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# Journal

THE CAPCO INSTITUTE JOURNAL OF FINANCIAL TRANSFORMATION

Operational

Potential and Limitations of Virtual  
Advice in Wealth Management

Teodoro D. Cocca

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# Financial Technology

## Operational

- 8 **Opinion: Time is Risk: Shortening the U.S. Trade Settlement Cycle**  
John Abel
- 13 **Opinion: Where Do We Go From Here? Preparing for Shortened Settlement Cycles Beyond T+2**  
Steven Halliwell, Michael Martinen, Julia Simmons
- 17 **Opinion: Seeing the Forest for the Trees – The Taming of Big Data**  
Sanjay Sidhwani
- 20 **Development of Distributed Ledger Technology and a First Operational Risk Assessment**  
Udo Milkau, Frank Neumann, Jürgen Bott
- 31 **Digital Finance: At the Cusp of Revolutionizing Portfolio Optimization and Risk Assessment Systems**  
Blu Putnam, Graham McDannel, Veenit Shah
- 39 **Safety in Numbers: Toward a New Methodology for Quantifying Cyber Risk**  
Sidhartha Dash, Peyman Mestchian
- 45 **Potential and Limitations of Virtual Advice in Wealth Management**  
Teodoro D. Cocca
- 58 **Overview of Blockchain Platforms and Big Data**  
Guy R. Vishnia, Gareth W. Peters

## Transformational

- 67 **The Rise of the Interconnected Digital Bank**  
Ben Jessel
- 79 **The Emergence of Regtech 2.0: From Know Your Customer to Know Your Data**  
Douglas W. Arner, János Barberis, Ross P. Buckley
- 87 **U.S. Regulation of FinTech – Recent Developments and Challenges**  
C. Andrew Gerlach, Rebecca J. Simmons, Stephen H. Lam
- 97 **Strains of Digital Money**  
Ignacio Mas
- 111 **Banking 2025: The Bank of the Future**  
Rainer Lenz
- 122 **Banks Versus FinTech: At Last, it's Official**  
Sinziانا Bunea, Benjamin Kogan, David Stolin
- 132 **The Un-Level Playing Field for P2P Lending**  
Alistair Milne
- 141 **Blockchain in a Digital World**  
Sara Feenan, Thierry Rayna
- 151 **FinTech in Developing Countries: Charting New Customer Journeys**  
Ross P. Buckley, Sarah Webster

# Potential and Limitations of Virtual Advice in Wealth Management

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## **Abstract**

Technological developments and changing customer preferences are placing demands upon the classical way that private banking clients and wealth management are advised by banks. This article analyzes how the traditional advisory model, whereby the client adviser and the customer interact in the form of a personal dialogue, could be altered by means of virtual advisory models. Based on survey results by wealth management clients in Switzerland, Germany, and Austria, current preferences are analyzed in terms of advice characteristics, and future potential as well as obstacles to the virtual consultation are discussed. A hybrid advisory model offered by established wealth managers appears to be the most promising advisory model for the main customer segments in wealth management.

## POTENTIAL AND LIMITATIONS OF VIRTUAL ADVICE IN WEALTH MANAGEMENT

Technological developments and changing customer preferences [Chung-Chi and Jyh-Shen (2012), Date et al. (2013), McKinsey & Co. (2016)] are placing demands upon the classical way that private banking and wealth management clients are advised by banks. This article analyzes how the traditional advisory model, whereby the client adviser and the customer interact in the form of a personal dialogue, could be altered by means of virtual advisory models. In the process, it is important to make a clear distinction from other studies that do not explicitly and exclusively relate to the private banking/wealth management segment. The private banking/wealth management segments typically deal with customers who possess free financial assets of at least €500,000. Most remarks in this article refer to the private banking/wealth management markets in Germany, Austria, and Switzerland and use a representative and regularly conducted survey of high-net-worth clients in the three countries as a data base [Cocca (2016)].<sup>1</sup> While the conclusions of this study can be applied to other wealth management markets, it is necessary to take local characteristics into account. Starting from the analysis of the present-day embodiment of a negotiation process in wealth management, the potential for extensive virtualization of this process will be discussed.

### INVESTMENT ADVISORY SERVICES

#### Today's structured advisory process

The classic advisory process in wealth management [Tilmes and Schaubach (2006), Bowen et al. (2008), Collardi (2012), Maude (2010)], which is utilized by wealthy clients, includes the following four phases, which rotate around the central question of "how to invest the client's liquid assets." In the first phase, a comprehensive analysis of the investment needs and objectives of the client is performed. Among other aspects of this process, the risk profile in particular is recorded, which also has high regulatory significance (suitability and appropriateness test in the context of MiFID (Markets in Financial Instruments Directive) regulations). Economically speaking, it is important to consider that the demand function is recorded at this stage. Not all customers are able to identify their investment needs themselves. The identification and formulation of investment needs, for example, is an ability that distinguishes experienced client advisers. As a result, on the basis of the established investment and risk profile, an investment strategy is defined that determines in particular the strategic asset allocation in the plain vanilla asset classes (cash, stocks, bonds) or the relevant currencies in the second phase. In the third phase, the implementation of the defined strategy by means of suitable products occurs. Continuous monitoring and any possible adjusting of the portfolio (rebalancing) represent the fourth ideal phase.

Nowadays, it is common practice that this so-called "structured advisory process" [Mogicato et al. (2009)] is digitized inwardly to varying degrees while barely being digitalized outwardly. The consultant has in-house IT banking systems that, on the basis of customer data (investment and risk profiles), automatically generates an investment proposal in which the current strategic and tactical investment opinion of the bank is expressed. This investment proposal is discussed after a personal dialogue, and adjusted if necessary. In this process, it has become quite common that, by means of simulation software, the client adviser can show the customer how changes to their portfolio in back-testing can affect its return and risk characteristics. What these largely computerized internal processes have in common, though, is that they are only available to the client adviser. While there is an interface between the customers and their advisers, there is no direct access to the bank's internal software-based systems. This architecture allows for strong inward standardization, with a high degree of perceived individualization generated by the human contact externally [Brost (2006)].

Essentially, when creating an investment proposal, the bank's internal system conducts a type of portfolio optimization that is linked to the CRM system (customer data) and the product database. Typically, the bank generally also then provides information about capital market developments (from the bank's own research department or from third parties) and suggests reallocations in the portfolio in the case of market developments (from the bank's own portfolio management). Here, as well, the trend is in the direction of switching or reinvestment proposals being increasingly displayed directly from the banking system for each portfolio on the IT system, with these then being personally communicated from the adviser to the customer.

