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Evolution of banking systems: A comprehensive historical analysis

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Abstract: This paper provides a comprehensive historical analysis of the evolution of banking systems, tracing their origins from ancient Greece and Rome through medieval Europe, the Renaissance, and the emergence of modern banking institutions. It explores the foundational practices of ancient Greek "trapezitai" and Roman "argentarii," which laid the groundwork for more advanced systems that flourished in the Italian city-states during the Middle Ages and Renaissance. The development of commercial and central banking systems in early modern Europe, including the establishment of the Bank of Amsterdam and the Bank of England, is examined in detail. The study further highlights the role of colonial powers in shaping banking structures across the globe and discusses significant innovations of the 19th and 20th centuries, such as fractional reserves and the rise of investment banking. Emphasis is placed on the transformational impact of globalization, deregulation, and technological advancements in the modern banking era. Additionally, the paper delves into contemporary challenges, including cybersecurity, data privacy, and the integration of artificial intelligence, offering insights into the future trajectory of banking institutions. By bridging historical developments with modern trends, this analysis underscores the enduring significance of banking as a dynamic and essential component of economic systems, providing valuable lessons for understanding its future evolution.

Keywords: *Banking system, Economy, Historical view.*

1. Introduction to Banking Systems

The "tavla" represents one of the earliest forms of a banking system in ancient Greece. This practice, primarily associated with ancient Athens, played a significant role in the functioning of its marketplace. The term "tavla," which translates to "table," refers to the tables used by early bankers, known as "trapezitai," to conduct transactions. This practice gave rise to the term "banker," which remains relevant in modern terminology. Unlike modern bankers, the trapezitai primarily facilitated currency exchange and provided loans at interest. Due to the diversity of coinage among the Greek city-states, currency exchange was essential for enabling trade. Additionally, some trapezitai offered money storage services, functioning as early savings depositories. They also extended loans to merchants and private individuals, often at high-interest rates, to support economic activity. The operation of the "tavla" system relied heavily on societal trust. While formal regulations were limited, trustworthiness was critical for the reputation of these early bankers. Those who failed to meet their obligations faced significant reputational damage and were often excluded from the marketplace. This system, therefore, depended on both the personal integrity of the "trapezitai and the trust of their clientele. Historically, the "tavla" system laid the groundwork for the development of more organized banking structures during the Hellenistic period and later in Roman times. It highlights the ingenuity and economic innovation of ancient Greece, demonstrating its lasting contribution to the foundations of modern banking practices. The term "banking" is used also in the Italian city-states during the Renaissance.

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Florentine bankers, dependent on the mercantile trade of the city-state, were the prototypes for modern banks. Although the technology and market structure of these early banks differ significantly from banks today, many fundamental issues of bank management are recurrent questions that informed depositors and shareholders originally grappled with. What level of risk is efficient for a bank? What agency problems do bankers face and how might those issues be addressed? What sort of assets can or should banks hold? Much of the early literature on banking applies to modern banks, and many issues addressed by contemporary regulation have existed for centuries. In spite of the fact that banking emerged centuries ago, relatively little is known about why individuals formed banks or how they were structured. Moreover, should be mentioned that there exist some aspects from the Homer Mycenaean period and also in Mesopotamia, where temples were used as "banks".

The term "banking" its also used in the Italian city-states during the remarkable period known as the Renaissance. In fact, it was the Florentine bankers, who relied heavily on the mercantile trade that flourished in the city-state, that emerged as the prototypes for what we now understand as modern banks. While it is true that the technology and market structure of these early banking institutions differ markedly from the advanced banking systems we have today, it is crucial to note that many of the fundamental issues regarding bank management persist as recurring questions that inform not only depositors but also shareholders. These are the very questions that were initially posed by those engaged in the banking activities. For instance, what level of risk is considered efficient for a bank to undertake? Additionally, what kind of agency problems do bankers confront, and how might those complex issues be effectively addressed? Furthermore, what types of assets should banks be allowed to hold, or indeed, what types of assets ought they to hold? A significant portion of the early literature concerning banking is directly applicable to the operations of modern banks, and many of the pressing issues dealt with by present-day regulations find their roots in problems that have existed for many centuries. Despite the fact that the phenomenon of banking began centuries ago, there remains a surprising scarcity of comprehensive knowledge about why individuals come together to form banks and how these institutions were actually structured in their initial stages.

The purpose of this text is to provide a thorough and comprehensive historical examination of the complex and multifaceted evolution of banking as an essential institution in society. This exploration delves deeply into both the critical decision to form a bank within a richly layered historical context and the gradual evolution of actual bank managerial practices that have developed and transformed over time (Anggela Septiani et al., 2022; Herskind et al., 2020; Kurmanbaev & Stambakiev, 2019; Mutarindwa et al., 2020, 2021; Shandy Utama, 2019; Srivastava Neha, 2017; Utama, 2018; Yamaoka, 2023). Although banking has existed for many centuries, the specific time period from the formation of the earliest banks up until the year 1800 has received relatively scant attention from scholars and researchers alike, which is genuinely surprising given its immense significance in shaping the banking landscape. In the modern context, the foundational elements of most contemporary banking regulation can be traced back to the transformative and impactful decade of the 1930s, which stands as a pivotal time wherein banks accumulated substantial amounts of equity capital, and government insurance increasingly played a crucial role in the financing of banks. Indeed, the established expectation that depositors would bear little to no risk in the unfortunate event of a bank failure has been a long-standing and widespread practice that has persisted throughout a variety of banking epochs over many years. In striking contrast to the contemporary practices that we observe today across the banking industry, most early banks held very little in the way of equity capital, and the organizers of these banks typically relied heavily on leverage as a primary means to finance their operations. This historical reliance highlighted the significant differences between then and now, revealing much about the numerous challenges and practices that characterized the banking sector during its formative years, setting the stage for the complex dynamics we see in banking today. This rich narrative not only sheds light on the past but also poses critical questions about the future of banking as an ever-evolving institution within our society.

