Introduction

Investigating existing research with respect to the topic under study is a prerequisite for every research project undertaken, as it provides a basic understanding of the subject and helps in developing a framework for research. In this chapter, the literature on diversification in banking sector has been approached from several directions. The concerned issues in the present chapter have been addressed in following categories. (i) Review of literature on nature and extent of diversification (ii) Review of literature on determinants (motives) of diversification in banks and (iii) Review of literature on financial implications of diversification in banking sector. The investigation of existing research reveals that diversification in corporate and finance sector has gained widespread attention in both the academic and the business world, but empirical research on the performance consequences of diversified banks and financial conglomerates is lacking, if not non-existing. Reason being, that due to various regulatory constraints like The Glass-Steagall Act (1933), diversification was prohibited in a number of countries and moreover, the trend towards financial conglomerates is relatively new. Moreover, attempts have been made to study the diversification of banks in developed countries, but in contrast, studies analyzing the diversification in banking sector in developing countries, especially in India, are far fewer.

2.1. Review of Literature on Nature and Extent of diversification

The purpose of this section is to give a general overview of empirical studies which investigate the nature and extent of diversification in financial sector. Contemporary measures of diversification strategy, therefore, attempt to reflect the extent of firm diversity and relatedness among the various businesses of diversified firms (Rumelt, 1974, 1982; Montgomery, 1979, 1982; Nathanson and Cassano, 1982; Pitts and Hopkins, 1982; Palepu, 1985; Varadarajan and Ramanujam, 1987). In many studies, a
distinction was made between extent (or degree) of diversification and the mode of diversification. Degree of diversification was used to denote an indication of the diversity status while mode of diversification refers to the approach used by an entity to diversify based on the nature of relatedness and unrelatedness.

**Rumelt (1974)** examined the nature and extent of diversification of firms based on the work of (Wrigley (1970)). Diversified firms are categorized into nine categories according to the relatedness of products, market and technologies. The level of economic and performance attached with nine different categories are discussed in the paper. It was found that related diversification categories results into highest levels of financial performance as comparative to unrelated diversification, which results into lower level of economic performance.

**Galbraith and Nathanson (1978)** analyzed three strategies of diversification namely, vertical integration, related diversification and unrelated diversification. The authors suggested that each type of diversification strategy was associated with a particular benefit i.e. vertical integration was associated with vertical economies, related diversification results in synergistic economies (economies of scope) and with unrelated diversification, financial synergies are obtained.

**Varadarajan and Ramanujam (1987)** examined the relationship between diversity status and performance of firms by categorizing them on the basis of degree and direction of diversification. A two-dimensional categorical measures were employed namely Broad Spectrum Diversification (BSD) and Narrow Spectrum Diversification (NSD), In the study, to measures the nature of firm diversity, an approach based on the work of (Berry (1971)) and (Wood (1971)) was used. For analyzing the relationship between diversity and performance, a two-way analysis of variance technique was used. It was found that both BSD and NSD have significantly association with performance. Overall, related diversification has resulted into better financial performance and on average related firms has outperformed firms with unrelated diversification.
Amit and Livnat (1988) examined two types of diversification strategies, related and unrelated. According to the authors the related diversification has more in common with operating synergies, whereas the unrelated seems to have more in common with the search for financial benefits due to greater stability in cash flows. Result of the study shows that pure financial diversification was linked to more stable cash flows and increased levels of leverages. Moreover, diversification into related businesses augments the market power of the diversified company, which in turn helps the company to enhance its long-term strategic position.

Markides and Williamson (1996) concluded that assets are important for successful diversification as per the resource view of diversification. It was found that related diversifications outperform unrelated diversifications in business on the condition that only if firms compete across market where same assets can be used. Diversified structures can have long run and short run advantages by allowing the firm’s divisions to share existing strategic assets as well as transfer the competence to build new ones more efficient.

Hitt et al. (1997) argued that the performance-multinationality relationship was positively affected by the firm’s diversification level. The authors gave theoretical explanation that the firms built up their capabilities in product expansion and geographic expansion being complementary strategies as well as develop an appropriate organizational structure and better governance. Firms mostly take decision in sequence, by first expanding in product diversification and then expand their operations into geographic diversification.

Shull and White (1998) presented an analysis of three alternative organizational structures namely the universal bank model, the holding company affiliate and the operating subsidiary. The authors specified universal model as, one in which the non-traditional activity was consolidated within the same corporate entity as the bank. The holding company affiliate was defined as organizational structure in which the bank was in one subsidiary of a holding company and the non-traditional activity was in another
subsidiary of the holding company. In the operating subsidiary, the non-traditional activity was located in a separate subsidiary of the bank. The authors analyzed the potential financial sector benefits and costs of expanding banking activities and organization structure contribution in achieving the efficiency and risk diversification benefits. It was found that as compared with the universal bank structure, both the holding company structure and the operating subsidiary structure offer additional potential benefits and also reduced potential costs. Also, these two types of organization structures appear to be a safer bet than the universal bank for non-traditional activities.

Pilloff and Rhoades (2000) explored whether large, geographically diversified banks have more competitive advantages than small banks and found that geographically diversified banks do not have a net competitive advantage. The evidence shows that large and diversified banks not necessarily have more competitive advantages than small banks because the complexity of large organization makes management less efficient. Although, large banks were more able to offer diverse products and services and make lower price through the benefit of scale economies than small banks.

Verweire and Berghe (2001) applied the theoretical frameworks of corporate diversification to the financial service industry and provided empirical evidence on the financial performance of diversification strategy for the Belgium and Dutch financial conglomerates. The authors studied different dimensions viz, degree of diversification, mode of diversification and link between diversification and performance. The study concluded that a combination of the internal development route and actively pursuing the synergies between the different banking and insurance activities results in better performance. Leveraging core competencies into new business result in better corporate performance.

