Peter Mooslechner
Executive Director
Oesterreichische Nationalbank

The FinTech Revolution: More important than the ATM?

> *„…the most important financial innovation that I have seen [in] the past 20 years is the automatic teller machine."*
>
> *Paul Volcker (2009)*

> *„…Something New Under the Sun?"*
>
> *Mark Carney (2017)*

At the moment, the FinTech arena seems to be more prepared for stone age unregulated fighting as to serve as a "cooperative" playground in an advanced global community under the roof of common institutions, like the United Nations in the area of politics. What seems to be urgent today is to bring all relevant agents in markets targeted and affected by FinTechs together to discuss the consequences of the rise of FinTechs from different perspectives and in an encompassing way.

It is obvious – and not meant as a critique – that all agents acting in this FinTech arena have different preferences, different starting points and that they follow different objectives. For example, they are of very different age, come from different historical (often national) traditions, are extremely different in size, market share and product portfolio, concentrate on different functions and tasks. In the end, it comes as no surprise, that they see each other as coming from different tribes or even planets, not even sharing the same language to talk to each other. However, this becomes more complicated by the mere fact that their playing field is more or less the same, at least they are active in significantly overlapping markets addressing the same customer base potential to a large extent.

It is necessary to put the FinTech focus in a much broader context, in order to set the scene for a fruitful discussion and analysis of the many complex topics that will have to be tackled in this context. At least this is key with regard to the three main elements: (i) financial markets, (ii) the institutional setup as well as (iii) the importance of technical progress and historical developments. Therefore, it is also necessary to bring representatives of the different teams on the playground together to talk to each other in a constructive and neutral setting.

As a starting point for a much more in-depth analysis and for addressing different views on the subject, three elements of the much broader focus mentioned above may help to prepare the topic on the one hand but also to raise awareness of the issues on the other hand:

From a macroeconomic point of view…..

…..quotes from three eminent economists may help to reveal the „character" of the FinTech innovation in an economic sense and the potential consequences it might produce. Robert M. Solow (1987), the outstanding pioneer of growth theory, concluded in a historical New York Times Book Review article characterizing the nature of the technical progress of that time: „You can see the computer age everywhere but in the productivity statistics." Paul Volcker (2009) commenting on the crisis experience famously remarked as a criticism of financial innovation and the behavior of financial market participants: „…the most important financial innovation that I have seen [in] the past

20 years is the automatic teller machine.“[1] Last but not least and most recently Robert Gordon (2016) in his monumental book *The Rise and Fall of American Growth* writes: „The Rise and Fall of American Growth demonstrates that the life-altering scale of innovations between 1870 and 1970 cannot be repeated.“

What do these quotes want to tell us, do they have a common message? From an economic point of view the interesting questions are: What is the personal welfare enhancing benefit of a consumer or firm and what is the overall social benefit of, for example, a payment transaction executed in 2 seconds or less instead of 2 hours or 1 day? In fact, these are very tricky questions to answer and the measurable impact of these innovations on GDP and productivity is difficult to quantify, in particular as some (or many) of them come as process innovations without a price. At the same time, negative consequences for existing financial institutions in the form of market share losses and reduction in employment become much more directly visible and are easily to understand.

From a historical point of view…..

…..the core questions relate to the type of technical change we will or might potentially see as a consequence of the FinTech revolution. What Robert Gordon has in mind is innovation of the type of revolutionary change, which than has a significant impact on the whole society (general purpose technologies), on each individual as well as on overall GDP in the end. Will we see this type of revolutionary technical progress impact or will FinTechs simply complement what we have already seen over the last centuries, for example online banking and electronic communication.

