



The impact of Fintech and digitisation on the Belgian banking sector



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ABSTRACT

This study by the National Bank of Belgium (NBB) analyses the trends, developments, opportunities, risks, and threats related to digitisation in the Belgian banking sector, to the use of innovative technologies and to the entry into the market of new players and competitors. Following up on the NBB's 2017 prior study of digitisation and of fintech in the Belgian banking sector, this renewed study provides an updated overview of those trends and developments, and of the initiatives illustrating the digital transformation of Belgian banks. The study concludes with the NBB's observations and recommendations, formulating a number of points for attention with respect to both the organisation and the functioning of Belgian banks, while emphasising the importance of an active dialogue.

I. Introduction & approach

Digitisation is today more than ever a key driver of success for banks. Considering the acceleration of the digitisation of society linked to the Covid19 pandemic, the technological advances as well as the competitive context marked by the entry into the banking and financial sector of challengers and (big)tech actors, **banks need a strong digital strategy to ensure their sustainability.**

Given the importance of digitisation for the banking sector as well as its rapid development, the National Bank of Belgium ("the NBB" or "the Bank") decided in 2020 to launch a new fintech and digitisation survey. This new survey follows up on the NBB's 2017 survey which had enabled the Bank to identify digitisation-related trends and issues, to steer its supervisory action proactively as well as to communicate best practices to the sector.

The aims of this new survey were fourfold:



First, to update the NBB's knowledge of the digitisation of the Belgian banking sector and take stock of the evolutions and potential threats since the 2017 survey. Therefore, the banks were asked their views regarding the general impact of fintech on the banking sector, the existing competition with fintech and bigtech actors, their competitive position within the Belgian and European markets as well as the threats, opportunities and risks linked to digitisation.



Second, the questionnaire aimed to provide a 360°-degree view on how digitisation is handled by banks and to assess to which extent the 2017 NBB recommendations were implemented, as well as to identify potential pitfalls. To this end, banks received detailed questions regarding digitisation within their organisation, strategy, and experience, in particular in key areas such as, for example, payments or mobile and internet banking.



Third, the NBB wished to further ready itself for the arrival of new technologies and business models within the Belgian banking sector. The NBB collected information on the potential of business models and technologies such as crowdfunding, peer-to-peer lending, credit scoring using AI/ML, etc., and banks' initiatives linked thereto. Moreover, the banks were queried on their assessment of the maturity of certain underlying technologies such as blockchain, AI/machine learning, APIs, etc., and their initiatives relating these new technologies and techniques.



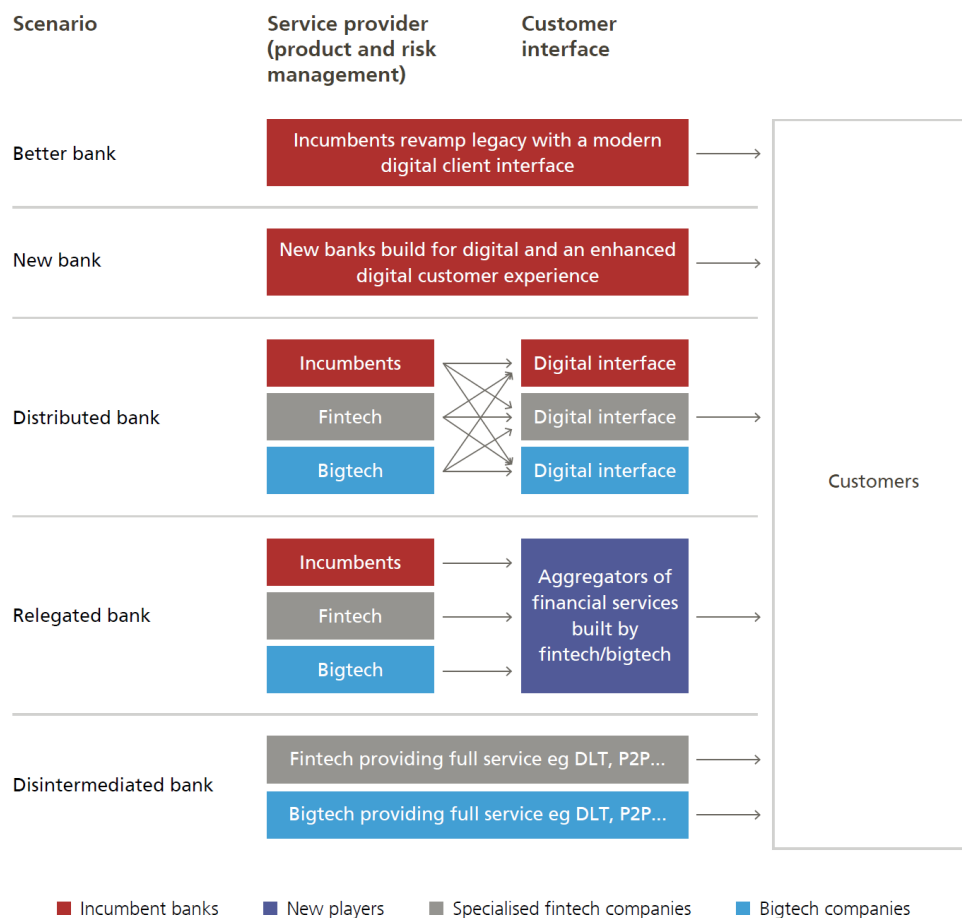
Finally, the NBB also wanted to collect feedbacks of the banks on the regulatory framework and its supervisory practices regarding fintech and digitisation.

