



## **BANK - SPECIFIC DETERMINANTS OF PROFITABILITY: EVIDENCE FROM NIGERIAN MEGA BANKS**

**Takon, Samuel Manyo**

Department of Banking and Finance, Faculty of Management Sciences  
University of Calabar, Calabar, Nigeria

**Obim, Edim Ndifon**

Department of Banking and Finance, Faculty of Management Sciences  
University of Calabar, Calabar, Nigeria

**Atseye, Fidelis Anake** 

Department of Banking and Finance, Faculty of Management Sciences  
University of Calabar, Calabar, Nigeria  
anakefidel@yahoo.co.uk, anakefidel@unical.edu.ng

### **Abstract**

*The paper was designed to provide empirical evidence of bank-specific determinants of profitability of top 10 deposit money banks in Nigeria for the period spanning 2007-2016 based on the Central Bank of Nigeria 2017 classification. The study employed ex-post facto research design with data from annual reports and financial statements of the sampled banks. Data were analysed using descriptive statistics and panel least squares (fixed effect) model both the techniques. Estimated panel results indicated a significant effect of capital adequacy and bank size on profitability, while credit risk and liquidity had insignificant effect on profitability of deposit money banks in Nigeria. Based on these findings, the paper recommended among other things, a robust loan portfolio with diversified inherent risks as well as a strong deposit base for the management of Nigerian deposit money banks to sustain profitability, strength and resilience of individual banks and the entire depository industry.*

*Keywords: Mega banks, specific determinants, profitability, banking*

## INTRODUCTION

The banking industry is one of the vibrant sectors of any economy; developed or developing. Through the mechanism of financial intermediation, it serves as the engine room of economic growth and development. Lending credence to the financial intermediation role of deposit money banks, Atseye, Nedozie and Obasam (2017) asserted that savings from different economic units must be added to the available stock of capital and channeled into investments for the growth and development of the economy. Real investment is achieved by procuring productive economic assets such as infrastructure, plant and equipment. With the robust monetary policies of the Central Bank of Nigeria, the emerging banking industry is adjudged strong and resilient to internal and external both the shocks.

In the past, government economic policies and programmes aimed at promoting sound financial system did not yield the desired economic growth. For instance, Dagogo and Ollor (2009), observed that the failure of previous financial policies of government to achieve desirable economic growth was a cause for concern, hence the demand for the restructuring of the Nigerian financial system. The introduction of the Structural Adjustment Programme (SAP) in 1986 and the privatization programme in 1989 were twin policy responses to failed institutional measures to promote growth and development in the economy. SAP was designed to reduce heavy dependence on consumer goods, imports and crude oil exports, the non oil export base to sustain growth in the economy (Uche, 2000). Similarly, Uche (2000) pointed out that government actions in the past have precipitated financial crisis in the Nigerian banking industry. The twin banking regulations of 1991- the CBN Banks and Other Financial Institutions Act (BOFIA) and the CBN Bank and Other Financial Institutions Decree (BOFID) gave the Central Bank unprecedented powers over the commercial and merchant banks. The CBN Decree of 1991, for instance, made it possible for the Central Bank to report directly to the president rather than through the Ministry of Finance. Again, the 1991 BOFID further empowered the Bank with the sole responsibility of licensing both banks and non-banks financial institutions, thus leading to proliferation of banks and other financial institutions. The emergence of Umana E. Umana miracle finance scheme of early 1990s where millions of Nigerians lost their life savings to the Ponzi scheme resulted in wide spread financial panic and public confidence was shattered (Atseye, et al 2017).

