

## **EFFECT OF TELECOM MONEY TRANSFER SERVICES ON FINANCIAL PERFORMANCE OF THE BANKING INDUSTRY; A CASE OF COMMERCIAL BANKS IN KENYA**

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**Abstract:** *The purpose of this study was to establish the effect of telecoms money transfer services on the performance of the banking industry in Kenya. The objectives of the study were; to assess the effect of various mobile money services transactions, to determine the effect of accessibility to mobile money services on the performance of bank institutions in Kenya. The study employed descriptive survey design. The population of the research consisted of the 5 major commercial banks in Kenya. The study used secondary data. Secondary data collection sheet was used to collect data on performance of banks. Data was analyzed mainly by use of descriptive and inferential statistics. During the study period, the amount of money transacted through the mobile money transfers increased steadily from 14.4 billion shillings in 2012 and rose to 122.7 billion shillings in the year 2016. The growth was motivated by the convenience offered by the service. Similarly, the number of agents enrolled into mobile banking increased steadily during the study period. The results revealed that mobile banking transactions (number of transactions) had a positive effect on the financial performance of commercial banks in Kenya. This study therefore concludes that as a commercial bank increases its mobile banking coverage, this results in an increased number of transactions through their mobile banking platforms and therefore improved financial performance. The study concludes that mobile banking is being used to improve financial operations. The study recommends that commercial banks as well as the regulatory bodies should strive to innovate for better and cheaper ways of serving customers. With shorter transaction turnaround times, transactions volumes can be significantly increased and by extension commission charges there from Government through the financial sector regulatory authorities, which is CBK, should encourage banks to engage in financial innovation but at the same time closely regulating such developments to assure on the integrity of the payment systems.*

**Keywords:** *Mobile Money Transactions, Accessibility, Financial Performance*

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### **1.1 INTRODUCTION**

The remarkable gains made towards mobile phone access have seen a steady progress in the scope of innovations emanating from exploitation of these new technologies. What has characterized the Kenyan mobile landscape is a rapid uptake of various services key among them the mobile-based products. Telecoms money transfer services is one innovation, which has progressively rendered itself in pervasive ways cutting across numerous sectors of economy and industry. An appropriate banking environment is considered a key pillar as well as an enabler of economic growth. With the continuously emerging wave of information driven economy, the banking industry in Kenya has inevitably found itself unable to resist technological indulgence.

The need for convenient ways of accessing financial resources beyond the conventional norms has seen the recurrent expansion and modernization of banking patterns. Efforts have been made by banks to link mobile communications credit lending services through the development of mobile money solutions. The rapid growth of mobile payments technologies in the last few years particularly in Kenya, South Africa, and the Philippines, has proven that there is latent demand for such services and that there is a willingness to adopt and pay for the technology among low-income users. At the same time, governments, banks and microfinance institutions (MFIs) have realized that extending financial services to the base of the pyramid via mobile technology can significantly lower the cost of delivery, including overhead costs for buildings and staffing branches, as well the costs to customers of accessing services (e.g., travel or queuing time, travel costs, security issues).

A recent FinAccess report showed the number of formally banked people in Kenya (defined as those using a bank, Postbank or insurance product) was at 35% by the end of 2015. 25% of these banked populations still cannot afford any form of financial service, leaving a percentage of more than 75% outside the reach of mainstream banking (Muthiora, 2015). Moreover, there is still room to enhance the quality of financial services by bringing down the costs of credit facilities, improving accessibility to financial services and ensuring a memorable consumer experience. A system with the potential to obliterate the historical hurdles of cost and free access which have for a long time stood in the way of willing partakers of banking services evokes immediate attention and interest. The unprecedented uptake of mobile phone banking services in Kenya is a testament to this fact.

## **1.2 Statement of the Problem**

The introduction of mobile money transfer services literally changed the thinking of financial services sector in Kenya. In a bid to reach a larger client pool, commercial banks began teaming up with mobile service providers to net more customers through opening of accounts through the mobile platform. This effectively meant that the mobile service providers now became a major stakeholder in the financial services market. In Kenya, there is a distinct 'fight' developing between mobile services operators and commercial banks with both players accusing the other of infiltrating their respective markets. An administrative issue then arises as to whether the mobile service providers are to be regulated by the central bank as players in the financial market. Currently, Equity bank- the largest bank by account holders- has rolled out a SIM card to rival the MPESA service. Clearly from the events above, mobile telephony is now a key driver of business (Mwangi, 2012).