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1.1. Definition and Functions of Banking

Banks serve as fundamental and essential financial institutions, playing a critical and indispensable role in the operation of modern economies. Their primary function involves the reception of deposits from the general public, which encompasses a wide variety of participants, including individuals, families, and businesses alike. These diverse clients collectively contribute to the pool of funds available within the banking system. Simultaneously, banks create monetary demand through an innovative and sophisticated method known as book-entry credit accounting. This intricate and complex accounting technique allows banks to effectively manage, control, and allocate funds within the broader economy. By doing so, they ensure that resources are appropriately and efficiently distributed, allowing funds to reach distinct areas where they are most desperately needed for growth and innovation. This critical process thereby promotes overall economic health and stability, reinforcing the significant and far-reaching impact banks have on financial systems around the globe. Banks notably distinguish themselves from other types of financial intermediaries in two crucial and significant ways that profoundly affect their interactions with their customers. Firstly, the current accounts that both individual customers and enterprises establish and maintain with banks possess the remarkable capability of being readily convertible into cash or money upon demand. This feature provides unparalleled liquidity to account holders, facilitating seamless and hassle-free transactions. It ensures that individuals can access their funds whenever necessary, without encountering unnecessary delays or complications. Secondly, the liabilities that banks hold, which contrast with the physical notes and coins issued by a nation's central bank, are extensively utilized for a remarkably diverse array of payment transactions and financial exchanges. These numerous transactions span various sectors of the economy, showcasing the versatility and overarching importance of bank-issued liabilities in everyday financial dealings. A bank operates as a multifaceted and intricate enterprise dedicated to fulfilling a wide spectrum of both public and private financial needs. It actively engages in the complex and intricate business of banking, which encompasses a broad range of services tailored to meet customer demands in a dynamic economy. This dynamic and multifaceted activity, which is commonly referred to as banking, is defined as involving at least two out of five major operations or services, each of which is crucial in maintaining overall financial order and stability. These essential operations include the acceptance of deposits or alternative forms of repayable funds, allowing individuals and businesses to securely store their money while concurrently earning interest on those deposits; the granting of credit to individuals or various entities in need, thereby promoting consumption and investment in different critical sectors of the economy; the purchase of assorted financial instruments, such as bills, cheques, and various forms of debt, all of which facilitate liquidity in the market and contribute significantly to financial fluidity; the timely and efficient transfer of funds or acquisition of monetary claims to enable effective payment processes that are vital for economic interaction; and finally, the provision of guarantees on the liabilities of others, alongside offering similar financial services that inherently carry various associated risks. Through these diverse and multifaceted operations, banks play a crucial and indispensable role within the overarching financial system. They facilitate economic stability and growth, while also promoting the smooth and efficient functioning of commerce and trade across a multitude of platforms and industries (Aakre & Rübbelke, 2010; Acs et al., 2016; AL-UBAYDLI et al., 2021; Altman, 2012; Androniceanu et al., 2019; Arabyan, 2016; "Awareness of Tobacco Tax Policy and Public Opinion on Tobacco Tax Reform in Taiwan," 2020; Béland, 2017; Bernasconi & Espinosa-Cristia, 2020; Cai, 2017; Castaño et al., 2016; C. Challoumis, 2018a; Constantinos Challoumis, 2018c; Dollery & Worthington, 1996; Driver, 2017; Dybowski & Adämmer, 2018; Evans et al., 1999; Forson, 2020; Fronzaglia et al., 2019; Gong et al., 2020; GVELESIANI, 2019; Hartz & John, 2009; Hasselman & Stoker, 2017; Herrington, 2015; Koethenbuerger, 2011; Kreft & Sobel, 2005; Lajas & Macário, 2020; Liu et al., 2018; Mohindra, 2007; Montmarquette, 2020; Reeves et al., 2019; Rizzo & Throsby, 2006; Ruiz et al., 2017; Stern, 2015; Swanstrom, 2019; Turner, 2010; Wu et al., 2019). This comprehensive engagement in critical financial activities enables banks to positively influence the economic landscape, thus ensuring a stable and secure financial environment for all participants involved in the economy. In doing so, banks

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not only uphold the integrity of financial systems but also empower individuals and businesses to pursue their economic objectives through access to necessary resources and reliable financial services and instruments.

1.2. Importance and Role in Economic Development

The level of economic development significantly varies with the development level of the banking system in any given region. Throughout the course of history, the private property sector has consistently served as both the hotbed and the driving force propelling the overall economy forward. This vital sector is inherently obliged to effectively give rise to and render active, vital services that are instrumental in the optimal utilization of economic resources, the judicious application of capital, the generation of employment opportunities, as well as ongoing development and innovation within the economy. The adequate resources that are necessary for substantial investment, efficient production processes, and the generation of substantial employment may all be commanded through means of various savings activities. Therefore, the essential characteristics of the banks, which are fundamental elements of the entire banking system, include the capacity to undertake savings from the public and subsequently make loans available to those in need. The employment of currently idle human resources, as well as material or financial resources that exist within the economy, constitutes the principal duty of the banks. Financial resources, which are specifically referred to as capital, usually represent a genuine burden for the bank; nevertheless, they enable the banks to function effectively as instrumental tools of planning and development. The principal duty of the banks, which are recognized as economic organizations that deal with a continuous flow of enterprise, is, in essence, to create money and facilitate financial transactions within the economy.

The capital market, which serves as a vital source of alternative financial resources for production and investment, faces several pressing issues concerning its relationship with the banking sector. The banks, playing a critical role in this dynamic, address the financial requirements of various companies by issuing bonds and stocks as viable financial instruments. However, the expenses associated with these methods can become burdensome, especially for small-sized companies that may struggle to cope with the costs involved. Furthermore, many companies lacking a robust financial constitution might find themselves engaging in high levels of speculation, which can lead to substantial risks that elevate costs beyond what is typically associated with standard banking interest rates. As a result, banks do not merely act as custodians of the savings of companies; they also play a transformative role by converting these savings into loans that support a diverse range of clients. This function is particularly crucial for even the smallest and financially insufficient companies that rely heavily on the support of banking institutions to meet their operational needs. It is essential to recognize that the opening of banking markets and the transition toward a more open financial system do not diminish the significance of the financial system as a whole. On the contrary, these developments highlight the ongoing importance of a stable and well-functioning banking system in facilitating economic growth and ensuring that even the most vulnerable businesses have access to necessary financial resources. Thus, the interplay between the capital market and banks remains a fundamental component of the broader economic landscape, underscoring the essential roles each plays in fostering an environment conducive to financial stability and growth.

2. Greek and Roman Banking

The Greeks developed some of the most significant and impactful economic aspects of daily life, which would deeply influence the course of history in remarkable ways. In the thriving ancient Greek societies, the agora served as the bustling and central market of the city, vital for the community's economic fabric. This marketplace was not simply a straightforward area where various economic transactions occurred; rather, it was a vibrant and lively hub for cultural interactions, dynamic economic exchanges, and essential political discussions. It attracted a diverse array of groups of people, fostering a rich environment for ideas, goods, and trade. In the pivotal 5th century B.C., the Greeks made a

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groundbreaking advancement by inventing some of the most crucial coins of the ancient world, revolutionizing the way commerce was conducted. The first coins were meticulously crafted from silver, which was a precious material that was notably scarce along the expansive Greek coastline. As history progressed into the early 6th century B.C., after the region of Lydia faced a significant invasion, King Croesus took the innovative step of introducing an advanced form of coinage made from gold, which was also a precious metal, renowned for its remarkable strength and safety in trade. This new form of currency held considerable international commercial value, greatly facilitating trade across various regions and enhancing economic interactions significantly, thereby shaping the economic landscape for generations to come and embedding itself in the legacy of Greek contributions to commerce.