Lepetit, Nysa, Rousa and Tarazia (2005) analyzed the risk considerations of the trend towards product diversification in the European banking industry. Data was collected for the time period of 1996 to 2002. The relationship between banking risk and the degree of diversification was discussed. Banks that have engaged into fee-based
activities have significantly increased their risk where as risk was unchanged for banks, which have mainly expanded their traditional activities into trading only. A positive correlation was found between the risk and the share of fee-based activities. But with trading activities, a negative association was found with risk as these activities are associated with lower lending rates.

**Insill Yi (2005)** examined the relationship between market structure and diversification of financial firm. The level of diversification was measured in financial companies of 19 countries during the time period of 1996 to 1997, along with other factors like laws, regulation and other financial activities, which may influence the firm’s decision to diversify. Standard Industrial classification codes were used to measure the level of diversification in terms of the number of industries in which they operate along with market structure variables and various institutional variables in financial companies. Further, to study the relationship between diversification and market structure, six hypotheses were set.

1) The financial companies are more inclined to choose specialized banking with the growth of financial markets.
2) The financial companies choose to specialize with increase in the share of direct financing.
3) The greater the size of economy, the higher the level of diversification in financial companies.
4) The degree of diversification in financial companies increases with the increase in the size of financial companies.
5) The level of diversification was higher for financial companies, which deal in both financial and non-financial companies.
6) The stronger and strict legal system and property right mechanisms, results in lower level of diversification.

From analysis, it was found that the level of diversification and market size are positively correlated. With the decrease in the ratio of indirect financing to direct
financing, the financial companies choose to go for specialized banking. As per third hypothesis, the profitability of financial company increases with the adoption of universal banking structure. Accordingly, the level of diversification increased with the size of economy. The fourth hypothesis was also accepted. The business diversification and size of financial company was found to be positively associated. Next, as tested in fifth hypothesis, it was found that the financial companies dealing in both financial and non-financial business have higher level of diversification. Further, it was revealed that the ratio of direct to the indirect financial markets and the degree of protection of property rights affect the diversification behaviour of financial companies negatively, whereas it was affected positively by the size of financial companies and their business diversification across non-financial sector.

**Prasad and Ghosh (2005)** examined the financial performance and effect on the competition in the Indian banking sector after the implementation of the financial sector reforms initiated in the time period of 1991-1992. The study was conducted for the time period of 1996 to 2004, divided into two-sub periods, 1996-99 and 2000-2004. The degree of competition in the Indian banking system was examined on the basis of three Cs: competition, convergence and consolidation. The impact of these three factors was analyzed as these lead to bring structural changing in the banking system. It was revealed from the study that consolidation enhances more competition in the banking sector. Scope for further consolidation do exists in the banking industry without compromising at competition considerations. Further, overall, competition in banking sector has improved profitability, diversification and the cost and earnings efficiency of the whole banking sector.

**Milo (2007)** examined the changing organizational structures of banks and financial institutions in Philippines. In Philippines, broadly banking structure includes banks classified as

- Universal banks in the nature of expanded commercial banks,
- Commercial banks dealing in traditional banking and non-banking business,
• Thrift banks in the nature of savings and mortgage banks, stock savings and loan associations and private development banks,
• Rural and cooperative banks,
• Islamic banks.

It was found that banks continue to be progressive in diversifying financial markets especially after the 1997 Asian Financial Crisis. With the initial financial liberalization program, Philippines banks have diversified and extended commercials banking through the German variant model (universal bank). During post liberalization period, fee-based income of banks have increased to thirty percent of total operating income and other non-interest income indicating a high level of income diversification for domestic as well as foreign banks.

**Klein and Lien (2009)** examined the situation in which firms determine the optimal boundary for diversification of the firm across different industries. Broadly, the authors examined the implications of Transaction Cost Economics (TCE) for diversification decisions. TCE refers to the theory related with costs of contracting to know the firm’s preference to diversify and venture out in new industry rather than contracting out assets which are valuable for that industry. It is found that, firms prefer to diversify, in situations, when firms have valuable and difficult-to-imitate resources and such resources are complementary to resources in other industries.

### 2.2 Review of Literature on Determinants of Diversification in Banking Sector

A number of studies reveal that there are many possible motives behind diversification strategies (Amit & Livnat, 1988; Grant 1998; Wood & Batiz-Lazo, 2001; Montgomery, 1994; Scherer, 1980; Sambharya, 2000). In the following text, some studies have been reviewed briefly.

**Silverman, Murray, Castaldi and Richard (1992)** studied the environmental and organizational factors that influence the small bank’s propensity to diversify. A
A sample of 94 community banks was examined for the purpose. Variables like the relationship between the Chief Executive Officers (CEO’s) intention to diversify and their perception of market and competitive forces, aversions to risk and the bank size along with past performances were studied. It was concluded that many factors appeared as antecedents to the decision to diversify like CEO’s perceptions of competitive intensity, change in customer preferences for financial services, bank size and past earnings etc.

Montgomery (1994) provided three perspectives on diversification, the market power view, the resource view and the agency view. The two first views are both consistent with profit maximization, but only the latter embraces the use of resources. The third was of managerial nature and neither profit nor it leads to efficiency maximization. The author explains three possible reason for diversification i.e., cross-subsidization, mutual forbearance (companies can meet on another market to compete less severely) and reciprocal buying.

Jixin XU (1996) examined the portfolio diversification hypothesis of banking sector in Canadian banks over the time period of 1978 to 1985. The study highlighted two main motives of portfolio diversification namely, higher external returns and portfolio diversification to reduce risk. It was found that Canadian banks derive benefits from international diversification in terms of increasing stability of assets returns. Further, it was revealed that banks with international expansion escape the systematic risk of any one national market.