In this report, the NBB aims to provide the public with a general overview of the results of this fintech survey by analysing sectoral trends (Section II), the digitisation of Belgian banks (Section III), and finally, by communicating its observations and best practices regarding Fintech and digitisation (Section IV).

II. Sectoral trends

a. Scenarios relating to Fintech development

The evolution of fintech and digitisation in the Belgian banking sector is here analysed based on the five [scenarios of the Basel committee](#) regarding the impact of fintech on banks considering which actor manages the customer relationship, and which actor ultimately provides the services and takes the risk. These scenarios can be summarised as follows:



Source: BCBS, Sound Practices: implications of fintech developments for banks and bank supervisors (2018).

The **better bank** is the most optimistic scenario for current players as according to this scenario, incumbent banks will adapt to digitisation and retain customer relationship.



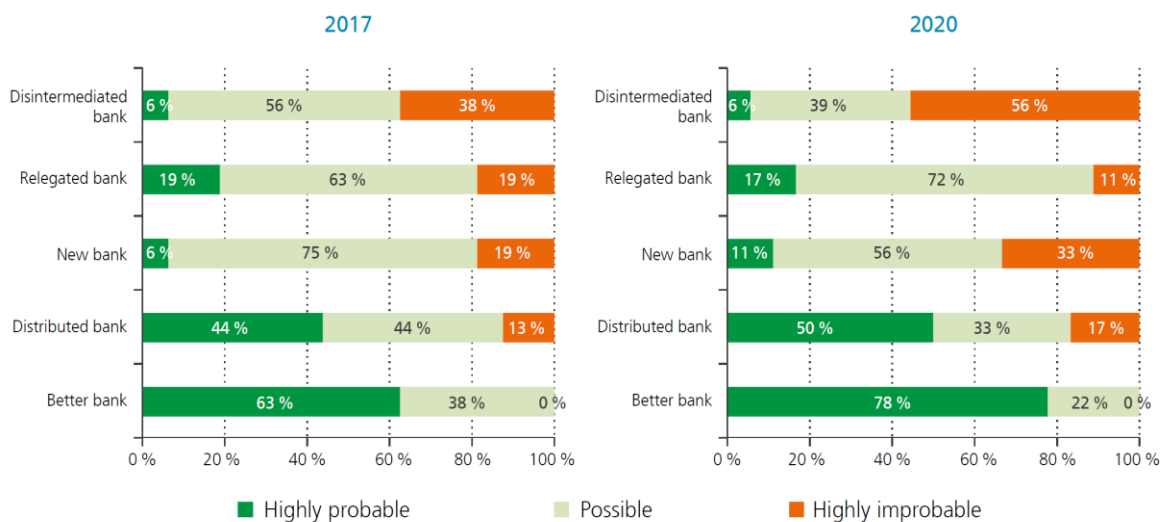
The **new bank** scenario is less optimistic for incumbent banks as it foresees that they will not be able to survive the wave of technology and be replaced by new technology-driven bank. Example of such trends can be found in neo challenger bank such as N26 in Germany, Orange Bank in France or Revolut.

In the **distributed bank** scenario, services are provided by incumbents or other players who plug and play on an interface which might be owned by any player in the market. This is a scenario where fintechs and banks act as a joint venture as for example is already the case in the payment area with Apple pay and Android Pay.

In the fourth scenario, **banks are relegated** to the back office and lose the customer relationship to other firms.

In the **disintermediated bank scenario**, banks have become irrelevant as customers interact directly with individual service providers as would be the case where fintech provide full services without the need for a bank, for example within value transfer networks where payments could be made without bank intervening. Certain so-called Decentralised Finance or DeFi applications are an illustration of this scenario.

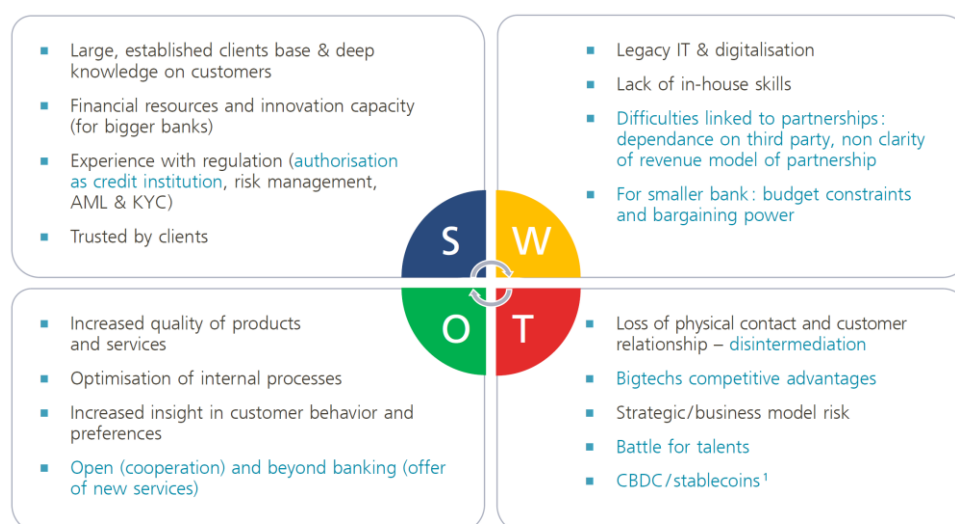
The Belgian sector's perception regarding the materialisation of the Basel Committee scenarios has not fundamentally changed since 2017; earlier views have further consolidated and extreme scenarios are considered less probable. The materialisation differs depending on the market segment at stake. For example, the distributed bank scenario is much more present in the payment area where the arrival of significant new players (e.g., Apple Pay, etc.) is observed while the better bank scenario can be observed in domains where banks focus on improving digital user experience.