The Romans developed their sophisticated and intricate banking system based on various Greek models that had been established earlier and were widely recognized for their efficiency and innovation. These Greek private banks, which had emerged during that significant time in history, were called trapezitae, a term that comes directly from the word for table. This name was fitting because it was this very furniture piece where bankers would usually sit to conduct their business activities. It is essential to note that they were true pioneers in the utilization of money in their transactions, setting a precedent for financial practices in the following centuries (Constantinos Challoumis, 2018b, 2021, 2022, 2023e, 2023g, 2023a, 2023b, 2023c, 2023f, 2023i, 2023d, 2024j, 2024g, 2024m, 2024b, 2024e, 2024h, 2024s; Constantinos Challoumis & Eriotis, 2024). With the introduction of these institutions, Roman banks began to attract a growing number of customers who started to appreciate immensely the various benefits of seeing their money actively working for them and generating returns. The bankers of these establishments had not only the necessary facilities but also the comprehensive infrastructure required for the safe storage and reliable transfer of their customer's valuables, which significantly boosted confidence in the banking system overall. However, it is crucial to understand that the trapezitae and the argentarii were not considered money lenders in the strictest and conventional sense. While they did indeed issue loans to their clients, once those loans were made, it was universally understood that only private individuals could serve as effective guarantors for the repayments of these loans. This understanding emphasized a different structure of lending relationships in that era. The reliance on private guarantees for repayment marked a notable aspect of Roman banking practices and highlighted the vital trust placed in personal relationships over formalized banking structures as we know them today.

3. Medieval Banking

The more advanced banking systems that emerged and were developed in the Italian maritime republics of Venice, Pisa, Genoa, and Florence saw an even more thorough and comprehensive integration of money and extensive money transfer operations with many other banking functions. In comparison with the private deposit banks that were operational in Marseille, the Italian banks typically made concerted efforts to attract into their vaults and keep the largest quantities of outside deposits. In this particular respect, these banks came to assume the present credit money functions that are characteristic of modern commercial or deposit banks. In the bustling financial centers of Venice and several other locations, important moneylending and currency-issuing banks fully fit the characteristics of a present-day, full-service unit bank, offering a range of services to both individuals and businesses. These Italian model commercial banks typically had well-organized committees structured on a time basis, which were dedicated to the essential tasks of management control and thorough auditing; they established sufficient security arrangements that ensured the safety of deposits; and they maintained a high level of trust in the overall quality of the bank's operations, as reflected in the complete absence of bank failures and the notorious issues faced by many banks of that time.

In contrast to the private deposit banks, as well as the city deposit or discount banks, which serve more localized needs, the universally significant Italian promissory banks played an extraordinarily crucial role by directly benefiting the public sector in a multitude of vital ways. These banks operated as large and powerful consortia, forming highly business-oriented branches that could be found not only

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within Italy's borders but also in the Netherlands, Switzerland, and numerous other locations across Europe and far beyond. Such banks generally offered a diverse range of essential services; they acted as financial advisors for both public sector entities and private clients, served as executive agents for various financial transactions, and provided robust guarantees for the funds that they collected on behalf of their public sector clientele. Furthermore, these banks typically excelled at gathering large and widely spread deposits, particularly on behalf of cash-strapped governments that were striving to meet their essential financial obligations. After successfully gathering these sizable deposits, the banks then promptly redistributed the funds to their clients, which mainly consisted of various government authorities, municipal organizations, or their suppliers, thereby efficiently managing and administering the funds raised from taxes and government loans for the vital benefit of the public sector and its myriad of programs. The expansive reach and influence of these banks made them a critical component of the financial infrastructure, highlighting their integral role in stabilizing and supporting governmental financial needs throughout the region.

3.1. Italian Renaissance Banking

The period of the Italian Renaissance banking is commonly traced back to the 1200s, initiating a transformative era that experienced more than three centuries of relatively undisturbed development and growth in various banking practices. The Renaissance banks are truly unique in several aspects, encompassing not only their business approaches but also their innovative technical methods and diverse banking instruments. These features collectively served as a model and prototype for the subsequent banks that emerged later, which eventually spread and expanded their influence into other parts of Europe, across America, and even throughout the rest of the world. In reference to the four phases of money, it is important to note that the Italian Renaissance outlook predominantly covered only two significant phases: the origin of money, which is notably linked with its very first employment within the scope of commerce, and the persistent scarcity of money that was coupled with its alarming tendency to concentrate in the hands of a few individuals and entities who ultimately controlled its supply and distribution, particularly with regard to lending practices that involved the charging of interest.

The first banks thus created the elements of a new economic structure, which institutions subsequent to the Renaissance further developed until the present time. Relatively simple compared to, let us say, the universal banks of today, the early banks executed fewer styles of operation in banking, and their business was further restricted in accordance with the customs and laws of the times. Their operations encompassed not only the receiving of deposits and the extension of discounts but revealed numerous incidents of lending for purposes that would be unacceptable under today's legal provisions and social concepts. Such banking operations included extending accommodation on pawned goods at usurious rates of interest, financing and more often supporting noble retinues, offering charity in the form of benevolent loans, or patronizing the arts, sponsoring commercial undertakings, wars, or government initiatives.

4. Early Modern European Banking

The Early Modern European period encompasses a fascinating and significant chapter in the extensive history of banking, spanning from the remarkable rise of Italy as the foremost banking nation during the 11th and 12th centuries through to the transformative epoch of the Financial Revolution. In this timeframe, the thirteenth-century Dutch merchant bourgeoisie made conspicuous and innovative arrangements for the payment of various commercial debts that were paramount for trade. They utilized letters of exchange to provide a structured method for handling payments at specific times, generally concerning the settlement of visible merchandise accounts that were critical for commerce to function smoothly. Their ability to manage these financial transactions revealed an efficiency and sophistication in the settlement processes that led to the establishment of short-term credit, a system that allowed merchants to engage in business with greater flexibility and reliability. Consequently, it is not

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particularly surprising to find that the origins of the bill of exchange can be traced back to the practices of bankers who were actively participating in the dynamic Italian exchange, which was crucial to the banking landscape of the time. Moving into the 17th century, there was a notable shift in focus towards payments, especially to local tradesmen, who played a vital role in the burgeoning utility of the modern bank deposit system. Additionally, evidence began to accumulate suggesting that discounting of financial instruments and commercial bills merited special attention from bankers, signaling a growing complexity in banking practices as they adapted to the evolving economic landscape.