Nowadays, the contact between customer and bank primarily occurs through personal contacts and personal interaction with the client adviser. On average, wealth management customers have around 17 contacts with their client advisers per year (see Figure 1). Approximately three quarters of these are telephone calls and e-mail contacts. On average, two to three personal conversations are held per year. Video conferencing or video-enhanced telephone calls (Skype, among others), however, are immaterial. As these data show, the penetration of pure virtual forms of interaction with the client adviser is also already widespread in the upmarket customer segment, if one counts phone calls and e-mail. If virtual interaction

<sup>1</sup> A total of 369 individuals were surveyed (100 in Germany, 114 in Austria and 155 in Switzerland). The main criterion for participation in the survey was disposable investment capital: over €500,000 in Germany and Austria and over CHF 900,000 in Switzerland. The extensive questionnaire included more than 100 singular questions and allowed, therefore, for a very deep understanding of clients' preferences and behavioral characteristics.



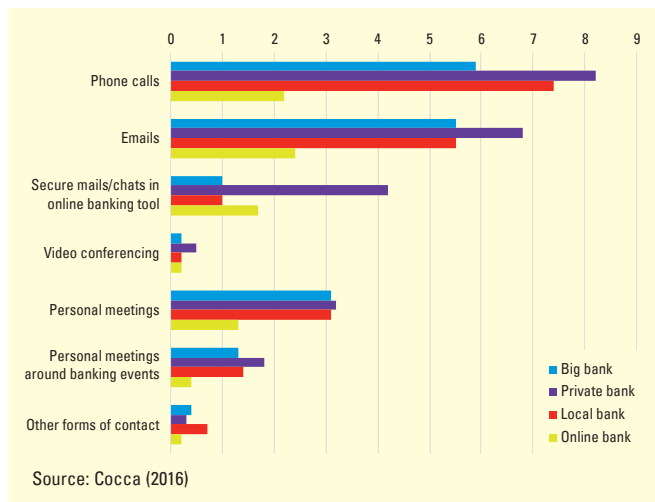


Figure 1 – Form and number of contacts with client advisers per year (compared according to banking groups)

is defined more specifically and includes newer forms of interaction, such as chat or video calling, the result turns out to be sobering. This form of interaction is essentially insignificant in this customer segment. It is clear, though, that face-to-face meetings are of great importance. In terms of quality and the density of interaction, an email cannot realistically be compared with a personal conversation. In any case, it is clear that the interaction is already very much multi-media today, and contact with the client adviser takes place in various forms throughout the year.

**Advisory concept**

Advisory, as a concept, is in the eye of the beholder; different people have different definitions for what constitutes advisory [Handler (2007)]. For the present work, the minimal definition provided Titscher (2001) can ultimately be used. Based on this, any form of advice that is provided under a defined adviser client relationship, thereby effecting a targeted modification of an existing starting point to a desired goal, can be understood as the professional, external services of a consultant to a client. A legal definition of terms can be modeled on the provisions of the MiFID, which states that “investment advice” means the provision of personal recommendations to a client, either upon its request or at the initiative of the investment firm, in respect of one or more transactions relating to financial instruments (Article 4 (4)). Can these definitions actually include the nature of the advisory business for wealthy individuals? From a psychological or sociological perspective, the term of advisory requires more [Sickendiek et al. (2008)]. Information and communication forms have changed, day-to-day activities are more risky and unpredictable, understanding does not readily occur on its own, trust can quickly be

put into question and has to be actively produced, similarities no longer seem self-evident, and identities are fragile. A lot is set in motion: planning takes place in increasingly uncertain and complex planning environments, decisions often have to be made despite the lack of a decision-making basis, and orientation needs to take place amid increasing complexity. However, the actions under these conditions still have to be able to remain professional, efficient, and effective. In this context, seeking advice can be helpful and, sometimes, downright essential. Advice is always embedded in contexts, day-to-day activities, and living environments; hence advisory services need professional expertise, as well as good communications skills. Consulting not only means mastering action techniques; it is also always a contextually produced blend of action competence and reflexive knowledge.

In today’s environment, problem-solving calls for cultural and contextual knowledge, knowledge of paradoxes and ambivalences, as well as knowledge of fractures and errors. It is important to anticipate and integrate the viewpoints of others (for example, legal developments, tax laws), to plan and agree an action plan jointly, to impart knowledge, to deal with lack of knowledge, and overcome resistances – these are all components of a comprehensive understanding of wealth management advisory. Advisory is, therefore, not a simple problem-solving process that provides short-term solutions to successfully deal with a question or a problem; rather, it helps to create sustainable change and results. Consequently, this advisory perspective is much broader and strives to achieve what advisory could, or should, be: an offer of education for those seeking advice. This aspect of knowledge transfer as well as the diverse psychosocial aspects receive too little attention in the traditional definition of advisory. It seems important to grasp these dimensions of the advisory concept, though, in order to consider the question of the virtualization of advisory beyond the merely trivial. Already in these definitional embodiments, it is apparent that advisory related to wealth management has, at first glance, a close connection to the concept of “investment advice.” However, the next section will demonstrate that wealth management should be viewed as more than just the provision of “investment advisory.”

**ADDITIONAL SERVICES IN WEALTH MANAGEMENT**

**Complex additional services**

Advisory services, as described above, is the most important service, as measured in terms of net income, that a classic wealth manager provides. However, wealth management also includes a number of other important services, especially in circumstances when clients have assets that are significantly greater than those of retail or affluent customers. When dealing with high and ultra-high net-worth



individuals, the following additional services can be significant [Reichenstein (2006), Reitinger (2006), Kruschev (2006), Hallmann and Rosenbloom (2009)]:

- Discretionary asset management
- Financial planning
- Complex asset allocation (foundations, trusts, etc.)
- Estate planning
- Retirement planning
- Tax planning

Within these services, the advisory takes place in a much more complex context and is dependent on the knowledge of legal and tax-related conditions in the jurisdiction that is relevant for the customer. It also requires a deep understanding of cross-border regulations. The degree of complexity of the legal norms and tax legislation, taking into account the constant dynamics and evolution of such provisions, is very high [Saad (2014)]. In addition, the services offered in wealth management in these customer segments mix with services from other banking fields (investment banking, commercial banking, institutional asset management). Unlike a pure Markowitz portfolio optimization, which can rather easily be described by algorithms, this advisory content places high demands on the ability to crosslink knowledge and apply it to a customer situation with a high degree of specificity. These complex forms of advisory services are now provided almost exclusively in personal consultations and, also because of the high individual costs that arise on the part of the consultant, are charged separately, with specific pricing models. Given the complexity of these requirements, and the environment within which such consultation is provided, the advisors need to possess in-depth knowledge of investment advisory, and also be able to identify where and how to obtain the best advice for the client.