The ability to offer financial transactions over the mobile phone has created new players in the financial services industry such as mobile phone providers who offer personalized services. This is evident with the prevalent use of Mpesa, Airtel money, Orange money and Yu cash. The real time money transfer over the mobile phones enables individuals in areas with no demand to acquire demand within seconds. Needs for payment and transactional services are not always well served by conventional banks since they do not always find it easy or cost effective to adopt a full- feature package for banking services (Higgins, Kendall & Lyon, 2012). Mobile Money Transfer services can be used to raise efficiency and boost business growth through cheap, efficient and reliable money service support systems that reduce the need for cash transaction and the risks associated. Most banks have adopted mobile banking applications allowing customers to conveniently do their banking using their mobile devices anytime and anywhere.

Different scholars have done studies on electronic and mobile banking in Kenya. Kigen (2010) studied the impact of mobile banking on transaction costs of microfinance institutions where he found out that by then, mobile banking had reduced transaction costs considerably though they were not directly felt by the banks

because of the then small mobile banking customer base. The current study differs from Kigen (2010) because the rate of mobile banking and the number of banks which have adopted mobile banking have increased. In addition, this study will consider overall financial performance and not just transactional costs. Kingoo (2011) did a study on the relationship between electronic banking and financial performance of commercial banks in Kenya where he paid keen attention on the microfinance Institutions in Nairobi. However, the current study is focusing on commercial banks and not microfinance institutions. Munaye (2009) studied the application of mobile banking as a strategic response by equity bank Kenya limited to the challenge in the external environment. Munaye (2009) reviewed the concept of mobile banking as a strategic response where its effects on financial performance were not considered.

Other studies on mobile banking have over-emphasized on the factors that affect mobile banking. Korir (2012), studied the factors influencing mobile banking in Kenya, Oonge (2012), focused on the influence of mobile banking on traditional banking transactions. Machio (2012), on the other hand focused on the effects of mobile banking on selected macro-economic factors. Kimondo (2012), studied the influence of mobile wallets on banking services among commercial banks in Kenya. Ochuma (2007), analysed the state of mobile banking in Kenya. These studies have not addressed the issue of mobile banking and its effects on the financial performance of commercial banks, which this study sought to address. In his study, Korir (2012), recommended a study to identify the effects of mobile banking on the performance of banks in Kenya. This research therefore aimed at bridging this gap by establishing the effect of Telkom money transfer services on the performance of the banking industry in Kenya.

### **1.3 Objectives of the study**

The main objective of the study was to establish the effect of telecoms money transfer services on the financial performance of the banking industry with specific objectives to;

1. Assess the effect of mobile money transactions on the financial performance of commercial banks in Kenya.
2. Determine the effect of accessibility to mobile money services on the financial performance of bank institutions in Kenya.

### **1.4 Research Questions**

1. How do mobile money transactions affect the financial performance of bank institutions in Kenya?
2. What is the effect of accessibility to mobile money services on the financial performance of bank institutions in Kenya?

## **2.0 LITERATURE REVIEW**

### **2.1. Theoretical framework**

#### **The Market Power Theory**

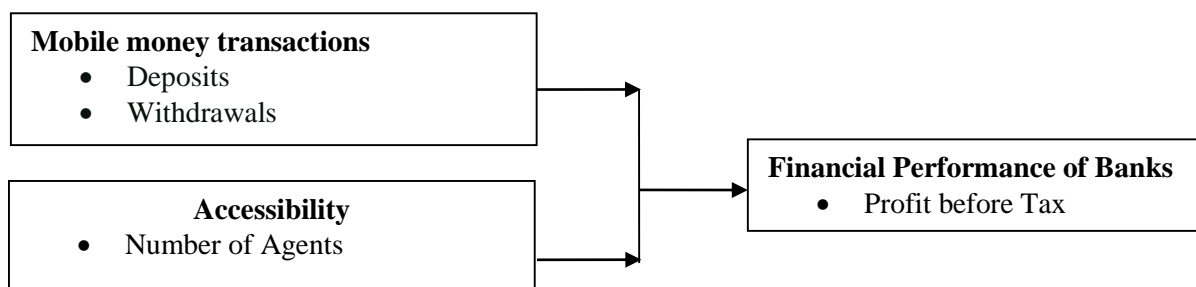
As noted in Tregena (2009) applied in banking the market power hypothesis posits that the performance of banks is influenced by the market structure of the industry. There are two distinct approaches within the market power theory; the Structure Conduct Performance (SCP) and Relative Market Power (RMP) hypothesis. According to the SCP approach, the level of concentration in the banking market gives rise to potential market power by banks, which may raise their profitability. Banks in more concentrated markets are most likely to make 'abnormal profits' by their ability to lower their deposits rates and charge higher loan rates as a result of

