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BANK 3.0 CONCEPT: GLOBAL TRENDS AND IMPLICATIONS

Abstract. Objective is to make the review of the banking industry development to identify theoretical and practical areas of transformations under the concept Bank 3.0.

Results. Theoretical and practical shifts occured in modern banking sector in the conditions of Bank 3.0 concept implementation are identified. Background of the modern transformation in the banking industry on a global scale is identified, the role and extent of structural changes in the banking sector is assessed and features of the modern business models of banks are identified.

Originality. Theoretical framework of banking transformations as financial intermediaries is developed. Distinguished features of the bank business–model in the future including high technology, giditalization of commercial activity, transformation of banking infrastructure, banking sector integration with social networks, instant messengers and Internet platforms, are justified.

Practical relevance. Identified features of the bank business–model can be used in the activities of banking developing the strategy and tactics to distribute banking services.

Keywords: digital technology, social network, mobile applications, cloud technologies, "smart" banking.

JEL classification: G21, M31, L18

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КОНЦЕПЦІЯ БАНК 3.0: ГЛОБАЛЬНІ ТЕНДЕНЦІЇ ТА НАСЛІДКИ

Досліджено особливості функціонування банків у розрізі різних концепцій ведення банківського бізнесу. Здійснено аналіз глобальних трендів банківського бізнесу та їх наслідків. У порядку наукової дискусії сформульовано характерні риси банку майбутнього, серед яких виокремлено наступні: висока технологічність, інформатизація діяльності, трансформація банківської інфраструктури, інтеграція банківської сфери з соціальними мережами, мессенджерами і інтернет–платформами. Аргументовано, що майбутнє банкінгу за клієнторієнтованими та високотехнологічними банками.

Ключові слова: цифрові технології, соціальні мережі, мобільні додатки, хмарні технології, "розумний" банкінг.

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КОНЦЕПЦИЯ БАНК 3.0: ГЛОБАЛЬНЫЕ ТЕНДЕНЦИИ И ПОСЛЕДСТВИЯ

Исследованы особенности функционирования банков в разрезе различных концепций ведения банковского бизнеса. Осуществлен анализ глобальных трендов банковского бизнеса и их последствий. В порядке научной дискуссии сформулированы характерные черты банка будущего, среди которых выделены следующие: высокая технологичность, информатизация деятельности, трансформация банковской инфраструктуры, интеграция банковской сферы с социальными сетями, мессенджерами и интернет–платформами. Сделан вывод, что будущее банкинга за клиенториентированными и высокотехнологичными банками.

Ключевые слова: цифровые технологии, социальные сети, мобильные приложения, облачные технологии, «умный» банкинг.

Формул: 0; рис.: 3; табл.: 0; библ.: 20

Introduction. Technological innovation and digital economy formation are considered to be one of the most influential developments affecting the financial sector and banking in particular in the near future. Possible implications of this trend for the banking theory and practice could be profound.

Theoretical background of modern banking has been changing through transformation of the institutional structure of the financial market originally aimed at efficient using of temporarily available resources for economic development. The competitive landscape has intensified by appearance of fintech startups, digital (IT) challengers and tech giants which present themselves not as technical intermediaries but as full–fledged financial intermediaries like alternative for banking and non–banking institutions. The startup Square has developed a means for operating payment cards via smartphone and offered a mobile wallet to pay in the coffee chain Starbucks resulted in

10% of revenues made for mobile financial services. Facebook has allowed users messenger directly send each other money. Apple launched its Apple Pay mobile payments service.

Reality of modern banking business practice is featured by changing business models as well as marketing and distribution channels of banking services pushing the transformation of the banking development concepts from "Bank 1.0" to "Bank 3.0".

Focus of this paper is that the banking industry is likely to be subject to a major degree of institional and operational change. The objective of the paper is to make the review of the banking industry development to identify theoretical and practical areas of transformations.

Research findings.

