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IMPACT OF DIGITALIZATION ON M&A TRANSACTIONS IN BANKING

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The article provides a view on how the digitalization of banking is impacting Mergers and Acquisitions (M&A) transactions. First the M&A process is described, outlining high level stages of the deal making and their objectives. Then a number of digital considerations are listed to present the increasing complexity of M&A transactions in the current period of intensive digital transformation. The digital considerations are mapped onto the core IT architectural components, together with an expert rating of their impact. In the following chapter the paper outlines technology integration strategies. The summary contains important observations and guidelines on the relevance of digitalization that can be used by M&A teams to increase the probability of success in future transactions.

Keywords: mergers and acquisitions, M&A, digitalization, banking, digital transformation, due diligence, integration process, digital assets, post-merger integration, technology integration strategies, digital gaps, digital talent

1. INTRODUCTION

The occurrence of “Mergers and Acquisitions” (M&A) transactions in banking can be seen both in times of economic prosperity and during crisis and uncertainty. In the first case, financial institutions are producing excess income that allows them to build capital for non-organic extensions of their market share (scale development) or client coverage (scope development). In the latter, we face diminishing returns on equity/ROE, bankruptcies or near-collapse conditions that put the stressed institutions on the market for purchase by governmental or commercial institutions, at an attractive price. It is then clear that the time to buy or sell banking

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businesses is in general not limited to a particular international or local economic situation. The global number of transactions in 2017 and beyond is expected to be steady (Robertson, 2017), with an already established component of acquisition of FinTech¹ ventures (Hutton, 2017), showing high interest in obtaining digital capabilities in a non-organic mode.

“Digital disruption²” or “digital transformation³” are some of the key drivers of global M&A transactions: about 20% of deals involve a technology oriented target and about 70% of acquirers are non-technology companies (Kengelbach, 2017). According to the research of Accenture⁴, median M&A Total Return to Shareholders (TRS) is the highest banking (27%), recognized (together with telecommunications) as a core industry subject to continuous and substantial technological change and convergence (Herd 2017, p. 4). However the same study points out that 45% of all analyzed M&A transactions either destroyed the value (24 month TRS < 0%) or destroyed significant value (24 month TRS < -20%). The decision to pursue an M&A in banking is laden with both opportunities and risks, but is also seen as a necessary means to accelerate innovation, as opposed to organic development (Ferranti 2015, citing Jeff Liu, the global technology industry leader for transaction advisory services at EY). It is therefore important to understand current and future drivers of complexity in deal preparation and execution, especially with respect to continuous digitalization of bank operations and customer experience. The article does not discuss the aspects of strategic decisions/target selection or deal valuation – it is focused on the operational issues faced by financial institutions in the M&A process.

A simplified view on M&A transactions in banking covers two primary models: 1. legal entity takeover, usually by means of universal succession or 2. an “asset deal,” where selected clients and their corresponding business volumes are transferred to the buyer. Both options can be executed with reference to the entire business, sub-portfolios or business lines. Regardless of the assumed transactional model, one of the core elements of the deal is to harmonize the information technology (IT) architecture landscape, mainly to achieve overall streamlining and

¹ Fin Tech (Financial Technology) ventures are companies that originate outside the financial sector (e.g. as startups, frequently non-licensed at the beginning) but provide elements or entire chains of financial services previously run by financial institutions.

² The digital disruption can be described as a change effect induced by new technologies (e.g. cloud, mobile, big data, artificial intelligence/cognitive computing, robotic automation, paperless, cryptography, blockchain, internet of things/IOT).

³ The digital transformation can be seen as a result of the digital disruption, it is a wide application of new, disruptive technologies and innovations across organizational and social processes, covering the customer journeys, internal operations, regulatory compliance. It has the potential to bring about new business models and revisions of value propositions/chains in organizations.

⁴ Results through December 2015 for the top 500 deals by value announced from January 2004 through March 2014.

simplification of operations and the resulting cost efficiencies. The challenge is then to integrate the business “without destroying what the acquirers just bought” (Baculard, 2017). The digitalization⁵ in this context can be best described as the current maturity level and the future strategy of using information technology across business and corporate functions to gain competitive advantages. In an M&A transaction the differences in the level of digital maturity and strategic plans have to be actively managed in order to assure that digital assets and their users are merged with no or minimal negative influence on the clients and overall efficiency ratios.

There are two leading perspectives on the impact of digitalization of banking M&A: 1. a merger of two classical, well established financial institutions or 2. an acquisition of a digital enterprise (e.g. a FinTech) by a classical financial institution. The focus of this article is on the first perspective, with the goal of displaying key digital considerations, risks and opportunities present in contemporary M&A transactions, especially in the due diligence and merger integration phases. The observations are drawn from the case studies of five recent (2014-2017) mergers⁶ on the Polish banking market, which is widely recognized as highly competitive and digitally advanced⁷, hence representative for the issues being analyzed.

2. THE MORPHOLOGY OF AN M&A TRANSACTION IN BANKING

In order to provide a base for the theme of the article, it is important to recall the key dimensions of M&A transactions in banking. We will look at the morphology of such transactions from the point of view of M&A activities and their goals. Standard value chains of M&A transactions in banking are organized along a defined set of phases which address a wide range of business, legal and formal decisions and activities (see Fig. 1).