Schmidt, Hackethal and Tyrell (1998) investigated the disintermediation of banking activities in result of various transformations in financial systems in three developed economies namely France, Germany and the UK. Data was analyzed for the time period of 1982 to 1996 for Germany, 1981-1994 for France and 1982-1995 for United Kindom. The time period was selected when the tendencies towards disintermediation and securitization has increased. For the purpose of analysis four propositions were set and tested, namely:-
• Banking is a “declining industry”.
• Financial systems tend to develop "naturally" from being old-fashioned and bank based to being more advanced and capital market-based.
• Financial systems become more capital market-based and less bank-based.
• The primary role of banks is declining as mobilizers of savings from the non-financial sectors.

It was found that in case of German and UK, importance of banking as an intermediary have not declined as there was neither a transformation from bank-based to capital market-based financial systems, nor towards a general trend towards disintermediation of banks. However, in respect of France, transformation in banking system and economy has lead to general decline in the role of banks. A similar change was observed in respect of lengthening of the intermediation process in banks in all three nations. Non-bank financial intermediaries have taken lead over banks in mobilizing of capital from the non-financial sectors.

Milbourn, Boot and Thakur (1999) presented a model to explain the reasons for banks intensity to become bigger and expand the scope of operation. Two explanations were given. First, banks’ managers want to enhance their reputation despite the dissipation for stockholder’s wealth. Second, managers think that the strategies increasing size and scope of operation may increase shareholder wealth. The authors used the Cournot Oligopoly model in the study and revealed that in the environment of strategic skills uncertainty, the banks gains a first mover advantage in a new market and learns new skills to compete effectively in the market.

Johnston, Jarrod and Madura (2000) examined the effect of Citigroup/Travelers merger for impending consolidation of financial services firms which include commercial banks, insurance companies and brokerage firms. The valuation effects were measured which resulted from the merger announcement among commercial banks and financial services firms which were most likely to be affected. It was revealed
that commercial banks, insurance companies, and brokerage firms have experienced positive and significant valuation. For the purpose of study, a cross-sectional analysis was performed to elaborate the various motives behind combining banks with other financial services with special reference to the City group merger in United States. Product complementarities namely mortgage and mortgage insurance, auto financing and auto insurance were identified as the prime motives. It was found that the valuation effects were most favourable for brokerage firms followed by commercial banks and insurance companies. Merges create generate efficiencies and linkages between bank services and underwriting services resulting from sharing customers, outlets etc.

**Wood and Bátiz-Lazo (2001)** examined the factors which influence the management decision to diversify within bank markets and effectiveness of strategic planning in commercial banks. The survey was carried in three parts in during the time period of 1996 to 2001. The first part of the survey was carried out in 1996 in Mexico, Spain and UK and the second part covers Germany, Ireland and Mexico in 1999. A third survey considered participants from Sweden, Estonia and Portugal in 2001. Three styles of management styles are discussed in the study namely “Financial Control Style”, “Strategic Planning Style” and “Strategic Control Style”. “Financial Control Style” refers to style in which strict expenditures objectives and performance targets are set. In “Strategic Planning” of management, managers integrate business activities with strategic targets. In “Strategic Control” style managers strike to keep balance between resource allocations of firm with market influence. Managers aimed to add competitive advantage and create value through utilizing all the three styles of management in the decision to diversify. Further, four important factors are considered crucial in bank mangers decision to diversify, namely, country of origin (competitive factors), type of diversification move (growth opportunity pursued), strategic style (management approach), type of respondent (distribution by sector).

**Farisell and Noreous (2002)** investigated the process of consolidation in Sweden banking sector and the forces, which are driving banks towards consolidation of banking
with non-banking activities. The effect of consolidation on the banking sector efficiency with special reference to stability aspect was discussed. They divided the motives behind the mergers into three categories namely size, market power and other motives. It was found that the diversification effect of mergers between Swedish banks has probably been limited because it has not reduced the credit risk in the bank system. With regard to operational risk, the sensitivity to disturbances in technical systems increased, but to some extent this can be counterbalanced by the major banks by better opportunities to invest in advanced security solutions.

Landi and Venturelli (2002) highlighted the determining factors of diversification in the banking sector of Europe. The authors evaluated the implications of diversification process in terms of concentration, profitability and efficiency of banking sector in Europe. The external and internal factors such as economies of scale and scope, declining interest margins, etc. are forcing banks to diversify. It was found that diversification has affected all size and classes of banks. Banks have generated gains in terms of cost control, regardless of the size. Diversification strategy was used for increasing the economic returns of the entire banking business.

Barth, Caprio and Levine (2003) analyzed the comparative consequence of consolidation and diversification of banking activities. A group of countries were examined and it was found that restricting bank activities results into negative bank performance and comparatively less stability, as compared to when banks diversify into other financial activities which may be in the nature of related or un-related business. Broad banking powers allow banks to diversify income sources and enhance stability.

Went and Peter (2003) studied the arguments for the merger between two Scandinavian Universal Banks at the time of announcement of mergers with the main aim of external diversification. Major arguments given for mergers were improving competitive position, broadening functional competencies, changes in legislative and regulatory environment besides complementing branch networks and competencies.
Mergers were aimed at bringing improvements in the profitability and market position.

_Nagata T., Maeda Y. and Imahigashi H. (2004)_ examined the motives for diversification. Further, the effect of synergies between divisions dealing in different types of businesses on revenue enhancement of financial conglomerates was studied. The study was conducted for the time period of 1998 to 2003 for the subsidiaries of three major financial conglomerates in Europe namely ING Group, Allianz Group and Credit Suisse Group. A sample of 15 subsidiaries of the ING Group (7 banks and 8 insurance companies), 55 subsidiaries of the Allianz Group (8 banks and 47 insurance companies), and 28 subsidiaries of the Credit Suisse Group (4 banks, 20 insurance companies and 4 securities companies). It was found that major motive for product diversification was revenue enhancement realizing from providing one-stop shopping. Cost reduction through product diversification was given as second important motive for decision to diversify. It was concluded that after diversification, major synergies were derived from revenue enhancement as compared to cost reduction strategies.