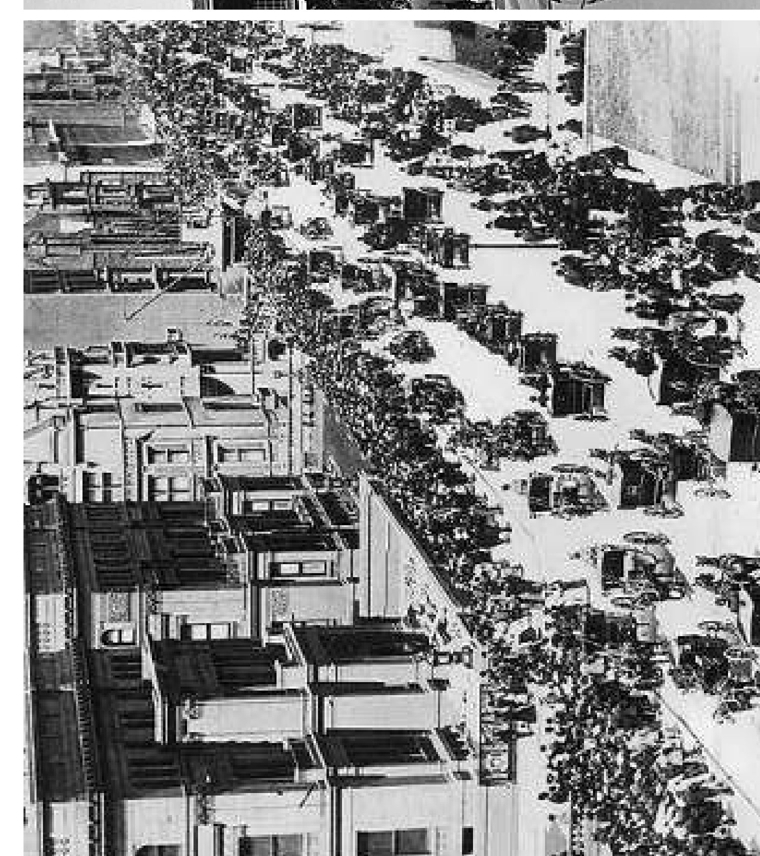
Two well known photographs illustrate perfectly, what in particular Gordon but also Volcker have in mind. These two photographs compare the New York Easter Parade on the Fifth Avenue in 1900 and in 1913. In 1900, we see a crowd of pedestrians as well as a large number of horse coaches. In 1913, only a little bit more than a decade later, the Fifth Avenue is full of cars but there are no horse coaches anymore and significantly less pedestrians as well. This is an illustration of this type of revolutionary technical progress, which really changes everyday life and almost completely covers our entire social activities and shrinks the old technology to a minimum, to very specific uses only. In comparison, no horse coaches are left in 1913 and later on as a significant part of transportation. Although, we know that horses still exist and they play some role on the countryside, in sports and in leisure activities. A comparable general purpose technology might have been the introduction of electricity (or air transport), but it is surprising how few comparable examples come to our mind that really have changed our lives in a revolutionary way. Even if many of us might have the personal feeling that

[1] *More in detail, here is the full quotation from the New York Post Website: „The most important financial innovation that I have seen the past 20 years is the automatic teller machine, that really helps people and prevents visits to the bank and it is a real convenience. How many other innovations can you tell me of that have been as important to the individual as the automatic teller machine, which is more of a mechanical innovation than a financial one?*
I have found very little evidence that vast amounts of innovation in financial markets in recent years has had a visible effect on the productivity of the economy, maybe you can show me that I am wrong. All I know is that the economy was rising very nicely in the 1950s and 1960s without all of these innovations. Indeed, it was quite good in the 1980s without Credit Default Swaps or CDOs. I do not know if something happened that suddenly made these innovations essential for growth. In fact, we had greater speed of growth in the 1960s and more importantly it did not put the whole economy at risk of collapse.”

The Easter Parade on the Fifth Avenue in New York as time went on

1913: Where’s the horse?

1900: Where’s the car?



Source: National Archives at New York City, Congress Library.

Peter Mooslechner

almost everything has changed completely during our lifetimes because of computers, internet, mobile phones and many other things more.

From a regulatory point of view.....

.....it is very important to „preserve“ the potential economic dynamics created by FinTechs with regard to the impact of digitalization and other key drivers on the future financial system. At the same time, there is the need to provide a level playing field for all actors in the respective markets, for newcomers as FinTechs as well as for established financial institutions.

To a large extent, the modernization of the regulatory framework will shape the impact digital innovation and the appearance of FinTech companies will have on the financial system. At the current stage, many FinTech innovations do not fit easily in the existing regulatory framework. If we expect FinTechs to be more than a short-lived fad that will soon either wane or be absorbed by incumbents, regulation will have to address the challenge.

By doing so, regulation must navigate between two opposing threats associated with financial innovation around digitalization: On the one hand, there is the threat of excessive competition, a use of innovation for regulatory arbitrage or speculative purposes, breeding instability by fostering excessive risk taking. A development, which we have seen many times in financial behavior in the past that has contributed to the creation of financial crises. On the other hand, there is the threat of rising market concentration induced by digitalization, for instance via integration of financial services by large online platform suppliers with oligopolistic market structures and a tendency to monopolize value added chains in the financial industry.

Due to the transnational nature of digital service supply and the existence of a European Single Market in financial services, an appropriate regulatory response will require either international coordination or has to be of a supranational character. As a result, a process has been started on the European level already to investigate the possible scope and shape of a common EU response. In March 2017, the European Commission has launched an encompassing consultation on the future regulatory and supervisory framework for FinTech.

In this context, a large number of fundamental theoretical and practical questions must be approached with respect to the goals of regulation in relation to digital innovation in the financial sector. There is a certain tendency in the current debate to frame the discussion in terms of whether new players will need to fit by and large into the existing regulatory framework or whether a tailor-made new framework has to be designed in order to suit and foster new approaches of providing financial services, in particular new technologies.

