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International Consortium on Government Financial Management

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"Working globally with governments, organizations, and individuals, the International Consortium on Governmental Financial Management is dedicated to improving financial management so that governments may better serve their citizens"

The editor invites submission of articles, research papers, letters and reviews of books, and other relevant documents. Please submit material to the editor: Hassan Ouda –

icgfm.ijeditor@icgfm.org.

Requests for information on the Consortium should be addressed to:

International Consortium on Governmental Financial Management

PO Box 1077

St Michaels, MD 21663

Telephone: (410) 745-8570

Fax: (410) 745-8569

Email: icgfm@icgfm.org

www.icgfm.org

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General Information

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Foreword

Public fiscal sustainability and public sector accountability are necessary for encouraging economic growth needed for the well-being of current and future generations. Both the public fiscal sustainability and public accountability are considered as the most important aspects of sound public sector governance. Fiscal sustainability aims to assure that current taxpayers are paying for the services that they receive and not pass those costs on to future generations, whereas the public financial accountability aims to monitor and control the performance of government officers and organizations, particularly with respect to quality, inefficiency and the abuse of resources. Therefore, the current issue focuses mainly on the public fiscal sustainability and public financial accountability and its role in controlling the public sector entities performance.

The first article of this issue focuses on measuring public finance sustainability and financial performance in Nigeria's Federal Treasury. In this article, Alozie, Christopher and his colleagues have attempted to measure public debt-to-finance sustainability and government financial performance in federal treasury reports from 1999 through 2014. Result yields "A" sustainability performance rating, indicating that Nigeria's sovereign treasury is solvent and in stable, holding other factors constant. The authors observed that Nigeria has reverted to excessive debt accumulation, thus fiscal planners should take adequate precautionary measures to moderate debt exposure; prudent capital expenditure management in the light of fluctuations in price of crude oil.

The second article deals with public financial accountability: The case of the financial Administration Courts in Ghana. In this paper, Samuel Pimpong argues that public financial accountability failure in Ghana denotes poor internal control systems that signify deficits in oversight institutions. The study reveals the presence of a good and detailed constitutional-legal framework that promotes and enhances PFA in Ghana. However, the absence of applying sanctioning mechanisms to wrongdoers, deficiencies in institutional capacity of the FAC, coupled with financial and human resource limitations, have had an adverse impact on PFA.

In the third article, Indra Bastian and Yuniati Pratiwi have conducted a case study at the Local Bank of Klaten which indicates that the tax audit result in 2015 requires a fiscal correction. The result of the study shows the difference of interpretation related to the formation of reserve fund and write-off of bad debts of Rural Bank (BPR) in accordance with banking regulations and according to the Income Tax Law and its implementing regulations. By not recognizing the bad debts of banks that have been written off in accounting, fiscal correction is done through the process of tax audit.

In the fourth article, Yong Joo Lee and the co-authors have attempted to analyze the efficiency of Korean banks using a two-stage DEA (data envelope analysis) bootstrap procedure suggested by Simar & Wilson (2007). The results of this article suggest a continuing tension between Korean bank profitability and bank revenue.

The fifth article deals with why municipal governments don't produce Popular Annual Financial Reports (PAFR), a preliminary study with evidence from Texas. Herein, James E. Groff and his colleagues have conducted a survey of the financial personnel of 178 Texas municipalities to determine the reasons why the vast majority of the municipalities do not prepare a PAFR. The authors have presented in detail the analysis of the reasons for preparing or not preparing the PAFR.

In the sixth contribution, Michael Parry and other members of Ad Hoc Committee on International Accounting Standards –ICGFM presents the response to Consultation Paper on Financial Reporting for Heritage in the Public Sector – April 2017.

The final contribution focuses on the review of "Government Budgeting and Expenditure Management". Salvatore Schiavo-Campo, Routledge 2017.

We hope the articles in this issue will stimulate discussion on contemporary problems of public organizations. If you would like to participate in such discussions, please contribute to the next issue of this Journal and/or attend future ICGFM events. We would also be pleased to receive reviews and suggestions for future issues. Send them to icgfm@icgfm.org.

We look forward to hearing from you!

Prof. Dr. Hassan Ouda	Jason Wynnycky	Jim Wright
Editor	*Vice President of Communications*	*President*

December 2017 Issue

Measuring Public Finance Sustainability and Financial Performance in Nigeria's Federal Treasury

Onwuliri, Okechukwu (Ph.D) and Alozie, Christopher (FCA)

Alozie, Christopher E. (B.Sc. (Econs), M.Sc. (Econs), M.Sc. (Accounting), M.Sc. (Banking & Finance), FCA): National Coordinator of Programmes, Centre for Community Development and Research (CCDR), Awka, Anambra State.

Dr. A. Sadiq (Ph.D): Bayero University and Committee Member, Research and Technical Committee, the Institute of Chartered Accountants of Nigeria.

Arumaologbede, Jude: B.Sc (Accounting), M. Sc (Accounting), Ph.D Research Fellow, University of Benin and Lecturer in Accounting, Ibinedion University, Okada, Edo State – Nigeria.

Abstract

The study measure public debt-to-finance sustainability and government financial performance in federal treasury reports from 1999 through 2014. The purpose is to establish whether the carry public debt profile and available public financial resources in the nation's treasury is sustainable presently and in short term. Ex-post 'facto' empirical analysis is the research method was employed. Financial analysis with extraction of financial performance indicators; descriptive statistics, econometric evaluation processes, and combined multiple discriminant analysis, financial discounting (DCF) technique with logistic regression model and the dynamic debt estimation approach were used in analysis. Result yields "A" sustainability performance rating, indicating that Nigeria's sovereign treasury is solvent and in stable, holding other factors constant. The author observed that Nigeria has reverted to excessive debt accumulation, thus fiscal planners should take adequate precautionary measures to moderate debt exposure; prudent capital expenditure management in the light of fluctuations in price of crude oil.

Keywords: Public finance sustainability, Public Debt Sustainability Analysis (PDSA) Public Finance Management, Public Financial Performance Sovereign Treasury, Financial Sustainability Index (FSI), Nigeria.

Introduction, Background to the Study

The paper analyzes pertinent financial variables in measuring public finance-to-solvency and sustainability in Nigeria's federal treasury. A sound public financial management and debt management practice necessitates requires appraisal and measure on a continuing annual basis, using appropriate q quantitative analysis (Debt Management Office, Nigeria (DMO), 2014). The primary aim of this paper is to determine fiscal financing leverage solvency and sustainability; that is, financial capacity of the available financial resources in meeting its current and future debt obligations as and when due without recourse to exceptional financing and without compromising economic growth and development (DMO, 2013). The study also gauges the impact of debt service payments on government revenue on one angle and on service-level fiscal capacity and public capital investment.

Public finance sustainability involves analysis and measurement of the existing relationship between public debt portfolios and financial capacity in sovereign treasury. There are different types of solvency and sustainability measurement in public finance management system. These include budgetary insolvency, treasury illiquidity, service-level solvency, external treasury vulnerability, public debt-to-public finance (leverage) insolvency. The study is concentrated on financial solvency and sustainability in the federal treasury.

Nigeria's experience in public treasury management, financial management performance and financial capacity health remains bitter, sweet and unpredictable. The statutory revenue accruing to Federation account has reduced drastically during the past four years due to steady decline in crude-oil price in the international market (FGN 2013, Okogu, 2014). The decline in petroleum revenue has caused serious difficulties in many states of Nigeria and induced some elements of fiscal budget distress and liquidity pressure in their central treasury. Most of the states are now facing fiscal difficulties to meet recurrent expenditure needs and financial obligations. Federal government on its part is equally facing serious liquidity challenges due to the dwindling revenues and insufficient revenue allocation from the federation account. Unfortunately, the sub-national governments surreptitiously relied on revenue from statutory allocation for the bulk of their spending needs and bail-out funds to meet part of their essential fiscal operations.

Public finance statistics indicate that Nigeria's public debt profile grew from N1216 billion in 1999 to N5767 billion in 2003 and increased to N6073 billion in 2004 before debt relief from the Paris Club of external creditors. A total sum of S18 billion in external debt waiver was granted to the national treasury in 2004 / 2005 during the debt relief process. This fact gives a simplified glimpse of the debt management practice to the discerning target audience ant interested readers preview on management of financial resources in federal treasury for the past 16 financial years. Following developments in the Nigeria's fiscal space and general government sector, discerning citizens, trade partners, donor agencies, sovereign governments, stakeholders and all other interested users of FGN's general purpose financial statements and government financial statistics have expressed concerns over the true state of the financial condition in the federal treasury. For this reason, the target audience of this study, relevant authorities of government, and the various stakeholders groups deserve to be adequately known and be well informed of whether Nigeria's national treasury is financially solvent and sustainable in the short term (future) or otherwise.

1.2 Problem Statement

Public finance issues and pertinent research problems in considered necessary for investigation for policy formulation and decision-making in the federal treasury in this paper include: practice of continuous deficit budgeting, fiscal imbalance, deficit financing with related excess accumulation of public debt; public finance leverage and debt vulnerability alongside the uncertainty about public finance–to–debt solvency and sustainability in short-to-medium term;

Studies conducted in Greece by Alogoskoufis, (2012), Kouretas and Vlamis (2010) for Greece established empirical evidence over indulgence in practice of continuous deficit budgeting alongside deficit financing which often lead to accumulation of excessive public debt and debt burden. These papers established that continuous use of overdraft financing induces negatively skewed public finance-to-debt leverage (financing structure), debt overhang, high debt service charges and transfer current debt to future generations (Roubini, 2006). Roubini (2006) opined that high leverage in an entity often result to acute debt burden, liquidity constraint and fiscal insolvency. However, to the best of this researcher's knowledge no studies so far have been conducted and reported on public finance solvency and sustainability in the Nigerian federal treasury. The present study bridges gap in paucity or non-existence of empirical studies on public finance sustainability for Nigeria and knowledge.

Back home in Nigeria, Okonjo-Iweala and Kwaafor, (2007) confirmed that lack of accurate and proper record of public debts, debt sustainability analysis, debt management strategies and balancing of public finances-to-debt vis-à-vis weak-based fiscal consolidation system compounded Nigeria's debt problems in the pre-debt relief era. Okonkwo (2013) observed that he Nigerian government have reverted to excessive accumulation of public debt and there resurgence of excessive debts in sovereign treasury within the past three fiscal years could worsen fiscal solvency and result in inter-generational transfer of debt burden. Yet, no empirical studies that measured financial sustainability in federal treasury to date.

1.3 Objectives of the Paper

The main objective is to measures of public finance sustainability and government financial performance in the Nigerian federal treasury. The specific objectives of the study include:

1. Examine the extent public debt and government revenue ratio affect financial sustainability

2. Evaluate the extent which external debt and exports revenue influence sustainability

3. Assess the extent, to which the association between public debt and gross national product (GDP) influence short term fiscal sustainability,

1.4 Research Questions

The research questions for this study include:

1. To what extent has debt-to-revenue ratio influence sustainability?

2. To what extent has external debt-to-exports ratio affect sustainability?

3. Which direction does public debt and GDP relationship affect fiscal sustainability?

1.5 Research Hypotheses

These hypotheses were therefore stated in the null form are as follows

Ho_1: Debt–to-revenue ratio does not affect financial sustainability in sovereign treasury.

Ho_2: External debt to exports does not influence fiscal sustainability in federal treasury.

Ho_3: The association between debt and national output does not induce sustainability.

1.6 Significance and Policy Relevance of the Study

This research is extremely relevance in development of debt management strategies in a sovereign treasury, fiscal policy and early detection of treasury illiquidity, fiscal insolvency and prevention of fiscal distress. For the state actor, this study has developed a credible and dynamic debt financial model to determine of realistic financial condition, solvency and sustainability in national or sub-national treasury in Nigeria and other countries. The study has provided researchers, stakeholders, consultants, government employee and practitioners and with requisite financial performance measurement system for the Nigerian public sectors. Policy analysts, financial analysts, financial journalists, monetary authorities, central banking community, researchers, local and international investors, operators in Nigeria's capital, financial and money markets, particularly bond market participants, net-worth individuals who invest in government bonds in appraising financial solvency and sustainability of sovereign nations.

1.7 Scope of the Paper

The paper is primarily conceptualized to perform a dynamic debt financial estimation, and through the process measure and establish public finance-to-debt sustainability in Nigeria's sovereign treasury. The research covered a period of 16 financial years, from 1999 to 2014.

1.8 Structure of the Paper

The rest of the paper is organized into four sections. Section II provides conceptual framework, theoretical literature with review of empirical studies. The research design, theoretical framework guiding empirical models adopted, and the main frame of the methodology of the research were laid out in section III. Section IV presents empirical results discussions, while the paper is summarized in section V.

SECTION 2: LITERATURE REVIEW

2.1 CONCEPTUAL LITERATURE

Public finance solvency and sustainability are the main concepts used in public debt management and debt portfolio management reference to the dynamic financial estimation and analysis of the relationship between debt and selected fiscal resource aggregate. However, public debt sustainability analysis (PDSA) deals exclusively on the association between public debt and available public financial resources. It is used as measure of capacity of the available public financial resources –government revenues, export revenues, foreign reserve balance in comparison to total debt, external debt and also debt service to determine the state of fiscal solvency and sustainability in the treasury (Padovanni, 2016).

Public finance solvency and sustainability commonly referred as public debt sustainability (PDSA) analysis in literature gauges the relationship between available public financial resources and the carrying public debt profile in the public financing structure of a government treasury. It is defined by Roubini (2006) as a measure of the summation of annual primary balance in a government entity required in recouping aggregate outstanding debt at the current market values. Public financial performance and financial health is interwoven with financial solvency and sustainability. Public finance or treasury sustainability can be broadly defined as government’s ability to meet its obligations on a continuing basis (Plummer and Patton, 2015). In other words, PDSA can be used to estimate the length of fiscal periods (in years) it takes to accumulate budget surpluses in order to fully offset outstanding carrying public debt balances. It is one of the latest approach and best practice adopted in debt management strategies in public treasury, globally. The variable in the model structure of a debt sustainability analysis conventionally reflect market values price of the carrying public finance resources (fiscal aggregates) and debt stock on point-to-point basis together with debt management strategies and fiscal policies adopted as criteria for government financial performance evaluation particularly in the sovereign treasury.

In assessing the financial condition of a government, emphasis is placed on the government’s ability to meet its obligations within the fiscal year (budget solvency), its ability to pay its current obligations as and when due (cash solvency), its ability to maintain existing service levels (service-level solvency), as well as meet outstanding obligations in the future (long-term solvency). Generally, financial condition or fiscal health is examined using indicators such as budgetary, cash, service, treasury liquidity and long-term public finance (short and long term) solvency (27, 25, 28) and debt sustainability. However, the common feature is that of examining whether an organization's financial condition is improving or not with the view to assessing the impact on its ability to meet stakeholder's demands.

Kattelus (2013) summarized three main factors that determine financial solvency and or contribute to prevalence of financial distress in government treasury to include environmental factors, financial factors and organizational factors. Kattelus (2013) stressed further that the financial factor include revenue generating capacity, aggregate public expenditure, size of government fiscal operating balances, debt portfolio, unfunded liabilities and state of public infrastructure. The financial capacity or condition of a government entity influences both the short and long-term treasury solvency and sustainability of countries. In view of this, the financial capacity of an entity provides a clue as to the sustainability of the organization in terms of survival and ability to meet expectations of stakeholders.

2.2 Public finance sustainability and financial management performance

The dependent variable of the study is public finance sustainability and independent fiscal variables consists three pair-wise sustainability indicators; present value (PV) debt-to–public revenue; PV of debt-to-foreign debt-to–exports; PV of debt-to-Gross domestic product (GDP). Financial sustainability represents dependent variables. In some studies, other pair-wise variables used may include debt service-to-government revenues or aggregate expenditure; interest rate of debts versus interest of Bonds rand / or annual rate GDP growth. It is pertinent to state that interest rate on debts, bonds / treasury bills interest rates and GDP annual growth rate are used primarily as discounting factor of the carrying book values of debts to derive estimate of future values of debt, while holding values of other variables (revenue, exports, foreign reserve and GDP constant.

In contrast to “high and low leverage ratios” used in the traditional public finance solvency measurements, specific international bench mark for selected sets of fiscal aggregates ratios and range of fiscal aggregates values have been established and applied as measures of sustainability (World Bank, 2013; DMO, 2014). Thus, to determine sustainability or unsustainability within the financing structure in sovereign treasury, an evaluator must ensure that the fiscal ratios or indicators falls within the lower range of the specified threshold / benchmark for given criteria for an entity. If otherwise, then, it is an indication of potential danger or risk of fiscal insolvency. Some of the main consequences of public finance unsustainability are almost the same as in high debt ratio, because it imposes financial constraints flowing from lack of resource capacity in meeting its obligations to its creditors and current expenditure commitments when due. In essence, the underlying effect of relationship between public finance solvency and sustainability in treasury management has a diverse impact on financial capacity of government entity, economic growth and development.

2.2.4 Developments in Nigeria’s sovereign treasury, debt and public finance management

Nigeria’s public finances and public debts appeared to be improperly handled during the period preceding debt year 2000. For instance, Okonjo-Iweala and Kwaafor, (2007) observed that lack of accurate and proper record of public debts, debt sustainability analysis, debt management strategies and balancing of public finances-to-debt vis-à-vis weak-based fiscal consolidation system compounded Nigeria’s debt problems. Okonjo-Iweala (2010) suggested that the budget was not good enough to proper growth in the economy. Annual budgetary allocation for public capital investment and infrastructure development is less than 30 percent of approved total annual expenditures. Total annual actual capital spends is about an average of 15 percent yearly during the last decade (FGN, 2014). Okonkwo (2014) observed that Nigeria’s public debt is increasing in leaps and bounds in the recent years, before the sharp and steady decline in crude oil export revenues. Okonkwo (2014) warns that the FGN desist from the practice of excessive accumulation of public debt and there resurgence of excessive debts in sovereign treasury within the past three fiscal years could worsen fiscal solvency and result in inter-generational transfer of debt burden. Going by the current revenue generating capacity, the latest trend in debt accumulation, may lead the country into another round of debt burden, and the resultant effect of excessive public debt, debt overhang is fiscal distress.

2.3 Theory of public finance-to-debt sustainability

Public finance solvency and sustainability model a specialized dynamic debt financial analysis model which measures ratios of public debt with suitable fiscal resource aggregates available in a government treasury to its ability to meet recurrent obligations and debt service payments without constraining other fiscal commitments (Masengo, 2011), Blanchard, (1990) cited in Mupunga and Le Perox (2015); Masengo (2011), Roubini, 2006). Alogoskoufis (2011) opined that it is common knowledge that governments do not always operate a balanced budget; thus, they maintain either budget deficit or surplus which compels them to indulge in deficit financing. Public finance sustainability model presupposes that governments operate and maintain primary surpluses with present values that are greater or equal to the carrying debt balance (Alogoskoufis (2011), Roubini, 2006).

Several approaches of public debt sustainability have been developed by authors and currently in use in empirical literature include: (i) borrowers-(Accounting) based approach, (ii) lenders-approach, (iii) present value of primary balance approach and (iv) hybrid approach (DMO, 2014, Roubini, 2006) Masengo, 2011, Mupunga et al). According to Johnson et al, (2004) cited in Masengo, 2011 the borrower-approach also known as 'accounting approach' is the main basic approach adopted in the PDSA. It states that fiscal deficit in a sovereign treasury is sustainable if the entity generates a constant debt-to-GDP ratio (Johnson et al, (2004) cited in Masengo, 2011. This approach lies at the root of PDSA methodology as it measures ability of an entity to meet future debt service obligation (Roubini, 2006; Masengo (2011, Mupunga & Le Poux, 2013). These authors state that so long as the economy's real GDP grows at higher rate than the interest rate (debt or deposit funds) it is possible to run sustainable primary fiscal deficits. The Lenders-based approach refers to present value constraint approach, reckons that a government treasury is in state of public finance solvency and sustainability if expected values of fiscal aggregates inflow is at least equal to the face value of debt. Buiter and Urijit (2005), Roubini (2006) opined that lenders' approach differs from borrower-base accounting approach which imposes an upper band to the debt-to-GDP ratio. Whilst the lenders' present value of budget balance-approach stipulates that if real growth rate of GDP or debt is lower than real interest rate deposit money, then the requisite budget constraint correction adjustment is satisfied. this approach does not require the public debt to be fully repaid This is in contrast to borrower-based accounting method which requires GDP growth rate being greater than rate of interest even though debt-to-GDP ratio may be growing through time-paths.

Present Value of Budget Constraint Approach–PVBC method guides the theoretical approach of debt sustainability; and also the empirical strategy is within the co-integration framework. Cointegration between revenues and expenditures is the necessary condition for debt sustainability analysis. Thus, expenditure of government is increasingly greater than revenue overtime, accumulated budget deficits eventually develop into a domestic debt burden. Therefore, sustainability requires that the co-integrating vector be (1,-1). If revenues and expenditures are both are both difference at first level, I (1) and co-integrated, then, domestic debt is sustainable.

Buiter et al, Mupunga and LeRoux, 2014, Onyelakukwe and Viegi (2005) and Roubini, 2006 explained further that where debt / GDP ratio converge to a predetermined optimum level, $r_t < g_t$ (indicating that r_t – debt interest rate is less than growth rate g_t and or interest income or fiscal stock variables). However, if $r_t > g_t$, public debt portfolio would the predetermined optimal path (Mupunga & LeRoux, 2014). In essence debt sustainability presupposes that debt stock of a nation or government entity does not rise but reduces instead (Aktas & Tiftik, 2013). This simply implies that if interest rate accrued or service charges on debt is greater than growth rate of the economy, interest burden on existing debt stock increases while debt-to-GDP ratio and or those of other fiscal flows or stock increases. Similarly, where government entity borrows for servicing its debt, a form of ponzi game scheme, further increases public debt stock and debt burden. Then, a trend of excessive deficit budgeting with continuous public borrowing in financing fiscal deficit that often result in excess public loans usually transfer debt burden to future generation and trigger adverse financial condition. This theoretical framework illustrates the impact of public debt sustainability.

For the public debt to remain stable, the primary budget surplus balance needs to cover accrued interest charges. However, where past debt stock are too large and or interest rate on debts are very high compared to GDP or other fiscal flows / stock variables, then, an entity is expected to raise its primary fiscal balance otherwise debt stock would rise sporadically because the portion of payment can no longer be sustained by annual budget surpluses, rather through issue of new bonds. Public finance-to-debt sustainability theory is the most appropriate and relevant theoretical framework used in prescribing the association between public financial resources and debt on one side and in developing empirical models used in assessing sustainability. It has proved efficient and effective for gauging on adequacy or inadequacy of revenue flows, aggregate spending, inter-temporal budget balances and fiscal capacity for recouping debt from primary budget balances in future. Apparently, adequacy in resource availability to public expenditure is the root of financial health in government treasury.