In the strategy phase banks define their expectation of benefits to be achieved via the transaction, such as market share expansion (e.g. Client Business Volume/CBV or segment oriented), bottom-line income improvement, cost optimization, diversification, elimination of a competitor (as long as approved by anti-trust

⁵ Digitalization in a broad sense is understood as a widespread application of information technology in processes of the organization, with a strong accent on the aspects of customer experience, mobility and enterprise integration. See also previous footnotes on digital transformation and disruption.

⁶ The M&A transactions include: Nordea and PKO BP, BZ WBK and Kredyt Bank, Raiffeisen and Polbank, BNP Paribas and BGZ, BZ WBK and DB Polska.

⁷ A well known example of this development and global trend setting is mBank, described in the Forrester research.

authorities and in-line with all applicable laws) or acquisition of human/real estate/technological resources needed for growth⁸.



Fig. 1. Value chain of M&A transactions in banking

The goals of the investment/divestment strategy are then matched with a list of target partners (deal pipeline), starting with a long list, through assessment based on a set of strategic party criteria (e.g. similarity of business models, comparability of organizational culture, anti-trust considerations). In parallel the seller is preparing information sets (fact/white books), such as the information memorandum (high level presentation of the deal), seller information document (SID)/fact-book covering a comprehensive financial overview of the subject of transaction. After the distribution of invitations to pre-selected parties, following a strict non-disclosure agreement (NDA) regime, the seller collects non-binding offers which are then filtered for entry into the due diligence stage. A wide set of advisors is assembled in the strategy phase to support all crucial elements of the transaction, including an investment bank (or an M&A advisor), legal counsel, finan-

⁸ According to a team of PWC Strategy Experts the primary goals of digitally driven M&As are: 1. acquisitions of digital products and services, 2. new digital business models and 3. digitalization of the value chain (Acker, 2016).

cial/tax/business/HR advisory and technology vendors. The role of the investment bank is fundamental for the overall structuring, facilitation, organization and management of the deal flow. This entity also provides access to the market and its players (network of contacts), pricing and deal condition reference as well as expertise on negotiation practices, in particular on markets and types of businesses. Aspects of digital maturity are not extensively addressed in this phase, unless set as one of the specific strategic objectives of the investment/divestment strategy.

The due diligence phase covers extensive management presentations, information sessions and a substantial flow of data, with the usage of a strictly controlled virtual data room (VDR). The data room is filled with responses to information requests voiced by the buyers. Due to the requirements of the anti-trust laws (consumer and competition protection), the responses are classified into various levels of access, e.g. “green” (access by buyer’s personnel) and “red” (access by “clean teams,” usually legal and professional 3rd party advisors). Unless explicitly requested, classical due diligence processes do not have a dedicated digital component that would address the digital maturity gaps. It is strongly focused on financials and proper disclosure of all risk factors that may disrupt the valuation of the transaction.

In the phase of negotiations, the seller collects binding offers and runs multiple discussions related to the terms and conditions of the deal. As a result a preferred bidder is selected for detailed consultations and negotiations. In parallel the legal teams are working with full intensity to shape the contractual documentation such as the transactional term sheet with schedules, the transaction agreement and the transitional services agreements (TSA). One of the core elements of the legal process is the documentation of the subject of the transaction: financial and non-financial assets, intellectual property, licenses and human resources. This is where the digitalization perspective is extended, in the form of a list of systems, technologies and data sets as well as their respective licenses, service contracts and expert personnel. At the same time, this process is oriented more towards a formal inventory, rather than a strategy on the final allocation of these assets or their respective functions within the buyer’s business model and technical environment.

Negotiations are concluded with the final selection of the buyer and the signing of the transactional agreement/TA (in various segments and configurations), followed by the deal closing (legal merger/demerger, transfer of shares and court registration) and the final settlement of the deal (including possible price adjustments). The signing/closing/settlement cycle can be arranged in different time frames and configurations, depending on necessary regulatory approvals (e.g. by the financial regulator and the consumer and competition protection office, tax treatment ruling), particular negotiation demands and business transfer risks and expectations. The merger integration (transaction execution) covers operational steps agreed in the TA and wrapped in a legal and regulatory framework. In parallel to this primary value chain the integration also covers corporate financing (provision of capital/financial/share resources, funding), value protection (retention of clients, busi-

ness volumes, employees) and the target operating model for the merged/ de-merged/remaining entities, together with their potential restructuring.