Consequent upon the crisis in the Nigerian banking industry, it was imperative for the monetary authority of the Central Bank to introduce fresh reforms to correct the anomalies. In his address on 6<sup>th</sup> July, 2004, the Central Bank Governor, Professor Charles Soludo, observed thus, “the Nigerian banking system today is fragile and marginal. Our vision is a banking system that is part of the global change, and which is strong, competitive and reliable. It is a banking

system which depositors can trust, and investors can rely upon. Evolving such a banking system is a collective responsibility of all agents in the Nigerian economy.” He gave reasons such as persistent illiquidity, weak corporate governance, poor assets quality, insider abuses, weak capital base, unprofitable operations, and over-dependency on public sector funds, among others, that necessitated the banking sector reform. Banking sector consolidation was consummated through mergers and acquisitions. All commercial banks were consequently required to recapitalize to the sum of 25 billion naira.

According to Ani, Ugwunta, Ezeudu and Ugwanyi (2012), deposit money banks are financial institutions whose profits are affected by numerous factors determined endogenously and exogenously. Therefore, the determinants of deposit money banks’ profitability are categorized into internal and external factors. Internal factors are bank-specific factors and they include: capital adequacy (the level of capitalization), earning strength, liquidity level and managerial efficiency. Banks specific factors are to a large extent under the control of the management. On the other hand, external factors are exogenous and include macroeconomic variables such as interest rate, inflation, gross domestic product (GDP), exchange rate and monetary policy rate (MRP). Banks thrive to maximize profit with a view to enhancing shareholders’ wealth and meeting obligations to other stakeholders in the industry. Profitability of the banking sector is crucial, as the safety of the sector is closely linked to the safety of the entire economy. According to Sharma and Mani (2012), banks’ performance has become a cause for concern to policy makers and economic planners due to the fact that the gains of the realistic sector of the economy depends on the efficiency of the banks in carrying out the function of financial intermediation. Different studies have been conducted in Nigeria and elsewhere to identify the determinants of commercial banks’ profitability. The major macro and micro factors that influence financial performance of banks is an on-going debate. Moreover, there are gaps in identifying bank-specific determinants of profitability. A 10-year scope of study employed in this work provides several time periods as well as data points for reliable results. Consequently, a lacuna in knowledge in terms of providing long run and fresh evidence is filled. In the light of the foregoing, this paper attempted an investigation of selected bank-specific determinants of profitability of top 10 mega banks in Nigeria during the period 2007-2016.

### **Specific Objectives**

- i. To examine the effect of capital adequacy on mega banks’ profitability.
- ii. To assess the effect of liquidity on mega banks’ profitability.
- iii. To determine the effect of bank size on mega banks’ profitability.
- iv. To ascertain the effect of credit risk on mega banks’ profitability.

## Research hypotheses

- Ho1: capital adequacy does not have a significant effect on mega banks' profitability.
- Ho2: liquidity does not have a significant effect on mega banks' profitability.
- Ho3: mega banks' profitability is not significantly affected by the size of their assets
- Ho4: credit risk does not significantly affect mega banks' profitability.

## LITERATURE REVIEW

### Theoretical framework

#### *Market structure theories*

This theory was propounded by Devinaga in 2010. The theory holds that firms' objective to maximize profits. It analyzes the profitability of the industry in terms of industry structure with the assumption that industry structure (measured by market concentration in terms of market share ratio) has impact on profitability of banks. Market structure theory provides two alternative policy drives in order to increase profit and rationalize market structure in the banking industry. First, limit the number of banking units in the industry by encouraging mergers and acquisitions among existing banks. This will increase the bank size in pursuit of external economies of scale. The second strategy is to share common facilities such as ATM with other banks in the industry. Both strategies may be useful in enhancing the competition in the market and improving the overall profitability and efficiency of the market.

#### *Structure conduct performance hypothesis*

This theory was propounded by mason in 1939. The theory presupposes that there is a correlation between industry structure and profitability of banking units. Therefore, there is a relationship between the degree of market concentration and the intensity of competition among firms in the industry. The hypothesis assumes that firms behave as rivals in the market which is determined by market structure conditions; especially the number and size distribution of firms in the industry and the conditions of entry. This rivalry leads to unique levels of prices, profits and other aspects of market performance. The implication is increased market power yields of monopoly profits.

### Empirical literature

A number of studies have empirically examined the various bank-specific determinants of commercial banks' profitability. Below is a list of review of selected empirical studies on the subject of investigation.