Source: NBB analysis based on the replies to the structured fintech questionnaire.

b. SWOT analysis

The strengths (“S”), weaknesses (“W”), opportunities (“O”) and threats (“T”) in relation to digitisation for the Belgian banking sector are mostly aligned with those observed in 2017. However, new elements (**highlighted in blue**) were observed in the context of the 2020 survey which are linked to the emergence of the **open and beyond banking model** where banks are opening their systems, concluding new partnerships, and offering new services, sometimes beyond their traditional banking services. While such a banking model offers opportunities, it also entails weaknesses linked to the conclusion of partnerships. Indeed, finding the right partner and establishing a valid revenue scheme with a partner can prove challenging. Moreover, such partnerships can lead to (high) dependence on a third party. Next to such weaknesses, the entry into the sector of bigtech is perceived as a threat by the sector given the competitive advantage of such players which enjoy large financial resources, credibility as well as IT and data capabilities. Hence, banks consider disintermediation as a threat considering such competition, a threat which might be enhanced by the deployment of **stablecoins** and **central bank digital currencies (CBDC)**¹ in the future. Finally, banks fear that they will have difficulties finding digital talents.



c. Banks’ top risks related to fintech and digitisation are cyber risk and strategic & profitability risks

Belgian banks identify **cyber risk** as the most important risk related to fintech and digitisation. Factors such as the increasing complexity of IT systems, increasing number of partnerships/third party dependencies often with actors which are not supervised, ever-increasing number of access points and currently

¹ Stablecoins are crypto-assets that purport to maintain a stable value by referring to other assets. CBDCs are crypto-assets issued by central banks in their capacity as monetary authorities.

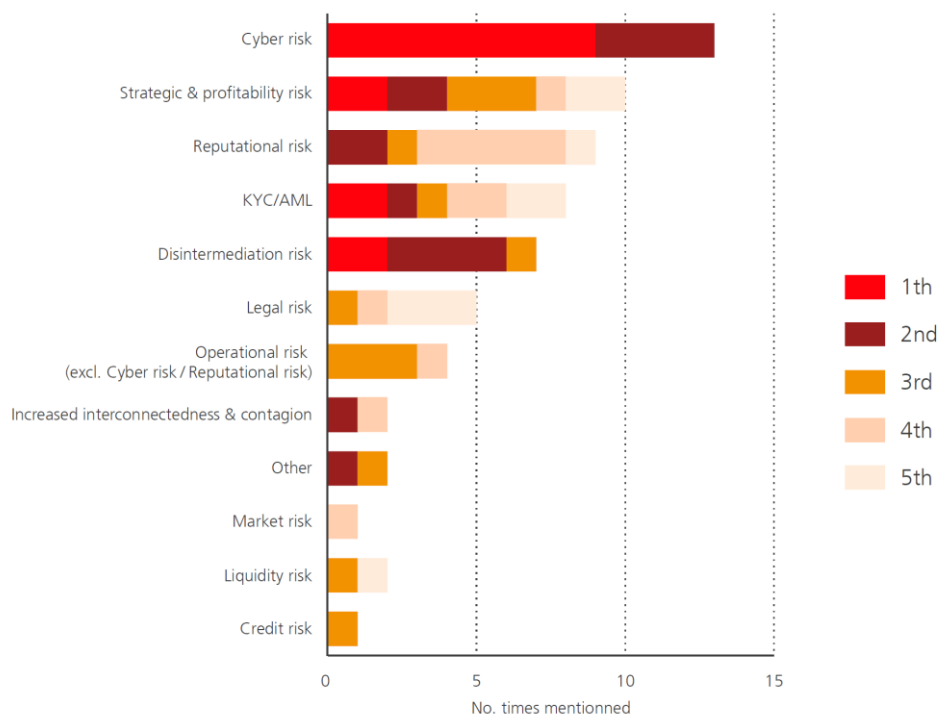


unknown/unexploited risks related to new technologies contribute to the ever-increasing importance of this risk type.

Strategic and profitability risks together with **disintermediation risks** are obvious because on the one hand fintech and bigtech actors have the potential to threaten banks in certain business domains i.e., by putting pressure on margins or by replacing banks in the relationship with the customer leading to a situation where banks become (regulated) back-end providers of products and services (cf. the relegated bank scenario). On the other hand, banks need to make the necessary investments to cope with increasing customer expectations, to at least match competitors' offerings and to cope with regulatory projects.

It is worth noting that both cyber as well as strategic and profitability risks are also present for new fintech actors. Other risks identified relate to increases in model risk, outsourcing risks and GDPR compliance.

New emerging and amplified risks



Source: NBB analysis based on the replies to the structured fintech questionnaire.