The four phases outlined above are arranged to cover a wide range of activities and goals, mainly grouped into the following clusters:

- **commercial**, e.g. valuation, price and condition negotiations, cost sharing, job guarantees and incentive schemes, merger quality gates, value protection (including attrition management, retention programs),
- **financial and tax**, e.g. transaction reconciliation, share capital management, tax management (on organized parts of the enterprise, assets, vendor contracts, mutual service agreements),
- **capital and risk**, e.g. capital ratio management for merged/retained entities, transitional liquidity management, settlement of treasury/hedging products, assuring continuity/cutoff of credit risk policy,
- **legal and compliance**, e.g. assuring adherence to all laws, especially regarding consumer protection, anti-trust, personal data management (especially in view of the GDPR⁹ regulation), employee protection (including labor union negotiations), dialog with the financial regulators, archive management (digital and physical),
- **communication**, e.g. client communication, employee communication, brand management,
- **vendor contract management**, e.g. termination of existing contracts including early termination fees, necessity to reconcile all long term commitments, feasibility study for the continued contract usage beyond closing,
- **information technology/systems**, e.g. target IT architecture, data migration (current and historical, data quality assurance, testing (including production data)),
- **operational**, e.g. timeline, governance, organizational structure management, transfer of resources (human, fixed assets, intangible assets and rights), pre and post transaction TSAs, dialog and arrangements with market organizers (e.g. clearinghouse, national bank, credit bureau, stock exchange, deposit protection, payment systems and operators etc.), vendor negotiations (service continuity, volume discounts), reporting system updates.

Based on the presented morphology and required actions, M&A transactions can be viewed as highly complex, high risk bearing and work intensive ventures. Based on the author's observations from the recent M&A transactions, the prime share of integration effort (measured by the absolute man-day workload) is related to the technology and it amounts to 60-80% of the total project. This high share is also reflected on the benefit side. In the research of McKinsey we can observe that about 60% of synergies achieved via M&A relate to direct or indirect technological

⁹ Global Data Protection Regulation (EU 2016/679) of the EU Parliament and The Council, <http://eur-lex.europa.eu/eli/reg/2016/679/oj>.

impacts (Sarrazzin, 2011)¹⁰. It is therefore highly advised to research the impact of digitalization on the deal flow in order to provide a clear set of guidelines for the optimal behavior in future transactions. In the industry debate on the future of banking there are clear claims that banks are quickly turning into “technology companies”. High investment capacity combined with large customer pools and continuous access to the clients in their lifecycle provides a unique advantage that can be consumed in the fast paced development of digitalization. M&A transactions can provide digital synergies and further accelerate the growth of a technology-driven financial organization. However, taking into account the challenges of technology integration - improperly managed M&As can temporarily stall that growth and generate unexpected overheads instead of synergies. As indicated in a recent interview of top M&A executives in Europe, about 75% of them agree that the digital disruption has had a large impact on or requires a complete overhaul of the M&A strategy (Leroi, 2017). In the same research only 11% of M&A executives can position themselves as mature/advanced on the learning curve. Similar observations were gathered in the earlier Deloitte M&A Trends Report for Mid-year 2016: 55% of the interviewed managers highlighted the integration of systems, technology and intellectual property as a significant challenge (Thomson 2016).

3. DIGITAL CONSIDERATIONS OF M&A IN BANKING

The approach to the digital aspects of M&A in banking is strongly driven by the information technology (IT) architecture of both the buyer and the seller. There are several components of the IT architecture that drive the strategic agenda of digital integration of both organizations (see Fig. 2). The M&A team needs to build a deep understanding of these components and how they differ on the infrastructure, functional and user interface level.

The key IT components serve the following purposes:

- **client master data** – processing of internal and regulatory data of primary/secondary contract holders/know-your customer (KYC), e.g. base demographics, authentication documents, addresses, opt in/out for marketing/credit bureau/communications/GDPR, service preferences, tax residence, MIFID, FATCA,
- **core banking engine** – central system to manage banking products, serves as the ultimate source of truth for the balance and history of a client’s business volume,

¹⁰ It is important to emphasize that this measurement was done during the period of a rapid increase in the new technology absorption by the financial sector and the so-called FinTech revolution, believed to emerge around 2008 and lasting until today.