collusive or monopolistic reasons, than firms operating in less concentrated markets irrespective of their efficiency (Tregenna, 2009). Unlike the SCP, the RMP hypothesis posits that bank profitability is influenced by market share. It assumes that only large banks with differentiated products can influence prices and increase profits.

With the advent of technology and increasing use of smart phone and tablet based devices, the use of Mobile Banking functionality would enable customer connect across entire customer life cycle much comprehensively than before. The current mobile banking objectives of say building relationships, reducing cost, achieving new revenue stream will transform to enable new objectives targeting higher level goals such as building brand of the banking organization. Emerging technology and functionalities would enable to create new ways of lead generation, prospecting as well as developing deep customer relationship and mobile banking world would achieve superior customer experience with bi-directional communications. Among digital channels, mobile banking is a clear IT investment priority as retail banks attempt to capitalise on increasing their market share by attracting deposits from the unbanked (Tiwari, 2006).

## 2.2 Conceptual Framework

According to Cooper and Schindler (2008), a conceptual framework is a basic structure that consists of certain abstract blocks which represent the observational, the experiential and the analytical/synthetical aspects of a process or system being conceived.



**Independent Variables**

**Dependent Variable**

**Figure 1: Conceptual Framework**

## 2.3 Empirical Review

### 2.3.1 Mobile Money Transactions

Mobile payment (also referred to as mobile money, mobile money transfer, and mobile wallet) generally refer to payment services operated under financial regulation and performed from or via a mobile device. Instead of paying with cash, cheque (or check), or credit cards, a consumer can use a mobile phone to pay for a wide range of services and digital or hard goods. Although the concept of using non-coin-based currency systems has a long history, it is only recently that the technology to support such systems has become widely available (Macmillan et al., 2016).

Mobile banking can offer a wide variety of services ranging from account information, which has to do with alerting the customers on the updates and transactions on their account through their mobile phones, payments (utility bills), deposits, withdrawals, transfers, purchase airtime, request bank statements (Dr Lennart, 2008).

### **2.3.2 Accessibility to Mobile Money Services**

Banks and mobile phone service providers in many developing countries have begun collaborating to capitalize on national surges in mobile phone usage. This collaboration has made financial services accessible through mobile phones, which allow financial services to take place at local retail outlets in areas where bank branches do not exist. Mobile money service providers are capable of both cutting down transaction costs and extending access to formal financial services to individuals who would not otherwise have such access. Within the last decade, more than 100 different mobile money services have been introduced in 59 countries. Of these, more than 60 percent were launched in 2009 and 2010 and ten additional mobile money service providers are scheduled to launch in 2011 (GSM Association, 2011).

Sharma (2015), carried out a study on mobile banking technology, factors affecting its adoption in Indian context. The study was based on exploratory research whereby both primary and secondary data was collected. The research is both quantitative and qualitative. In his findings mobile phones have immense potential of conducting financial transactions thus leading the financial growth with lot of convenience and much reduced cost. For inclusive growth, the benefits of mobile banking should reach to the common man at the remotest locations in the country. For this all stakeholders like Regulators, Government, telecom service providers and mobile device manufactures need to make efforts so that penetration of mobile banking reaches from high-end to low-end users and from metros to the middle towns and rural areas. Inclusion of non-banking population in financial main stream will benefit all. There is also need to generate awareness about the mobile banking so that more and more people use it for their benefit.