Theoretical shifts. Traditional theoretical basis for banks existence is based on the theory of financial intermediation including neoclassical theory of the firm [1], portfolio theory [2], transaction cost theory [3], information–based approaches [4] and others. Moreover innovation concept of Schumpeter J.A. is considered main function of financial intermediary have to be promotion of entrepreneurial activity and solvent demand ensuring economic growth in the country [5]. Conditions of altered banking landscape through banking regulation post crisis reforms implementation and macroeconomic downturns are requiring adjustments. There are next changes in theoretical basis of banking according to the functions and role of banks in the financial system:

1) as information intermediary. Costs associated with the acquisition and processing of information concerning financial transactions (the data regarding the price and quality of products, the conclusion of the contract, control over its execution) are reducing due to the intensive technological development. In addition, the uniqueness of the bank as sources of important information on the market has been lost in the increased regulatory requirements for information transparency and public disclosure by banks of financial statements;

2) in the context of the transaction costs reduction. Popular view related to the ineffectiveness of capital markets and the ability of banks to reduce transaction costs has been lost importance through the development of financial engineering and financial instruments that solve the problem of stacking "complete" contracts;

3) as delegated monitoring agent. The bank's ability to monitor the financial and non–financial aspects of the borrowers has been lost their unique value through the active development of market institutions for the supply of similar information, such as rating agencies;

4) as liquidity insurance provider. The importance of the ability of the bank due to the accumulation of liquidity risks (large number of investors with uncertain liquidity needs) to predict the requirement of private liquidity is decreasing in the conditions of development of market capital, funds of short–term funding, investment funds and other intermediaries.

Practical shifts. Development of digital technologies and increased regulatory pressure on banking lead to the transformation of the banks business models varying from "Bank 1.0" and "Bank 2.0" to "Bank 3.0" (or "Bank of the future)" (Fig. 1).

The concept "Bank 1.0" is considered to use traditional conservative business model focusing on close relationship between the client and the bank, regularly bank branches visits by customers for standard banking services provision like checking accounts or money withdrawals. Physical branches remain at the core of banking services. The introduction of the "Bank 2.0" concept is associated with the using of online environment, which can provide virtual services focusing on people without any physical infrastructure that eventually increases the gap between the physical branches and customers.

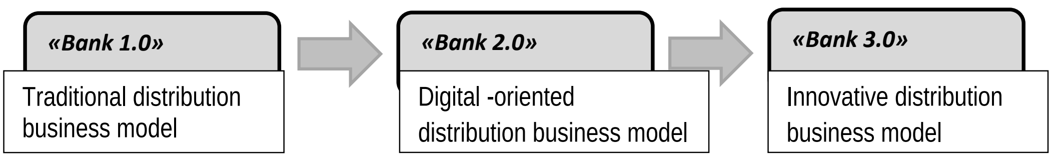

Figure 1. Modern concepts of bank distribution business models
Source: authorial

In terms of bank 3.0 shift will be made from a business–centric model to a consumer–centric one, and in doing so completely redefine the user experience. The main value comes from the impact of digital on the cost base and loss provisions completing with automation of servicing and fulfillment processes and migration of front–end activity to digital channels.

Concept shift in banking business is determined by changes in technology platforms as well as global trends (Figure 2, 3). Consumers are less likely to view their bank in terms of capital adequacy, branch network, products and rates. Instead, customers are more likely to determine their banking partners by how easily they can access their accounts when they need to, and how much they trust their provider to execute business on their behalf. It signals that the branch role as a driving force in choosing a bank is reduced, and the role of features that give customers the technology grows. Now the convenience of banking is not measured by the distance to it or schedule but applications.

1970s/80s ATMs	
•Withdrawing cash and completing basic transactions at the ATM • Proliferation of ATMs in urban landscape	Impact: Masses are now accustomed to transacting with machines in lieu of humans.

1990s: Internet	
• On-demand account access becomes available • Security and user-friendly interfaces are ubiquitous	Impact:. Eliminates need to leave home for many basic banking functions.

2000s – present: Smartphone / Apps	
• 3G smartphones support basic banking transactions • Apps allow for payments, transfers and account details • Some banks offer deposits via mobile photo capture • Apps provide ATM-locator function	Impact:. Further decreased need to visit bank branch for basic banking.