III. Analysis of the digitisation of the Belgian Banks

a. Methodology

The NBB developed a methodology to assess the digitisation of Belgian banks. Two main areas were considered: (1) the general approach of the banks, i.e., their organisation, strategy, and experience, as well as (2) the use cases considered or disregarded by banks – and the degree of implementation thereof, i.e., the technologies and business models they are adopting (the “initiatives”). Scoring tables were then applied to each criterion used in the assessment (see below).

General approach scoring table

0	Not applicable for business model
1	Poor (substandard practices, no practices)
2	Medium - low (practices are present but not up to sectoral standards)
3	Medium - high (good practices, in line with sectoral standards)
4	Good (above sectoral standards)

The NBB scored the banks’ general approach on a scale from 0 (not applicable to business model) to 4 (above sectoral standards). This scoring is therefore based on a benchmarking exercise.

Initiatives scoring table

0	Not applicable for business model
1	No interest
2	Interest but no concrete initiative
3	Project scheduled in the medium to long term (> 2 year)
4	Project scheduled in the short term (< 2 year)
5	Single running project
6	Multiple running projects

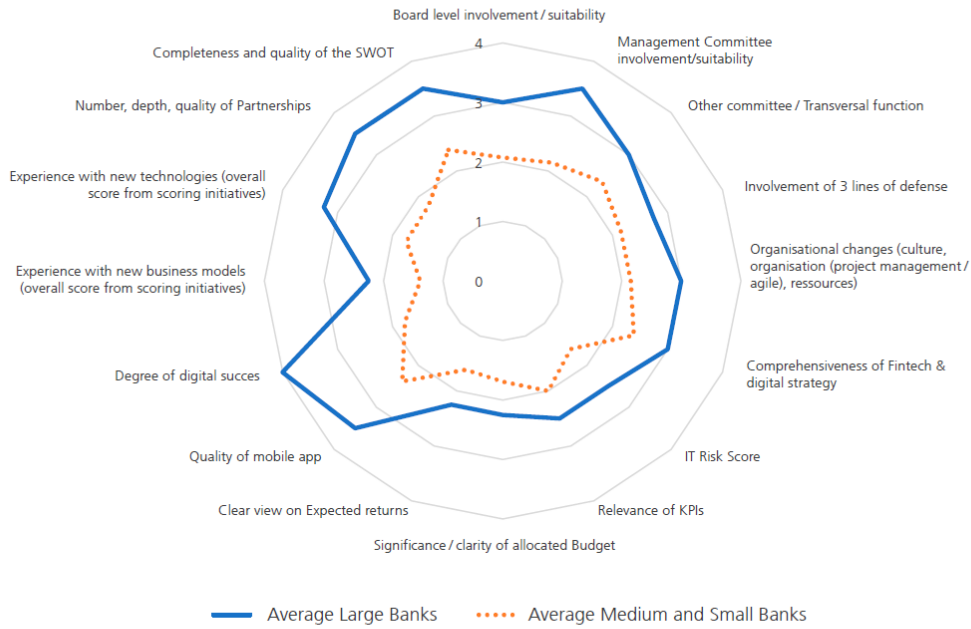
The initiatives were scored on a scale from 0 to 6 depending on the level of developments of banks’ digitisation and fintech project.

b. Results of this analysis

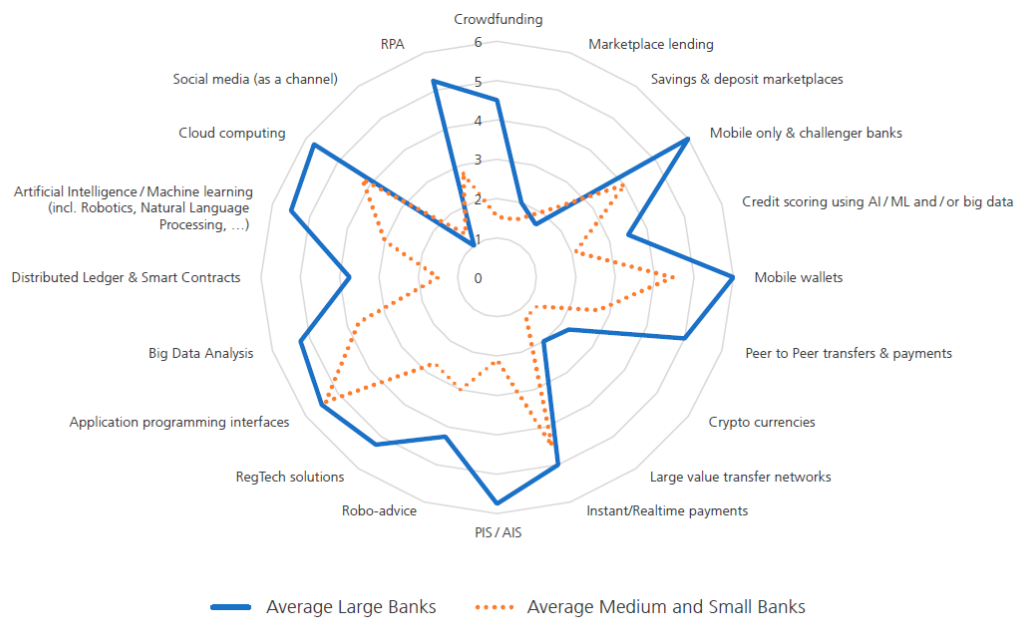
On average, the large banks score significantly higher on these dimensions than smaller banks. However, some smaller banks manage to keep pace with their larger competitors. The analysis of the initiatives is further developed in subsection (c) below.