Little is known of English banking in its early stages, but it does not seem to have any very developed organization or structure before the year 1530. The London goldsmith was its natural foundation and played diverse roles within this nascent financial system, including functions such as coin changers, security depositors, bullion dealers, discounters, opulent businessmen, and lenders on security. The London goldsmiths lent their surpluses and took deposits that were repayable on demand through the use of checks, which could be mutually canceled in the absence of any of the rare cash operations that did not involve the mint. In contrast, Barcelona has some evidence of banking practices from the 12th century and inherently financed trade activities between Genoa and London during the 14th century. Venetian banking emerged as a well-developed system during the 14th and 15th centuries, showcasing a sophisticated approach to financial transactions. It is probable that the very first state bank was that of Venice, due to their arrangements with public entities in vital financial hubs such as Florence, Milan, and Genoa, which proved to become some of the most active and influential banking centers in Italy towards the end of the Middle Ages and contributed significantly to the overall development of banking as we understand it today.

4.1. Bank of Amsterdam

The Bank of Amsterdam was established in the notable year of 1609, primarily to facilitate the efficient and effective transfer of deposits that originated from the minting service, particularly during times when heightened wartime demand for readily available metals was prevalent. This innovative initiative played a crucial role in improving credit liquidity during periods that were often characterized by a downturn in the value of the national coin, which was a common and unfortunate occurrence. The deposits within this groundbreaking bank were often seen as a form of pseudo-currency, as they allowed depositors the convenience and flexibility of writing relatively small check-sized debits on their accounts, providing them with increased access to funds. These debits were payable in the mint's acceptance at the same denomination in coins, or alternatively, in larger physical currencies that were represented through transferable banking receipts. The provision of these essential physical commodities and clearing services can be regarded as the foundational basis of various decentralization models that emerged from this innovative banking system. These models granted the bank the significant authority to impose its developmental framework on both the debt and metallic money systems of that era, thus marking a pivotal shift in the financial landscape. This was primarily accomplished through the effective acceptance management services that the bank offered, which were inherently vital to its ongoing operations. The administration of the bank was a collaborative and coordinated effort between the city government and the local burgher authorities who were actively involved in the minting service, creating a unique partnership. The bank's certificates came to be perceived as holding equivalent value to the mint's direct acceptance, largely due to the fact that the bank successfully created its own ratio of bank holdings to currency in circulation. As the city steadily developed stronger connections with the mint's customers, it became increasingly important that the local economies actively attracted metallic deposits to sustain economic vitality. Additionally, payable arrangements from various city businesses that had a metallic extent also played an instrumental role in neutralizing the detrimental effects caused by the mint's destruction of goods, which was a pressing concern for the local community. Observers of the financial situation argued that there was a crucial need for an improved value of metallic-currency trade to be highlighted before the prevailing problems worsened to an unmanageable and catastrophic level. The only way to effectively intervene and achieve

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this desired effect was by ensuring that the mint did not lose a significant share of its crucial role regarding commercial operations and trade relations. Thus, the bank strategically aimed to restore its ongoing economic advantage by carefully managing these unforeseen challenges. Throughout its rich and storied history, the Bank of Amsterdam successfully managed to fulfill all of its policy objectives while maintaining its influential position in the financial realm well into the year 1790. However, this remarkable stability came to an abrupt and startling halt with the outbreak of the French Revolution, which dramatically altered the economic landscape and posed a series of new challenges that the bank had to confront and navigate. The effects of the revolution rippled through the financial system, creating uncertainties and requiring the bank to adapt in order to survive in a rapidly changing economic environment.

4.2. Bank of England and the Birth of Central Banking

Ever since it was originally established in the historic year of 1694, the Bank of England has been universally and widely regarded as the prototypical central bank within the vast and intricate global financial landscape. In many significant, varied, and diverse ways, it has effectively served as an essential model and crucial reference point for numerous other central banks that have been developed, established, and ultimately created across the globe over the span of more than three centuries that have passed since its momentous inception. This remarkable, storied, and time-honored institution has consistently continued to fulfill the essential role of a contemporary lender of last resort while remaining a vital and indispensable component of the intricate, interconnected financial system that exists in today's economic environment. The Bank was initially founded by a consortium of enterprising, resourceful London bankers, whose foremost objective was to raise a substantial loan amounting to £1.2 million. This significant financial injection was not just a mere formal procedure; rather, it was absolutely crucial for restarting all the challenging and arduous battles involving England. The funding provided not only necessary but also timely support to His Majesty King William III and his vital allies during the ongoing, fiercely contested conflict with France. The raising of this much-needed loan was a structured, carefully orchestrated, and meticulously arranged process that involved a selective group of underwriters among the original, committed subscribers. This arrangement and intricate procedure were later encapsulated in the Articles of Association of what would evolve, develop, and grow into the prestigious Bank of England that we proudly recognize today. This association played a crucial, critical, and pivotal role in efficiently managing the mounting debt that had been incurred by the nation, while its negotiability was further enhanced by an important clause that stated 'no other use … should be made' of the subscription that was dedicated to strengthening the associated funds of the institution. When the battles concluded sooner than anticipated and unexpectedly, leading to a victorious resolution of the protracted war with France, the Bank took on the substantial and formidable task of overseeing the unified management of this burgeoning public debt. Furthermore, the creditors involved had the valuable opportunity to receive their principal sum back, accompanied by an interest coupon that provided an element of financial reassurance. This marked the grand commencement of a remarkable and significant era, as this coupon became the first of a long line of National Debt Coupons that would subsequently be distributed in the years to come. The negotiability of these innovative, pioneering financial instruments was further improved through the various facilities that were offered at the Bank, which enabled and allowed for the efficient consolation of interest payments to be effectively managed. This meant that for those who chose to discount the coupons, they were generously awarded interest-bearing shares in return for their active engagement in the financial dealings of the institution. Additionally, the original subscribers, who were closely linked with the emerging ranks of shareholding employees of this incorporated entity, began to form the early, foundational ranks of formally employed central bankers who were destined to significantly impact the evolving financial landscape. They were not only instrumental in the numerous and expansive financial dealings of the institution, but they were also granted valuable limited monopolies and privileges that allowed them to operate within the financial sphere. This was particularly noteworthy given the recognized risks and considerable

