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Business Model Innovation: Analyzing Forms and Patterns of Change within Investment Banking

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Abstract

This research explores Business Model Innovation (BMI) in the investment banking industry, with a focus on analyzing how business models have evolved and identifying forms of BMI. Through an exploratory approach, including expert insights, the study reveals that business model components vary in their susceptibility to change, while BMI is more frequently observed when innovations are unique to the firm rather than the industry. New dimensions, besides scope and level of novelty, such as sustainability and ease of replication, are proposed to further enhance clarity on the conceptualization of BMI.

Keywords

Business Model Innovation, Business Model Evolution, Strategic Transformation, Investment Banking

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1. Introduction

Prevailing market conditions in global industries are characterized by a high degree of uncertainty and various disruptions (Banholzer, et al. 2023). An organization's potential for sustained success is closely linked to the configuration and mechanisms embedded in its business model (Clinton and Whisnant 2019, 464). However, today's market conditions are making traditional business models less sustainable, compelling organizations to embrace continuous innovation and adaptability in their strategies (Jong and Dijk 2015). Despite growing awareness of its importance among industry professionals and scholars, business model innovation (BMI) remains an emergent and less mature area of research with high ambiguity regarding its definition and scope. BMI can be seen as an extension of business model (BM) literature, however, as it brings innovation as a new dimension to the BM concept, there are several theoretical and empirical questions arising that have not been answered yet. Implied are questions regarding drivers, forms, or conceptualization of BMI (Foss und Saebi 2017, 215). This research aims to enhance clarity in the field of BMI by offering nuanced insights into the mechanisms of business model change, leading to the central research question: How do business models evolve, and what specific forms of BMI can be identified?

Understanding how business models change and evolve is crucial in today's rapidly transforming business landscape and addressing these questions is pivotal to advancing our comprehension of BMI. This study seeks to give answers by applying concepts of business model evolution and innovation to the investment banking industry, chosen for its transformative dynamics and highly competitive market (Bhattacharyya, et al. 2023). The study delves into the evolution and innovation of business models in this sector while exploring potential forms and patterns of innovations. Thereby it takes a qualitative exploratory research approach, focusing on the collection of secondary data through extensive literature review and detailed document analysis. The core of the data collection involves a documentary analysis of the company and financial reports of selected investment banks. To deepen the understanding of the insights, semi-structured interviews with industry experts will complement the secondary data, providing contextual insights and enhancing the understanding of the evolving business models. The outcomes of this research can serve as a valuable foundation for future academic inquiry, encouraging a deeper exploration of the concept of BMI.

2. Literature Review

To examine the concept of business model innovation, it is essential to first clarify the term 'business model' itself. The literature review then delves into the spectrum of business model change and thereby illuminates how BMI differs from other types of change. Followed by an analysis of the current state of research on the specifics and forms of BMI, the literature review concludes with a critical assessment of key findings and implications.

2.1 Theoretical Foundations of Business Models: Components and Frameworks

Every organization operates on the basis of an underlying business model, whether explicitly articulated or not (Magretta 2002, 87). Yet, the academic literature presents a variety of BM definitions, each emphasizing different aspects. More generally, a BM performs two primary functions: to create and to capture value (Chesbrough 2007, 13). A comprehensive review by Demil and Lecoq (2016) of fifteen years of business model innovation research identifies a convergence around Teece's (2010) conceptualization of a BM as the "design or architecture of the value creation, delivery, and capture mechanisms" (Teece 2010, 175) employed by an organization (Demil and Lecoq 2016, 230). Recent academic studies continue to reference Teece's (2010) definition of a business model, employing his framework as a fundamental basis for further exploration and research in this field (Clinton and Whisnant 2019, 465; Klos, et al. 2021; Ven, et al. 2023, 39). As Teece's (2010) concept remains to be essential within BM research, his definition will serve as the baseline for this study.

While it is acknowledged among scholars that business models consist of various interrelated components, there are divergent perspectives in the literature about which components a BM encompasses. Saebi, Lien, and Foss (2016) identified a convergence around these key elements: "the firm's value proposition and market segments, the structure of the value chain required for realizing the value proposition, the mechanisms of value capture that the firm deploys, and how these elements are linked together in an architecture" (Saebi, Lien und Foss 2016). However, some of these elements are defined in rather broad terms, leading to ambiguity in comprehending their full scope and implications. Several frameworks facilitate the understanding and analysis of a BM, which build upon the key elements identified by Saebi, Lien, and Foss (2016). One that is commonly used in research and among business practitioners is the Business Model Canvas (BMC) developed by Osterwalder and Pigneur (2010). It consists of nine building blocks, which represent the dimensions of a BM: customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure. Given its widespread application in both research and practice, the BMC will serve as the foundational framework for understanding the components of a BM. A more detailed description of the BMC components can be found in Appendix 1.

2.2 Business Model Change: Forms and Typologies

Current market conditions are marked by a high degree of uncertainty and diverse disruptions (Banholzer, et al. 2023). These circumstances are making traditional business models less sustainable, leading organizations to embrace continuous innovation and adaptability in their strategies (Jong and Dijk 2015). Hence, changing the business model accordingly is essential for maintaining competitiveness (Wirtz, Pistoia, et al. 2016, 36). As a result, components of a business model change over time, leading to adaptions within the firm's value proposition as well as value creation, delivery, or capture mechanisms (Rissanen, et al. 2020, 259). The term business model change represents all changes that impact the fundamental, routinely executed procedures within a business model. What these core procedures consist of is not clearly defined in the literature (Sérgio Cavalcante 2011, 1330), which can be led back to the general ambiguity within research about the key components of a business model, as discussed in the previous chapter. However, since this study applies the core components of the business model canvas as a baseline, any changes within these core components will be considered as business model change. Within research, the act of changing a business model is associated with various terms. Besides business model innovation (Foss and Saebi 2017, 203ff.), scholars use terms such as business model evolution (Demil and Lecoq 2016, 235 f.) or adaptation (Saebi, Lien and Foss 2016, 568f.), each representing a different spectrum of change. The following table shows an overview of the different terms that are being used.

Table 1: Spectrum of Business Model Change – Overview of Definitions

Typology	Author	Definition
Business Model Change	Sérgio Cavalcante, Peter Kesting, John Ulhøi (2011)	A change that affects the fundamental and routinely executed processes within a business model
Business Model Adaptation	Saebi, Lien and Foss (2016)	The strategic realignment of a company's business model to accommodate shifts in the external environment
Business Model Innovation	Frankenberger, et al. (2013)	Novel value creation and capturing stemming from modifications on one or various business model components
	Saebi, Lien and Foss (2016)	The deliberate introduction of a new business model with the potential to disrupt markets
Business Model Evolution	Balboni et al. (2019)	Represents a range of changes including incremental, adaptive, and innovative adjustments
	Demil and Lecoq (2016)	A series of interconnected changes, including both deliberate and emergent changes that impact the core components of a BM or their elements

Business model adaptation (BMA) is viewed as a strategic realignment of a company's business model to accommodate shifts in the external environment. Business model innovation (BMI), on the other hand, involves the deliberate and voluntary introduction of a new business model with the potential to disrupt markets (Saebi, Lien and Foss 2016, 569). However, there seems to be high ambiguity within the definition of BMI in terms of its scope and level of novelty. Other scholars refer to BMI as a "novel way of how to create and capture value, which is achieved through a change of one or multiple components in the business model"

(Frankenberger, et al. 2013, 253), not emphasizing the element of disruption in their definition. In the opinion of Balboni et al. (2019) neither BMI nor BMA captures the full scope of changes within a business model, as incremental changes are not considered. Hence, they define business model evolution (BME) as a framework that encompasses a range of changes including incremental, adaptive, and innovative adjustments (Balboni, et al. 2019, 116). This view is grounded in the definition provided by Demil and Lecoq (2016), who conceptualize BME as a series of interconnected changes, including both deliberate and emergent changes that impact the core components of a BM or their elements over time (Demil and Lecoq 2016, 240). According to them, alterations in cost and revenue structures often serve as the initial indicators of BM evolution (Demil and Lecoq 2016, 235). In conclusion, BME appears to be a term that encompasses various types of change over time, including both adaptive and innovative alterations. Hence, in this study, BMA and BMI will be considered as sub-categories within the broader framework of BME.

2.3 Theoretical Foundations of Business Model Innovation: Dimensions and Forms

The analysis of business model change both highlighted its complex and multifaced nature and revealed the ambiguity surrounding the concept of BMI. Business model innovation, similar to the BM concept, lacks a universally accepted definition. It can be defined as an extension of BM research while introducing innovation as a new facet. Foss and Saebi (2017) identified two crucial dimensions commonly used by scholars to define BMI: the scope and the level of novelty. In terms of scope, the central question revolves around the extent of change required within a BM to be categorized as BMI. There are two distinctive perspectives scholars take on this aspect (Foss and Saebi 2017, 209f.). One group sees alterations in individual elements of a BM as sufficient to refer to it as BMI, such as modifications in the industry’s value chain, revenue mechanisms, or the organization's structure (Giesen, et al. 2007, 29). A BMI might also be characterized as a change in technology, stakeholder networks, or financial benchmarks

(Koen, Bertels and Elsum 2011, 53f.). The second group of academics argues that BMI should be recognized not just by smaller changes in specific components but by the innovation of the overall business model architecture (Foss and Saebi 2017, 221). Some literature, however, suggests a middle ground between these two groups, recognizing BMI as a spectrum ranging from smaller adjustments within a BM's element to a complete disruption that could involve introducing a completely new model (Khanagha, Volberda and Oshri 2014, 325). As for the level of novelty, research perspectives can be categorized into two main schools of thought. The first proposes that BMI is identified when a business model is novel to a particular company, regardless of its industry prevalence. The second argues that true BMI is characterized by its novelty to the industry at large, not just to the individual firm. Foss and Saebi (2017) propose the BMI Typology Framework to differentiate between four types of BMI: evolutionary, adaptive, focused, and complex BMI, while considering the two dimensions level of novelty and scope (see Table 2).

Table 2: Business Model Innovation (BMI) Typology by Foss and Saebi (2016)

Novelty	Scope		
		Modular	**Architectural**
	New to firm	Evolutionary BMI	Adaptive BMI
	New to industry	Focused BMI	Complex BMI

Evolutionary BMI has a modular scope and is new to the firm, while not being new to the industry. This type can be seen as a "fine-tuning process involving voluntary and emergent changes" (Demil and Lecoq 2010, 239), which are done within individual parts of the BM and may occur automatically over time. Within adaptive BMI, an organization changes the overall BM as a response to external shifts. In terms of their level of novelty, these changes are new to the firm itself but not to the general industry. Both evolutionary and adaptive BMI are not defined as being purposely disruptive. Focused and complex BMI on the other hand involves either modular or architectural changes within a BM, with the intent to disrupt markets. Hence, within these two forms, the changes are new to the industry and have the highest level of novelty (Demil and Lecoq 2016, 217).

2.4 Critical Evaluation, Gaps, and Implications

The literature review shows that business model innovation represents a multifaced field with various nuances. A notable point of contention within this domain is the lack of consensus on the conceptualization and definition of both BM's and BMI. Foss and Saebi (2017) highlight the importance of attaining clarity on the meaning and essence of BMI to enable further research possibilities (Foss and Saebi 2017, 225). To increase transparency on the concept of BMI, a differentiation between other forms of change is essential. Here the literature reveals a critical gap: only a few studies thoroughly examine the nuances and differences within business model change, which encompasses terms like evolution, adaptation, or innovation to describe the various forms of change. Chapter 2.2, which analyzed the dynamics of business model change more broadly, introduces the idea of business model evolution as an overarching framework that includes both BMI, BMA and additional incremental changes. A deeper examination of BME, based on this perspective, could serve as a foundational basis for analyzing the nuances and identifying forms of BMI, thereby enhancing its conceptual clarity.

Chapter 2.3, as a more detailed examination of BMI research, revealed two crucial dimensions for understanding and analyzing BMI: level of novelty and scope. The understanding of what each dimension encompasses, however, varies among scholars. Foss and Saebi (2017) suggest four distinctive forms of BMI within their typology framework (see Table 2). In their study, BMI is neither set into the context of business model change nor differentiated from other forms of change. Hence, BME and BMA are not discussed as distinctive concepts. Rather, their research on BMI seems to merge nuances of both evolution and adaptation within the BMI concept, thereby synthesizing the various opinions discussed in Chapter 2.3, particularly regarding the extent of novelty and scope. Two of the BMI forms provided in their framework are described as 'Evolutionary BMI' and 'Adaptive BMI'. Although the terminology might lead to confusion as it interferes with the terms BME and BMA, which are seen as distinctive concepts by other scholars, it provides an alternative perspective on how to illustrate the spectrum of business model change within BMI. According to Foss and Saebi's (2017) definition, evolutionary BMI includes both voluntary and emergent changes, while concerning only individual business model elements. Adaptive BMI is defined as a change that concerns the whole BM and acts as a response to external drivers or shifts. Furthermore, the literature review reveals ambiguities around the concept of 'disruption' in BMI, with Foss and Saebi (2017) defining the dimension 'new to industry' as inherently disruptive.

Overall, the critical evaluation of existing literature illuminates the divergence in perspectives on the discussed concepts, which not only highlights the complexity of the field but also signals a gap in understanding the dynamics between different aspects of business model change and ultimately BMI. This underscores the need for a deeper exploration into these dynamics, which is essential for advancing research on BMI in the future. As identified in Chapter 2.2, BME serves as an inclusive framework that encompasses both BMI and BMA. Hence, understanding the overall evolution of a business model could serve as a baseline for identifying forms of BMI. Consequently, this leads to the following research question: How do business models evolve, and what specific forms of BMI can be identified?

3. Research Design and Methodology

3.1 Research Aim and Design

Drawing from the insights gathered in the critical evaluation of the literature review, the primary focus of this research is to analyze the evolution of business models and identify distinct forms of business model innovation. Thereby, this research aims to bring more clarity to the nuances of business model change as well as the conceptualization of BMI. To address the core questions, theoretical concepts and frameworks of both business model evolution and business model innovation were applied to a chosen industry. Within this industry, select firms were examined to comprehend how their business models have evolved and to pinpoint variations in BMI. This research aims to contribute to the ongoing academic discourse concerning the scope and forms of BMI and thereby extend the current state of knowledge. By adopting the lens of business model evolution as an overarching framework to identify BMI, this study will additionally bring clarity to the nuanced typologies inherent in business model change. Given the mature yet ambiguous nature of BMI research, this study adopted an exploratory approach to understand the nuances of contexts and perspectives from a qualitative standpoint. The qualitative research design aligns with the objective to delve deeper into the complexities of business model evolution and innovation.

3.2 Methodology

The industry in focus for this research is investment banking, selected for its transformative dynamics and the highly dynamic market influenced by macro-economic, geo-political, regulatory, technological, and sustainability-oriented forces (Bhattacharyya, et al. 2023).

The analysis methodology, deriving from the implications of the literature review, is based on the idea that BME serves as an overarching framework, on which basis the identification of BMI forms can be performed. Hence, within the first part of the data analysis the business model evolution of three selected investment banks was examined, employing the BMC as an analytical framework. The initial step involved creating a baseline BMC for each bank, reflecting their original business model at the start of the analysis period, which is set to the year 2000. The analysis period reaches until 2022 and for selected time spots a reconstructed BMC was prepared to highlight changes across the nine components of the business model. The selected time spots were identified by dividing the analysis period into several significant phases (Fohlin 2016, 134ff.): 2005, as the pre-financial crisis era, 2009, the aftermath of the 2008 financial crisis, 2011, the subsequent recovery and regulatory phase, 2015, representing the mid-2010s market evolution characterized by various technological shifts, 2019, the pre-pandemic period, and finally, 2022 as the pandemic aftermath. Hence, six additional BMCs for each respective bank were created. The evolution analysis was then used as a basis for the identification of forms of BMI. To effectively explore BMI among the banks, the study utilized the BMI Typology framework proposed by Foss and Saebi (2017) as a starting point (Foss and Saebi 2017, 217). To collect the necessary data for the analysis, this study employed a multi-pronged data collection approach, with secondary data, mainly company reports, as the primary source for analyzing both BME and BMI. After the data collection and analysis phase, expert interviews were conducted to provide primary data, with the aim to enrich and deepen the research findings.

To select suitable investment banks, a multifaceted sampling method was implemented that considered pre-defined key characteristics for an ideal sample set. The first characteristic was the accessibility and availability of company data that allows to analyze BMs in detail, effectively excluding startups and smaller banks. The second criterion was a strong commitment to innovation. Given the inherent challenge in quantifying innovation commitment, a global competitor overview of investment banks was compiled using Bloomberg as a data source. This overview includes key performance indicators such as market capitalization, revenues, EBIT (earnings before interest and taxes), likelihood of default, and ESG (Environmental, Social, and Governance) data (see Appendix 2). Banks from undeveloped countries, the Middle East, Asia, and Africa were strategically excluded from the sample set. Innovation commitment was further approximated by assessing the banks' resource allocation capabilities, with a particular emphasis on bulge bracket banks, identified through percentile-based market capitalization categorization. This process distilled the list to 31 potential investment banks, which all fall under the category of bulge bracket. As a next step, the top 10 bulge bracket banks by market capitalization were chosen for a more detailed examination, including reviewing market analyses for industry awards or recognitions concerning innovation. Additionally, as sustainability is a key driver for BMI (Foss and Saebi 2017, 221), ESG scores were included in the selection criteria. Ultimately, three from the 10 bulge bracket banks were chosen based on the market analysis and ESG criteria: JPMorgan Chase & Co., among the top 5 most innovative banks in 2023, Goldman Sachs, with an ESG score of 5.08, and UBS, scoring 4.87, indicating their strides in adapting business models towards sustainable practices. This targeted sampling method ensured a focused analysis on banks that not only lead the market and have the highest resource allocation opportunities, but also embody innovative business practices.

3.3 Methodological Limitations

While the chosen methodologies offered a structured approach to analyzing BME and BMI in investment banks, there are methodological limitations that need to be acknowledged. Firstly, the BMC's static nature may not fully capture the dynamic changes in the evolution of investment banks, particularly in times of rapid technological change and market volatility. It provides snapshots of business models at specific moments in time but may not necessarily represent the transitions between these models effectively. Furthermore, the decision to divide the analysis into specific periods – 2005, 2009, 2011, 2015, 2019, and 2022 – might not align precisely with the actual timings of changes in the business models, potentially leading to missed changes in the business models. In addition, it is important to note that this study does not focus explicitly on the drivers of business model innovation, which could yield crucial information about the scope of the respective changes. As the study incorporates the BMI Typology framework by Foss and Saebi (2017), another limitation pertains to the analysis of the level of novelty within BMI. Assessing whether a change in a business model is novel to the entire industry or only to the respective bank is aggravated, as the scope of this study does not include a comprehensive analysis of the entire industry. Finally, the exploratory nature of this study, chosen to uncover new insights, also means that the conclusions drawn might be preliminary. The study is designed to discover forms and patterns of BMI rather than to test specific hypotheses or theories. As such, findings should be considered as providing directional insights rather than definitive conclusions about BMI.

4. Business Models in Investment Banking: Evolution and Innovation

4.1 Business Model Evolution Analysis

The baseline BMs from 2000 show that all three banks shared key similarities, including a focus on skilled human capital (Key Resources), a commitment to high service quality and innovation (Value Propositions), and an emphasis on trust-based, long-term customer relationships (Customer Relationships). The primary differences laid in their key activities: Goldman Sachs focused on trading and investment banking, UBS on wealth management and private banking, and JPMorgan Chase on a diverse range of financial services. A detailed description of the basis BM's can be found in Appendix 1. The period from 2000 to 2022 witnessed significant evolutions in the business models of Goldman Sachs, UBS, and JPMorgan Chase & Co. which are highlighted in the following. A detailed overview of their business model evolution can be found in the appendix (see Appendix 4 – 24).

(1) Customer Segments: Over the analyzed period, the investment banks exhibited stability in their customer segments, with some refining shifts focusing on particular client groups. For instance, UBS in 2009 identified ultra-high-net-worth individuals as a target for growth alongside high-net-worth individuals, which by 2011 both became their key customer segments, indicating a refinement process in their client segmentation (see Appendix 13 and 14). Overall, there was a trend of geographic expansion, with UBS, Goldman Sachs, and JPMorgan Chase & Co. broadening their customer base into emerging and growing markets such as Asia or the Middle East. This expansion, as can be seen at UBS in 2005 and JPMorgan Chase & Co. in 2011, highlights the evolution of customer segments from a geographic point of view (see

Appendix 12 and 21).