_Pati and Shome (2006)_ discussed theoretically, the gradual disintermediation in banking industry in particular and finance sector in general. Banks act as primary financial intermediaries through accepting deposits at promised rate of return by converting them into different categories of assets in the form of loans etc. Deregulation has lead to increased tendency of disintermediation in banking activities as a result banks are diversifying their operations and business. Another factor for enhancing disintermediation was development of technology. Disintermediation activities in banking sector have also increased with declining share of bank deposits in global finance from 45 % in 1980 to 30% in 2006. Therefore, banks are diversifying to look for additional sources of revenue to enhance fee based and other source of income.

_Mallick (2008)_ analyzed comparative advantage of adopting strategic specialization or diversification in banking operations. In wholesale and corporate banking, domestic banks have comparative advantage as compared to foreign banks. Domestic banks take advantage of long term relationship with depositors and industries
besides knowledge of domestic and local industrial and market conditions. While foreign banks have advantage of access to the latest technology and communications network, as a result, such banks penetrate profitably in a new retail market. While community and regional banks face problem in business mobilization across different cultures and communities. However, in serving a specified community such banks have a comparative advantage. Overall, banks face problem of co-ordination failure when banks diversify across different regions and industries.

**Busch and Kick (2009)** analyzed the determinants of non-interest income and its impact on financial performance of German banks. The study was conducted of bank-specific observations from 1995 to 2007 for the sample covering, German savings, cooperative and private banks. Major reasons stated for banks decision to diversify are macro in nature. Banks diversify their operations to generate non-interest income to compensate for the adverse development in the interest business due to opening up of new markets, particularly in trading, asset management and investment banking activities. Another reason is that, the introduction of new regulatory requirements (Basel I and Basel II), impairs banks’ non-interest income activities. Opportunities in the cross-selling of business and banks’ exposure to competitive pressure are other reasons for banks decision to diversify. With regard to financial performance of banks, it is found that banks would benefit from diversification when all income components are either negatively or only slightly correlated.

### 2.3 Review of Literature on Financial Implication of Diversification in Banking Sector

The diversification and performance linkage has been a constant topic for strategy researchers over the past several decades (Christensen & Montgomery, 1981; Delois & Beamish, 1999; Diamond, 1984; Boyd and Graham, 1986; Lubatkin & Rogers, 1989; Rumelt, 1974, 1982).

**Kane and Buser (1979)** studied the cost and benefit of diversification in banks from shareholders perspective. Data for more then 800 largest banks of USA from the
time period of 1965 to 1967 was analyzed. For the purpose of study, proxy variables were assigned to the marginal costs and benefits available to the bank to deal in the particular markets and contracts. It was generalized that marginal benefits do exist for the banks from diversification in terms of reduction in the cost of equity offered by its shareholders.

Diamond (1984) analyzed the effect of diversification on capital structure and portfolio structure of the financial intermediaries. It was found that net ‘delegated cost’, which refers to the depositor’s cost of monitoring, reduced as the banks monitors a large portfolio of loans, diversified firms and markets. Further, it was examined whether portfolio diversification was a source of risk reduction for banks. It was concluded that a bank could reduce the default risk without a corresponding decline in expected return by investing in assets with different payoffs and are less than perfectly correlated.

Boyd and Graham (1986) examined the operation of banks into non-banking business lines and its effects on systematic return distributions of BHCs (Bank Holding Companies). A sample period of all domestic banks for the time period of 1971 to 1983 was studied. Those banks with total assets exceeding $5 billions at the end of 1983 were included in the sample. No evidences were found that a bank holding companies involvement in non-banking business systematically affected their risk of failure. BHCs with above average non-banking activities involvement experienced above average rate of return on assets.

Pulley and Humphrey (1993) analyzed to what extent banks providing a broad mix of services were able to estimate and determine gains realized through capitalizing the potential savings in transaction costs. A specialized revenue function was developed to study the impact on banks production cost. A measure of revenue economies of scope was used to determine the revenue complementarities aroused from effects of fixed revenues associated with specialized production. Consumer consumption expenses were considerably reduced through relationship banking strategies by ensuring one stop shopping for all financial services. The study revealed that the complementarities arise from reductions in user transaction and search costs by providing financial services
jointly from the same bank as compared to providing services from different providers at different locations.

Demsetz and Strahan (1995), (1997) measured diversification and risk at bank holding companies using stock return data between 1980 and 1994. It was found that on market measures of diversification, large bank holding companies (BHCs) are better diversified as compared to small BHCs. However, that better diversification does not always result in risk reductions because banks shift their asset portfolio into riskier mixes of activities and hold less equity. Moreover, potential of diversification gains are offset by lower capital ratios and larger industrial loan portfolios.

Klien and Saidenberg (1997) studied the effect of diversification on the organizational structure of multi-bank holding companies. A portfolio-simulation technique was used to compare the performance to that of their performance benchmarks and to estimate the value added from diversification by bank holding companies. A Dataset of 412 multi-bank bank holding companies (MBHCs) for the time period of 1990 to 1994 was analyzed. It was found that MBHCs realize benefits from geographic diversification in terms of risk reduction and access to internal capital markets. However, it was found that some organizational inefficiency attached to holding company structure limits the gain derived from diversification. It was recommended that banks should be allowed to realize the diversification gains without limiting them to a particular organizational form.

Bodnar, Tang and Weintrop (1997) examined the effect of geographic and industrial diversification on firm value. Database used for the study consist of a sample of over 31,000 U.S. corporations over the time period of 1984 to1997. Two measures were used to study the impact on firms value namely, an excess market value of equity-to-sales ratio and an asset-to-book value of assets ratio. Value of geographic diversification led to increase in the degree (breadth) of business. It was found that the value of a firm with international diversification was 2.2% higher as compared to an industrially diversified firm which was lower by 5.4%. Further, it was demonstrated that the failure to account
for geographic diversification may leads to an overestimation of standard diversification
discount. Geographic diversification results in significant increases in both value
measures as compared to industrial diversification which results in significant reductions
in firm’s value.