### **2.4 Performance**

A commonly used measure of bank performance is the level of bank profits (Ceylan, Emre and Asl, 2008). Bank profitability can be measured by the return on a bank's assets (ROA), a ratio of a bank's profits to its total assets. The income statements of commercial banks report profits before and after taxes. Another good measure on bank performance is the ratio of pre-tax profits to equity (ROE) rather than total assets since banks with higher equity ratio should also have a higher return on assets (Ceylan, Emre and Asl, 2008).

Masila (2013), carried out a study to establish the effect of internet banking on the financial performance of commercial banks in Kenya. The measure of financial performance used in this research is Return on assets and the independent variables are natural Log of assets, Ratio of loans to total assets and internet banking. Results indicated that the increasing of internet as an additional channel of marketing banking services has significantly improved the financial performance of commercial banks in Kenya. Internet banking has also significantly improved banking efficiency in rendering services to customers.

## **3.0 RESEARCH METHODOLOGY**

This study adopted a descriptive survey design. According to Kothari (2004), descriptive survey design includes surveys and fact finding enquiries of different kinds. The major purpose of descriptive research design is description of the state of affairs as it exists at present (Kothari, 2004). The target population comprised of 5 commercial banks which adopted mobile banking first in Kenya which are Equity bank, KCB, Barclays Bank, Cooperative bank and Standard bank. Secondary data will be collected for five years (2012-2016).

This study used purposive sampling. Purposive sampling is used to select the case respondents from the employees. According to Mugenda and Mugenda (2003) purposive sampling is a sampling technique that allows a researcher to use cases that have required information with respect to the objectives of the study. Cases of subjects were therefore handpicked because they are informative and have the required characteristics,

since the study focused on only those banks that adopted mobile banking first in Kenya. According to Mugenda and Mugenda (2003) and Kothari (2004) a sample size of 10% is adequate for a descriptive study which has a small population. The sample size for this study is 5 commercial banks which represented 12% of the target population (42 commercial banks in Kenya).

This study used quantitative data since secondary data was used. All the data was collected by review of documents, annual reports of the commercial banks, financial statements and Central Bank of Kenya. The selected period was between year 2012 to year 2016 (5 years).

The data was analyzed using descriptive statistics, and presented by use of frequency tables. The analysis was done with the application of the statistical package for social sciences (SPSS) software. The study also applied the multiple regression analysis to establish the relationship between the dependent and the independent variables. The regression model is as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \varepsilon$$

Where: Y = Financial Performance, X<sub>1</sub> = Mobile money transactions, X<sub>2</sub> = Accessibility to mobile money services

## 4.0 RESULTS AND DISCUSSION

### 4.1 Descriptive Statistics

#### 4.1.1 Financial Performance of Commercial Banks

The study sought to establish the financial performance of commercial banks in Kenya. Table 4.1 shows that the profit before tax was on an increasing trend over the period of the study. In the year 2012 the banks had a mean of 13185.8 shillings which increased slightly to 14384.2 in 2013 and gradual increase to 16316.6 in 2014. In the year 2015 the profit before tax declined slightly to a mean of 16190.8 and increased gradually to 18497.6 in 2016. The decline in 2015 could be associated with the harsh economic conditions in the country in general. The results are tandem with Maina (2012) who concluded that adoption of mobile banking by financial institutions is very important in improvement of financial adequacy of commercial banks as well as improving operations and reduce costs in the long run hence increase in earnings.

Table 4.1: Profit before Tax

Variable	Year	N	Mean	Std. Deviation
Profit before Tax	2012	5	13185.8	2771.18
	2013	5	14384.2	3422.71
	2014	5	16316.6	4627.42
	2015	5	16190.8	6413.74
	2016	5	18497.6	7349.04

#### 4.1.2 Mobile Money Transactions

The study sought to assess the effect of mobile money transactions on the financial performance of commercial banks in Kenya. According to the findings in Table 4.2 the annual amount of money moved through mobile banking has been on an increasing trend since the year 2012 all through to 2016. Results indicate that in the year 2012 the annual amount of money moved through mobile banking stood at 14.4 billion shillings while in year 2013 the amount increased gradually to 21 billion shillings. Following years, the amount moved increased slightly from 26.1 billion shillings in 2014 to 63.8 billion shillings in 2015. Finally the amount moved in the

year 2016 stood at a figure of 122.7 billion shillings. The findings imply that mobile banking has been greatly embraced by users and the users are opting to use mobile banking instead of traditional mode of banking where account holders go to the banking hall. This has been evidenced by the increasing trend of the amount of money moved annually over the period of the study.