(2) Key Activities and Revenue Streams: All three banks saw different changes within their main activities, which had direct implications for their revenue streams. JPMorgan Chase & Co., for example, experienced a notable shift in investment banking, which became less of a focus over time (investment banking revenues 2003: $14,440 million vs. 2011: $5,911 million) (see Appendix 18 and 21). UBS underwent a similar significant evolution. Initially, in 2005, its focus laid on wealth & asset management, and investment banking & securities, with retail banking in Switzerland as a secondary focus. However, by 2012, UBS had shifted its strategy to primarily focus on wealth management and retail banking, positioning investment banking and asset management as complementary divisions (see Appendix 12 and 14). This evolution was also evident in their revenue streams, with wealth management overtaking investment banking as the largest revenue driver by 2019 (see Appendix 15 and 16). Additionally, all banks noted an increase in sustainable-oriented activities (see Appendix 4-24).

(3) Customer Relationship and Value Proposition: Throughout the analysis period, certain core values remained consistent across the business models of all three investment banks. These include a customer relationship built on trust combined with a client-centric approach in their value proposition. Furthermore, all banks consistently highlighted their commitment to excellence and a high standard of quality. One nuance observed was the increasing complexity of client needs, prompting the banks to place an even stronger emphasis on providing tailored solutions. This was supported by establishing an integrated business model over time, where various divisions complement each other, thereby enhancing the overall value delivery to clients (see Appendix 4-24).

(4) Key Resources: Across the three investment banks, key resources such as intellectual capital, a strong capital foundation, and a global scale were consistently emphasized and remained stable. However, the importance of risk management rose notably, especially after the financial crisis. Similarly, the value of a strong reputation as a key asset became increasingly pronounced post-crisis. In UBS's case, a significant reduction in total assets was observed, which aligned with their shift away from investment banking towards wealth management (see Appendix 12 and 16).

(5) Cost Structure: In all three business models, compensation remained the primary component of the cost structure. Changes in cost structures were identified, such as strategic staffing adjustments by Goldman Sachs, including employing more junior staff and relocating to more cost-effective locations (see Appendix 8). Additionally, the evolving regulatory environment led to an increase in regulatory costs, representing an unintentional but significant change in the cost structures (see Appendix 15). One key evolution present in all three BM's is the enhanced focus on operational efficiency as a measure to reduce costs (see Appendix 4-24).

(6) Channels: A common evolution across the three investment banks was the establishment and expansion of a multi-channel approach, integrating both physical and online platforms. Post-2015, there was a marked increase in the launch of new platforms, serving as additional customer touchpoints. For example, UBS introduced a variety of new platforms in 2019, reflecting the bank's changes according to the increasingly digital landscape of customer interaction (see Appendix 16).

(7) Key Partners: The analyzed data sources did not provide detailed information about key partnerships, besides the typical industry partners such as governments or regulators. A notable aspect, however, was the emphasis on internal partnerships. All three banks highlighted these internal collaborations as key, reinforcing the concept of an integrated business model that boosts the over effectiveness and service quality (see Appendix 4-6).

4.2 Insights from Expert Interviews

As the research progressed into the analysis phase of BMI identification, it became increasingly evident that a more nuanced understanding of innovation and industry perspectives were needed. The framework of typologies introduced by Foss and Saebi (2016) was chosen as a starting point to identify and explore BMI along the two dimensions of novelty and scope. However, the identification of BMI, based on the evolution analysis, faced difficulties. A clear differentiation between BMA and BMI was needed and although the literature review defined both terms, deeper insights into the nuances of innovation itself and industry insights were missing to allow a grounded analysis of BMI as a next step. Hence, the expert interviews were strategically integrated at this stage of the research, thereby enhancing the foundation and depth of the BMI analysis. Additionally, the nuanced views and experiences of the experts were leveraged to provide a layer of practicality and realism to the theoretical concepts that are applied, enabling a more comprehensive interpretation of the secondary data.

For this study, three experts (see Appendix 25) were selected based on their expertise in innovation and financial services, with a minimum of 5 years of experience. The interviews were conducted online, each lasting 30 minutes on average, using a semi-structured format to balance depth and flexibility. Ethical considerations were considered by obtaining informed consent from all participants and anonymizing their identities to maintain confidentiality. Finally, a thematic analysis was applied to the transcripts of each interview (see Appendix 26-28) as a method to identify, analyze, and report the main occurring themes, which are summarized in the following.

Theme 1 – Understanding of BMI and Business Model Change: The first theme that emerged from the expert interviews revolves around the understanding of BMI and changes in business models. All experts agreed that innovation involves bringing novelty to existing practices or models. Expert A emphasized that innovation is used to differentiate from competitors, noting that evolution on the other hand is a continuous process that is not always consciously initiated (see Appendix 26, lines 14-19). Similarly, Expert C associated innovation with obtaining a competitive advantage, viewing it as a means to outperform competitors (see Appendix 27, lines 84-87). Expert B raised a point regarding the pace of innovation in investment banking, which is perceived as relatively slow, leading to confusion between true innovation and smaller incremental changes (see Appendix 27, lines 22-25). A significant contribution to this theme was the introduction of the ’10 Types of Innovation’ framework, which introduces sustainability as a dimension. Sustainability in this context is not seen as environmentally sustainable, but rather in terms of competitiveness and difficulty of replication. Research on this framework suggests that the more sustainable and less replicable an innovation is, the more genuinely innovative it is considered (see Appendix 28, lines 18-44).

Theme 2 – Level of Novelty within BMI: The second theme focuses on the level of novelty within BMI, which is part of the Typology framework introduced by Foss and Saebi (2017). The experts had varied understandings of what constitutes a practice as being novel to the industry. Expert A distinguished between innovations in startups and those in bulge brackets, describing a symbiotic relationship where startups initiate innovations but often lack the scale and resources to fully develop them. In contrast, bulge brackets might be slower to innovate but can effectively adapt or acquire these innovations. The latter might be considered as being novel to the industry, although the idea was already introduced by a startup before (see Appendix 26, lines 44-52 and 126-133). Expert B noted that real disruption or industry-new innovations are quite rare in investment banking, as the innovations are often originating in other sectors like technology or are mainly driven by FinTech’s (see Appendix 27, lines 98-117). Expert C once again introduced the ‘ease of replication’ as an additional crucial dimension for defining the nuances of innovations. While startups may innovate faster, larger firms have the resources to scale these innovations. The ability to scale is often what determines whether a startup’s innovation disrupts an entire industry (see Appendix 28, lines 84-117).

Theme 3 – Scope of BMI: The third theme delves into the scope of BMI, highlighting which components of the business model are most affected. Expert A noted that cost structure is significantly impacted by BMI, along with other components that are influenced by technology, such as revenue streams or product development (see Appendix 26, lines 62-80). Expert B concurred with this perspective, emphasizing that particularly in wealth management the cost structure is mostly affected by BMI (see Appendix 27, lines 73-76). Another significant area of change is in customer relationships and value propositions, with an increase in more personalized and tailored client experiences (see Appendix 27, lines 80-82).

4.3 Identifying Forms of Business Model Innovation

The expert interviews provided significant insights into the nuances of innovation and BMI, thereby contributing valuable dimensions to consider while exploring forms and patterns of BMI. The difficulty in identifying BMI, as elaborated in Chapter 4.3, primarily arose from the absence of a precise definition of the concept of innovation itself and what distinguishes it from adaptation. Since this study does not include a detailed analysis of the external environment, which could have provided in-depth insides about whether a business model change was a response to an external shift, thus qualifying as a BMA, additional expert insights on innovation were crucial. One particularly valuable aspect that emerged from these discussions was the introduction of the '10 Types of Innovation' framework, which provides to be a tool that adds depth to the understanding and identification of innovation. As such, this framework will be introduced and applied for the BMI analysis, complementing the Typology framework by Foss and Saebi (2017). The '10 Types of Innovation' framework, developed by Doblin and now part of Deloitte Digital, is a comprehensive tool that categorizes innovation into ten types across three main categories: Configuration, Offering, and Experience. While the ten types share several similarities with the components of the BMC, they offer a more nuanced understanding of innovation, providing a detailed and distinct perspective on how each aspect contributes to overall business innovation. The first category, Configuration, deals with the inner mechanisms of an enterprise, including the strategy of revenue generation, cooperation to create value, and how talents and assets are organized. The second category, Offering, focuses on innovations in the company’s core products or services, encompassing differentiating product features and functionalities, and product systems. The third category, Experience, centers on enhancing customer interactions through service offerings, channels, and brand representation or reputation. Additionally, the framework suggests, that using multiple layers of innovation in combination can lead to more impactful and sustainable innovation (Deloitte Digital 2023). To identify forms of BMI, a table with a three-step analysis was constructed (see Appendix 29), documenting all changes identified in the evolution analysis. The first step in the analysis was to categorize each respective change as either BMI or BMA. The criterion for categorization is whether the change is new to the firm and voluntary, which would indicate innovation, or solely a response to an external shift, which would indicate adaptation. As no detailed external analysis was conducted, some assumptions were made regarding whether the change constituted a response to the external environment or was voluntary. The second analysis step applied Foss and Saebi’s (2017) framework and examined the two dimensions scope and level of novelty. As a third step, the 10 Types of Innovation framework was introduced, with a focus on which levels of innovation were affected by the respective business model change.

Overall, the study revealed a total of 63 business model changes, with 20 classified as BMA and 43 as BMI. The most prevalent types of BMI, based on the Typology framework, were Evolutionary and Adaptive BMI, each accounting for 15 instances. In contrast, innovations considered as new to the industry were rarer, accounting for 5 instances of Focused BMI and 6 of Complex BMI (see Appendix 29). This pattern suggests that BMI new to a firm is more frequent among bulge bracket investment banks than innovations new to the industry. However, the identification of both scope and level of novelty presented difficulties, particularly in defining what constitutes real innovation or industry novelty. Furthermore, certain business model changes did not neatly align with the scope categories provided by the Typology framework, as they seemed to lay in the middle ground between modular changes, which affect individual parts, and architectural changes, which encompass the entire business model. Incorporating the ‘10 Types of Innovation’ framework into the analysis offered a new perspective on the innovation’s scope and the components affected. Hence, the third analysis step revealed that, on average, the 43 identified cases of BMI spanned across 3.8 layers of the innovation (see Appendix 29). This suggests that while these innovations do not alter the entire business model, they extend beyond merely affecting an individual element. The perspectives shared by Expert A and Expert C during the interviews unveiled an additional aspect that could be crucial in understanding the nuances of BMI and its forms, which they referred to as ‘ease of replication’ or ‘differentiation potential’. Additionally, research on the ’10 Types of Innovation’ framework suggests that the more sustainable and less replicable an innovation is, the more genuinely innovative it is considered. To demonstrate how this dimension and perspective could enrich the analysis of BMI and to underscore the complexity involved in the analysis, two specific BMI examples are examined in greater detail.

Example 1: New Client Service Model at UBS: In 2011, UBS underwent a significant restructuring of its key activities, leading to the introduction of a new client service model, the “UBS house view” (see Appendix 30). This shift notably placed wealth management at the forefront, while positioning investment banking and advisory services as complementary functions. This change not only had implications for UBS’s key activities but also affected their revenue models. It enhanced its value proposition and client experience by improving service quality and more effectively meeting the complex needs of clients. Additionally, it influenced their key partnerships by intensifying collaboration between divisions. Expert’s B interview further revealed that recent innovations in client services have been more intangible, focusing on the methods of client advisement (see Appendix 6, lines 37-39). Categorizing UBS’ innovation regarding the level of novelty within the typology framework proved to be difficult, as the nuances of the meaning of novelty are not clearly established, and analyzing the uniqueness of this model among competitors presents a challenge. However, analyzing this change through the lens of the '10 Types of Innovation' framework, one can identify seven types: profit, networks, structure, process, product performance, product system, and service. The integration of multiple innovation layers in this model suggests a more sustainable form of innovation. Considering Expert C's insights, the level of novelty here could be considered high due to its sustainability. Although a focus on client-centric approaches might not be new to the industry, the complexity could imply a difficulty to replicate. Hence, it could make the specific model that UBS established innovative for the industry, as it has differentiated them within the market. Regarding scope, within Foss and Saebi's (2017) Typology framework, one could categorize UBS' innovation more towards an architectural type of BMI, as it affects several components.

Example 2: Expansion of Goldman Sachs Key Activities: In 2019, Goldman Sachs ventured into consumer banking, marking a significant expansion of its key activities. From the perspective of the Business Model Canvas, this move influenced several components: key activities, revenue streams, cost structure, customer segments, value proposition, channels, and customer relationships. Regarding the level of novelty, the categorization of this innovation within Foss and Saebi's framework is clearer. Within the broader industry context, consumer banking is not an innovative change within the business model of an investment bank, as firms like UBS and J.P. Morgan already serve this segment. Though it represents a new venture for Goldman Sachs and affects multiple, almost all, business model components, it aligns with adaptive BMI as per the typology framework of Foss and Saebi. When examined through the '10 Types of Innovation' framework, this shift encompasses several layers of innovation. However, it does not represent a novel industry-wide innovation as in the example before.

4.4 Key Findings

The research, incorporating both expert interviews and secondary data analysis, has highlighted the multifaced and complex nature of BMI. Adopting an exploratory approach was instrumental in allowing new perspectives and frameworks to emerge, enriching the depth of the analysis. Overall, the analysis of BME showed that the BM components such as customer segments or value proposition were rather stable over the analysis period. In contrast, revenue streams, cost structure, and customer relationships noted more significant changes. This pattern was also acknowledged by Experts A and B during the interviews. Besides industry insights, the expert discussions yielded the introduction of new dimensions for analyzing BMI and the '10 Types of Innovation' framework, which were crucial components in enhancing the analysis. Especially as navigating the identification of BMI forms presented challenges, particularly in categorizing innovations within the two-dimensional framework proposed by Foss and Saebi (2017), the insights from the interviews proved to be valuable. The exploration then identified 63 business model changes, with 43 of them being categorized as BMI. A notable pattern that emerged is that BMI new to a firm was more prevalent than innovations new to the industry. Throughout the analysis, it became evident that some forms of BMI would rather fit in between the dimensions outlined by Foss and Saebi. Hence, two forms of BMI were examined in more detail: 1) UBS's restructuring to a client-centric service model, exemplifying a comprehensive and sustainable form of BMI that redefines multiple business components, and 2) Goldman Sachs' expansion into consumer banking, representing adaptive BMI as it introduces a new business segment while aligning with existing industry practices. These two examples illustrate the varied nature of BMI, ranging from holistic model changes, to focused, novel innovations.

5. Discussion

5.1 Interpretation of Key Findings

The primary goal of this research was to bring clarity to the nuances of business model change as well as the conceptualization of BMI. To accomplish this objective, the research question was addressed by applying relevant concepts and frameworks to the context of investment banking. A key insight from the analysis is the complexity of categorizing innovations, particularly regarding their level of novelty. The Typology framework by Foss and Saebi (2017), while useful as a starting point, did not comprehensively capture the diverse forms and nuances of innovation present in service-based industries such as investment banking. This gap was significantly bridged by incorporating the '10 Types of Innovation' framework, which brought enhanced clarity to the levels of innovation, revealing aspects not explicitly outlined in the initial typologies' framework. Throughout the analysis, it became apparent that some instances of BMI do not neatly fit into the dimensions proposed by Foss and Saebi (2017). This observation suggests that incorporating analytical frameworks from other domains, such as innovation studies, can significantly enhance the understanding of BMI. By doing so, additional clarity can be brought to the concept of BMI, particularly in understanding its full scope and implications. Furthermore, this analysis has uncovered potential new dimensions that could be considered in the identification of BMI forms. In addition to scope and level of novelty, factors such as sustainability and ease of replication could provide valuable insights. Incorporating these aspects could offer a more comprehensive perspective on how businesses innovate and compete. Additionally, Expert A brought up the dynamics between startups and bulge bracket firms, where innovation takes a distinctive form depending on the size of the company and its resources. This opens up another area of research that could significantly enhance the understanding of BMI.

The research addressed the evolution of business models, uncovering that certain components are more prone to change, while others remain stable. It also revealed that within investment banking BMI is more frequent when innovations are new to the firm rather than to the industry.

However, the analysis also emphasizes the complexity of BMI, the value of incorporating diverse research frameworks, and the need for a detailed analysis to fully understand its nuances.

5.2 Limitations and Suggestions for Future Research

This research, while offering crucial insights into the dynamics and conceptualization of BMI, encountered certain limitations that must be acknowledged. The scope of the analysis was confined to investment banking, which, although providing depth, might limit the breadth and applicability of the findings across different industries. This industry-specific focus potentially restricts the generalizability of the conclusions drawn about the nature and dynamics of BMI. This also applies to the patterns that were observed in the analysis, which might be specific to the industry. Another notable limitation is the study's focus on bulge bracket banks, thereby excluding startups and fintech companies, often known for innovative practices. Another aspect that was not extensively explored in this study is the external environment's impact on business model changes. The absence of a detailed external analysis meant that some categorizations and interpretations were based on assumptions rather than on a complete understanding of the external influences. A more thorough examination, encompassing a wider array of competitors, could offer a finer understanding of the level of novelty in business models and provide a clearer distinction between BMI and BMA.

In light of these limitations, several suggestions for future research emerge. Firstly, expanding the application of the frameworks and concepts used in this study to other industries could offer a richer, more diverse understanding of BMI. Such an extension would enable a cross-industry comparison, potentially revealing new BMI patterns. Secondly, future research should consider examining the dynamics between startups and established bulge bracket firms. This inclusion could unveil the unique contributions of smaller firms to innovation in the financial sector, as emphasized by Expert A. Additionally, integrating a detailed external environment analysis in future studies would enhance the precision of categorizations and deepen the understanding of the dynamics between BMI and BMA. Lastly, exploring additional dimensions and frameworks from other research areas, such as innovation or competitive advantage, could further enrich the understanding of BMI. A multi-disciplinary approach, integrating diverse theoretical perspectives, could capture the complexities of BMI more comprehensively. Addressing these limitations and exploring these suggested areas in future research could significantly advance the understanding of BMI, providing valuable insights for both academic research and practical application across various industries.

6. Conclusion

This research aimed to explore the complexities of business model change and identify forms of BMI, by applying existing concepts and frameworks to the investment banking industry. The study's comprehensive literature review and empirical analysis illuminated that certain business model components are more prone to evolution, while others remain relatively stable. It was revealed that in the realm of investment banking, BMI is more commonly observed when innovations are unique to the firm rather than new to the industry at large. By employing an exploratory approach and incorporating insights from industry experts, this study provided a richer understanding of the nuances and conceptualization of BMI, as well as the complexity and thereby necessity of integrating perspectives from different research streams to enhance clarity and understanding. This research has illuminated new dimensions, such as sustainability and ease of replication, which could significantly enhance the understanding of Business Model Innovation (BMI), especially given the gaps and limitations revealed in the current state of research regarding the level of novelty and scope. Overall, the findings not only effectively address the central research question but also contribute to the ongoing academic discourse, offering a solid foundation for future exploration in this dynamic area.

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8. List of Appendices

Appendix 1 – BMC: Detailed Description of Components

Customer segments represent the target group a firm intends to reach, which can range from one to multiple segments. The value proposition stands for the different services and products a company offers to generate value for the defined customer segment and can be seen as an array of benefits a company provides. Hence, the value proposition resolves consumers' issues or fulfills consumers' needs. These values can be quantitative, such as selling prices or quality of service, or qualitative, including aspects such as customer experience or design. The building block channels represents all touchpoints an organization uses to reach and address its target group, while customer relationships show what kind of relationships the firm has established with its customer segments. With key resources the canvas represents the main assets the firm needs to maintain its business model. Key partnerships display the main suppliers and collaborators that enable the business model to function. Lastly, the cost structure shows all costs caused by operating the business model (Osterwalder and Pigneur 2010, 16ff.).