General Approach



Initiatives





c. Analysis of the new business models and technologies of banks

Mobile & challenger banking features are seen as a threat whilst regtech, robo advice and the use of artificial intelligence and big data are considered an opportunity

A first step in analysing the new business models and technologies of banks is to assess to which extent they are considered as threats or opportunities.

Although the views on a number of these fintech domains are rather heterogenous in a number of cases, incumbent banks clearly identify mobile only & challenger banking functionalities as the most important threat for their own business model which is driven by the successful focus of both new mobile and challenger banks but also certain incumbent competitors on improving the user experience in the mobile banking apps.

Opportunities are identified in applying business solutions based on regtech, robo advice and credit scoring using artificial intelligence and big data.

Threat or Opportunity



Source: NBB analysis based on the replies to the structured fintech questionnaire.

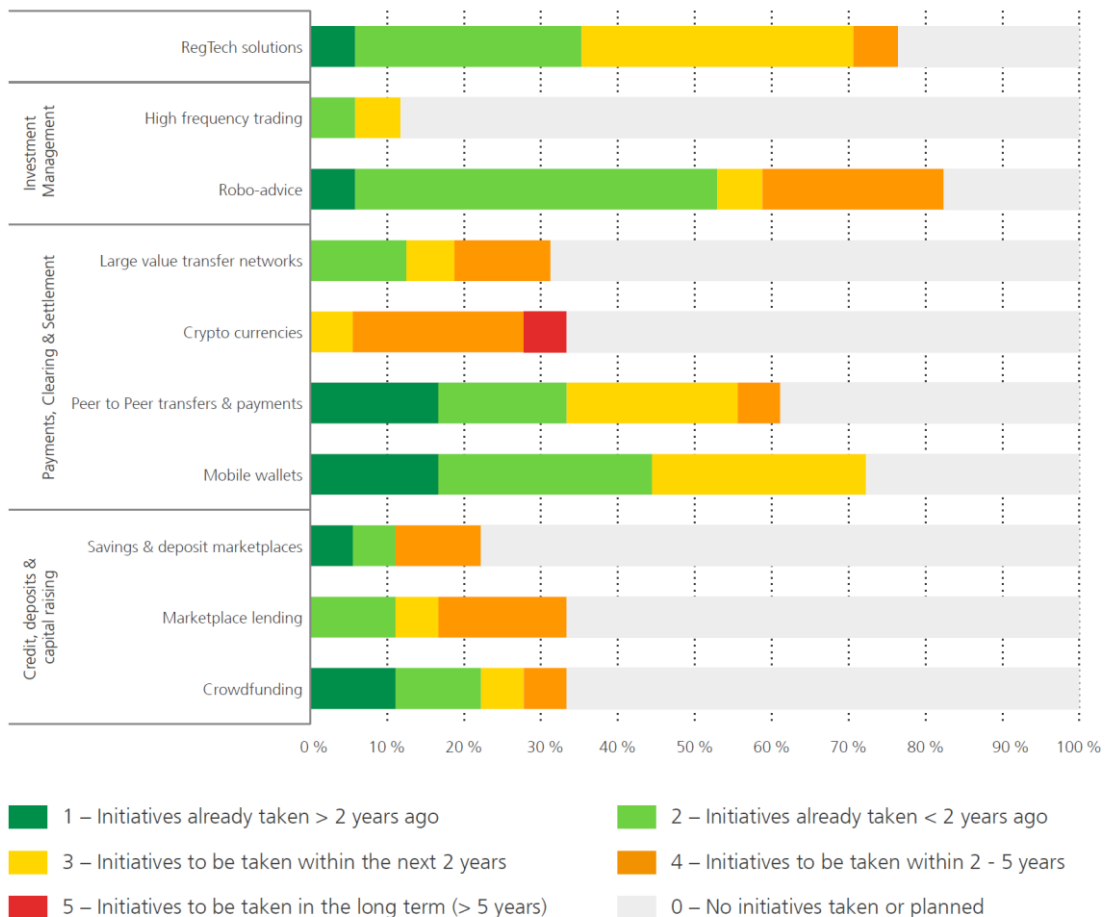
Incumbents react upon such threats and opportunities by adopting such business models at difference speed

About 35% of the Belgian banks have already taken initiatives around regtech often in the domain of KYC/AML and regulatory reporting; another 35% contemplates developing new regtech initiatives in the next 2 years.

More than half of the Belgian banks have already taken initiatives around robo advice, often in a mode where it is used in combination with a human advisor.

Crypto initiatives are as expected not yet mature but a significant part of the Belgian banks are planning to launch initiatives in this domain in the longer term.

Maturity of Initiatives



Source: NBB analysis based on the replies to the structured fintech questionnaire.