Table 4.2: Amount of Money Transferred via Mobile Banking

Variable	Year	N	Mean	Std. Deviation
Amount moved via mobile banking	2012	5	14,441,083,000	1.3E+10
	2013	5	21,010,994,200	1.4E+10
	2014	5	26,176,765,200	1.8E+10
	2015	5	63,883,154,800	5E+10
	2016	5	122,798,895,000	1.3E+11

#### 4.1.3 Accessibility to Mobile Money Services

The study sought to determine the effect of accessibility to mobile money services on the financial performance of bank institutions in Kenya. Table 4.3 shows that the number of agents has increased steadily through the period of study to a highest figure of 9568 agents in 2016. The mean for number of agents in 2012 was 1920.6, which increased slightly to attract a mean of 3144.6 agents in 2013 and then increased gradually to a mean of 6524.4 and 7434 in the year 2014 and 2015 respectively.

Table 4.3: Number of Agents

Variable	Year	N	Mean	Std. Deviation
No. of Agents	2012	5	1920.6	2038.16
	2013	5	3144.6	2987.57
	2014	5	6524.4	6067.65
	2015	5	7434	7243.99
	2016	5	9568	10410.1

#### 4.2 Regression Analysis

The linear regression model shows that  $R^2=0.735$  which means that the combined effect of the predictor variables (accessibility to mobile money and mobile money transactions) explains 73.5% of the variations in profit before tax of commercial banks. The correlation coefficient of 85.7% indicates that the combined effect of the predictor variables has a strong and positive correlation with profit before tax. This also meant that a change in the drivers (accessibility to mobile money and mobile money transactions) had a strong and positive effect on performance of commercial banks (Profit before tax).

Table 4.4: Model Fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857 <sup>a</sup>	.735	.711	2748.250

a. Predictors: (Constant), No. of Agents, Deposits/ Withdrawals

Analysis of variance (ANOVA) on Table 4.5 shows that the combined effect of accessibility to mobile money and mobile money transactions was statistically significant in explaining changes in financial performance

(profit before tax). This is demonstrated by a p value of 0.000 which is less than the acceptance critical value of 0.05 by Faraway (2002).

Table 4.5: ANOVA for Profit before Tax

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	460139175.557	2	230069587.779	30.461	.000 <sup>b</sup>
	Residual	166163278.443	22	7552876.293		
	Total	626302454.000	24			

a. Dependent Variable: Profit before Tax

b. Predictors: (Constant), No. of Agents, Deposits/ Withdrawals

Table 4.6 displays the regression coefficients of the profit before tax. The results reveal that mobile money transaction are statistically significant in explaining profit before tax (beta=3.713E-008, p value 0.010). The study findings are in support of Ndi (2013) who carried out a study on the relationship between mobile banking deepening and financial performance of commercial bank in Kenya and found out that there was a steady increase in the amount of money transacted through mobile money transfers which was motivated by the convenience offered by the service. The study however found that there exist a weak positive relationship between mobile banking and the financial performance of commercial banks in Kenya.

The results reveal that accessibility to mobile money services are statistically significant in explaining profit before tax (beta=0.938, p value 0.000). The findings imply that an increase in accessibility to mobile money services (number of agents) by one unit leads to an increased profit of commercial banks effectiveness by 0.938 units. The study findings are tandem with Murega (2012) who examined the effect of mobile money transfer services on financial inclusion among citizens in Kenya and the findings showed that when there is increase and constant improvement on the growth of the mobile money transfer services, the level of financial inclusion proportionately grows.

Table 4.6: Regression Coefficients

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12192.665	734.571		16.598	.000
	Deposits/ Withdrawals	-3.713E-008	.000	-.515	-2.825	.010
	No. of Agents	.938	.141	1.209	6.642	.000

a. Dependent Variable: Profit before Tax

## 5.0 CONCLUSION AND RECOMMENDATION

### 5.1 Conclusion

From the research findings presented, the study concludes that mobile banking has a positive effect on financial performance. Hence, banks should continue investing in mobile banking as it positively influences financial performance. The volumes of transactions that can be processed on mobile banking are high as compared to delivering such transactions using manual processes. This helps to minimize the cost per unit of service and



hence better returns to the banks. Commercial banks should explore more ways of maximizing their utilization and returns from mobile banking.