Kwan (1998) studied the relative risk and return associated with both securities
underwriting and trading activities. Implications of securities activities on bank safety
and soundness were examined. It was analyzed by comparing the performance of bank
holding company securities affiliates called Section 20 subsidiaries with their commercial
bank affiliates between 1990 and 1997. It was revealed that the security trading as
compared to the banking activities tends to be more profitable and riskier. In banking
operations, trading activities engaged by primary dealer securities subsidiaries provide
strong diversification benefits by reducing the overall risk. Underwriting activities
generate likely diversification benefits for both security trading and traditional
commercial banking activities.

Allen and Jagtiani (1999) studied the impact of banks involvements in insurance
and securities activities on the riskiness of banks. For this purpose, risk involved in a
synthetic universal banks (consisting of a bank, a securities firm and an insurance
company) were compared with risk of undiversified bank. The study was conducted for
the time period of 1986 to 1994 for 729 bank holding companies, whose shares were
listed on recognized stock exchange. It was found that these non-bank activities reduce
the firm’s total risk but serve to increase systematic market risk. The bank's systematic
risk (non-diversifiable) increased with the involvement of securities and insurance
activities within the organization.

Hughes, Lang, Mester and Moon (1999) analyzed the implications of
geographical diversification on banks profit efficiency, market value efficiency and
insolvency risk. A structural model of leveraged portfolio production was used to study a
sample of highest level of U.S bank holding companies. It was found that the marginal
cost of monitoring increases due to individual banker’s limited resources and
organizational complexities. Banks’ probability of remaining solvent tends to increase with strategies, which enhance the geographic diversification.

Winton (1999) compared loan specialization with loan portfolio diversification in banks. It was concluded that the loan portfolio diversification proved beneficial with loans and are exposed to moderate risk. Diversifying into new sectors can lead to an increase in the chance of failure. The quality of credit portfolios was endogenous, because the bank chooses the level of monitoring of its loans. This choice can be affected by the extent of debt in the bank's capital structure and by the diversification of assets. Moreover, an increase in the probability of default reduces the incentives of bank owners to bear the costs of monitoring.

De Young and Roland (1999) observed various mixes of financial services produced and marketed jointly by commercial banks. A dataset of 472 U.S. commercial banks between 1988 and 1995 was used for the purpose of study. The term ‘degree of total leverage’ was used and defined as “a bank’s earnings volatility to fluctuations in its revenues, to its expenses and to its product mix”. The impact of production synergies (economies of scope) and marketing synergies (cross-selling) was also analyzed. It was found that the volatility of the earning of commercial banks increases with shifting towards fee-based activities from traditional intermediation activities. Three main reasons are specified for increased volatility in earnings and consequential risks of commercial banks. Firstly, income from lending business have comparatively stable pattern of earning because, switching and information costs are costly for both lenders and borrowers. While in cases of non-interest income, fluctuating pattern was observed as switching banks for these kinds of activities are very easy. Second reason stated was that expanding income activities implied rise in fixed cost and consequential increase in the operating leverage of banks. Third reason stated was that, banking regulations do not require banks to hold adequate capital. As a result volatility of non-interest income streams increased.

Vander Vennet (2000) analyzed the impact of diversification on cost and profit efficiency of financial conglomerates and universal banks of Europe during the time
period of 1995-96. For this purpose, measures of economies of scale and scope and measures of cost and profit efficiency were compared for (i) European universal banks versus European non-universal banks and (ii) for European financial conglomerates versus European non-financial conglomerates. The structural differences between universal banks, financial conglomerates, diversified banks, and specialized counterparts were studied. The results indicated on revenue efficiency basis, shows that the financial conglomerates are more revenue efficient as compared to their specialized competitors. Universal banks are found better as compared to non-universal banks in respect of degree of cost and profit efficiency. The degree of both cost and profit efficiency was higher in universal banks. In traditional intermediation activities, cost efficiency was not appeared in specialized banks. However, financial conglomerates do have cost efficient in providing non-traditional banking activities.

Emmons, Gilbert and Yeager (2001) examined the impact of synergy driven mergers on banks performance and risk. For this purpose, the mergers of community banks both within and across economic market areas were simulated and studied. It was found that local market risk reduced with the dispersion of banking business across different economic and geographic market areas. This was may be due to the reason that an adverse economic development unique to a specified market will not affect bank’s business located in another market area.

Shirai (2001) focused on assessing the impact of reforms on restructuring of banking structure in India and used the dataset for all commercial banks for the time period of 1993-2000. A major impact on the overall performance of public-sector banks was found. At the initial stage, the reforms had lowered profitability and cost efficiency of banks. This negative impact disappeared as banks adjusted themselves to the new environment. Profitability, cost and earnings efficiency of the banking sector have improved with engaging in non-traditional activities. Financial sector reforms have a positive impact in overall performance and profitability of banking sector.
Acharya, Hasan and Saunders (2002) investigated the effect of focus (specialization) as compared to bank diversification on return and on bank’s loan portfolio risk. A data of 105 Italian banks were examined over the period from 1993 to 1999. The Hirschman-Herfindahl Index (HHI) has been used as a measure of diversification, for measuring industrial and sectoral diversification. Industrial diversification results in declining returns and risk and was linked with a decrease in performance. The sectoral diversification also leads to decreases in the performance of bank characterized by a high level of risk. The study concluded that diversification provides no guarantee of superior performance and greater bank safety. Further, as per traditional belief, diversification doesn’t necessarily lead to lower credit risk. Overall, diversification may results in diseconomies. These diseconomies lead to monitoring and credit risk disadvantages. Also, with expansion over industry where the bank lacks experience results in increased credit risk.

