

# Comparative Analysis of Gross Earnings Performance in Nigeria Banking Industry: Pre and Post Merger and Acquisition Experience

Onuorah, Anastasia Chi-Chi (PhD)

Department of Accounting, Banking and Finance, Faculty of Management Sciences,  
Delta State University, Asaba. Delta State Nigeria.

---

**Abstract:** *This paper evaluated the comparative analysis of gross earnings performance in Nigeria banking industry, a view on pre merger and acquisition using gross earnings performance, upon dividend payment, operating expenses, earnings per share, loans and advances. The pre and post Merger and acquisition were classified following the period from 1996-2004 and 2004-2014. Trend analysis, descriptive statistics and regression analysis were techniques used for the comparative study. Findings suggest that Merger and Acquisitions in Nigeria were imposed on banks as survival strategy. Based on profit motives, market driven expansion and other motives, such as market, expansion, technology, profit, etc, caused decreased in the number of banks in Nigeria from 86 to 20 banks after mergers and acquisition. The study confirmed that, in the post merger and acquisition era, operating expenses significantly impacted on the gross earnings in the banking sector, Performance of the models are quiet impressive as the value of coefficient of variability are above 50% level with record high performance in post merger and acquisition, the post merger has the best model for predicting gross earnings in the banking sector. In pre merger, earning per share was seen to have performed a high record of 51% while in the post merger era operating expenses, earnings per share, loan and advances have high record of positive impact of above 62.5% with dividend payment being positively low as 47% to gross earnings, (viii) operating expenses and earnings per share reacted positively low to gross earning in pre merger as dividend payment and loan and advances have negative effect on gross earnings. In general, merger and acquisition in the banking sector has contributed significantly in the post model and help in prediction. The study recommended that Government and individual should introduce effective and efficient monitoring team comprises expert in the sector to evaluate the quality of services of the banking sector to bring about the desire transparency and accountability.*

**Key words:** *Liquidity, Performance, Merger, Acquisition, Model*

## 1. Introduction

The concept of Merger and Acquisition is a global business phenomenon to achieve various objectives. These objectives may be survival, profit motive, territorial expansion, economy of scale etc. Osiegbu, and Nwakamma (1998) stated that Mergers and Acquisitions is the Banking industry or any other establishment is a type of combination on takeover of a business by mutual agreement. Mergers and Acquisitions are business strategies dealing with combining, purchasing, selling of different parts of organizations to raise fund to help in corporate growth without having to incorporate a new business entity. Internationally, multi-national corporations (MNCs) have considered Mergers and Acquisitions as a key strategy to expand, diversify, penetrate or consolidate their businesses in other parts of the world, in African, Asia, Europe and U.S.A. To attain financial stability and capital base for the global competitive banking business, Nigeria has key into the trend of merger and acquisition since 2004. As a result of this great development inform the comparative study of pre and post merger on gross earnings base on the loan and advances, earning per share, operating expenses and dividend payment perspective of banking industry in Nigeria.

## 2. Literature Review and Theoretical Framework

Ever since the merger and acquisition of bank, several studies had been carried out with significant impact on the current performance enjoyed in the sector today. However, there are still not without some challenges in its sustainability in terms of efficiency and job cuts. Muhammed (2005) opined that there are some problems facing Nigerian Banks especially in the Pre Merger and Acquisition era including personalized ownership and management structure which made the banks insensitive to finance large scale and long term projects because of very limited liquidity at the

sector disposal. Then, the sector was characterized with import financing rather than encouraging domestic growth in the economy which further resulted to loss in public confidence and customer dissatisfaction on banking services. The problem brought about distress and inefficiency in the banking industry. Soludo (2004) declared banking sector reforms, recapitalization and consolidation policy through the instrument of mergers and acquisitions process. The various reforms have been acquired to be necessary, but it is debatable if they yielded the anticipated result. The new policy initiative was to pose some challenges to both the economy as well as the banking system.