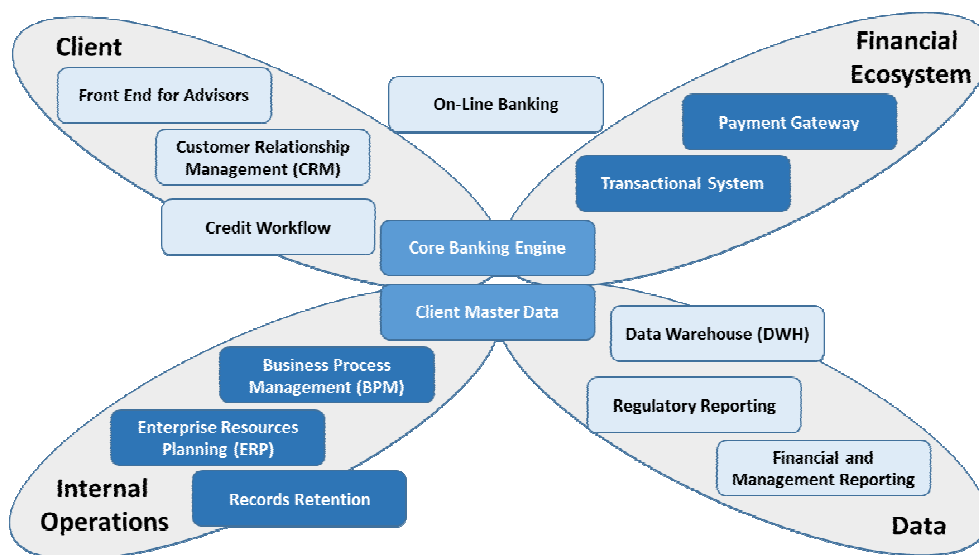


Fig. 2. Key IT architecture components in the M&A's digital agenda

- **payment gateway** – processing incoming/outgoing payment orders via national/international clearinghouses, card systems, and alternative payment providers (e.g. mobile, token-based),
- **transactional system** – access to financial and insurance markets (e.g. investment funds, securities brokerage, foreign exchange trading) and other non-financial transaction platforms (e.g. e-Government, telecommunication providers, e-Commerce, collaboration boards),
- **on-line banking** – internet based client self-service platform with advanced remote authentication and authorization of operations,
- **front-end for advisors** – provides access to multiple banking systems, allowing them to conduct sales and aftersales operations, usually set up in the form of an omni-channel portal,
- **customer relationship management (CRM)** – central point for managing client/prospect contacts and campaigns, either integrated with the front-end for advisors or a dedicated system,
- **credit workflow** – credit risk evaluation covering application and behavioral scoring, decision engine, pre-approvals, credit reviews,
- **workflow/business process management (BPM)** – internal work distribution and process management used for client facing and internal activities,
- **records retention** – data and system archives (business, financial, operational) no longer in active use, but retained for regulatory and claims purposes, often

linked to externalized paper documentation, such as signed client contracts or bookkeeping statements,

- **enterprise resource planning (ERP)** – coverage of corporate functions such as statutory finance (general ledger/GL) and controlling, purchasing, human resources,
- **data warehouse (DWH)** – storage of all bank data in various forms and levels of detail,
- **financial and management reporting** – analytical environment supporting risk management and reporting across all risk types; also, the management information system (MIS),
- **regulatory reporting** – systems providing compliance with necessary reporting required by local or shareholder-specific laws (e.g. financial supervision authority, the national bank, the deposit protection scheme, ministry of finance, tax authorities).

The above list covers only main components of systems architecture present in banks and is always followed by a number of additional custom and proprietary solutions. We must also mention that the view presented above does not take into account any strong relationships between the systems, e.g. related to the fact that several components are provided by the same vendor, resulting in native integration and not based on open application programming interface (API) standards.

In order to best prepare for the integration phase of the M&A, it is important to understand which factors influence the ability to not only merge different organizations, but also to achieve expected synergies and fuel growth. Based on the recent research of the author there are several key digital considerations related to the mapping of the technology gap between the buyer and the seller:

- **multiple instances of systems:** decentralized architecture split e.g. by segment or product, with historically different levels of investments resulting in uneven quality or functionality in various copies of solutions,
- **functional differences in systems:** solutions built following different strategies and business models, with different resources and constraints, may contain some common core functionalities, but also specialized modules and interfaces, often linked to external partners,
- **user experience (UX) differences in systems:** as above but related to the customer journey, covering the interface design, customer dialog and emotional build-up of the usage of a bank's products and services,
- **inherent cross-sell options:** supporting either only base functions or a packaged set of various products and services; the bundling of offer elements increases the complexity of the underlying databases, application logic and interfaces,
- **financial ecosystem connectivity:** reflecting the ability of each organization to interact (on-line or off-line) with other market players – either via public/joint platforms or through dedicated contracts and connections,

- **approach to regulatory requirements:** automated vs. manual coverage of regulatory demands, compliance-driven customer experience (more or less formal and bureaucratic) vs. “must-have” regulatory minimum in the background of the primary client functionalities,
- **cloud vs. on-shore hosting:** adoption of open solutions delivered by 3rd party vendors vs. retention of the infrastructure and access under the only and full control of the organization,
- **outsourced vs. in-house development:** usage of internal or external resources for technology development, it is a possible driver of vendor complexity and dependency that may be subject to commercial pressure following the communication of the M&A transaction,
- **concentration of technology vendors:** relationships with a high or low number of vendors, entrustment of a large scope of digital work to a selected partner,
- **multichannel processes:** level of internal integration of information about the clients, products and processes; ability to access data simultaneously with a single version of truth and the ability to switch processing between the channels,
- **shared services:** within the capital group (joint platforms) or other organizations, e.g. in the form of market alliances and cost reducing partnerships approved by the anti-trust regulations.

The key digital considerations can be mapped onto the previously presented list of architectural IT components in order to provide an indication of their relative impact. The mapping was conducted by a team of experts (5 persons with a background in IT/management consulting and banking) which hold a significant experience in the technological aspects of M&A transactions. In the expert session moderated by the author, a discussion was taking place to evaluate the level of impact per IT component and digital consideration. The group provided an agreed upon, joint score using a scale with 4 impact values (0 – no impact, 1 – low, 2 – medium, 3 – high). The resulting heat map (see Fig. 3, red denotes highest impact) provides an expert view on which considerations and systems may generate the largest digital gap and are currently gathering the most attention and effort of the M&A teams.

