

Introducing Successful Financial Innovations: Rewriting the Rules in Light of the Global Financial Crisis

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Abstract—Since the 1980s, banks and financial service institutions have been running in an endless race of innovation to cope with the advancing technology, the fierce competition, and the more sophisticated and demanding customers. In order to guide their innovation efforts, several researches were conducted to identify the success and failure factors of new financial services. These mainly included organizational factors, marketplace factors and new service development process factors. They almost all emphasized the importance of customer and market orientation as a response to the highly perceptual and intangible characteristics of financial services. However, they deemphasized the critical characteristics of high involvement of risk and close correlation with the economic conditions, a factor that heavily contributed to the Global financial Crisis of 2008.

This paper reviews the success and failure factors of new financial services. It then adds new perspectives emerging from the analysis of the role of innovation in the global financial crisis.

Keywords—Financial Innovation, Global Financial Crisis, Lessons learned from Global Financial Crisis, Success Factors in Financial Innovation.

I. INTRODUCTION

FINANCIAL Innovation or the creation of a new thing that reduces costs, reduces risks, or provides a better product/service/ instrument that satisfies participants' demands [1] has been the theme of the financial service industry for the past two decades. The initially highly regulated institutions offering limited standardized services and products have realized that within the rapidly changing environmental conditions, the only way to gain a sustainable competitive advantage is to engage in an endless race of innovation. This was mainly driven by the fierce local and global competition resulting from deregulation, more sophisticated and demanding customers, rapidly changing technology, and lack of patenting in financial services [2]. As a result, financial service institutions considered innovation as one of their top strategic priorities and started to offer new products, new delivery channels, new financial services and instruments, new credit scoring models, new internal processes and even new organizational structures.

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This innovation race had its victims along the way. Many financial institutions introduced financial services that failed either on the operation side, on the marketing side, or are even terminated before launch. The result is that almost 70% of the resources devoted to developing new products are devoted to failing ones [3]. Therefore, researchers tried to help financial institutions win the innovation leadership race by providing them with the success and failure factors that affect the performance of new financial services, as well as, with different tools to measure success. They emphasized the fact that financial services are highly intangible and perceptual, and therefore customer orientation was always cited as one of the most important factors contributing to success [4],[5]. Other identified factors were internal that are related to the organization, external that are related to the market place, or other factors that are related to the new service development process adopted. In their search for the success factors of individual products, researchers failed to take into account two extremely important characteristics of financial services, their involvement of risk and their close correlation with the economic condition.

While researchers were busy identifying the success factors of individual services, the biggest failure for financial innovation happened, not on a micro organizational level, but rather on a macro global level; the global financial crisis of 2008. This crisis that affected all financial institutions and economies around the world and that resulted in falling stock markets, collapsing major financial institutions, and governments' interference to rescue their financial systems [6]. Literally, no country, developed or developing has escaped the impact of this growing crisis [7]. In almost all analysis of the crisis and its causes, financial innovation has always been accused of being a major contributing factor, if not the only one.

This paper re-examines the new financial products success and failure factors and measures in light of the 2008 global financial crisis. It starts with reviewing new financial service success factors as described by researchers. It then explains the role of financial innovation in the 2008 global financial crisis and how the incomplete identification of determinants of success partially contributed to the crisis. It finally redefines the success and failure factors of new financial services, as well as the measures of success, from a different more holistic

and longer term perspective. This perspective takes into account not only the performance of individual new services for the organization, but goes deeper into the interplay of these services with different environmental factors and their possible long term effect on the whole economy; this effect that proved to fire back on each and every individual institution no matter how successful its new products were.

II. SUCCESS FACTORS IN NEW FINANCIAL SERVICE DEVELOPMENT

The topic of Introducing successful new financial services has been tackled by many researchers since the late 1980s with the aim of guiding financial institutions in their innovation efforts. They differentiated between two types of success; the success of the development process, in terms of how it facilitates achieving product success, and the success of the service itself in terms of its achievement of intended outcomes. Whereas success of the development process could be easily measured by speed and cost effectiveness [8], researchers agreed that there is no single measure that is sufficient on its own to measure the success of a newly developed financial service and that several measures should be used together in order to be able to really assess the performance of the service. In surveying the suggested measures, financial measures (such as overall profitability, lower costs, and achieving cost efficiencies); competitiveness measures (such as customer satisfaction achieving high market share, above targets sales growth rates, enhancing company's image and reputation and realizing an important competitive advantage); and Quality Measures (such as having unique superior benefits, and improving the reliability of the service) were usually cited [8], [9], [10]. Reference [11] added to these measures enhanced opportunities (such as opening up of new markets or presenting a platform to introducing other new services).