### **Additional value generating functions**

Extending the view of the entire consultation process by upstream and downstream functions can offer some additional perspectives on the potential for digitization. Consequently, customer acquisition and the related customer allocation to a client adviser (client acquisition, adviser selection, and matching) could be subject to technologically driven changes. From a regulatory point of view, the overall “on-boarding” phase is also of central importance. Finally, the aggregation of the overall financial situation can also be incorporated in this consideration as quite relevant.

### **Client acquisition, adviser selection, and matching**

The assignment of a client adviser to a new client is largely random and unsystematic in today’s environment, which is surprising given its importance in influencing whether the client decides to have a long-term relationship with the bank or not. In private banking, customer acquisition primarily takes place through referrals [Maude

(2010)]. This means that affluent customers share their own perceptions and experiences in their social network. In this process, both professional and interpersonal factors at the level of sympathy play an essential role. The assessment of what makes a good adviser is, therefore, individual and subjective. If the chemistry between Customer A and Consultant Z works well, this does not at all mean that the recommended Customer B also corresponds to Consultant Z. Today, this subject is still given little attention, and the assignment of a customer to a client adviser is determined either by the recommendation relationship or, often, quite randomly, with a client adviser being assigned to a potential customer mainly due to time constraints. In addition, the customer rarely has the ability to make an informed decision, because they are not able to choose from a variety of client advisers corresponding to their professional and interpersonal preferences.

From the outset, though, it is difficult to assess which customer characteristics best fit, at least on paper, to a given adviser’s characteristics. The right match is not trivial, as Cocca (2010) shows. Basically, there seems to be a tendency towards “like attracts like,” at least in terms of the criteria of age and – even more pronouncedly – gender. In any case, the personal “chemistry” between the client and the consultant plays a very important role. The sympathy that one feels towards their consultant (and probably vice versa) dictates whether the client demands a change of advisor or not. As in real life, there has to be a spark between a consultant and a customer in order for there to be a prospect of a long-term relationship. As in real life, this process certainly cannot be institutionalized. 13% of private banking customers actually want another client adviser [Cocca (2010), Cocca (2014)] – which is a remarkably high proportion. Bearing in mind that, in private banking, a bank gains an average of around 1% to 3% of net new customers per year, this indicates that the growth of around six financial years is at stake. However, considering the guidance-related aspect that is crucial for the desire for a change in consultants, it is evident that customers who are ready for change express themselves negatively, especially in terms of sympathy and the allocation of speaking time during a consultation. Around 80% of customers who want a change in consultant indicate that the client advisers generally speak most during customer conversations, and around 60% do not like their client advisers. These dissatisfied customers are a latent migration risk for the bank. For this reason, it is worth every investment in the recognition of this potential for dissatisfaction and in the improvement of the assignment of the “right” customer advisor to a customer. This “matching” process could be helped tremendously through the use of social media. Consultants can be rated by the community, and be assigned to a customer on the basis of relevant professional (training, experience, expertise, etc.) as well as purely private criteria (hobbies, religion, languages, etc.).

**On-boarding**

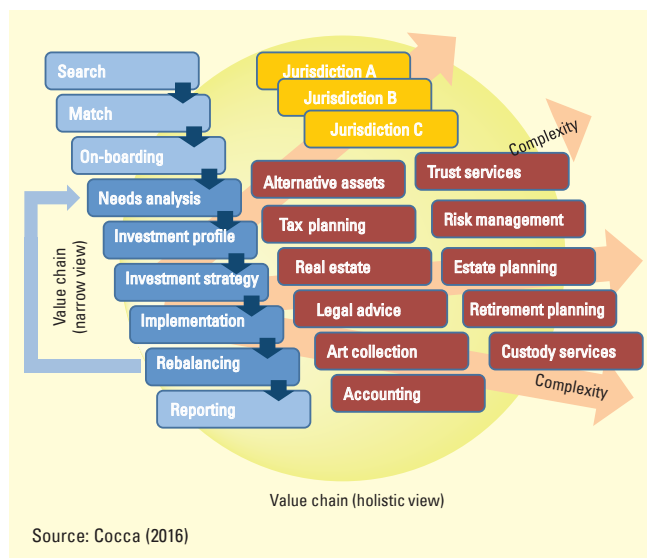
On the part of the bank, a further partial step in customer acquisition, which still receives little attention in discussions about the change potential of digitization, is of great importance, and that is customer identification as part of the on-boarding process [Dwivedi (2016), Thomson Reuters (2016)]. In this regard, key regulatory requirements are to be met that demand that the know-your-customer (KYC) approach and which, based on risk, require clarifications of the background of the client and their financial circumstances. In the context of a virtual bank environment in which a bank draft should be performed more frequently and easily, the question arises as to whether each bank has to perform clarifications regarding regulatory requirements, from the above-mentioned suitability tests to the fulfillment of money laundering provisions, for each potentially new customer. For more complex customer situations, an account opening in wealth management may take several months until all the investigations have been performed. Taking advantage of digital opportunities, it is conceivable that each client be checked by a non-bank entity with respect to the compliance with all these rules, and that a central personal identity be generated that each bank can access when the corresponding customer wants to begin or considers beginning a customer relationship. In this way, the customer identification process would be much more efficient and would also be improved in terms of quality by means of specialization.