Graham, Lemmon and Wolf (2002) investigated the role of corporate diversification in the value destruction of banks. To study the impact of corporate diversification on value of financial conglomerates, the sum of market values of each separate division was compared with sum to the actual market value of the conglomerate. It was confirmed that there was no evidence that diversification intensifies agency problems and destroys value. The study has focused on the firms, which expand via acquisition and/or increase their number of business segments. The combined market reaction to acquisition announcements was positive but acquiring firm excess values decline after the diversifying event. Much of the excess value reduction occurs because firms acquire already discounted business units and not because of diversifying, value was destroyed.

De Young and Hunter (2003) examined the potential impact of increased non-interest income on the financial performance of 4,712 U.S. commercial banks for the time period of 1989-2001. A strong relationship was found between non-interest income and bank characteristics, market conditions, technological progress and bank performance. It
was seen that well-managed banks were reluctant to expand into activities that have poor risk-return tradeoffs. An increase in non-interest income of banks was significantly associated with higher ROE. The fee based non-intermediation financial services have played significant role in the financial health and business strategy of the U.S. commercial banks.

**Souza and Lai (2003)** examined the data for the period of 1997 to 2003 of five big Canadian banks namely the Bank of Montreal, the Bank of Nova Scotia, the Royal Bank of Canada, the Canadian Imperial Bank of Commerce and Toronto Dominion and analyzed that whether Canadian banks have benefited from the diversification of their loan portfolios to more industries and geographical regions. For measuring bank efficiency, the author used measures that trade off between risk and return by taking variables such as liquidity management, on-mortgage lending and security trading and securities investment. Their results reveal that it was the composition of bank’s portfolios and business lines that matters. A merger between banks in the regional composition with different business lines can result in more efficient entities.

**Banerjee, Cole and Duflo (2003)** studied the effect of entry and expansion of new generation private banks on the competition behavior and lending practices of public sector banks in India. A comparison was made on evolution of credit from five major bank groups: public banks, old private banks, new private banks, rural regional banks and foreign banks during the last 20 years. It was found that private banks are largely focused on a very small number of larger markets with the motive of skimming the cream i.e., attracting the best clients away from the public sector banks. Moreover new private banks tended to locate in metro areas, where agricultural lending becomes difficult. The presence of private banks helped in improving credit access indirectly, by changing the competitive environment faced by the public sector banks. It was possible, for example that faced with the loss of traditional clients base, public banks would be more aggressive in serving clients who were earlier being under-served.
Smith, Staikouras and Wood (2003) investigated the diversification effect on income of banks in 15 different European countries. The variability and the correlation of interest and non-interest income of the banking systems of EU countries for the years 1994-98 were examined. It was concluded that negative correlations exist between interest and non-interest income of banks. It was also found that over the time period, non-interest income was more volatile as compared to interest income.

Bon Sung Gu and Woojin Kim (2004) studied the effect of non-traditional activities on banks' earning streams and focused on the diversification effect on commercial banks. The world's top 132 commercial banks were examined ranked by asset size. A significant effect was found on long-term stability of large banks earnings. Overall bank performance was positively related to non-interest income. In addition, larger banks seem to have the more stable interest income since their sensitivity to volatility from non-interest income becomes more significant than the other banks.

Stiroh (2004) focused on the impact of non-traditional activities on the performance of U.S. bank holding companies. The emphasis was to exploring the links between the growing reliance on income and the volatility of bank revenue and profits. The aggregate and individual level bank data from the late 1970 to 2001 was used to examine the contribution of non-interest income in determining the profitability and riskiness involved in individual banks. The cross-sectional correlation was calculated between the components of non-interest namely, fiduciary income, service charges, trading revenue, and fees and net interest income for all banks. It was found that cross-sectional correlation between net interest income growth and non-interest income growth has increased over the time period. Overall, it was seen that risk adjusted returns are negatively associated with profitability of banks. Also, trading income was associated with a decline in profit per unit of risk. Non-interest income was also found to be much more volatile than mere traditional net interest income.

Ebrahim and Hasan (2004) examined the market reaction of change in commercial bank earnings in terms of value differences in the earnings components from
traditional and non-traditional banking activities. A sample of commercial banks between 1993 and 2002 were studied. The authors found the evidence that the commercial banks continue to focus on core intermediation business in addition to expansion into new activities. Bank’s annual returns were significantly positively related to both the interest and non-interest components. The existence of non-interest income component was perceived by the market as a signal for bank’s growth potentials. Along the same proposition, it was argued that non-intermediary banking activities indicate more growth potentials for the banks in the future.

Esho et al. (2004) studied the impact of diversification on the financial performance of credit unions in Australia. The study was conducted for the time period of 1993–2001. It was found that an increased fee income of banks was associated with increased risk. The shift to fee income within financial institutions arises from shifts in product mix and fee charged on traditional banking products. As a result, banks change pricing policies as well as increase in the quantity of services provided. It was found that reduction in the proportion of interest income is associated with higher risk and lower earnings principally because transaction fees were squeezed in response to increasing pressure on interest rate margins. So, diversified credit unions experienced the increased share in income of transaction fee on loans and deposits associated with reduction in share of interest income.

Shanmugam and Das (2004) used a stochastic frontier production function model to study banking efficiency in the post reform period that was 1992 to 1999. For the purpose of study, four variables namely, deposits, borrowings, labor and fixed assets were taken as input variables while other four variables consisting of net interest income, non interest income, credits and investments, were taken as output variables. It was observed that deposits have contributory role in producing all outputs. The technical efficiency in respect of raising interest margin was varied across the banks. Overall, performances of private and foreign banks are found better as compared to public banks.
Kamp, P. Fingsten and Daniel (2005) examined to what extent benefits of diversification outweigh those of specialization in German banks. Data was collected for the period of 1993 to 2003 of saving and state banks of Germany. The results of the empirically study shows that specialized banks derive slightly higher return in terms of creating market and economic value as compared to diversified banks.