When discussing the contributing factors to the success or failure of new financial services, researchers usually considered the special characteristics of financial services as being intangible, inseparable from the service provider, heterogeneous, perishable, and difficult to patent [12], [13], [14]. Therefore, constant innovation with careful capacity planning was usually emphasized. Customer orientation, or the new survival skill as termed by reference [4], was also considered a top priority as a response to the extensive involvement of customers in services [5]. Customer orientation, in terms of considering customers' needs, wants, and assessment criteria, as well as, customers' involvement in the NSD effort have always been referred to as critical success factors [3], [15]. Reference [16] asserts that for banks all plans should begin and end with the customer and references [12], [17], and [18] argue that the first task of any new service development is to create services that customers regard as having added value. On the other hand, the lack of customer understanding was identified as the major cause of new financial service failure [11], [19], [20]. This was also

identified as the reason why 9 out of every 10 new financial products fail in meeting their objectives [21].

Although some researchers highlighted the risky nature of financial services [12], [22], this was only translated in innovation research into a higher need for effective customer communication to reduce their perception of risk [23], a higher need to create trust between the customer and the financial institution, or a higher need for individualized marketing systems [22]. The long term or macro level implications of such risky nature was hardly emphasized or incorporated in research. As for other success and failure factors of new financial services, these could be divided into factors related to the organization, factors related to the market, and factors related to the New Service Development (NSD) process

A. Organizational Factors

Organizational factors are internal to the innovating financial institution and are mainly related to its innovation capabilities. Successful innovative financial institutions should embed innovation into the fabric of the organization [24]. This means that strategy, structure, culture, people and systems must all be innovation oriented in order for financial institutions to be successful innovators.

Among the important strategic factors contributing to success is a dynamic view of strategy that focuses on identifying valuable resources and how to nurture and redeploy them over time. Those resources must stay flexible in order for the organization to be able to rapidly adapt to large scale changes [25]. A learning organizational perspective in which past performance is analyzed to guide future innovation is highly important to exploit the full potential and reap the full benefits of innovation [26]. This should be coupled with an innovative organizational culture that promotes changes [27], and a strong, appropriate, and supportive organizational structure that is convenient to the specific type of innovation adopted. Institutions introducing successful radical innovations are usually characterized by bigger size, higher complexity, lower level of centralization, and higher level of integration if compared to those providing only incremental innovations. On the other hand, both product and process innovation need low level of centralization and high levels of formalization, complexity, and integration [28]. There must also be a high level of inter-functional coordination, as well as, effective communication between all departments and people involved [23], [29], [30].

Leaders and managers are the driving force behind successful innovation. Therefore, they must develop a talent to play the role of an architect who can merge technical knowledge with complex organizational design to drive innovation through the firm [31]. Extensive regular formal and informal communications between the leaders, as well as, hands in involvement by senior leaders usually characterize successful financial innovation projects [32]. These are also characterized by a strong and visible senior management support and commitment as demonstrated by allocating

sufficient time and financial resources to new service development [29], [30]. In addition, a committed, highly qualified, creative, motivated and enthusiastic workforce who have the necessary skills and expertise required to develop successful services is a prerequisite for any new financial innovation success [3], [29]. This is particularly true for customer contact staff that must also have a high level of professionalism, training, and service knowledge in order to be able to handle customer's worries in a friendly, efficient, and courteous manner [11], [33].

The ability to achieve synergies, or leveraging the strengths and competences of the organization for the new service is also an important driver of success. Financial institutions should try to reach a good fit between new service development project needs and the organizational resources, skills, and core competencies [33]. The new service should fit with existing services [11], as well as, with existing marketing, operations, management, and financial resources and capabilities in order to maximize its chances of success [33].

B. Marketplace Factors

No matter how brilliant the idea of the new service is, in order for this service to succeed, there must be a sufficiently large growing market for it that perceives it as needed and valued [29]. Therefore, on one hand, the new service itself must be unique, differentiated, and provides superior value to the customers [3]. Differentiated services were found to be three times more successful than me too services [33]. On the other hand, there has to be a service market synergy in order for any new financial service to succeed. Those new services that exhibit synergy between service and market were five times more successful than those with low synergy. The elements of a good synergy are a clear definition and understanding of the target market and knowledge of its size, a solid understanding of the customers' wants and needs and how the purchase decision is made, and a strong fit between the service and customers' wants, values, desires, and operating systems [3], [33]. There has also to be a good fit between the service and the existing image of the institution with consistent communication conveying this unified image to customers [29], [30]. Finally, market communication must be able to create awareness of the new service, as well as realistic expectations of its performance and quality [23]. The communication package should be integrated including print advertising, press coverage, direct mail, selling efforts by a trained sales force and indoor advertising [34].