Zubairu (2006) identified concern of stakeholders, realignment of human resources; role of technology integration, possible monitoring and supervision problems arising from consolidation of banks in Nigeria. Author like (Abati, 2006) was of the opinion that the biggest bank losers in the consolidation process of the banking sector had some human elements particularly the depositors in the liquidated banks, and workers of the merged and acquired banks. Based on the post merger and acquisition problem identified by Scholars, the impact analysis of Pre and Post Merger and Acquisition operations was set out to analyze the performances of Nigeria banks between 1969-2003 and 2004-2010 using banks financial statements. In view of Soludo (2004) about 86 deposit money banks operating in Nigeria was identified up to 2003. Structurally, the sector was highly concentrated and most banks in Nigeria had a capitalization of less than \$10 million. Based on the above, Soludo (2004) stated that “the Nigerian banking system was fragile and marginal; therefore, our vision was a banking system that is part of the global change, which should be strong, competitive and reliable”. We should have a banking system which depositors can trust, and investors can rely upon in order to move the Nigeria economy forward. Therefore, our banking system should be sound, reliable and catalyst of development. To achieve the objective in 2004 and 2005, Millennium Development Goals (MDG) approaches were introduced which assisted greatly in propelling the entire banking sector with the directive of raising the minimum capital for each bank to twenty five billion naira (N25bn). Soludo further stated through bank consolidation or instrument of mergers and acquisition (M and A) can be used for the growth and development of the other sectors towards industrialization.

The acquisitions worldwide were recorded in the year 2006 year which was happening for the first time in the history of banking. The transactions exceeded US\$ 4 trillion while cross-border acquisition single handedly amounted to a record

high of US\$ 1.3 trillion during the process. Based on literature review so far, there are no studies focusing on the comparative analysis of merger and acquisition in pre and post merger era in Nigeria. Therefore, this study tends to fill the gap by carrying out empirical study on pre-post merger in the banking industry in Nigeria between 1997 and 2010.

### 3. Methodology

The scope of the study shows that it is a comparative study which compares pre Mergers and post Mergers and Acquisition era. Journals, finance text book from Africa, Asia, America and Europe were reviewed to draw conclusion on motive of Mergers and Acquisitions. The paper adopted comparative study method. The variables used “are number of Banks during pre and post Mergers and Acquisition era, Gross Bank Earnings, loans & Advances and Dividend payment. The research covers the pre-merger and acquisition era in the banking industry from 1997-2003 while the post merger and acquisition era was from 2004-2010. Information was gathered from various journals and statistical Bulletins of Central Bank of Nigeria. This comparative study was conducted using secondary published financial data of banks that meet the stipulated minimum capital requirements of pre and post Mergers and Acquisition eras. The data consist of five variables which include: Gross bank earning, Loans and Advances, Total operating expenses, Earning per share (EPS) and Dividend payment. Statistical techniques such as bar graph, trend analysis and regression model estimates were used to achieve the research purpose.

#### Model specification

To attain the objective of the study, two models for pre and post merger are formulated as follows:

#### Model

$$GE = f(LA, OE, EPS, DP)$$

$$GE = \alpha_0 LA + \alpha_1 OE + \alpha_2 EPS + \alpha_3 DP + \varepsilon \rightarrow 1$$

#### Pre-Merger

$$GE_{Pr} = \alpha_0 LA_{Pr} + \alpha_1 OE_{Pr} + \alpha_2 EPS_{Pr} + \alpha_3 DP_{Pr} + \varepsilon \rightarrow 2$$

#### Post-Merger

$$GE_{Pt} = \alpha_0 LA_{Pt} + \alpha_1 OE_{Pt} + \alpha_2 EPS_{Pt} + \alpha_3 DP_{Pt} + \varepsilon \rightarrow 3$$