Matraves and Rodriguez (2005) studied the association between profitability and both types of diversification i.e., product and geographic diversification. For this purpose, data was collected for leading firms in German and UK during the time period of 1987 and 1993. Level of product and geographic diversification was observed to be affected by both type of factors, namely the industry and firm-specific factors. It was found that a curvilinear relationship (in which the relationship does not follow a straight line) exist between profitability and product diversification for German firms but a linear relationship was found between profitability and geographic diversification for UK firms. Diversification and multinationality are found to be complementary strategies for German firms but substitute strategies for UK firms.

Levien and Levine (2005) investigated the influence of diversity of activities by banks and financial conglomerates on the creation of market values. The data over the time period of 1998-2002 for banks in 43 countries was analyzed. The data were used to observe the influence of diversification of activities undertaken by financial institutions on their market valuations. Financial conglomerates consisted of financial intermediaries that specialize in the individual activities. Impact of diversification was examined by asset-based and income-based measures of diversity. It was found financial conglomerates have higher markets valuation as compared to banks which have engage in multiple activities. Reason being that banks engage in multiple activities face agency problems and destroy value.

Deng and Elyasiani (2005) investigated the impact of geographic diversification on BHC stock return, risks and firm value. Data over the time period of 1994 to 2003 for 388 U.S. bank holding companies (BHCs) was used for the purpose of analysis. It was
found that geographic diversification was associated with a significant decline in total risk, unsystematic risk and systematic risk. A positive yet insignificant impact of geographic diversification on BHC stock return was found. As BHCs expand geographically, lack of knowledge on the part of managers of the new local areas may result in reduced profitability.

**Elsas, Hackethal and Holzhauser (2006)** analyzed the implication of revenue diversification on bank size and bank value in nine developed nations. A panel data of 2072 banks for the time period of 1996 to 2003 from nine countries namely USA, Canada, Australia, UK, Germany, France, Spain, Italy, and Switzerland. An adjusted Herfindahl-Hirschman index was used to measure revenue diversification. It was found that degree of revenue diversification has no role in future value creation of banks. But revenue diversification does have strong influence on current value creation and allows banks to analyze a more detailed analysis of impact of diversification on bank profitability.

**Hayden, Porath and Westernhagen (2006)** examined the type and impact of diversification on performance of German bank by making a comparative analysis of focused vs. diversified banks. A data set of segregated individual bank’s loan portfolios for the time period of 1996 to 2002 were analyzed to study the association between banks’ portfolio diversification across different industries, economic sectors and geographical regions and banks’ profitability. HHI, Herfindahl-Hirschman Index was used to capture the levels of concentration for region, sector and industry. For return measures, the ratio of operating profits to assets and operating profits to equity was used. For measure of risk, the ratio of unexpected losses to total exposure was used. It was found that banks instead of operating in a constant risk-return efficiency level use diversification to change their risk-return profile. Diversification across different sectors leads to a negative effect on banks’ profitability rather than increasing bank returns. It was also found that portfolio diversification in different sectors, regions and industries, results in negative effect on banks’ profitability. Overall, it was concluded that each kind
of diversification harms banks’ return but focus in general increases profitability.

García-Herrero and Vazque (2007) assessed the extent of diversification gains generated from operation of 38 banks incorporated in eight industrial countries Canada, France, Germany, Italy, Japan, U.K., U.S. and Spain during the time period of 1995-2004 of the operations of International banks overseas. Geographical diversification was measured as ‘subsidiaries’ assets relative to those of their parent banks and the differences between risk-return of parent banks in their countries of incorporation, vis-à-vis those of their subsidiaries in overseas. Herfindahl-Hirschman Index was used to study the concentration of the assets of each international bank within industrial and emerging countries and the consequence effect of international diversification between the country groups. It was found that geographic diversification gains were limited within regions. Banks with International diversification gains with larger allocation of assets overseas and consequently derives higher risk-normalized returns. In case of International banking groups with subsidiary, an additional one percent of their assets assigned to subsidiaries results in an average increase in risk-adjusted returns of banks. However, the coefficients of the Herfindahl indexes indicates negative results, which shows that the regional concentration of the operations of international banks proved to be detrimental to bank’s risk-adjusted profitability. The risk-adjusted returns of international banks, has increased with a larger allocation of bank assets to subsidiaries. It was found that international banks in their home countries as well as their subsidiaries overseas are more profitable and risky as shown by systematic differences in the risk-return performance of banks.

Mittal and Dhide (2007) examined the impact of government’s decontrolled and liberalized policies on public sector banks, private sector banks and foreign banks in India. Profitability and productivity of various categories of banks were analyzed for the time period of 1999-2000 to 2003-2004. A significant difference in burden ratio (Other operating expenses ratio – Non-interest income ratio) was found in the public sector, private sector & foreign sector banks but no differences were found in the spread ratio.
Profitability of private sector banks was found better as compared to public sector banks. Some of the public sector banks with better productivity found themselves at par with the private sector banks. Overall, public sector banks were found to be less profitable than the private sector and foreign banks in terms of overall profitability but their profitability had improved over the last 5 years.

**Goddard et al. (2007)** analyzed impact of diversification on revenue structure and financial performance measures and to study the effects of shifting into non-interest income activities by U.S. credit union. The study was conducted for the time period of 1993 to 2004. Two measures namely ratio of non-interest income to operating income and an income concentration index was used to examine impact of diversification of income sources. It was found that the share of non-interest income in total income has increased significantly between 1993 and 2004. Between 1993 and 2000, the pace of growth was 3%. Between 2001 and 2004, the pace of growth quickened, with the non-interest income share increasing by a further 7%. Further, it was found that large banks have capable of improving their financial performance at the cost of a higher risk, while small banks and credit unions don’t have the scale or the specialization to engage activities different to their core products.