**Holistic wealth management**

Throughout the entire consultation process, the focus on the entire wealth of an individual is a central aspect of holistic advisory. In this process, the main question is which provider has the overall view of the customer’s assets. This may well be called the “Holy Grail” of wealth management advisory. For high-net-worth clients, this function can be fulfilled by the family office, an independent asset manager, or the main bank. An enormous challenge remains, however, for a complex fortune to generate such a consistent overall view, which allows continuous control based on current market data across all asset classes. In addition, it is usually the customers themselves who avoid such a concentration of power with a provider that holds all the information and pulls all the strings. An independent entity that performs such an aggregator role by using digital technology would be beneficial in ensuring optimal advisory results. Examples such as MINT, which makes such an offer for the retail and affluent spec, demonstrate the potential of the approach. However, it quickly becomes apparent just how difficult such an implementation is as soon as complex investments with alternative asset classes and different jurisdictions are involved.

**The entire perspective on wealth management services**

Figure 2, which provides a visual manifestation of the diversity of advisory services provided in wealth management, demonstrates that the current perspectives of robo-advisers are based almost



Source: Cocca (2016)

Figure 2 – Wealth management value chain

exclusively on a narrow view of the advisory process and not the full range of conventional advisory activities, or interfaces and overlaps between the general topics being adequately considered.

**POTENTIAL FOR VIRTUALIZATION**

**Standardization versus complexity**

In order to provide a service virtually, it has to be possible to map it in software, an algorithm, or a different kind of expert system [Guinan et al. (2016)]. To some degree, this requires the service elements to be standardizable. The level of complexity of advisory services in the financial industry is very different. Thus, the degree to which a rendered service can be offered completely virtually differs as well. What kind of financial advisory customers will prefer to receive advice based on an algorithm or provided in person is a question of individual preferences. It is conceivable that certain easily standardized services can be provided more cheaply by an algorithm, whereby comparative cost advantages can be achieved compared to the service provided by client advisors. It is not readily apparent, though, whether it is possible to capture a large market share in advisory services in such a trust-based business as wealth management by offering the service solely via algorithms. The most likely scenario is that specific issues are increasingly automated by algorithms and thus offered as a commodity, while traditional service providers could be forced into more complex advisory services. However, such predictions have to consider that wealth management advisory has a high degree of complexity when knowledge and expertise have to

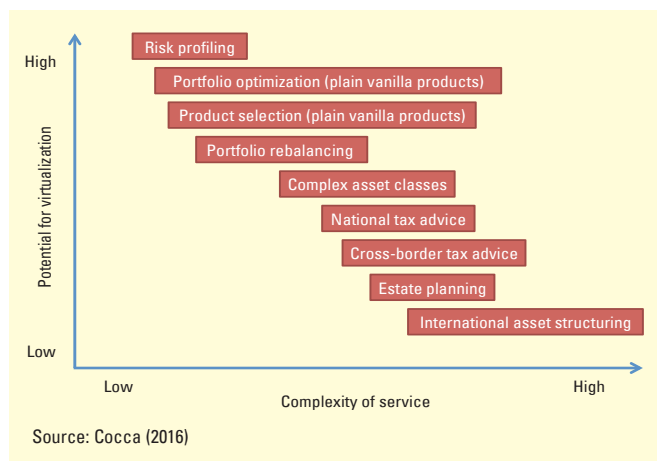


Figure 3 – Potential for virtualization

be applied, such as from other disciplines. The combination of legal, tax, and financial issues, for example, is hardly suitable for mapping by algorithms, since each case has so many degrees of freedom and requires such case-specific solutions that standardization can hardly be achieved efficiently. An additional layer of complexity is also created by the frequently encountered relevance of various jurisdictions, leading to more complex asset structuring (see Figure 3).

### Efficiency of human interaction

Given the available software solutions for financial planning, the potential for the virtualization of advisory services could be high. Once the algorithms have to represent more complex issues, however, the required technical expertise for entering the data increases. Thus, a limiting factor that cannot easily be solved by digitization is that a certain measure of expertise is required in order to feed a more complex algorithm with data. In such a case, the (human) adviser often plays an important intermediary role. Through their knowledge, the advisors are able to manage the relationships in a simpler and more comprehensible language. Their experience also helps manage issues that can be confusing for the average customer. One can learn from experiences of other industries that have only partially been addressed by digitization. The medical services industry is a good example. Those subtle interaction signals that are expressed in a personal interview through language, facial expressions, and posture, demand the involvement of an individual. Is the customer uncertain? Is there something that they have not really understood? Why do they hesitate? What seems to be bothering them? The importance of reading body language, which to this day has not been mastered by technology, should not be underestimated.

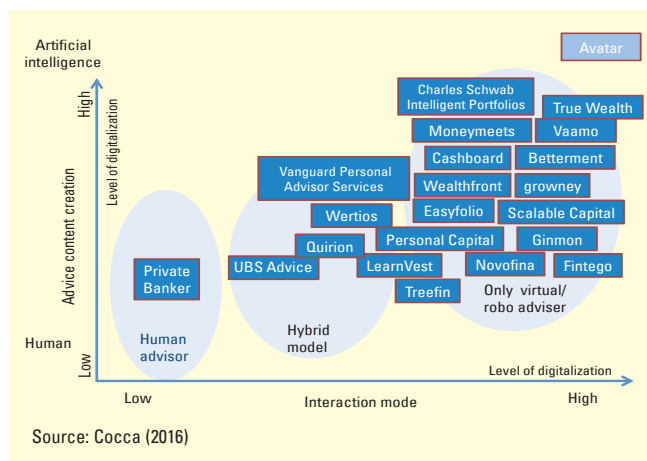


Figure 4 – Virtualization dimensions

### Dimensions of virtualization

Conceptually, the issues facing digitization in the wealth management advisory industry can be divided in the following manner:

- **Virtualization of the interaction:** this refers to the configuration of the communication channel between the advising entity and the customer. The communication can be performed physically and personally (one-to-one meeting) such that the consultant and the client meet in a conference room of the bank and have a conversation. A virtualization of this communication environment can now take place such that a conversation with the client adviser is performed through a digital channel, whereby it can be decided whether a pure text, voice, or image transmission is involved.
- **Virtualization of the advisory content:** The content of the consultation can be virtualized to varying degrees. Here, the central question is whether the advice has been created by a human intellectual performance or an information processing procedure based on a programming code: for example, an expert system or other algorithm.