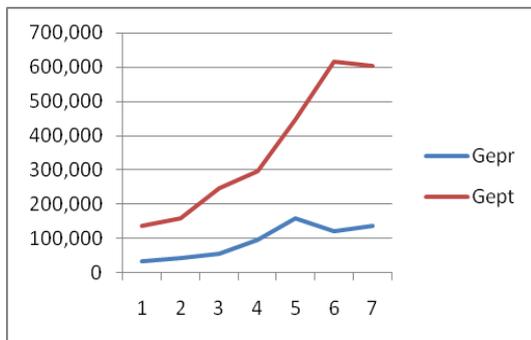
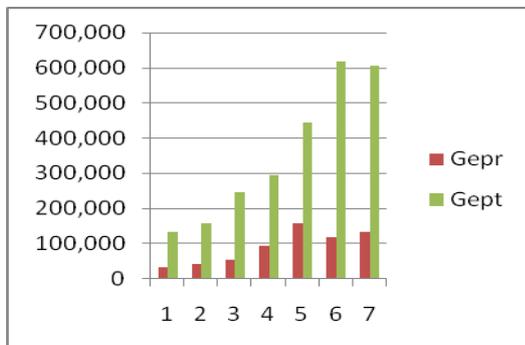
Where;

GE- Gross Earnings, LA- Loans and Advances, OE- Operating Expenses, EPS- Earnings per share, DP- Dividend payment, Pr- Pre-Merger and Pt- Post-Merger

#### 4. Empirical Results

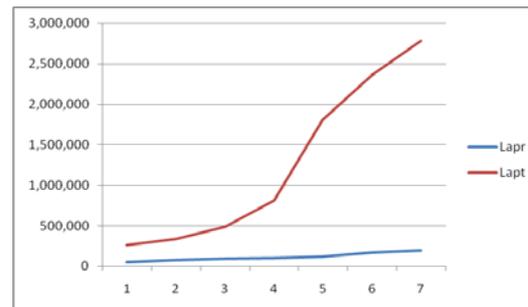
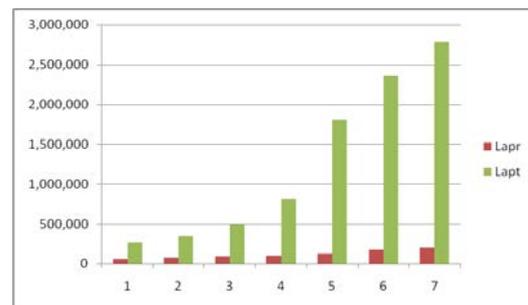
### Chart and trend analysis of Pre and Post Merger

For visual appreciation of the trend pattern of performance indicators of the pre and post merger and acquisition in the banking sector, bar and line graphs are used to explain the behavior of the variables over time. This also helps in driving home the comparative analysis of individual variables in the pre and post merger era in Nigeria.



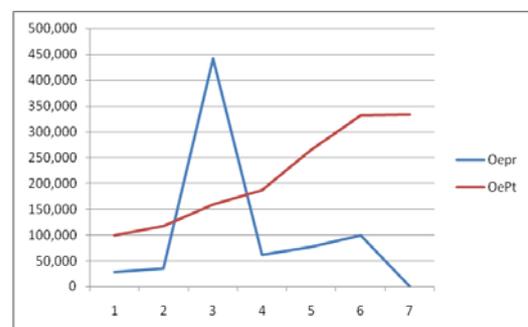
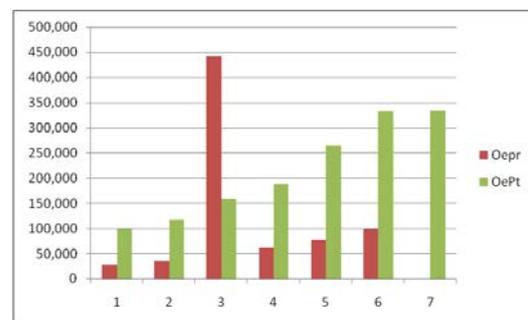
**Fig. 1 Bar graph and Trend of Gross Earnings in Pre and Post Merger**

Trend Gross Earnings (GE) had not been impressive in the pre merger era but showed a quiet significant performance increase in the post merger and acquisition period. The trend cannot encourage a profit maximization to invest in the industry in the pre-merger and can lead to liquidity.