Appendix 2 – Competitor Overview and Sample Selection

USD

Investment Bank	Category	Market Cap (in million)	Revenue LY (in million)	% Revenue Growth (latest year compared to prior period)	P/E (as of 16.11.23)	Net Debt (latest year) (in million)
JPMORGAN CHASE & CO	Bulge Bracket	432,900	154,792	21.69	8.79	-378062.00
BANK OF AMERICA CORP	Bulge Bracket	234,405	115,053	22.59	8.02	91530.00
WELLS FARGO & CO	Bulge Bracket	155,579	82,859	0.55	9.32	3287.00
HSBC HOLDINGS PLC	Bulge Bracket	147,179	77,938	23.83	5.44	-322500.00
MORGAN STANLEY	Bulge Bracket	130,780	65,936	7.88	13.33	70225.00
GOLDMAN SACHS GROUP INC	Bulge Bracket	113,995	68,711	5.73	15.77	-54119.00
TORONTO-DOMINION BANK	Bulge Bracket	110,092	48,730	30.26	9.90	-70388.59
MITSUBISHI UFJ FINANCIAL GRO	Bulge Bracket	106,003	55,930	32.91	8.40	-169191.07
UBS GROUP AG-REG	Bulge Bracket	87,817	41,933	3.52	2.53	-43698.00
CITIGROUP INC	Bulge Bracket	85,895	101,078	26.56	8.79	-3255.00
BNP PARIBAS	Bulge Bracket	70,273	47,850	-22.63	8.86	129440.29
BANK OF MONTREAL	Bulge Bracket	58,367	34,752	37.54	10.77	-39080.58
ANZ GROUP HOLDINGS LTD	Bulge Bracket	47,101	35,671	91.39	10.21	19598.03
MACQUARIE GROUP LTD	Bulge Bracket	42,095	18,841	42.02	15.01	30761.81
CREDIT AGRICOLE SA	Bulge Bracket	38,636	51,126	16.61	5.76	42736.89
DNB BANK ASA	Bulge Bracket	28,744	10,446	48.71	8.00	64208.87
BANCO BTG PACTUAL SA-UNIT	Bulge Bracket	26,931	15,721	125.16	11.73	17401.20
BARCLAYS PLC	Bulge Bracket	25,944	45,150	33.70	3.98	-57224.75
SKANDINAVISKA ENSKILDA BAN-A	Bulge Bracket	25,105	9,201	41.43	7.00	24711.33
CSC FINANCIAL CO LTD-H	Bulge Bracket	24,719	5,392	-7.74	10.91	18883.34
DEUTSCHE BANK AG-REGISTERED	Bulge Bracket	24,144	42,585	20.39	4.61	-40168.39
NATIONAL BANK OF CANADA	Bulge Bracket	22,345	10,821	25.11	9.71	-744.19
STANDARD BANK GROUP LTD	Bulge Bracket	17,929	9,541	-2.71	8.13	-657.55

USD

Investment Bank	Net Income (current year) (Bloomberg estimate)	Net Income 12 month forecast (Bloomberg estimate)	ESG Bloomberg Score	ESG Bloomberg Score Percentile	S&P ESG Score	P/B (as of 16.11.23)	Total assets (latest year) (in million)	1 year default probability (Bloomberg estimate)
JPMORGAN CHASE & CO	49492.63	45162.47	4.45	66.70	73.00	1.50	3665743.00	0.00
BANK OF AMERICA CORP	27894.74	26066.77	5.51	95.20	90.00	0.90	3051375.00	0.00
WELLS FARGO & CO	19222.35	18126.47	4.70	95.50	71.00	0.96	1881016.00	0.00
HSBC HOLDINGS PLC	25677.04	25010.80	4.08	42.90	90.00	0.88	2949286.00	0.00
MORGAN STANLEY	9284.57	10552.95	5.10	100.00	84.00	1.44	1180231.00	0.00
GOLDMAN SACHS GROUP INC	8353.41	11285.77	5.08	98.70	80.00	1.03	1441799.00	0.00
TORONTO-DOMINION BANK	10708.04	10497.80	3.60	9.50	96.00	1.51	1405915.39	0.00
MITSUBISHI UFJ FINANCIAL GRO	9141.58	9261.58	3.93	38.10	89.00	0.82	2913304.79	0.00
UBS GROUP AG-REG	5551.46	5186.47	4.87	95.30	99.00	0.97	1104364.00	0.00
CITIGROUP INC	11941.43	11185.76	4.10	50.00	81.00	0.45	2416676.00	0.00
BNP PARIBAS	10481.43	11291.04	4.20	57.10	98.00	0.59	2853140.48	0.00
BANK OF MONTREAL	6122.02	6517.30	3.74	23.80	96.00	1.18	835251.12	0.00
ANZ GROUP HOLDINGS LTD	4147.91	4153.93	4.61	94.90	98.00	1.04	712129.84	0.00
MACQUARIE GROUP LTD	2390.00	2678.18	3.73	19.00	89.00	1.89	259835.45	0.00
CREDIT AGRICOLE SA	5913.88	5960.46	3.16	4.80	83.00	0.59	2295688.63	0.00
DNB BANK ASA	3433.62	3293.83	5.68	99.40	87.00	1.28	329411.55	0.00
BANCO BTG PACTUAL SA-UNIT	2078.91	2401.93	2.09	42.70	90.00	2.74	85230.20	0.00
BARCLAYS PLC	5937.18	5928.39	4.52	76.20	93.00	0.37	1831273.05	0.00
SKANDINAVISKA ENSKILDA BAN-A	3564.21	3156.71	4.03	89.90	82.00	1.18	339204.31	0.00
CSC FINANCIAL CO LTD-H	1266.28	1517.15	2.22	48.70	90.00	0.79	73812.95	0.00
DEUTSCHE BANK AG-REGISTERED	4553.12	4768.98	4.68	81.00	96.00	0.35	1431833.63	0.00
NATIONAL BANK OF CANADA	2328.60	2378.42	4.87	96.20	91.00	1.54	296018.77	0.00
STANDARD BANK GROUP LTD	2248.62	2421.38	3.91	89.00	91.00	1.40	169164.68	0.00

Appendix 3 – Detailed Description of Baseline BM's (2000)

The initial business models from 2000 of the selected investment banks will serve as the baseline for the business model evolution analysis. However, as JPMorgan Chase & Co.'s public documents only date back to 2003, their baseline business model will refer to this time point. There are some foundational aspects that firms within the investment banking industry have in common. In general, human capital plays a significant role in this service-driven market, with firms competing for the most skilled talents. Hence, compensation, as part of the cost structure within the business model canvas, is the main cost driver for investment banks (Hume 2009). This can also be seen in the baseline business models of Goldman Sachs, UBS, and JPMorgan Chase & Co., as compensation accounted for the biggest cost driver in each of their business models (see Appendix 4, Appendix 11, Appendix 18 double check). Revenue streams within investment banking mainly consist of interest income or fees, with smaller differences depending on their key activities. Goldman Sachs's key activities were split into two main segments: Capital Markets and Asset Management and Securities Services. The former included investment banking, trading, and principal investments in areas like fixed income and equities. Trading, with revenues of $6,627 million, and investment banking, with $5,371 million in revenues, were their biggest revenue sources. This was represented in Goldman Sachs's strong positioning as an expert in mergers and acquisitions (M&A), serving large institutions and corporations as their key customer segment (see Appendix 4). UBS's business model, on the other hand, was more focused on wealth management and private banking. Notably, in contrast to Goldman Sachs, they also had a retail banking division for individual and corporate clients in Switzerland (see Appendix 11). JPMorgan Chase & Co.'s business model structured its key activities around four major business segments: Investment Bank, Treasury & Securities Services, Investment Management & Private Banking, JPMorgan Partners, and Retail & Middle Market Financial Services (see Appendix 18). Key resources of all three investment banks were similar and included global presence, a highly skilled workforce, substantial financial and intellectual capital, as well as their brand reputation. They also showed similarities within their value propositions, as each of them put high emphasis on high levels of service quality, a client-centric approach, and innovative solutions(see Appendix 4-18). Notably, UBS additionally embraced a strong commitment to sustainability (see Appendix 11). Moreover, customer relationships also showed significant similarities in each of their business models, as all three prioritize long-term personal engagements built on trust as the key value (see Appendix 4-18).

Appendix 4 – Business Model Canvas: Goldman Sachs (2000)

Key Activities
- Two core businesses: Global Capital Markets (Investment Banking and Trading and Principal Investments) and Asset Management and Securities Services
- Investment Banking consist of financial advisory and underwriting
- Trading & Principal Investments consists of Fixed Income, Currency & Commodities; Equities; and Principal Investments
- Asset Management and Securities Services can be divided into Asset Management, Securities Services and Commissions (The Goldman Sachs Group, Inc. , 2001, 4)
- Investment Banking: Lead in M&A, underwriting of IPOs & common stock offerings (advised one of the largest deals of the era: Vodafone’s acquisition of Mannesmann) (The Goldman Sachs Group, Inc. , 2001, 2ff.)

Key Partners
- No specific information available

Key Resources
- Strong financial positions: transitioned to a public company to ensure a stable capital foundation to serve their clients' needs
- Highly liquid balance sheet (The Goldman Sachs Group, Inc., 2001, 37)
- Expert Financial Workforce: Highly skilled professionals and focus on attracting & retaining the best talent
- Brand Reputation: Goldman Sachs' brand as a top-tier investment bank
- Total assets of $289,760 million in 2000 (The Goldman Sachs Group, Inc. , 2001, 2ff.)

Value Propositions
- Reputation for excellence
- M&A Expertise: Recognized leadership & number one advisor in merger transactions globally (supervised $1.3 trillion transactions, 7 out of 10 of the largest worldwide)
- High standard of client service: Offered tailored and customized solutions for complex problems
- Commitment to innovation: entrepreneurship & intellectual curiosity as key capabilities; innovation across all products, operations and services (The Goldman Sachs Group, Inc., 2001, 2)

Customer Relationships
- Client-centric approach through personalized client services (The Goldman Sachs Group, Inc., 2001, 2)
- Relationships built on a high level of trust: mutual commitment over time, trust in competencies of Goldman and the high quality of services and advice as well as innovative approaches (The Goldman Sachs Group, Inc., 2001, 6)

Channels
- Global Offices: Strong physical presence worldwide
- Expanded digital distribution through the creation of several pioneering and industry-first solutions: digital bond issuance, electronic bond marketplace, electronic offering for municipal bonds (The Goldman Sachs Group, Inc., 2001, 15)

Customer Segments
- The “most important and influential corporations, institutions and individuals worldwide” (The Goldman Sachs Group, Inc., 2001, 2)
- Financial institutions as another client segment
- Corporate Clients: Catering to large corporations for M&A, underwriting services, and other financial advisories
- Institutional Investors: Serving pension funds, insurance companies, and other large financial institutions
- High-Net-Worth Individuals: Offering private banking and wealth management services
- Industry leadership position in several key growth industries: telecommunications, financial services, technology, healthcare and energy (The Goldman Sachs Group, Inc., 2001, 4ff.)

Cost Structure
- Compensation and Benefits account for the highest cost driver with $7,773 million in 2000 from $11,570 million total operating expenses; at that time Goldman had 22,627 employees
- The next biggest cost drivers in 2000 in million were: professional services and other ($639); brokerage, clearing and exchange fees ($573); market development ($506); depreciation and amortization ($486); and communications and technology ($435) (The Goldman Sachs Group, Inc., 2001, 34)

Revenue Streams
- Total revenues: $33,000 million in 2000
- Revenues from Global Capital Markets division: $11,998 million in 2000
- Trading, under Global Capital Markets, as the most profitable business with net revenues of $6,627 million in 2000, Investment Banking net revenues were $5,371 million in 2000
- While Investment Banking revenues increased by 23% compared to 1999, Trading revenues increased by 15%
- Revenues from Asset Management and Securities Services: $4,592 million in 2000 (The Goldman Sachs Group, Inc., 2001, 30)

Appendix 5 – Business Model Canvas: Goldman Sachs (2005)

Key Activities
- Restructured their key activities into three segments: Investment Banking, Trading and Principal Investments, Asset Management and Securities Services
- Investment Banking activities slightly shifted due to consumer preferences: key to investment banking is still to provide judgment on pricing of securities, however, clients increasingly asked for advice in the “design, origination, pricing and use of securities”, leading to increased service offerings
- Clients increasingly sought integrated solutions that merge both capital commitment and advisory services, expecting investment banks to leverage more of their own financial resources to execute transactions
- Consequently, investment banks allocated own capital to provide client credits, thereby taking on market risks on their behalf or to engage in joint investments (The Goldman Sachs Group, Inc., 2006, 4ff.)
- Established the Urban Investment Group for innovative impact investments and an Environmental Policy Framework (The Goldman Sachs Group, Inc., 2006, 5)

Key Partners
- Due to shifting customer preferences Goldman Sachs, and investment banks in general, started to act as co-investors in some cases (The Goldman Sachs Group, Inc., 2006, 2)

Key Resources
- Brand Reputation, workforce and its knowledge and skills remain to be the key resources of Goldman Sachs
- Global scale mentioned as an additional key resources (The Goldman Sachs Group, Inc., 2006, 3ff.)
- Total assets of $706,804 million in 2005 (The Goldman Sachs Group, Inc., 2006, 2ff.)

Value Propositions
- Core focus of its value propositions remains to be “a dedication to our clients, a determination to attract and develop talent with unsurpassed market expertise and a commitment to our culture of excellence, teamwork and integrity” (The Goldman Sachs Group, Inc., 2006, 2)
- Increased emphasis on creative and comprehensive solutions for complex problems for their clients
- Integrated solutions of both advice and capital: Goldman Sachs positioned itself as an “advisor, financier, co-investor and financial intermediary of choice” combined with its “strong business judgment, grounded in integrity” (The Goldman Sachs Group, Inc., 2006, 5)
- Culture as the most important competitive advantage (The Goldman Sachs Group, Inc., 2006, 16)

Customer Relationships
- Investment banking as the main first point of contact for customers
- Client trust remains key component of their customer relationship
- Relationships built on a high level of trust: mutual commitment over time, trust in competencies of Goldman Sachs and the high quality of services and advice as well as innovative approaches (The Goldman Sachs Group, Inc., 2006, 6)

Channels
- Increased demand for tools such as online trading platforms or trading on algorithm, which have been brought to the Asian market (The Goldman Sachs Group, Inc., 2006, 14)

Customer Segments
- Corporate clients, institutional investors, high-net-worth individuals remain key customer segments
- Due to the rise of private equity and hedge funds, Goldman Sachs was able to provide its services to many of the world’s largest hedge funds (The Goldman Sachs Group, Inc., 2006, 6f.)

Cost Structure
- Compensation and Benefits account for the highest cost driver with $11,688 million in 2005 from $16,509 million total operating expenses; at that time Goldman had 22,425 employees
- The next biggest cost drivers in 2005 in million were: brokerage, clearing and exchange fees ($1,109); other expenses ($1,016); occupancy ($728); depreciation and amortization ($501); communications and technology ($490) (The Goldman Sachs Group, Inc., 2006, 2)

Revenue Streams
- Total revenues: $24,782 million in 2005; CAGR of 11% since 1999
- Highest driver of revenues is Trading and Principal division, with net revenues of $16,362 million, followed by Asset Management and Securities Services ($ 4,749 million) and Investment Banking ($3,671 million) (The Goldman Sachs Group, Inc., 2006, 2)

Appendix 6 – Business Model Canvas: Goldman Sachs (2009)

Key Activities
- No significant changes

Key Partners
- Increased partnership with governments after financial crisis, for instance investment of the U.S. government of $10 billion, which was paid as Goldman Sachs participated in the U.S. Treasury's TARP Capital Purchase Program, was paid back to the government in 2009 (The Goldman Sachs Group, Inc., 2010, 4)

Key Resources
- Total assets of $848,942 million in 2009 (The Goldman Sachs Group, Inc., 2010, 2)
- Were able to allocate capital during a period where market liquidity was limited and capital was scarce (The Goldman Sachs Group, Inc., 2010, 2)

Value Propositions
- Emphasis on its conservative financial profile with liquidity and managing risk as the key success factors
- Core focus of its value propositions remains to be client-centric approach (The Goldman Sachs Group, Inc., 2010, 3)

Customer Relationships
- Advisory business as first point of contact with clients, often leading to follow-up opportunities in other services of Goldman Sachs
- Client trust remains key component of their customer relationship (The Goldman Sachs Group, Inc., 2010, 3)

Channels
- No significant changes

Customer Segments
- Corporate clients, institutional investors, high-net-worth individuals remain key customer segments (The Goldman Sachs Group, Inc., 2010, 3)

Cost Structure
- Compensation and Benefits account for the highest cost driver with $16,193 million in 2009 from $25,344 million total operating expenses; at that time Goldman had 32,500 employees
- The next biggest cost drivers in 2005 in million were: other expenses ($2,440); brokerage, clearing and exchange fees ($2,298); depreciation and amortization ($1,734); occupancy ($950); communications and technology ($709)
- Main cost drivers, which are compensation, headcount, and levels of business activity, are similar for all three business divisions (The Goldman Sachs Group, Inc., 2010, 53ff.)

Revenue Streams
- Total revenues: $45,173 million in 2009, more than 50% increase compared to 2008, reflected in the significantly increased revenues from the Trading and Principal Investments division ($34,373 million in 2009, $9,063 million in 2008)
- Asset Management and Securities Services had net revenues of $6,003 million and Investment Banking of $4,797 million in 2009 (The Goldman Sachs Group, Inc., 2010, 53f.)

Appendix 7 – Business Model Canvas: Goldman Sachs (2011)

Key Activities
- Key activities in itself remained the same, however, there was a tendency of services increasingly being merged due to more complex clients' needs (for instance, the partnership between Investment Banking and Institutional Client Services to combine advisory and risk management)
- Key activities were now structured in four business segments: Investment Banking, Institutional Client Services, Investing & Lending, Investment Management
- Compared to 2009, Investment Banking remains a category for itself, while Trading & Principal Investments seems to be divided into Institutional Client Services for the trading aspects and Investing & Lending for the principal investments (The Goldman Sachs Group, Inc., 2012, 4ff)

Key Partners
- No significant changes

Key Resources
- Mentioned within their Business Principals that people, capital, and reputation are the key assets of Goldman
- Another key resource was their size and scale (The Goldman Sachs Group, Inc., 2012, 2)
- Total assets of $923,225 million in 2011 (The Goldman Sachs Group, Inc., 2012, 28)

Value Propositions
- Established the Goldman Sachs Business Principles, which underpin the value proposition that was already set up in its original business model from 2000: "We take great pride in the professional quality of our work. We stress creativity and imagination in everything we do. Integrity and honesty are at the heart of our business. We constantly strive to anticipate the rapidly changing needs of our clients and to develop new services to meet those needs." (The Goldman Sachs Group, Inc., 2012, 2)

Customer Relationships
- 2010 was a year marked by strong criticism towards Goldman Sachs from the broader public
- Despite their global scale, they aimed to establish and retain loyal and personal relationships with their clients (The Goldman Sachs Group, Inc., 2012, 2)

Channels

Customer Segments
- Corporate clients, institutional investors, high-net-worth individuals remain key customer segments
- Consumer goods as an important customer segment, as Goldman Sachs supervised Prada with the largest IPO to date (2011) of a global luxury brand
- Increased "local" expertise in response to client demand and expanded workforce into countries such as Brazil, Russia, India, China and Korea (The Goldman Sachs Group, Inc., 2012, 5ff.)
- Further intensified customer base in Asia, as revenues from business activities doubled since 2002 (The Goldman Sachs Group, Inc., 2012, 2ff.)

Cost Structure
- Emphasize that they make an unusual effort to attract and retain the best talent (The Goldman Sachs Group, Inc., 2012, 2)
- Besides compensation, costs of adjusting to new regulatory restrictions are significant and have increased significantly since the financial crisis (The Goldman Sachs Group, Inc., 2012, 3)
- Compensation and Benefits account for the highest cost driver with $12,223 million in 2011 (lower than in 2009); from $22,642 million total operating expenses (lower than in 2009); at that time Goldman had 33,300 employees
- Other cost drivers remained similar compared to 2009 (The Goldman Sachs Group, Inc., 2012, 100)

Revenue Streams
- Total revenues: $28.81 billion in 2011, with net earnings of $4.44 billion and a ROE of 3.7%
- Investment Banking revenues were $4,355 million; Institutional Client Services revenues were $17,280 million; Investing & Lending revenues were $2,142 million; Investment Management revenues were $5,034 million
- Revenues from business activities in Asia have doubled since 2002 (The Goldman Sachs Group, Inc., 2012, 2ff.)

Appendix 8 – Business Model Canvas: Goldman Sachs (2015)

Key Activities
- Business mix became more balanced: significant growth in Investment Banking and Investment Management business activities, whereas Investment Banking in 2011 was only half the size of their FICC business (Fixed Income, Currency and Commodities Client Execution)
- Increase in Investment Banking activities largely stem from an increased M&A activity on the market
- To accommodate those changes, Goldman Sachs has reduced risk-weighted assets within FICC Urban Investment Group allocated up to $4.9 billion to social communities in need (The Goldman Sachs Group, Inc., 2016, 3ff.)

Key Partners
- No significant changes

Key Resources
- Total assets of $861,395 million in 2015 (The Goldman Sachs Group, Inc., 2016, 70)
- Increased focus on technology, up to one quarter of the total workforce is staffed in technology roles (The Goldman Sachs Group, Inc., 2016, 6)

Value Propositions
- Business Principles, which partly showed their value proposition, remained the same
- Continued to be leader in M&A rankings, setting a record in the gap to the nearest competitor
- Goldman Sachs continues to hold a top-tier position in both FICC and Equities as one of the few financial entities
- Increasingly improving quality of service and customer experience through technology implementation, such as data analytics or improved speed (The Goldman Sachs Group, Inc., 2016, 2ff.)