Short (1979) and Bourke (1989) studies are among the pioneering works on bank profitability. For instance, Short (1979) found a positive relationship between size and banks' profitability. This is possible by lowering the cost of raising capital for big banks. Smirlock (1985) utilised data from 2700 United States banks operating in a particular region for the period 1973-1978. The result revealed that once market share is controlled for, concentration (market share) is independent of banks' profitability rate. In another study, Berger (1995) employed structural models of two market-power hypotheses and two efficient-structure hypotheses expressed in testable and reduced forms of profit equation to test the four hypotheses of market concentration, market share,  $x$  – efficiency and scale efficiency. The results showed the presence of relative market power hypothesis and partial support for  $X$  – efficiency approach.

However, Weersainghe and Perera (2013), enumerated the common determinants of profitability as cost, size, capital, liquidity, credit risk as internal factors/bank-specific determinants. Naceur (2003) investigated the impact of banks' characteristics, final structure and macroeconomic indicators on banks' net interest margin and profitability in the Tunisian banking industry between 1983 and 2000 using panel data and random effect models. The findings revealed that high net interest margin and profitability tend to be associated with banks that hold relatively high amount of capital, and with large overheads.

Athanasoglou, Delis and Stakouras (2006) analyzed the effect of selected set of determinants on banks profitability in the South Eastern European region over the period 1998-2002. Using an unbalance panel dataset, the study reveals that concentration is positively correlated with bank profitability. Tunay and Silpar (2006) investigated profitability of the Turkish banking sector in the period of 1988-2004 using panel data method. The study revealed that the ratios of equity, non-interest expenditures to total assets, national income and concentration ratio have positive impact on ROE and that the ratio of deposits to stock market capitalization have negative impact on both return on equity (ROE) and return on assets (ROA).

In Turkey, Yildirim (2008) analyzed profitability of Turkish banking sector for the period 2002 – 2007, by employing multiple regression method. The findings reveals a positive relationship between return on assets and the ratio of budget balance to industry production balance, the ratio of securities to total assets and the ratio of equity to total assets. On the one hand, the ratio of off-balance sheet transactions to total assets and the ratio of liquid assets to assets were identified to have a negative relationship with return on assets. Sayilgan and Yildirim (2009) examined the relationship between the return on assets and the return on equity ratio for a sample of Turkish banks for the period 2002 – 2007. The analysis from the monthly data showed that profitability is positively affected by capital adequacy and negatively by growing off-balance sheet assets. Tragenna (2009) analyses the effect of structure on

profitability from 1994 – 2005 using bank level data to test the effect of concentration (market power) bank size and operational efficiency on profitability. Efficiency is not found to be strong determinants of profitability suggesting that banks' high profit during this period were not earned through efficiency performance. Robust evidence is found that concentration increases profitability.

Gul, Irshad and Zaman (2011) assessed the relationship between specific and macroeconomic characteristics over bank profitability by using data of top fifteen Pakistani commercial banks over the period 2005 – 2009. They investigated the impact of assets, loans equity, deposits, economic growth, inflation and market capitalization on major profitability indicators i.e., return on asset, return on equity, return on capital employed and net interest margin separately. The empirical results found strong evidence that both internal and external factors have a strong influence on the profitability. Davydenko (2010) investigated the determinants bank profitability in Ukraine ranging from bank specific, industry specific and macroeconomic indicators to the overall probability of Ukrainian banks. The study uses a panel of individual banks' financial statements from 2005 – 2009. Ukrainian banks suffer from low quality of loans and do not manage to extract considerable profits from the growing volume of deposits. This study finds evidence for the difference in profitability patterns of banks with foreign capital versus exclusively domestically owned banks.