C. NSD Process Success Factors

Many researchers stressed on the importance of a well planned, systematic, and complete NSD process in order for the new services to be successful [29], [30], [33]. Although they provided different phases for the process, they all shared common phases that are considered the most important and that together compose a complete process. These are formulation of the new service strategy, idea generation, idea

screening, concept development, business analysis, service development, market testing, and finally launch [35]. Reference [33] suggested that a stage-gate process that provides a roadmap from new product concept to market should be used. This means having a well defined, systematic and formal new service development process with well defined stages and activities described within each stage. Go/Kill decision points are identified in order to decide whether to proceed with or to terminate the project. Criteria for decision are set for each stage and the decision made at each stage is tied to the company's strategic objectives. This enables management to focus the valuable and scarce resources on those projects with higher probabilities of success and to derail projects that were once promising but now do not appear so. They also associate success with a high quality execution of the NSD process with standards designed for each step and quality control check points built into the process. They stated that customer's involvement throughout the process increases chances of success to 80% while neglecting customer voice drop success chances dramatically to 20% only [33].

The implementation of the different phases of the NSD process must also be carried out according to some success rules in order to ensure the successful implementation of the whole process. In setting the new service strategy, customer requirements must be integrated with the enterprise competences to come up with a new customer oriented service strategy. Customers must be involved in the very early stages of the process so that they can co-influence the origin of the new service [36].

In Idea generation and idea screening phases, there has to be a systematic well established process to solicit new ideas and determine which ones will have the priority [29]. Customers are usually identified as the first external source of new product ideas [12], [37]. During Idea screening, ideas must be evaluated against customers' needs and behavior as the success of NSD is based upon how well the new products suit customers' needs [12].

The concept development and business analysis phases, which develop the service concept and assess the feasibility and probability of success of the new project, are identified as the most important phases to which success is mainly attached [34]. In order to maximize chances of success of those crucial phases, market research should be conducted before developing financial analysis [30]. It should be based upon a solid understanding of the type of information required and a good definition of the service concept. Gaining thorough market understanding and information would allow the institution to make early changes in the design before it is very expensive to do so [29]. Market studies might include user wants and needs studies, value in use studies (what economic value the new service will bring to the customers), competitive analysis, and concept tests. Market and technical assessment should be conducted early in the process and must be properly funded and executed. [29], [33]. A comprehensive business assessment should also be conducted to define the business proposition, justify the project, identify potential

risks and prepare detailed financial analysis, business risk assessment, and legal / regulatory assessment [33].

During Service design and development phases, in which the idea is translated into an actual service, researchers associate success with a unique design that is based on an extensive market research and competitive analysis [33]. Users must be actively involved in service design and testing [37] and design must be given all the resources that it might require in terms of both time and money [29]. Reference [12] explains that a very important step of product development is to develop the ways in which the product and its benefits will be explained to target customers in the promotion materials, contract forms, contact personnel, etc.

Testing is one of the very important steps of the process that gives the institution a chance to see the real performance of the new service and to take corrective actions when necessary. Enough time and effort must be spent on conducting thorough testing to ensure that the new service is properly designed and accepted [29]. It should include all technical and information technology aspects of the project in order to make sure that they are working properly with no technical deficiencies [30]. Market testing is crucial to ensure success even with prior marketing research [12]. Reference [5] identified this stage to be among the ones in which customers are heavily involved.

Quality of Launch greatly distinguishes between successful and failing new financial services. A well planned superb launch is usually a characteristic of successful new services. Launch effort should be well planned and coordinated with various communication materials ready and in place so that the new good service does not have a hard time succeeding [29]. There should be a real detailed marketing launch plan that is carefully crafted and outlines all the actions needed for launch. Part of the plan, there should be a formal advertising, promotion, marketing communication, training and internal and external marketing program backed with sufficient resources. The communication effort must be well targeted at the right customers [30], [33]. Quality of service delivery must be exceptional with customer contact staff well trained on the new service and possess all the necessary marketing and selling skills and knowledge before launch [33]. There should also be a control system to ensure that frontline staff is committed to sell the new service [29]. Communication should be effective in creating awareness, convincing, and promoting brand image. It must be able to explain potential benefits of the service and must create realistic expectations [23].