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challenges associated with establishing monopolistic ventures in the complex and dynamic economy of the time (Constantinos Challoumis, 2020, 2024q, 2024t, 2024f, 2024v, 2024r, 2024u, 2024o, 2024w; Constantinos Challoumis & Eriotis, 2024; Kryeziu & Durguti, 2019; Kyewaalabye et al., 2022; Kyseliov, 2017; Lim et al., 2020; Miailhe, 2017; N. Johanessen & G. Zucman, 2014; Rikhardsson et al., 2021; Turner, 2010). The pursuit of financial governance and oversight represents a critically important foundation that underpins the modern economic systems we rely on today. The profound and multifaceted impact of these fundamental principles is clearly evident in the manner by which they have meticulously sculpted the varied paths taken by central banks and numerous financial organizations across the globe. These principles have embedded themselves deeply and irrevocably in the very essence of both national and international economic frameworks. In the face of rapidly evolving and increasingly complex markets, these institutions have not only sought to uphold and protect their respective jurisdictions but also aimed to harness innovative practices and pioneering strategies that would effectively foster resilience and adaptability within their operational structures. As they meticulously crafted their distinct approaches, these institutions paid careful and thoughtful attention to a multitude of lessons learned from historical precedents, ensuring that the practices they instituted not only reflected the wisdom gleaned from past experiences but also embodied forward-thinking strategies that are capable of anticipating future challenges. This necessary blend of tradition and innovation played an undeniably crucial role in shaping effective monetary policies and regulations, enabling them to successfully address the complexities that arise from economic fluctuations and unforeseen crises that can disrupt the delicate balance of financial systems. Furthermore, the continuous and unrelenting quest for improvement encouraged not just individual nation-states but also fostered international collaboration among nations, facilitating a rich and vibrant exchange of ideas, practices, and solutions to pervasive global financial challenges that transcend geographic and political borders. The overarching theme of interconnectedness became paramount, as central banks and financial institutions came to recognize that their individual successes were, inextricably, tied to the overall health and stability of the global economic landscape. By fostering a culture of cooperation and mutual support among diverse financial entities, they significantly strengthened their collective ability to respond to potential threats and crises, ensuring a more stable and resilient financial ecosystem for everyone involved in these endeavors. Through this intricate and dynamic tapestry of relationships and exchanges, the foundational tenets established by various banks and financial institutions proliferated throughout the global community, inspiring a whole new generation of policymakers and economic leaders to champion sound economic principles while effectively navigating the ever-growing complexities of an increasingly intricate financial world. As a direct result of these ongoing efforts, their legacy remains deeply influential in contemporary discussions, prompting an array of ongoing dialogues and considerations in the collective quest for economic stability and responsible governance that aspires not only to manage risk but also to promote sustainable growth for future generations, ensuring that the benefits of sound fiscal practices are enjoyed by all stakeholders involved in this vital endeavor (Altman, 2012; Constantinos Challoumis, 2018c; Dancygier & Laitin, 2014; de Mello-Théry et al., 2020; Haskel & Westlake, 2021; Johnston & Ballard, 2016; Kandrács, 2023; Kartini et al., 2019; Khan & Liu, 2019; Liu et al., 2018; Wilson & Gowdy, 2013).

5. Colonial Banking Systems

The expansion of colonial empires, particularly by Western powers in the sixteenth century, saw the implementation of different colonial administrations. Each administering country adopted its own approach to the governance of territories, ranging from direct to indirect rule. This therefore yields different banking regulatory regimes, ranging from direct control to limited authority over banking. First, the colonial powers implemented regulations to block illicit money flows. These laws yielded common issues in various regions. Second, while in some countries, a single regulatory entity controlled both domestic and foreign banks, we argue that regulatory structures were different under indirect rule.

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We delve into the intricate and complex emergence of distinct banking regulatory regimes that were carefully and systematically implemented by various Western colonial powers over an extensive period of time. Our central argument posits that each country that was administered under colonial rule developed its own unique banking regulatory framework, which was broadly structured around the specific laws that were enacted during that time and the degrees of control that were consistently exerted by the colonial authorities themselves. The administered laws encompassed a wide array of provisions that were extensive in nature; they included direct legislative measures aimed meticulously at controlling domestic financial businesses along with their associated stakeholders and constituents. Additionally, these laws were specifically designed to effectively regulate and guide the behavior of firms that were operating within the wider financial ecosystem or system. Furthermore, the colonial powers also instituted various laws with the specific and strategic objective of controlling and curtailing illicit money flows that posed threats; these laws mainly pertain to international money laundering regulations that were enacted both in the colonial powers' home countries as well as in the host countries where the various colonial rule was established. The variations in regulatory approaches demonstrate and reveal significant insights into the varying priorities and challenges that were faced by different colonial authorities during their governance, revealing a multifaceted picture of colonial financial regulation.

5.1. Banking in the American Colonies

Although the primary purpose of the mercantile system was fundamentally aimed at favoring the enrichment and financial well-being of the mother country, the elimination of certain specific trade restrictions that existed between the colonies and selected foreign nations was an inevitable and necessary accompaniment to this system. Most of the colonies, shortly after their founding, established some form of banking institution or utilized the functions of the Bank of England for limited periods of time in order to effectively address their various internal or external economic problems and challenges. In the year 1683, Massachusetts celebrated and honored the first piece of gold that was minted in England, which was documented to have circulated in America. This significant piece was a twenty-shilling coin that had been minted by Sir Joseph Williamson for Prince Maurice of Orange during the reign of Charles II in the year 1674. It is important to note that this situation was largely influenced by a myriad of factors, including the ongoing war between England and Holland, the elevation of old Spain as a significant power, and France's battle against the formidable Dutch sea power which was a force to be reckoned with at that time. New England ships, engaging actively in the lucrative West Indian carrying trade, had become the richest and most profitable in all of England due to their strategic positioning and adept handling of trade routes. Once faced with the pressing need for a reliable medium of exchange, Massachusetts took the decisive and bold step of establishing a mint, and notably, the sterling value of its coinage amounted to a remarkable 30 percent less than its legal face value, creating a curious economic situation. The Bay colonists would settle their debts to the home country utilizing the heavier coinage obtained from England; some of this coinage would then be meticulously reshipped back to Massachusetts specifically to purchase additional goods and supplies necessary for their burgeoning economy. At an early date, prior to the year 1710, the General Court of Massachusetts took significant action by establishing the very first bank in British North America. This was accomplished by enacting a law that provided the council of the colony with the authority to determine the necessary amount of specie that was needed within the colony to support its economic activities. It was stipulated by this law that only gold and silver could be exported, and even then, only in the form of foreign bills of exchange, and with the appropriate license granted for that purpose, ensuring a level of control over the precious metals that were so vital to the trade and economy of the colonies.

5.2. East India Company and Colonial Banking in Asia

Established in the year 1600, the East India Company emerged as the largest and most complex mercantile enterprise in the expansive tapestry of English history. Over the course of more than two

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and a half centuries, this remarkable Company amassed immense wealth and significant power, which found vivid expression in the fact that its ships constituted, at times, "a third of the tonnage, carried a third of the value of all European trade, and a half of that with the East." The formidable powers possessed by the Company are perhaps best illustrated by the striking reality that "it governed more territory than Europe's greatest land-based power." In a particularly telling episode reflecting its authority, at the docile nib of its Governors stationed in the Bengal Presidency, under the leadership of the rapacious and audacious figure Warren Hastings, Mughal Emperor Shah Alam—the titular sovereign residing in the grand city of Delhi—executed a pivotal document in the year 1765. This document, remarkably concise in its phrasing, effectively ceded indefinite sovereignty over vast territories, control over numerous people, and the right to revenue collection directly to the Company of Merchants trading to the East Indies.