The highest relative importance can be attributed to the digital consideration of the “approach to the regulatory requirements”. It is quite intriguing that an area governed by regulations, laws and control/audit processes (therefore theoretically very precisely defined) is indicated as a source of M&A challenges with respect to the majority of IT systems. However one must note that a number of regulations, in the European Union (EU) and locally in Poland, are issued in the form of general guidelines and recommendations. These directional regulations are later interpreted by various legal and business teams, providing varying implementations of rules in the systems and processes. The second most important digital consideration is linked to the “functional differences in systems”. Despite many years of developing a similar set of banking system functionalities, serving the primary banking products (e.g. interest calculation, collection of fees, loan repayment schedule calcula-

tion, collateral management), financial institutions develop their non-core capabilities in various fashions. This process is linked to the search for competitive advantages either via specialization or innovation. While pursuing differing business models, banks are developing functionalities that provide advantages within a specific framework of resources and actions. Such business and technical capabilities of the seller may be redundant or simply not matching the IT architecture of the buyer, driving the complexity behind the decisions on which functionalities to maintain or to abandon. On the one hand, the goal of the buyer is to benefit from innovation and to provide at least a comparable level of service to the acquired client base. On the other hand, the cost of retaining all previous functionalities may interrupt the achievement of the expected cost and operational synergies.

Digital consideration		1	2	3	4	5	6	7	8	9	10	11	Score (per IT component)										
Core IT architecture component	Legend: 0 - no 1 - low 2 - medium 3 - high impact of a digital consideration on the IT architecture	multiple instances of systems	functional differences in systems	user experience (UX) differences in systems	inherent cross-sell options	financial ecosystem connectivity	approach to the regulatory requirements	cloud vs. on-shore hosting	outsourced vs. in-house development	concentration of technology vendors	multichannel processes	shared services											
	1	client master data	1	1	1	0	1	3	0	0	0	1	0	8	12								
2	core banking engine	3	3	0	3	2	3	3	3	3	1	1	25	2									
3	payment gateway	1	1	0	0	3	3	0	0	0	0	1	9	11									
4	transactional system	3	3	3	2	3	3	0	0	0	2	1	20	3									
5	on-line banking	3	3	3	3	3	3	3	3	3	3	1	31	1									
6	front-end for advisors	2	3	0	3	1	3	0	2	2	2	0	18	4									
7	customer relationship management (CRM)	3	3	0	3	1	3	0	0	0	3	0	16	5									
8	credit workflow	2	3	1	2	1	3	0	0	0	1	1	14	6									
9	workflow/business process management (BPM)	0	0	1	1	1	3	0	0	0	3	1	10	9									
10	records retention	0	2	0	0	0	3	0	0	0	0	1	6	14									
11	enterprise resource planning (ERP)	0	3	0	0	1	2	0	0	0	0	1	7	13									
12	data warehouse (DWH)	0	3	0	0	1	3	0	0	2	0	1	10	9									
13	financial and management reporting	0	3	0	0	0	3	0	2	2	0	1	11	7									
14	regulatory reporting	0	3	0	0	0	3	0	2	2	0	1	11	7									
												18	34	9	17	18	41	6	12	14	16	11	Score per digital consideration
												3	2	10	5	3	1	11	8	7	6	9	RANK

Fig. 3. Expert evaluation of the impact of digital considerations in M&A transactions on core IT architecture components

In terms of core IT architecture components, where the digital considerations display high impact potential, the most affected area is “on-line banking”. In the high paced digital arms race banks are placing the utmost attention on electronic banking capabilities, treating them as the primary gateway to customer dialog and competitiveness. As a result, on-line banking reflects a bank-specific business approach related not only to functionality offered in this channel, but also to the overall customer journey. This is emphasized further by the high importance of user experience (UX) in on-line banking and transactional systems. At the same time, UX is not significant for systems other than on-line banking and transactional engines, making it the second to last digital consideration in the overall ranking. The

second most impacted IT component is the core engine, mainly due to business-driven customizations (deviation from standardized functionalities) and maintenance models possibly involving outsourcing and cloud technologies¹¹, with high vendor concentration. At the end of the IT component ranking we can see the systems related to ERP and records retention. Both of these systems have been developed for a long time and are highly standardized, therefore the progressing digitalization does not strongly impact their evolution.

4. STRATEGIES TO ADDRESS THE DIGITAL CONSIDERATIONS

One of the primary tasks of the M&A technical team is to understand the size and complexity of the previously presented digital impacts and differences existing in the information technology architecture of both organizations. The digital gap has to be diagnosed in order to define an optimal technology integration scenario. Based on the recent mergers studied by the author, the following 6 integration strategies are widely practiced (Table 1).

Looking at the variety of strategies and the consequences they bear for all key performance indicators (KPI) of an integration project (budget, time, quality, scope, return on equity/ROE, return on investments/ROI), it is clear that their choice requires a detailed analysis, especially having in mind the digital considerations presented in the previous chapter. For example if the level of core engine customization is high, the Buyer may consider retaining the seller's system (option C) or using outsourcing (option D), followed by a gradual migration of seller's products to the product suite supported by the buyer. The strategy of migration (A) to the system of the buyer seems to be most appropriate for situations where the digital gap is low and can be bridged with change requests. Some gaps can also be covered by the recreation of the seller's system or business model (C). For situations where the digital gap is high, the choices are more oriented towards retaining the existing solutions (systems, processes, business models) – either by keeping the systems or contracting a TSA service from the seller or another professional party. The most challenging strategy is related to the termination (E) of a business model component (e.g. close a product, perform re-segmentation of customer groups) or a servicing element (e.g. close a channel). This option however can't be excluded if

¹¹ Cloud experiences mostly come from outside of Poland, due to the presently low adoption of cloud technologies in the Polish banking sector. This situation may change since the Polish Financial Services Authority (Komisja Nadzoru Finansowego/KNF) recently (2017-10-23) published a set of cloud guidelines, clarifying uncertainties regarding the usage and approval of these technologies in banking. https://www.knf.gov.pl/knf/pl/komponenty/img/Komunikat_dot_korzystania_przez_podmioty_nadzorowane_z_uslug_przetwarzania_danych_w_chmurze_obliczeniowej_59626.pdf.