The results reveal that mobile banking transactions (number of transactions) had a positive effect on the financial performance of commercial banks in Kenya. This study therefore concludes that as a commercial bank increases its mobile banking coverage, this results in an increased number of transactions through their mobile banking platforms and therefore an improved financial performance.

## 5.2 Recommendation

The study recommends that policy makers consider mobile banking in their formulation of policies because of the technological developments and the expected switch from physical branch networks to technologically supported banking services. This is because despite negligible relationship between mobile banking and financial performance of commercial banks in Kenya, the impact could be pronounced if much change is recorded in technological developments and more customers adopt mobile banking services. This is because the relationship may not be direct but an indirect one resulting from the convenience that the mobile banking services offers to commercial banks.

## References

- Cooper, D. R. and Schindler, P. S. (2008). *Business Research Methods*, (11<sup>th</sup>, ed.) New Delhi: McGraw-Hill Publishing.
- Dr. Lennart, S. (2008). *mobile banking –financial services for the unbanked?*
- GSMA. (2008). *Mobile Money for the Unbanked Annual report 2008*. Retrieved from:[http://www.gsmworld.com/documents/mmu\\_2008\\_annual\\_report.pdf](http://www.gsmworld.com/documents/mmu_2008_annual_report.pdf).
- Hughes, N. and Lonie, S. (2007). *M-PESA: Mobile Money for the “Unbanked”: Turning Cellphones into 24-Hour Tellers in Kenya*. *Innovations: Technology, Governance, Globalization*, 2(1–2), 63–81.
- Kigen, K. P. (2010). *The impact of mobile banking on transaction costs of microfinance institutions*, Unpublished MBA
- Kingoo, H. (2011). *The relationship between electronic banking and financial performance of commercial banks in Kenya*, Unpublished MBA Thesis, University of Nairobi
- Kothari, C. (2004). *Research Methodology: Methods & Techniques*, 2<sup>nd</sup> edition. New age International Publishers, New Delhi, India
- Macmillan, Rory, Partner, Macmillan Keck Attorneys and Solicitors (2016). *Digital financial services: Regulating for financial inclusion: An ICT Perspective*. GDDFI Discussion paper. ITU News Magazine. New York.
- Maina, E. (2012). *Contribution of mobile banking towards financial performance of Commercial Banks in Kenya*, Unpublished MBA project University of Nairobi.
- Masila, F. K. (2013). *The effect of internet banking on the financial performance of commercial banks in Kenya*. Unpublished MBA thesis, University of Nairobi.
- Mugenda, O. and Mugenda, A. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Africa Centre for Technology Studies.

- Munaye, H. (2009). The application of mobile banking as a strategic response by equity bank Kenya limited to the challenge in the external environment. Unpublished MBA Thesis, University of Nairobi.*
- Murega, J. (2012). Relationship between Mobile Money Transfer and Financial Inclusion in Kenya. Unpublished MBA thesis, University of Nairobi*
- Muthiora, B. (2015). Enabling Mobile Money Policies in Kenya Fostering a Digital Financial Revolution. Bill & Melinda Gates foundation.*
- Ndii, G. M. (2014). The Relationship between Mobile Banking Deepening and Financial Performance of Commercial Banks in Kenya. Unpublished MBA thesis, University of Nairobi.*
- Sharma, N. (2015). An Empirical Study on Mobile Banking Technology: Factors Affecting its Adoption in Indian Context. 6, 55.*
- Tiwari, R, Buse, S. and Herstatt, C. (2006). Mobile Banking as Business Strategy: Impact of Mobile Technologies on Customer Behaviour and its Implications for Banks, in: Technology Management for the Global Future - Proceedings of PICMET '06*
- Tregenna, F. (2009). Fat years: the structure and profitability of the US banking sector in the pre-crisis period' Cambridge Journal of Economics, 33(4), 609-632*