The Company's inland trade was very profitable almost from the very beginning, but it employed other merchants to transact its own trading business—first in cheap houses, the market, and finally in its own warehouses. The Company began with a joint-stock capital of 720,000 pounds in 1600, funded by 873 shareholders, payable in ten equal installments over two years. Initially, this capital was held in perpetuity and was thus a relatively stable foundation of the corporate structure. At the very beginning, private banking was intertwined with the East India Company. It was not until 1702 that individuals other than members of the Company became Directors. However, in 1676, some rather wealthy "free gentlemen" combined together to open a trade for Indian goods, and in 1727, 716 of them applied to the Company for shipment to the eastern destinations, which was to be financed with a capital of 3,206,000 pounds.

6. 19th Century Banking Innovations

History of sound banking may be divided into eight different eras. We have now come to the sixth one. This takes us back in time to the early 19th century, a century that is justly celebrated, especially in Great Britain and the United States, because of the innovations of bankers who introduced explicit fractional reserves, thereby creating bank notes that circulated at approximately the market exchange rates for considerable periods of time. Ideas, however, never evolve completely out of the blue. They build on the existing stock. It would, therefore, be useful to outline how the fractional reserve system came about.

The adoption of the gold standard was, of course, a first step in the direction of sound banking because it created a link between money and the most marketable of commodities. During our present era, in which we have abandoned the gold standard, little need be said about it at this point. It may thus come as a bit of a surprise that these discussions are directly relevant to the first major innovation in banking in the 19th century, what is referred to by historians as the first one hundred percent reserve experiment.

6.1. Development of Commercial Banks

The development of the modern banking system can be traced back to Florentine bankers, who made their mark in the 14th to 19th centuries' economic and financial activities by permitting transactions against deposits and who initiated a rapid expansion of the public debt process. Meanwhile, the Dutch Republic featured a truly modern banking model (Constantinos Challoumis, 2018c, 2024a). Vault safekeeping business extended to the payment system: deposits held by a bank could be transferred between accounts by draft, clearing, or debiting the issuing bank's balance. Banks only carried out mutual transactions on the balance available at the clearinghouse at the end of the day, where they agreed to cancel, reduce, or rarely reconduct mismatches after assessing mutual positions (Balios et al., 2015; Dimitris Balios et al., 2020; Eriotis, 2011; Vasiliou et al., 2020). Simultaneously, these banks greatly supported the international markets and public debt of the countries of a fragmented Europe by providing liquidity, making payments, buying and selling securities on behalf of clients in different countries. Moreover, modern credit systems were founded, promoting economic growth.

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During the formation of the unified Italy from the 1860s to the 1870s, the crises of the Florentine banks were due to inappropriate operational strategies as well as local political factors. The failure of the Medici and Amerigo Vespucci inspired pioneering regulation by providing solutions and attributed ownership of a unique fundamental function to a joint-stock company.

6.2. Clearing Houses and Payment Systems

An important category of financial institutions consists of the clearing houses and payment systems in which their members exchange obligations, the primary of which are checks. The technological capacity of a society to make payments, together with a demonstrated demand for the service, is the beginning of money and banking. More than anything else, the development of the banking system depends on the costs of using alternative methods to make payments and those associated with existing banking institutions. If the latter can offer the service at lower cost, they can attract the entirety of trade and industry, taking privileged profits on their exchange, hire purchase, short-term, small- to medium-sized loans and other credit functions.

The benefits of interbank clearing and other, basically related forms of payments, lie in the additional funds that can be saved in the process of exchanging obligations, above the cost of savings using the traditional cash and/or transfer settlement methods. In fact, the larger the proportions of barter and indirect transactions as opposed to direct transactions of goods and services and the more the number of intermediation levels in a money economy, the greater is the role for ideal banking institutions and at least at still relatively low banking fees. In practice, the role of central or interbank clearing and payment systems has never stopped growing.

7. 20th Century Banking Transformations

Replica helped create a century that was dramatic in its technical capabilities and speculations that at times seemed boundless. We had thought that improvements in the ability of our banking systems to serve mankind had kept pace with and benefited from these advancing technological capabilities. We had thought that the institutional architecture of what we reconciled to in retrospect as a disappointingly unpredictable flow of benefits and costs, frictions and oppression, had enriched the system through time and likewise risen to meet the expanding technological and economic demands placed on it. We had looked back with pride and admiration at the centuries-old experiment of checks and balances that culminated in the innovative deposit/loan banking institutions that marked the final phases of asset transformation in Western economies, and we had assumed that a meaningful economy had nurtured them.

We had appreciated the extensive and quite rapid transformations in banking capabilities and services during the latter half of the 20th century. The financial grocery store of the contemporary bank represented the current epitome of a centuries-old banking evolutionary process that seemed to chronicle the successful pursuit of efficiency levels that appear to have epitomized beliefs in thrift, economy of decision, and the desire to preserve something of greater value in the future based on the framework of risk-taking that characterizes both the owner of bank capital and his fractional ownership interest in the banking business. We had erroneously taken these advances for granted.

7.1. Great Depression and Banking Regulations

The Great Depression is easily the most important event in U.S. or world banking history. It was more severe than any previous depression in Western history and far more than any other banking panic. No event since the Civil War has resulted in more deregulation of U.S. banking. The Depression shook the banking industry to its core and severely tested the foundations of banking policies of the period. The large economic swings that took place were at variance with theories that argued that the force of equilibrium was the force of stability itself. Commercial banks were to undergo substantial revision regarding their government regulation, their behavior, and the rules that governed the determination of their balance sheets. We can only deal with the essentials of the Depression era and

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banking regulation in this chapter. This period is very important, however, inasmuch as it gave rise to institutions and rules that are still with us.

By his quick action, President Roosevelt and his teams kept the American banking system from total collapse. It is argued by many that the seeds of the recovery from the Depression were planted during the era of Reconstruction Finance Corporation loans to non-member banks. The critical period of the Depression was from March 9, 1933, to January 15, 1934. During this ten-month interval, the crisis in the banking industry was confronted by a series of unprecedented events. To begin with, at first, the local lenders throughout the United States took their cues from the sovereign states, while the Federal Reserve banks and their member banks based in New York City took their cues from the President and his advisors. Local banks did take a lead from the Empire State stock exchange governors and board members, as corporations literally lost their New York City bank terminals. On March 4, the legislature had authorized Empire State night sessions to resolve technical matters, and Mr. Roosevelt was quick to accept the authority of the state setting bodies.