Table 1. Technology integration strategies in M&A transactions

Strategy	Description	Advantages	Disadvantages
1	2	3	4
A. Data migration to the system of the buyer	Seller prepares data sets to be imported into the buyer's existing systems or an integrated platform ¹²	<ul style="list-style-type: none"> – Onboarding of acquired business in the existing systems and processes – No necessity to maintain legacy systems 	<ul style="list-style-type: none"> – Functional differences may generate the necessity for change requests – Long data migration testing process – Not all archive data can be easily migrated
B. Retention of the seller's system	The system of the seller is added to the architecture of the buyer	<ul style="list-style-type: none"> – Faster integration¹³ – Simplified business continuity approach – Archive data available with less constraints 	<ul style="list-style-type: none"> – Increasing the complexity of the architecture (e.g. regulatory requests have to be implemented in several systems) – Necessity to build interfaces to other systems (e.g. markets, reporting)
C. Recreation of the seller's system or business model by the buyer	Development of the seller's architectural component from scratch (with use of the seller's know-how): either fully or partially	<ul style="list-style-type: none"> – Taking the best or regulatory-required piece of the seller's solution – Full knowledge build-up by the buyer 	<ul style="list-style-type: none"> – Development cost – Lengthy testing process
D. Outsourcing (TSA) to the seller or a third party	The buyer only acquires a service	<ul style="list-style-type: none"> – No interference with the architecture of the buyer – Attractive for run-down portfolios with short term maturity 	<ul style="list-style-type: none"> – TSA dependency on the seller or a third party – Development and running costs that may be equivalent to self-development
E. Termination of a business model element	Stopping production of new and termination of all active contracts related to: products, channels, segments, internal processes	<ul style="list-style-type: none"> – No need to invest in the development – In case of low business volumes/ usability – positive business case (loss of business capacity vs the cost of its maintenance) 	<ul style="list-style-type: none"> – Necessity to settle with the clients in case no easy option to terminate agreements exists

¹² According to SAP, the adoption of a comprehensive and open technology platform allows for the acceleration of M&A transactions (Brown, 2016).

¹³ The speed of transaction execution is seen as one of the key success metrics (Vollmer 2012).

Table 1 cont.

1	2	3	4
F. Client relationship closure and reopening	Closure of a relationship on the seller's side and immediate reopening on the buyer's side	<ul style="list-style-type: none"> – No need for a technical migration – Usage of all the native policies, procedures and systems of the buyer 	<ul style="list-style-type: none"> – Necessity to terminate agreements (legal constraints e.g. for loan contracts) – The Client needs to appear physically in front of bank personnel to confirm identity – Possibly loss of historical data

allowed by anti-trust and consumer protection laws and acceptable from the business point of view (loss of clients and revenues), especially when the timeline of the post-merger integration is challenging. The ultimate conclusion from the recent transactions is that organizations use a hybrid/combination of technology integration options, usually following the business strategy to protect the value of the business being acquired. Therefore investments are made in the critical elements of the business model, while areas without strategic focus are treated with an option that is the least complicated and carries the lowest overall cost.

5. CONCLUSIONS AND RECOMMENDATIONS

Digitalization is impacting the shape and flow of M&A transactions in banking, by introducing a new level of complexity that has to be actively managed by deal teams. The occurrence of a digital gap between that buyer and the seller can be evaluated by a number of digital considerations. Since in banking M&A the share of IT related agenda items dominates the entire transaction effort, addressing the digital considerations is needed to increase the chances of successfully conducting the deal. Based on the recently observed transactions, and the analytical framework presented in this article, several recommendations can be made for the M&A teams to structure their digital gap evaluation and bridging:

- **The understanding of the digital gap between the buyer and the seller is a critical success factor to complete the M&A transaction and deliver on its expected KPIs.** It is no longer sufficient to simply “run an IT stream” in the integration project. The digital/technology agenda should be shaped as early as possible, serving as a cornerstone for the full scope of contractual arrangements, in every phase of the M&A process:
 - a) **Strategy:** it is important to understand the digital strategy of the subject of the transaction – pointing out strategic opportunities and risks resulting from acquisition and establishing digital goals not only in the area of technology and operations, but across all other categories of objectives: commercial, capital and risk, legal, compliance, communication and vendor contract management.