**Fig. 2 Bar graph and Trend of Loan and Advances in Pre and Post Merger**

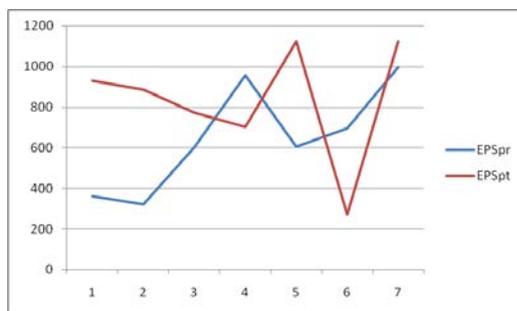
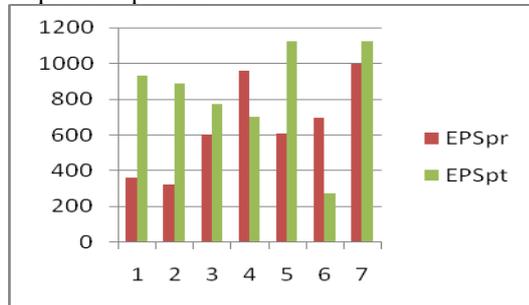
The LA-Loan and Advances performance was very low and discouraging in the pre merger and acquisition. The trend of loan and advances improved very drastically in the post merger. Tremendous increase in loans and Advances helps to stimulate the economy. This is the reason the Central Bank of Nigeria device the motive of encouraging mergers and acquisitions in the sector.



**Fig. 3 Bar graph and Operation Expenses in Pre and Post Merger**

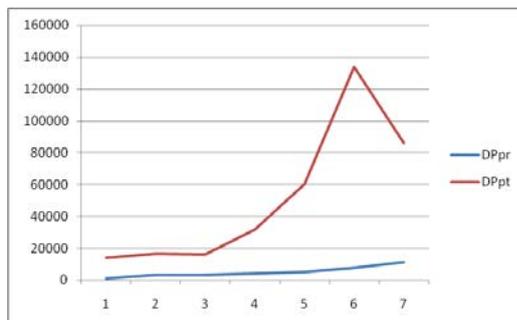
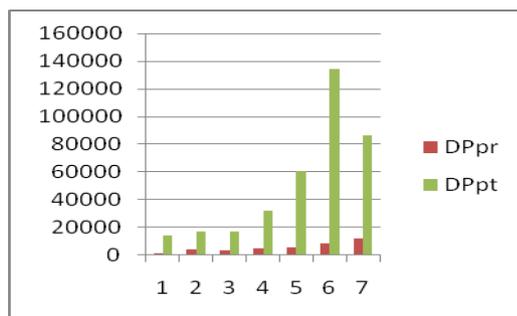
The operating expenses of the banking industries were steady over the period of pre merger but were

greatly unstable in the post merger era. This is problem because of introduction of technology, improvement in banking system operation and down seizing experienced in post merger and acquisition period.



**Fig. 4 Bar graph and Trend of Earning Per Share in Pre and Post Merger**

The EPS was unstable over time with high instability in pre merger. However, post merger was unstable but with characteristics steadiness in performance as compare to pre merger era. Merger and Acquisitions has achieved its objectives if we compare pre and post Merger and Acquisition era.



**Fig. 5 Bar graph and Trend of Dividend Payment in Pre and Post Merger**

One of the main objectives of the dividend payment is to stimulate investors' interest. In the Banking sector, we observed stable dividend policy existed in post merger but was quite low as compare to the higher unstable dividend payment experience in the pre merger. It is very critical to know that the amount of dividend payment cannot attract investments because they are low in the post merger. This is the economic reality in the Nigerian economic performance today.