7.2. Birth of Investment Banking

Recap and Context The discussion of the joint-stock company as a form of financial association incorporating a vast scale of wealth encouraged us to better recognize the emergence of incorporated banks as another mode of financial cooperation that coincided with the former but developed less rapidly. Corporations had appeared since the twelfth century. Large-scale business required an extension of that principle to surviving associations; as a result, complete separation of the liability of the investor and that of the enterprise was to appear at the eve of the Industrial Revolution, theoretically almost as complete as between present-day members and their corporations. 7.2.2. Bank Developments According to Function and Product There were great differences in legislative treatment of the banking institution according to its function during these early stages of its development. The vast banking monopoly of conceding credit on the strength of deposits was, in fact, to appear after several centuries of banking practice and on the eve of bank corporatization. During the sixteenth and seventeenth centuries, the sales deposit spread formed the main income of the Lombard depositary. The first banking establishments were often mixed up with the first depositaries, but they were not from the outset privileged to issue notes, and even when they were allowed a privileged circulation, more or less general gold, silver, and coinage retained a significant role associated with their offices even when their beneficiaries preferred the safety, or even the covert revenue there, to carrying about them.

8. Globalization and Modern Banking

In the last part of the 19th century and the first quarter of the 20th century, modern banking became more and more international. Capital flowed rapidly between countries, but it was the manufacturers of many commodities who, along with certain service industries, were the main creators and beneficiaries of the new global economy. Banks in the early part of modern history had been simple national businesses, although their origins lay in foreign trade, and the banking business then was the processing and financing of that trade. No merchant bank of eighteenth-century Europe was a purely deposit-loan business, nor did any refuse to deal with the government in the art of public finance. The new international banking that emerged in the early 20th century systematized dealings in foreign exchange and thereby partially internationalized national currencies, if only in a loose way.

The central bank systems that developed in the early 19th century were made possible by fiscal reform in the first half of the century, which in turn had been rendered feasible by the peace and stability that followed the breakdown of the old monarchical system of states. At the end of the 19th century, it was the turn of capital markets to consolidate, and this development was fostered by the monetary arrangements of the time. But by the outbreak of World War I in 1914, inflation and the destruction of European economies nearly brought these markets, if not the industrializing economies they served, to disaster. No doubt a new international system is being shaped. But the shape it was to assume as soon and manifestly as that adopted in 1945 was then no more than an object secondary to a primary

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endeavor, which was the immediate task of dealing with the instability, financial disorder, and, above all, the political implications brought about by the crisis in the existing world financial and monetary structure.

8.1. Deregulation and Financial Liberalization

The 1970s and 1980s experienced major developments in the international macroeconomic environment and in domestic institutional arrangements and policy rules. The major international development was the collapse of the Bretton Woods system, based on a fixed exchange rate regime, and the simultaneous move towards floating rates. Technical changes that followed the development of the computer also made possible the development of new innovative financial instruments that augmented competition between the banking sector and the rest of the financial system. These two elements led national and international authorities to question the relevance of a regulatory regime that had been established mainly for domestic institutions in a context of fixed exchange rates.

The first response, adopted essentially by the United States, was to deregulate the domestic financial environment and allow the rise of innovative nonbank financial intermediaries and markets that would compete with traditional banks. The second response, adopted by major industrial countries with exchange controls, was to stimulate the development of international banking units and offshore markets that would operate outside the constraints of national banking legislation. These two attempts at regulating a financial system that was called on to operate in a much less regulated international environment were part of a much wider move towards liberalizing then regulating at a new, more integrated international economic environment. They also signaled fundamental shifts in the power structure of the international monetary system that had to be regulated, in the absence of an effective international market for money, to prevent the political powers of each country from having to violently contend on currency markets to stabilize the exchange rate under their authority. Finally, we are led to put in context and relate our observations to what is happening today.

8.2. Digital Banking and Fintech Innovations

The concept of innovation has typically been implemented by banks, commonly adapting new technologies while substituting or integrating current transaction methods, promoting new agents, proposing novel products, and providing new solutions through financial activities. In fact, financial evolution, when intensified, shapes and influences different behaviors in the banking system. Innovation within this oligopoly leads to modifications of the same nature. In recent years, new phenomena, like fintech, have become fundamental pieces for innovations looking to improve services provided by traditional banking institutions (Constantinos Challoumis, 2024n, 2024c, 2024p, 2024a, 2024l, 2024d, 2024k, 2024i). This paper aims to describe the different historical moments of the banking system, discussing various levels of innovation. We aim to indicate new and old challenges in the financial services sector.

Each invention establishes an evolutionary step, underlining limitations or new opportunities in an incentive or coercive way. Since very early times, humans have had the necessity of dealing with monetary issues and looking for solutions to their inherent transaction problems. Financial mutations guide and model a co-evolution between: 1) men and technology as they need to identify, produce, adapt, sell, distribute, and innovate, endorsing a financial system at a certain moment; 2) the culture of a society, based on knowledge absorbed, socioeconomic activities developed, and needs supplied. Such interactions are largely made with the use of money, evolving in the way society manages it effectively, reliably, and efficiently. With this approach, we can understand the reasons for current and future possibilities of a fast, modern, integrated, effective, and efficient economy, which can produce or optimize some property rights, being cheaper and smarter by focusing on new categories of transactions suited to fit new organizational modes.

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9. Challenges and Future Trends in Banking

The reflections will cover some of the present challenges of the banking industry, namely those that can affect the traditional role of banks in reducing gaps and helping them to create a safer environment and, consequently, a more favorable reputation. From the discussion of the challenges, options for future banking practices are highlighted, and some conclusions about the roles and structure of future banks are drawn. The future of the banking industry does not seem to align with the traditional concept of banking. Probably, it is time to change and discuss whether a bank must be the traditional institution that performs the full range of activities. The reflections on the future structure, concept, roles, and services provided by banks are also a major issue in current discussions among bank managers, regulators, and supervisors, who are involved in future economic growth and stability. The future of banking institutions must be light, flexible, secure, and an effective tool to promote economic stability, investing in secure assets, providing guardianship, and fostering economic growth. Finally, the perception of these challenges is also very important. The aims of this paper are to contribute in exceptional ways to the debate on banking structure and challenges, as it provides a historical approach and covers the entire geographic area and institutional development.

9.1. Cybersecurity and Data Privacy

With cyberattacks becoming an ever-increasing threat for financial markets, it is essential to examine the scope of fraud and the potential for supervisory regulation. Security issues are likely to continue to be a growing concern in the banking industry. With the increasing use of electronic banking, data privacy is becoming an important and controversial issue in banking markets. The prospect of information sharing by financial institutions and the recent transformation of financial institutions, particularly the activities of affiliates owning subsidiaries in different types of financial institutions, brings the ownership structure of financial intermediaries and the potential for systemic risk into focus.