- b) **Due diligence:** the due diligence phase should be a particularly intensive period of understanding the digital situation of both organizations in the context of the transaction, evaluating potential digital gaps. A view on the expected outcome of the anti-trust and consumer protection approach should be formulated (e.g. related to exceeding a certain market share or worsening of client service by migrating to digital tools that have functional limitations). This phase should also cover the preparation of digital strategies for the negotiation and integration phases.
- c) **Negotiations:** should be run with awareness of the digital gap, e.g. assuring a proper set of seller's obligations related to the migration of digitally active (or native) clients. Several digitally-specific issues need to be addressed, e.g. **joint client communication and campaigns** in the digital channels, approach to **duplicate clients** (digital clients frequently have multiple accounts in many banks) or an approach to the **financial ecosystem connectivity** (treatment of digital partnerships).
- d) **Integration:** needs to cover all digital assets and clients with the most appropriate migration strategies addressing, among others:
- **business continuity** – since digital services are expected to operate 24/7, any possible service disruption should be minimized and a bare minimum option to allow access to customer's financial resources should be assured (e.g. usage of cards with a pre-arranged off-line mode),
 - **security and anti-fraud** – the migration creates a period of uncertainty, when cyber criminals can manipulate the clients into following a fraudulent process, compromising base safety rules and resulting in theft of credentials and funds,
 - **client education/digital training** – clients get used to their digital tools experience; therefore, while migrating to new system environments, assistance should be provided to assure clients do not get frustrated with the new UX.
- As banks dynamically engage in the digital transformation – **the impact of digital considerations will grow in importance**. The digital gap between M&A entities will be widening, unless regulatory pressure for **open banking** initiatives is significantly increased, allowing further atomization of bank services towards clear subcomponents (standardized or specialized, but easily distinguished in the IT architecture).
- **The leadership of the M&A deal structuring and execution needs to cover a strong (if not principal) role of the Chief Information Officer (CIO)**. Since the complexity of the transaction is highly driven by digital constraints, the CIO must provide active involvement and sponsorship of the deal, including the go/no-go decision.
- **On-line banking is highly susceptible to the formulation of digital gaps and requires close supervision**. Financial institutions shape their digital identity via functional and user experience development of on-line banking. Apart from

a common core (e.g. ability to run payments, check balances and transactions, verify loan schedules), banks invest heavily into innovative options and ways to use electronic banking, leading to highly disparate solutions.

- **The integration of digital solutions is a chance to achieve synergies from combining various innovations in one asset, however not at all cost.** The goal of the buyer should be to benefit from the seller's innovation and level of digital services, by taking "the best of both worlds" and merging existing solutions to generate synergies. At the same time, the adoption of the seller's digital capital must follow the business case and may need to be spread over time. The M&A teams should aim for retaining sound solutions from both sides of the deal, but historical digital decisions may stand in the way of completing the integration (e.g. the pull vs push cross-sell philosophy/approach). Early detection of actual synergy potential is advised in order to avoid hopes of innovation transfer that can't be operationalized later in the project. While building the target IT architecture blueprint it is necessary to study various digital decision criteria, such as scalability, maturity, adoption, usage propagation or development potential.
- **Valuation of digital assets will continue to be a challenge for the integration business case.** As the M&A teams develop financial plans, they need to increase their ability to value digital solutions and to take calculated risks on their expected future performance.
- **The M&A teams should be equipped with high quality technological capabilities** to work on addressing the digital gap and understand its impact early on in the transaction process. It is important that legal advisors involved in the M&A project have sufficient technical knowledge to create the contractual framework to address digital considerations. It is expected that the **demand for legal counsel with technical skills will be growing**, following the digitalization of the banking industry.
- **Digital talent retention should be forward looking.** When acquiring a team of digital experts it is not only important to assure business continuity of the service to the clients, but also to understand the digital roadmap the seller's organization developed. In other words – the M&A integration should not only cover the existing digital assets (e.g. keeping people with knowledge to the end of migration), but also the plans to grow in the future.
- **The approach to digital vendors servicing the seller and the buyer needs to be factored into the deal negotiations.** The buyer has to understand the vendor landscape (still within the scope of allowed anti-trust information access), taking into account competitive positions and sustainability of these vendors versus the buyer's vendor base, in the long term. Depending on the integration strategies the vendors may be asked for additional services, temporary licenses or urgent change requests. Depending on the importance of the seller's business to the vendor (e.g. key client and revenue generator, awareness of the business finishing soon), this aspect of the M&A transaction may also generate management challenges.

- **Digital KPIs should be a part of due diligence.** In order to best understand the potential behind digital solutions, their current performance needs to be documented and reconcilable between the seller and the buyer. Digital KPIs should form a standard section of the due diligence.

Digitalization is changing the M&A processes in banking, constantly providing new challenges, especially in the technology-driven areas. The M&A teams on both the seller's and the buyer's side need to adapt to the new rules and practices in order to protect and maximize the value being passed between the institutions. The farther we move in the digital transformation of the banking sector, the more M&A agility and competence is needed to evaluate the digital gaps/considerations as well as to select the most optimal target application landscape and integration strategies. According to the research of EY (Krouskos, 2016), companies are planning to address the digital transformation needs via a similar level of in-house development (86% of respondents will do so), but also by a growing volume of inorganic operations (growth by 14pp to 67%) and outsourcing/partnerships (growth by 24pp to 55%). It is therefore important to continue the study of this area, especially by the continuous collection of banking M&A transaction experiences from various geographies.