Customer Relationships
- No significant changes

Channels
- New platforms developed by Goldman Sachs for their clients such as Tradeweb, DirectEdge, Markit, Symphony, or Marquee (The Goldman Sachs Group, Inc., 2016, 6)

Customer Segments
- No significant changes

Cost Structure
- Although headcount increased, Goldman Sachs was able to offset additional costs through employing more juniors and the relocation to cheaper workplaces
- Implementation and focus on technology additionally helped to reduce costs, for instance the use of cloud technology led to decreasing costs in vendor expenses (The Goldman Sachs Group, Inc., 2016, 6)
- Compensation and Benefits account for the highest cost driver with $12,678 million in 2015 (similar to 2011); from $25,042 million total operating expenses; at that time Goldman had 36,800 employees (The Goldman Sachs Group, Inc., 2016, 58f.)

Revenue Streams
- Total revenues: $33.82 billion in 2015, with net earnings of $6.08 billion and a ROE of 7.4%
- Investment Banking revenues were $7,027 million; Investment Management revenues were $5,868 million
- Revenues from commissions and fees were $3,320 million (belonging to Institutional Client Services and Investment Management); market making revenues were $9,523 million (belonging to Institutional Client Services); other principal transactions revenues were $5,018 million (belonging to Investing & Lending) (The Goldman Sachs Group, Inc., 2016, 58)

Appendix 9 – Business Model Canvas: Goldman Sachs (2019)

Key Activities

- Remained position as global leader in M&A, equity and common stock offerings (The Goldman Sachs Group, Inc., 2020, 2)
- Refocusing its operational priorities by implementing a strategic planning process that spans multiple years, emphasising to foster long-term investments for the future (The Goldman Sachs Group, Inc., 2020, 6)
- Established a 10-year sustainability target, aiming to generate $750 billion through financing, investing within the area of climate transition and inclusive economic growth (The Goldman Sachs Group, Inc., 2020, 9)

Key Partners

- No significant changes

Key Resources

- Total assets of $992,968 million in 2019 (The Goldman Sachs Group, Inc., 2020, 55)

Value Propositions

- First time that Goldman Sachs described in detail their value proposition and strengths in their annual report
- Purpose statement: "We advance sustainable economic growth and financial opportunity" (The Goldman Sachs Group, Inc., 2020, 3)
- Positioning statement: "Drawing on over 150 years of experience working with the world's leading businesses, entrepreneurs and institutions, we mobilize our people, culture, technologies and ideas to advance the success of our clients, broaden individual prosperity and accelerate economic progress for all" (The Goldman Sachs Group, Inc., 2020, 3)
- Refined their business principals into core values: Partnership, Client Service, Integrity, Excellence Their core competitive advantages: talented workforce; commitment to innovation, which is fostered by their people; global scale and presence; risk management capabilities (The Goldman Sachs Group, Inc., 2020, 3)

Customer Relationships

- One Goldman Sachs initiative intended to simplify client touchpoints and to deliver capabilities to up to 30 top-tier client relationships (The Goldman Sachs Group, Inc., 2020, 4)

Channels

- One Goldman Sachs initiative as a new touchpoint
- Strategic expansion to consumer banking with a digital banking platform (The Goldman Sachs Group, Inc., 2020, 4)

Customer Segments

- Cover mainly public companies which have a company valuation over $10 billion (cover 95% of those companies in America and EMEA) and companies with a valuation between $2 and $10 billion (cover 80% of those in America and EMEA)
- Strategic goal of Goldman Sachs is to expand their customer segments to firms with a valuation between $500 million and $2 billion, of whose they only cover 40% up to date (2019) (The Goldman Sachs Group, Inc., 2020, 6)
- Strategic expansion to consumer banking with the expectation to gain millions of new customers (The Goldman Sachs Group, Inc., 2020, 8)

Cost Structure

- Compensation and Benefits account for the highest cost driver with $12,353 million in 2015 (similar to 2015); from $24,898 million total operating expenses; at that time Goldman had 38,300 employees (The Goldman Sachs Group, Inc., 2020, 53.)

Revenue Streams

- Total revenues: $36,546 million in 2019, with net earnings of $8,466 million and a ROE of 10%
- Investment Banking revenues were $6,798 million; Investment Management revenues were $6,189 million
- Revenues from commissions and fees were $2,988 million (belonging to Institutional Client Services and Investment Management); market making revenues were $10,157 million (belonging to Institutional Client Services); other principal transactions revenues were $6,052 million (belonging to Investing & Lending) (The Goldman Sachs Group, Inc., 2020, 51)

Appendix 10 – Business Model Canvas: Goldman Sachs (2022)

Key Activities
- Restructured its key activities into three segments: Global Banking & Markets; Asset & Wealth Management; and Platform Solutions, which includes Transaction banking and consumer platforms (The Goldman Sachs Group, Inc., 2023, 5)
- Achieved up to 55% of the $750 billion sustainability target (The Goldman Sachs Group, Inc., 2023, 12)
- Consumer platforms as a new business segment that offers credit cards and credits for consumers (The Goldman Sachs Group, Inc., 2023, 27)

Key Partners
- No significant changes

Key Resources
- Total assets of $1,169,539 million in 2022 (The Goldman Sachs Group, Inc., 2023, 68)

Value Propositions
- Refined purpose: "We aspire to be the world's most exceptional financial institution, united by our core values of partnership, client service, integrity and excellence" (The Goldman Sachs Group, Inc., 2023, 3)

Customer Relationships
- One Goldman Sachs established itself as a crucial part of Goldman Sachs business, strengthening their client relationships (started as a pilot in 2019) (The Goldman Sachs Group, Inc., 2023, 5)

Channels
- Key strategic offices, intended to build centers of excellence: Bengaluru, Salt Lake City, Dallas, Singapore, Warsaw, Hyderabad
- Offices span over 35 countries worldwide with 52% of the employees based in America (The Goldman Sachs Group, Inc., 2023, 5)

Customer Segments
- Platform Solutions, as a new established business segment and aiming to expand to a new customer segment, represents Goldman Sachs consumer strategy, which was significantly narrowed down within 2022
- As for the status of 2022, this business segment consisted of smaller emerging businesses with the goal to make them profitable (The Goldman Sachs Group, Inc., 2023, 6)

Cost Structure
- Total operating expenses were 31.2 billion (2% decrease from 2021)
- Compensation and Benefits account for the highest cost driver with $15,148 million in 2022 (15% decrease from 2021, despite 10% increase in employees); global headcount was 38,300 (The Goldman Sachs Group, Inc., 2023, 8)
- Strategic investments into technologies and acquisitions (The Goldman Sachs Group, Inc., 2023, 3)
- Increase in non-compensation expenses due to investments in acquisitions and technology (The Goldman Sachs Group, Inc., 2023, 8)

Revenue Streams
- New revenue stream through Consumer Platform segment, which generates revenues through net interest income and financing activities (The Goldman Sachs Group, Inc., 2023, 27)
- Total revenues: $47.4 billion in 2022, with net earnings of $11.3 billion and a ROE of 10.2%
- Global Banking & Markets revenues were $32,487 million; Asset & Wealth Management revenues were $13,376 million; Platform Solutions revenues were $1,502 million (The Goldman Sachs Group, Inc., 2023, 68f.)

Appendix 11 – Business Model Canvas: UBS (2000)

Key Activities
- Leader in private banking services and asset management and among the top-tier investment banks globally
- Corporate and retail banking leader in Switzerland (UBS AG, 2001, 2)
- Four business groups: UBS Switzerland (private banking & wealth management globally & banking for private & corporate clients locally); UBS Asset Management (leading asset manager and fund provider for institutions and retail consumers); UBS Warburg (operates globally; investment banking, wealth management and securities for global clients); Corporate Center (manages all three business groups) (UBS AG, 2001, 3)
- UBS Warburg was newly introduced as a brand in 2000 (UBS AG, 2001, 6)
- UBS Warburg included: Corporate & Institutional Clients (investment banking & securities); UBS Capital (private equity & third-party funds); UBS PaineWebber (private clients in US, prior acquisition of PaineWebber); International Private Clients (private banking for clients outside US and Switzerland) (UBS AG, 2001b, 25ff.)
- UBS Life was newly introduced as an insurance company (UBS, 2000, 24)
- Established environmental policy & report (UBS AG, 2001b, 44)

Key Partners
- Group Governance Committee as UBS internal intermediate between governments, central banks and regulators to comply with regulatory and policies (UBS AG, 2001b, 86)

Key Resources
- Combination of financial strength and its reputation for a commitment to innovation, which is represented in its culture of change (UBS AG, 2001a, 2)
- Reputation and brand image as a key asset
- Amongst the best capitalized financial entities globally (UBS AG, 2001a, 6)
- Total assets of CHF 1,087,552 million (UBS AG, 2001a, 15)

Value Propositions
- Vision statement: "Our vision is to be the pre-eminent global integrated investment services firm and the leading bank in Switzerland" (UBS AG, 2001, 2)
- Created value for clients through the combination of all its resources and expertise from all its businesses
- Open product architecture: offering clients a variety of own proprietary products and curated third-party offerings (for instance, the launch of UBS Fund Solutions, a pre-selection of exclusive investment funds including third-party offers) (UBS AG, 2001, 6)
- "Our staff's expertise adds value for our clients and is the basis of our success" (UBS, 2000a, 16)
- Defined brand attributes: "global reach, technology excellence, sophisticated products & services, integrated business platform and strong focus on advice" (UBS AG, 2001b, 41)
- The brand represented success through partnerships (UBS AG, 2001b, 41)
- Strong & early commitment to sustainability (one of first banks to sign the UNEP Bank Declaration; first bank certified with ISO 14001 certificate; ranked first in DJSGI) (UBS AG, 2001b, 44)

Customer Relationships
- Core to their client relationships is high-quality advisory with a special emphasis on integrity and intimacy, enforced through their relationship managers (UBS AG, 2001, 6)
- Tailored-services: Active Portfolio Supervision gives tailored recommendations and investment strategies (UBS AG, 2001, 26)

Channels
- Physical presence, operating from 50 countries worldwide and strong focus on online services (multi-channel strategy) (UBS AG, 2001, 2)
- UBS Switzerland focuses within their banking and securities services on their award-winning e-commerce services (UBS AG, 2001a, 3)
- Built one of „Europe's leading e-commerce platforms, with top-class business-to-business connectivity through Investment Banking On-Line (IBOL) at UBS Warburg" and ranked on the second place as leading online bank (UBS AG, 2001a, 6)
- Among the first banks to introduce mobile transactions of stocks (WAP-based banking) (UBS AG, 2001b, 13)

Customer Segments
- Individual, institutional and corporate clients globally
- UBS Capital main sectors were consumer goods, industrial products & services, computer related, transportation (UBS AG, 2001b, 31)

Cost Structure
- Personnel account for the highest cost driver with CHF 17,163 million in 2000 from CHF 26,203 million total operating expenses (UBS AG, 2001a, 15)

Revenue Streams
- Total revenues: CHF 36,402 million in 2000
- UBS Switzerland revenues: CHF 13,398 million; UBS Asset Management revenues: CHF 1,953 million; UBS Warburg revenues: CHF 19,532 million; Corporate Center revenues: CHF 1,519 million
- UBS Switzerland: Private & Corporate Client revenues of CHF 6,684 million (Individual clients as largest revenue stream with CHF 5,026 million); Private Banking revenues of CHF 6,714 million
- UBS Warburg: Corporate & Institutional Clients revenues of CHF 17,790 million as biggest driver; amongst that Equities as largest revenue stream (UBS AG, 2001c, 26ff.)

Appendix 12 – Business Model Canvas: UBS (2005)

Key Activities
- Internal shifts towards a more integrated business model: US, Swiss, international entities, wealth management, Swiss corporate and retail banking within one Business Group
- Business segments are now: Global Wealth Management & Business Banking (including Wealth Management International & Switzerland, Wealth Management US, Business Banking Switzerland); Investment Bank; Global Asset Management; and Corporate Center (UBS AG, 2006b, 28ff.)
- Dillon Read Capital Management launched for alternative investments (UBS AG, 2006a, 2)
- Focus of UBS is on Wealth & Asset Management and Investment Banking & Securities, while Retail Banking in Switzerland remains a secondary focus alongside them (UBS AG, 2006b, 8)
- Industrial Holdings as a new segment, initiated by private equity investments mainly in Atel Group, which is an energy provider in Europe (59.3% interest) (UBS AG, 2006b, 50)

Key Partners
- Internal joint ventures representing the integrated business model approach (for instance, the joint venture between asset management and wealth management) (UBS AG, 2006a, 7)
- Partnerships to reach younger customer groups: Partnered with Apple in 2005 for the launch of iTunes Store in Switzerland, offering free banking services or advisory meetings (UBS AG, 2006a, 21)

Key Resources
- Total assets of CHF 2,060,250 million (UBS AG, 2006a, 38)
- Among the best capitalized firms within financial services industry: 12.9% BIS Tier 1 ratio; CHF 2.65 trillion of invested assets; CHF 44.3 billion of equity from shareholders; CHF 131.9 billion market capitalization (UBS AG, 2006b, 3)
- Intellectual capital is reinforced and leveraged through one firm approach (UBS AG, 2006b, 11)

Value Propositions
- Established a new brand tagline, which was used in all media communications: "You & Us" (UBS AG, 2006a, 4), representing UBS' one-firm approach (integration of all business segments to an integrated business model) and representing UBS' core value 'trust' (UBS AG, 2006a, 4ff.)
- Vision: "We are determined to be the best global financial services company" (UBS AG, 2006b, 8)
- Purpose: "Our purpose is to help clients make financial decisions with confidence" (UBS AG, 2006b, 8)

Customer Relationships
- Four-step approach to consulting clients to increase customer experience and to differentiate from competitors (approach ensures to understand client needs, personalized solutions and continuous review & adjustments) (UBS AG, 2006a, 17)
- One-firm approach means that client can access services from any business segment, regardless of which business segment it is served by at that moment (UBS AG, 2006b, 11)

Channels
- No significant changes

Customer Segments
- Actively established projects to reach younger customer segments for their retail banking activities (partnership with Apple) (UBS AG, 2006a, 21)
- Established reputation within wealth management in Asia Pacific, alongside of Europe as a key growth area
- Goal to establish investment banking in markets such as China, India, Russia, Brazil and Middle East (UBS AG, 2006b, 8)

Cost Structure
- Total operating expenses were CHF 37,926 million, with personnel expenses as biggest cost driver (CHF 21,049 million), followed by goods and material purchased (CHF 8,003 million) and general and administrative expenses (CHF 7,047 million) (UBS AG, 2006a, 37)
- UBS employed 69,500 people worldwide (UBS AG, 2006b, 3)
- Cost/Income Ratios: Global Wealth Management & Business Banking: 65.5%; Global Asset Management: 57.5%; Investment Bank: 70.5% (UBS AG, 2006c, 28ff.)

Revenue Streams
- New revenue stream through 59.3% interest in Atel Group (UBS AG, 2006b, 50)
- Revenues of CHF 39,896 million (excluding revenues from industrial holdings, including them revenues would be around CHF 54,000 million), ROE 27.6% and net profits of CHF 9.442 million (CHF 14,029 million including industrial holding revenues) (UBS AG, 2006a, 37)
- Global Wealth Management & Business Banking revenues: CHF 19,238 million, with Wealth Management International & Switzerland as biggest revenue stream (CHF 9,011 million; Wealth Management US: CHF 5,156 million; Business Banking Switzerland: CHF 5,071 million) (UBS AG, 2006c, 28ff.)
- Investment Bank as second largest revenue driver: CHF 17,484 million (Global Asset Management: CHF 2,487 million) (UBS AG, 2006c, 42ff.)

Appendix 13 – Business Model Canvas: UBS (2009)

Key Activities
- Established significant efforts to reposition and rebuild the firm by setting strategic targets: being leader in wealth management and client-centric investment banking
- Business model flexibility crucial to enable adjustments to changes in regulatory (UBS AG, 2010a, 3)
- Increased governance processes to protect and reinstate UBS' reputation (UBS AG, 2010a, 6)
- Expanded sustainable products, including tailored services & products (UBS AG, 2010b, 62)
- Established detailed corporate sustainability screening (UBS AG, 2010b, 64)

Key Partners
- Dialogue with external experts regarding corporate responsibility and sustainability topics (UBS AG, 2010b, 60)
- Global Asset Management became part of UN Principles for Responsible Investment to demonstrate importance of ESG in their activities (UBS AG, 2010b, 62)
- Further focused on internal partnerships to enhance product & service distribution (UBS AG, 2010b, 91ff.)

Key Resources
- Total assets of CHF 1,340,538 million (UBS AG, 2010b, 9)

Value Propositions
- Due to recognition of distinctive needs of different client segments within wealth management and banking, UBS refocused towards specialized, client-centric services (UBS AG, 2010b, 74ff.)

Customer Relationships
- After the crisis, the focus was to regain the trust of clients and stakeholders, hence, UBS set emphasis on sustainable earnings and banking activities (UBS AG, 2010b, 61)

Channels
- Optimized multi-channel distribution, integrating prime brokerage services for better client services (UBS AG, 2010b, 95ff.)

Customer Segments
- Aimed to strengthen their position as bank of choice for high net worth and ultra high net worth individuals globally, while the latter is set as a target for growth (UBS AG, 2010a, 6)
- Leader in wealth management in Switzerland, Europe, Asia Pacific, Middle East, Latin America (UBS AG, 2010b, 13)

Cost Structure
- Essential initiatives were established to strengthen capital foundation after the crisis, mainly by cost and risk reduction: Reduced employee headcount by 12,500 to a total of 65,000 and fix costs by CHF 3 billion compared to 2008. Additionally, balance cheet and risks were reduced by 30%
- Total operating expenses of CHF 25,162 million, with personnel expenses of CHF 16,543 million as the largest driver (UBS AG, 2010a, 2f.)

Revenue Streams
- Total revenues of CHF 22,601 million, negative net profit of CHF -2,736 million and ROE of -7.8%
- Loss could be improved to prior year loss of CHF -21.3 billion
- Diversified revenue streams through increased integration of sustainable products (SRI products such as UBS (Lux) Equity SICAV – Sustainable Global Leaders or UBS (Lux) Equity SICAV – Climate Change) (UBS AG, 2010b, 62)
- Wealth Management & Swiss Bank revenues: CHF 11,390 million; Wealth Management Americas: CHF 5,550 million; Global Asset Management: CHF 2,137 million; Investment Bank: CHF 6,856 million (UBS AG, 2010b, 74ff.)

Appendix 14 – Business Model Canvas: UBS (2011)

Key Activities
- Fundamental shift in key activities and strategic focus: wealth management globally and banking activities in Switzerland are in focus; whereas investment banking and asset management serve as enablers for a successful wealth management division
- Focus of investment banking was set on reducing complexity and capital intensity (UBS AG, 2012, 2)
- UBS aimed and continued to increase business integration of all business segments and the integrated client service model further; as such, investment banking was set to work closer with wealth management (UBS AG, 2012, 13)
- Established ”Impact Investing” within their philanthropy service offerings (UBS AG, 2012, 23)
- Business model evolution goal is to move from traditional private banking more towards an investment manager with strengths in advisory; therefore, restructured wealth management & IB (i.e., established an Investment Products & Services division, including the “UBS house view” representing the new client service model) (UBS AG, 2012, 25)
- Wealth Management and Banking split into separate divisions (UBS AG, 2012, 27)

Key Partners
- Internal joint venture between investment banking and wealth management: Global Family Office Group with specialized teams aiming to serve the largest family offices globally (UBS AG, 2012, 24)

Key Resources
- Strengthened position as bank with best capitalized firm amongst their peers (UBS AG, 2012, 2)
- Established a complex compliance framework to differentiate from competitors (UBS AG, 2012, 23)
- Total assets of CHF 1,419,162 (UBS AG, 2012, 12)

Value Propositions
- Again, put emphasis on client-centric approach and providing superior advice to customers
- At the same time, due to increased regulatory landscape, UBS prioritized to reduce risk exposure and focus on sustainable activities (for instance, reduction of assets with high risks) (UBS AG, 2012, 13)
- Highlighted their combined businesses as an added value for clients, as they complement each other and serve the complex needs of clients (UBS AG, 2012, 14)

Customer Relationships
- “UBS house view” reinforces tailored customer services (UBS AG, 2012, 26)

Channels
- New local presence offices in new markets, for instance emerging markets, where clients prefer physical assistance (UBS AG, 2012, 23)

Customer Segments
- Prioritize ultra high net worth individuals (+ CHF 50 million in investable assets) and high net worth individuals (CHF 2 million up to CHF 50 million in investable assets); wealth management additionally serves financial intermediary entities (UBS AG, 2012, 23)

Cost Structure
- Total operating expenses of CHF 22,439 million, and overall cost/income ratio of 80.5% (UBS AG, 2012, 12)
- In regard to complex compliance framework, continued investments in processes of risk management; continued investments to expand presence in Asia Pacific, while focusing on Singapore and Hong Kong (UBS AG, 2012, 23f.)