Given that cybersecurity has become a major concern for financial and banking institutions, it is important to understand the nature of these threats and consider constantly evolving threats. The use of value-at-risk models to measure a bank's exposure to implicit insurance created by government-sponsored entities is discussed (Amanor-Boadu et al., 2014; Bento, 2009; Blundell & Preston, 2019; Cascajo et al., 2018; C. Challoumis, 2018b; Constantinos Challoumis, 2018d, 2018a, 2023h; dos Santos Benso Maciel et al., 2020; Erickson, 2016; Ginsburgh & Weber, 2020; Goldsztejn et al., 2020; Haskel & Westlake, 2021; Hausman et al., 2016; "Income Taxes, Public Fiscal Policy and Economic Growth," 2014; Islam et al., 2020; Johnston & Ballard, 2016; Jomo & Wee, 2003; Kandrács, 2023; Kartini et al., 2019; Korenik & Wegrzyn, 2020; Laplane & Mazzucato, 2020; Marume, 2016; Ndalamba, 2019; Ng, 2018; Oueslati, 2015; Pircher, 2020; Rumayya et al., 2020; Saraiva et al., 2020; Scholvin & Malamud, 2020; Snow, 1988; Swanstrom et al., 2002; Taub, 2015; Torres Salcido et al., 2015; Ud Din et al., 2016; Ustinovich & Kulikov, 2020; Victral et al., 2020). The need for such insurance becomes crucial due to the fact that borrowers might have incentives to undertake risky activities to exploit a government guarantee. The security of the exchanges, payments, and messages necessary for the bank's customers to purchase these financial services using electronic delivery channels is essential. The vulnerability of these electronic delivery channels must be understood in order for security measures to be adopted effectively. The effectiveness and efficiency of risk management frameworks are issues central to discussions of individual financial institutions, but primarily require a focus at the financial system level.

9.2. Impact of Artificial Intelligence and Automation

Nevertheless, over the course of time, a drastic and remarkable transformation has taken place in the banking industry, largely in the form of artificial intelligence advancements. The entire banking system is currently in a significant state of upheaval, closely following and mirroring the rapid developments in information technology and automation. At present, traditional banks, often found on high streets, continue to separate transactions from personalized advice and still strive to offer the

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cherished traditional 'human touch' that many customers expect. However, in recent years, developers have introduced hundreds of innovative new AI-based financial applications that provide 'automated touches' instead of human interaction. These applications are designed to deliver financial services efficiently and effectively, with processes and outcomes increasingly driven by large data analytics. When this data-driven approach is effectively combined with the capabilities of a cloud computing system, these AI tools can function as a quasi-bank, offering a range of services that challenge conventional banking practices and set the stage for the future of finance.

Table 1.
Banking system.

Section	Topic	Description
1. Introduction to Banking Systems	Historical origins of banking systems	Overview of early banking practices, including ancient Greece's "tavla" system and the evolution of modern banking.
1.1 Definition and Functions of Banking	Role and functions of banks	Explanation of banks as financial intermediaries, their services, and their importance in economic stability and growth.
1.2 Importance and Role in Economic Development	Banking's impact on economic progress	Discussion on how banks contribute to economic development by mobilizing resources, financing investments, and creating employment opportunities.
2. Greek and Roman Banking	Evolution of banking in ancient civilizations	Analysis of Greek trapezitai and Roman argentarii, their roles, and their influence on later banking systems.
3. Medieval Banking	Banking practices in the Middle Ages	Focus on Italian city-states like Venice and Florence, their innovations, and the transition from deposit banks to commercial banks.
3.1 Italian Renaissance Banking	Renaissance banking innovations	Exploration of banking practices during the Italian Renaissance, including the emergence of promissory banks and the impact of these practices on European banking.
4. Early Modern European Banking	Rise of banking institutions in Europe	Covers innovations like letters of exchange, early central banking, and the influence of the Dutch and English banking systems.
4.1 Bank of Amsterdam	Establishment of the Bank of Amsterdam	The bank's role in improving credit liquidity and its historical significance in monetary policy and trade.
4.2 Bank of England and Central Banking	Birth of modern central banking	Establishment of the Bank of England and its influence on central banking principles worldwide.
5. Colonial Banking Systems	Banking under colonial rule	Examination of banking systems in American colonies and Asia under the East India Company.
6. 19th Century Banking Innovations	Innovations in banking	Adoption of fractional reserves, the gold standard, and the development of modern commercial banks.
7. 20th Century Banking Transformations	Banking in the 20th century	Impact of events like the Great Depression, emergence of investment banking, and evolving banking regulations.
8. Globalization and Modern Banking	Modern banking and globalization	Integration of international banking, deregulation, and advancements in financial technology.
9. Challenges and Future Trends in Banking	Future directions for banking	Discussion of cybersecurity, data privacy, artificial intelligence, and the transformation of banking roles and structures.

Numerous academic studies and initiatives have predominantly been conducted in the context of emerging higher education institutions, specifically focusing on the intersections of artificial intelligence and the prospective evolution of the accounting profession. In contrast, this study aims to fill a notable void regarding similar inquiries within the banking sector. Additionally, considering the restrictions that have recently been imposed on larger, more established universities, the existing studies in the field can serve as valuable research models. This trend points toward the concept of the 'bank of 2040,' suggesting that it will incorporate the most effective blend of artificial intelligences, holonomic principles, and cloud computing technologies. This integration is anticipated to empower engineers to facilitate meaningful human-to-human experiences, which have largely been diminished by the current frameworks of banking services. Furthermore, these services no longer require direct transactions with a bank representative; instead, customers are empowered to perform various services independently, utilizing artificial intelligence through voice commands, touch interactions, or even through steering wheel controls in automobiles.

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10. Conclusion and Summary of Key Findings

This essay provides an extensive and detailed review of the vast history of money and banking spanning over a thousand years, tracing its evolution from ancient Greece and Rome all the way to the establishment of the Bank of England in 1694. The primary objective of this exploration is to demonstrate that the inception of the Bank of England represented yet another significant monetary reform; one that has been independently conceived, implemented, and forgotten multiple times throughout history. The profound insights drawn from many centuries of experience with money and banking during the pre-modern period may very well offer pertinent lessons for our contemporary era, particularly in light of the recent financial crisis that has left an indelible mark on the global economy. In addition to chronicling the overarching history of banking, this essay delves into the specifics of how and when banking practices evolved over the centuries. We also provide a succinct overview of the structure and organization of prominent banks such as those in Cairo and Venice, which played critical roles in the development of financial systems during their respective periods. The second section of this work is the most extensive and is structured in chronological order; it briefly outlines the significant monetary innovations that defined each era, beginning with the origins of money in the Near East and culminating with the foundation of the Bank of England. This section addresses the early emergence of coinage, the subsequent development and eventual decline of various forms of money within ancient civilizations, the renaissance of the concept of money following its obscurity, the medieval prohibition on interest, the different attempts made to regulate monetary use, and finally, the evolution of banking practices during the Renaissance era which set the stage for the creation of the fundamental elements of what would become a modern banking system. In conclusion, we summarize by listing some essential criteria that any bank should meet in order to be rightfully recognized as the very first "true" bank in the historical context of financial institutions. These reflections aim to provide clarity on the foundational principles that govern banking today and enhance our understanding of its legacy.

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