LITERATURE

- Acker, O., Krings, J., Neely, J. (2016). Will you be mine, *Strategy+Business*, 83. Retrieved from https://www.strategy-business.com/media/file/Will_You_Be_Mine_in_the_Digital_World.pdf.
- Baculard, L-P., Leroi, A., Miles, L., Spaulding, E. (2017). *The changing rules for digital M&A*, February 10, Bain Brief. Retrieved from <http://www.bain.com/publications/articles/the-changing-rules-for-digital-m-and-a.aspx>.
- Brown, T. (2016). *Digital Finance: Transforming Finance for the Digital Economy*, SAP Digital Finance Whitepaper (02/16), SAP SE. Retrieved from https://dam.sap.com/mac/preview/a/67/AlOxnsXyPIHWwEEIU0wnmXXvggwgwVHnygJCUmAHg11EXwxM/Digital_Whitepaper_Finance_final.htm.
- Ferranti, M. (2015). *Digital transformation spurs tech M&A to close in on record*, December 2015, IDG News Service. Retrieved from <https://www.itworld.com/article/3012767/digital-transformation-spurs-tech-ma-to-close-in-on-record.html>.
- Forrester. Retrieved from <https://www.forrester.com/report/Case+Study+mBank+Builds+A+NextGeneration+Online+Banking+Experience/-/E-RES106321>.
- Herd, T. McClelland, M. (2017). *Sizing Up M&A Value Now*, *Accenture Strategy*. Retrieved from https://www.accenture.com/t20170523T044206Z_w_/us-en/_acnmedia/PDF-51/Accenture-Sizing-Up-Mergers-Acquisitions.pdf#zoom=50.
- Hutton, M., Noda, M., Spoth, C., Toto, C. (2017). *Banking and securities M&A outlook – Opportunities amid uncertainty*, *Deloitte Development*. Retrieved from <https://www2.deloitte.com/us/en/pages/financial-services/articles/banking-securities-mergers-acquisitions-outlook.html>.

- Kengelbach, J. Keineburg, G. et al. (2017). *The 2017 M&A Report, The Technology Takeover*. Boston Consulting Group, BCG. Retrieved from http://image-src.bcg.com/Images/BCG-The-Technology-Takeover-Sep-2017_tcm9-172639.pdf.
- Krousos, S. (2016). *Digital Deal Economy Study, Dealing in a digital world, Capital strategies to future-proof your business*. EY Publishing 2016. Retrieved from [http://www.ey.com/Publication/vwLUAssets/PI/EY_%E2%80%93_Dealing_in_a_digital_world/\\$FILE/Dealing-in-a-digital-world.pdf](http://www.ey.com/Publication/vwLUAssets/PI/EY_%E2%80%93_Dealing_in_a_digital_world/$FILE/Dealing-in-a-digital-world.pdf).
- Leroi, A. (2017). 3 Ways M&A Is Different When You're Acquiring a Digital Company, July 11th. *Harvard Business Review*. Retrieved from <https://hbr.org/2017/07/3-ways-mre-acquiring-a-digital-company>.
- Robertson, S., Sagar, H., Sharma, C. (2017). *Strength in the storm, Banking M&A Trends*, March 2017, KPMG International. Retrieved from https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2017/03/strength-in-the-storm_v1.pdf.
- Sarrazin, H., West, A., (2011). *Understanding the strategic value of IT in M&A*, January 2011, McKinsey Publishing. Retrieved from <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/understanding-the-strategic-value-of-it-in-m-and-38a>.
- Thomson, R., Trevear, T., Garay, M. (2016). *M&A Trends Report, Mid-year 2016*. Deloitte. Retrieved from www.deloitte.com/us/ma-trends-report.
- Vollmer, S., *How to run a hurry-up offense – Six key success factors for digital acquisition integration*. PWC Strategy&, formerly Booz & Company, New York 2012 [online]. Retrieved from <https://www.strategyand.pwc.com/media/file/How-to-run-a-hurry-up-offense.pdf>.

WPLYW DIGITALIZACJI NA TRANSAKCJE M&A W BANKOWOŚCI

Streszczenie

W artykule przedstawiono perspektywę wpływu digitalizacji bankowości na transakcje fuzji i przejęć (ang. Mergers and Acquisitions/M&A). W pierwszej kolejności opisano proces M&A, ze wskazaniem głównych etapów przeprowadzania transakcji oraz ich celów. Następnie przedstawione są uwarunkowania digitalizacyjne, wskazując na złożoność transakcji M&A w obecnym okresie dynamicznej transformacji cyfrowej. Uwarunkowania digitalizacyjne są następnie powiązane z kluczowymi komponentami architektury systemów informatycznych, wraz z ekspercką oceną ich wpływu na tę architekturę. W kolejnym rozdziale przedstawiono strategię integracji technologicznej. Podsumowanie zawiera istotne wnioski oraz wytyczne związane ze znaczeniem digitalizacji w transakcjach M&A i może zostać zastosowane przez zespoły M&A w celu zwiększenia prawdopodobieństwa sukcesu w kolejnych transakcjach.