From these two dimensions, the conceptual forms of advisory shown in Figure 4 can be created. The traditional private banker who personally meets the customer and provides advice based upon his/her experience and knowledge represents the basic model. A first evolution of this advisory model is the hybrid advisory model, in which the customer relationship is still dominated by the client adviser but the customer can make use of personal meetings as well as e-mail, chat features, or video telephony. Moreover, the customer has the ability to use certain analytical or simulation programs, such as via an app or webpage. This corresponds to a changed communication and interaction behavior that can be observed today on a large scale



[Kitces (2016)]. A second stage of evolution is the elimination of a personal consultant. The resulting “robo-adviser” is an information processing system that automatically generates the advisory content. Consequently, the interaction only takes place over a virtual channel. As media technology and artificial intelligence develop more in this area, another conceivable future developmental stage could be advisory represented by an avatar, which could connect the capacity of processing information with a quasi-human face.

## **RELEVANT CONSIDERATIONS BEYOND VIRTUALIZATION**

### **Trust**

Trust is a key element in wealth management. Advisory only has a perceived and demanded value when the advised party has a strong sense of trust. Financial matters seem to demand a higher level of trust than other consumption decisions. Trust in wealth management reflects many aspects, the most important being gained expertise in a field, capital strengths, and general reputation of an institution or the person representing it. A non-negligible element of trust, particularly for very wealthy clients, is the question of liability: who will be legally liable in the case of misadvising. This liability capital will depend on the financial strength of an institution, which makes it difficult for small companies to do business with very wealthy clients.

### **Regulation**

Certain regulatory requirements make digital advisory, clearly structured, appear attractive to service providers. The thorough digital processes that clients have to follow allows for an uninterrupted verifiability of compliance with legal requirements [i.e., MiFID (Markets in Financial Instruments Directive)]. In such an environment, customers cannot behave in a way that is not compliant, and consequently the services provided by the bank will always be compliant. However, a virtual customer relationship may undermine the KYC approach in another area; namely, in a regulatory as well as a business-policy sense. In terms of regulation, a pure virtual customer relationship makes it possible to ensure that the customer is compliant any given time through electronic monitoring. However, adequate attention might not be given to certain important information that can seem suspicious to a trained client adviser. Big data allows for the profiling of customers and the prognosis of future customer behavior, but, especially in dealing with very wealthy clients, the question arises as to whether the personal relationship with the customer and the knowledge of a customer does not also include valuable information regarding their preferences and potential future needs. Moreover, a customer may feel more willing to talk about the consequences of the sudden passing away of their wife when the long-time adviser to the family addresses this delicate issue with due care, whereas a robo-adviser might send a change of text of the

testament contract by e-mail on the basis of the calculated probability of such a scenario.

### **Service integration**

In future virtual banking solutions, consideration has to be given to the enormous complexity of interfaces between financial services. Today's robo-advisers or online brokers offer only a very small portion of the range of services. The advantage of an established wealth management provider, for example, is the facilitating of interfaces for upstream or downstream services. This problem arises particularly if the services need to be integrated across national borders or the service does not include plain vanilla products. It is precisely in wealth management, though, that such questions appear with great regularity, bringing with them a very flexible and, therefore, expensive IT infrastructure – not least of all with many human interfaces and low straight through processing rates. The development of a fully integrated financial services offering, for example, provides enormous potential, but also represents a major challenge. This is somewhat demonstrated by the large number of FinTech companies that are currently active in the market and that offer solutions in a barely identifiable number of niches. The question of who can bring together a comprehensive total offering is currently in the background, but it is likely to be very relevant in the future. Established banks have certain advantages in this respect.

### **The relevance of human interaction**

The central question seems to be how important human interaction is to an adviser, especially when it comes to advising wealthy individuals in financial matters. A view of empirical findings from other advisory industries that have similarities to the financial sector can be helpful in this regard. Medical advisory, for example, can be described as comparable to wealth management advisory, due to (1) the complexity of the provided advisory services, (2) the potential importance of the advisory for the individual, (3) the great importance that is attached to the trust, and (4) because a variety of online services is being developed in the area. A number of studies in this field [Cotten and Gupta (2004) and Fox and Rainie (2000)] find that a person who is healthier and happier is more likely to search for answers to medical issues online, while those who are severely ill visit a doctor. A dominant theme in the literature is the factors that influence consumers' trust in the information or advisory offered online [i.e. Sillence et al. (2006)]. Although internet usage occupies an increasingly important role, particularly during the information gathering phase, the doctor and the personal conversation with him/her remain the primary source of information and advisory [Sillence et al. (2007)].

In addition to the use of virtual advisory in the health sector, the use of legal advisory also seems to have parallels with financial advisory. Progress in this area can also be recognized, but some evidence suggests that major challenges still exist when it comes to approximating

or replicating the advisory provided by a person with a machine [Bench-Chapon (2015)]. Another area of research that seems to be relevant is the field of human computer interaction (HCI), where studies have been conducted into how trust is, and can be, generated between man and machine [Cheskin (1999), Schneiderman (2000), Olson and Olson (2000), Corritore et al. (2003), Derbas et al. (2004), Marsh et al. (2004), Riegelsberger et al. (2005), Wang and Emurian (2005), Robinette (2015)]. It seems that despite the technological advances, there is still a long way to go before we get to a stage where information systems or robot advisors are able to replicate the kinds of advice that a human being is able to provide [Waern and Ramberg (1996), Torrey et al. (2013), Kim and Gambino (2016)]. The challenge lies both at the level of content-related information processing (the meaning, linking, and evaluation of information) [Alvarado-Valencia and Barrero (2014), Parkes and Wellman (2015)] as well as in the form of interaction (recognition of voice, gestures, and facial expressions). In addition, the extent to which sensitive data (financial advisory also undoubtedly involves very sensitive data) is exchanged in the same manner with a machine as with a human partner is still not clear. This will particularly play a central role when technology has advanced so far that avatars will be able to be involved in a real advisory situation with customers [Pickard et al. (2016)].

From these research fields, conclusions can be derived which are also important for financial advisory:

- The complexity of the consultation content is high when it comes to covering a wide range of advisory topics; and not just single, easily standardized elements.
- Trust in the quality of the provided advice is still a problem in virtual environments where advisory is replaced by a machine. A person seems to still trust a human counterpart more than a machine.
- In interaction, the machine is far from able to replicate the subtle and varied communication and interaction patterns of a person.