Figure 2. Technological drivers of the "Bank 2.0" and "Bank 3.0" concept introduction
Source:[6]

Bank business models is influenced by global trends like uncertainty and economic developments. One of the drivers of uncertainty is political reason starting from the US elections to uncertainty about the future attitude of Member States towards European integration. Another one is social and economic stability which can be disrupted by the Greek debt crisis, the fall in the Chinese stock market, waves of migration to Europe, the conflicts in Syria and Ukraine, the numerous terrorist acts in France, Italy and other countries.

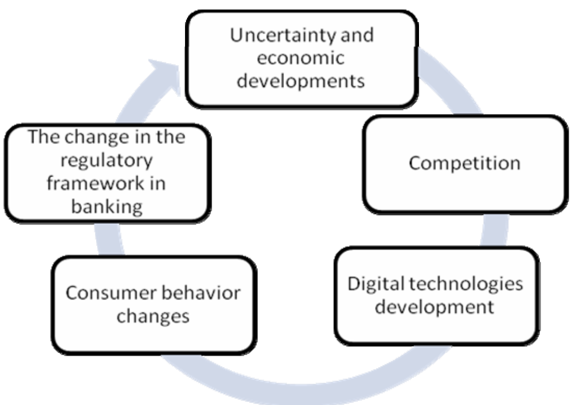

Figure 3. Global trends in banking business
Source: authorial

Financial liberalization era in financial sector has completed by the global financial crisis and the consequent revision of regulatory approaches in the financial sector –banking regulation and supervision system in particular. The main features of post–crisis regulatory reform are: 1) introduction of additional macro–prudential requirements for bank activities taking into account not only the individual but also systemic risk in the banking; 2) a significant increase in requirements for key performance indicators of the bank – capital, liquidity and risk, corporate governance, information transparency and accountability, especially for systemically important financial institutions of global and national levels; 3) implementation of structural and institutional restrictions on investment banks.

Competition in the financial sector has been steadily increasing by entering new players, not only the purely banking, but many startups within IT and telecommunications sectors. Moreover economic cycles, technology, accessibility, generation changes are triggering customer behavior shifts. Customers are becoming more financially aware and more demanding valueing their time.

As a result banks often consider new technologies through the theory of generations – a group of people who feel impact of the same events, education, values, behavior, habits and goals [7]. Today there are several generations and from the point of the customer behavior research the most important will be three generations – "X», «Y» and «Z» as they forming the majority of the world's population and determine trends in the economy, creating demand and supply – on banking market in particular.

Among main features of generation "X" are global awareness, technical literacy, informality and individualism views. Generation "Y" is distinguished by involvement in digital technology. Generation Z differs from Millennials by less focusing living in a world of continuous updates, thinking and acting more entrepreneurially and they have never known a world without smartphones and social media.

According to American Bankers Association research in 2010 only 20% of consumers aged 55 and older preferred online banking, in 2011 their number increased to 57% and in 2012 to 62% [8]. In developed economies today about 30% of all calls to the bank goes through branch contact centers, 30% – from ATMs, 30% – through online banking, the remaining 10% – through the mobile application. The latter two are growing rapidly. Advances in technology will lead to the fact that artificial intelligence will deal with risk management, consulting and management experience better than person – for example bank products pricing depends on the context, client management experience turned into a 24/7/365 mode.

There are five key trends during bank business model shifts within concepts 2.0 and 3.0 including development of digital banking, mobile applications, social network, cloud technologies and distribution transformation.

Trend 1. Digital banking is key trend of 2017

The company Juniper predicts that in 2017 the digital strategy of traditional financial institutions will be to purchase finteh startups and fully digital banks significantly improving bank competitiveness. Moreover it is confirmed in the report "Digital disintegration retail banking"of BI Intelligence. Nowadays news about the new generation banks open is more widespread than about the traditional banks. Italian group UniCredit has announced the opening of an online bank Buddybank, UK is launching several digital players – ClearBank and Starling Bank, French mobile operator Orange opens its own online bank – Orange Bank.