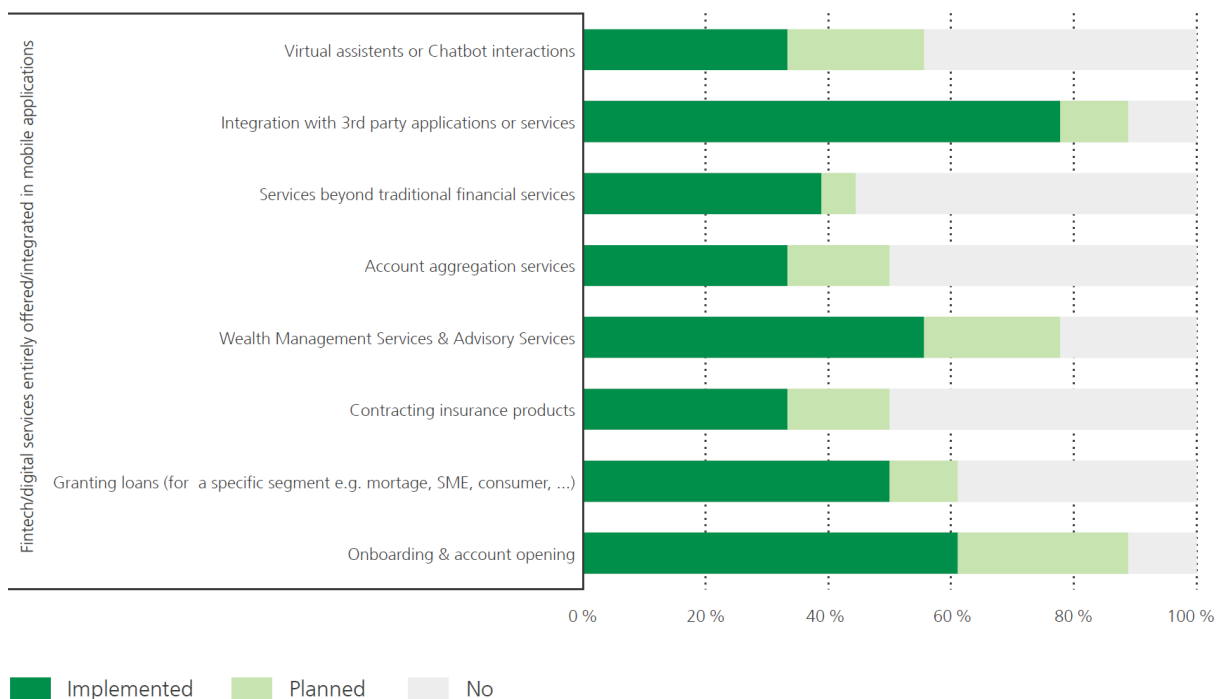
... by improving the functionalities and user experience of their own mobile banking apps

In general, mobile banking apps are under continuous evolution, incorporating more and more features in an effort to match the standards set by mobile only and challenger banks but also other incumbents in terms of features.

Over 50% of the Belgian banks mobile apps already incorporate features around payments, onboarding and account opening, the granting of certain types of loans and wealth management services. Planned features often involve chatbots and payment services.

The main rationale for the seemingly widespread integration with third party applications is the collaboration with certain cross-sectoral service providers such as for example Payconiq, Doccle, ...

Use Cases - % Institutions with Implemented & Planned initiatives



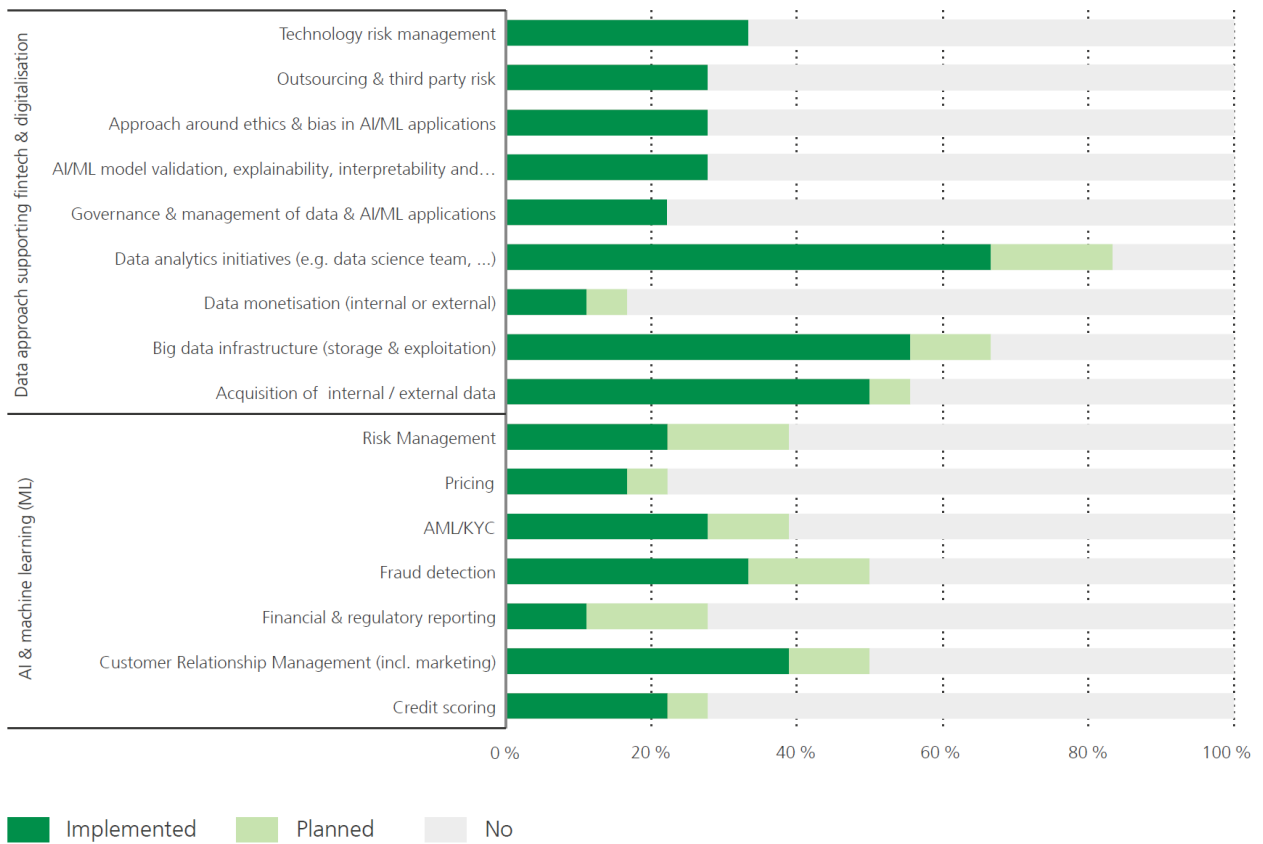
Source: NBB analysis based on the replies to the structured fintech questionnaire.