Revenue Streams
- Total revenues of CHF 27,788 million, net profit of CHF 4,159million and ROE of 8.5% (UBS AG, 2012, 12)
- Wealth Management revenues: CHF 7,645 million; Retail & Corporate revenues: CHF 4,085 million; Wealth Management Americas revenues: CHF 5,295 million; Global Asset Management revenues: CHF 1,803 million; Investment Bank revenues: CHF 9,340 million (UBS AG, 2012, 22ff.)

Appendix 15 – Business Model Canvas: UBS (2015)

Key Activities
- Remained its focus on wealth and banking business, with investment and asset management as complementary units (UBS AG, 2016a, 6)
- UBS Nobel Perspectives: An innovative series of dialogues with Nobel Prize winners in the field of Economic Sciences (UBS AG, 2016a, 9)
- 5 business units remain (UBS AG, 2016a, 8)
- 35% of invested assets are sustainable (UBS AG, 2016a, 8)
- Business Model transformation process, initiated in 2011, was completed in 2014; as such, high-risk assets were reduced, and leverage ratio was improved, leading to a strong capital foundation (UBS AG, 2016a, 15)
- Created innovation labs for research purposes, especially regarding technological innovations (UBS AG, 2016b, 35)
- Became thought leader on blockchain as they launched a research project aimed to explore the technology (UBS AG, 2016b, 35)

Key Partners
- Collaborated with several start-ups, venture capital funds or academic entities to foster innovation within UBS (UBS AG, 2016b, 35)

Key Resources
- Three main pillars that define UBS: capital strength, efficiency & effectiveness, risk management (UBS AG, 2016a, 6)
- Intellectual capital: experience in financial services and banking spans over 150 years (UBS AG, 2016, 8)
- Total assets of CHF 942,819 (UBS AG, 2016a, 11)

Value Propositions
- Three principals representing UBS' core values: client focus, excellence, sustainable performance
- Awarded for its excellence in sustainable performance and best global private bank (UBS AG, 2016a, 6ff.)
- "From the beginning of our transformation, building capital and keeping ahead of regulatory requirements have been critical to maintaining our clients' confidence in the safety and stability of the bank" (UBS AG, 2016a, 15)

Customer Relationships
- Wealth Management had 4,019 client advisors (UBS AG, 2016a, 8)
- Within their business activities in Switzerland client satisfaction increased around 50% (2009 – 2015) (UBS AG, 2016a, 8)

Channels
- New product launch: UBS Paymit, which is the first P2P app for payments in Switzerland (UBS AG, 2016a, 7)

Customer Segments
- No significant changes

Cost Structure
- Total operating expenses of CHF 25,116 million and cost/income ratio of 81.8% (UBS AG, 2016a, 11)
- 60,099 employees worldwide (UBS AG, 2016a, 10)
- Regulatory costs an increasing cost driver (UBS AG, 2016b, 35)

Revenue Streams
- Total operating revenues CHF 30,605 million, with net profits of CHF 6,203 million and ROE of 13.7% (UBS AG, 2016a, 11)
- One key component of UBS' revenue streams are recurring revenues through portfolio management, investment funds that are asset based on net interest income, ultimately leading to more sustainable earnings that are predictable (UBS AG, 2016a, 15)
- Investment Bank as highest revenue stream with CHF 8,821 million, closely followed by Wealth Management with CHF 8,155 million (UBS AG, 2016b, 111)

Appendix 16 – Business Model Canvas: UBS (2019)

Key Activities
- Implemented data analytics, machine learning, AI tools for automation and robots within their operations and activities (UBS AG, 2020, 4)
- Research activities are essential for their advisory quality; UBS research efforts differentiates from competitors through several initiatives: UBS Evidence Lab Innovations (providing data) and UBS Research Academy (analytics team with training offerings for institutional investors), which was newly launched in 2019 (UBS AG, 2020, 36)
- Introduced several new tools in 2019, such as Asset Wizard platform (risk analysis for portfolios of ultra high net worth individuals) (UBS AG, 2020, 37)
- Investment Banking platform: UBS Data Solutions, as increasing demand from clients' side (UBS AG, 2020, 37)
- Launch of ESG Global Equity Premia (sustainable investment solution) (UBS AG, 2020, 41)

Key Partners
- Strengthening internal partnerships and actively encouraging the cooperation between and within business divisions, for instance, through employee incentives (UBS AG, 2020, 20)

Key Resources
- 4 defined key resources: Financial capital, relationships & intellectual capital, human capital, social & natural capital
- Social & natural capital represents UBS' commitment to net zero by 2050 or the award-winning UBS Optimus Foundation (UBS AG, 2020, 5)
- Total assets of CHF 972,183 million (UBS AG, 2020, 8)

Value Propositions
- 13.5% of total invested assets are attributable to sustainable assets (UBS AG, 2020, 5)

Customer Relationships
- Core values of their client relationships is mutual respect, trust and integrity
- Recognized the varying needs of their customers and provided services and aiming to generate superior investment performance (UBS AG, 2020, 3)

Channels
- Customer relationships strengthened through a variety of platforms: UBS Evidence Lab Innovations, GWM platforms, WM Online portal, UBS Partner, we.trade, UBS Atrium and Mobile Banking (UBS AG, 2020, 7)
- Multi-channel approach with a mix of on- and offline touchpoints (UBS AG, 2020, 23)
- UBS Neo, as a multi-channel platform of the Investment Bank division (UBS AG, 2020, 29)
- UBS Advisor Messaging in Asia (WhatsApp conversations between clients and advisors) (UBS AG, 2020, 37)

Customer Segments
- No significant changes

Cost Structure
- 10% of revenues per year are invested in technology (CHF 3.5 billion in 2019) (UBS AG, 2020, 4)
- Total operating costs of CHF 23,312 million (UBS AG, 2020, 8)
- 68,601 employees worldwide (UBS AG, 2020, 43)

Revenue Streams
- Total operating revenues of CHF 28,889 million, with net profits of CHF 4,304 million and ROE of 7.9% (UBS AG, 2020, 8)
- Global Wealth Management revenues: CHF 16,353 million; followed by Investment Bank revenues of CHF 7,269 million (UBS AG; 2020, 85ff.)

Appendix 17 – Business Model Canvas: UBS (2022)

Key Activities
- Continued focus on sustainability: 6.8% of invested assets were sustainable or impact oriented (UBS AG, 2023)
- Increased digital product range with the launch of key4 smart investing in Switzerland (UBS AG, 2023, 2)
- Enhancing competitive edge by investing in technology, aiming for simplification and improved user experience
- Engaging with emerging technology such as blockchain: launched the industry-first digital bond, tradable on both blockchain and traditional exchanges, as the digital asset market is expected to grow with the potential to transform the market (UBS AG, 2023, 3)

Key Partners
- Strategic collaborations with entities like universities for innovation and sustainability initiatives (UBS AG, 2023, 34ff.)

Key Resources
- 4 defined key resources: Financial capital, relationships & intellectual capital, human capital, social & natural capital
- Social & natural capital represents UBS' commitment to net zero by 2050 or the UBS Optimus Foundation (UBS AG, 2023)
- Increasingly trying to leverage technology to differentiate from competitors, as such, increased establishments such as automation or user experience (UBS AG, 2023, 3)
- Total assets of $1,104,364 million (UBS AG, 2023, 8)

Value Propositions
- New purpose statement established in 2021: "Reimagining the power of investing. Connecting people for a better world." (UBS AG, 2023)
- Increasing client experience by establishing new brands and services, such as the new brand UBS key4, which is a neo-bank for smart banking, allowing clients to independently manage and invest their capital; client need to manage capital independently is increasing (UBS AG, 2023, 2)

Customer Relationships
- Increased use of digital tools by advisory to enhance client interactions and to provide tailored financial advice (UBS AG, 2023, 34ff.)

Channels
- Established a new brand: UBS Key4, which is a neo-bank for smart investing allowing clients to independently manage and invest their capital (UBS AG, 2023, 2)

Customer Segments
- Further expanded services to include new market segments such as sustainable investors (UBS AG, 2023, 34ff.)

Cost Structure
- Removed outdated tech components & applications to strengthen cybersecurity and anticipate $200 million in cost savings by 2023 (UBS AG, 2023, 3)
- Allocation of resources towards cybersecurity and data protection to maintain high security standards (UBS AG, 2023, 34ff.)
- Total operating expenses of $24,930 million (UBS AG, 2023, 8)

Revenue Streams
- Total revenues of $34,563 million, net profit of $7,630 and ROE of 13.3% (UBS AG, 2023, 8)
- Revenues of business divisions in million: Global Wealth Management: $18,967; Personal & Corporate Banking: $4,099; Asset Management: $2,061; Investment Bank: $8,717 (UBS AG, 2023, 8ff.)

Appendix 18 – Business Model Canvas: JPMorgan Chase & Co. (2003)

Key Activities
- Their key activities are covered within their five business segments: Investment Bank (including equity underwriting, capital markets, global treasury); Treasury & Securities Services (financial transactions & information services for wholesale clients); Investment Management & Private Banking (wealth management); JPMorgan Partners (private equity entity); and Chase Financial Services (retail & corporate banking) (J.P. Morgan Chase, 2004, 3)
- Within Investment Banking strong focus on Equities (ranked globally on place 4); Global Syndicated Loans (ranked place 1); Global Investment Grade Bonds (ranked place 2); and M&A (ranked place 5) (J.P. Morgan Chase, 2004, 19)
- Made significant improvements in lowering their risk exposure (J.P. Morgan, 2004, 24)

Key Partners
- Internal partnerships across divisions to improve results and benefit for clients (i.e., launched Chase Personal Financial Services which combined banking and investing) (J.P. Morgan Chase, 2004, 12ff.)

Key Resources
- Intellectual capital, innovation, and risk management expertise (J.P. Morgan Chase, 2004, 3)
- Increased and improved risk management processes as key success factor (J.P. Morgan Chase, 2004, 3)
- Total assets of $771 billion (J.P. Morgan Chase, 2004, 22)

Value Propositions
- Innovative solutions and seamlessly integrating all business functions, thereby leveraging internal partnerships to increase value for the customer (according to their annual report, they believe they are the most integrated company in the industry) (J.P. Morgan, 2004, 12)
- J.P. Morgan mentions as differentiators from competitors its depth of knowledge & expertise, and its position as a leader (J.P. Morgan, 2004, 9)
- Ranked number one private bank in the US and number three globally according to total assets of clients; leading bank in its home market US (J.P. Morgan, 2004, 20)

Customer Relationships
- Trust as a crucial component within client relationships (J.P. Morgan Chase, 2004, 3)
- Client-centric approach to all their services and activities (J.P. Morgan, 2004, 16)

Channels
- Both physical branches and online platforms (for instance, online brokerage and trading services within Investment Management & Private Banking) (J.P. Morgan Chase, 2004, 2)

Customer Segments
- Diverse client segments: corporations, financial institutions and governments worldwide, as well as individuals for their banking activities (J.P. Morgan, 2004, 18)
- Private Banking had a significant growth in its client base (J.P. Morgan, 2004, 19)

Cost Structure
- Total expenses: $21,688 million (J.P. Morgan Chase, 2004, 28)
- Through the usage of Six Sigma and transforming internal processes net financial benefits of $1 billion could be generated (J.P. Morgan, 2004, 16)

Revenue Streams
- Chase Financial Services as the biggest revenue stream with $14,632 million, closely followed by Investment Bank with $14,440 million in revenues; Treasury & Securities Services revenues were $3,992 million; Investment Management & Private Banking revenues were $2,878 million; JPMorgan Partners had negative revenues of $-190 million
- Total revenues of $33,256 million, net income of $6,719 million (J.P. Morgan Chase, 2004, 28)

Appendix 19 – Business Model Canvas: JPMorgan Chase & Co. (2005)

Key Activities
- Key activities now structured within six business divisions: Commercial Banking, Investment Banking, Retail Financial Services, Card Services, Treasury & Securities Services, Asset & Wealth Management (JPMorgan Chase & Co., 2006, 3)
- Established and launched JPMorgan Private Equity Fund Services as a new division, as an attempt to expand services in alternative investments (JPMorgan Chase & Co., 2006, 18)

Key Partners
- Collaboration between retail banking division and card services, leading to new product services and a distinctive competitive advantage (JPMorgan Chase & Co., 2006, 4)

Key Resources
- Total assets of $1,198,942 million (JPMorgan Chase & Co., 2005, 1)
- Global scale and size as one of the key assets (JPMorgan Chase & Co., 2006, 2)

Value Propositions
- Key values are teamwork, execution and partnerships (JPMorgan Chase & Co., 2006, 2)
- Put emphasis on innovative solutions for clients within Investment Banking (JPMorgan Chase & Co., 2006, 14)

Customer Relationships
- No significant changes

Channels
- Invested in expansion of distribution channels, especially in retail stores, technology and salespeople (JPMorgan Chase & Co., 2006, 4)

Customer Segments
- Expanded within Investment Banking to energy industry by including new capabilities and hence targeting a new customer segment (JPMorgan Chase & Co., 2006, 14)
- Within Retail Banking expanded their offerings in mortgage products in order to target more broad customer segments (JPMorgan Chase & Co., 2006, 15)
- Expanded geographically, for instance with Card Services business to Canada (JPMorgan Chase & Co., 2006, 16)

Cost Structure
- Total operating expenses of $38,835 million (JPMorgan Chase & Co., 2006, 1)
- Increased operating efficiency by combining leasing business systems with the firms' heritage business credit (JPMorgan Chase & Co., 2006, 17)

Revenue Streams
- Total revenues of $54,533 million; net income of $8,483 million and ROE of 8% (JPMorgan Chase & Co., 2006, 1)
- Revenues of business divisions in million: Investment Banking: $14,578; Retail Financial Services: $14,830; Card Services: $15,366; Commercial Banking: $3,596; Treasury & Securities Services: $6,241; Asset & Wealth Management: $5,664 (JPMorgan Chase & Co., 2006, 27)

Appendix 20 – Business Model Canvas: JPMorgan Chase & Co. (2009)

Key Activities
- After crisis increased focus on risk management, strong capital management and conservative accounting (JPMorgan Chase & Co., 2010, 4)
- Key activities still divided into six divisions, excluding the corporate center (JPMorgan Chase & Co., 2010, 7)

Key Partners
- No significant changes

Key Resources
- Total assets of $2,031,989 million (JPMorgan Chase & Co., 2010, 1)
- Mentioned as key resources their risk management, technology resources, compliance management (JPMorgan Chase & Co., 2010, 4)
- People and intellectual as the most valuable resource (JPMorgan Chase & Co., 2010, 16)

Value Propositions
- Focus more on risk management and regaining trust from stakeholders (JPMorgan Chase & Co., 2010, 4)

Customer Relationships
- Increased emphasis on honesty and trust after financial crisis (JPMorgan Chase & Co., 2010, 4)

Channels
- Increased mobile banking offering and services (JPMorgan Chase & Co., 2010, 39)
- Established new platform: Blueprint SM, which helps clients to better manage their financials (JPMorgan Chase & Co., 2010, 40)

Customer Segments
- Became leader in financing of auto (JPMorgan Chase & Co., 2010, 39)
- Within Card Services launched new projects to attract new customers, such as a reward system (JPMorgan Chase & Co., 2010, 40)
- New geographic expansion for Wealth Management to Miami, Philadelphia, San Francisco, Seattle and Washington (JPMorgan Chase & Co., 2010, 43)

Cost Structure
- Increased efficiency through the merger with Bank One, which led to synthesized operating platforms, networks and data platforms (JPMorgan Chase & Co., 2010, 4)
- Compensation as highest cost driver with $26,928 from overall $52,352 million (JPMorgan Chase & Co., 2010, 56)

Revenue Streams
- Total revenues of $100,434 million, with a net income of $11,728 million and a ROE of 6% (JPMorgan Chase & Co., 2010, 1)
- Investment Banking with a record performance: revenues of $28.1 billion, net income of $6.9 billion and a ROE of 21% (JPMorgan Chase & Co., 2010, 6)
- Net income per business divisions in million: Retail Financial Services: $97; Card Services: -$2,225; Commercial Banking: $1,271; Treasury & Securities Services: $1,226; Asset Management: $1,430; Corporate: $3,030 (JPMorgan Chase & Co., 2010, 7)

Appendix 21 – Business Model Canvas: JPMorgan Chase & Co. (2011)

Key Activities
- Key activities are segmented into 6 business divisions: Investment Bank, Retail Financial Services (serving individuals and corporations through branches and online banking), Card Services & Auto (credit card issuance), Commercial Banking (mainly focus corporations, financial institutions, non-profits), Treasury & Securities Services, Asset Management (JPMorgan Chase & Co., 2012, 5)

Key Partners
- No significant changes

Key Resources
- Total assets of $2,265,792 million (JPMorgan Chase & Co., 2012, 2)

Value Propositions
- "Our customers, employees, shareholder value and communities all come first" (JPMorgan Chase & Co., 2012, 6)
- Aim to become leader in customer service (JPMorgan Chase & Co., 2012, 40)
- New value proposition communicated as "One Chase", which stands for exceptional service and meeting all client needs (JPMorgan Chase & Co., 2012, 14)

Customer Relationships
- Put emphasis on listening to the client, leading to increased depth of customer relationships (JPMorgan Chase & Co., 2012, 8)
- However, they mention in their report that they lacked in customer service quality and set it as a strategic goal to increase it (JPMorgan Chase & Co., 2012, 40)

Channels
- Increased mobile banking offering and services (JPMorgan Chase & Co., 2012, 39)
- Established new platform: Blueprint SM, which helps clients to better manage their financials (JPMorgan Chase & Co., 2012, 40)

Customer Segments
- Expanded their Asset Management, Investment Bank and Treasury & Securities Services businesses to Asia, Latin America, Africa and Middle East
- Also growing its corporate banking business outside of its home market, serving 3,500 corporate customers in over 40 countries; while commercial banking grew inside its US home market (JPMorgan Chase & Co., 2012, 10ff.)

Cost Structure
- Total expenses of $62,911 million (JPMorgan Chase & Co., 2012, 2), with compensation as the biggest cost driver with $29,037 million (JPMorgan Chase & Co., 2012, 74)

Revenue Streams
- Total revenues of $97,234 million, net profit of $18,976 million, ROE of 11% (JPMorgan Chase & Co., 2012, 2)
- Biggest revenue streams were principal transactions ($10,005 million), administration and commission fees from asset management ($14,094 million), credit card income ($6,158), lending- and deposit-related fees ($6,458), and Investment Banking fees ($5,911 million) (JPMorgan Chase & Co., 2012, 71)

Appendix 22 – Business Model Canvas: JPMorgan Chase & Co. (2015)

Key Activities
- Activities now structured among 5 divisions: Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking, Asset management and JPMorgan Chase (JPMorgan Chase & Co., 2016, 8)
- Fundamental activities undertaken to decrease risk exposure: exited several activities such as Private Equity or Physical Commodities business (JPMorgan Chase & Co., 2016, 14)

Key Partners
- Corporations with FinTechs, for instance with OnDeck for new working capital products (JPMorgan Chase & Co., 2016, 28ff.)

Key Resources
- Compliance and risk management (JPMorgan Chase & Co., 2015, 2)
- Technological infrastructure, including human resources dedicated to technology, global networks and databased (JPMorgan Chase & Co., 2016, 28ff.)

Value Propositions
- Value proposition: focus on serving clients, communities, global countries and generating fair profits for their shareholders (JPMorgan Chase & Co., 2016, 2)

Customer Relationships
- Customer satisfaction scores increased continually, while within commercial banking industry among the leaders in customer satisfaction (JPMorgan Chase & Co., 2016, 10)
- More personalized services through enhancing mobile app for consumer banking
- Improved online experience for Wealth Management customers by introducing new digital tools (JPMorgan Chase & Co., 2016, 28ff.)

Channels
- Increased multi-channel approach, for instance, establishment of remote advice services for retail banking customers (JPMorgan Chase & Co., 2016, 28ff.)

Customer Segments
- Within Wealth Management an increased focus on wealthy families and individuals (JPMorgan Chase & Co., 2016, 28ff.)

Cost Structure
- Total costs of $59,014 million (JPMorgan Chase & Co., 2016, 1)
- Increased investments in technology, employees and talent, as well as infrastructure (JPMorgan Chase & Co., 2016, 2); for instance, approximately $300 million in investments in digital projects for Asset Management over three years; spent $9 billion on technology (JPMorgan Chase & Co., 2016, 28ff.)

Revenue Streams
- Total revenues of $93,543 million, with a net income of $24,442 million and a ROE of 11% (JPMorgan Chase & Co., 2016, 1)
- Highest revenue stream was administration and commissions from Asset Management: $15,509 million in revenue; followed by principal transactions with $10,408 million and Investment Banking fees of $6,751 million (JPMorgan Chase & Co., 2016, 72)

Appendix 23 – Business Model Canvas: JPMorgan Chase & Co. (2019)

Key Activities
- Clean financing increased to approximately $50 billion (JPMorgan Chase & Co., 2020, 1)

Key Partners
- No significant changes

Key Resources
- Total assets of $2,687,379 million (JPMorgan Chase & Co., 2020, 1)
- Success of Investment Banking division stems from scale and qualitative service offerings (JPMorgan Chase & Co., 2020, 28ff.)