**Table 1: Relative Statistic Comparison of Pre and Post Merger Analysis**  
 Dependent Variable- GE-Gross Earnings

Variable	Pre-Merger			Post Merger		
	Co-eff	t-statistic	Prob.	Co-eff	t-statistic	Prob.
LA-Loans&Advances	1.6449	0.0716	0.8644	0.4785	1.8261	0.2094
OE-Operating Expenses	-0.0815	1.3674	-0.5448	0.6405	4.8131	0.0406*
EPS-Earning per share	51.1187	63.2841	0.4664	0.6868	1.6276	0.2451
DP-Dividend payment	-17.3773	0.21405	-0.5746	0.6236	0.4513	0.6960

\*Sig. at 5%, p<0.05

**Pre-Merger OLS Model Estimate**

The estimated model for pre merger is expressed empirically as:

$$GEPR = 1.64496652304 * LAPR - 0.0815754566519 * OEPR + 51.1187275196 * EPSPR - 17.37735165 * DPPR - 39670.6956072$$
 This implies that dividend payment and operating expenses have negatively impacted on the gross earnings of banking industries in the pre merger and acquisition era. However, loan and advances and earnings per share confirm positive impact on gross earnings. Change in the earnings per share and loan and advances result in 51.1% and 16.4% in the gross earnings while increase in the unit of dividend payment and operating expenses decreased gross earnings by 17.37% and 8.1%. None of the exogenous variables is statistically significant to gross earnings.

Parameter	Pre	Post
Mean dependent var	91026.57	357667.4
S.D. dependent var	49024.57	200897.6
C.V	53.85%	56.17%

**Post-Merger OLS Model Estimate**

Estimated model of post merger defined as:  $GEPT = 0.0716876693192 * LAPT + 1.36742662656 * OEPT - 63.2841157148 * EPSPT - 0.214053157644 * DPPT + 38743.2519131$  suggests that dividend payment, operating expenses, earnings per share, loan and advances confirm positive effect on gross earnings in banking industries. Any unit change in the dividend payment, operating expenses, earnings per share and loan and advances will bring about 62.36%, 64.04%, 68.68% and 47.85% in the gross earnings correspondently. In the post merger and acquisition era, only operating expenses significantly impacted on the gross earnings in the banking sector.

**Table 2: Global Statistic Comparison of Pre and Post Merger Analysis**  
 Dependent Variable- GE-Gross Earnings

Parameter	Pre	Post
R-squared	0.688303	0.999522
Adjusted R-squared	0.064908	0.998565
Akaike info criterion	24.54673	20.88805
Durbin-Watson stat	2.511339	3.383322
F-statistic	1.104120	1044.949
Prob(F-statistic)	0.526240	0.000956

In terms of global statistics, the correlation level of pre-merger was 68.8% while post merger is put at 99% indicating better association among dividend payment, operating expenses, earnings per share, loan and advances. Adjusted R-squares reveal that 6.4% variation in the gross earning of banking sector in the pre merger was captured by the exogenous variables. However, 99.8% variation is explained by exogenous variable in post merger and acquisition. Both the pre and post merger models have Durbin Watson statistic values greater than 2.0 which show that there is no presence of serial correlation and the models are adjudged very good predictor. Joint significance of endogenous (gross earnings) and exogenous (dividend payment, operating expenses, earnings per share, loan and advances) variables are statistically significant in the post merger and acquisition as the  $Prob(F\text{-statistic}) < 0.05$ . To select the best between the compared models, the model with low Akaike Info Criterion (AIC) represents the best model. Pre merger model has AIC value of 24.55 and Post merger has AIC value of 20.88. Hence the post

merger has the best model for predicting gross earnings in the banking sector.