In summary, in order to develop successful new financial services, the financial institution's strategies, culture, structure, processes, policies, management and employees must all be innovation oriented. This should be coupled with a real market opportunity as represented by a large market that values the new differentiated service. It is the coordination and synergy between internal (organizational) factors and External (Market Factors) that lead to a market oriented, high quality and comprehensive new service development process that would finally produce successful new financial services.

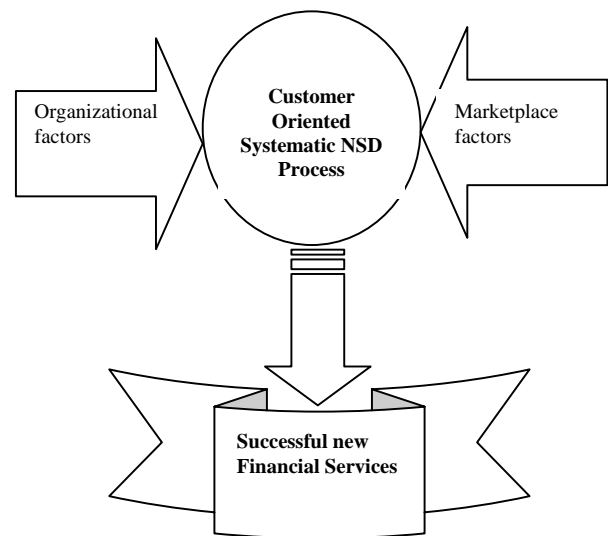


Fig. 1 Developing successful financial innovations

These factors were the formula that financial institutions adopted to introduce successful financial innovations. These innovations were later accused of being one of the main drivers of the global financial crisis of 2008.

III. THE ROLE OF FINANCIAL INNOVATION IN THE GLOBAL FINANCIAL CRISIS

The 2008 global financial crisis had its roots with the US subprime crisis of 2007. The high rate of default in the US subprime market made investors realize the huge amount of risk they hold in their investments. Markets froze and the funding for securities dried with prices going up. Banks stopped lending to each other as there was no information on which banks held the risky assets [38]. Liquidity problems appeared and asset price deflations weakened many banks. The crisis happened, and because of the high level of technology and globalization, it drew in, not only US, but also European and other international markets [39] with its ripple effect spreading into both high income and low income countries [7]. Since September 2008, the crisis has been the major concern for all economic and financial analysts who tried to come up with explanations for the causes of this crisis, as well as lessons to be learned and actions for the future. In doing so, financial innovation has always been pointed out as one of the heavily contributing factors.

Some researchers accused innovation of being the primary cause for the crisis such as reference [40] who clearly stated that the US subprime crisis is a direct consequence of innovation in the financial market. Others claimed that it only bears part of the responsibility with other macro economic and micro level institutional factors coming into play. Reference [41], for example, explains that the crisis emerged on one hand from the interplay of the US macroeconomic factors of monetary expansion, large capital inflows to US securities market, US housing boom and the increasing level of US household indebtedness. On the other hand, it was also caused

by the micro level institutional aspects of rapidly growing asset securitization coupled with innovation (in terms of new structured financial products, hedge funds, structured investment vehicles,--), in addition to the inadequate credit assessment and inadequate regulatory frameworks. Others blamed wrongly guided innovation for the crisis. Reference [42] states that "It was all done in the name of innovation, and any regulatory initiative was fought away with claims that it would suppress that innovation. They were innovating all right, but not in ways that made the economy stronger"

The truth remains that financial innovation played an important role in formulating the crisis. Innovators with their high appetite for profits and strong customer orientation were urged to grasp the opportunities of strong investors' demand for higher yielding assets [38] and customers' demand for loans and mortgage products. Thus, they introduced several new high risk lending and mortgage products. These products severely increased the household debts to exceed their disposable income by one third [41] and opened opportunities for fraud and uneducated customers who do not have enough income to make payments. Financial innovation also introduced standardized loan underwriting tools to make the credit decision easier and faster such as credit scoring that predicts default risk by applying statistical models to data. These tools replaced human judgment and led to accepting less than qualified loan applicants.

Innovators also violated the basic principal of not putting all eggs in one basket by bundling subprime mortgages into packages and then coming up with their innovative breakthrough of converting those packages of bad eggs into "triple A" high yield mortgage backed securities [40]. These securities met the demands of investors who also, due to the products' complexities, could not do the proper due diligence of their own and depended on the misleading credit ratings. This further contributed to the loosening of credit standards as mortgage originators did not care about the quality of loans since they have no intention of retaining them on their balance sheets and therefore, no longer felt the consequences of defaults. As for the regulatory bodies, the rate of innovation was so high that regulators did not have enough capacity to follow up on all these developments [38].