2.3.2 Empirical review

Contemporary studies that assessed public finance-to-debt sustainability in sovereign treasury which were reviewed here include: Aktas and Tiftik (2013), Mupunga and Le Roux (2014), Alosgoskoufis (2012); Kouretas and Vlamis (2010). Aktas and Tiftik (2013) constructed sovereign financial risk model for Turkey, using data on public finance resource and public debt indicators to measure fiscal solvency and sustainability from 1991 to 2010. Results indicated that the fiscal stance adopted by Turkey during the review period has a sustainable outlook in the short term future. Mupunga and Le-Roux (2014) paper's results from simulation analysis show that debt dynamics in Zimbabwe are largely composed of huge stock flow adjustments to finance social and political expenditures. This underscores the need for prudent debt management to protect the treasury against unexpected changes in public debt stock, which are not explained by public investments and growth. Masengo (2011) assessed government revenue with public debt leverage (solvency) for Zambia. Results suggested that domestic debt of Zambia is sustainable with and or without grants. The author further observed that fiscal revenue was boosted by increase in raw copper price with GDP rising at well over five percent for the past seven years. The author expressed concerns that not minding the prevailing public finance sustainability, Zambia's domestic debt might still be threatened by her over dependency on revenue from coppers as the main source of fiscal revenue.

Result from Roubini (2006)'s study for Mexico suggests that a country that solvent can be trapped in self-full filling debt trap, and remain in default; and that debt rescheduling can lead to even greater defaults levels. The result further stated that if there are pure or semi-pure liquidity cases, there are other measures to mitigate such solvency problems that do not involve debt forgiveness. Mendoza and Oviedo (2003) utilized debt–to-GDP indicator in its public money and debt leverage analytics study. Results showed that a four percent of the GDP reduction in government total spending during fiscal crises, in a simulated model for Mexico yielded a natural debt limit at 0.05 which is slight above the observable average debt-to-GDP ratio of 0.0459 for year 1999-2002. The authors concluded that natural debt limit is very sensitive to small variations to changes in tax revenues, interest rate and public expenditure. Result from Kouretas and Vlamis (2010) revealed that since November 2009, Greek's fiscal budget deficit and public debt profile were un-sustainable. The study established that the cause of debt crisis in Greece economy was not directly linked to the year 2007 sub-prime mortgage loan market crisis that triggered global financial crisis. It confirmed that the Greece government gladly accepted a 'Fiscal Rescue Plan' worth *Euro* 110 billion designed and financed by the European Union and the International Monetary Fund (IMF). Research finding in Alogofikous (2012) on sovereign debt crisis in Greece confirms that the proposal being implemented in the Greek economy for tackling the financial crisis and speeding up the recovery process is sufficient to resolving the prevailing situation.

SECTION 3: METHODOLOGY

3.1 Research Design

The paper adopted ex-post 'facto' empirical financial analysis and quantitative methods in its dynamic financial estimation model used as measures of public finance sustainability. This approach follows the procedure adopted in Alogofikus (2013) and Roubini (2006).

3.2 Data sources and method of collection

Secondary data were extracted from Nigeria's official public debt reports contained Central Bank of Nigeria and Debt Management Office's annual reports from 1999 and 2014 – both years inclusive. The procedure followed in data gathering is the archival data retrieval collection system which involved extraction of the necessary secondary data required in deriving fiscal variables adopted obtaining the pertinent financial performance indicators used in the construction and measure of public financial sustainability indicators.

3.3 Public Finance Sustainability Empirical Model

Theoretical framework supporting empirical model used in public finance sustainability analysis in this paper is combination of the borrowers' accounting–based approach, lenders' valuation method, and PVBC, which is referred as the hybrid approach. The hybrid approach which integrate the borrower (accounting-based) method, lender-based approach, the PVBC method with 'baseline-scenario' in deriving pertinent sustainability indicators. This empirical model is borrowed from Roubini (2006), Alogosfikous (2013). This approach utilize variety fiscal aggregates including revenues, expenditures, exports and GDP which also incorporate interest rate and growth rate elements as discounting factors on one side. This debt dynamic financial modeling approach of this study is in tandem with debt sustainability analysis used in practice by national debt management agencies globally including Nigeria (DMO, 2014, 2015; World Bank, 2014; Moody (2014; 2015).

Furthermore, the paper adopted modified version of the contemporary Altman and (2010) Z-score financial distress prediction model (FDPM) technology as its public finance sustainability index (FSI) to measure and test the level of fiscal sustainability in Nigeria sovereign treasury. Altman and Hotchkiss (2010) Z-Score model of financial distress index developed a standard bench-mark for measuring corporate financial distress in developing countries and emerging markets (Zakaria, 2013; Mungai, 2016) is given as:

$$\text{FCI / FSI Z-Score (Z)} = 3.25(X_1)+6.56(X_2)+3.26(X_3)+6.72(X_4)+1.06\ (X5) \qquad (3.1)$$

Whilst, a modified public financial Sustainability index (FCI) developed by the author in the paper is: $\text{FSI} = \text{Z-Score (Z)} = 0.5X_1 + 0.50X_2 + 0.50X_3 + 0.05X_4 + 0.50\ X5$ (3.2)

Where: X_1 = fiscal operating surplus indicator; X_2 = financial leverage solvency indicator; X_3 = public finance sustainability indicator; X_4 = budgetary solvency indicator, X_5 = Institutional Quality–governance indicator. To determine the zones of discrimination (solvency or insolvency in public finance / public financial distress prediction model; $Z > 5.00$ is a safe zone; $Z = 4.00 < 5.00$ is considered as in a grey zone (under watch) while $2.5 < 4.00$ is seen as fully distress zone. Failure grade point is not applicable is this performance measurement metric system. Financial sustainability performance rating score, with values ranging from 0.01 to 1.00; grade rating score from 0.50 and 0.99 represent solvency while 0.01 to 0.49 indicative of unsafe financial condition. A continuous achievement of composite financial distress index score of less than 0.5 for three consecutive financial years confirms the likelihood that the entity will experience acute financial distress / instability in short and medium term (Altman, 1977). Probability score of the financial distress is further categorized in five distinct states of financial conditions depend on the range of grade point score yield.

Performance rating score system for credit worthiness of a public entity is a minimum of 50 percent (0.50) and similar to the sovereign credit rating commonly adopted by the CRAs in evaluation of financial condition and macroeconomic performance of sovereign countries (Fitch, 2014; Moody, 2015; Standard & Poor, 2015).

3.4. Specification of Sustainability Measurement Model

Three core financial sustainability indicators employed in model development and in analysis and measures of financial health in Nigeria's federal treasury are provided in table 3.1.

Table 3.1: Financial Performance Indicators used as Predictors of FGN Financial Health

Category / Indicators	Indicators	Bases	Measures	Thresholds
DEBT SUSTAINABILITY - DYNAMIC FINANCIAL ESTIMATION MODEL				
Criteria for Public Debt Sustainability:				
i) PV of Debt / Public Revenue		Public Debt / Revenue	Sustainability	100 : 250
ii) PV of External Debt/Exports		External Debt/ Export	Solvency	30 : 150
iii) PV of Debt / Nigeria R-GDP		Total Debt /NGDP	Efficiency	56 : 100
Total of 3 Indicators				

Source: Author's Compilation (2015): Debt Management Office, 2014

3.4.1 Evaluation and econometric estimation procedure

Unit root, serial correlation or co-integration tests will be performed as part of the data screening, and evaluation procedure. In addition, a simple moving average approach and or an econometric estimation method as well as financial (fiscal resource discounting (DCF) technique may be employed to the present values of models variables as the tools of analysis and were facilitated through the use of modern computer technology and software packages including SPSS, compustat, E-views 6 and respectively.

3.4.2 Public finance sustainability index (FSI) measurement Model

Classical financial ratio analysis is used to obtain raw financial performance indicators (KPIs) adopted in a combined multiple discriminant analysis (MDA) with dynamic financial estimation and logistic regression models to obtain composite financial sustainability index (FSI or Y = Z). The pair-wise variables include: total public debt / revenue, external debt / exports and total debt / GDP. Econometric model equation function is express as follows: The equation can therefore be written as econometric equations as follows:

$$FCI = \beta 0 + \beta 1\ T1 + \beta 2\ T2 + \ldots\ + \beta n\ Tn + \varepsilon \qquad (1)$$

Financial sustainability (or condition) index model equation:

A dual model is specified the model of this study. This commence with specification of MDA of the financial distress prediction model (FDPM) commonly employed in the conventional accounting and corporate financial analysis and configured in a logistic regression model (LRM) following the empirical model adopted in Mupunga and Le-Roux (2014) in a public finance sustainability researches. The parameter of the predictor in our model follows Altman and Kotchkiss (2010)'s modified Z-Score for developing countries and emerging markets; the

CRAs (Fitch, 2014; Moody, 2014) credit worthiness performance rating score system now blended into a hybrid FDI model score-rating and now modified by this author (Alozie) in 2017 in this paper as public financial condition index.

Financial sustainability (or condition) index model equation:

FSI =ƒ (X1 (pd/rev), X2 (ed/rev, X3 (pd/gd), …………..) (2)

Then, followed with construction of MDA / Logistic regression model and given as

$FSI_{=} (Z) = W_1 * X_{2.1} + W_2 * X_{2.2} + \ldots + Wn * X_n \;/\; n_{:}$ (3)

where: FSI_{or} (Z) is composite financial index and parameter to measure of model test $W_1 * X_{2.1} + W_2 * X_{2.2} + \ldots. + Wn * X_n$ are the representative values of each sustainability indicators.

Technique of analysis for Model 3 include: ratio analysis, derivation of financial performance indicators, descriptive statistics, financial discounting method, multivariate discriminant analysis, logistic regression analysis, equal-weighting of performance indicators, and derivation of public finance sustainability index.

3.5. Construction of Public Finance Sustainability Index

3.5.1 Constructing sustainability indicators (FSI Overall) index

The procedures followed in constructing key performance indicators (the raw financial ratios) and financial distress index is given as follow.

Step 1: Develop and construct relevant dimensions of financial performance indicators

Step 2: Derive of standard performance indicator from series of sub-performance indices

Step 3: Determine dimension index in a model- ratios or correlation coefficient

Step 4: Index Construction–Equal Weighting; using simple average of the performance indicators

Step 5: Establish the composite financial condition index

3.5.2 Operationalization of financial sustainability index

The score grading system of the international credit rating agencies used by Standard & Poor (2014), Fitch (2014) and Moody (2015), which is similar to the grade score point system currently adopted in the academia is adopted in operationalizing raw financial solvency indicators derived to determine the ultimate financial condition index of the model. Values of financial distress index of a predictor in each models one, four and five, ranges from 0.01 to 0.99 (Ritonga, 2014); "A" = Excellent, "B" = Very Good, "C" Average, "D" = fair but below average and "E" = Weak. The values from 1-49 in these first category models, signify financial distress while 50 and above is an indication of positive financial performance, solvency and sustainability (Roubini, 2006). There is no outright failure grade in sovereign credit rating system.

3.5.3 Decision Criterion

If FCI calculated falls within the range from 0.01 to 0.49 or 0.50 (50 percent) < 0.51; accepts $Ho_{,}$ but where FCI calculated ranges from 0.51 < 0.51 and up to 0.99 (precisely 99 percent), Ha_3 is accepted and Ho_3 is rejected.

SECTION IV: ANALYSIS AND RESULTS

4.1 Analysis and Results

4.1 Screening, refinement and evaluation

Consistent with the procedure in contemporary empirical research, pertinent statistical analysis, screening, evaluation and estimation were undertaken for financial variables, in nominal terms and ratios before unit root, auto-correlation, stationarity and other routine diagnostic tests were performed on the data sets. This ensures that results of analysis did not contain spurious defect. Augmented Dickey-Fuller (ADF), Bresch-Godfrey co-integration rank test and Eigen(s) trace statistics were performed to examine estimation power and evaluate existence of long-run relationship co-integration between public debt, revenue, exports and GDP data sets.

The necessary screening tests were undertaken to ensure that data sets used in analysis and measuring of solvency the model are from spurious defect and that they are not serially correlated. Augmented Dickey Fuller (ADF) and Bresch-Godfrey residual co-integration LM test were performed to check for unit root and existence of co-integration in long-run relationship between the pair-wise variables notably public debt/revenue, external debt / exports, and public debt / GDP. Unit root test showed negative results; whilst Breusch-Godfrey co-integration tests for partial regression of revenue (Models 1, 2, and 3) tested positive to co-integration at level. Thereafter, the affected variables treated and normalized at *1* (1) first difference. Furthermore, Trace statistics indicated no co-integration at 5 percent (0.05) significance level. Wald and Dublin-Watson test all yielded values below minimum threshold of 2.4. Generally, results of these diagnosis checks and evaluation procedures undertaken established that the relevant pair-wise model variables were suitable for use in analysis of financial performance and hybrid MDA / LR analysis and also fitted the model very well. Summary of the relevant statistical analysis for the respective models are provided in the relevant tables for each model in the appendix pages (appendices).

4.2 Results of Analysis

Following model equation functions specified in sub-section section 3.4 and plugging the relevant key financial performance indicators obtained from financial analysis of the model variables into the system equation financial sustainability index as:

$$\text{MDA / FSI}_{.=} (Z_3) = W_1{*}X_{2.1}+W_2{*}\ X_{2\cdot 2} +\ldots+Wn{*}\ X_n\ \ / \ n_{:} \qquad (4.1)$$

Blending simple average equal-weighted financial sustainability indicators into logistic regression model structure of equation 4.1 to derive financial sustainability indicator as re-stated below:

$$\text{FSI / LRM} = (Y_{2i}=1) = 1/\text{-}1+_{e}\text{-}\ (B_o+B_1X_{i1} + B_2X_{i2} + \ldots + B_{\,n}\ X_{\,n)} = 1/\ 1+_{e}\ \text{-}Z_i \qquad (4.2)$$

$$\text{FSI}_{=} (Z) = 1/\text{-}1\ (0.76_{X3} + 0.74_{X3} + 0.78_{X3} / 5_{:} \ldots \qquad (4.3)$$

= 0.76 or 76 percent and “A” credit-worthiness or sustainability rating

$FSI_3 = 0.76 < 0.50$. Therefore, Ho_3 adopted; in effect public finance-to-debt sustainability of the Nigerian federal treasury is significantly positive, highly sustainable. From this dimension of the Federal Government’s financial management performance, the federal treasury is not distress but financially solvent.

4.3 Results of the Supplementary Analysis Performed

Aside from the individual model financial sustainability indicators used in the composite public finance sustainability metrics and the composite sovereign credit-risk rating (‘A+++) for Nigeria’s federal treasury for the review period; the paper produced a supplementary research finding relating to simulated dynamic estimates of the numerical fiscal aggregates for the current MTEF / rolling plan cycle, ending 2017. Based on a moving average financial estimation methodology, Nigeria's public debt will hover around N10000 billion; external debt at N2000 billion whereas export revenue, federal (FGRR) revenue and gross national output will reach N12000 billion, N5500 billion and N93000 billion by the end of 2017. The result of the dynamic estimation of public finance-to-debt sustainability for Nigeria's federal treasury is the same as in the ex-post empirical analysis in 4.3 above, that is, 78 percent and "A"+++ . Hence it is not duplicated.

4.3 Robustness checking (test) and External Validity of Results

The study adopted 0.50 or 50 percent as bench-mark cut-off point and minimum pass mark of public finance solvency and sustainability in hypothesis testing sovereign financial sustainability for Nigeria's federal treasury. This is tandem with the authors' modified version of Altman and Hotchkiss (2010) Z-score's 4.2 < 5.00 cut-off mark for developing economies. It is assumes stronger credit worthiness rating than grading score-point system used by the CRAs 0.5 > 0.99 as for public treasury solvency and sustainability in a public treasury. Thus, it is assumed that the standard prior range of the probability of financial distress or solvency and sustainability in developing our models is the five percent level of significance. We evaluated The fiscal aggregates used as model variables were duly screened, refinement and evaluated on five percent significance level were confirmed satisfactory prior to test results yielded.

For external validity, Nigeria's sovereign credit worthiness and financial risk credit rating of issued by the international credit rating agencies including Standard & Poor (2014), Fitch, (2014 and 2015) and Moody (2014 and 2015) is adopted for external comparison and validation of the research results and they are on the same performance ranking score.

SECTION 5: SUMMARY OF RESULTS AND CONCLUSIONS

The summary of empirical findings obtained in this study, conclusions and pertinent recommendations for policy formulation and fiscal decision-making are presented in this last chapter. The overall objective of the study was to perform some measure of financial sustainability in the Nigerian federal treasury or otherwise.

5.1 Summary of Results

This research focused on assessment, evaluation of sustainability of public debt-to-public financial resources as a dimension of government financial performance in Nigeria's sovereign treasury. Summary of results are summarized as follows:

Model 1: Public debt–to–public revenue solvency / sustainability indicator = 76% (A++)

Model 2: External debt–to–exports revenue solvency / sustainability = 74% (A++)

Model 3: Public debt–to–Gross Domestic Product solvency / sustainability = 78% (A++)

Thus, overall credit worthiness rating of the public finance-to-debt sustainability drawn from debt management criteria of sovereign treasury management in Nigeria's federal treasury is 76 percent and A*** - excellent grade. This implies that the existing financial capacity of the national treasury is in a sound and stable condition.

Evaluation of hypotheses tests from each of the three models confirmed that debt and revenue; external debts and exports and public debt and national output with 'A" grade scores in every model as highly sustainable in the short run. This result is in tandem with results from similar debt sustainability reported by DMO (2014; 2015) and differ from the performance rating (B++) and (B*) by Fitch in 2014 and 2015 and Moody in 2015 respectively. This sustainability rating is anchored on 'baseline scenario' assumptions which relies on estimates of revenue projection from oil in rolling plan cycle, medium term expenditure framework and fiscal consolidation strategy and altering with the fiscal developments subsequently.

5.2 Conclusion

Although results indicates that overall public finance-to-debt (leverage in financing structure) in Nigeria's sovereign treasury is highly sustainable. However, the prevailing trend in debt portfolio which reflects steady rise in public debt stock is not that encouraging. Similarly, the recent debt management strategy which is shifting concentration on domestic and resulting in tremendous increase in domestic public borrowings–bond, treasury bills etcetera recently is rather worrisome. These developments require adequate precautionary measures and more conservative towards accumulation of additional debts as well as prudent capital expenditure management in the light of fluctuations in price of crude oil and dwindling revenue inflow from oil sales.

5.3 Recommendation

The paper recommends that Nigeria's debt management authorities should restrict the limit deficit budgeting, financing and borrowing in all tiers of the Nigerian governments to amount not exceed 40 percent of aggregate revenue in previous year. Similarly, external debt should be minimized and restricted to total amount not exceeding 100 percent of exports. Government is encouraged to sustain public capital investment within the range from about a minimum of 15 – 25 percent of the aggregate annual spending in infrastructure particularly cash flow generating and financially viable projects with publicly verified implementation to boost gross domestic output. Finally, government borrowing both at the federal level and sub-national government tiers need to be restricted to 50 percent of revenue generating capacity or reserve financial assets in order to minimized excessive debt accumulation.

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APPENDIX PAGES (APPENDICES)

MODEL 1: PUBLIC DEBT AND REVENUE STATISTICAL ANALYSIS

Dependent Variable: REVENUE
Method: Least Squares
Date: 07/16/17 Time: 11:54
Sample: 1 16
Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL_DEBT	0.404255	0.166992	2.420799	0.0297
C	92.71778	901.3470	0.102866	0.9195

R-squared	0.295075	Mean dependent var	2173.355
Adjusted R-squared	0.244723	S.D. dependent var	1249.632
S.E. of regression	1086.014	Akaike info criterion	16.93488
Sum squared resid	16511964	Schwarz criterion	17.03146
Log likelihood	-133.4791	Hannan-Quinn criter.	16.93983
F-statistic	5.860270	Durbin-Watson stat	0.345322
R	0.54321		
Prob (F-statistic)	0.029662		

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	11.68621	Prob. F(2,12)	0.0015
Obs*R-squared	10.57204	Prob. Chi-Square(2)	0.0051

MODEL 2: EXTERNAL DEBT-TO-EXPORT REVENUE SUSTAINABILITY STATISTICS

Dependent Variable: REVENUE(2)
Method: Least Squares
Date: 07/16/17 Time: 12:25
Sample: 1 16
Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXT_DEBT	-2.353100	0.646093	-3.642043	0.0027
C	12705.13	1622.502	7.830579	0.0000

R-squared	0.486511	Mean dependent var	7932.750
Adjusted R-squared	0.449834	S.D. dependent var	5159.839
S.E. of regression	3827.218	Akaike info criterion	19.45413
Sum squared resid	2.05E+08	Schwarz criterion	19.55071
Log likelihood	-153.6331	Hannan-Quinn criter.	19.45908
F-statistic	13.26448	Durbin-Watson stat	0.449441
R	0.69750		
Prob(F-statistic)	0.002667		

REVENUE2 = 12705.13 -2.353100 (EXT-DEBT)

Wald Test:
Equation: Untitled

Test Statistic	Value	Df	Probability
t-statistic	-3.642043	14	0.0027
F-statistic	13.26448	(1, 14)	0.0027
Chi-square	13.26448	1	0.0003

Model Diagnostic Checking

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	6.685460	Prob. F(2,12)	0.0112
Obs*R-squared	8.432281	Prob. Chi-Square(2)	0.0148

MODEL 3.3: TOTAL PUBLIC DEBT AND GDP SUSTAINABILITY STATISTICS

Dependent Variable: GDP
Method: Least Squares
Date: 07/16/17 Time: 12:14
Sample: 1 16
Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEBT	13.52781	3.134096	4.316336	0.0007
C	-37894.20	16916.40	-2.240087	0.0418

R-squared	0.570957	Mean dependent var	31731.38
Adjusted R-squared	0.540311	S.D. dependent var	30062.09
S.E. of regression	20382.21	Akaike info criterion	22.79918
Sum squared resid	5.82E+09	Schwarz criterion	22.89575
Log likelihood	-180.3934	Hannan-Quinn criter.	22.80413
F-statistic	18.63076	Durbin-Watson stat	0.622382
R	0.75562		
Prob(F-statistic)	0.000711		

GDP = -37894 .20 +13.52781 (DEBT)

Wald Test:
Equation: Untitled

Test Statistic	Value	df	Probability
t-statistic	4.316336	14	0.0007
F-statistic	18.63076	(1, 14)	0.0007
Chi-square	18.63076	1	0.0000

Model Diagnostic Checking

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	5.456254	Prob. F(2,12)	0.0206
Obs*R-squared	7.620297	Prob. Chi-Square(2)	0.0221

Public Financial Accountability: The Case of the Financial Administration Courts in Ghana

Samuel Pimpong, Lecturer, Department of Accounting, University of Professional Studies, Accra (samuel.pimpong@upsamail.edu.gh)

Abstract

This paper focused on the Financial Administration Courts (FAC), an independent oversight institution responsible for the enhancement of financial accountability in the public sector. In Ghana, the Auditor-General's reports have persistently blamed public financial accountability failures on weak internal control systems, despite the existence of oversight horizontal accountability institutions. This paper, however, argues that public financial accountability failures in Ghana denote poor internal control systems that signify deficits in oversight institutions. This study adopted a largely qualitative research approach. Face-to-face Interviews, document reviews and the direct observation methods were employed as tools for data collection. The study reveals the presence of a good and detailed constitutional-legal framework that promotes and enhances PFA in Ghana. However, the absence of applying sanctioning mechanisms to wrongdoers, deficiencies in institutional capacity of the FAC, coupled with financial and human resource limitations, have had an adverse impact on PFA. The study also argues that the persistent failure of the Financial Administration Courts in applying sanctions to wrongdoers has the tendency to retard any efforts towards the improvement of PFA in Ghana.

