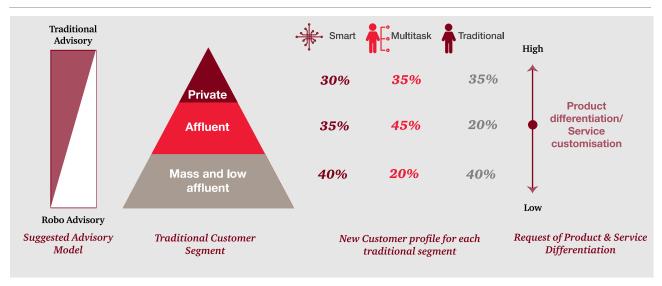
Affluent market

This segment could be a good opportunity for the Robo Advisor - both integrated in the bank or segregated because of their familiarity with investment and financial operations and their low necessity to have a strong relation with the financial advisor. The best solution of Robo Advisor for this segment could be a hybrid one accordingly with the characteristics of multitasking segment of the new behavioral segmentation. In this case the Robo Advisor is not totally automated, but is coupled with a financial advisor with whom the client could consult when he thinks it is necessary.

Mass and low affluent market

In this traditional market segment, the best opportunities for banks could be an end-customer (B2C) Robo Advisor, for the sub-segment of the smart customers, that implies a self-directed online guidance, where the degree of product customization is low and products offered are primarily ETFs and funds. For the other sub-segment the traditional advisory model fits better but implies higher cost-to-serve.

What do banks have to take into consideration?

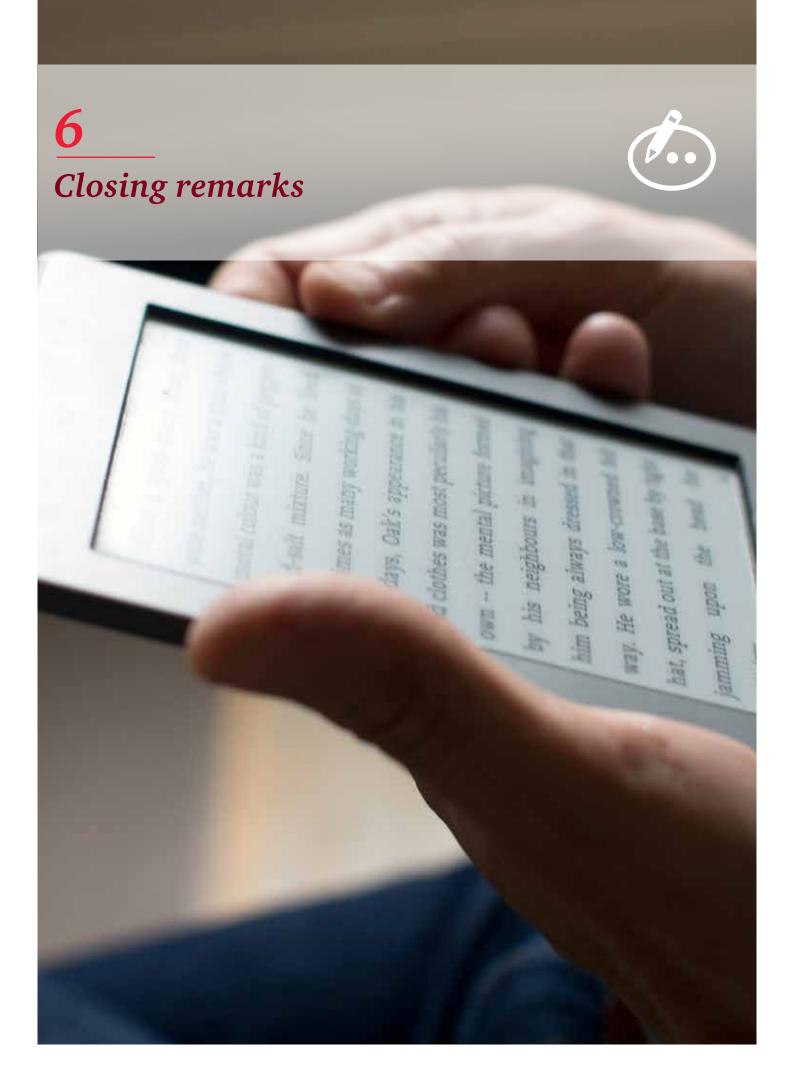


Strategy/Service Model

Banks have to consider whether the introduction of this form of advice is in line with their own strategy and service model. Infact, there are some banks in the market with their own strategy which, to meet the demand of their customers, offer a high degree of product differentation, coupled with a tailor-made faceto-face service as a key of their differentiation strategy. Consequently, for this type of banks, the introduction of the Robo Advisor will not be parceived by the customers as a value. Even if some of them belong to the Smart and Multitasking segments.

Technology

Banks must also consider either to build the Robo Advisor in-house or to form a partnership or to buy it from an external provider. Only the main Banking Groups are willing to invest in an in-house platform, most of the mid and low size players are considering to do a partnership with a specialised FinTech in order to reduce the implementation costs.



The traditional banking advisory model, based on direct physical relationship between the advisor and the client, is going to be shaken by the digital innovation.

The analysis highlights that the demand is ready to adopt digital advisory services: 40% of retail customers are already favorable to the adoption of Robo Advisory services, and the percentage is going to increase in the future as the younger generations will become mature.

Even if still limited to AuM, there is already a wide offer in the global and EU market of Robo Advisors, that are competing with traditional wealth managers trying to target this large base of digitally-ready clients not loyal to any banking brand. These players can benefit from limited regulatory constraints and even gain the appealing status of independent advisor under MiFID II.

In particular, Italian Robo Advisors seem to have learnt the lesson of social media success, providing a service based both on structured portfolio management and on flexible interaction with digital and human advisors.

In order to exploit this long-lasting trend and not being gradually overcome, banks should build diverse advisory models, value propositions and digital customer experiences depending on their target customers and looking at behavioral segmentation rather then the traditional one.

While the Authorities are still striving to understand and regulate this new sector, the first experiences show that the Robo Advisory services can fit the banking service model, supporting the development of the mass market segment in a cost effective way and helping to tailor services to affluent and private customers.

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Contacts

Mauro Panebianco

Partner | PwC

+39 348 1328581 mauro.panebianco@it.pwc.com

Andrea Laurenti

Director | PwC

+39 348 1505630 andrea.laurenti@it.pwc.com

Marco Folcia

Associate Partner | PwC

+39 347 3786843 marco.folcia@it.pwc.com

Roberto Bartocetti

Director | Strategy&

+39 348 2607297 roberto.bartocetti@strategyand.it.pwc.com

Project Coordinator

Fabrizio James

Senior Manager | PwC

+39 349 6117286 fabrizio.james@it.pwc.com

We'd like to thank:



PwC | Giovanna Gialloreto, Michele Marchiaro

Field Researcher | Luca Bellani, Giovanni Candeo, Beatrice Cereda, Gabriele De Giorgi, Elisa Gusmeroli, Noemi Kaci, Chiara Mendia, Cristina Penone, Mattia Pisati, Andrea Salvioni, Veronica Stoynovska

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