Value Propositions
- Based on footprint, the leader in Consumer Banking and leader in sales of credit cards, based on volumes (JPMorgan Chase & Co., 2020, 1)
- Leader in investment banking fees and markets revenues (JPMorgan Chase & Co., 2020, 1)
- Reputation of "being there for clients, customers and communities in the most critical times" (JPMorgan Chase & Co., 2020, 2)
- Emphasized on committing to a full suite of products and services globally, while maintaining presence in critical markets (JPMorgan Chase & Co., 2020, 28ff.)

Customer Relationships
- Focus on long-term client relationships and a holistic client service approach (JPMorgan Chase & Co., 2020, 28ff.)

Channels
- Further expansion of digital tools, however, no significant changes mentioned (JPMorgan Chase & Co., 2020, 28ff.)

Customer Segments
- Expanding services of Investment Banking to emerging markets globally (JPMorgan Chase & Co., 2020, 28ff.)

Cost Structure
- Total costs of $65,497 million (JPMorgan Chase & Co., 2020, 1)
- Managing increased capital requirements and investing in technology and compliance, indicating a focus on long-term value over short-term profitability (JPMorgan Chase & Co., 2020, 28ff.)

Revenue Streams
- Total revenues of $115,627 million; net income of $36,431 million; ROE of 15%
- Consumer & Community Banking had a record in net income of $16.6 billion, with revenues of $55.9 billion and a ROE of 31%
- Investment Banking revenues were $38.3 billion, with net income of $11.9 billion (JPMorgan Chase & Co., 2020, 1)

Appendix 24 – Business Model Canvas: JPMorgan Chase & Co. (2022)

Key Activities
- Established sustainable development target in 2021 and financed or initiated $482 billion since then (JPMorgan Chase & Co., 2023, 2)
- Ranked number one within a study of AI maturity within banking (JPMorgan Chase & Co., 2023, 2)
- Established centers of excellence for ESG solutions and carbon transition, with dedicated and specialized investment banking employees who are providing expert advice to clients (JPMorgan Chase & Co., 2023, 48)
- Expanding exchange-traded fund services (JPMorgan Chase & Co., 2023, 50)

Key Partners
- Close cooperation with the US government (JPMorgan Chase & Co., 2023, 5)
- Coorperation with Volkswagen to explore future opportunities in smart payment devices within cars (JPMorgan Chase & Co., 2023, 51)

Key Resources
- Total assets of $3,665,743 million (JPMorgan Chase & Co., 2023, 1)
- Resilience as a core competency (JPMorgan Chase & Co., 2023, 3)
- Significant workforce headcount dedicated to implementation and advancement of AI technology (JPMorgan Chase & Co., 2023, 20)

Value Propositions
- Constant investments in innovations, stable capital foundation, and ongoing investments in their talent
- Focus on long-term value creation (JPMorgan Chase & Co., 2023, 5)
- Vision statement: “We aim to be the most respected financial services firm in the world, serving corporations and individuals.” (JPMorgan Chase & Co., 2023, 14)
- New established purpose statement: “Make dreams possible for everyone, everywhere, every day” (JPMorgan Chase & Co., 2023, 14)
- Core values: Service, Heart, Curiosity, Courage and Excellence while promising to empower economic growth and uplift communities (JPMorgan Chase & Co., 2023, 15)
- Strong focus on community growth remains (JPMorgan Chase & Co., 2023, 17)

Customer Relationships
- Digital Experience study ranked JPMorgan Chase & Co.’s Wealth Management as number one globally (JPMorgan Chase & Co., 2023, 1)

Channels
- No significant changes

Customer Segments
- Predominantly geographic customer segment remains US (JPMorgan Chase & Co., 2023, 1)
- Increased Investment Banking footprint within the US (JPMorgan Chase & Co., 2023, 48)
- Increasingly expanding customer segment to clients that are focusing on green economy and low-carbon activities (JPMorgan Chase & Co., 2023, 49)

Cost Structure
- Total costs of $76,140 million (JPMorgan Chase & Co., 2023, 1)
- Compensation remains biggest cost driver with $41,636 million (JPMorgan Chase & Co., 2023, 54)

Revenue Streams
- Total revenues of $128,695 million, net income of $37,676 million, and ROE of 14% (JPMorgan Chase & Co., 2023, 1)
- Highest revenue stream remains Asset Management with $20,677 million; followed by principal transactions with $19,912 million; Lending- and deposit-related fees of $7,098 million; Investment Banking fees of $6,686 million and card income revenues of $4,420 million (JPMorgan Chase & Co., 2023, 52)

Appendix 25 – Expert Interview Overview

Expert	Role and Industry	Expertise Description	Years of Expertise	Interview held on
Expert A	Research and Academia; Strategy Consulting in Financial Services	Currently works as a senior manager in a global consulting firm within the financial services industry, with experience mainly in the Swiss banking sector. Projects include financial product launches, BMI with a focus on technology and data, and strategy & transformation. Holds a PhD in Strategic Management with a focus on innovation topics within banking and continued to work as a researcher within this field.	17 years, of which 8 years are within his current role	17.11.2023
Expert B	Strategy Consulting in Financial Services	Works as a Strategy Consultant focused on Financial Services, with a focus on capital markets, investment banking and wealth management. Holds a MBA and a Master of Science in Finance.	6 years, of which 2 years are in his current role	21.11.2023
Expert C	Advisor and Co-Founder in several companies with a focus on innovation & technology	A LinkedIn Top Voice for Innovation & Technology (around 100.000 follower on LinkedIn), highly experienced leader in digital transformation and innovation, with several job experiences as an advisor or co-founder. Used to work as an consultant in financial services for 5 years.	12 years	22.11.2023

Appendix 26 – Expert Interview A

Laura Mertens: I'll start with general questions about BMI and then I'll ask more industry-specific questions. Okay, then I'd like to start with some general questions. What does the term BMI mean to you? What do you understand by it?

Expert A: The conscious, targeted renewal of business models with the intention of increasing the company's success and breaking new ground that others may not yet have taken.

Laura Mertens: And would you say that in your environment or in practice, a distinction is made between terms such as transformation, business model innovation or business model adaptation, or are they often used in the same context?

Expert A: I would say that transformation and innovation are certainly used differently. It can simply be the case that transformation does not always necessarily have the same positive aspects as innovation. In other words, it sometimes comes out of necessity that you have to transform and the ways in which you transform are not always just innovative, but sometimes also tried and tested. I believe that PE companies make a lot of tried and tested transformational moves in order to restructure companies financially and perhaps also to restructure. And for me, transformation is still restructuring somewhere, whereas innovation is the creative process of reinvention with the intention of differentiating oneself from the competition, with a different positioning of the business unit. And the third term was evolution. For me, evolution is simply more continuous, not necessarily consciously initiated, but also happens to some extent and therefore cannot be seen at the same speed as innovation.

Laura Mertens: To what extent have you already had experience with business model innovation or what role does business model innovation play in your professional context?

Expert A: Well, I've already had a few different professional contexts, so my previous one was academia for quite a long time and actually strategic management, where of course the topic you're looking at was an essential aspect. That's why I think I understood some of the theory there in terms of motivation and ways of innovating business models, and in the professional context now, in consulting, we also do that. It's not necessarily our most popular offering, but it's very popular from our side because it's exciting and fun and holistic and brings strategy and creativity together. This is also conceived from a market perspective, i.e. outside-in analyses, the synthesis with what the company already does and the introduction of new aspects that perhaps make innovation possible in the first place. And this also includes digitalization. And the company where I now work naturally has a strength in digitalization and is therefore well placed to support the actual implementation of innovations and is therefore actually in a very good position to handle projects of this kind, and we have recently had one or two where I was able to be involved. And they were simply shaped in exactly the way I have just described. In the end, it was all about us being able to help build the platforms and ecosystems that were then innovated, because we also have the expertise in construction.

Laura Mertens: In research, there is a framework that I have looked at, which is supposed to summarize different types of business model innovation, so to speak, that looks at two different dimensions in particular. The first dimension is the level of novelty, i.e. the degree of novelty, in other words whether it is something new for the entire industry or just for the company. If you now think about your past projects or the experiences you have had with business model innovation in a professional context, were they more likely to be projects that were new for the company or were they also innovations where you could say were new for the industry?

Expert A: Yes, the second one. That was actually the last project, so the last project was actually also new for the industry. Not new in all aspects, but in the sense that it replicated something based on a consortium approach that otherwise only large corporations in the industry would have done on their own. And we then applied it to a consortium of smaller companies and gave the whole thing a different spin in terms of content. But in terms of content, larger corporations have already done this for themselves, which is what we have now proposed, but as I said, we have rethought it for SMEs, i.e. more medium-sized companies in a consortium approach, and this did not yet exist in the industry. So, I would say second category, new for industry.

Laura Mertens: The second dimension that is looked at in this framework is the scope. In other words, which parts of the business model are affected. And there is a view that business model innovation must affect business model as a whole in order to be classified as business model innovation. The other view is that only individual parts of the business model are affected.

Expert A: Yes, we can take another quick look at the components of business models. Please help me out here.

Laura Mertens: Sure, there is the business model canvas, for example, which I looked at in particular, which includes key activities, cost structure, revenue streams, customer segments and customer relationships.

Expert A: At Cost Structure we always have the ambition to innovate. This is always part of our projects because a lot has happened with the tech stack that can be applied to companies today. We also have this as a major topic in our company, that we always bring this to the customer and what is understood by this, cloud etc. is all part of it and then also rather flexible cost structures. In other words, this dimension has become very, very prominent recently due to the possibilities we have today. The revenue model is actually linked to this because the cost structures are now mostly flexible, so it also makes sense to keep the LOS structures flexible and to link pricing to the outcome rather than to fixed amounts. And beyond that, customer segments are actually rather stable. Of course, there is also the possibility of creating new and better segments, but at the end of the day, I think the market has always been relatively advanced in the last few decades, in the sense that it has always been easy to differentiate between customer groups. Today it's a bit more dynamic that you don't always strategically target the same customer group, but rather target dynamically and define your criteria and then the group is constantly changing. But it's not necessarily the silver bullet that solves everything at this point. It doesn't do as much as it does now on the cost side and, of course, the same applies to the product dimension as it does to the cost side, where new opportunities have been opened up that can now be used to a greater extent. So, if I had to draw a heat map of the dimensions in which it is doing the most, it would certainly be those that have been changed by technology in recent years. These are products, costs, and revenues.

Laura Mertens: We've just touched on the fact that technology is of course a very important driver for BMI. Can you think of any other drivers? What about sustainability, for example? Do you also see that as an important driver in the industry?

Expert A: It always depends on the industry, but in principle everything that drives customers and influences their preferences is a driver for business model innovation. Sustainability is certainly one of them, for very good reasons. Regulation is certainly another factor that perhaps also plays a special role in regulated industries, where changes open up new opportunities or impose restrictions.

Laura Mertens: Then I would like to introduce the more industry-specific questions. In general, if you can say for investment banking and otherwise for banking in general or financial services, what would you say have been the biggest changes over the last few years in terms of how business models have evolved?

Expert A:

I would say that in the last few years, if we go back to the dimensions we talked about earlier, i.e. the cost side and the revenue side, which have changed significantly due to cloud, APIs, servitization, etc., I see AI as a fundamental force for change. In the future, I see AI as a fundamental force that will change things because it will also allow employees to be more efficient and creative in all roles. It's like a leverage effect that works on everyone who knows how to use it for their own benefit, possibly also shifting services or where value is added. It can also be in the back office, with AI-empowered employees, who are much more productive and I can imagine that this will change many things and that some things can be automated and taken over completely by AI. And certain aspects where people will focus on things that are really differentiating and can't be solved by looking them up on the internet. That's actually what the LNMs do. They can actually take on this function and then it remains creative. But I believe there is also AI empowerment in creative processes. And then it's about decisions, capital, empathy.

Laura Mertens: What has shaped the industry or financial services or banking in particular are of course all the technological innovations that you mentioned, and at the same time all the new market competitors that are entering, such as fintechs. How would you say that business model innovation has changed under these circumstances, especially for large banks and investment banks?

Expert A: Yes, I would say that the new competitors have simply exerted pressure to change for large corporations and large banks and other financial service providers. What they couldn't do, however, is actually disruption in its entirety, because they actually lack the weight for it. Tey are fighting in a different weight class and in the end, especially in banking, the forces or physical laws of the balance sheet still apply. If someone is involved in large volume transformations, then that carries weight if the market is changing, or if it is valuable from a market perspective, as it will be increasingly now, there is currently a lot of net interest income and a good balance sheet is key. And the start-ups are currently at a disadvantage in this regard. In other words, interest rates were definitely a factor that favored startups for a long time. Now this has turned around and you can actually see where the value creation is perhaps more sustainable and I don't see any danger for the banks now. From my point of view they are the ones who are benefiting, because they have now perhaps also learned, seen what works at this point, launch their own banking apps or even neo-banks completely, if it really makes sense. In most cases, a smart app that is connected to the core banking system is enough. In this respect, for me the start-ups in this sector are more of a source of ideas, forces that exert pressure somewhere on the innovation of the corporations and as long as they become active in a sufficiently short period of time, it is more of an advantage for both sides. The banks can look at the proven concept on the market and the founders can be bought out when the time comes. And in the end, the risk of the innovation is borne by the innovator who has carried the startup until it has proven itself and then it has been incorporated into the DNA of something bigger. And the company that scales the whole thing in a different way and thereby creates added value for everyone. Yes, in that respect it is a symbiosis for me. Because especially in times of rising interest rates, one cannot function without the other.

Laura Mertens: Then I have one final question. What would you say successful investment banks or banks in general have in common in terms of their business model? You have already said which components are specifically in focus when it comes to BMI. Perhaps you could expand on this in terms of success factors or similarities.

Expert A: Yes, I would come back to the one point that I briefly mentioned earlier in the context of AI, which is the factors that will ultimately be really decisive for success. I summarized it as empathy before, but I think it also includes relationships, customer relationships, trustworthy customer relationships, and I see that especially in investment banking. First and foremost, I would say with whom do you have trustworthy customer relationships that perhaps also have a certain complexity, so that they cannot be replicated by competitors. And that's not very transactional, it's not an online purchase, but the big deals are more about these relationship networks, skills, trust, knowing that you can rely on the other person and knowing what the other person delivers. So, these are probably the key success factors. To avoid failing in this respect, you can't fail in any other dimensions, of course. So, you have to be operationally efficient, you have to use all the options you have as a company to be competitive in terms of price. You don't have to have the cheapest offer, but you also can't go overboard and be too expensive if you haven't done your homework on the operations side.

Appendix 27 – Expert Interview B

Laura Mertens: I will start with questions that are more about business model innovation in general and then I will ask some more industry specific questions. From your understanding how would you define business model innovation or what does business model innovation mean to you?

Expert B: So, the way I see it besides you know the academic framework, let's say the way I see business model innovation is always try to either create new products or be more efficient to create existing products or having companies that shift from one existing business model, but because maybe the market is shifting away from the business model, from the service, from that need, they also are very quick and very agile to adapt to a new business model. So, I would say I would take these three angles, the product, the efficiency and also the total pivoting to something new.

Laura Mertens: And in your experience, when you work with clients or when you have projects about business model innovation, do you feel that terms like business model transformation or like evolution or like adaptation are used similar to the term business model innovation or would you say that there is a lot of differentiation between these terms?

Expert B: Yes, I mean, I think sometimes people do not really understand what innovation means. And because they don't understand to them everything is innovation. I mean, even if they change a little process in macro structure, that's business model innovation when actually it's not really it. So, and I mean also by working with clients, part of my job is also to tell them about what actually innovation is and what's not innovation. Yeah, you can always use the term transformation, evolution, I mean, these are all synonymous. Let's say you can always use them you know, for describing the same thing, even if it's not so. So yes, for sure, the term is sometimes misused and in our industry, I mean investment banking, it’s also a different type of innovation because the industry itself is much slower than all the, the tech industry or software industry. So, every little thing can be seen as innovation or innovative, even if it's not.

Laura Mertens: Okay, maybe now we can talk a bit more about your experience with business model innovation and if you can, apply it to investment banking. What role does business model innovation play in your work environment?

Expert B: So for example, I remember when I was working for a large international bank, one of the things that was considered innovative business model was to check how securities are transferred from clients account to you know, sorry from the stock exchange to the client accounts and I remember in this project the innovation was to create a tool that allows to do that automatically. So for that we check the client eligibility, check the client funding you know, ensure that there there's enough funding in the account. So, it was a very technical tool to then be innovative in the way securities or shares, you know products, financial instruments are then transfer from a brokerage account to the cast of the account to the client or to another account of the client. And that was the innovation. I think the most innovative side of the, the real innovation from a business model perspective I see is on the wealth management side because they also advise clients how to be more innovative. And here I can start talking, for example, about, what I've done in my sustainability project. We were also telling the client how they should change their business model in order to become more sustainable. And that's for me more towards the idea of business model innovation. I was covering the shipping stream, so we were taking care of all shipping clients or clients that have shipping companies. And as you know, it's a very old traditional business model because I mean you have the goods, and you have to transfer the goods from point A to B and by doing this you pollute. So, if you want to pollute less, you need to be even much more efficient. You need to buy new products, meaning sustainable engine. And you need also to change maybe your business model itself, how you work, how you transfer from A to B, can you find better way, can you find better routing. So, in that project it was much more sustainable and also from an investment banking perspective that was more corporate finance which is you can consider corporate finance one of the branches under investment advisory and how to structure a business, how to IPO a business, how to create, or how to lend to business. And I was in the lending space for shipping, so all the advisory part our client you know could change their business model to become more sustainable.

Laura Mertens: That's actually an interesting perspective. You just mentioned that it's not only about the business model of investment banks itself, but also about the services they provide and how they advise clients to be more innovative.

Expert B: I mean, if you think about an investment bank is a bank, whatever type of bank is always the intermediary and when you are an intermediary, you have this extremely privileged role of kind of consult your client because that's also what I mean. When a client want to IPO their company, they come to you to ask how to IPO it when they want US loan structure or new credit lines or a leveraged buyout, they all come to you as the expert and you consult them. And you can also consult them on how to change the business model to be more innovative. For example, for sustainability, I mean, you want to pollute less, you need to change some things, and that's the role of a bank saying if you change, I give, I lend you the money. If you don't, well go somewhere else.

Laura Mertens: When you think about all the experience or projects you had about business model innovation, in academia business model innovation can be looked at through 2 dimensions. And one of the dimensions is the scope, which means which parts of the business models are affected. For example, customer segments or like cost structure or revenue streams. What would you say were like the most affected components or which components are most often dealt with when you have projects about business model innovation?

Expert B: I mean, if we take the business model canvas, you know like the, you know the standard Business Model Canvas, I see banks or investment banks, they for sure target the cost part. So, the cost structure and reducing cost, so making their processing more efficient, cutting people and so on and so forth and their value proposition. But this is mostly for the wealth management side, because investment banking, in the revenues you have all the fees and clients come to you when they have a specific problem. IPO leveraged buyout, issuing new shares and so on and so forth. So, your value proposition is already kind of fairly stable in wealth management. I see the wealth management industry is really changing towards more personalized, tailored client experience and that's why wealth management is also targeting the value proposition though. So, they're trying to understand what's the real value proposition. Rather than investment banks, I mean investment banks, they just want to be cheaper because they provide the same services, maybe you know, beat the market. So, the value proposition can be generating more alpha but, in the end, you want to be cheaper. So, off the same services, cheaper also from, you know from a distributor perspective, you don't really, I mean you have value chain in investment banking but it's not like a manufacturer company or a like a supply chain company where you have a lot of intermediaries, or you are the intermediate already. So, you have a someone who has money, someone who doesn't, and you could connect them together. So, you don't have a huge value change. That's why I think investment banking is mostly working on the cost structure.

Laura Mertens: Another dimension they look at is the level of novelty, which means that, for example, if the business model innovation they want to implement is only new for the company itself or if it's new for the whole industry and might be more disruptive. And can you say that the experiences you had go more in one direction or in the other direction or maybe both? Like, the kind of projects you did, were they mostly new for the firm only or something that was new to the industry?