Key Words: Public Financial Accountability, Financial Administration Courts, Public Financial Management Act

Introduction

Finance or money lies at the heart of operations and activities of the public sector. This is because the public sector is the largest spender and employer in virtually every developing country and it sets the policy environment for the rest of the economy (Owalla & Luanga, 2014). Unfortunately, the approach to mobilizing and managing public finance in most developing countries has been met with challenges such as corruption, misapplication and misappropriation of funds, over-spending and lack of compliance with existing legislative frameworks. In an effort to overcome these challenges, developing countries have attempted to introduce reforms in public sector financial mobilization and management systems. These reforms have mainly dealt with areas of legal and institutional framework, resource generation, improved resource allocation, transparency, accountability and fiscal discipline aimed at improving efficiency, effectiveness and value for money (Owalla & Luanga, 2014).

The presence of sound public financial accountability (PFA) has numerous indicators. First, a country is likely to manifest sound PFA if its legislative committees and audit committees provide for its citizens crucial oversight of the country's public finance (Sahgal & Chakrapani, 2000). Second, is the existence of budgeting and accounting systems that promote performance and that capture public organizations' transactions and their actual and contingent assets and liabilities accurately and in a timely way (Sahgal & Chakrapani 2000). Third, a country may be publicly accountable financially if it maintains internal control and performance reporting systems that check bad recordkeeping, noncompliance with rules and regulations, lack of due regard for economy and efficiency, weak evaluation and internal audit capacity, breaches in codes of ethics, and misrepresentations of performance information (Sahgal & Chakrapani, 2000). The fourth indicator is a country's reporting of external audits and reviews to the legislature and the stakeholders on how government manages risk. Finally, a country is publicly financially accountable, if it has the “capacity for evaluation that ensures that it can capture its lessons from experience and act on them in a timely way” (Sahgal & Chakrapani, 2000).

In an effort to enhance effective and sound PFA in Ghana, the Financial Administration Act, (FAA) 2003, and the Financial Administration Regulation (FAR) 2004, which have been consolidated into Public Financial Management Act, Act 921 of 2016, were enacted to regulate PFM in Ghana. The PFM Act of 2016 prescribes the responsibilities of persons entrusted with financial management (FM) in the public sector. This is to ensure the effective and efficient management of State revenues, expenditures, assets, liabilities, resources of the government, the Consolidated Fund and other public funds and to provide for matters related to these. Notwithstanding the measures put in place, public financial accountability failures persist in Ghana. Against this background, this paper seeks to examine the role of the Financial Administration Courts (FAC) in promoting and enhancing public financial accountability (PFA).

Research Problem

Section 15 (1) of the PFM Act, 2016 (ACT 921) requires the Minister of Finance to put in place a functional public financial management (PFM) system with sufficient controls, checks and balances, as a measure of promoting accountability, ensuring adherence to standards and regulations, promoting civil society alertness and participation, and effective resource allocation and utilisation. The FAA, 2003, Act 654 on the other hand, established the Financial Administration Courts (FAC) to enforce recommendations of the Public Accounts Committee (PAC) on the Auditor-General’s (A-G) reports as approved by Parliament.

In spite of the systems put in place, the Auditor- General’s (A-G) reports which are readily available and covering the periods 1993-2015 reveal low levels of compliance with existing legislative framework, misapplication and misappropriation of funds, managerial lapses and weak monitoring procedures leading to the loss of billions of Ghana Cedis- a situation that suggests significant managerial and capacity handicaps. For instance, the latest A-G’s report of 2015, reveals that Ghana lost GH¢505,179,135 as a result of financial errors and irregularities committed by public boards, corporations and other statutory institutions. The loss, according to the A-G’s Report for the 2015 fiscal year, arose out of the breakdown of internal controls. The loss, according to the report, occurred between January 1 and December 31, 2015.

While the reports of the A-G persistently condemn the weak internal control systems within the Ministries, Departments and Agencies (MDAs), hardly have there been any empirical research that assess the role and contributions of the Financial Administration Courts (FAC) to the promotion and enhancement of public financial accountability.

Accordingly, this paper examines the constitutional-legal and institutional framework for promoting and enhancing public financial accountability (PFA) in Ghana since the advent of the Fourth Republic in 1993. More specifically, the paper discusses how the Financial Administration Courts (FAC), comprising the institutional framework, enforce PFA in Ghana under the Fourth Republic.

Objective

The general objective of this paper is to evaluate the constitutional-legal and institutional framework for promoting and enhancing public financial accountability (PFA) in Ghana since the advent of the Fourth Republic in 1993. The four specific objectives are:

To assess the constitutional-legal framework (1992 Constitution, Financial Administration Act, 2003, Financial Administration Regulations, 2004 and Public Financial Management Act, 2016) for PFA in Ghana including their design and implementation;

To assess the institutional framework (in terms of mandates, capacity, independence, personnel and funding) of the Financial Administration Courts (FAC)

To examine some of the challenges facing the FAC and how it can be addressed to ensure effective PFA in Ghana.

Highlight the lessons and their implications for the theoretical, comparative and empirical literature on PFA and accountability in general

The Financial Administration Courts in Ghana

The institution responsible for implementing the recommendations of the Public Accounts Committee (PAC) is the Financial Administration Court. Section 66 (1) of the Financial Administration Act (FAA), 2003 states that "there is established by this Act a Financial Administration Tribunal referred to in this Act" as the "Tribunal". The phrase "tribunal" was later amended as "court" (The courts are also known as specialised financial and organised crime courts). By the FAA Act, the Court "shall comprise, a Justice of the High Court who shall be the chairperson; a chartered accountant; and a management accountant or a professional valuer." Section 66 (3) of the FAA further stipulates that the members of the court "shall be nominated by the Chief Justice in consultation with the Judicial Council and shall be appointed by the President."

Section Three of Act 760 of the Financial Administration (Amendment) Act, 2008 (Act 760) repealed the Panel System, "made up of a Justice of the High Court as chairperson, a Chartered Accountant or a professional valuer" as member, and introduced the Single Judge System. This amendment notwithstanding, the court still has jurisdiction to "enforce recommendations of the Public Accounts Committee on the Auditor-General's report as approved by Parliament." The Financial Administration Act, 2003 stipulates that the court has power to;

a) "Hear and determine matters that fall for determination under this Act;

b) Enforce recommendations of the Public Accounts Committee on the Auditor-General's reports as approved by Parliament."

c) "Enforce contracts and bonds entered into in pursuance of this Act;

d) Make such orders as it considers appropriate for the recovery of monies, assets or other property due to the State;

e) Prohibit any individual whether a public officer or not from managing public accounts or funds if the individual is unqualified professionally or has been persistently negligent in the management of public funds;

f) Prohibit any person from participating as a bidder in any government procurement or contract where the person has a record of defrauding the State."

It is pertinent to note that the Orders of the FAC "shall be enforced in the same manner as an order of the High Court." (FAA, 2003, Section 66). This clause definitely strengthens the FAC. However, other clauses in the FAC Act tend to downplay the importance about the essence of severe punishment as a deterrent to wrongdoers. For instance Section 69 (1) of the FAA Act states that "a person adversely affected by an audit report may accept liability and offer to pay compensation or make restitution".

Method

This study relied on both primary and secondary data. Generally, for case study design, six key techniques of data collection are used. These are physical artefacts, interviews, documentation, archival records, direct observation and participant observation (Welman, Kruger & Mitchell, 2005). This study, however, used three of the above- mentioned methods, namely direct interviews using semi structured open ended interview guides, documents/records review and direct observation method.

Study Population

The study population was taken from key organisations including; the office of the Auditor-General (A-G), Parliament's PAC, the FAC and civil society organisations (CSO) that focuses on issues with regards to public financial accountability (PFA). The study population was classified under four groups. The first group involved heads of departments and units of the Audit Service, Ministry of Finance, Controller and Accountant-General's Departments and past Auditor-Generals. The group mentioned above formed part of the study population because the nature of their duty is such that they are involved with issues relating to PFA. Moreover, they tend to understand, as they deal with issues relating policy implementation on a day-to-day basis. Also, by virtue of their position of authority and responsibility as well as their control of public resources, accountability is sought from them.

The second group of people were the elected representatives (politicians): This group involved ten present and former members of the PAC and three members of the finance committee of parliament. Members of the two committees formed part of the study due to the fact that the public accounts committee and finance committee are key financial accountability committees of the Parliament of Ghana, whose activities are geared towards promoting accountability, combating corruption, strengthening budgetary oversight and improving resource allocation. Members of the PAC have been entrusted with the responsibility of auditing the accounts of government presented by the Auditor-General. Secondly, members of the above committees serve as representatives of the people, and are responsible for giving satisfactory explanation to the public on issues that relates to financial accountability and institutional performance.

The third group are members of the financial administration court, who have the mandate to enforce recommendations of the PAC and to make orders for the recovery of monies, assets or other property due to the State. Respondents were selected on the basis of their specialised knowledge of public financial accountability, rather than they being selected at random. Selecting respondents on the basis of their specialised knowledge and background which are relevant to the study enhances the quality of data for analysis and discussion. Also, Tremblay (1995) argues that this technique is effective when defining the essential characteristics of some issues by drawing on personal experience and understanding of the people involved. Their inclusion in the study seeks to reveal the extent to which the application of sanctions have either enhanced accountability or otherwise.

The fourth group is the CSOs, which though do not form part of the arms of government, offer a significant and autonomous bridge with governmental organisations. Six key civil society organisations (think-tanks and pressure groups) namely the Institute of Economic Affairs (IEA), the Centre for Democracy and Development (CDD), the Institute for Democratic Governance (IDEG), the Ghana Integrity Initiative (GII), Ghana Anti-corruption Coalition (GACC) and Occupy-Ghana were purposely selected on the basis of their keen interest and focus on issues relating to public financial accountability. Their inclusion was purposely to ascertain (from their perspective) how far the Financial Administration Courts have assisted in championing sound financial accountability and its enforcements in the public sector. It must also be noted that civil society organisations are sometimes regarded as the "community's voice" and are required to fight against financial malpractices.

The respondents were purposely selected, using a criterion sampling method. The criterion sampling method is very useful as it enhances quality assurance. The criteria for selection was based on respondents with comprehensive insight and understanding with regards to the thematic ideas on PFA. In sum, thirty-five participants were interviewed as shown in Figure 1.

Figure 1: RESPONDENTS USED IN THE STUDY

Designation	Organisation	Frequency
Auditor-General (former)	Office of the Auditor-General	2
Heads of units/department	Audit Service	1
Heads of Unit/department	Ministry of finance	1
Heads of unit/department	Controller and Accountant General's Department	1
Senior Principal Auditors	Audit Service	3
Chief Finance Officer	Ministry of Finance	1
Chief Finance Officer	Controller and Accountant General's Department	1
Members of PAC	Parliament	5
Former Members of PAC	Parliament	5
Members of Finance Committee	Parliament	3
Members of Financial Administration Court	FAC, Accra	3
Member	Judiciary	1
Member	Attorney-General's Department	1
Directors and Members	Civil-Society Organisations	5
Member	Pressure Group, Occupy-Ghana	1
Member	Public Interest Accountability Committee (PIAC)	1
TOTAL		35

Source: Author's work

Results and Findings of the Study

The key findings of the study can be summarised as follows. First, internal financial control systems are weak in Ghana, not as a result of ignorance about PFM laws or incapability on the part of public officials, but as a result of deliberate disregard towards the systems that have been put in place. Such impunity stems from the fact that the enforcement of sanctions is not effective. Indeed, the former A-G in his 2011 Report to Parliament stated that "The cataloguing of financial irregularities in my Report on MDAs and Other Agencies has become an annual ritual that seems to have no effect because affected MDAs are not seen to be taking any effective action to address the basic problems of lack of monitoring and supervision and non-adherence to legislation put in place to provide effective financial management of public resources" (A-G's report, 2011: 15). From 2005 up to 2015 (latest A-G's report), Ghana has lost over Two Billion Ghana Cedis (GH₵2,000,000,000) through the MDAs alone.

Second, the institutional framework under which the Financial Administration Courts operate needs to be strengthened in terms of their mandates, capacity, independence, personnel and funding. There is an absence of a well-structured institutional framework to enhance proper coordination among other horizontal accountability institutions in enforcing sanctions, monitoring and reporting activities. Finally, the study revealed that since the inception of the Financial Administration Courts, the courts are yet to hear cases referred to it by findings of the Public Account Committee of Parliament in respect of public officers found culpable of financial malfeasance by the Auditor General's Report, as approved by Parliament.

Conclusion

A fundamental question that engages our attention in this paper is whether the constitutional-legal and institutional framework put in place to enhance public financial accountability in Ghana has actually achieved its purpose? There is no easy answer to this question. Ghana has invested in programmes aimed at strengthening PFM. The result is that the country is guided by sound Public Financial Management laws that have been enshrined in the 1992 Constitution of Ghana, the Financial Administration Act (2003), the Financial Administration Regulation (2004), and Public Financial Management Act (2016) among others. However, the prevalence of corruption in Ghana tends to be a consequence of institutional (in our study the Financial Administration Courts) failures. Therefore, safeguarding the integrity of the PFM system necessitates rigorous enforcement of the regulatory framework and putting in place effective mechanisms to strengthen horizontal accountability institutions.

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Fiscal Correction Due to Tax Regulations: Case Study of Klaten Local Bank, Indonesia

Indra Bastian, Accounting Department, Gadjah Mada University, Indonesia

Yuniati Anna Pratiwi, Ministry of Finance, Indonesia

Abstract

In order to mitigate a risk regulation in the form of possible losses, such as due to uncollectible loans, the Rural Bank (BPR) undertakes a policy of establishing a reserve fund on its earning assets. At the same time, the Bank Indonesia Regulation allows for the write-off of loans or credits granted on the basis of the length of the arrears and their collectability. In the practice, different interpretations between the banking industry and the tax authorities occur.

The case study conducted at the Local Bank of Klaten indicates that the tax audit result in 2015 requires a fiscal correction, because the local bank is charged on too high on write-off of accounts receivables and non-compliance with the requirements of Article 6 paragraph 1 letter h of the Income Tax Law. Upon such correction, BPR shall file an objection against the Underpayment Tax Assessment Letter of Incoming Tax (SKPKB PPh) which has been issued.

The result of the study shows the difference of interpretation related to the formation of reserve fund and write-off of bad debts of Rural Bank (BPR) in accordance with banking regulations and according to the Income Tax Law and its implementing regulations. By not recognizing the bad debts of banks that have been written off in accounting, fiscal correction is done through the process of tax audit. At the same time, the established reserve funds have been recognized by management as reserve accounts receivables, whereby tax audits assume that this is motivated to lower the value of taxes collected.

This study is expected to provide enlightenment to various parties about tax disputes that occur as well as acceptable solutions for all parties.

Keywords: Provision for Loan Losses (PPAP), write-off, bad debts, fiscal correction

Introduction

Law Number 10 of 1998 on Amendment to Act Number 7 of 1992 concerning Banking, Rural Bank (BPR) requires all conventional and syariah banks, not providing payment traffic services. Furthermore, the regulations of Bank Indonesia and the Financial Services Authority are guided, in addition to the prevailing tax regulations in Indonesia. Directorate General of Taxation (DGT), as one of the agencies under the Ministry of Finance, has the duty to formulate and implement technical policies and standardization in the field of taxation. Through the policies and strategic plans that have been prepared, DGT seeks to provide guidelines for internal agencies and Taxpayers in implementing and complying with the provisions of taxation.

The involvement of the various agencies above raises implementation disputes for various implementing agencies, such as differences in interpretation of tax regulations with regulations relating to specific business sectors. This condition is one of causes of high tax disputes, as revealed in Table 1.

Table 1 Tax Dispute Settlement in 2012-2016

No.	Verdict	2012	2013	2014	2015	2016	Total
1	Repeal	75	81	95	178	1.352	1.781
2	Not acceptable	1.037	1.013	854	1.187	1.774	5.865
3	Decline	1.700	1.929	2.438	2.294	2.878	11.239
4	Additional taxes that should be paid	3	2	1	13	8	27
5	Partially grant	732	1.003	1.430	1.217	1.346	5.728
6	Fully grant	2.530	3.276	3.991	4.049	5.367	19.213
7	Nullify	476	73	37	94	127	807
	Total	6.553	7.377	8.846	9.032	12.852	44.659

Source: http://www.setpp.depkeu.go.id/statistik

Table 2 Number of Tax Disputes File by Complain/Defendant in 2012-2016

No.	Complain/Defendant	Number of Incoming Files				
		2012	2013	2014	2015	2016
1	Director General of Tax	5.114	5.118	7.289	7.454	7.080
2	Director General of Customs and Excise	1.754	2.749	3.016	4.068	3.023
3	Local Government	485	462	561	964	50
	Total	7.353	8.339	10.866	12.486	10.153

Source: http://www.setpp.depkeu.go.id/statistik

In addition to the growing number of tax dispute cases, the number of Taxpayer complaints to the Taxation Supervisory Committee (KPP) also tends to increase. The objections and appeals of the Taxpayer are the most. Chairman of the Taxation Supervisory Committee, stated that based on complaints received, there are three subject areas in question. First, regulations and policies are often out of sync and potentially multiply interpretations and overlap. Second, organization and staffing, and the ability to communicate with Taxpayers is not good. In addition, there are fears of criminalization. Third, the system and procedures and the internal tax data bank is difficult to be accessed by tax officials. In addition, the implementation of *electronic invoices* has not been able to automatically create data collection systems (Setyowati, 2016).

In line with the first field of tax disputes, polemics or problems occurring between the DGT Regulations and Bank of Indonesia (BI) regulations is the establishment of reserve funds and bad debts that may be deducted as expenses. This difference will affect the determination of the taxable income of the bank between the tax authorities (fiscus) and the Taxpayer (BPR), as well as the possibility of a dispute after the tax audit.

Accounting Regulation on Bad Debt

Fiscally, bad debts are the value arising from a fair transaction in accordance with the Taxpayer's business field (excluding accounts receivables arising from business transactions with parties that have special relationship), by which the Taxpayer has made the maximum billing effort but not made any results. Commercial charges on bad debt by Taxpayers are the object of fiscal reconciliation before determining taxable income. The allowance for doubtful accounts which have not been decided as bad debts shall not be made as deductible expenses in calculating taxable income (Wijaya, 2016).

In the Rural Bank (BPR) Accounting Manual, it is stated that the write off of credit is the administrative action of the Rural Bank (BPR) to write-off the bad credit from the balance sheet as much as the debtor's liabilities without removing the Rural Bank's claim rights to the debtor. While the removal of the credit collection right (remove the bill) is the act of Rural Bank (BPR) to remove the debtor's liabilities that cannot be completed. Meanwhile, in Kieso, Weygandt, and Warfield (2008) stated that there are two methods in determining the amount of bad debts, they are the *direct write-off method* and the *allowance method*. In a direct write-off method, records should be factual rather than estimated. No journal entries are created until a special account has been specified as uncollectible. The recording of bad debts is only possible if the debtor's accounts receivables are definitely not collectible. The direct write-off methods are usually applied to small companies with daily transactions, especially credit sales are rare. The disadvantage of this method is that the accounts receivables presented in the balance sheet will reflect the unfair circumstances because they are presented in gross amounts in order to violate generally accepted accounting principles. Or it can be said less able to compare costs with income in the period in question. The advantage of this method is the application is simple and easy to apply.

In the direct write-off method, losses are recorded when specific consumer accounts receivables are estimated to be uncollectible. It is often claimed the forecasts cannot be made until a certain accounting period ends, resulting *in improper matching of revenue and expenses*. In addition, in SFAS (Statements of Financial Accounting Standards) No. 5, it is stated that when the asset is damaged or the debt is uncollectible, an estimate of the estimated losses is made. Due to the existence of bad debts, most companies make estimates of bad debts (Mappedeceng, 2016).

The second method is allowance for bad debts (allowance method). The allowance method includes the uncollectible accounts receivable at the end of each period. This method provides better adjustments in the income statement and ensures that accounts receivables are recorded at their net realizable value (NRV) in the balance sheets. Net realizable value is the net amount expected to be received in cash. This does not include the amount that the company estimates will not be collectible. Therefore, the accounts receivables will be deducted by the estimated accounts receivables from uncollectible accounts receivables in the balance sheet. The allowance method is also called the indirect method. Proponents of this method believe that the expense of bad debts should be recorded in the same period as the sale to obtain an appropriate match on expenses and revenues, as well as to obtain the appropriate carrying amount of the business accounts receivable. Although by using estimates, but the percentage of bad debts can be known from past experience, market conditions, and analysis of outstanding balances. In large-scale companies, industry, trade, and service companies make allowance for accounts receivables that are expected to be uncollected. In this case, the actual losses experienced cannot be known with certainty. It is intended to provide accurate accounting records that are reflected in the financial statements.

Table 3 The difference of methods in accounts receivable write-off recording

Explanation	Direct Method	Allowance Method
Recording of estimated of bad debts.	No Journal	Recorded based on estimates through journal: Accounts receivable loss fee xxx Accounts receivable loss reserve xxx
Accounts receivable write-off	Accounts receivable loss xxx Business accounts receivable xxx	Accounts receivable loss reserve xxx Business accounts receivable xxx
Statement of the ability of the debtor to pay the accounts receivables that already written off	Business accounts receivable xxx Accounts receivable loss xxx	Business accounts receivable xxx Accounts receivable loss reserve xxx
Receipt of payment of accounts receivables that have been written off	Cash xxx Receivable loss xxx	Cash xxx Business accounts receivable xxx

Source: Pujianto (2012)

On the other hand, in accordance with Regulation of the Minister of Finance No. 20 /PMK.010/2015 on the Second Amendment to the Regulation of the Minister of Finance No. 105/PMK.03/2009 about Accounts Receivables that obviously cannot be collected may be deducted from Gross Income explained that which defined as real accounts receivables that cannot be collected are:

1. accounts receivables arising from reasonable business transactions in accordance with their line of business;
2. which is clearly cannot be collected even if the Taxpayer has made the maximum or final collection efforts;
3. excluding accounts receivables arising from business transactions with parties with special relationship with the Taxpayer.