Alperand Anbar (2011) examined banks-specific and microeconomics determinants of bank's profitability in Turkey over the period from 2002 – 2010. The bank profitability was measured by return on assets (ROA) and return on equity (ROE) as a function of bank-specific and macroeconomic determinants. Using a balanced panel dataset, the results show that asset size and non-interest income have a positive and significant effect on bank profitability. However, size of credit portfolio and loans under follow-up have a negative and significant impact on bank profitability. Acarvaci and Calim (2013) analyzed the bank specific and macroeconomic factors that affect the profitability of commercial banks in Turkish banking sector by using Johansen and Johanssen cointegration test approach. Data for the period 1998 – 2011 was collected from the three biggest state-owned, privately-owned and foreign banks and the following variables were used a proxies for profitability of bank namely, return of asset, return of equity and net interest margin. The bank specific determinants, which were thought to have effects on profitability are total credit/total assets, total deposits/total assets, total liquid assets/total assets, total wage and commission income/total assets, total wage and commission expenses/total assets, the logarithm of total assets and total equity/total assets.

Abdullah, Parvez and Ayreen (2014) study examined the bank-specific, industry-specific and macroeconomic determinants of 26 DSE listed bank's profitability in Bangladesh during

2008 – 2011. Panel data approach was used where bank profitability is calculated by return on assets (ROA) and Net interest Margin (NIM) as a function of bank specific, industry-specific and macroeconomic determinants. The findings show that the profitability of the Bangladesh banking sector is determined by bank size, higher cost efficiency, capitalization, higher concentration, regardless of whether ROA or NIM is used as the dependent variable. Credit risk and ROA have a negative relation, whereas the relationship with NIM is positive. In Ghana, Antwi and Apau (2015) investigated the determinants of financial performance of Rural and Community banks in Ghana. Thirty (30) rural and community banks across the country were purposefully selected for the period 2006 – 2010 and panel data was used in regression analysis model to examine the variables that affect the performance of RCBs. The variables of the regression include credit risk, capital adequacy, portfolio composition, bank size, operational efficiency, gross domestic product as well as inflation (consumer price index). The results from the study reveals that credit risk, non-interest expense, banks capital strength, gross domestic product, and annual rate of inflation are significant drivers of RCBs' profitability in Ghana. However, bank size and portfolio composition did not have any significant impact on their profitability.

Tuzcu (2015) present the model of the determinants of profitability for the Turkish banking industry by employing a dynamic panel framework for 30 Turkish commercial banks. The study used a comprehensive quarterly date set of bank level, industry level and macroeconomic explanatory variables for the period 3003 – 2010. The findings were that internal factors such as capital and the credit risk are the most influential ones. Petria, Capraru and Iibatov (2015) assessed the main determinants of banks' profitability in EU27 over the period 2004 – 2011 using panel data approach. The study was split into three categories of factors that influence bank profitability namely; the bank-specific (internal) factors, industry specific and thirdly macroeconomic (external) factors. Bank's profitability was proxies by return on average assets (ROAA) and the return on average equity (ROAE). The empirical findings were that credit and liquidity risk, management efficiency, the diversification of business, the market on concentration / competition and the economic growth have influence on banks profitability, both on ROAA and ROA. An interesting and valuable result is the positive influence of competition on bank profitability in EU27. Mehmet and Nimet (2017) investigated bank-specific and macroeconomic determinants of bank profitability in Turkey covering the period 2005-2015. According to the results, bank-specific characteristics such as, the ratio of interest on loans to the interest on deposits, used as proxy for net interest margin, the ratio of net fees and commissions revenues to total operating expenses and relative size had positive and significant impact on profitability. On the other hand, the ratio of nonperforming loans to total loans and capital adequacy and the ratio of other operating expenses to total operating revenues, are

negatively related to profitability. The result also revealed that banks are limited in the determination of interest rates because rates are externally determined. Based on the literature reviewed, mixed findings are observed due to the variation in the environment and methodological considerations.

## METHODOLOGY

### The Study and the Data

The study employed historical design with data sourced from annual reports and accounts of the affected mega banks. The banks include: United Bank of Africa, Access Bank, First Bank of Nigeria, Zenith Bank, GTbank and IBTC. The Nigerian Capital Market Statistical Bulletin of the Securities and Exchange Commission (SEC) as well as the Annual Report of the Nigerian Deposit Insurance Corporation (NDIC) was consulted. Data were analysed using descriptive statistics and panel ordinary least square (fixed effect) model both the techniques.