### Today's client preferences

Based on the collected customer data [Cocca (2016)], attitude towards and use of online advisory is illustrated. The analyzed customer data support a generally high technological affinity<sup>2</sup> of private banking customers, regardless of banking services. Approximately two-thirds of respondents gladly use digital options for information and communication in everyday life. That alone does not automatically mean that online services related to wealth management and investment advisory will explicitly be in demand. The relationship between general technology affinity and the current use of online banking services shows a mixed picture:

- No significant statistical correlation results between the general affinity for technology and the effective use of online wealth management services.

- There is a significant statistical relationship between the general affinity for technology and the occasional use of online banking to transmit orders/stock orders to the bank.
- There is no significant statistical relationship between the general affinity for technology and the regular virtual interaction with the client adviser.
- The wealthier the person, the more important a human interlocutor/adviser is.
- The older the person, the more important a human interlocutor/adviser is.
- The higher the level of expertise, the higher the affinity for technology.
- The lower the risk aversion, the higher the affinity for technology.

If the general affinity for technology is placed in relation to statements about future behavior, a much stronger relationship is evident. A statistically significant correlation exists with the statements "I can well imagine receiving consultation from my client adviser primarily online," "I can well imagine performing financial transactions and investment transactions with the bank primarily online," "I can well imagine performing financial transactions and investment transactions – regardless of my bank – primarily online." Respondents are open minded in terms of a hypothetical use of future virtual offers. These prospective statements should always be taken with some caution, though, since they are hypothetical. Other findings from the data analysis paint a more nuanced picture of the "digital future." The main results can be summarized as follows:

- About two-thirds of the surveyed private banking customers are open minded in terms of the use of online financial services, but personal contact with their client advisers is just as important to them. For a clear majority of the customers, there is no question of the use of a pure online service offering.
- Around 30% of respondents can imagine using a purely online service offering. Especially in younger private banking clients (young in this context means less than 60 years of age<sup>3</sup>), the proportion rises to 45%.
- The observed generation gap (younger respondents have a greater affinity for technology than do older respondents) is also not unexpected. This shows that, for younger private banking customers, online financial services have become even more important than personal contact, although the latter is still meaningful. What is surprising is the fact that the generation gap closes more quickly than is generally expected. A comparison of the

<sup>2</sup> The question is as follows: "In everyday life, I gladly use new options for information and communication offered by the internet ("true" - "not true," score 0-10)?"

<sup>3</sup> The average age of a private banking/wealth management client is 60-65 years.

results of previous surveys shows that, in some areas, the older customer groups (over 70 years of age) have meanwhile nearly caught up with younger ones in terms of technological affinity.

- Another interesting result of the analysis that is so far generally not recognized is that technological affinity in private banking is very much gender dependent: male private banking customers have a significantly greater affinity for technology than their female counterparts. This does not mean that women have no affinity for technology, rather that the proportion among men was significantly greater. This finding could have implications for the design of online financial services.
- It is also evident that the self-assessment of personal risk tolerance and one’s own knowledge of financial matters has a significant positive relationship to technological affinity in general, as well as to the hypothetical use of online services in the future.

The data support the finding that new technological possibilities are undoubtedly becoming increasingly important in private banking. An answer seems to be appearing to the question regarding the extent to which age-related conservatism superimposes technological affinity at a young age in the case of private banking customers. The age gap observed in the past regarding the use of new technological opportunities in private banking is fast disappearing, since now even the older generations of customers have developed a significant affinity for technology.

To place the previously developed differentiated image in an overall context, the totality of the surveyed customers, which is representative of an average customer book in private banking, is illustrated in

segments by means of the degree of digitization. In this regard, four relevant segments that differ in terms of the degree of digitization (i.e., how they make use of online private banking services today) can be distinguished:

- **Digital deniers:** the client has a personal adviser and does not use any virtual banking channels.
- **Hybrid client:** the client has a personal adviser and uses virtual banking channels for services related to wealth management.
- **Mostly digital:** the client has no personal adviser and more than half of his/her wealth is with an online bank.
- **Fully digital:** the client has no personal adviser and all of his/her wealth is with an online bank

Figure 5 now shows how the customer base is distributed: 13.6% are digital deniers, 79.9% are hybrid customers and 6.5% are digital customers today.

Digital deniers also display the following characteristics in the group comparison. They have higher average age, proportion of women, average wealth, and individuals who are risk averse, and lower proportion with good/very good knowledge and overall technological affinity.

Digitals, on the other hand, have the following characteristics. They have lower average age, percentage of women, average wealth, and individuals who are risk averse, and have higher proportion with good/very good knowledge and overall technological affinity.

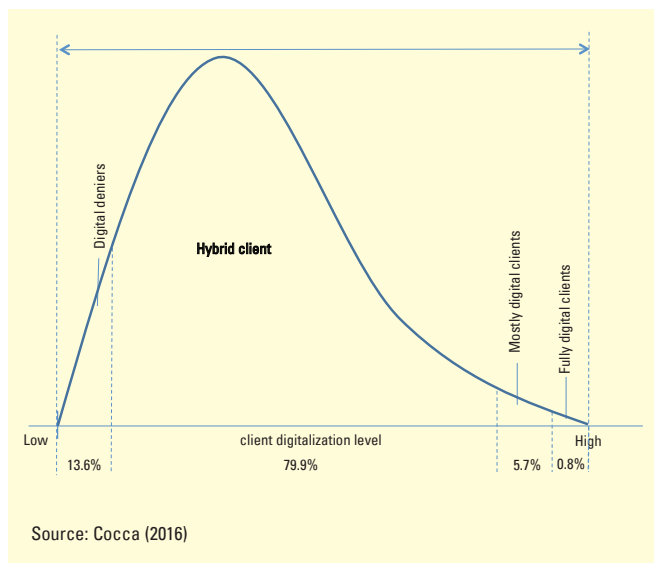


Figure 5 – Degree of digitalization of wealth management customers

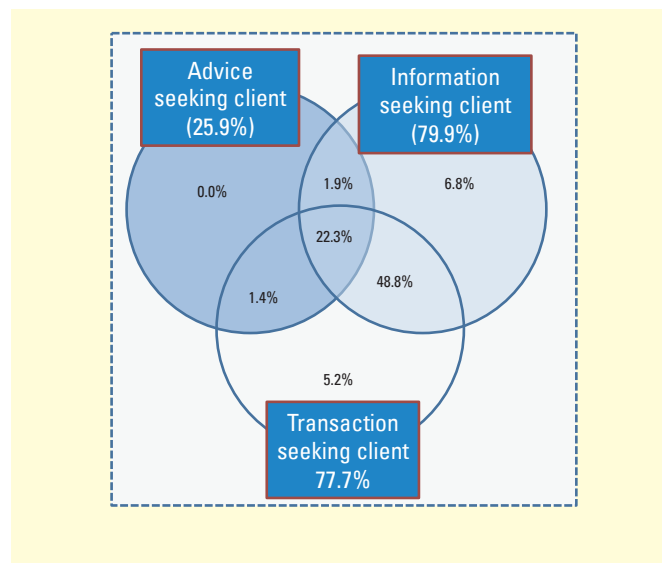


Figure 6 – Use of online services by hybrid customers



Hybrid customers can be analyzed further with respect to their use of online services and their quantitative distribution. In this process, the following types of use can be distinguished:

- **Information seeking client:** i.e., enquires about portfolio information or becoming informed about markets and investment opportunities.
- **Advice seeking client:** i.e., stay in touch with the client adviser and is advised by the client adviser via the internet.
- **Transaction-seeking client:** i.e., give the adviser instructions or send trading orders.

Figure 6 shows the quantitative distribution of these types of use, including the intersections. As a result, it is clear that in the case of hybrid customers, online services are mainly used for obtaining information and transmitting transaction. However, only 25.9% use the online channel to remain in contact with the consultant or to seek advice.

In a prospective consideration, the question of which tendencies the various customer segments show in terms of making use of virtual wealth management services in the future can now be investigated. In this regard, a distinction is made between readiness for virtual interaction with a client adviser, readiness for banking mostly online with their bank but without a client adviser, and readiness for truly virtual advice not from their bank.

Figure 7 shows how these three dimensions respond for the three segments according to the survey results:

- Among the **digital deniers**, only 12.5% of respondents said that they could imagine interacting virtually with their client adviser in the future. Moreover, only 10.4% can imagine dispensing with the client adviser and generally interacting online with the bank. The proportion is the same with regards to people who can imagine completely virtual consulting from a third party.
- Among the **hybrid customers**, only 30.4% of respondents said that they could imagine interacting virtually with their client adviser in the future. As many as 45.4% can imagine dispensing with the client adviser and generally interacting online with the bank. Moreover, 34.8% can even imagine completely virtual consulting from a third party.
- Among the **digitals**, 36.4% of respondents could imagine interacting virtually with their client adviser. As many as 85.7% can imagine dispensing with the client adviser and generally interacting online with the bank, while 81.8% can even imagine completely virtual consulting from a third party.

Dimension A, therefore, represents the potential of a primarily virtual interaction with the customer advisor. Dimension B shows the

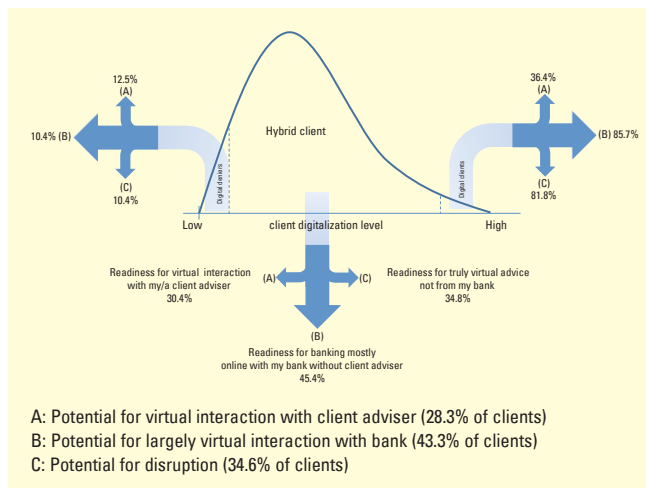


Figure 7 – Use of online services by hybrid customers

potential for an elimination of the client adviser, while dimension C represents the disruption potential if customers are willing to make use of completely virtual consulting by a third-party. To assess the potential of these dimensions, the totals of A, B, and C are presented across all segments. As shown in Figure 7, a fundamental potential arises for future forms of online advice, which is in the range of 30% to 40% of today's customer base. Potential in this regard refers to customers who, from today's perspective, can imagine making use of such a service.

## ROBOADVISER & CO.

The manifestation of virtual advice concepts is best seen today in the area of robo-advisers. A robo-adviser is an online investment platform that provides automated online investment advice and uses algorithms to determine asset allocations and automated rebalancing for investors. Each client's portfolio is structured to achieve optimal returns at every level of risk. A key investing approach used by robo-platforms is to invest in low-cost ETFs that minimize embedded investment costs. The "robo" part of their name refers to the fact that no human contact is involved. At the heart of today's players in the field of virtual advice is a more or less complex proprietary algorithm. In most cases, the firm's investing strategy involves the use of Modern Portfolio Theory to design customized ETF portfolios. The average portfolio size at companies like Wealthfront or Betterment is in the range of 20T to 40T U.S.\$. This could be an indication that today's rather simple virtual forms of advice are directed to retail clients that have most likely never had access to a dedicated wealth adviser. Moreover, most concepts are directed at ETF investments

and, therefore, build on a low-cost selling proposition, eventually giving access only to ETF investments for low wealth clients in a cost-effective manner.

Looking at the overall wealth management market, some providers have achieved a relevant size in particular markets with an affinity for technology (such as the U.S. or U.K.) within a relatively short time. However, the current total market share of the wealth management market attributable to robo-advisers is well below 1%. Companies like Betterment (U.S.\$ 3.2 bln assets under management (AUM)), Wealth Front (over U.S.\$ 2 bln AUM) and Nutmeg (U.S.\$0.5 bln AUM), which are among the pioneers of robo-advisory services, have yet to show whether they have succeeded in maintaining their initial high growth rates. Among the established providers, the offerings of Charles Schwab, Vanguard (Vanguard Personal Advisor Services) and UBS (UBS Advice), among others, can be mentioned. According to estimates, these companies now manage significant client assets on a virtual platform (or according to a hybrid model). It is observed that, when it comes to offering more complex services or when the client's assets are very substantial, even robo-advisers turn to a financial adviser.