**Table 3: Performance Comparison of Pre and Post Merger Analysis**  
 Dependent Variable- GE-Gross Earnings

On the average table 3 above reveals that post merger model has the highest mean value of \$357667.4USD compare to \$91026.57USD during the pre merger era model. The dispersion in the gross earnings is lower in the post merger and acquisition model. Performance of the models are quiet impressive as the value of coefficient of variability are above 50% level with record high performance in post merger and acquisition.

**5. Conclusions**

The concept of Merger and Acquisitions as a policy has mix feelings. The Merger and Acquisitions in Nigeria was imposed by Bank regulating agency (C.B.N). However, the merging entities are given the right to discuss, negotiate and produce a memorandum of understanding (MOU) before the final permission is given to Merge or be acquired. During the pre Merger and Acquisition era there were 36 commercial banks and 48 merchant banks, but the post merger era decreased it to 20 banks based on the performing bank in terms of dividend payment, operating expenses, earnings per share, loan and advances. The study confirmed that, in the post merger and acquisition era, operating expenses significantly impacted on the gross earnings in the banking sector. Performance of the models are quiet impressive as the value of coefficient of variability are above 50% level with record high performance in post merger and acquisition. Post merger has the best model for predicting gross earnings in the banking sector. In pre merger, earning per share was seen to have performed a high record of 51% while in the post merger era operating expenses, earnings per share, loan and advances have high record of positive impact with dividend payment being positively low to gross earnings. Operating expenses and earnings per share reacted positively low to gross earning in pre merger as dividend payment and loan and advances have negative effect on gross earning. In general, merger and acquisition in the banking sector has contributed significantly in the post model and help in prediction. This is true because merger and acquisitions are not imposed but driven by other motives, such as market, expansion, technology, profit, etc.

## 6. Recommendations

Based on the empirical model comparison and conclusion, the study therefore recommended:

1. Consistent consolidation on the gains of merger and acquisition should be improved upon to sustain the present merging and acquisition in the banking sector.
2. Government and individual investor should introduce effective and efficient monitoring team comprises expert in the sector to evaluate the quality of services of the present banking sector to bring about the desire transparency and accountability
3. Liquidity test check should be designed and introduced by the CBN to survive the sector by creating confidence building among the operators and the customers as key players.

## 7. References

1. Avkiran, N.K. "The Evidence on Efficiency gains. The role of Mergers and the benefits to public". *Journal of Banking and Finance*, Vol. 23, 1999 Pp. 991-1013.
2. Berger, A.N and Mester, L.J. "Explaining the Dramatic Changes in Performance of U.S. Banks: Technological Change, Deregulation and Dynamic Changes in Competition", *Journal of Financial Intermediation*, Vol. 12, 2003, 1157-95.
3. Central Bank of Nigeria, *Statistical Bulletin Various Issues*.
4. Chu, S.F and Lim, G.H. "Share performance and Profit Efficiency of Banks in an Oligopolistic Market: Evidence from Singapore" *Journal of Mathematical Financial Management*, Vol. 8, 1998 Pp. 155-168.
5. Gaughan, P. *Merger, Acquisition and Corporate Restructuring*, 2<sup>nd</sup>ed. New Jersey, U.S.A, 1999.
6. KPMG "Mergers and Acquisitions: Global Research report, 1999, London.
7. Larson, P.T. "Take-overs reach a Record high" *The financial Times special Report on corporate finance* Jan. 25<sup>th</sup>, 2007, P.I.
8. Liu, B. and Tripe, D. "New Zealand Bank mergers and Efficiency Gains" *Journal of Asian Pacific Business*, Vol. 4, 2002, Pp. 61-81.
9. Mordi, C.N.O. "Institutional Framework for the Regulation and Supervision of the Financial Sector". *Central Bank of Nigeria Bulletin* Vol. 28, no. 1, 2004 Pp. 25-30.
10. Muhammed, R. "Understanding mergers and acquisitions". *Business Day Newspaper* February 17<sup>th</sup>, 2005
11. Osiegbu, P.I. *Money, Banking and Economy in Nigeria*, 2<sup>nd</sup> ed. Harey Publication Co. Port-Harcourt Nigeria, 2005.
12. Osiegbu, P.I, and Nwakamma, P.C. *Financial Management*, 2<sup>nd</sup>ed Harey Publication Port-Harcourt Nigeria, 2008.
13. Soludo, C. "Beyond Banking Sector Consolidation in Nigeria". A paper presented by CBN Governor during Global Banking conference held on Nigerian Banking Reform 2006.
14. Sufian, F. and Habibullah, M. "Do Mergers and Acquisitions lead to a higher technical scale Efficiency P.A country Evidence from Malaysia" *African Journal of Business management* Vol. 3 2008-2009, Pp 34-41.
15. UN Trade and Development "World Investment Report Cross Border Merger and Acquisition and Development", 2006 United nation Publication, New York, U.S.A.