### Model specification

The theoretical model for the bank-specific determinants of profitability of Nigerian mega banks followed the footsteps of popular model reviewed in the literature. It was adopted and modified as shown below.

$$ROA = F(CA, LD, CR, SZ)$$

In econometric form it is given by:

$$ROA = \alpha_0 + \alpha_1 CA + \alpha_2 LD + \alpha_3 CR + \alpha_4 SZ + \varepsilon_0$$

Where,

$\alpha_0$ -  $\alpha_4$  are co-efficient of explanatory variables and  $\varepsilon_0$  is the error term

### Description of variables

- **Return on asset (ROA):** the ratio of profit before tax to total assets for bank *i* at time *t*
- **Capital adequacy (CA):** the ratio of bank capital resources needed to finance its operations for bank *i* at time *t*
- **Liquidity (LD):** consistent with Acarvaci and Calim (2013), liquidity measured as the ratio of total liquid assets to total assets for bank *i* at time *t*
- **Credit risk (CR):** it is the ratio of total loans and advances as credit to total assets for bank *i* at time *t*
- **Size(SZ):** In some studies, it is used as a control variable and taken as the natural logarithm of total assets bank *i* at time *t*



## ANALYSIS AND DISCUSSION OF RESULTS

The panel least squares (fixed effect) model result is presented in table 1 in appendix. The value of the intercept 4.70, revealed that the profitability of deposit money banks in Nigeria will experience a 4.70 increase when all other variables (size, liquidity, credit risk and bank capital adequacy) are held constant. The estimate coefficient which is 0.09 for bank liquidity {LD} shows that a percentage change in LD will cause a 9% increase in the profitability of deposit money banks in Nigeria. The coefficient of 0.88 for bank size {SZ} shows that a percentage change in SZ will cause an 88% increase in the profitability of banks in Nigeria. The estimated coefficient of 1.03 for credit risk {CR} shows that a percentage change in CR will cause a 103% increase in the profitability of banks in Nigeria. Lastly, the coefficient of 0.24 for bank capital adequacy {CA} shows that a percentage change in CA will cause a 24% increase in the profitability deposit money banks in Nigeria.

The  $R^2$  {R-Squared} which measures the overall goodness of fit of the entire regression, had a value of 0.7251, approximately 73% indicating that the independent variables: LD, SZ, CR and CA account for about 73% of the variation in the dependent variable (ROA). Therefore, the variables correctly fit the model specified.

From the results in table 1, f-calculated {6.14} is greater than the f-tabulated {2.34}, that is,  $f\text{-cal} > f\text{-tab}$ . Hence, we reject the null hypothesis {H0} that the overall estimate has a good fit which implies that our independent variables are simultaneously significant. The Durbin-Watson statistic value of 1.82 indicates the non-existence of positive autocorrelation in the model, thus adjudging it as a good fit.

Table 1 Summarized t-test result from the panel least squares (fixed effect)

The t-test as summarized: {t-cal.}	t-tab	Corresponding probability	Remark
LIQ {0.02}	± 2.04	0.9790	Insignificant
SIZE {-3.06}	± 2.04	0.0229	Significant
LAR {4.84}	± 2.04	0.0000	Significant
CAAQ {-2.41}	± 2.04	0.0590	Significant

In the table, t-calculated {-2.416}, taking the absolute value, is greater than 2.04 t-tabulated, implying that CA is statistically significant. Therefore, capital adequacy had a significant effect on the profitability of deposit mega banks in Nigeria. Under hypothesis 2, t-calculated {0.02} is lower than 2.04 {going by absolute values} which represent the t-tabulated, implying that LD is statistically insignificant, hence the null hypothesis was upheld-liquidity does not have a significant effect on mega banks' profitability in Nigeria. From table, it is deduced that mega

banks' profitability is significantly affected by the relative size of their assets, since t-calculated {3.06} is greater than 2.04 t-tabulated. Finally, result of hypothesis 4 showed that credit risk significantly affected mega banks' profitability in Nigeria. From the estimated results in table 1, t-calculated {4.84} is greater than 2.04 t-tabulated, the null hypothesis was ignored.