At one robo adviser, for example, you might have financial planning questions that involve budgeting, developing a financial plan, buying or selling a home, planning for a newborn, planning for retirement, or developing a college savings plan for a child. For all of these questions, you'll have access to a financial advisor. At another robo adviser, clients with an account balance of U.S.\$ 500k or greater can schedule a one-time personal consultation with one of the firm's in-house financial advisers. Moreover, what is striking is the linking of the robo-adviser with the discussion of the advantages of passive versus active investing. The question of who uses robo-advisers today can probably best be answered by looking at the market positioning of most providers. It seems that customers who, due to their small asset sizes, have never enjoyed the benefit of extensive wealth management advisory that are the most active users of robo-advisors. Robo-advising offers a viable, low-cost investment solution that is within reach of even new investors who are starting out with small investment amounts. Investors with complex estate, business, or tax circumstances may particularly benefit from the more customized guidance of a traditional financial adviser. The offer of robo-advisers, therefore, seems to be intended for retail and affluent customers [EY (2016)]. For classical wealth management clients, the traditional human adviser provides the kind of personal, hands-on service that investors consistently seem to prefer. Investors' preference for human advice is further evidenced by the decline of self-directed investors – those who want to handle their own portfolios and are not looking for advice. Since 2010, the population of self-directed investors has declined from 45% to 38%, even as the tools for monitoring and managing portfolios have steadily improved [Smith (2016), Cocca (2016)].

The "natural" limit in the development of robo-advice could be that simple risk-tolerance questionnaires, which serve as the core of robo-advisers' client-discovery process, do not get to the heart of understanding the entirety of an investor's financial needs and goals and how their investment portfolio works in the context of their complete financial circumstances. Fein (2015) also evaluates whether robo-advisors meet a high fiduciary standard of care and act in the client's best interest. Based on a detailed review of user agreements for three leading robo-advisers, Fein concludes that robo-advisers do not live up to the Department of Labor's (DoL's) requirements. From a regulatory point of view, it is often unclear where the boundaries lie between a personal recommendation and information/execution only, and whether this is transparent enough for the end-user. These regulatory challenges could become more important as the use of robo-adviser increases. The regulators could take the view that robo-advisers are failing to perform the same level of due diligence that authorized advisers have to conduct, since by their very nature robo-advisers are working from questionnaires that are filled out electronically and that are largely go unchecked in terms of whether the information is accurate.

## CONCLUSION

Contrary to some spectacular perspectives, which are generally attributed to FinTech firms at present and in the specific context of virtual advisory in wealth management, the following key aspects of the potential of virtual advisory can be formulated:

- **Mastering complexity:** currently, robo-advisers are only able to manage a financial decision with low complexity in a virtual environment. Crucial to success in wealth management will be the ability to offer more complex financial services in a cross-border context and in a virtual form or, by means of technology and innovation, to change the basic architecture of a service and simplify it to such an extent that it will be easier to digitalize it [Deutsche Börse (2016)]. Of relevance will be the degree of improvements in the technical capability of hardware and software, as well as the extent by which national and international regulatory and legal systems converge or diverge.
- **Building trust among the target group:** financial consultancy requires a very high level of perceived customer trust towards the advisers and the institution. This can manifest itself in the form of reputation capital or high capital strength and, thus, of recoverable assets in the case of legal disputes. For start-ups, this represents the biggest challenge. Conversely, established wealth managers can use their existing reputations to place a "hallmark" on a hybrid or purely virtual offer. It, therefore, appears most likely that the most successful offers will come from

established providers. A mixed form in the sense of a reputation transfer would exist if a strong brand from the virtual consumer sector (i.e., Amazon, Google, etc.) would try to expand into the financial sector by working with FinTech companies.

- **Financial expertise as a hurdle:** advancing into more complex financial services could be technically possible but has as yet not been tackled. A limiting factor could be the knowledge (or time) that is necessary for such use.
- **Replacing the customer advisor:** if it is possible to produce an advisory experience with pure virtual offers and to have the “old consultant” forgotten by means of new features or solutions, then self-directed and finance-literate customers could be serviced to a large extent with such an offer.
- **Segment-specific offers:** advising clients from the affluent segment appears most promising from today’s perspective, since the greatest similarity exists between the investment advisory obtained today and the offer of a virtual investment consultancy. The response to the needs of HNWI or UHNWIs has to be looked at more critically. As observable to some degree in online brokerage, it is conceivable that HNWI or UHNWI customers might dedicate a (small) portion of their assets to online trading. The majority of the assets, though, remains in traditional advisory models, which provides a clear potential for hybrid advisory models in the upscale customer segments.
- **Pricing model:** what all current robo-advisor offerings have in common is that they try to offer a standardized service over a virtual channel at significantly more attractive terms, thereby attacking the fees, and fee structures, of established providers. The threat to traditional wealth managers is that, on average, a large portion of revenues is derived from highly standardized services that can be easily digitized. Hence, a highly relevant portion of income is at stake.
- **Hybrid model favored:** from today’s perspective, it can be noted that, despite the increased use of technology, personal contact with a client adviser is still important, or very important, for the majority of private banking/wealth management customers. This could mean that a hybrid, bank-centric model can be expected to have the greatest potential for the future.
- **FinTech challenge:** the increasing number of FinTech offerings in wealth management is a positive development from the perspective of promoting innovation. Based on the issues explored in this article, it is not expected that the market share of such offers will rise substantially in the medium term. The confusion resulting from the large number of providers is a problem in terms of market fragmentation and will eventually allow only a few to gain a foothold in the market. Since the combination of established brand strength and existing customers with the innovative strength of a FinTech company combines the benefits “of both worlds,” FinTech companies should not be seen so much as competitors to established operators, but rather as strategic

cooperation partners. Private banking providers, therefore, face the challenge (or opportunity) of developing existing business models by means of integrating innovative solutions from the “FinTech” sector. This proves that it is generally up to the established private banking providers to meet the digital needs of their increasingly technology-friendly clientele.

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# Centre for Global Finance and Technology

The Centre for Global Finance and Technology at Imperial College Business School will serve as a hub for multidisciplinary research, business education and global outreach, bringing together leading academics to investigate the impact of technology on finance, business and society.

This interdisciplinary, quantitative research will then feed into new courses and executive education programmes at the Business School and help foster a new generation of fintech experts as well as re-educate existing talent in new financial technologies.

The Centre will also work on providing intellectual guidance to key policymakers and regulators.

“I look forward to the ground-breaking research we will undertake at this new centre, and the challenges and opportunities posed by this new area of research.”  
– Andrei Kirilenko, Director of the Centre for Global Finance and Technology

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