Behind this dichotomy, there are different approaches on what the goals of regulation are and what the potential roles of FinTech and financial innovation in an existing financial environment in general are. There is a case for modesty with respect to ex ante devising a grand scheme for the future evolution of the financial industry by regulators and supervisors. Instead, as the path and the dynamics of changes in financial markets and to financial institutions cannot be known in advance, let new competitors try to convince authorities that they can and how they will contribute to these developments. Regulation is sometimes/often portrayed exclusively as a burden. That is certainly misleading in many respects. Overall, there is the expectation (or hope) that regulation and supervision contribute decisively to overall welfare of a society.

As history has proven on many occasions, at least the absence of an appropriate regulatory framework has led into situations of financial turmoil regularly. However, regulation also contributes to the legitimacy of market participants. In a trust-based market like the financial sector, driven by market expectations and characterized by intertemporal contracts, such legitimacy is a key factor for all suppliers to gain customer confidence. In order to obtain legitimacy provided by regulation, FinTechs have to demonstrate how they can contribute to and comply with the goals of financial regulation in their own interest.

In the wake of the Global Financial Crisis, the need for regulation and supervision to make competition in the financial sector compatible with stability and overall welfare has been strongly underlined. Stakeholders expect authorities to ensure efficient financial services that add value to users and the economy without increasing risks. Two questions come to the forefront when these expectations are translated in the context of a broader financial system’s view:

First, what and how can FinTechs and digital innovation contribute to these overall goals of creating value and welfare and what kind of regulatory and supervisory approach would fit best to maximize this contribution?

The second question concerns the more direct impact of digitalization on regulation and supervision, associated with the term „*RegTech*“. What can digitalization contribute to enhance the quality and efficiency of regulation and supervision?

Summing up

Though the term FinTech is rather new, financial technology had already been a major phenomenon before the term FinTech became such a fascinating topic recently. This calls for particular analytical precision in dealing with all the related issues in a sophisticated way, as the rise of FinTech is seen as having the potential to “disrupt” (OECD, 2016) the financial industry. Without a doubt, questions to be addressed are challenging but they provide interesting opportunities as well. The main difficulty obviously is to find the right balance between the many relevant perspectives involved. In particular, decision makers should facilitate the positive innovation dynamics FinTechs obviously provide while safeguarding financial markets and institutions against negative and destabilizing developments at the same time.

References

Brunnermeier, M., A. Crockett, C. Goodhart, A. Persaud and H. S. Shin. 2009. The Fundamental Principles of Financial Regulation. International Center for Monetary and Banking Studies. Geneva.

Carney, M. 2017. The Promise of FinTech – Something New Under the Sun? Deutsche Bundesbank G20 conference. Wiesbaden. January 25.

Deloitte. 2015. RegTech Is The New FinTech. How Agile Regulatory Technology Is Helping Firms Better Understand and Manage Their Risks. Galway.

Deloitte. 2016. Bitcoin, Blockchain, and Distributed Ledgers: Caught Between Promise and Reality. Melbourne.

European Commission. 2017. Fintech Consultation. https://ec.europa.eu/info/finance-consultations-2017-fintech_en.

Financial Stability Board. 2016. Key Elements Underlying Fintech and their Financial Stability Implications. Basel.

Financial Stability Board. 2017. Financial Stability Implications from Fintech: Supervisory and Regulatory Issues that Merit Authorities' Attention. Basel.

Gordon, R. 2016. The Rise and Fall of American Growth. Princeton.

IMF. 2017. Fintech and Financial Services: Initial Considerations. SDN/17/05. June.

Institute for International Finance. 2016. RegTech in Financial Services: Technology Solutions for Compliance and Reporting. Washington DC.

International Organization of Securities Commissions. 2017. IOSCO Research Report on Financial Technologies (Fintech). Madrid.

Kregel, J. 2016. The Regulatory Future FESSUD Working Paper Series 164.

KPMG. 2017. The Pulse of Fintech. Amstelveen Netherlands.

Lagarde, C. 2017. Fintech: Capturing the Benefits, Avoiding the Risks IMF Blog. June, 20.

Mori, N. 2017. Will Fintech Create Shared Values? Presentation at the Annual Tokyo Conference of the Center on Japanese Economy and Business. Columbia Business School. New York. May 25.

OECD. 2016. FinTech: Implications for the Shape of the Banking Sector and Challenges for Policy Makers. DAF/CMF (2016) 21. 27 October.

Philippon, T. 2016. The FinTech Opportunity. BIS Working Papers 655.

Solow, R. M. 1987. We'd Better Watch Out. The New York Times Review of Books. July 12.

Volcker, P. 2009. New York Post. December 13.

Wilkins, C. 2016. Fintech and the Financial Ecosystem – Evolution or Revolution? Presentation at Payments Canada. Calgary Alberta. June 17.