In the Regulation of the Minister of Finance also mentioned that the Taxpayer may charge the cost of bad debts in calculating taxable income with the condition:

1. been charged as expense in the statement of commercial income statement;
2. the taxpayer must submit a list of bad debts to the Directorate General of Taxes, whether in hard copy (in attachment of SPT) and soft copy; and
3. the obviously uncollectible accounts receivables:
    a. has submitted its collection case to the District Court or government agency handling state accounts receivables; or
    b. there is a written agreement concerning the write-off of debt accounts receivables/debts between the creditor and the debtor concerned; or
    c. has been published in a public or special publication (may be an internal publication of the association or the like); or
    d. there is recognition from the debtor that the debt has been written off for a certain debt.

In Andriyan (2012) stated that in banking practice, banks will make efforts to rescue credit on credit portfolio classified as problem credits (non-performing credits, doubtful credits, and bad credits). Credit rescue efforts are conducted by banks using three consecutive ways, namely *rescheduling*, *reconditioning*, and *restructuring*. If the credit rescue efforts by way of restructuring remain unsuccessful and the credit portfolio remains stuck, then can take the way of the elimination of bad credit. The elimination of bad credit is commonly done by national banks as one way to reduce the level of non-performing loans (NPL ratio) to improve bank soundness. The removal of bad credits consists of two stages: write-off (conditional deletion) and remove the bill (absolute deletion). Remove the bills are generally only done by the bank if the portfolio of bad credits is very difficult to collect or because the cost of billing is very large. Although it has been removed, the portfolio of bad credit is still possible to collect so it is still possible to give money to the bank. Such income should still be included in the bank's bookkeeping in other income items.

According to Dahlan M. Sutalaksana in Andriyan (2012), write-off is defined as write-off. In the banking context, this term is usually intended to remove unproductive assets and bookkeeping accounts, such as bad debts, but the bank still has the right to collect the bad credits as much as possible. The write-off of bad credit by a bank can basically be done by the bank as long as the bank concerned is able to execute it, which has sufficient reserves. The main purpose of write-off of bad credits is primarily to improve the quality condition of bank earning assets. However, in its application, it is considered that there are various problems, especially concerning the provisions of taxation, the confidentiality of banks and various problems faced by banks, especially banks that have gone public.

Meanwhile, in the Regulation of the Minister of Finance No. 57/PMK.03/2010 concerning Amendment to PMK No. 105/PMK.03/2009 concerning Accounts Receivable that obviously cannot be collected that may be deducted from Gross Income, it is stated that accounts receivable that obviously cannot be collected are accounts receivables arising from reasonable business transactions in accordance with their line of business, which are clearly non-collectable even though the Taxpayer has made the maximum or final collection efforts.

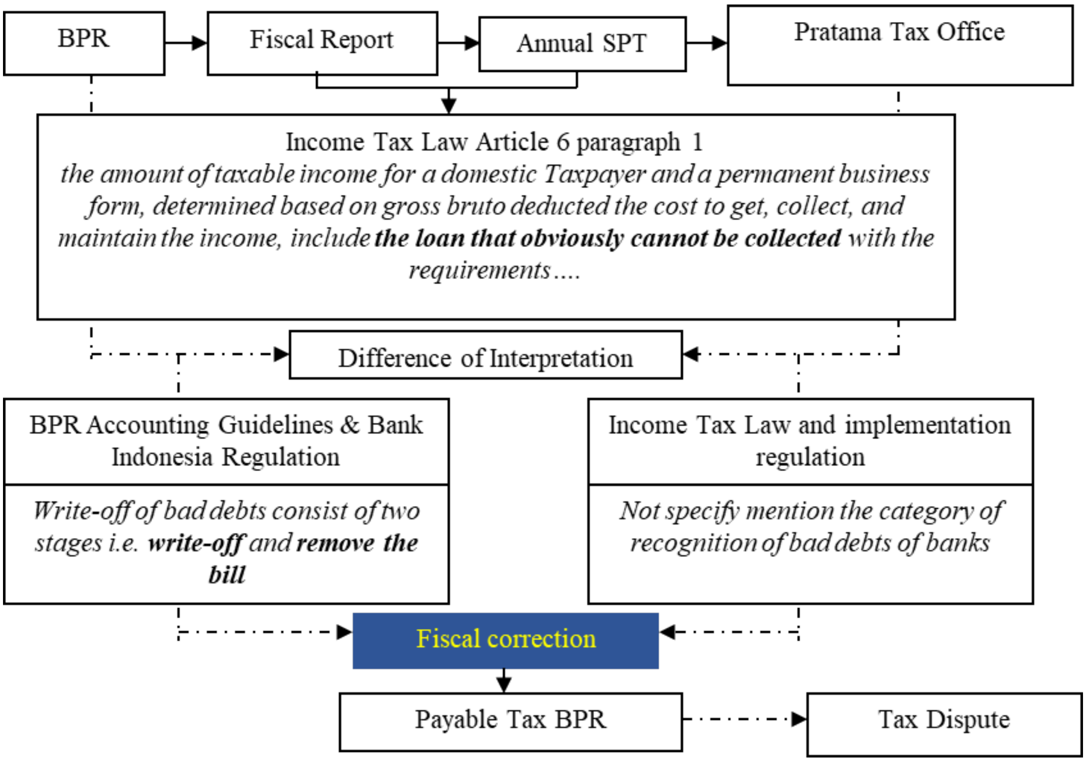
Regulation on Reserve Funds

Establishment of a reserve fund or also known as Provision for Loan Losses (PPAP) in a Rural Bank (BPR) shall be guided by Bank Indonesia Regulation Number 13/26/PBI/2011 concerning Amendment to Bank Indonesia Regulation Number 8/19/PBI/2006 concerning Earning Assets Quality and Provision for Loan Losses of Rural Bank (BPR). Meanwhile, the fiscal formation of reserve fund is regulated in Article 9 paragraph 1 letter c of Law Number 36 of 2008 About Fourth Amendment of Law Number 7 of 1983 regarding Income Tax. This regulation states that to determine the amount of taxable income for a domestic Taxpayer and a permanent business form shall not be deducted from the establishment or accumulation of a reserve fund, except reserves for bad debts for the business of a bank and other entities that disburse credits, rent for business with option rights, consumer finance companies, and factoring companies. Then, the mechanism for the establishment of PPAP is also regulated in Regulation of the Minister of Finance No. 219/PMK.011/2012 on Amendment to Regulation of the Minister of Finance No. 81/PMK.03/2009 concerning the Formation or Fertilization of Reserve Funds that can be Deducted as Expenses.

As mentioned earlier, the current interpretive differences and the possibility of tax disputes are related to the establishment of reserve funds and the write-off of bad debts for the purposes of fiscal reporting among banks and taxation, particularly in rural banks. As has been known that one of the important elements in the business of Rural Bank (BPR) is the management of accounts receivables or placement of funds in the community which is the main source of income for Rural Bank (BPR). Bad debts or loss becomes the biggest risk in the management of accounts receivables. This requires preparation of funds in the allowance for write-off bad debts (Margono, 2014).

Basically, the establishment of PPAP based on taxation and banking regulations is not so different. However, problems arise in determining the balance of PPAP books at the end of the period according to the Taxpayer and the tax authorities (fiscus) when there is a write-off of accounts receivables. In the practice of Rural Bank (BPR), the balance of PPAP books is derived from the reduction of total PPAP in that period by writing off the credit. The difference occurs because in banking known as the write-off of credit and the elimination of credit claims, while in taxation there is only an accounts receivable term that clearly cannot be collected. When a Rural Bank (BPR) writes off credit, it does not remove the claim on the credit. Whereas in the Income Tax Law Article 6 paragraph (1) letter h stated that the accounts receivables that are clearly cannot be collected and can be charged as a cost is the result of the maximal or final efforts of the Taxpayer. In this case, to be able to recognize the cost of bad debts as a deductible of taxable income, one of the requirements that must be fulfilled is that the Taxpayer must submit a list of accounts receivables that cannot be collected to DGT (as an attachment in the Corporate's Annual Tax Return). The accounts receivable list must have been submitted to the District Court or government agency handling state accounts receivables, there is a written agreement concerning the write-off of accounts receivables between the creditor and the debtor, has been published in a public/special publication, or an acknowledgment from the debtor that the debt has been written off for the amount of certain debt. By not admitting to write off the credit as a deductible of taxable income and the non-compliance requirement of bad debts by Rural Bank (BPR), then this will be a correction for the tax officers (fiscus) on excess of PPAP formation and affect the increase of Rural Bank (BPR) taxable income.

Figure 1 General Picture of Difference of Interpretation



Basically, the provisions of Article 6 and Article 9 of Law Number 36 of 2008 regarding Income Tax have provided general guidance to taxpayers to conduct fiscal reconciliation. The two articles outlined the concept of deductible expenses and nondeductible expenses to calculate the value of taxable income for a domestic Taxpayer and a permanent business. However, one type of cost which in practice is enough to cause confusion in the field is bad debts (Wijaya, 2016).

The credit write-off is an administrative write-off, which is a written-off credit, but is not discontinued because it is still billed by the bank. In its application, there are various problems in the act of write-off the banking industry, especially in the case of taxation. This is seen in the case of tax disputes that occurred due to differences in interpretation between the Directorate General of Taxation and banking in interpreting the provisions of the Income Tax Law and its implementing regulations (Taufiqur-rakhman and Santoso, 2013)

Regulatory Allowance for Losses or the Formation of a Reserve Fund

Based on the Rural Bank (BPR) Accounting Guidelines, provision for credit losses is established to cover possible losses arising in connection with the placement of funds into credit. The amount of allowance for possible losses on loans is determined by taking into account, among other things, the quality of loans and the value of available collateral, which are calculated, inter alia, on the basis of collateral type, collateral binding type, market price and any assessments made by independent evaluator.

Earning assets serve to earn the bank's main income and have a great risk. Potential losses due to poor collectability of these assets can lead to bankruptcy of the bank. Therefore, banks are required to establish Provision for Loan Losses (PPAP) in the form of general reserves and special reserves to cover possible losses. The established PPAP represents the estimated loss on the outstanding balance of the loan. In the financial statements, the PPAP should be included in the income statement as one of the charges by the bank in each financial reporting period (Rinanti 2013). A Rural Bank (BPR) is required to establish a minimum allowance for loan losses in accordance with the prevailing provisions and the allowance may be made at any time or at any financial statement date.

Based on Bank Indonesia Regulation Number 8/19/PBI/2006 concerning the Establishment of Provision for Loan Losses of Rural Banks, as amended by Bank Indonesia Regulation Number 13/26/PBI/2011, provision for loan losses, a PPAP is a reserve that must be established at a certain percentage of the outstanding balance based on the classification of the quality of earning assets.

Meanwhile, in Article 9 paragraph 3 of Law Number 36 of 2008 regarding Income Tax stated that to determine the amount of Taxable Income for domestic Taxpayer and permanent establishment shall not be deducted the formation or accumulation of reserve fund, except one of the reserves bad debts for businesses of banks and other business entities that disburse credits, leases with option rights, consumer financing companies and factoring companies. Fertilization of reserve funds shall also be regulated in the Regulation of the Minister of Finance of the Republic of Indonesia Number 81/PMK.03/2009 concerning the Establishment or Fertilization of a Reserved Fund that may be deducted as an expense. The amount of accounts receivables used as the basis for establishing a reserve fund is the principal of loans granted by rural banks that perform conventional business activities.

Regulation on Fiscal Correction

In Kesit (2010), it is stated that fiscal correction aims to adjust commercial profit (i.e. profits calculated according to Generally Accepted Accounting Principles) with the provisions of taxation so as to derive fiscal profit. The statements of income statement made by the company are financial statements prepared under the General Accounting Principles. Therefore, in order to calculate the amount of income tax payable, the company must make adjustments to its profit and loss account in accordance with the tax regulations and provisions. This adjustment step is done by searching different account items of treatment between accounting principles generally accepted with the provisions of the law of taxation law. These account items need fiscal correction.

In Herawati (2013) also mentioned that the differences in the recognition of income and expenses according to commercial and fiscal accounting, as well as differences in accounting policies can be grouped into two categories, namely fixed differences and temporary differences.

The permanent difference arises as a result of the difference in the recognition of expenses and income between commercial and tax/fiscal reporting. The consequences of this difference also result in commercial profit and fiscal profit as the basis for calculating the tax payable. The fixed difference usually arises because the tax laws require some things to be excluded from the calculation of taxable income. Meanwhile, the timing differences are referred to as the difference between the tax base of an asset or a liability and the carrying amount of the asset or liability resulting in a change in future fiscal profit. The time difference usually arises because of differences in methods used between taxes with accounting.

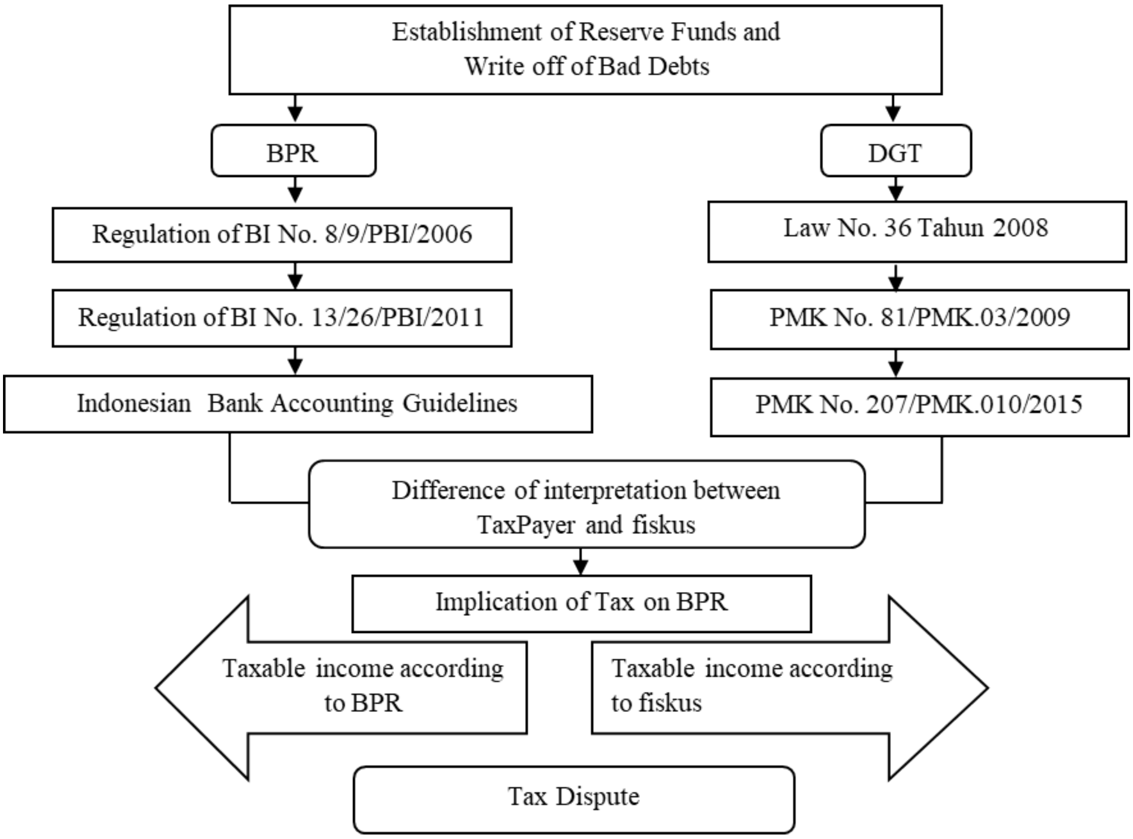
Dispute Study on Bad Debts

Related to the polemic as described above also occurred in the Regional Company of BPR Bank Klaten. Regional Company (PD) BPR Bank Klaten is a banking company owned by the local government of Klaten Regency established based on Regional Regulation of Klaten Regency No. 12/Per/DPRD/51 on August 1, 1951. Products and services provided are credit, savings, and deposits. Regional Company (PD) BPR Klaten Bank is a conventional people's credit bank that publishes a publication financial report on the Financial Services Authority website. The published publications report contains balance sheets, profit and loss statements, commitments and contingencies, and other information reports. On the other hand, Regional Company (PD) BPR Klaten Bank is one unit of the banking sector which includes a registered taxpayer in the Tax Office *Pratama* Klaten.

From the results of the examination in 2015, fiscal correction is made because the BPR is too high to charge the elimination of accounts receivable and non-fulfillment of the requirements of Article 6 paragraph 1 letter h of the Income Tax Law. Upon correction, the BPR filed an objection against the Underpayment Tax Assessment Letter of Income Tax (SKPKB PPh) which has been issued. In this case, further impact if the BPR objected to the tax audit result that the BPR may be subject to additional sanctions in the form of a 50% fine of Article 25 paragraph 9 of the Law on General Tax Provisions and Procedures (UU KUP) of the tax amount based on the objection decision minus the tax already paid before filing the objection.

Framework of this case can be presented in the form of the following flow chart, Figure 2.

Figure 2 Framework of Study Conceptual



Based on the framework above, the question proposed in this case study.

1. How is the fiscal correction of the formation of reserve fund and the write-off of bad debts at Regional Company (PD) BPR Bank Klaten?
2. What issues triggered a tax dispute between BPR and the tax office regarding the establishment of reserve funds and write-off of bad debts in the banking sector?

Through case study, data collection was done by interview and documentation techniques. Interview method is done to certain participants. The parties interviewed are the parties directly involved in the research topic and have the authority to provide information. Documentation is done by studying data and information derived from documents relevant to the issue/topic of research. In this case, the researcher will focus on confirming the dispute and confirm the correction made by the tax auditor on tax reporting that has been reported by the BPR, especially regarding the establishment of reserve fund and bad debts.

Confirmation 1: The Occurrence of Tax Dispute Between BPR and Tax Office

In accordance with Article 3 Paragraph 1 of Law Number 16 of 2009 concerning General Provisions and Tax Procedures, it is stated that every Taxpayer must fill out the Notice Letter correctly, completely and clearly, in Bahasa Indonesia using Latin letters, Arabic numerals, Rupiah, and sign and deliver it to the office of the Directorate General of Taxes where the Taxpayer is registered or confirmed or elsewhere determined by the Director General of Taxes. As a tax reporting obligation, Regional Company (PD) BPR Bank Klaten also reports the Annual Tax Return of Agency. Annual Income Tax Return for Taxpayers who are required to maintain bookkeeping should be accompanied by financial statements in the form of balance sheet and income statement and other information required to calculate taxable income.

In 2015, an examination by the tax office for the 2012 tax year on the Annual Tax Return has been reported by Regional Company (PD) BPR Bank Klaten. The examination of this BPR is done based on the proposal of *Account Representative* which has conducted analysis on the report of the work that has been submitted to Tax Service Office (KPP). From the examination it turns out that there are disputes between BPR and tax office, particularly related to the write-off of bad debts and the establishment of reserve funds at the end of the period. Calculation of taxable income by BPR and according to tax inspector (fiscus) there are significant differences. Fiscal correction is done because the Taxpayer is too high to charge the PPAP removal fee. In addition, the Taxpayer calculates the elimination cost of the accounts receivables that are not in accordance with the provisions of article 6 paragraph 1 letter h of the Income Tax Law. From the results of the examination, Tax Underpayment Assessment Letters (SKPKB) is issued. Regional Company (PD) BPR Klaten Bank then filed an appeal against Tax Underpayment Assessment Letters SKPKB which has been issued. Objections filed by the Taxpayer one of them because the materiality aspect caused.

Confirmation 2: the occurrence of Fiscal Correction on the Establishment of Reserve Fund and Write-Off of Bad Debts

In accordance with the provisions of Article 12 of Bank Indonesia Regulation Number 8/19/PBI/2006 stated that BPR is required to establish a reserve fund or Provision for Loan Losses (PPAP) in the form of general PPAP and special PPAP. The establishment of this reserve fund in anticipation of uncollectible credits provided in the future. So it is from the tax laws. In Article 9 paragraph (1) letter c of the Income Tax Law and PMK Number 81/PMK.03/2009 stated that BPR are allowed to establish reserves for bad debts. In this case, the amount of accounts receivables used as the basis for forming a reserve fund is the principal of the loan granted by the BPR, which conducts conventional business activities.

Regional Company (PD) BPR Bank Klaten, as a Rural Bank (BPR), one of its businesses related to the provision of credit for the employee and public sector, also make the formation of reserves for uncollectible accounts receivables. Here is the calculation illustration for fiscal year 2012 reporting.

Table 4 Calculation of Reserve on Credit Write-off of Regional Company (PD) BPR Bank Klaten in 2012 According to Regulation of BI No. 8/19/PBI/2006

Credit	Loan Principal	Collateral	PPAP Basic	% PPAP	PPAP
Current	90.284.953.000	-	90.284.953.000	0,5%	451.424.765
Less Current	1.955.493.000	1.466.619.750	488.873.250	10%	48.887.325
Doubt	1.137.082.000	852.811.500	284.270.500	50%	142.135.250
Loss	5.858.051.000	4.023.244.340	1.834.806.660	100%	1.834.806.660
Total	**99.235.579.000**				**2.477.254.000**

Table 5 Calculation of Reserve on Credit Write-off in 2012 According to Regulation of Finance Minister No. 81/PMK.03/2009

Credit	Loan Principal	Collateral	PPAP Basic	% PPAP	PPAP
Current	90.284.953.000	-	90.284.953.000	0,5%	451.424.765
Less Current	1.955.493.000	1.466.619.750	488.873.250	10%	48.887.325
Doubt	1.137.082.000	852.811.500	284.270.500	50%	142.135.250
Loss	5.858.051.000	4.023.244.340	1.834.806.660	100%	1.834.806.660
Total	**99.235.579.000**				**2.477.254.000**

From the calculation above can be seen that for the establishment of reserve funds or Provision for Loan Losses (PPAP) by Rural Bank (BPR) and Tax Service Office (KPP) there is no difference. Based on Article 9 paragraph 1 letter c of Law Number 36 of 2008 regarding Income Tax, the tax provisions allow banks to establish reserves for potential risks in the future on bad debts. In other words, banks can use the *allowance method* to recognize the loss of accounts receivable, according to their respective risk levels.

In May 2012 Regional Company (PD) BPR Bank Klaten did write off of bad debts with details as follows.

Table 6 Write-off of Bad Credits in 2012

No.	Description	Total
1	General Credit Sector (SKU)	329.453.000
2	Employess Credit Sector (SKK)	1.600.000.000
3	Daily Cash Office Credit Sector (KKH)	320.000.000
	Total	2.249.453.000

Journal: Provision for earning assets 2.249.453.000

Credit granted 2.249.453.000

Credit write-off above done by Taxpayer in accordance with the Decision of the Board of Directors of Regional Company (PD) BPR Bank Klaten. Meanwhile, during the period of 2012, Regional Company (PD) BPR Bank Klaten has conducted the following formation of reserves.