**Mercieca et al. (2007)** analyzed the costs and benefits derived from diversification by small European banks, which showed interest in adopting the universal banking model. Data for the purpose of study consisted of 755 small banks during the time period of 1997-2003. The trend towards shifting of small banks towards generating non-interest income activities and consequential impact on performance was examined. An inverse association between non-interest income and bank performance was found as no direct diversification benefits are derived within and across business lines. It was observed that banks enter lines of business with lack of expertise and experience.

**Hirtle and Stiroh (2007)** studied the retail banking industry from 1997 to 2004 to examine the impact of U.S banks’ diversifications towards retail market segment and consequence effect on performance. For this purpose, retail intensity defined as retail
loan share, retail deposit share and branches per dollar of assets were compared with both equity market and accounting measures of performance. It was found that expansion towards retail market results in lower equity market and accounting returns.

**Estrada, Arbelaez and Rueda (2008)** explained the conditions for banks to engage in multiple-bank lending activities as a part of diversifying their loan portfolio. The study was carried out for 47 banks in Columbia for the period of 1995 to 2007. In the paper, model developed by Holmstrom and Tirole (1993) and Carletti et al. (2007) was used to study the impact. Monitoring factor was considered as one of the main explaining factors besides other factors namely return indicators, risk and three different types of loan diversification: (i) Sectoral (ii) type of loans and (iii) regional. A positive relationship was found between return and risk. However, a negative relationship was observed to exist between return and type of loan diversification. As a non-linear relationship was seen with the expected return measures. Banks can take advantage of type of loan diversification to increase their returns. But this benefit was reduced by sectoral diversification as the profits from focusing by type of sector are higher.

**Schmid and Walter (2008)** evaluated the contribution of functional diversification in the corporate value creation process of financial service sector. A dataset of 4060 U.S financial service sector consisting of commercial banks and bank holding companies, insurance companies, asset managers and broker-dealers was examined for the time period of 1985 to 2004. A sales and asset-based Herfindahl-Hirshman index (HHI) was used as a measure of diversification. HHI was defined as the sum of the squares of each segment’s sales (assets) as a proportion of total sales (assets) for the firm. Univariate analysis was used to investigate the difference between diversified and focused firm. It was found that the differences in the value of means and medians between diversified and focused firms were statistically significant. Further it was observed that functional diversification in terms of both geographic and business diversification leads to value destruction of firms.
Sheng-Hung Chen (2009) empirically investigated the relationship between international diversification and bank valuation. The role of diversification in creating the economic and market value of financial conglomerates was examined. A panel data of 864 banks over the time period 1992 to 2006 was used to study geographic and functional diversity. Further, the diversification discount was rechecked in financial conglomerates. Degree of diversification was measured through Herfindahl-Hirschman Index. It was found that diversification creates premium, also known as diversification premium and does not destroy the market valuation of financial conglomerates. Financial conglomerates benefited from economies of scale through international diversification.

Bhadury (2010) analyzed the contribution of different components of other income and its affect on profitability of banking sector in India. The study was conducted for all the banks in private and foreign bank group during the time period of 1991-2006. Due to stringent Basel II norms along with global recessionary trends, banks were adopting diversification move to enhance their other income. Trend analysis and panel regression analysis technique was used to study the impact on profitability. Other income consists of six different components namely commission exchange and brokerage, net sale investment, net revaluation of investment, net land, net exchange & miscellaneous income, profit, assets and reserves of the commercial banks. From the results of trend analysis, it was found that, other income as a proportion of total income has increased over time 1991 to 2006. Of the components of other income, major increase was noticed in the share of net sale investment while declining trend was seen in commission exchange brokerage. Comparatively, foreign sector banks are more influenced by other income components.

Meslier, Taeneng and Tarazi (2010) studied the effect of diversification on bank performance in Philippines banking sector. The study was conducted for the time period of 1995 to 2005 covering 39 commercial and universal banks. In this study, the focus was given to different components of non-interest incomes to study the cross-selling
behaviour of banks. Different components of non-interest income includes fee-based and trading activities consists of bank commissions, service charges/fees and other commissions and income from trading government securities, private equity/debt; financial futures, forwards and swaps, profit from the sale of investments and profit from foreign exchange. Major portion of non-interest income from trading activities, generates from fee-based activities. Univariate analysis was used to study the association of non-interest income sources with risk. It was found that banks with negative average growth of non-interest income are characterized by higher income from fee-based activities mainly driven by other commissions and fees while banks whose average growth rate of non-interest income was positive trades more government securities. Foreign banks generate higher fee-based income while domestic banks generate more revenue from trading in government securities and private debt/equity securities. It was also found that non-interest income have positive effect on a bank’s performance and growth in non-interest income was correlated with fee-based income growth.

Overall, a complex picture emerges out from review of theoretical and empirical literature on different aspects of diversification in banking sector. Some studies favour the pronouncement of diversification in banks like Hitt et al., 1997; Tallman and Li, 1996; Hennart and Park, 1994; Geringer et al., 2000 etc. Vander Vennet (2002) shows that diversified bank are more revenue efficient than their specialized competitors. Boyd et al. (1993) used hypothetical cross-product mergers and simulations and found risk reduction effects from these deals. Estrella (2001) examined direct measures of potential diversification gains from consolidation of financial firms. While some studies found negative impact of diversification on banking activities. (Rumelt, 1974; Berry, 1975; Geringer et al., 1989; Tallman and Li, 1996; Hitt et al., 1997; Palich et al., 2000). On the other hand, some other studies found inconclusive and contradictory results (Christensen and Montgomery, 1981; Rumelt, 1982; Montgomery, 1985; Michel and Shaked, 1984; Grant et al., 1988).
To summarize, this chapter presents an overview of the studies that have concentrated on nature and extent of diversification, various determinants for diversification and its performance consequence. It aims to contribute towards understanding the subject matter and yields very interesting insights regards the diversification issues in banking sector.