Expert B: So new for the industry, I've never done anything like that. I've never done a project that is really new cutting edge for the industry, also because the industry is extremely regulated so it's very difficult for an investment bank or for a wealth manager to create something so disruptive that changes the industry. That's why you have all the FinTech's. I mean, that's their role. The role of a FinTech is to disrupt the industry, to change a very small part of a value chain, and then being bought by an investment bank and then trying to build on top of that. But you have to understand that Goldman Sachs, J.P. Morgan and UBS, these three are giants, so for them to be so fast to disrupt an industry is very unlikely and that's why I was never on a project like this for sure. Yes, they try always to be innovative compared against their peers. So, for example, I mean if J.P. Morgan now is launching a new AI tool for investment banking, everybody else will follow with creating their own version of the AI. So, what does J.P. Morgan IB division do? They take all the data they have from the market, from their clients, they create their AI tool, and then they sell these AI tool to their clients to then understand how they can help the other business, what's the valuation, if they should issue new shares to understand, you know, maybe this AI tool will also calculate and find out what's the reevaluation of the company based on the balance sheet and the income statement and everybody else will follow. But this innovation comes from another industry. You know the real disruption, the real innovation of AI is coming from Microsoft, OpenAI, or whoever, and then it is applied in banking. That's why it's always about following other trends, being innovative within the industry, but never disrupting an industry.

Laura Mertens: There are differences of course between a startup or Fintech and a large bank. Large banks most of the times see these innovative features or like the disruption happening in the market and then at some point if they see how it has developed they either going to buy it or do the same but a bit different.

Expert B: Look, I can give you another example of a project for a Dutch bank and they wanted to buy a buy-now-pay-later FinTech and back then buy-now-pay-later was another disruption, let's say, or innovation in the industry. Why? Because I mean, you create a platform and in this platform all the clients and all the people that want to buy something come in, they give you an interest, they pay you an interest and then you will lend them the money basically. So, it's a very similar concept of banking, right? The problem is that a bank, because it's regulated, has extremely high standards in the quick KYC, so they need to know their customer and it takes long to really onboard a customer on the bank side. It's very quick for the Fintech because there's no regulation, but it's very long on the bank side. So, the cost of acquisition of one customer, because in the Fintech it's much shorter, it's also cheaper to acquire a customer and then you can also lend money to a lower interest rate. On a bank side it is more difficult because you have more people, the process is longer. So, it's a much more complex organization that needs to validate that these customers, you can lend money to these customers also from a risk perspective. So even if a bank wants to buy it, wants to buy innovation, let's say they need to apply them, and that's the difficult part.

Laura Mertens: Okay, one last question, maybe from a more high-level perspective, what would you say were the biggest changes in business models of investment banks the last few years?

Expert B: I mean, for sure quantitative trading. So, the, you know, like the algorithmic trading, quantitative trading that gave them a big boost because it became much faster to trade and there was trading on much lower bits. So, it was extremely fast and this was cutting edge at the time when it started. Data Analytics for sure, because I mean investment banking is all about, you know, studying the past to predict the future. I mean, they always had the scale because investment banks usually they were, tend to be always, at least J.P. Morgan almost has to be everywhere in and to offer everything. But I think in the last, if you talk about the past exactly, first of all, question back to you how long should we have to go to understand business model innovation. So how long? 10 years?

Laura Mertens: Yes 10 years is good.

Expert B: Then I will say yes, data analytics, algorithmic trading, quantitative trading and, yes, I would say these three.

Appendix 28 – Expert Interview C

Laura Mertens: Okay, I would start quite general. How would you define innovation or what does innovation mean to you?

Expert C: Got it. So, innovation for me is a spectrum. So, there is innovation in making improvements to something, in this case, part of your business. But that can take very many forms. And so, I think it's important, the way I was taught, or the way I was taught to think about innovation was to, it was using a framework. And there are many different frameworks for innovation as well, right? So, there are very many organizations or thought leaders who will tell you that innovation must include the following things and it must include people, process, and technology. Or it must include commercial, customer, and technology as a very simple framework. And for the earliest months of my career, that was the first framing, is that any innovation that you create must be sustainable, must be desirable to the customer, must be commercially feasible, and it must be technically viable. So people will want it, it has a good business case, and you can build it. Now technological could be bricks and mortar, it could be ones and zeros. So that's the first framework that I learned to understand business model innovation. And the bad news is there's probably a thousand or so different frameworks that kind of touch on similar, maybe slightly varying but largely the same thing, which is a variation of customer, commercial and technology, but with different improvements or different specificity. So the framework that I often go back to for innovation is by a company called

Doblin and it's called the 10 Types of Innovation. And it takes the business model, commercial, and customer considerations, and it expands them out into 10 archetypes of innovation that expand on that triangle. So it expands on kind of operation, so the network of who you work with, your process design, your, I don't remember, the tensile's off my heart, but instead I'm gonna look it up on the internet, because that'll be easier. But anyway, it frames the operating model, it outlines the profit model, and then it talks about the brand and customer intimacy. And there are 10 different specific archetypes that they researched as the ones that matter if you want to create sustainable innovation. There is, I guess, also a point for you, there is unsustainable innovation, or there is non-disruptive which is incremental improvement or using a small number of those types of innovation. So for example, product features. If you make a product lighter as a means of innovation, if you make a car lighter, it'll go faster. That might be attractive to certain parties, but then if somebody else makes the car a little bit lighter than yours, you don't have a sustainable innovation there. You've had the first mover advantage, but you don't have sustainable innovation. Just to remind myself that the 10 types of innovation cover the configuration of your business, so how you make profits, who you connect with or who you partner with to create value, the structure of your organization, so whether it's centralized, decentralized, corporate, hub and spoke, et cetera. And then the processes that you follow to create your product or your service or whatever it is that you do. Process innovation is something a lot of people looked at, right? So if you look in industrial manufacturing, being able to create a faster, cheaper, more automated process will allow you to get your costs down, but processes again in isolation can be copied. The theory behind 10 types of innovation is the more types you can apply in consort together, combined on your business, or the way you look at your business, or the way you look at creating product, the more sustainable your advantage, because you have been able to create patterns or you've been able to bring together components of innovation that are harder to copy by anyone or by multiple companies. I'm going to pause there before I go further, just in case you have questions.

Laura Mertens: That's a really interesting perspective you're bringing, because I looked at a framework that tries to categorize business model innovation, and it basically looks at two different dimensions. The first one being level of novelty. So if the innovation is new to the firm only or is like an industry-wide novel thing. And the second dimension is the scope. So if it's like concerning only one certain part of the business model or if it's like concerning a lot of parts or the whole business model. And what you're saying about like, sustainable innovation is like a really good perspective, which I haven't looked into for now.

Expert C: The point you raise around the horizons is important. And there is something else called balanced breakthroughs in the theory that Dublin used to espouse. And again, this is the only framework I've really had good intimacy with. So there will be others. The balanced breakthroughs is around when it comes to innovating. Obviously, you assume that there is an existing business, or that that business is already operating, so it has a limited budget, or doesn't have unlimited resources. And so the horizons and the amount through which you invest in innovation is important. And having a portfolio approach to investing. So you place a number of smallish bets with something like 40 to 50% of your investment goes on these small bets that are probably new products to existing customers or existing products to new customers. And that's part of the portfolio. You then have the next 30% of your investment looks at new products to new customers. Sorry, let me reframe that. I've got that wrong. The first one is innovating your existing products to your existing customers. That's home base. That should be relatively easy, but maybe less defensible because you are using maybe less types of innovation, or the opportunity is smaller, so the returns might be smaller. Existing products, existing market, you may not be able to grow significantly from that. The next horizon is either new product, existing customers, or existing product, new customers. And you say, I'm going to try and find a way to either bring something different to my existing customers, or I'm going to go and take what I have, innovate and go and address a new audience. The final part then, as you might imagine, in this continuum, is new product, new customers. You create something entirely different for an entirely different audience when you don't have any unfair advantage of existing intimacy or existing loyalty. And you only spend about 10% of your budget there, or small amounts of your budget there, because it's risky, there's high potential for returns, but if you're looking at a portfolio approach, you don't want to put all your money there because you, statistically speaking, or probability, you've got a lower likelihood of success. So that layers on top of the 10 types of innovation. And so you can apply 10 types of innovation to existing products and existing customers. It's that your go-to-market success is going to be more challenged. If you start going into new markets that you're not familiar with, where you don't have expertise, where you don't have networks and relationships. I'm going to pause there because that's me validating the framework that you've described.

Laura Mertens: Perfect. Thanks. One interesting perspective for me would also be how is innovation different, or the dynamics of innovation different to a startup compared to a large company? How would you describe those dynamics?

Expert C: Interesting. Really good question. I think with innovation, you're looking to compete. There are advantages that some startups have over corporates, and there are advantages that corporates have over startups. And so in each one, if you're looking to innovate successfully, or you're looking to make use of those unfair advantages, so startups can be agile. They can pivot quickly. They have a more flat structure, typically, not always. They are able to probably develop faster because there is less corporate governance, potentially, or that just as a way of operating, they are more nimble because they need to be. So startups can, I guess, innovate potentially faster. I'm not saying that's necessarily the case because they can innovate within the capabilities that they have or the experience that they have. But compared to a larger organization, they have less network, they have less staff. A larger corporate has a body of knowledge. It has relationships with multiple different suppliers, has relationships with multiple different buyers, it has customer relationships in multiple jurisdictions, maybe not, but sometimes. It has potentially a better source of capital. If you're profit generating as opposed to a startup, you might get more access to funding. So you can invest more, potentially. Now that doesn't have to come from P&L either. So companies can raise funds for innovation. They don't always, but sometimes they do. Whereas startups have to raise money behind their business model, be very clear, and then have maybe some sacrifices around equity and so on. But, you know, startups, the stereotype tells us they can move faster, that's not always the case. They can probably pivot quicker, and probably have less scrutiny or less controls around what they do. So, as a corporate governance or corporate controls, if you're a listed company, you have certain requirements and restrictions. Companies have to, in some cases, disclose what they do. You can argue that there's been any number of inverted commas startups that have taken established corporates out of business. You look at Netflix, like a person's blockbuster. Or if you look at Uber as a start-up. The thing is that these guys weren't start-ups forever. They just created something that was disruptive quickly, but then became corporates to scale it. And their business model was difficult to compete with or it was difficult to replicate. That's not saying that startups have an unfair advantage over corporates. It's also not to say that corporates can't become startups. It's a spectrum. At some point, a startup becomes a unicorn. You wake up one day and say, oh, this startup's got a billion dollars. Are you still a startup because you've got, because of the number of staff you had? Do you graduate from startup or corporate because of your governance structures? You graduate from startup to corporate because of your government structure? Do you graduate from startup to corporate because of how much revenue you have in the customers, how many employees you have? The differentiation between startup and corporate I think is important. I'm going to pause again.

Laura Mertens: Okay. Thank you for the insights. I saw that you also had experience in financial services. Did you have experience with business model innovation or innovation within that role?

Expert C: Yes, many times. My job was financial services innovation for about five years. So working with Visa Europe to try to create new products based on their data and data models, working with retail banks to create new products, made use of technology or applications, tried to create interesting functionality that allowed users of banks to get more from their banking experience or to get better products. I have some experience of helping banks to innovate, yes.

Laura Mertens: Maybe you can elaborate a bit what role business model innovation and financial services plays and maybe how innovation has affected their business models in the past years.

Expert C: All right, good one. So I guess as background information, there are a couple of important drivers and barriers to innovation and financial services. Regulation is one. So what you can and can't do, who you can and can't sell to. Restrictions on products, product features, disclaimers to products, et cetera, socially appropriate lending rates, and so on and so forth. If you look at an example of innovation around lending in financial services in the last 10 years, you can look at the concept of high interest rate payday lending. That's not something that the traditional banks came out with as a product because it was ethically questionable. Very high levels of interest. There was demand in the market for it. It was desirable to the customer. It was technically feasible to deliver. Those propositions were often based on app-based. Still required a financial services license. So licensing is also another, I guess, barrier in some cases to innovation. And the traditional banks just said, this is too risky. We don't want to take on this business. The default rate is particularly high or the likelihood of getting payment back is high. We don't want to be in a high interest rates, but high default products. We'd much rather have stable, predictable, defensible business. That's a corporate governance constraint. And as a result, that book of business was not available to or banks opted out of that innovation. At the same time, banks have a pretty, I'm sorry, financial services institutions. I mean, again, you need to probably specify, are we talking about insurance? Are we talking about investments? Are we talking about retail banking? Are we talking about something else, life and pensions? And so, because in each one of those different sectors of financial services, you'll see slightly different drives and barriers. But let's stick with banking for the moment. The regulatory driven innovation is an interesting topic to look at. That's a theme. So open banking, PSD2, for example, was an interesting driver of innovation because it forced banks to open up the current accounts, open up APIs to allow for payments to and from current accounts initiated by third parties. It opened up the opportunity to create aggregator apps, or the ability where you could have multiple current accounts and multiple bank accounts consolidated or aggregated to one place where services could be orchestrated from or products could be sold, where you can get a single view of your financial services, of your finance picture. And on top of that, then, the company who provides analytics can then try to sell you services and products. That's disintermediation. So that is regulatory-driven disintermediation. That wasn't driven by the market, that wasn't driven by competitive startups, that was driven by regulation to say, in Europe, we don't want banks to have an oligopoly forever. We would like, we also see that banks have a low propensity to drive digital first innovation, because, and this is important, banks have very large, very old technology stacks that have, in most cases, relatively low levels of turnover and upgradeability because they're big, they're slow, they're expensive, they're risk averse. That technology cost base is a hindrance to innovation. A lot of the technology stacks were not designed to be, much lower, not designed to be interoperable. The challenge of having multiple accounts by a single customer in multiple different products sitting on very different systems, makes it very difficult even with a single bank aggregate a single view of the customer. Let alone that single view across multiple banks and multiple accounts. So banks have done that for themselves by having a technology infrastructure that's unfit for innovation. So that's kind of thing two. The next part of this is innovation in financial services within the scope of regulation, what's possible, has been driven a lot by technology. And how can we move the point of contact from the branch or the telephones to self-serve, high touch, high value. Financial services institutions are not famous for user experience design. They're not famous for high caliber technology delivery. That's just not something that is a core competence of a bank. A core competence of a bank is finance management, risk and governance, and keeping a secure store of things. And to not move fast break stuff, high cycle, regular updates, et cetera. It's just not the way typically they've been wired. Yet, we've seen companies that have came out, neo-banks, if you want to call it that, who have had a slightly different capability profile. And that capability profile is that they have all of the traditional capabilities you need in a bank. Regulatory compliance, KYC, AML, treasury management, payments, product design, but with a very heavy focus on user experience and digital first. And so the N26s of the world, the Clarinets of the world, and a few others have been able to grant market share. Also in European markets, they've managed to, because of the way that their single market works, they've been able to address multiple markets with a digital offering without having to have a physical in-country presence, which allows them to scale a little bit faster, a little bit better. So there's business model innovation there in terms of operations. Because they're digital first, they've been able to arbitrage their cost base. So rather than having very expensive staff sitting in London or Dublin, they've been able to have low cost staff sitting in Estonia or Lithuania and so on, supporting propositions. You can find examples in the middle where you see established national banks taking a digital first strategy and being successful. EKO, BP in Poland, or Millennium Bank, they've kind of acknowledged that they were not too encumbered by legacy, needed to be digital first, and could be successful in doing so. Before I pause, I would say that the same is true of insurance. And there is a dearth of talent around user experience in insurance. The other issue is with insurance products. You've seen some FinTechs, early stage startups, have been more focused on parametric insurance, more focused on customizable insurance. But in reality, that's still a riskier business to be in because you have less stickiness on the customer relationship. If you can switch on and switch off your travel insurance, or switch on and switch off your content insurance, whatever, the insurer is carrying the risk for a shorter period of time for less returns and there's a risk in the ability to Create returns on the the fees paid by customers and to support the risk that you're carrying so traditional insurance is traditional insurance because the kind of the the business model the profit model of insuring things requires capital and requires stickiness of the customer base. That's not to say that you can't create some innovation around the link between underwriting and sales. So for example, one of the things that I was often advocating for traditional car insurance, home insurance, is to link the pricing model to the actuarial model. Because you know that the actuarial model after a point in time is going to say, I don't want to insure more than five houses on this street, because that's too risky. At that point, you know you're going to be uncompetitive for anybody else who wants to get business in that street. So why wouldn't you allow at the, to know that the underwriter is going to say, no, I don't want any more business here. And then either stop quoting, or quote a ridiculously high price just in case. Now you can either create margin by saying, I wanna stay with you, I wanna stay with this or not, or identify the fact that you've got a willing customer that could probably fit still within your risk tolerance, but the computer is being inflexible. The malleability, the flexibility in the actuarial models relative to the business opportunity is not joined up. You've got silos within the way that you work as a company. So again, I'm gonna pause there, probably rambling thoughts on financial services innovation, but hopefully helpful.

Laura Mertens: Yes, for sure helpful. Maybe one last question, you mentioned that technology is an important driver. Would you say that sustainability is also an important driver in innovation, or do you come up with even more important drivers of business model innovation?

Expert C: So the ability to defend or sustain your innovation is a good question. As I said, if somebody can copy what you do, if all you did was you made your website pink one day, to appeal to people who like pink, every other bank in the market, if everybody suddenly only likes pink bank accounts, or it's pink websites, every bank in the world's gonna have a pink website tomorrow and that is completely undefensible, because you've done nothing that is particularly differentiated or that requires particular skill or expertise to deliver. And so, if you're competing in a market, the ability to create something that others don't have and can't get easily is important. So that's something that people can't get by hiring one of your staff or using similar messaging or creating a product that is identical. If product features is your only innovation, it will be unsustainable, or it'll be easy to copy quickly. I use sustainability not in an environmental sense, I use sustainability in a how long can you continue to compete with this innovation before others catch up. And so back to the 10 types of innovation. The more types of innovation you apply to what it is that you are, you're changing, you're innovating, and that could be purely business model, it could be the exact same product, but delivered in a different way with more partners, with less in-house production, with more services delivered digitally with a lower cost base, or data captured from more third parties to reduce the risk of default, or to present or holistic or interesting or innovative products to the customer. Could be anything on that spectrum. But the more types of innovation you apply to that particular upgrade, the better. And also it's important to realize that applying the 10 types of innovation isn't something you do for the company. You do, here's the 10 types I'm going to use, and we'll use those 10 types in one go, and then we'll see what happens. Those 10 types can be applied in different product areas, in different parts of the organization. Any company, or any function, or any product owner looking at innovation can look across those 10 types and say, in my domain, how do I apply this? In finance, I'm the CFO. How do I look at my profit model, my network model, my, how I deliver my services, the features of my services, the branding of my services, et cetera, to deliver a more innovative finance function? How do I turn my, how do I turn my finance function to a profit center that allows my company to reinvest money in innovation and future, or to get a higher margin to be able to reinvest and give back to shareholders, whatever it is. So 10 times of innovation or innovation itself is not something you do once, apply the types and then go. It's something you can repeatedly apply as a framework every time you want to innovate, every time you think to innovate. And my final thought then on that one is, how often do you think to innovate? innovate, right? Because if innovation is a once a year thing, right, it's January, we're all gonna innovate now. That's probably less meaningful as a, or less impactful as a path to innovation than more regular cycles. But it's a constant trade off, right? Because you're trading off the time and attention of your staff and your ability to invest in those innovations for supporting business as usual and supporting your existing customers. So there's an important challenge around the culture of innovation in the company. We're not saying, hey, we're gonna use innovation all the time and every day we're gonna be creating a new proposition, we're gonna be writing a new business canvas, we're gonna create new proposals. Maybe not. But those companies that commit appropriate resource, appropriate focus, and make innovation part of the way of working, the expectation of working, probably have a greater likelihood of success. If you're working for a bank whose primary culture is responsible behavior, regulatory compliance, and risk management, you're likely going to see less focus on innovation in your processes and ways of working because the company is focusing its energy on being different or being in a different mode. That's not to say that you can't have financial services institutions that can have a corporate culture of innovation. It happens very often. But at the same time, there are fewer people who can engage with innovation as a topic or as a concept because their focus is, they don't have the tools or the training or the experience to deliver on those things. Innovation to them is, I'll go to a workshop and put some post-it notes on the wall, share some ideas, and that's me done for the next six months. As opposed to trying to find a more regular cadence of trying to find more regular forums to train people how to think about innovation. How to actually use the thinking and then apply it regularly as part of business as usual. As opposed to some sort of corporates. I get two days off to go and be innovative this year. What a load of fun. That'll be brilliant. I'll drink smoothies, I'll go to a really nice room, that's much, much more exciting than my current office. I'll go and do something innovative, I'll come up with some good post-it notes ideas, and then that's my job done. I can go back to being a boring risk manager and trying to make sure that I don't lose my customers' money. That's culture-wise an example of, you're not going to get very far if that's the typical staff approach or typical leadership approach to how innovation is orchestrated or how innovation is facilitated in a company.

Laura Mertens: Okay, thank you so much.