Beginning balance of PPAP in 2012	Rp	4.690.891.000
PPAP establishment		134.316.000
Credit write-off		(2.249.453.000)
PPAP establishment in 2012	Rp	2.575.754.000
Provision of Reserves according to BI		2.477.254.000
Excess of reserve establishment	Rp	98.500.000

As previously stated, the correction of the examination is the imposition of high fees for eliminating accounts receivables and the calculation of the elimination cost of accounts receivables that are not in accordance with the provisions of Article 6 paragraph 1 letter h of the

Income Tax Law. Upon correction, it is stated that in fiscal case, write-off of Rp2.249.453.000,- cannot be entirely charged as deduction of reserves for bad debts due to non-compliance.

In the provisions of Article 6 paragraph (1) letter h of Income Tax Law, it is stated that the costs of accounts receivables that are clearly uncollectible are recognized as deductible of taxable income with the condition that:

1. have been charged as expenses in commercial income statement;
2. Taxpayer must submit a list of accounts receivables that cannot be collected to the Directorate General of Taxes; and
3. has submitted its collection case to the District Court or government agency handling state accounts receivables; or a written agreement concerning the write-off of accounts receivables/debt exemptions between the creditor and the debtor; or has been published in a public or special publication; or a recognition from the debtor that the debt has been written off for a certain amount.
4. the requirements referred to in number 3 shall not apply to the elimination of small debtor's bad debts as referred to in Article 4 paragraph (1) letter k of the Income Tax Law.

The write-off by Rural Bank (BPR) refers to one of them in the Rural Bank Accounting Guidelines Chapter IV point 7.2 regarding the Allowance for Loss and Termination of Acknowledgment. The section states that a Rural Bank (BPR) may perform write-off, which is an administrative measure to write-off a bad credit from the balance sheet at the expense of the debtor's liability without removing the collection right to the debtor. In fact some of the accounts receivable that have been written off are still paid by the debtor. Deposits received by debtors on credits that have been written off are recognized as other operating income.

On the other hand, the recognition of uncollectible accounts receivables that can be recognized as deductible of taxable income based on the explanation of Article 6 paragraph (1) letter h of the Income Tax Law must have been through the maximum or last billing effort. For the banking sector, the provision still creates multiple interpretations in the field, especially for tax reporting purposes. The Income Tax Law is only mentioned for bad debts. Meanwhile, in Bank Indonesia Regulation and Accounting Guidelines, BPR is known for two kinds of write-off of accounts receivables, namely write off and remove the bill. The unclear interpretation of bad debts in the taxation provisions resulted in correction from the examiner. This is because BPR acknowledges the write off as a deduction of costs in the determination of its taxable income. However, such recognition cannot meet the specified requirements.

If we look at the explanation section of Article 6 paragraph (1) letter h of the Income Tax Act above, the term bad debts in this taxation provision has been explained by the necessity through the last billing effort. This leads to the definition of "remove the bill" in the banking sector. As stated in the BPR Accounting Guidelines, the elimination of the credit collection (remove the bill) is the act of BPR removing the debtor's liability which cannot be resolved. Therefore, the existence of the provisions that multiple interpretations resulted in differences in calculations between the Taxpayer and the examiner. The following is presented in the calculation of PPAP by BPR and inspector.

Table 7 Illustration of PPAP Calculation according to Taxpayer and Tax Inspector

Description	According to Taxpayer		According to Inspector	
Opening Balance of PPAP in 2012	Rp	4.690.891.000	Rp	4.690.891.000
PPAP Formation	Rp	134.316.000	Rp	134.316.000
Credit Write-off	Rp	(2.249.453.000)	Rp	(132.215.000)
PPAP Formation in 2012	Rp	2.575.754.000	Rp	4.692.992.000
Provision of Reserves according to BI	Rp	2.477.254.000	Rp	2.477.254.000
Excess of reserve establishment	Rp	98.500.000	Rp	2.215.738.000

The write-off of bad debts by new Taxpayers is just writing off the book and is not removing the bill. Therefore, according to the investigator, accounts receivable that can satisfy the criteria of accounts receivables that are clearly cannot be collected only to the debtor who has passed away and/or escaped Rp132.215.000,-

Correction of credit write-off:

According to Taxpayers	Rp	2.249.453.000
According to the inspector	Rp	132.215.000
Correction on write-off	Rp	2.117.238.000

This correction causes the excess of PPAP formation during 2012 and the surplus is calculated as income which will increase the amount of tax payable of BPR. According to Regional Company (PD) BPR Klaten Bank, one thing that is not done by the inspector is to bring credit given on the debit side, then this credit also contains the risk and must be established PPAP of 100% because it has entered collectability of loss.

Here there is a difference in interpretation of Article 4 of Ministerial Regulation No. 81/PMK.03/2009 concerning the Formation or Fertilization of Reserved Funds that Can Be Deducted as Expense. The Article states that in the event that the amount of reserves for bad debts in whole or in part is not used to cover the losses, the excess amount of such reserves shall be calculated as income. From the provision above, there are still some interpretations. If until the end of 2012 there is no write-off of accounts receivables, then all reserves that have been established in 2012, both on fully paid and outstanding accounts receivables, must be returned or reversed into income. Despite the write-off of accounts receivable, but if the amount is more than the reserve, the rest must also be turned into income. In other words, there is the assumption that the end-of-year position, the balance of bad debts write-off reserves is always zero.

In the Rural Bank Accounting Guidelines it is also stated that the deposits received from the debtor on written off credits or deleted claims are recognized as other operating income. Basically, Regional Company (PD) BPR Bank Klaten agreed on it, but on credit account provided also must be corrected. According to the BPR, the correction of the write-off has affected the account in bookkeeping (the write-up journal), namely:

Provision for earning assets	2.117.238.000	
Credit granted		2.117.238.000

The non-recognition of the write-off (for reasons not meeting the requirements of Article 6 paragraph (1) letter h of the Income Tax Law) resulted in the absence of a write-off journal. BPR assumes that if correction is made, credit should also be corrected. Or it can be said to be returned as a credit that is still outstanding (have not been removed). Thus, the write-off of credit book recognition will affect account in bookkeeping, which is:

Credit granted	2.117.238.000	
Provision for earning assets		2.117.238.000

The consequences of the journal cancellation above are as follows:

1. Journal cancellation (credit) on the backup account of PPAP causes the excess of reserves formed from the intended, resulting in a positive correction of Rp2.117.238.000,-.
2. Journal cancellation (debit) on credit account granted by additional credit granted at the end of the year and there is a deficiency in the formation of credit risk reserve in 100% for collectability of loss. This raises a negative correction of Rp2.117.238.000,-.

If look at the provisions contained in the tax regulation and Bank Indonesia Regulation there is no statement that explains that at the end of the year there should be reversal of all unused reserves to remove bad debts. In addition, there is also no explanation for dismissing outstanding credits which of course also has an uncollected risk. Whereas both the provisions of taxation and banking both allow the BPR to make the formation of reserve funds in anticipation of uncollectible credit in the future.

In the Circular Letter of the Director General of Taxes No. SE-17/PJ.223/1984 concerning Reserves of Doubtful Accounts (Seri PPh Umum-01) the second point stated that:

"For the type of business of the bank, the losses from the actual accounts receivables suffered shall first be accounted for by the amount of allowance for write-off of the doubtful accounts receivables established at the beginning of the tax year. In the event that the amount of such reserves is insufficient, the remaining losses on the accounts receivables are all deducted from income to calculate the amount of taxable income. At the end of the year the formation of new reserves is also a factor in reducing taxable income ".

From explanation above can be illustrated in calculation as follow.

Credit Write-off	
According to BPR	According to Inspector
Rp2.249.453.000	Rp132.215.000
Difference Rp2.117.238.000,-.	

Cannot be charged as deduction of reserves for bad debts because they do not meet the requirements of Income Tax Law

PPAP Reserve	: Positive correction	= 2.117.238.000
Credit Granted	: Negative correction	= 2.117.238.000

PPAP balance and credit provided, they are:

	Before	After
Credit granted	99.235.579.000	101.352.817.000
PPAP	2.477.254.000	4.594.492.000

Then the allowance for losses (reserve) in fiscal at the end of year become:

Credit	Loans Principal	Collateral	PPAP Basic	% PPAP	PPAP
Current	90.284.953.000	-	90.284.953.000	0,5%	451.424.765
Less Current	1.955.493.000	1.466.619.750	488.873.250	10%	48.887.325
Doubt	1.137.082.000	852.811.500	284.270.500	50%	142.135.250
Loss	7.975.289.000	4.023.244.340	3.952.044.660	100%	3.952.044.660
Total	**101.352.817.000**				**4.594.492.000**

Description	According to Taxpayer		Fiscal Correction	
Opening Balance PPAP 2012	Rp	4.690.891.000	Rp	4.690.891.000
PPAP Formation	Rp	134.316.000	Rp	134.316.000
Credit write-off	Rp	(2.249.453.000)	Rp	(132.215.000)
PPAP book balance	Rp	2.575.754.000	Rp	4.692.992.000
Supposed PPAP per 31 Dec 2012	Rp	2.477.254.000	Rp	4.594.492.000
Excess of reserve formation	Rp	98.500.000	Rp	98.500.000

From the calculation illustration above, it is known that if write-off is done and correction is also done on the establishment of PPAP by returning the deleted credit into the bad credit category, then the final calculation of the excess of reserve formation according to the Taxpayer and according to the tax authority/inspector (fiscus) will be the same.

However, to further examine the calculation above, the following illustrates the formation of a reserve fund or Provision for Loan Losses (PPAP) and the write-off of account receivables that can be charged on a fiscal by a BPR based on data analysis, tax audit module, and other related provisions.

Period of 2016

Opening Balance: Credits granted	100.000.000.000
PPAP (*provision)*	1.850.000.000
Transaction occurring:	
Receipt of accounts receivable/credits (which have been written off)	500.000.000
Credit write-off	700.000.000

Must meet the requirements of Law No.36 of 2008 and the rules of implementation:

a. It has been charged on commercial Lap L / R
b. Submit a list of bad debts to DGT
c. Submitted billing case to District Court; there is a written agreement; published; or recognition of the debtor
d. Exclusion letter c for other small debtor

Balance of credit granted and PPAP become:

Credit granted	:	120.100.000.000
Provision for loan losses	:	1.650.000.000

Table 8 Provision for losses in fiscal

Credit	Loans Principal	Collateral	PPAP Basic	% PPAP	PPAP
Current	110.000.000.000	-	110.000.000.000	0,5%	550.000.000
Less Current	4.000.000.000	2.500.000.000	1.500.000.000	10%	150.000.000
Doubt	1.900.000.000	1.500.000.000	400.000.000	50%	200.000.000
Loss	4.200.000.000	3.000.000.000	1.200.000.000	100%	1.200.000.000
Total	**120.100.000.000**				**2.100.000.000**

Reserve for accounts receivable write-off that can be charged in fiscal:

Opening Balance of PPAP	1.850.000.000	
Accounts receivable income that has been written off	500.000.000	
Write-off during the ongoing year	(700.000.000)	
	1.650.000.000	
PPAP-end year	2.100.000.000	
Lack of reserve	450.000.000	*Dedutible expenses*

In BPR condition is not doing write-off in ongoing year, then the calculation is:

Opening Balance of PPAP	1.850.000.000
Accounts receivable income that has been written off	500.000.000
Write-off during the ongoing year	-
	2.350.000.000
PPAP- end year	2.100.000.000
Excess of reserve	250.000.000

Gain

Under the provision of PMK Number 81/PMK.03/2009 (related to the establishment of a reserve fund) and PMK No. 207/PMK.010/2015 (related to write-off of an accounts receivable), if the credit write off of Rp700.000.000,- **did not meet** the requirements of Article 6 paragraph 1 letter h of the Income Tax Law, the tax treatment is as follows.

In the case that reserves of bad debts are not or are not entirely used to cover losses arising from accounts receivables that are clearly non-collectible, the excess amount is calculated as income, whereas in the case of insufficient reserves, the shortfall is calculated as a loss.

Due to the write-off of a credit of Rp700.000.000,- do not meet the requirements, it is returned to the fourth credit quality (loss). Under the Provision of PMK Number 81/PMK.03/2009 (related to the formation of a reserve fund) and PMK No. 207/PMK.010/2015 (related to write-off of accounts receivable), if write-off of Rp700.000.000,00 does not meet the requirements Article 6 paragraph 1 letter h of the Income Tax Law, then the tax treatment will be different. There are still some opinions related to tax treatment of the condition. According to BPR, due to the credit write-off of Rp700.000.000,00 does not meet the requirements, if it is returned to the quality of the fourth credit (loss), then fiscally, there is no write-off journals.

è fiscally no write-off journal

Provision for earning assets	700.000.000	
Credit granted		700.000.000

so that the balance of PPAP and credit provided, i.e.:

	Before	After
Credit granted	120.100.000.000	120.800.000.000
PPAP	1.650.000.000	2.350.000.000

Provision for losses (reserve) in fiscal at the end of the year become:

Credit	Loans Principal	Collateral	PPAP Basic	% PPAP	PPAP
Current	110.000.000.000	-	110.000.000.000	0,5%	550.000.000
Less Current	4.000.000.000	2.500.000.000	1.500.000.000	10%	150.000.000
Doubt	1.900.000.000	1.500.000.000	400.000.000	50%	200.000.000
Loss	4.900.000.000	3.000.000.000	1.900.000.000	100%	1.900.000.000
Total	**120.800.000.000**				**2.800.000.000**

Opening Balance of PPAP	1.850.000.000	
Accounts receivable income that has been written off	500.000.000	
Write-off during the ongoing year	-	
	2.350.000.000	
PPAP-end year	2.800.000.000	
Lack of reserve	450.000.000	*Dedutible expenses*

From the calculation above can be known that the amount of reserve that can be charged fiscally will be the same.

From the illustration, it can be seen that the amount of fiscally charged provision will be the same. Meanwhile, in the event of a fiscal correction to Regional Company (PD) BPR Bank Klaten on the write-off of accounts receivables, KPP's tax inspector basically refers to the provisions contained in the Conventional Banking Industrial Tax Inspection Module of 2012. It states that if calculations such as the above illustration are performed, then for the Taxpayer (BPR) as if there is no difference that the credit on the quality of loss or has been removed. The amount of fiscally charged provisions will be the same. For that reason, it should be noted that Fiscal Jurists do not see such things above the same tax treatment. Thus, in fiscal terms based on prevailing taxation provisions, Taxpayers should not comply with the 4 requirements for write off, the amounts removed should not be re-entered in the amount of credit in the quality of loss, but postponed until the fulfillment (to the next year).

However, what needs to be paid attention and further study is the write-off of bad debts is the timing differences. The point is that the amount of difference between the fiscal and commercial that occur will be automatically corrected in the next year period. This will create an opportunity for injustice to the BPR Taxpayer in the year for correction on the write-off of accounts receivables, compared to other BPR in the same condition, but not examined. Fiscal correction will cause the tax payable of the BPR to increase, in addition to administrative sanctions for underpaid taxes and the uncertainty of tax treatment of BPR.

Learning:

Based on the previously described explanation, it can be seen how the fiscal correction raises a tax dispute between BPR and the tax office, especially the fiscal correction of the establishment of reserve funds and the write-off of bad debts of BPR.

From the study conducted, findings on the causes of the problem:

1. Taxpayers do not take advantage of KPP consultation facilities

In fulfillment of its tax obligations, the BPR as a Tax Payer is also required to understand the applicable tax provisions. This is particularly important in view of the development of the prevailing dynamic tax laws in line with the development of the business sectors become the tax object. Following the development of the regulation is expected to meet its tax reporting well.

Tax Service Office (KPP) Pratama in this case provide services to Taxpayers who still feel difficult or not understand related to a tax provision. All problems encountered in the case of the fulfillment of tax obligations can be consulted with the KPP, especially to *Account representative*. *Account representative* is a KPP Pratama employee who performs the supervision and excavation function of Taxpayer potential. Based on the Regulation of the Minister of Finance No. 206.2/PMK.01/2014 on the Organization and Working Procedures of

Vertical Institutions of the Directorate General of Taxation, AR has the task of supervising taxation obligations, preparing taxpayer profiles, performance analysis, data reconciliation in order to intensify and appeal to the Taxpayer.

In conducting supervision, Account Representative (AR) conducts a review and analysis of the Annual Tax Returns that have been reported by Taxpayers. If it is found that there be any discrepancies to the prevailing provisions then AR will submit a letter of appeal. With the letter submitted the appeal is expected Taxpayer also responds to the contents or aspects presented. However in the field, in fact sometimes taxpayers less respond to the appeal submitted. Only when there is a problem or polemic they feel less given a deep respect from the tax office.

2. Differences of interpretation among the tax authorities.

In conducting tax audits, the tax inspector functionality has a standard or guidance that becomes a reference in its implementation. With this standard, it is hoped that there will be uniform treatment of tax audit on the same problem, which is encountered by tax inspector in all KPP. But in reality there are still different treatment in the implementation of tax audit for the same aspect, especially related to the establishment of reserve funds and write-off of bad debts. The difference is due to the diverse interpretation of the tax provisions. Whereas it should be for the same provisions, the inspector's treatment of the problems faced must be the same.

In the case of Regional Company (PD) BPR related to the correction of write-off of bad debts is also found a variety of interpretations both between KPP's internal tax officers and the tax inspectors between KPP. This causes not uniformity of the inspector's treatment in making fiscal correction related to the formation of reserve funds and write-off of bad debts of BPR. The fact is that the dispute experienced by Regional Company (PD) BPR Bank Klaten does not occur in some other working areas of KPP. Whereas on the same examined aspect and tax inspector using the same reference rules or provisions.

Related to the fiscal correction of the formation of reserve funds and bad debts is still multiple interpretation against the provisions of Article 4 PMK No.81/PMK.03/2009. The article states that:

a. in the event that the amount of reserves for bad debts entirely or partially is not used to cover the losses, the amount of excess reserves is taken into account as income;

b. in the event that the amount of reserves for bad debts is used to cover the losses but not sufficient, the amount of the deficit is considered as a loss.

The existence of various interpretations of these provisions resulted in the occurrence of different tax treatment of the same case. This is because in Article 4 mentioned above has not stated clearly when is actually the BPR can do the backup. It is also related to when the reserve should be reversed or recognized income or loss.

3. Differences in interpretation between taxpayers and tax authorities on tax laws.

Understanding of the Taxpayer of the BPR against the prevailing taxation provisions is very important in fulfilling its tax obligations. By understanding the reference used, the BPR can apply the tax provisions correctly in its tax return. If in practice the BPR encounters any problems or something different from the banking regulations, it can be consulted immediately with the tax office so as to minimize the occurrence of the dispute.

In practice, there are sometimes differences in interpretation between taxpayers and tax authorities on a provision in order to fulfill the tax obligations. This difference of understanding can be on the same terms with different interpretations or each has guidelines in the relevant business sector but there are some differences that cause problems.

In addition, the lack of understanding of taxation provisions also influences the taxpayer compliance scene. Thertina (2016) mentions that the Directorate General of Taxation has highlighted the low level of compliance of Rural Banks (BPR) in reporting annual tax returns (SPT). The reason, of all taxpayers' BPR, only half of them are obedient. This condition is in contrast to commercial banks whose level of compliance has reached one hundred percent.

Table 9 Rate of Tax Reporting of BPR in 2012-2016

Year	2011	2012	2013	2014	2015
Report	899	943	951	971	1.007
Not Report	902	858	850	830	794

Source: http://katadata.co.id/berita/2016/11/09/ditjen-pajak-50-persen-bpr tak-lapor-pajak-tahun-lalu

From the data above can be seen that the level of compliance of BPR in fulfillment of tax obligations is still lacking. It is expected that the Taxpayer is more active to study the taxation provisions and consult with AR on everything related to its tax obligations.

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An Analysis of Korean Bank Performance Using a Double Bootstrapped DEA Analysis

Dr. Yong Joo Lee, Associate Professor, Central Washington University
Dr. Thomas Tenerelli, Associate Professor, Central Washington University
Dr. Seong-Jong Joo, Associate Professor, Air Force Institute of Technology

Abstract

The purpose of this study is to analyze the efficiency of Korean banks using a two-stage DEA (data envelope analysis) bootstrap procedure suggested by Simar & Wilson (2007). The study comes approximately two decades after the Korean financial crisis which had a devastating impact on the Korean banking sector and economy. The crisis exposed the underpinnings of extremely liberal lending policies which prompted numerous banking reforms by the government. In the first stage of the two-stage DEA procedure, the relative efficiency scores of Korean banks are estimated. Then, in the second stage, the effect of certain environmental variables is estimated using a truncated regression model. The results of this paper suggest a continuing tension between Korean bank profitability and bank revenue.

1. Introduction

Korea is one of the original modern economic miracles, increasing GDP by almost 7% annually over the 30 years (1965 to 1995) leading up the Asian Financial Crisis in 1997. This is more than China, Hong Kong, and Taiwan over the same period, and is comparable to the city-state of Singapore. Korean banks in combination with Korean business conglomerates known as Chaebol, were a critical component of this growth. However, the Korean financial crisis had a devastating impact on the Korean banking sector, and exposed several deficiencies which were contributing factors to the financial crisis. In response to the crisis, numerous significant banking reforms were implemented by the government.

This study comes approximately 20 years after the Korean financial crisis and both assesses the current levels of efficiency of Korean banks and identifies factors that currently influence Korean bank efficiency. The efficiency of Korean banks is assessed using a two-stage DEA (data envelope analysis) bootstrap procedure suggested by Simar & Wilson (2007). In the first stage the relative efficiency scores of Korean banks are estimated. Then, in the second stage, the effect of certain environmental variables is estimated using a truncated regression model. The two-stage DEA bootstrap procedure used in this paper increases the efficiency of estimates of the determinants of Korean bank efficiency relative to prior two-stage methods utilized to measure efficiency.

This study updates and improves upon past research on Korean bank efficiency. Following the Korean/Asian financial crisis in 1997, several authors studied Korean bank efficiency both leading up to and following the crisis. Gilbert and Wilson (1998) analyzed the effects of Korean banking liberalization efforts (privatization and deregulation) on 24 Korean banks (14 nationwide and 10 regional) during the 1980-94 time period. Malmquist indexes were used to decompose productivity changes into changes in efficiency and changes in technology. The authors found that during the 1980-94 time period of deregulation and privatization, banks significantly changed their mix of inputs and outputs. The changed mix of inputs and outputs resulted in increases in both productivity and potential output.

Hao, Hunter, and Yang (2001) also analyzed effects of Korean banking liberalization efforts. Their focus was on the productive efficiency of a sample of private banks (9 nationwide and 10 regional) over the 1985-95 period. The authors used a stochastic frontier cost function approach to measure efficiency scores for the banks in their sample. In a second stage efficiency regression the authors identified important drivers of operating efficiency. Their results indicate that the most efficient banks were those with higher rates of asset growth, lower expense ratios, larger amounts of core deposits, and few employees per mission won of assets. They also found that the financial deregulation of 1991 did not have a significant effect on bank efficiency.