...and by building the foundations for the development of data analytics use cases

Adoption of big data and artificial intelligence use cases is still in its infancy. Many banks are focusing on building the foundational layer by investing in data analytics teams and building a big data infrastructure.

The actual use cases are still relatively limited and focussed on AML/KYC as well as on customer relationship processes.

Use Cases -% Insitutions with Implemented & Planned initiatives

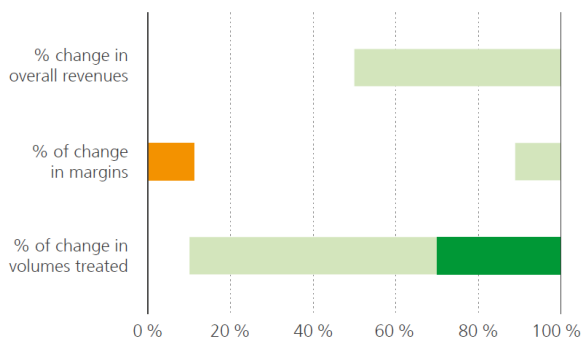


Source: NBB analysis based on the replies to the structured fintech questionnaire.

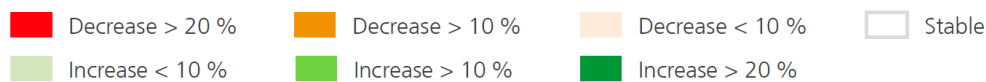
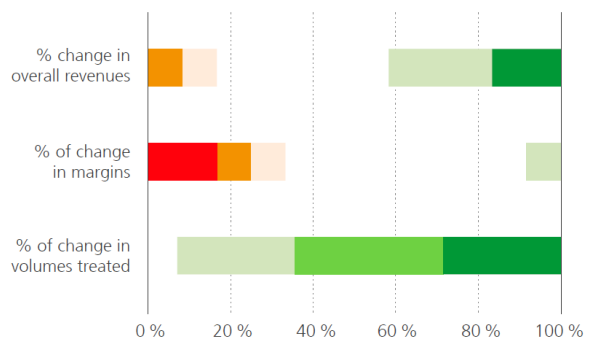
Payment is often considered as the first business line where competition from fintechs and bigtechs has already materialised. Surprisingly Belgian banks did not observe significant downward pressure on overall revenues and do not expect this for the near future either.

Within the industry payments are often mentioned as the first domain where banks are experiencing tough competition from newcomers and bigtechs. Based on banks' answers, volumes are to continue to increase and most banks continue to anticipate stable margins and stable revenues still. These expectations shall in time have to be verified seeing the rapid growth of certain payment service providers (e.g. Wise, Adyen, ...), the open banking framework established by PSD II and the successful steps that a number of bigtechs have taken in the development of their payment offering (e.g. Apple pay).

Evolution 2017–2019



Evolution 2020–2022



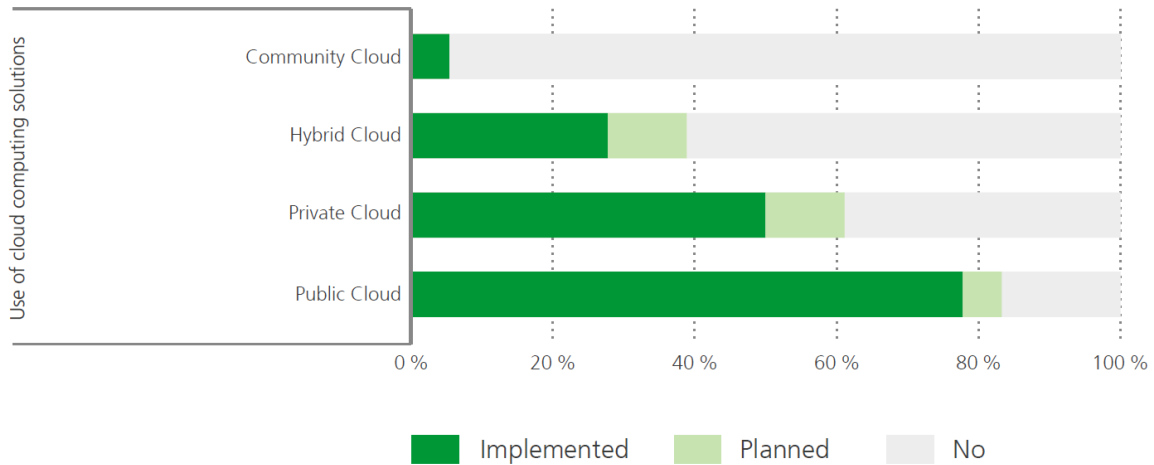
Source: NBB analysis based on the replies to the structured fintech questionnaire.