Appendix 29 – BMI Identification Table

				Step 1: Identifying BMA and BMI		*Step 2: Applying BMI Typology Framework by Foss & Saebi (2017)*				
				Form of Business Model Change		Level of Novelty		Scope		Typology
*Business Model Change**	*Investment Bank*	*Year*	*Identification Key*	BMA	BMI	New to Firm	New to Industry	Modular	Architectural	Form of BMI
More focus on the design, origination, pricing and use of securities within Investment Banking advisory, due to shift in consumer needs (see Appendix 3)	Goldman Sachs	2005	BMC 1	x						
Establishment of Urban Investment Group for innovative impact investments and an Environmental Policy Framework (see Appendix 3)	Goldman Sachs	2005	BMC 2		x		x		x	Complex
Increased integration and merging of both advice and capital services through which Goldman started to leverage more of ist own financial resourecs to execute transactions (see Appendix 3)	Goldman Sachs	2005	BMC 3		x	x			x	Adaptive
Extended customer segment to world's largest hedge funds, due to increase of private equity hedge funds (seep Appendix 3)	Goldman Sachs	2005	BMC 4	x						
Global expansion of services to Asia and emerging markets (see Appendix 5)	Goldman Sachs	2011	BMC 5		x	x		x		Evolutionary
Increased staffing in technology roles (see Appendix 6)	Goldman Sachs	2015	BMC 6	x						
Technology implementations, such as data analytics, to improve quality of service and customer experience (see Appendix 6)	Goldman Sachs	2015	BMC 7		x	x		x		Evolutionary
Cost compensation strategy established to offset increase in employee costs due to increased headcount, such as employing more juniors or re-locating to cheaper workplaces (see Appendix 6)	Goldman Sachs	2015	BMC 8	x						
Cost reduction through technology implementations such as cloud technology (see Appendix 6)	Goldman Sachs	2015	BMC 9		x	x		x		Evolutionary
Increased focus on long-term investments for the future and thereby established a new planning process, which spans over multiple years (see Appendix 7)	Goldman Sachs	2019	BMC 10		x	x		x		Evolutionary
Establishment of a detailed value proposition, including a new purpose and positioning statement (see Appendix 7)	Goldman Sachs	2019	BMC 11		x	x		x		Evolutionary
Strategic expansion to consumer banking (see Appendix 7)	Goldman Sachs	2019	BMC 12		x	x			x	Adaptive

Step 3: Applying 10 Types of Innovation Framework by Deloitte Digital (2023)

	Configuration				Offering		Experience				
Identification Key	Strategy of revenue	Networks and cooperations for value	Organisation and alignment of talents and	Processes to enable operations and services	Differentiating product features &	Product systems and complementary products	Enhancing customer interactions through service	Channels and offer delivery	Brand Representation or	Customer engagement	**Sum of Types of Innovation**
BMC 1											0
BMC 2	x		x		x				x		4
BMC 3	x	x	x	x	x	x	x			x	8
BMC 4											0
BMC 5	x		x					x			3
BMC 6											0
BMC 7			x	x	x		x				4
BMC 8											0
BMC 9			x	x							2
BMC 10	x			x							2
BMC 11									x	x	2
BMC 12	x	x	x	x		x	x	x	x		8

				Step 1: Identifying BMA and BMI		*Step 2: Applying BMI Typology Framework by Foss & Saebi (2017)*				
				Form of Business Model Change		**Level of Novelty**		**Scope**		**Typology**
*Business Model Change**	*Investment Bank*	*Year*	*Identification Key*	**BMA**	**BMI**	**New to Firm**	**New to Industry**	**Modular**	**Architectural**	**Form of BMI**
New business division: Consumer platforms, which offers credit cards and credits for consumers (see Appendix 8)	Goldman Sachs	2022	BMC 13		x	x			x	Adaptive
Refined their purpose statement to "We aspire to be the world's most exceptional financial institution, united by our core values of partnership, client service, integrity and excellence" (see Appendix 8)	Goldman Sachs	2022	BMC 14	x						
Internal shifts towards a more integrated business model: US, Swiss, international entities, wealth management, Swiss corporate and retail banking within one Business Group (see Appendix 10)	UBS	2005	BMC 15		x	x			x	Adaptive
Launch of Dillon Read Capital Management for alternative Investments (see Appendix 10)	UBS	2005	BMC 16		x	x				
Industrial Holdings as a new segment, initiated by private equity investments mainly in Atel Group, which is an energy provider in Europe (59.3% interest) (see Appendix 9)	UBS	2005	BMC 17		x	x			x	Adaptive
Internal joint ventures representing the integrated business model approach (for instance, the joint venture between asset management and wealth management) (see Appendix 10)	UBS	2005	BMC 18		x	x			x	Adaptive
Partnerships to reach younger customer groups: Partnered with Apple in 2005 for the launch of iTunes Store in Switzerland, offering free banking services or advisory meetings to actively reach a younger customer segment (see Appendix 10)	UBS	2005	BMC 19		x		x	x		Focused
Four-step approach to consulting clients to increase customer experience and to differentiate from competitors (approach ensures to understand client needs, personalized solutions and continuous review & adjustments)	UBS	2005	BMC 20		x		x		x	Complex
Established a new brand tagline, which was used in all media communications: "You & Us" (UBS, 2005a, 4), representing UBS' one-firm approach (integration of all business segments to an integrated business model) and representing UBS' core value 'trust' (see Appendix 10)	UBS	2005	BMC 21		x	x			x	Adaptive
Established significant efforts to reposition and rebuild the firm by setting strategic targets: being leader in wealth management and client-centric investment banking (see Appendix 11)	UBS	2009	BMC 22	x						
Increased governance processes to protect and reinstate UBS' reputation (see Appendix 11)	UBS	2009	BMC 23	x						
Expanded sustainable products, including tailored services & products (see Appendix 11)	UBS	2009	BMC 24	x						
Global Asset Management became part of UN Principles for Responsible Investment to demonstrate importance of ESG in their activities (see Appendix 11)	UBS	2009	BMC 25		x	x		x		Evolutionary

Step 3: Applying 10 Types of Innovation Framework by Deloitte Digital (2023)

	Configuration				Offering		Experience				
Identification Key	Strategy of revenue	Networks and cooperations for value	Organisation and alignment of talents and	Processes to enable operations and services	Differentiating product features &	Product systems and complementary products	Enhancing customer interactions through service	Channels and offer delivery	Brand Representation or	Customer engagement	**Sum of Types of Innovation**
BMC 13	x	x	x	x		x	x	x	x		8
BMC 14											0
BMC 15		x	x	x	x	x	x				6
BMC 16											0
BMC 17	x		x	x	x						4
BMC 18	x	x	x	x	x	x	x				7
BMC 19							x		x	x	3
BMC 20		x	x	x	x	x	x			x	7
BMC 21									x	x	2
BMC 22											0
BMC 23											0
BMC 24											0
BMC 25		x							x		2

				Step 1: Identifying BMA and BMI		*Step 2: Applying BMI Typology Framework by Foss & Saebi (2017)*				
				Form of Business Model Change		**Level of Novelty**		**Scope**		**Typology**
*Business Model Change**	*Investment Bank*	*Year*	*Identification Key*	**BMA**	**BMI**	**New to Firm**	**New to Industry**	**Modular**	**Architectural**	**Form of BMI**
Essential initiatives were established to strengthen capital foundation after the crisis, mainly by cost and risk reduction: Reduced employee headcount by 12,500 to a total of 65,000 and fix costs by CHF 3 billion compared to 2008. Additionally, balance cheet and risks were reduced by 30% (see Appendix 11)	UBS	2009	BMC 26	x						
Diversified revenue streams through increased integration of sustainable products (SRI products such as UBS (Lux) Equity SICAV – Sustainable Global Leaders or UBS (Lux) Equity SICAV – Climate Change) (see Appendix 11)	UBS	2009	BMC 27		x	x		x		Evolutionary
Aimed to strengthen their position as bank of choice for high net worth and ultra high net worth individuals globally, while the latter is set as a target for growth (see Appendix 11)	UBS	2009	BMC 28	x						
Fundamental shift in key activities and establishment of a new client service model "UBS house view": wealth management globally and banking activities in Switzerland are in focus; whereas investment banking and asset management serve as enablers for a successful wealth management division; Focus of investment banking was set on reducing complexity and capital intensity (see Appendix 12)	UBS	2011	BMC 29		x		x		x	Complex
Established "Impact Investing" within their philanthropy service offerings (see Appendix 12)	UBS	2011	BMC 30		x	x		x		Evolutionary
Established a complex compliance framework to differentiate from competitors (see Appendix 12)	UBS	2011	BMC 31		x		x	x		Focused
Prioritize ultra high net worth individuals (+ CHF 50 million in investable assets) and high net worth individuals (CHF 2 million up to CHF 50 million in investable assets); wealth management additionally serves financial intermediary entities (see Appendix 12)	UBS	2011	BMC 32	x						
UBS Nobel Perspectives: An innovative series of dialogues with Nobel Prize winners in the field of Economic Sciences (see Appendix 13)	UBS	2015	BMC 33		x		x	x		Focused
Created innovation labs for research purposes, especially regarding technological innovations (see Appendix 13)	UBS	2015	BMC 34	x						
Became thought leader on blockchain as they launched a research project aimed to explore the technology (see Appendix 13)	UBS	2015	BMC 35		x		x	x		Focused
Collaborated with several start-ups, venture capital funds or academic entities to foster innovation within UBS (see Appendix 13)	UBS	2015	BMC 36		x	x		x		Evolutionary
Implemented data analytics, machine learning, AI tools for automation and robots within their operations and activities (see Appendix 14)	UBS	2019	BMC 37		x	x			x	Adaptive
Research activities are essential for their advisory quality; UBS research efforts differentiates from competitors through several initiatives: UBS Evidence Lab Innovations (providing data) and UBS Research Academy (analytics team with training offerings for institutional investors), which was newly launched in 2019 (see Appendix 14)	UBS	2019	BMC 38		x		x		x	Complex
Introduced several new tools in 2019, such as Asset Wizard platform (risk analysis for portfolios of ultra high net worth individuals) (see Appendix 14)	UBS	2019	BMC 39		x	x		x		Evolutionary
Customer relationships strengthened through a variety of platforms: UBS Evidence Lab Innovations, GWM platforms, WM Online portal, UBS Partner, we.trade, UBS Atrium and Mobile Banking (see Appendix 14)	UBS	2019	BMC 40		x	x			x	Adaptive

Step 3: Applying 10 Types of Innovation Framework by Deloitte Digital (2023)

	Configuration				Offering		Experience				
Identification Key	Strategy of revenue	Networks and cooperations for value	Organisation and alignment of talents and	Processes to enable operations and services	Differentiating product features &	Product systems and complementary products	Enhancing customer interactions through service	Channels and offer delivery	Brand Representation or	Customer engagement	**Sum of Types of Innovation**
BMC 26											0
BMC 27	x				x						2
BMC 28											0
BMC 29	x		x	x	x	x	x	x	x	x	9
BMC 30	x										1
BMC 31			x	x							2
BMC 32											0
BMC 33							x	x		x	3
BMC 34											0
BMC 35			x		x						2
BMC 36			x	x	x						3
BMC 37		x	x	x			x				4
BMC 38	x	x	x	x	x		x				6
BMC 39							x	x			2
BMC 40	x						x	x		x	4

				Step 1: Identifying BMA and BMI		*Step 2: Applying BMI Typology Framework by Foss & Saebi (2017)*				
				Form of Business Model Change		**Level of Novelty**		**Scope**		**Typology**
*Business Model Change**	*Investment Bank*	*Year*	*Identification Key*	**BMA**	**BMI**	**New to Firm**	**New to Industry**	**Modular**	**Architectural**	**Form of BMI**
Increased digital product range with the launch of key4 smart investing in Switzerland (see Appendix 15)	UBS	2022	BMC 41		x	x			x	Adaptive
Engaging with emerging technology such as blockchain: launched the industry-first digital bond, tradable on both blockchain and traditional exchanges, as the digital asset market is expected to grow with the potential to transform the market (see Appendix 15)	UBS	2022	BMC 42		x		x	x		Focused
New purpose statement established in 2021: "Reimagining the power of investing. Connecting people for a better world." (see Appendix 15)	UBS	2022	BMC 43	x						
Established and launched JPMorgan Private Equity Fund Services as a new division, as an attempt to expand services in alternative investments (see Appendix 17)	JPMorgan Chase & Co.	2005	BMC 44		x	x			x	Adaptive
Collaboration between retail banking division and card services, leading to new product services and a distinctive competitive advantage (see Appendix 17)	JPMorgan Chase & Co.	2005	BMC 45		x		x		x	Complex
Invested in expansion of distribution channels, especially in retail stores, technology and salespeople (see Appendix 17)	JPMorgan Chase & Co.	2005	BMC 46	x						
Expanded within Investment Banking to energy industry by including new capabilities and hence targeting a new customer segment (see Appendix 17)	JPMorgan Chase & Co.	2005	BMC 47	x						
Established new platform: Blueprint SM, which helps clients to better manage their financials (see Appendix 18)	JPMorgan Chase & Co.	2009	BMC 48		x	x		x		Evolutionary
New geographic expansion for Wealth Management to Miami, Philadelphia, San Francisco, Seattle and Washington (see Appendix 18)	JPMorgan Chase & Co.	2009	BMC 49		x	x		x		Evolutionary
Increased efficiency through the merger with Bank One, which led to synthesized operating platforms, networks and data platforms (see Appendix 18)	JPMorgan Chase & Co.	2009	BMC 50		x	x			x	Adaptive
New value proposition communicated as "One Chase", which stands for exceptional service and meeting all client needs (see Appendix 19)	JPMorgan Chase & Co.	2011	BMC 51	x						
Increased mobile banking offering and services (see Appendix 19)	JPMorgan Chase & Co.	2011	BMC 52	x						
Fundamental activities undertaken to decrease risk exposure: exited several activities such as Private Equity or Physical Commodities business (see Appendix 20)	JPMorgan Chase & Co.	2015	BMC 53	x						
Corporations with FinTechs, for instance with OnDeck for new working capital products (see Appendix 20)	JPMorgan Chase & Co.	2015	BMC 54		x	x		x		Evolutionary

Step 3: Applying 10 Types of Innovation Framework by Deloitte Digital (2023)

	Configuration				Offering		Experience				
Identification Key	Strategy of revenue	Networks and cooperations for value	Organisation and alignment of talents and	Processes to enable operations and services	Differentiating product features &	Product systems and complementary products	Enhancing customer interactions through service	Channels and offer delivery	Brand Representation or	Customer engagement	**Sum of Types of Innovation**
BMC 41	x	x	x	x	x		x	x		x	8
BMC 42					x						1
BMC 43											0
BMC 44	x		x	x	x						4
BMC 45	x	x	x		x	x	x			x	7
BMC 46											0
BMC 47											0
BMC 48					x		x	x			3
BMC 49	x							x			2
BMC 50	x	x	x	x							4
BMC 51											0
BMC 52											0
BMC 53											0
BMC 54		x									1

				Step 1: Identifying BMA and BMI		*Step 2: Applying BMI Typology Framework by Foss & Saebi (2017)*				
				Form of Business Model Change		Level of Novelty		Scope		Typology
*Business Model Change**	*Investment Bank*	*Year*	*Identification Key*	**BMA**	**BMI**	**New to Firm**	**New to Industry**	**Modular**	**Architectural**	**Form of BMI**
Increased multi-channel approach, for instance, establishment of remote advice services for retail banking customers (see Appendix 20)	JPMorgan Chase & Co.	2015	BMC 55	x						
More personalized services through enhancing mobile app for consumer banking; improved online experience for Wealth Management customers by introducing new digital tools (see Appendix 20)	JPMorgan Chase & Co.	2015	BMC 56		x	x			x	Adaptive
Increased focus on clean financing, with investments of approx. $50 billion (see Appendix 21)	JPMorgan Chase & Co.	2019	BMC 57		x	x		x		Evolutionary
Expanding services of Investment Banking to emerging markets globally (see Appendix 21)	JPMorgan Chase & Co.	2019	BMC 58		x	x		x		Evolutionary
Established sustainable development target in 2021 and financed or initiated $482 billion since then (see Appendix 22)	JPMorgan Chase & Co.	2022	BMC 59		x	x			x	Adaptive
Increased focus on incorporating on AI, ranked number one within a study of AI maturity within banking (see Appendix 22)	JPMorgan Chase & Co.	2022	BMC 60		x		x		x	Complex
Established centers of excellence for ESG solutions and carbon transition, with dedicated and specialized investment banking employees who are providing expert advice to clients (see Appendix 22)	JPMorgan Chase & Co.	2022	BMC 61		x	x			x	Adaptive
Vision statement: "We aim to be the most respected financial services firm in the world, serving corporations and individuals."; New established purpose statement: "Make dreams possible for everyone, everywhere,	JPMorgan Chase & Co.	2022	BMC 62	x						
Increased Investment Banking footprint within the US (see Appendix 22)	JPMorgan Chase & Co.	2022	BMC 63		x	x		x		Evolutionary
*Changes that were identified as smaller, incremental changes are not listed and categorized. Although they accound for a business model										
				Sum	**Sum**	**Sum**	**Sum**	**Sum**	**Sum**	**Sum Evolutionary:**
				20	43	32	11	21	21	15
										Sum Adaptive:
										15
										Sum Focused:
										5
										Sum Complex:
										6

Step 3: Applying 10 Types of Innovation Framework by Deloitte Digital (2023)

	Configuration				Offering		Experience				
Identification Key	Strategy of revenue	Networks and cooperations for value	Organisation and alignment of talents and	Processes to enable operations and services	Differentiating product features &	Product systems and complementary products	Enhancing customer interactions through service	Channels and offer delivery	Brand Representation or	Customer engagement	Sum of Types of Innovation
BMC 55											0
BMC 56				x	x		x	x			4
BMC 57	x				x						2
BMC 58	x							x			2
BMC 59	x		x	x	x				x		5
BMC 60	x		x	x	x						4
BMC 61	x		x	x	x		x		x		6
BMC 62											0
BMC 63	x							x			2

Average number of Types
3.8

Appendix 30 – UBS House View Framework (UBS AG, 2012, 26)

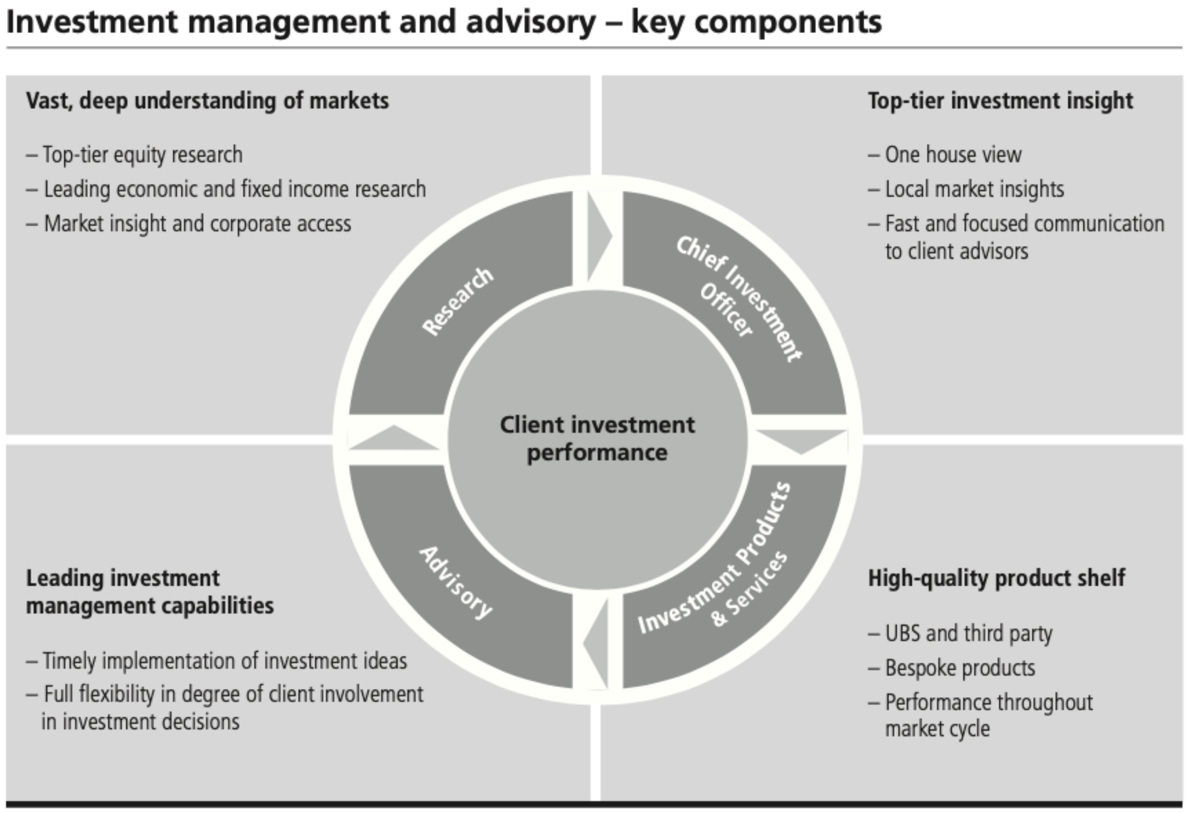

Illustration by UBS AG, 2012, 26.