Park and Weber (2006) estimated Korean bank inefficiency and productivity changes over the 1992-2002 period. Estimates of inefficiency were derived from the directional technology distance function. The authors aggregated individual bank inefficiency and productivity growth to the industry level. They found that technical progress during the 1992-2002 period outstripped efficiency declines to produce a net increase in banking industry productivity.

Sufian (2011) analyzed the sources of inefficiency in the Korean banking sector over 1992-2003 time period. Three different approaches were used to measure how efficiency scores vary with changes in inputs and outputs: an intermediation approach, a value-added approach, and an operating approach. Using multiple approaches allowed the author to determine if different definitions of inputs and outputs affect the measured efficiency levels. Technical efficiency was sensitive to the definition of inputs and outputs – with efficiency levels highest using an operating approach and lowest using an intermediation approach. The decline in Korean bank efficiency over the period was found to be due to scale, with banks either too small to benefit from economies of scale or too large to be scale-efficient.

The paper proceeds as follows. Section 2 of the paper discusses the history of the Korean banking sector. Due to the integral nature the banking sector played in growth of the Korean economy, the banking sector review largely summarizes the Korean Miracle economic growth story while discussing the close connection between banks, the government, and the large business conglomerates known as Chaebol. Section 3 of the paper describes the DEA technique for identifying bank efficiency and also the bootstrapping and double bootstrapping processes utilized to improve the estimate of banking sector efficiency. Section 4 of the paper discusses the results of the double bootstrapped estimates of Korean bank efficiency and identifies the most important contributors to Korean bank efficiency. Section 5 concludes the paper by discussing the key insights from the empirical analysis.

2. History of the Korean Banking Sector

Since 1945, the Korean banking sector has undergone significant changes. At the end of the Japanese occupation (1910-1945), Korea inherited a few modern commercial banks from the Japanese colonial era. Although political instability prior to the establishment of the Republic of Korea in 1948 resulted in severe dislocation of the financial system (Gilbert & Wilson, 1998), by 1950, several central bank and general banking statutes were passed by the newly formed National Assembly. These statutes included the Bank of Korea Act of 1950, which led to the creation of a central bank. Shortly afterwards, the Bank of Korea enacted several policy measures that laid the foundation for sound banking guidelines (Park & Weber, 2006) and provided the basis for the reorganization and nationalization of the privately-held colonial-era commercial banks under the General Banking Act of 1950 (Gilbert & Wilson, 1998). However, implementation of the act was delayed by the Korean War (1950 – 1953). After the 1954 signing of the Korean War Armistice, existing privately-held commercial banks were nationalized for the purpose of reconstruction and redevelopment of industries which suffered during the war. (Park & Weber, 2006)

In 1960, a newly elected government began privatization and autonomy efforts through divestment of ownership interest in the commercial banks. However, by 1961 a military coup and regime change headed by President Park Chung-hee resulted in the end of privatization efforts and the renationalization of five nationwide banks. (Park & Weber, 2006) After two years of lackluster economic performance, in 1963 the Park government instituted the first of a series of five-year government plans that “reflected a strong commitment to industrialization and an important role for the state in this process.” (Noland, 1996)

The next approximate 35 years were marked a period of heavy government intervention into the banking sector, including the establishment of several categories of banks/financial institutions with varying roles in the financial industry (nationwide commercial banks, regional commercial banks, specialized banks, and non-bank financial institutions), specifying the business scope of the various financial institutions (Lee, 2000), appointing top managers at banks (Gilbert & Wilson, 1998), setting interest rates on loans and deposits at banks (Gilbert & Wilson, 1998; Hao et. al., 2001), targeting certain industries and firms as recipients of loans (Hao et al., 2001; Noland, 1996; Park & Weber, 2006) while restricting loans to other firms/industries (Banker et al., 2010), subsidizing loans to targeted industries, firms, and projects (Gilbert & Wilson, 1998; Noland, 1996), promoting consumer savings via national saving campaigns and control of interest rates (Banker et al., 2010; Noland, 1996), restricting shareholder influence over banks (Lee, 2000), and limiting foreign involvement in Korean banking market through such means as imposing currency exchange controls (Gilbert & Wilson,1998), limiting foreign investment in Korean banks (Noland, 1996), limiting entry into the Korean market by foreign banks, and limiting foreign borrowing by Korean firms through loans (Gilbert & Wilson, 1998) or bond sales (Noland, 1996).

Over this approximate 35 year period, the Korean banking system and Korean savings were essentially used by the government as a vehicle by which it implemented the national industrial policy delineated in its five-year plans. (Banker et al., 2010; Borensztein and Lee, 1999) Due to the essential nature of the banks to Korea’s industrial policy, in particular, to the success of large conglomerate companies called chaebols (see discussion below), the government provided an implicit safety net for Korean banks. (Lee, 2000)

In the 1960s, following the nationalization of five existing commercial banks and the first five-year government economic plan, several new banks were developed or allowed to form. Specialized banks were established by the government to finance government targeted industries. (Park & Weber, 2006) In the late 1960s, in an attempt to stimulate and balance local and regional economic development, privately owned regional commercial banks which were only allowed to operate within their own provinces were developed. (Gilbert & Wilson, 1998) Then, during the 1970s, tightly regulated nonbank financial institutions were introduced in an effort to attract funds and introduce competition into the market by diversifying financing sources. (Hao et al., 2001)

During the 1960s and 1970s, national and regional commercial banks, through the provision of financing to specific industries targeted for economic development, were the primary tool used by the government to institute its five-year economic plans which defined Korea’s industrial policy aimed at rapidly developing and industrializing the Korean economy. (Park & Weber, 2006; Ji and Park, 1999) “Toward the latter part of the 1970’s, policy loans, i.e., loans which supported government programs, accounted for nearly 80% of domestic credit extended during the period.” (Hao et al., 2001)

Much of the financing provided by Korean banks to targeted industries, particularly during the 1970s, occurred via large industrial groups, or conglomerates, known as chaebols. As a result of the government’s five-year economic plans, chaebols were given government protections, special privileges, access to capital, and subsidized loans in order to help nascent Korean industries develop and compete internationally and hence accelerate Korea’s economic growth. (Borensztein and Lee, 1999; Lee, 2000)

During the 1970s, a close relationship developed between the chaebols, the Korean banking sector, and the government, giving the chaebols privileged access to capital. The chaebols, in combination with “the government-controlled banking system which channeled consumer savings” to the chaebols, are felt to have been critical to the successful and rapid growth in the Korean economy during the industrialization period leading up to the Asian financial crisis. (Banker, Chang, & Lee, 2010) However, after industrialization, that same close relationship is considered by many to have become a hindrance to future economic growth. (Lee, 2000) This was an opinion even expressed by government of Korea. (Leipziger and Petri, 1993; Yoo, 1998; Borensztein and Lee, 1999)

In the 1980s, the Korean government began to loosen its tight grip over the banking industry with the reforms aimed at deregulation and privatization. Many of these reforms were brought about by the 1982 General Banking Act and a new five-year economic plan. During this time period, all remaining nationalized nationwide commercial banks were privatized, six new nationwide commercial banks came into existence as restrictions on the formation of new banks were removed, banks were given more discretion over their internal affairs as numerous regulations governing the internal management decisions and restrictions on business activities were abolished or simplified, controls over interest rates on loans (and deposits) were loosened or removed as the government increasingly relied on reserve requirements and monetary aggregates to reach its goals, entry barriers to non-bank financial institutions were reduced, loan regulations shifted from policy preference loans (for example, to chaebols) to minimum loan amounts for small to medium sized businesses (Noland, 1996), and exchange controls and restrictions effecting foreign ownership of Korean firms were relaxed. (Gilbert & Wilson, 1996) Perhaps most importantly of these reforms during this period was that “the government shifted its policy from supporting large companies to restricting chaebols’ economic power and enforcing competition policies.” (Lee, 2000)

In the 1990s the Korean government engaged in another round of bank reforms – this time promulgated by pressure from the Organization of Economic Cooperation and Development and United States to open its financial markets. The result was two revisions to the General Banking Act with the first occurring in 1991 and the second in 1997. The result of these changes in the 1990’s was that “interest rates were deregulated, policy loans and other credit controls were eliminated, reductions in non-performing loans were targeted, foreign exchange market transactions were deregulated, and bank ownership was restructured to allow individual shareholders up to a 12% equity stake.” (Park & Weber, 2006) Additionally, during the 1990s, the government instituted a deposit insurance program for Korean banks. (Kataoka, 2001)

Despite the financial sector reforms of the 1980s and early to mid-1990s, many felt that by the advent of the Korean financial crisis in 1997, the government still exerted heavy influence over the banking industry. One of the most important ways the government continued to exert its influence was by impacting which firms/industries received loans. (Banker et al., 2010; Borensztein and Lee, 1999; Gilbert & Wilson, 1998; Lee, 2000; Noland, 1996)

A primary source of the government influence over who received loans was its influence over the appointment of top managers at banks and other financial institutions. (Borensztein and Lee, 1999; Gilbert & Wilson, 1998; Kataoka, 2001; Lee, 2000; Noland, 1996; Park & Weber, 2006). It is perhaps not surprising that bank lending continued to be aggressive and high-risk during the 1980s and early to mid-1990s, with little attention paid to the creditworthiness of borrowing firms. (Banker et al., 2010; Borensztein & Lee, 1999; Gilbert & Wilson, 1998; Kataoka, 2001; Lee, 2000; Park & Weber, 2006; Corsetti et al., 1999)

Aggressive and high-risk bank lending was reflected in the poor balance sheets of Korean banks (Banker et al, 2010), the low average rate of return on Korean bank assets, a rate which was among the lowest in the emerging economies at the time (Goldstein & Turner, 1996, Table 5), the extremely low profit margins in the Korean manufacturing sector (Borensztein and Lee, 1999), the extremely low return on invested capital (ROIC) for chaebol (Corsetti et al., 1999), the high ratio of corporate interest payments to sales (Gobat, 1998), the low ratio of corporate operating income to interest payments, or interest coverage ratio (ICR) (Corsetti et al., 1999), and the weak relationship between the allocation of credit and the profitability of investment (Borensztein and Lee, 1999).

Ironically, some recent financial reforms leading up to the Korean financial crisis - allowing entry into the banking market (thus promoting competition) and significantly lifting restrictions on foreign borrowing (Chang et al, 1998) – contributed towards the 1997 crisis. These financial reforms did so by operating complementarily with the tight bank-chaebol-government relationship, the moral hazard problem (Hahm & Mishkin, 2000) created by the government's previous "too big to fail" policy for chaebols (Borensztein & Lee) and banks (IMF, 1988), and lax government banking supervision of financial institutions (Hahm & Mishkin, 2000) to produce excessive risk-taking which ultimately resulted in wide scale corporate failure in the Korean economy.

The Korean government's financial reform of allowing nonbank financial institutions (NBFIs) to enter into market beginning in the 1980s, particularly the proliferation of merchant banks in the 1990s, resulted in heavy ownership of the NBFIs by chaebols. (Hahm & Mishkin, 2000) This cross ownership, combined with low government restrictions and oversight of lending to chaebols by these new financial institutions compared to traditional banks, resulted in the NBFIs increasingly funneling loans to chaebols compared to traditional banks. (Kihwan, 2006). By the late 1990s, the debt to equity ratio of most chaebols was extremely high, exceeding 400 percent. (Baek et al., 2004; Banker et al., 2010; Gobat, 1998)

Meanwhile, both the merchant banking industry and the traditional Korean banks/financial institutions increasingly utilized short-term foreign debt to finance their investments, chiefly loans to chaebols. The extremely high debt levels in the late 1990s were exacerbated by the fact that the share of short-term debt in total debt was also high. (Chang et al, 1998; IMF, 1998)

When chaebols had problems paying their debt, the government broke from prior policy of bailing out or restructuring the chaebols or their lenders (Gobat, 1998) due to the excessive perceived costs of a bailout compared to prior debt-crisis bailouts in 1972, 1979-83, and 1984-88. (Joh, 2004) By 1997, "creditors realized that the government was willing to break from past policy and let poorly managed big businesses fail." (Gobat, 1998) The result was that "foreign banks demanded repayment of the short-term loans given to Korean financial institutions rather than rolling them over to the following year, which had been the usual practice." (Joh, 2004) "Due to their size and importance in subcontracting, the failure of these chaebols had a devastating impact on the economy …" (Joh, 2004) "The string of bankruptcies and financial distress that affected the Korean corporate sector in 1997 translated into serious financial difficulties for the banking system…" (Corsetti et al., 1999) Ultimately, "high leverage and excessive short-term debt [held by foreign countries] ma[de] Korean companies vulnerable to economic downturns, changes in financing costs, and changes in creditor perceptions" (Gobat, 1998), thus precipitating the 1997-1998 Korean financial crisis.

"In early December 1997, when the IMF announced its US$ 57 billion bailout package for South Korea, the Korean banking sector was on the verge of collapse." (Cho & Kalinowski, 2010)

While the inexorable expansion of size/scale and market share of the chaebols at the expense of profit through the use of Korean financial system was arguably effective at helping promote Korean economic growth up to the 1990s, with the advent of the Korean financial crisis it became increasingly clear that in order for the Korean economy to remain successful, significant further and real banking reform would have to be instituted to reduce the influence over the financial sector by the government and the chaebol.

Perhaps the most important post-crisis Korean banking industry reform measure insofar as breaking the tie between the government/chaebol and the banking industry was the increase in foreign access to the Korean banking market: "In May 1998, the government abolished the remaining barriers to foreign entry into the domestic financial markets … The market share of foreign-owned banks including foreign bank branches, measured in assets, increased from 8.1 percent in 1997 to 31.1 percent at the end of 2005… [Meanwhile,] the average ratio of foreign equity shares in the Korean banking sector accounted for 55 percent as of end-2005, the sixth highest in the world. This was a dramatic change compared with the closed banking market before the 1997 crisis." (Cho & Kalinowski, 2010)

Other important reforms instituted in the aftermath of the financial crisis included strengthening prudential regulation of banks by bringing them into line with international best practice, improving transparency by introducing new disclosure requirements, and legislative provisions to promote the development of financial holding companies to strengthen financial institutions' competitiveness through an increase in the scale and scope of their business. (Kim et al., 2006)

These post-crisis reforms occurred concurrently with a government led restructuring of the banking sector. "The first phase between 1998 and 2000 was dominated by the government efforts to avert the systemic failure of the banking sector through nationalization and the injection of massive public funds. The second phase, after basic banking stability was restored in 2001, can be characterized by" re-privatization and then strategic mergers that resulted in a massive consolidation of the Korean banking sector. (Cho & Kalinowski, 2010)

In the wake of the Korean financial crisis the Korean financial sector has been characterized by an increase in the quality of assets, increased profitability, an increased share of the financial market by banks, increased market concentration, and an increased market share for foreign banks. (Kim et al., 2006)

This current study allows us to assess the efficiency of Korean banks approximately 20 years after the Korean financial crisis and approximately 10 years after completion of the most significant reforms and banking industry restructuring following that crisis.

3. Bootstrapping Process

3.1 Obtaining Efficiency Scores Using the DEA Technique

Data Envelope Analysis (DEA), which takes a non-parametric approach, is a very widely used method of gauging the productivity of firms. Since our study aims to identify the environmental components that might have an impact on the efficiency of Korean banks through a truncated regression analysis, we must first conduct a traditional DEA analysis to obtain the dependent variable utilized for the advanced investigation in the bootstrapped regression analysis. Even though there have been many developments and variants of the DEA model since the inception of the CCR model, we will anchor our initial analysis to the original CCR input-oriented model due to its conciseness and clarity of the theoretical background.

The model is expressed as follows:

$$\min \theta$$
$$s.t.$$
$$Y\lambda \geq y_0$$
$$\theta x_0 - X\lambda \geq 0$$
$$e\lambda = 1$$
$$\lambda \geq 0, (j = 1,2,3,\ldots, J)$$

3.2 Smoothed Bootstrapping

Despite the great feature of the theoretical background in its own support, the DEA model still suffers from the fact that the model, deterministic in nature, is sensitive to the sampling variation in obtaining the true frontier since the outcome (i.e. efficiency scores) is derived from the limited samples (Simar and Wilson, 1998, 2000). In order to circumvent the issue, Simar and Wilson (1998) proposed applying the bootstrapping technique introduced first by Efron and Tibshirani (1993), which might mitigate the sensitivity of the sampling variation. Hence, before moving forward to the next phase of our analysis, we have implemented the smoothed bootstrap of Simar and Wilson (1998) to further our understanding of the statistical sensitivity of the DEA model. The algorithm for deriving several bootstrap replications with respect to DEA efficiency is as follows:

Step 1: Compute the original efficiency scores for each of seventeen Korean banks, θ_i, which are greater than or equal to the one from the CCR input model.

Step 2: Conduct the naive bootstrap estimates to obtain β_i from the sample with replacement.

Step 3: Construct a pseudo-data set as $\{x_i^*, y_i^* = y_i * (\theta_i / \tilde{\beta}_i)\}$,

where,

$$\tilde{\beta}_i = \begin{cases} \beta_i + h\varepsilon_i \ if \ \beta_i + h\varepsilon_i \geq 1 \\ 2 - (\beta_i + h\varepsilon_i) \ otherwise \end{cases}$$

h = bandwidth parameter, one of which could be h= $0.9An^{-1/5}$ used by Silverman (1986), Desli and Ray (2004), and Lothgren (1998)

$\varepsilon_i =$ random error i drawn from standard normal deviation

A= min (standard deviation of θ, interquartile range of θ/1.34)

σ_θ^2 = variance of initial DEA efficiency score

Step 4: Repeat step 3 B times, typically 1,000 times, to compute β_{Bi}^* as follows:

$$\beta_{Bi}^* = \bar{\beta} + \left[(\tilde{\beta}_{Bi} - \bar{\beta}) / (1 + h^2 / \sigma_\theta^2)^{1/2} \right]$$

where,

$$\bar{b} = \frac{\sum \tilde{b}_{Bi}}{n}$$

Step 5: Obtain $bStarAvg_i = \dfrac{b^*_{Bi}}{B}$.

Step 6: Compute necessary statistics such as bias or confidence intervals.

3.3 Double Bootstrapping

Simar and Wilson (2007) argued that previous studies that employed a two-stage approach for DEA were flawed in two ways. First, the studies did not take account of the date generating process (DGP), which is a mimicking process to simulate the sampling distribution of interest, leaving suspicion on the accuracy of the estimation of productivity. Particularly when a study uses a small sample size, the basic assumption of independence in the censored (Tobit) regression analysis without proper statistical underpinning is violated.

The second issue, which is more serious, is that DEA scores tend to be correlated since a score of one data making unit (DMU) is the product of the other ones within the same data set. The correlation effect might result in second stage estimates which are inconsistent and biased.

To circumvent these dependency issues, Simar and Wilson (2007) proposed a new algorithm of double bootstrapping and advocated using the truncated regression model instead of the censored (Tobit) model in the second stage.

Regarding usage of the truncated regression model, Simar and Wilson (2007) argued that it is preferable to the Tobit model since the Tobit model accommodates truncation for the dependent variable below zero, but allows the dependent variable to go to infinity in the positive direction. On the other hand, the truncated model defines the domain of the dependent variable only between zero and one, as the DEA index structure cuts off other regions in both directions.

Addressing the two flaws, the Simar & Wilson algorithm entails the following seven steps:

1. Calculate $\hat{\delta}_i$ for each bank using the original data.
2. Apply Maximum Likelihood estimation in the truncated regression of $\hat{\delta}_i$ on z_i, to obtain an estimate $\hat{\beta}$ of β and an estimate $\hat{\sigma}_\varepsilon$ of σ_ε.
3. Repeat B_1 times to yield seventeen sets of bootstrap estimates $\left\{\hat{\delta}_{i,b}* \ \ b = 1,\dots B_1\right\}$.

   a) Draw ε_i from the $N(0, \hat{\sigma}_\varepsilon^{\,2})$ distribution with left-truncation at $(1 - \hat{\beta} z_i)$.

   b) Compute $\delta_i * = \hat{\beta} z_i + \varepsilon_i$.

   c) Reconstruct a pseudo data set $(x_i *, y_i *)$, where $x_i * = x_i$ and $y_i * = y_i \hat{\delta}_i / \delta_i *$.

   d) Obtain a new DEA estimate $\hat{\delta}_i *$ using the new data $(x_i *, y_i *)$.
4. Compute the bias-corrected estimator $\hat{\hat{\delta}}_i$ as follows:

$$\hat{\hat{\delta}}_i = \hat{\delta}_i - \widehat{bias}_i$$

where $\widehat{bias}_i = \left(\frac{1}{B_1} \sum_{b=1}^{B_1} \hat{\delta}_{i,b}^{*} \right) - \hat{\delta}_i$.

5. Use the Maximum Likelihood method to estimate the truncated regression of $\hat{\hat{\delta}}_i$ on z_i, yielding an estimate $\hat{\hat{\beta}}$ of β and an estimate $\hat{\hat{\sigma}}$ of σ_ε.
6. Loop over the next three steps (a-c) B_2 times to acquire a set of B_2 bootstrap estimates $\left\{ (\hat{\hat{\beta}}_b^{*}, \hat{\hat{\sigma}}_b^{*}) \quad b = 1,\dots,B_2 \right\}$.

a) For each bank i=1,…n, ε_i is drawn from the $N(0, \hat{\hat{\sigma}})$ distribution with left truncation at $(1 - \hat{\hat{\beta}} z_i)$.

b) For each bank i=1,…n, $\delta_i^{**} = \hat{\hat{\beta}} z_i + \varepsilon_i$ is computed.

c) Use the Maximum likelihood method for the truncated regression of δ_i^{**} on z_i, obtain an estimate of β, $\hat{\hat{\beta}}^{*}$ and an estimate of σ_ε, $\hat{\hat{\sigma}}^{*}$.

7. Finally, using the estimate $\hat{\hat{\beta}}^{*}$ of β and $\hat{\hat{\sigma}}^{*}$ of σ_ε, construct $(1 - \alpha)$ percent confidence intervals of the *j*-th element β_j of the vector β.

4. Empirical Results

4.1 Analysis of Bootstrapped DEA Indices

In the initial analysis of our study we derive efficiency rates for each of the seventeen Korean commercial banks in year 2014. The data set included outputs of interest revenue and non-interest revenue, and inputs of deposits, number of employees, and capital. The data were acquired from the Financial Supervisory Service (FSS) in Korea which releases bank statistics once a year. The original data contains some negative values for non-interest revenue. Hence, we added a certain number to all non-interest revenue data so that all values were above zero based on the translation invariance theorem, which denotes that translation of the original observations results in a new problem that has the same optimal solution for the envelopment form as the old one (Cooper et al. 2007).

We used the ‘rDEA’ package embedded in R to implement the algorithms. However, we additionally had to code up in R since the package was not sufficient to conduct all necessary analyses in our study.