The crisis as such could be partially attributed to the mismanagement of financial innovation. This mismanagement could be described as a troika of three equal forces: financial institutions, customers and investors, and finally regulators. Financial institutions failed to see behind the boundaries of their own organizations and behind the horizon of their short term financial forecasts. They measured success of new financial services in terms of their achievement of the intended outcomes that were mainly financial or competitive. They focused their efforts, with the guidance of the above mentioned innovation success formula, on building their internal innovation capabilities, meeting market demand while being customer oriented, and carrying out a comprehensive new service development process that increases their profitability, enhances their customer satisfaction and reduces

their organizational risk. They did not study the long term impact of their products outside the organizational boundaries as if they were not aware that the problems they create to the economy will fire back on the long run. Therefore, their risk analysis tools were deficient and short sighted. They could not really estimate the risks of their new financial innovation and were totally surprised to see the deep political economic and social impact of their failures [40]. They also did not monitor the performance of their products over the long term to assure their continued success. Customers and investors also played an important role by their uneducated consumer behavior that made them adopt new, sometimes complex, financial innovations without doing the proper due diligence to assess the risk of such products. Meanwhile, regulators could not cope with the speedy rate of financial innovation and lagged behind in realizing the negative effect these new financial tools could cause, and thus, did not interfere in the right time to prevent the crisis.

IV. DISCUSSION AND CONCLUSION

The analysis of the role of financial innovation in the global financial crisis 2008 has several implications on the previously mentioned success factors of new financial services. First, it challenges the definition of success as "the achievement of intended outcomes". The collapsing financial institutions in the global crisis global financial crisis proved that this achievement could only be in the short run, while in the long run the outcome could be completely reversed. Therefore, the definition and measures of success in the financial services context could be reformulated, not only to include the long lasting achievement of intended outcomes, but also, the non achievement of un-intended ones both to the organization and to the economy as a whole.

Analysis also reveals that with the risky complex nature of financial services coupled with the high level of financially uneducated customers, customer orientation in new financial services should be handled with extreme caution. Customers and investors may not be able to assess the long term risks associated with new complex financial products. Therefore, they get tempted with the short term benefits provided, perceive them as valuable, and exhibit high willingness to adopt them. Financial institutions shouldn't be misled with the high demand on new financial services and should separate their technical and risk analysis from their market analysis. It is even preferable that they conduct complete risk analysis for the new services before conducting the market assessment. Most importantly, the scope of organizational view of risk itself must be widened to include, not only micro level, but also macro level risks. This means that when introducing new financial services, financial institutions should take into account the risks that may face the organization, as well as the risks that may face the economy as a whole from introducing this service. They must conduct a more formal and holistic risk analysis that considers the different risks that might affect the short and long term performance of the service, as well as, the possible

implications of the interplay of those risks on both the micro and macro level. Scenario planning could be a very helpful tool to conduct this analysis as it can project the performance of the new service within the different possible scenarios for the interactions of different environmental risks.

Finally, the importance of monitoring the performance of financial innovations after launch proved to be one of the most important lessons learned from the financial crisis. A number of major banks realized the risky nature of sub prime lending as early as 2006 and took the necessary measures to manage the risks. These were the banks that were not heavily affected by the crisis. Others, who failed to monitor the performance of their new products and were totally into the attraction of new business and generation of new products, were badly affected by the crisis [38]. This implies that financial institutions should have a formal systematic follow up and monitoring system for the performance of their financial innovations. This system should give early warning signals when one of the projected risks magnifies or when a new risk appears. These early signals could enable the institution to take the necessary measures to save both its financial and market position before the crisis explodes.

In conclusion, although financial Innovation contributed to the outbreak of the global financial crisis of 2008, it will remain survival imperative for financial institutions. They will not be able to compete within our rapidly changing global environment without constantly introducing new products and services. However, they have to understand that financial innovation is risky and is directly related to the overall performance of the economy. They should also understand that the whole world has become one system and that every problem has become a global problem that affects not only economies, but also politics and people, and would definitely fire back to each and every organization. Therefore, their base of innovation should slow down, and their view of success and how to achieve it should be completely modified. They should regard financial innovation from a completely different perspective, a perspective that takes into account not only the performance of individual new services for the organization, but goes deeper into the interplay of these services with different environmental factors and their possible long term effect on the whole economy.

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