Result of hypothesis 2 conforms to the works of Dietrich and Wazenried (2011), Alper and Anbar (2011), and Mirzaei and Mirzaei (2011) who found that the level of liquid assets may be quite high, if the share of liquid assets within total assets cannot be regarded a trustworthy measure of liquidity. Liquid assets bring lower yields, a high share of these assets are expected to impact profitability negatively. This result is corroborative of most empirical literature reviewed. Result of hypothesis 4 indicated that credit risk affect banks' Profitability significantly.

## CONCLUSION AND RECOMMENDATIONS

According to the findings, bank-specific determinants of profitability of mega banks in Nigeria capital adequacy, credit risk and the relative size of bank assets. Therefore, deposit money banks' profitability is significantly affected these factors. Bank share capital regulation has remained in force over the years in Nigeria. Constant recapitalization enhances fixed tangible assets multiplication and the entire banking sector growth through mergers and acquisitions, little wonder that bank size was found to be statistically significant. The statistical significance of credit risk against profitability indicates a striking result. However, the determinants of deposit money banks' profitability are bank-specific, industry-specific and macroeconomic in nature.

The following recommendations are proffered to guide policy framework based of the findings:

1. Management of deposit money banks should implement strategies that will guarantee trade-off between liquidity and profitability for smooth operations. This is because large asset portfolios may affect their profit margins.
2. Compliance with capitalization requirements prescribed by regulatory authorities would sustain adequate capital for bank-specific and sector-specific growth.
3. The ratio of total loans and advances total assets as a measure of credit risk should be in direct proportion to minimize excessive risks by banks
4. Strict bank supervision by regulatory authorities would ensure compliance with regulatory requirements for a sound banking industry in Nigeria.

However, there is room for further studies. For instance, macroeconomic evidence can be provided on the topic. A combination of micro and macroeconomic determinants of profitability of the mega bank can be considered for further study. A variable such as volatility as

a measure of risk in an emerging market such as Nigeria should be incorporated in the determinants of profitability of mega banks in Nigeria.

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**APPENDIX**

Dependent Variable: LPROF

Method: Panel Least Squares

Date: 06/03/18 Time: 06:11

Sample: 2007 2016

Periods included: 10

Cross-sections included: 6

Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LSIZE	0.888586	0.836021	-3.062874	0.0229
LLIQ	0.096457	3.641752	0.026486	0.9790
LLAR	1.033146	0.213168	4.846633	0.0000
LCAAQ	0.242625	0.582866	-2.416263	0.0590
C	4.708143	3.050261	1.543521	0.1290

**Effects Specification**

Cross-section fixed (dummy variables)

R-squared	0.725125	Mean dependent var	-1.259006
Adjusted R-squared	0.639648	S.D. dependent var	0.990331
S.E. of regression	0.041329	Akaike info criterion	-1.390267
Sum squared resid	27.47843	Schwarz criterion	-1.739325
Log likelihood	-61.70802	Hannan-Quinn criter.	0.526803
F-statistic	6.143436	Durbin-Watson stat	1.826308
Prob(F-statistic)	0.000009		