In order to provide an overview the variables employed in this study we start our analysis by presenting the descriptive statistics for the original data set in Figure 1.

Figure 1: Descriptive Statistics

	Interest revenue	Non-int. revenue	Deposit	Number of employees	Capital
Mean	20292	3043	801874	6922	88590
Median	12571	1876	374337	3478	60429
Max	50830	9402	2368266	21283	211559
Min	924	19	29821	416	3342

Figure 2 presents both the smoothing and double bootstrapped efficiency scores along with the original DEA index for Korean banks that are classified as three different types: national, local, and specialized banks. The original mean DEA scores for national banks, local banks, and specialized banks are 0.786, 0.947, and 0.951, respectively. This implies that specialized banks -- banks that target specific customer groups such as those engaged in agricultural or ocean production or small to medium sized businesses -- and local banks, targeted to serve regional customers, are more productive than other bank groups.

Figure 2 also shows that overall specialized banks are very efficient, with two specialized banks, Development and Industrial, lying on the efficient frontier of the estimated DEA model. Local banks also demonstrate a high performance rate, also having two banks on the efficient frontier, Cheju and Jeonbuk.

On the other hand, the national banks are the least efficient in their operations, due possibly to their larger size. When the business size is large, the magnitude of operational profit might be greater than that of the smaller banks. However, a firm's productivity does not necessarily increase proportionately to the size of the firm. Hence, the national banks in Korea might have large room for improvement in their operational efficiency.

Figure 2 also illustrates the bias in estimates of DEA efficiency for each bank from the smoothed bootstrap technique, with an average bias of 0.102. This bias estimate gauges the sensitivity of the measurement of productivity in Korean banks arising largely from the sampling differences. Even though specialized banks are the most efficient in their productivity among the three bank groups, the average bias for specialized banks is the largest, followed by local banks. This might imply that the sampling instability is relatively high with the specialized banks compared to other groups. Based upon the new scores after adjusting the bias, local banks were deemed overall most efficient.

Figure 2 also illustrates that the double bootstrapping method produces similar outcomes to the smoothed bootstrapping technique in terms of the order of mean values of bias corrected efficiency indices among the three bank groups -- the local bank group was the highest, followed by specialized banks and then national banks. However, all the three groups are consistent in that the bias corrected scores from the double bootstrapped technique tend to be closer to the original DEA indices compared to those obtained from the smoothed bootstrapped technique. This implies that the second bootstrapping resulted in a higher smoothing effect as deviations from the original scores decreased.

Despite the tendency of the second bootstrapping to yield estimates closer to the original values in biased corrected scores, they still reveal quite a large difference compared to the original scores. For example, the national bank group has a difference of 0.048, local group of 0.042, specialized group of 0.092, and overall of 0.055. Additionally, the measured bias (the difference between the original values and bias corrected scores) is positive for all bank banks. This observation is consistent with the previous literature, for instance, Halkos and Tzeremes (2013) and Roman et al (2014).

Figure 2: Smoothed and Double Bootstrapped Efficiency Scores

Type	Bank	DEA	B. corrected		Bias		Lower Bound		Upper Bound	
			S.	D.	S.	D.	S.	D.	S.	D.
	Woori	0.756	0.703	0.733	0.053	0.023	0.684	0.714	0.739	0.761
	K. SC	0.803	0.704	0.727	0.098	0.076	0.645	0.695	0.793	0.748
	Hana	0.774	0.716	0.743	0.057	0.031	0.694	0.725	0.757	0.768
	Exchange	0.747	0.677	0.702	0.070	0.045	0.642	0.689	0.721	0.719
Nat.	ShinHan	0.776	0.704	0.726	0.072	0.05	0.667	0.713	0.749	0.742
	K.City	0.955	0.840	0.867	0.115	0.088	0.770	0.814	0.933	0.906
	Kookmin	0.693	0.629	0.668	0.064	0.025	0.597	0.654	0.683	0.694
	Mean	**0.786**	**0.710**	**0.738**	**0.076**	**0.048**	**0.671**	**0.715**	**0.768**	**0.763**
	Std. dev.	**0.081**	**0.064**	**0.061**	**0.022**	**0.025**	**0.054**	**0.049**	**0.080**	**0.068**
	Daegu	0.954	0.869	0.919	0.084	0.035	0.830	0.897	0.938	0.953
	Busan	0.977	0.903	0.950	0.074	0.027	0.873	0.926	0.955	0.987
Local	Kwangju	0.895	0.800	0.862	0.095	0.033	0.748	0.838	0.870	0.897
	Cheju	1.000	0.814	0.942	0.185	0.058	0.677	0.896	1.059	1.001
	Jeonbuk	1.000	0.830	0.959	0.169	0.041	0.707	0.924	0.976	1.020
	Kyongnam	0.858	0.783	0.831	0.074	0.027	0.748	0.814	0.839	0.858
	Mean	**0.947**	**0.833**	**0.911**	**0.114**	**0.042**	**0.764**	**0.882**	**0.940**	**0.953**
	Std. dev	**0.058**	**0.045**	**0.052**	**0.050**	**0.011**	**0.074**	**0.046**	**0.078**	**0.063**
	Develmt	1.000	0.815	0.812	0.184	0.188	0.679	0.770	1.072	0.858
Spec.	Industrial	1.000	0.832	0.871	0.167	0.129	0.714	0.813	0.990	0.916
	Ag. Coop.	0.853	0.779	0.826	0.074	0.027	0.744	0.807	0.848	0.857
-	Suhyup	0.953	0.847	0.929	0.105	0.024	0.788	0.908	0.928	0.965
	Mean	**0.951**	**0.819**	**0.859**	**0.132**	**0.092**	**0.731**	**0.824**	**0.959**	**0.899**
	Std. dev.	**0.068**	**0.029**	**0.052**	**0.051**	**0.081**	**0.046**	**0.058**	**0.095**	**0.052**
O.all	**Mean**	**0.882**	**0.779**	**0.827**	**0.102**	**0.055**	**0.718**	**0.800**	**0.873**	**0.862**
	Std. dev.	**0.106**	**0.076**	**0.095**	**0.045**	**0.054**	**0.070**	**0.090**	**0.120**	**0.106**

The last two columns in the Table 2 construct the upper bond and lower bound of the estimated values.

Simar and Wilson (2000) suggested the following way of constructing the estimated $(1-\alpha)$ percent confidence interval of the *j*-th element β_j of the vector β:

$$\mathrm{Prob}\left(Lower_{\alpha,j} \le \beta_j \le Upper_{\alpha,j}\right) = 1-\alpha,$$

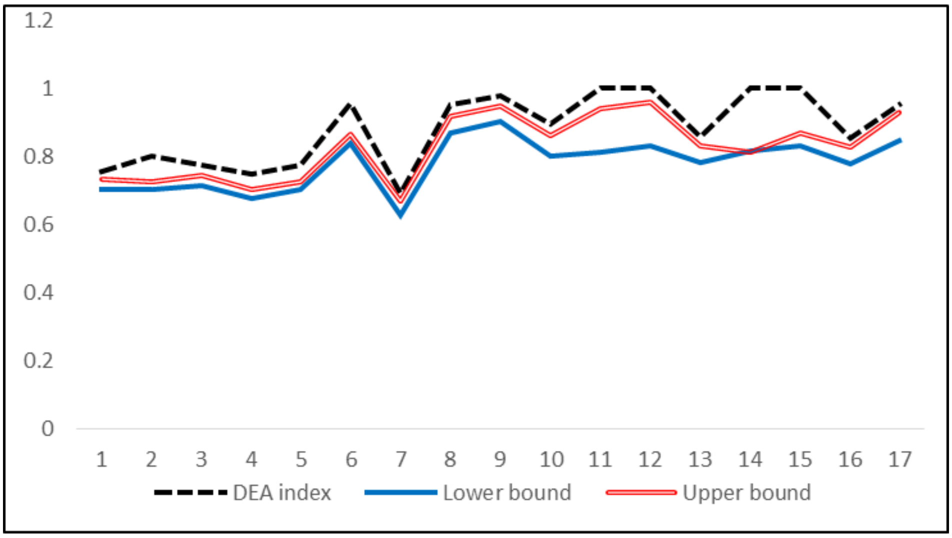
where a is some small value denoting the probability of committing type 1 error (we used the a level of 0.05 in our study) . $Lower_{\alpha,j}$ and $Upper_{\alpha,j}$ are calculated using the empirical intervals obtained from bootstrapped results. Thus,

$$\mathrm{Prob}(-\hat{b}_\alpha \le \hat{\hat{\beta}}_j{}^* - \hat{\hat{\beta}}_j \le -\hat{a}_\alpha) \approx 1-\alpha$$

where $Upper_{\alpha,j} = \hat{\hat{\beta}}_j + \hat{b}_\alpha$ and $Lower_{\alpha,j} = \hat{\hat{\beta}}_j + \hat{a}_\alpha$.

Figure 3 displays the lower and upper confidence interval bounds for the double bootstrapped DEA estimates among the seventeen Korean banks. The confidence intervals displayed suggest some interesting observations. First, the 95% confidence intervals generally display a narrow gap (interval) for the DMUs in the national group (numbers 1-7). Meanwhile, the gap (interval) for the specialized banks (numbers 8-13) is wider, while the gap (interval) for the local banks (14-17) is the widest. Second, the double bootstrapped DEA scores (center of the gap / confidence interval) for the national banks are closer to the original DEA scores than both the local and specialized banks indicating a lower degree bias in the original estimates for the national banks. Despite the larger 95% confidence intervals for local and specialized banks, the confidence intervals do not include the original DEA score estimate. Hence, for every bank, a hypothesis test that the double bootstrap estimate equaled the original DEA score estimate would be rejected at the 5% significance level.

Figure 3: Bias Corrected Double Bootstrapped Index



4.2 Truncated Regression Analysis

The major purpose of this study is to identify the impacts that external environmental variables have on the productivity of seventeen Korean banks. This is done by regressing the efficiency scores derived from the double bootstrap algorithm proposed by Simar and Wilson (2007) on environmental variables. The environmental variables employed in our work are ROA (Return on Assets), Age (number of years in operation since the bank was first established), securities, and type (national banks and local banks are treated as binary variables). Thus, the second stage regression model can be expressed as follows:

$$d_i ** = \hat{\hat{\beta}} z_i + \varepsilon_i$$

Or, equivalently:

$$d_i ** = b_0 + b_1(ROA)_i + b_2(Age)_i + b_3(Security)_i + b_4(TypeNational)_i + b_5(TypeLocal)_i + e_i$$

Figure 4: Truncated Bootstrapped Regression Output

	Estimate	Std. Error	t-value	Pr (>|t|)
Constant	1.0471e+00	7.2855e-02	14.3723	2.2e-16 ***
ROA	-1.5783e-01	9.4841e-02	-1.6642	0.09607 *
Age	-7.2862e-04	1.0190e-03	-0.7150	0.47460
Securities	6.4225e-07	1.2259e-07	5.2390	1.615e-07 ***
Type National	2.7127e-01	6.1948e-02	4.3790	1.192e-05 ***
Type Local	1.4422e-01	5.9591e-02	2.4202	0.01551 **
Sigma	6.9622e-02	1.3196e-02	5.2761	1.320e-07 ***

***: 0.01 significance level, **: 0.05 significance level, *: 0.1 significance level

From Figure 4 it can be observed that securities and bank type were significant variables; securities at the level of 0.01, type National at 0.01, and type Local at 0.05. This implies that the securities of each bank and bank type are likely important determinants of efficiency scores for each bank (DMU). However, the variables ROA and age were either weakly significant or insignificant. Thus, the ROA and age variables are not important environmental factors in determining the operational efficiency of Korean banks.

A more detailed discussion on each variable follows. First, the estimated coefficient on ROA was negative and barely significant at the level of 0.1. In the Korean banking sector history section of this paper, there was a discussion on aggressive and high-risk bank lending leading up to the financial crisis being associated with low measures of profitability, including return on assets (ROA). Thus, excessively large loan portfolios of Korean banks which generate large revenues (our measure of output in the DEA analysis) have traditionally resulted in lower measures of returns (e.g., ROA) for Korean banks. Hence, the negative sign on ROA may be indicative of the inverse relationship between profitability measures (like ROA) and efficiency measures based on revenue per unit of deposits, employees, or capital.

The second variable, age, has a negative coefficient but is insignificant. Meanwhile, the estimated coefficient on the third variable, securities, is highly significant. The securities variable largely represents non-loan assets on the balance sheet of banks which is generally highly correlated with the size of bank. Hence, the positive coefficient on securities likely represents the increased efficiencies of larger banks due to economies of scale.

Next, the estimated coefficients on type-national and type-local were positive and highly significant. This implies that area coverage and target customers might be critical factors in determining Korean bank efficiency. This is not surprising given that specialized banks "were established to provide funds to particular sectors whose supply of funds through commercial banks was insufficient due to limited availability or low profitability." (Bank of Korea, 2008) Thus, the positive coefficient on type-national and type-local likely indicates their greater efficiency compared to specialized banks due to specialized banks focus on targeted industries which have been traditionally neglected by national and local banks because they are less financially appealing loan recipients. Currently Korea has seven national banks, six regional or local banks, and five specialized banks.

5. Managerial Insights and Conclusion

We have examined the efficiency level of 17 Korean commercial banks using the DEA methodology and also identified the components that influence bank efficiency in a second stage truncated regression analysis. Three key managerial insights can be derived from the results in our study.

First, this is the first study to employ a two-stage DEA bootstrap procedure based on the work of Simar and Wilson (2007) to increase the efficiency estimates of the determinants of Korean bank efficiency. Hence, this work builds on prior two-stage methods utilized to analyze the determinants of efficiency in the Korean banking sector – in particular, the work of Hao, Hunter, and Yang (2001).

In the second stage of the DEA bootstrapping process, we conducted a truncated regression analysis to determine the impact of environmental variables on bank efficiency. Among others, we singled out the variables return on assets (ROA), age, securities, and bank type (national, local, or specialized). The results revealed that securities, bank type, and ROA were significant.

A second key insight of this paper relates to the sign of the coefficient on ROA in the regression for the second stage analysis. In that regression, Korean bank efficiency was the dependent variable. Following popular convention in DEA banking sector papers, efficiency (the relationship of outputs to inputs) was measured using outputs focused on revenue generation – specifically, interest and non-interest revenue.

While one might expect a positive relationship between ROA and bank efficiency, the negative relationship is not surprising given the discussion in the Korean banking sector history portion of this paper: Leading up to the 1997 Korean financial crisis, aggressive and high-risk bank lending was reflected in numerous weak measures of profitability of Korean banks. While banks were effective at making a great number of revenue increasing loans throughout the post-World War II period leading all the way up to the financial crisis, the impact of those loans on Korean banks income statements was dubious, with across the board profitability measures at extremely low levels by international standards by the eve of the financial crisis.

While the efforts of the Korean government to expand the Korean economy in the decades leading up the financial crisis by strongly promoting loans to Korea Chaebol and other firms appear to have been successful at expanding loans and potentially increasing economic growth, these accomplishments came at the expense of bank profitability. Specifically, the negative coefficient on ROA shows the inverse relationship between loan revenue and our measure of bank profitability (ROA).

In the years between the end of World War II and the 1997 financial crisis, Korea rapidly converged on the levels of GDP per capita seen throughout the economically developed world. Korea is now one of the wealthier countries in the world with GDP levels just below that of the U.K., France, Japan, and Italy. However, Korea's rate of convergence on the United States has greatly slowed since the 1997 financial crisis - in 1996 Korea's per capita GDP in U.S. $'s was just below ½ of the United States, while in 2017 it remains at just below ½ of the United States. (https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=KR-US)

Additionally, a 2016 McKinsey & Company research report revealed that Korean banks still have very low levels of profitability compared to much of the rest of the world – with returns on equity that are the lowest by far among the 14 Asian countries included in the regional report. (HV, 2016, Exhibit A)

The results of this paper, specifically the negative coefficient on ROA in the loan revenue regression, reveal the continuing tension between bank profitability and bank revenue. The Korean government may still be influencing Korean bank lending practices to this day. Meanwhile, the slowing rate of convergence of Korean GDP to that of the United States suggests that the optimal strategy for growth may change depending on where one is on the development path. That is, once a country is on the cusp of GDP levels seen in the most economically advanced countries, a change in banking policies may be called for to sustain convergence on the most advanced economies.

As a developed country, it may be time for a reassessment of the influence of the Korean government on Korean bank lending practices with a close eye to the optimality of such a strategy once a country has significantly narrowed its GDP gap relative to the rest of the economically developed world.

A third key insight in the paper relates to the implied coefficient on specialized banks in the second stage regression. Since both the national and regional/local bank binary variables had positive coefficients, the implication is that specialized banks had lower levels of efficiency compared to national and regional/local banks. The Korean government originally regulated banks to serve different target customers by diving them into three categories - national, regional/local, and specialized. In one sense, this is an encouraging policy since different group of customers receive better customized services from the specialized bank group. But the specialized bank category was specifically developed to serve sectors of the economy that were receiving insufficient funds according to government officials. The Korean government has pointed out that one reason for the lack of funds was the reduced profitability of investments (loans) in these neglected sectors. (Bank of Korea, 2008) However, as with the Korean government's industrial policy aimed at increasing bank loans across the banking industry (national, regional/local and specialized banks), the industrial policy of increasing bank loans specifically to neglected sectors may be a policy worth assessing now that Korea's rate of convergence on the most developed countries in terms of GDP per capita has slowed.

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Why Don't Municipal Governments Produce Popular Annual Financial Reports? A Preliminary Study with Evidence from Texas

James E. Groff, Ph.D., CMA, Professor, Department of Accounting, University of Texas at San Antonio, James.groff@utsa.edu

Marshall K. Pitman, Ph.D., CPA, CMA, Professor, Department of Accounting, University of Texas at San Antonio, Marshall.pitman@utsa.edu

Wayne Tervo, Ph.D., CPA*, Associate Professor, Bauernfeind College of Business, Murray State University, wtervo@murraystate.edu * Corresponding author

Abstract

Although governments have been encouraged to present their financial information in a form that would be more easily understood and useful to their constituents, governments have not embraced the use of the Popular Annual Financial Report (PAFR). A survey of the financial personnel of 178 Texas municipalities was conducted to determine the reasons why the vast majority of the municipalities do not prepare a PAFR. Responses were received from 61 municipalities of which only 11 prepared a PAFR. Analysis of the reasons for preparing or not preparing the PAFR are presented in detail.

Introduction

In its Concept Statement 1 (GASB, 1987), the Governmental Accounting Standards Board (GASB) recognized three primary constituencies for governmental financial reporting: the citizenry, legislative, and oversight bodies. The GASB, which concerns itself with financial reporting, focuses on financial disclosures which are almost universally included as part of Comprehensive Annual Financial Reports (CAFR). Though not required by the GASB, the CAFR has become the primary tool for reporting governmental financial performance and status to constituencies.

As legal entities established by the legislatures of the various states, governmental bodies are universally required to engage in budgeting exercises which result in legally binding budgets. Budgetary controls become the primary tools of governmental managers and oversight bodies. The one constituency that is least served by the established financial reporting and control models is the citizenry.

The "Blue Book" (NCGA 1968) provided many useful examples providing some uniformity in the presentation of the CAFR although it did not present a complete CAFR. In the 1970s, the CAFR became the national standard for government financial accounting reporting (Gauthier 2001). The CAFR includes financial statements in conformity with generally accepted accounting principles (GAAP) as well as other reports, discussions, and statistical data. As such, these reports may be quite lengthy (often in hundreds of pages). The CAFR has an audience that is highly literate in accounting and finance as well as willing to study the report in detail (Carpenter and Sharp 1992, 35). Montondon and Marsh note, "The Comprehensive Annual Financial Reports (CAFRs) provide too much in-depth information and are often too complicated for many citizens to read and understand;..." (2005, 53). As such, the CAFR may be overwhelming and unreadable (Sharp et al. 1998, 35), and, accordingly, neither understandable nor useful to the largest component of a government entity's stakeholders, it citizens. In fact, a recent article asked "Are Comprehensive Annual Financial Reports Useless?" (Walters, 2013).

Budgets are certainly more scrutinized than are CAFRs by a government's stakeholders, particularly its constituents. Usually there is a formal process involving a series of highly publicized events including public hearings, publications of summaries, and finally a formal vote of approval associated with the budgeting process. The formal adoption of the budget imposes legal obligations on the governmental managers and the budgets are widely distributed and, usually, easily accessed on the entities' websites (Groff and Pitman 2004, 22). However, budgets are also highly detailed, generally follow a formal pre-established format and involve significant technical language that makes understanding difficult. So, like CAFRs, budgets are difficult to interpret for the typical citizen of a governmental unity.

More Citizen Friendly Financial Reporting

Because these two major mechanisms for communication of financial information to constituencies are both difficult for citizens to read and comprehend, there has been a movement to encourage what has been called "citizen-centric" financial reporting. Citizen-centric financial reporting can be described as reports prepared to disclose financial information to a population that lacks sophisticated accounting and financial understanding in a manner that is easily accessible and readily understandable. Characteristics include a lack of formal structure and technical jargon with the presentation more likely to be in pictures or graphs than in numerical tables or statements. The specific focus of these reports is on how budgets or financial performance impacts individual citizens and constituent groups. A wide variety of reports may fall into this category including popular annual financial reports (PAFR), budget-in brief, state-of-the-government reports, and budgetary summaries among others (see Yusuf and Jordan, 2015).

Two organizations that have been particularly strong supporters of citizen-centric reports are the Association of Government Accountants (AGA) and the Government Finance Officers Association (GFOA), both of which sponsor awards for quality citizen-centric financial reporting.

Since 1945 the GFOA has encouraged the preparation of high quality financial reports for governments in the United States through its Certificate of Achievement for Excellence in Financial Reporting Program[1]. This program evaluates the quality of government financial reports that are prepared in the CAFR format. In 1991, the GFOA began encouraging governments to supplement their CAFRs with "popular" reports by establishing its Popular Annual Financial Reporting Awards Program[2] for preparing top-quality PAFRs (GFOA 2008). These PAFRs are designed to be useful to constituents by providing less detail and more of an overview of the government's financial activities and condition. The movement toward developing more user friendly financial reporting to citizens was given further impetus by the 1992 GASB research report supporting PAFRs for citizens. (see Carpenter and Sharp 1992). More recently, in 2006, the AGA has established its Citizen-Centric Initiative to encourage governments to "improve transparency and accountability" (AGA, 2015).

However, even with such emphasis on citizen-centric reporting, relatively few governmental units actually prepare such reports. An indication of how few governments actually produce these statements is given by the relative numbers of governments participating in the GFOA'S CAFR and PAFR reporting competitions. In the fiscal year 2006 3,569 U.S. governments received the GFOA's CAFR achievement award; while only 156 governments received the

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[1]For Canadian governments there is the Canadian Award for Financial Reporting Awards Program by the GFOA.