Appendix A

Pre-Merger OLS Model Estimate

Dependent Variable: GEPR				
Method: Least Squares				
Date: 02/21/16 Time: 07:21				
Sample: 1997 2003				
Included observations: 7				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LAPR	1.644967	1.902944	0.864432	0.4785
OEPR	-0.081575	0.149713	-0.544881	0.6405
EPSPR	51.11873	109.6036	0.466396	0.6868
DPPR	-17.37735	30.24159	-0.574618	0.6236
C	-39670.70	91191.72	-0.435025	0.7060
R-squared	0.688303	Mean dependent var		91026.57
Adjusted R-squared	0.064908	S.D. dependent var		49024.57
S.E. of regression	47406.84	Akaike info criterion		24.54673
Sum squared resid	4.49E+09	Schwarz criterion		24.50809
Log likelihood	-80.91355	Hannan-Quinn criter.		24.06920
F-statistic	1.104120	Durbin-Watson stat		2.511339
Prob(F-statistic)	0.526240			

Estimation Command:

=====  
 LS GEPR LAPR OEPR EPSPR DPPR C

Estimation Equation:

=====  
 GEPR = C(1)\*LAPR + C(2)\*OEPR + C(3)\*EPSPR + C(4)\*DPPR + C(5)

Substituted Coefficients:

=====  
 GEPR = 1.64496652304\*LAPR - 0.0815754566519\*OEPR + 51.1187275196\*EPSPR -  
 17.37735165\*DPPR - 39670.6956072

Post-Merger OLS Model Estimate

Dependent Variable: GEPT				
Method: Least Squares				
Date: 02/21/16 Time: 07:26				
Sample: 2004 2010				
Included observations: 7				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LAPT	0.071688	0.039257	1.826132	0.2094
OEPT	1.367427	0.284105	4.813098	0.0406
EPSPT	-63.28412	38.88138	-1.627620	0.2451
DPPT	-0.214053	0.474316	-0.451288	0.6960
C	38743.25	56162.76	0.689839	0.5616
R-squared	0.999522	Mean dependent var		357667.4

---

Adjusted R-squared	0.998565	S.D. dependent var	200897.6
S.E. of regression	7609.725	Akaike info criterion	20.88805
Sum squared resid	1.16E+08	Schwarz criterion	20.84941
Log likelihood	-68.10818	Hannan-Quinn criter.	20.41052
F-statistic	1044.949	Durbin-Watson stat	3.383322
Prob(F-statistic)	0.000956		

Estimation Command:

=====

LS GEPT LAPT OEPT EPSPT DPPT C

Estimation Equation:

=====

GEPT = C(1)\*LAPT + C(2)\*OEPT + C(3)\*EPSPT + C(4)\*DPPT + C(5)

Substituted Coefficients:

=====

GEPT = 0.0716876693192\*LAPT + 1.36742662656\*OEPT - 63.2841157148\*EPSPT -  
0.214053157644\*DPPT + 38743.2519131