According to “Retail Banking: Digital Transformation & Disruptor Opportunities” data the number of digital banking users until 2021 will reach 3 billion – it is 53% more than last year [9] . The research of the Boston Consulting Group shows that due to the lower cost of customer servicing (4%), higher sales services (8%) and reducing the cost of service (14%) online bank customers will be more profitable than traditional services client [10].

Trend 2. Mobile applications

Brett King according to the concept of Bank 3.0 ("Why banking is no longer somewhere you go but something you do", 2014) notes the dominance of mobile wallets in the near future, the unlimited possibilities of tablet computers and smartphones [11]. The current generation

("Generation Z") accustomed to touch screens requires mobile applications and online services for keeping in banking. For example, today the Internet Bank in USA – Simple – expands on the market with easy to use mobile apps and payment cards. Unfortunately Ukrainian banking business is featured by low degree of using mobile applications – only 13 of the 117 banks offer mobile applications for their customers [12].

Trend 3. The convergence of banks with social networks

According to American portal Hub Spot research 65% of Internet users aged 18 to 24 choosing a product/service are guided by the information obtained in social networks [13]. So now the social network is not just a fashion instrument for the bank, but an additional channel of communication with the client.

The trend of banking sector and social networks integration is actively developing across the world. According to Deutsche Bank, in 2011 only 32% of Germans, who believed that the social network will become a sales channel for banks in 2015, 71% of respondents predicted that it will happen in 2025 [14]. However today electronic as well as traditional banks are increasingly using social media to promote their products. The interest rate on deposits in German Bank Fidor depends on the amount of likes on his page in Facebook: more likes – higher rate [15]. Another example is the Kenyan banking group NIC in 2015, has started campaign of bank integration into a modern social network. The company announced introduction of a new NIC CONNECT platform that will allow users of social networks and messengers to use banking services without leaving the network. African users of WhatsApp, Facebook, Twitter and Telegram will have the ability to check balances, get a statement, transfer funds, pay utility bills and purchase on the Internet [16].

There are more cases in banking practice of clients identification by photos in social networks. The company Socure has developed a program Perceive that uses biometric parameters of the client to log in to the mobile banking application. The system studies the customer's picture taken on a smartphone and compares the image with picture from networks – Facebook, Twitter and LinkedIn. After verification, the system accepts the payment, or sets off an alarm. Currently the test mode system is used by several London banks [17].

Trend 4. Distribution transformation

The extensive network of bank branches is becoming increasingly burdensome. Across the world largest retail banks are featured by high cost of rent, equipment and personnel – according to the Economist – 40–60% of total operating expenses. From 2006 to 2011, the number of bank branches in the UK has decreased by 19.8%, Germany – 6.6%, France – 4.2%. After crisis similar trend is observed in Ukraine [18]. Banks do not just cut their branch network but abandon old–fashioned interiors in favor of modern offices that not only look like the Apple Store, but is able to provide the customer experience of the 21st century.

Citibank has opened more than a hundred of "smart offices" in Asia equiping them with video walls, tablets and personal places for self–service, and ATM 360 Stations featured by the ability to request a loan and contact the bank staff through a video conference. French BNP Paribas has opened in centre of Paris office with a Seating area, carpets and lounge.

Trend 5. Cloud–based technology

Cloud technology is expected to be one of the fastest–growing technologies in the coming years. According to the forecast of the analytical company Forrester Research the global cloud computing market will reach by 2020 of 241 billion dollars, and the market for cloud applications and services via the Internet will increase to 159.3 billion dollars [19, 20]. Cloud technologies are becoming more popular in the global financial market. Among the banks actively using cloud technologies is the Dutch Bank Robeco, with assets of $8 billion, the sixth largest Bank of Spain – Bankinter, and the Dutch Bank –DNB and Australian – Suncorp Bank Australia.

Conclusions. New landscape has altered banking business under increased the regulatory burden on the banking business, the significant impact of the development of digital technologies and innovations, increaedcompetition and the emergence of new types of competitors in the banking market that leads to changes in the types of institutions engaged in banking activities and business operations. Modern banking business is characterized by changing business models, marketing and communication distribution channels of banking services. Eventually leadership in banking will belong to customer–centric and technology companies – and it doesn't have to be banks.

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