In terms of supporting technologies cloud and APIs are considered mature technologies whilst distributed ledger & smart contracts are only considered to be mature in the next 5 years

A large majority of banks consider cloud computing and APIs as mature technologies, which is for the latter certainly linked to the mandatory implementation of access interfaces under PSD II.

For the former public cloud usage is widespread although often for less critical business processes.

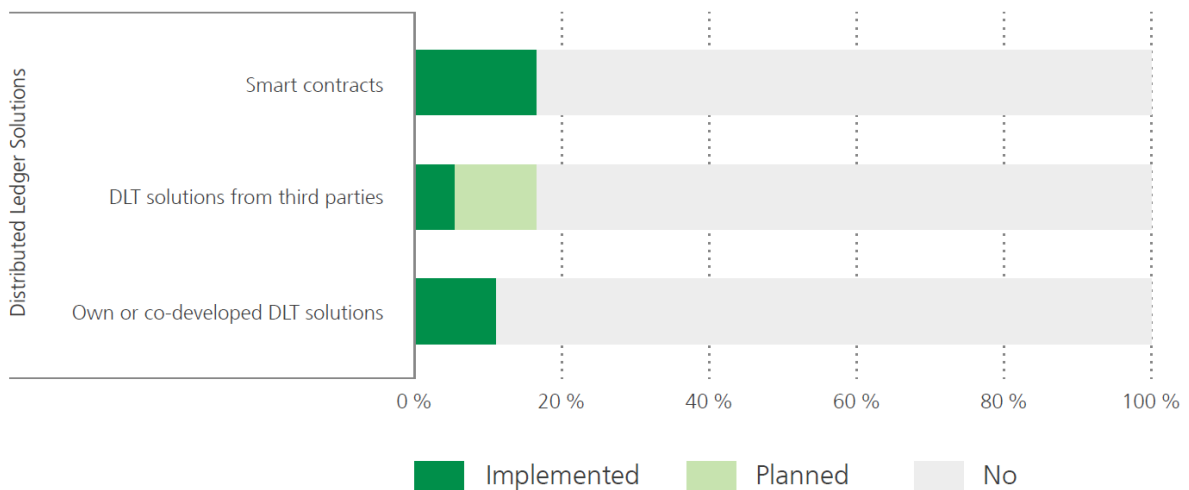
Use Cases -% Insitutions with Implemented & Planned initiatives



Source: NBB analysis based on the replies to the structured fintech questionnaire.

The use cases related to distributed ledger or smart contracts are for the time being rather exceptional with only 15% of banks having actual use cases in this domain.

Use Cases -% Insitutions with Implemented & Planned initiatives



Source: NBB analysis based on the replies to the structured fintech questionnaire.



IV. Conclusions: observations and best practices

1. The adoption, and the periodic update, of a **digital strategy and business model** should (continue to) be a key priority for banks to ensure their short-, mid- and long-term viability by addressing the disruptive effects of digitisation and of competition from non-traditional players.

While more institutions have articulated a digital strategy and onboarded relevant profiles as compared to 2017, some institutions are lagging and should act now. All banks should also (continue to) ensure that diversity exists or increases at board level to adequately inform their choices and to allow for their challenging of the strategy and its implementation.

2. The ever-increasing dependence on IT systems, including that of third parties, as well as banks' specific exposure as prime targets for malicious actors make it of paramount importance that banks (continue to) deploy a **proactive, in-depth approach** to address **operational resilience and cyber risks** linked to digitisation to protect their systems, data and customers.

Banks should foster an adequate innovation risk culture to anticipate, identify, and manage emerging risks. Banks may need to consider creating new positions in their organisation to that end. They should also be mindful that, while pursuing the potential benefits of co-opetition, where competitors are also partners, there be no overreliance on third party arrangements leaving the bank as an empty shell.

3. A holistic vision across the three lines of defence and risk management processes, thus including the timely and adequate **involvement of control functions**, should (continue to) be a key point of focus for banks when deploying initiatives.

While progress as to governance has been noted as compared to 2017, banks should ensure that adequate resources are leveraged, and requisite skills are developed at all levels, including the various levels of management, to ensure an appropriate oversight on initiatives and to ensure compliance with existing and developing regulation in the fields of digitisation and fintech.

4. The **identification of granular metrics** should become part and parcel of banks' planning and review of strategies and initiatives.

Banks should identify and track granular metrics across multiple dimensions (e.g., the customers' experience and satisfaction, the degree of digital sales, the efficiency gained in internal processes) to better inform their planning and review of their strategy and initiatives.

5. **Active dialogue** continues to be welcomed and encouraged.

Further active dialogue with banks in respect of their strategies, models, and initiatives will continue to contribute to the NBB's and to the institutions' mutual understanding of existing and emerging developments, and to inform the devising of upcoming policy frameworks and of supervisory practices in an era of increasingly cross-sectoral frameworks.