BANKS	YEARS	LIQ	CAAQ	LAR	PROF	SIZE
UBA	2007	0.882161	0.152086	0.061703	0.432547	19.38693
	2008	0.715984	0.475602	0.073711	0.386937	19.958
	2009	0.850482	0.171102	0.073305	0.423288	13.91295
	2010	0.845363	0.140635	0.084355	0.37709	14.23428
	2011	0.865999	0.161664	0.069361	0.507876	14.15261
	2012	0.869957	0.16719	0.048172	0.66228	14.18066
	2013	0.890571	0.147038	0.050956	0.80872	14.32597
	2014	0.886027	0.148461	0.065247	0.424919	14.47462
	2015	0.882955	0.144398	0.119367	0.400993	14.61185
	2016	0.879457	0.155437	0.124	0.433762	14.66517
FIRST	2007	0.747093	0.399062	0.044521	0.490336	20.08808
	2008	0.802705	0.284005	0.003087	0.104434	20.2009
	2009	0.898646	0.129673	0.05749	0.586186	13.54486
	2010	0.708401	0.481434	0.063189	0.582818	13.96863
	2011	0.820877	0.208894	0.052813	0.399202	14.38788

	2012	0.688627	0.459432	0.046446	0.513378	14.67198
	2013	0.731247	0.360586	0.045327	0.530687	14.86768
	2014	0.76621	0.293608	0.052169	0.538229	14.95665
	2015	0.772773	0.281931	0.042644	0.469825	15.13657
	2016	0.742521	0.337349	0.043532	0.489777	15.23418
ZENITH	2007	0.852984	0.203162	0.037149	0.090885	20.60708
	2008	0.857473	0.200928	0.006108	0.000716	20.73151
	2009	0.872352	0.198646	0.045956	0.508875	20.5999
	2010	0.798558	0.291426	0.062037	0.44769	21.24224
	2011	0.787347	0.302125	0.054645	0.40511	14.27225
	2012	0.801572	0.276768	0.047569	0.528896	14.40256
	2013	0.82849	0.236055	0.049285	0.504466	14.58981
	2014	0.820261	0.243064	0.061036	0.185395	14.70623
	2015	0.835821	0.227237	0.055869	0.231519	14.87285
	2016	0.850253	0.226335	0.05398	0.202589	15.04627
GTB	2007	0.827408	0.23806	0.062225	0.484508	19.55931
	2008	0.806103	0.285259	0.078474	0.24169	20.21797
	2009	0.900844	0.163117	0.080804	0.585347	19.98589
	2010	0.800538	0.363066	0.052761	0.087579	20.64042
	2011	0.80633	0.30156	0.044907	0.080467	20.75569
	2012	0.800199	0.302129	0.060794	0.118708	20.80328
	2013	0.846291	0.237958	0.058698	0.091266	21.14429
	2014	0.823158	0.269991	0.079595	0.097464	21.20589
	2015	0.826899	0.261206	0.067928	0.101308	21.36741
	2016	0.826235	0.256678	0.06677	0.099289	21.47779
IBTC	2007	0.817287	0.259064	0.043013	0.423032	20.21909
	2008	0.794752	0.405334	0.085482	0.502963	20.11096
	2009	0.762177	0.999538	0.044846	0.319174	19.53425
	2010	0.778392	0.774754	0.061344	0.175308	19.66117
	2011	0.772287	0.361077	0.06632	0.469934	12.70987
	2012	0.775377	0.356837	0.071528	0.609392	12.86674
	2013	0.852521	0.272787	0.05658	0.338404	13.22583
	2014	0.875781	0.224187	0.051844	0.271119	13.42516
	2015	0.867229	0.207415	0.068831	0.268543	13.54507
	2016	0.879015	0.201595	0.073421	0.230524	13.75846
ACCESS	2007	0.882498	0.149695	0.035502	0.283946	21.28304
	2008	0.862962	0.168422	0.043005	0.382562	19.19607
	2009	0.913623	0.138305	0.035849	0.470238	19.6104
	2010	0.833306	0.488935	0.024445	0.349006	20.75461
	2011	0.726122	0.451523	0.015659	0.310161	20.33002

2012	0.748948	0.414273	0.046288	0.490702	20.40438
2013	0.802991	0.357897	0.041949	0.213527	20.67132
2014	0.84323	0.217211	0.059811	0.196561	21.13918
2015	0.856122	0.191777	0.041216	0.313857	21.2563
2016	0.861674	0.187867	0.044838	0.249339	21.40735

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