[2]This award program is available for governments in the United States and Canada.

GFOA's PAFR achievement award. That is only 4.4% of the governments that earned the GFOA's award for their CAFRs. As indicated in Table 1, for fiscal year 2013, 4,110 U.S. governments received the GFOA's achievement award for their CAFRs while 294 governments were awarded GFOA's achievement award for their PAFRs. While that is more than an 88% increase in the number of PAFR achievement awards, it still represents only 7.2% of the governments whose CAFRs received awards.

Table 1. Number of CAFR and PAFR Awards by Type of Government for Fiscal Year 2013

	CAFR		PAFR	
Type of Government	**Number**	**%**	**Number**	**%**
Municipalities	1,997	48.6	135	45.9
Counties	514	12.5	65	22.1
States	45	1.1	5	1.7
School Districts	542	13.2	19	6.5
Other	1,012	24.6	70	23.8
Total	4,110	100.0	294	100.0

Source: www.gfoa.org

This reinforces the observation that there seems to be little voluntary reporting, at least as measured by participation in the GFOA's PAFR program, in citizen-centric reporting (Harris, McKenzie and Renfro, 2008). This certainly raises the question one recent article asked "It isn't hard so why aren't more jurisdictions doing it?" (Funkhouser, 2013).

Since citizen-centric reports of any kind are not mandatory, but budgetary and general purpose financial statements such as CAFRs are, government administrators simply believe that citizen-centric reports are not useful to the citizenry. This certainly would be true if citizens do not use financial data for decision making. In a recent laboratory study, Yusuf and Jordan (2012) found evidence that statements that are straight forward and understandable by the average person would be useful to citizens. In a study of election data from Spanish cities, Brusca and Montesinos (2006) found that citizens use financial performance data in making voting decisions. A survey conducted by Yusuf and Jordan (2013) indicates that public administrators believe there is value to providing citizens with financial information in formats that are different from the mandated reports. However, in their survey they included a wide variety of possible reports that focused on budgetary information or financial performance of individual project feedback. The question remains, why do public entities not produce systematic, citizen-centric reports of government financial performance for their citizens?

Popular Annual Financial Reports

While the CAFR has been the standard mechanism for public entity financial reporting for most of the last fifty years, the problems citizens have with using it as a tool for decision making have been well documented. To overcome the CAFR's lack of understandability and usefulness by citizens, some entities began presenting supplemental financial reports in a more user friendly and readable form called Reports to Citizens (RTC) or Popular Annual Financial Reports (PAFR). As previously stated, in 1991 the GFOA began encouraging governments to supplement their CAFRs with "popular" reports by establishing its Popular Annual Financial Reporting Awards Program for preparing top-quality PAFRs (GFOA 2008). These PAFRs are designed to be useful to constituents by providing less detail and more of an overview, of the government's financial activities and condition. The movement toward developing more user friendly financial reporting to citizens was given further impetus by the 1992 GASB research report supporting PAFRs for citizens (see Carpenter and Sharp 1992).

This paper focuses on the question of why municipal governments (in particular those in Texas) do or do not prepare and distribute PAFRs to their citizens. The focus of this research is on the PAFR because of its long established and widely accepted status as a form of citizen-centric financial reporting and because of its specific focus on the results of financial reporting of the entire government. The PAFR can be thought of as a reformulation of the CAFR to address the well-known issues with the CAFR. While other forms of citizen-centric reports may address the budget or specific aspects of the government performance, only the PAFR attempts to present a comprehensive view of the status and performance of the public entity to its citizens.

According to the Bureau of the Census (2013), there are 38,910 general-purpose and 51,146 special-purpose government entities. In total there are more than ninety thousand public bodies operating in hundreds of different jurisdictions under different legal regimes. To attempt to control for the different reporting requirements between governmental types, we have chosen in this preliminary study to focus specifically on municipalities. Municipalities are general purpose governments, they all have the same responsibilities to their constituents and they all operate under legal structures imposed on them by the states in which they are incorporated.

Of course, there are fifty different state governments that impose their own legal requirements on the municipalities within their borders. Therefore, we chose to focus only on Texas municipalities. Of the municipalities that were included in Table 1, Texas accounted for approximately 10% of the CAFRs and approximately 12% of PAFRs. Accordingly, it was felt that Texas would be representative of the municipalities participating in the GFOA's achievement programs.

METHODOLOGY AND RESULTS

The purpose of the PAFR is to provide financial data in a form that is not confusing or discouraging to those unfamiliar with accounting and financial reporting for a government or municipality. Our research attempts to ascertain the perception of the preparers of these types of governmental reports, whether they believe the reports provide value to the municipality, how long they have been preparing, etc. We believe this information will be of value to preparers, users and legislative bodies in the continued attempts to make governmental financial data more usable and understandable. The subjects (financial administrators) were obtained from the Texas GFOA's website or the individual municipality's websites. E-mail addresses were ascertained and a link to the surveymonkey.com research instrument was sent to each identified person. The entire research instrument is included in the Appendix.

The instrument was sent to 178 individuals, with 61 total respondents resulting a 34.3% response rate. If an e-mail was returned as undeliverable, an attempt was made to contract an alternative appropriate financial administrator. The first section of the survey included demographic responses (population, general fund budget and number of accounting employees). Fifty-one of the 61 respondents (84%) were from municipalities between 10,000 and 200,000 people with 50 of the 61 respondents (82%) having general fund revenues between $10 million and $100 million, and 93% of the respondents had an accounting department of less than 25 employees (excluding internal audit). Accordingly, it is felt that the responding municipalities are representative of Texas and the nation. A summary of the responses to the instrument follows.

Table 2. Descriptive Statistics

Total Responses = 61						
Population	**<= 10,000**	**>10,000 but < 50,000**	**>50,000 but <100,000**	**>100,000 but < 200,000**	**>200,000 but < 1,000,000**	**> 1,000,000**
Responses (%)	5 (8.2%)	30 (49.18%)	11 (18.03%)	10 (16.39%)	5 (8.2%)	0 (0%)
General Fund Revenue	**<= $5 mil**	**>$10 mil but < $50 mil**	**>$10 mil but < $50 mil**	**>$50 mil but < $100 mil**	**>$100 mil**	
Responses (%)	0 (0%)	8 (13.1%)	31 (50.82%)	11 (18.03%)	11 (18.03%)	
# of accounting employees (excluding internal audit)	**<=5**	**>5 but <10**	**>10 but <25**	**>25 but < 50**	**>50**	
Responses (%)	28 (45.9%)	19 (31.15%)	10 (16.39%)	4 (6.56%)	0 (0%)	

The instrument then asked, "In addition to preparing the CAFR, do you prepare a PAFR?" Only 11 of the 61 respondents (or 18%) stated that they prepare the PAFR (82% do not prepare the report). This result is higher than the rate of participation of 6.8% nationally and 8.3% for Texas indicating a higher degree of familiarity with the GFOA's PAFR program.

A review/discussion of those who do not prepare the PAFR is presented next, followed by those who do prepare the PAFR.

Those Who Do Not Prepare the PAFR

Most of the respondents stated they did not prepare a PAFR (82% or 50 of the 61 respondents). The following is a discussion of the results of questions asked to this particular group of municipality respondents.

The first question asked why these municipalities have chosen not to prepare the PAFR for their constituencies. Forty-nine of the 50 respondents who stated they did not prepare the PAFR replied to this question. Respondents were asked to select all that apply, so total is larger than 49. The most common responses "does not have adequate personnel resources" (34 total responses, 69%) and "does not have monetary resources" (12, 24%) to prepare and distribute the report. Tied for third were "citizens have no interest" and "does not provide enough information to make it useful to our citizens" (7, 14%). These responses (in Table 3) show that the municipalities are concerned with both resources and the perceived usefulness of the reports to its citizenry. Respondents were then asked to rank the potential reasons they do not prepare the PAFR if more than one reason was given. "Personnel resources" and "monetary resources" and "citizens have no interest" were the top 3 reasons ranked. The full results of this ranking are given in Table 4.

Table 3. Why doesn't your municipality prepare the PAFR?

Statement	Responses (%)
The city does not have the personnel resources to prepare a Popular Report	34 (69.39%)
The city does not have the monetary resources to prepare and distribute a Popular Report	12 (24.49%)
Our citizens have no interest in reviewing a Popular Report	7 (14.29%)
The Popular Report does not provide enough information to make it useful to our citizens	7 (14.29%)
Other Comments	
The information is already provided in the Annual Report, budget documents and website	3 (6.1%)
We are a fast growing community and have had other "growing pains" issues to address.	1 (2.0%)
Restructuring of Finance Department	1 (2.0%)
I am new here and not sure of the reason	1 (2.0%)
Timing of submission and other priorities getting in way.	1 (2.0%)
Not interested in public input	1 (2.0%)

Table 4. Why don't you prepare the PAFR (Ranking)?

Ranking **Reason Stated**	**1** **% (#)**	**2** **% (#)**	**3** **% (#)**	**4** **% (#)**	**N/A** **% (#)**	**Total** **#**	**Score**
The city does not have the personnel resources to prepare a Popular Report	65.52% 19	17.24% 5	0.00% 0	3.45% 1	13.79% 4	29	4.68
Our citizens have no interest in reviewing a Popular Report	15.00% 3	30.00% 6	10.00% 2	0.00% 0	45.00% 9	20	4.09
The city does not have the monetary resources to prepare and distribute a Popular Report	14.29% 3	33.33% 7	9.52% 2	0.00% 0	42.86% 9	21	4.08
The Popular Report does not provide enough information to make it useful to our citizens	5.88% 1	11.76% 1	11.76% 2	11.76% 2	58.82% 10	17	3.29
Other	15.79% 3	15.79% 3	0.00% 0	5.26% 1	63.16% 12	19	4.14

After answering why they did not prepare the PAFR, respondents were asked if they were considering doing so in the future and why. Forty-eight responded and 20 (or 42%) stated they were considering doing so in the future while 28 (or 58%) stated they did not plan on doing so. These results do not bode well for the continued growth of Popular Reporting. Of the 20 respondents stating they were considering preparing a PAFR in the future, 19 answered the question "why they were considering doing so". The most common response was the PAFR is easier for citizens to understand than the CAFR (with 17 responses, or 89%), followed by we want to participate in the GFOA's Popular Report Award program (8, 42%) and, the PAFR distinguishes our city from other comparable cities that do not prepare one (7, 37%). The respondents then ranked the reasons they were considering preparing the PAFR, if they listed more than one reason in the prior question. Results were similar as shown in Tables 5 and 6.

Table 5. Why are you considering preparing a PAFR?

Statement	Responses (%)
The Popular Report is easier for the citizens to understand than the CAFR	17 (89.47%)
We want to participate in the GFOA's Popular Report Award program	8 (42.11%)
The Popular Report distinguishes our city from other comparable cities that do not prepare one	7 (36.84%)
Once the CAFR is prepared, there is little or no cost to prepare the Popular Report	2 (10.53%)

Table 6. Why are you considering preparing the PAFR (Ranking)?

Ranking Reason Stated	1 % #	2 % #	3 % #	4 % #	5 % #	N/A % #	Total #	Score
The Popular Report is easier for the citizens to understand than the CAFR	57.14% 8	21.43% 3	0.00% 0	0.00% 0	7.14% 1	14.29% 2	14	4.42
We want to participate in the GFOA's Popular Report Award program	25.00% 3	16.67% 2	25.00% 3	0.00% 0	0.00% 0	33.33% 4	12	4.00
The Popular Report distinguishes our city from other comparable cities that do not prepare one	8.33% 1	41.67% 5	16.67% 2	0.00% 0	0.00% 0	33.33% 4	12	3.88
Once the CAFR is prepared, there is little or no cost to prepare the Popular Report	11.11% 1	0.00% 0	11.11% 1	11.11% 1	0.00% 0	66.67% 6	9	3.33
Other	0.00% 0	0.00% 0	0.00% 0	12.50% 1	0.00% 0	87.50% 7	8	2.00

The next question asked how those who were considering preparing the PAFR in the future would distribute it to their citizens. The most common response was present on the City's website (19 responses, or 95%) followed by citizens could pick up copy at City Offices (9, 45%), and send a paper copy to each resident either separately or in other communications (2, 10%). Table 7 provides all responses to this item.

Table 7. How would you distribute your PAFR?

Statement	Responses (%)
Present it on the City's website	19 (95%)
Citizens could pick up paper copy at City Offices	9 (45%)
Send a paper copy to each resident either separately or in other communications	2 (10%)
Printed copy included in a special edition of the local paper	1 (5%)
Email to citizens	1 (5%)
Use for Economic Development promotions	1 (5%)

The next section of the instrument asked respondents (those not preparing the PAFR) to rate their agreement/disagreement with fifteen statements regarding PAFRs. These statements were asked in an attempt to ascertain a better understanding of why they did not (and later in the manuscript, why they did) municipalities participate in the PAFR process. The statements were broken into three main topics: 1) Preparation of the PAFR, 2) benefits associated, and; 3) PAFR award process. Some broad conclusions attained were: It was found that of those that do not prepare a PAFR, 30% reviewed other municipalities PAFRs on-line, 24% reviewed award winning PAFRs on-line, 0% agreed that their constituents asked for the PAFR, 63% were neutral on if more conformity should be required in the report, and; only 15% agree the reports should be required. This low percentage could be due to the finding that 0% agreed with the statement that their constituents asked for the PAFR. Responses were also attained as to the benefits of Popular Reporting: 57% believe that PAFRs add value to regular financial statements; 43% believe they increase awareness; and 24% believe they increase usage. No respondents believe that PAFRs provide a cost savings to the municipality and, not surprisingly, only 24% believe the benefits of the reporting are worth the costs. Lastly, 50% of the respondents know of someone who has won a GFOA award while 10% have actually been judges in the process. The full results of the responses to these items are listed in Table 8.

Table 8. Non-Preparers' perceptions of PAFRs

	Strongly Agree % #	Agree % #	Neutral % #	Disagree % #	Strongly Disagree % #	Total	Weighted Average
You review other municipalities Popular Reports posted on-line	2.17% 1	28.26% 13	23.91% 11	28.26% 13	17.39% 8	46	3.30
You review award winning Popular Reports on-line	0.00% 0	23.91% 11	23.91% 11	32.61% 15	19.57% 9	46	3.48
You have been a reviewer/judge for Popular Report awards?	0.00% 0	0.00% 0	13.04% 6	41.30% 19	45.65% 21	46	4.33
Your constituents ask for the Popular Report?	0.00% 0	0.00% 0	17.39% 8	36.96% 17	45.65% 21	46	4.28

Table 8. Non-Preparers' perceptions of PAFRs

There should be more conformity required in the Popular Report?	2.17% 1	13.04% 6	63.04% 29	15.22% 7	6.52% 3	46	3.11
Popular Reports add value to the regular financial statements?	6.52% 3	50.00% 23	32.61% 15	4.35% 2	6.52% 3	46	2.54
Municipalities should be required to make Popular Reports available to constituents?	0.00% 0	8.70% 4	13.04% 6	36.96% 17	41.30% 19	46	4.11
Your state "encourages" these Popular Reports?	0.00% 0	15.22% 7	56.52% 26	19.57% 9	8.70% 4	46	3.22
Popular Report increases awareness	6.82% 3	36.36% 16	34.09% 15	18.18% 8	4.55% 2	44	2.77
Popular Report increases usage	2.17% 1	21.74% 10	47.83% 22	21.74% 10	6.52% 3	46	3.09
Popular Report allows for application of analytical tools	2.17% 1	23.91% 11	52.17% 24	19.57% 9	2.17% 1	46	2.96
Popular Report helps avoid disclosure redundancy	0.00% 0	6.52% 3	56.52% 26	26.09% 12	10.87% 5	46	3.41
Popular Report provides a cost savings to the municipality	0.00% 0	0.00% 0	32.61% 15	47.83% 22	19.57% 9	46	3.87
I believe benefits of Popular Report outweigh the costs.	0.00% 0	23.91% 11	47.83% 22	17.39% 8	10.87% 5	46	3.15
I have (or I know someone who has) won a GFOA award.	30.43% 14	19.57% 9	21.74% 10	19.57% 9	8.70% 4	46	2.57

Those Who Prepare the PAFR

The results of the municipalities who prepare a PAFR disclosed the following information. When asked how long they had prepared the PAFR, 73% (of the 11 responses) stated they had prepared the statement for less than five years, with 27% having prepared for between five and ten years. No respondent had prepared for more than 10 years. This result is surprising given the fact that the GFOA has been encouraging them since the early 1990's. The respondents were then asked how they distribute (Table 9) and why they prepare (Table 10) the PAFR. The most popular answers were present on City's website (100%) and easier to understand than the CAFR (91%). Interestingly, 7 respondents (64%) wanted to participate in the GFOA's Popular Report Award program. This percentage could be due to the perception that the GFOA award is important to the municipality. Full results are presented in Tables 9 and 10 (respondents were asked to list all reasons, so total is greater than 11): Respondents were then asked to rank the potential reasons they prepare the PAFR if more than one reason was given. "Easier for Citizens to understand" and "distinguishes our city from comparable cities that do not prepare one" and "there is little or no cost to prepare" were the top 3 reasons ranked. The full results of this ranking are given in Table 11.

Table 9. How do you distribute the PAFR?

Statement	Responses (%)
Present it on the City's website	11 (100%)
Citizens can pick up paper copy at City Offices	5 (45.5%)
Hard copies are available in the Library	1 (9%)
There is a link in City online newsletter	1 (9%)

Table 10. Why do you prepare the PAFR?

Statement	Responses (%)
The Popular Report is easier for the citizens to understand than the CAFR	10 (90.91%)
We want to participate in the GFOA's Popular Report Award program	7 (63.64%)
The Popular Report distinguishes our city from other comparable cities that do not prepare one	5 (45.45%)
Once the CAFR is prepared, there is little or no cost to prepare the Popular Report	4 (36.36%)
OTHER: The PAFR provides additional financial transparency for the city.	1 (9.1%)
OTHER: Our Mayor loves this report	1 (9.1%)

Table 11. Why do you prepare the PAFR (Ranking)?

Ranking Reason Stated	1 % #	2 % #	3 % #	4 % #	5 % #	N/A % #	Total #	Score #
The Popular Report is easier for the citizens to understand than the CAFR	66.67% 6	0.00% 0	0.00% 0	11.11% 1	0.00% 0	22.22% 2	9	4.57
Once the CAFR is prepared, there is little or no cost to prepare the Popular Report	11.11% 1	11.11% 1	22.22% 2	0.00% 0	0.00% 0	55.56% 5	9	3.75
The Popular Report distinguishes our city from other comparable cities that do not prepare one	12.50% 1	50.00% 4	0.00% 0	0.00% 0	0.00% 0	37.50% 3	8	4.20
We want to participate in the GFOA's Popular Report Award program	0.00% 0	25.00% 2	37.50% 3	0.00% 0	0.00% 0	25.00% 2	8	3.17
OTHER: Our Mayor loves this report	0.00% 0	14.29% 1	0.00% 0	0.00% 0	0.00% 0	87.50% 7	8	4.00

Table 11. Why do you prepare the PAFR (Ranking)?

OTHER: The PAFR provides additional financial transparency for the city.	0.00% 0	0.00% 0	0.00% 0	0.00% 0	14.29 1	87.50% 7	8	1.00

The next section of the instrument asked respondents (PAFR preparers) to rate their agreement/disagreement with fifteen statements regarding PAFRs. These statements were asked in an attempt to ascertain a better understanding of why municipalities participate in the Popular Reporting process. As done previously in the manuscript, the statements were broken into three main topics: 1) Preparation of the PAFR, 2) benefits associated, and; 3) PAFR award process. Some broad conclusions attained in regards to preparation were: It was found that of those that prepare a PAFR, 82% compared their reports to others posted on-line (or award winners); 74% referenced best practices website in an attempt to make changes or improve the process; 0% agreed that their constituents asked for the PAFR; 60% were neutral on if more conformity should be required in the report, and; only 18% agree the reports should be required. This low percentage could be due to the finding that 0% agreed with the statement that their constituents asked for the PAFR (though 64% were neutral on the statement). Responses were also attained as to the benefits of the PAFR: 64% believe that PAFRs add value to regular financial statements; 82% believe they increase awareness; and 36% believe they increase usage. No respondents believe that PAFRs provide a cost savings to the municipality but 64% believe the benefits of the reporting have been worth the costs. Lastly, 100% of the respondents know of someone who has won a GFOA award while 10% have actually been judges in the process. The full results of the PAFR preparers' responses to the individual statements are listed in Table 12.

Table 12. Preparers' perceptions of PAFRs

	Strongly Agree % #	Agree % #	Neutral % #	Disagree % #	Strongly Disagree % #	Total	Weighted Average
You compare your Popular Report to others posted on-line or award winners?	18.18% 2	63.64% 7	18.18% 2	0.00% 0	0.00% 0	11	2.00
You have been a reviewer/judge for Popular Report awards?	10.00% 1	0.00% 0	20.00% 2	20.00% 2	50.00% 5	10	4.00
You reference the best practices Popular Report website to make potential changes or improvements?	18.18% 2	54.55% 6	9.09% 1	18.18% 2	0.00% 0	11	2.27
Your constituents ask for the Popular Report?	0.00% 0	0.00% 0	63.64% 7	27.27% 3	9.09% 1	11	3.45
There should be	10.00%	0.00%	60.00%	20.00%	10.00%		3.20

Table 12. Preparers' perceptions of PAFRs

more conformity required in the report?	1	0	6	2	1	10	
Popular Reports add value to the regular financial statements?	36.36% 4	27.27% 3	18.18% 2	9.09% 1	9.09% 1	11	2.27
Municipalities should be required to make Popular Reports available to constituents?	0.00% 0	18.18% 2	36.36% 4	27.27% 3	18.18% 2	11	3.45
Your state "encourages" these Popular Reports?	0.00% 0	18.18% 2	54.55% 6	9.09% 1	18.18% 2	11	3.27
Popular Report increases awareness	27.27% 3	54.55% 6	18.18% 2	0.00% 0	0.00% 0	11	1.91
Popular Report increases usage	9.09% 1	27.27% 3	54.55% 6	9.09% 1	0.00% 0	11	2.64
Popular Report allows for application of analytical tools	0.00% 0	27.27% 3	45.45% 5	9.09% 1	18.18% 2	11	3.18
Popular Report helps avoid disclosure redundancy	9.09% 1	9.09% 1	45.45% 5	18.18% 2	18.18% 2	11	3.27
Popular Report provides a cost savings to the municipality	0.00% 0	0.00% 0	27.27% 3	54.55% 6	18.18% 2	11	3.91
I believe that the benefits of Popular Reports have been worth the costs?	36.36% 4	27.27% 3	27.27% 3	9.09% 1	0.00% 0	11	2.09
I have (or I know someone who has) won a GFOA award?	54.55% 6	45.45% 5	0.00% 0	0.00% 0	0.00% 0	11	1.45

Respondents were then asked who their audience and objective (and other comments) for popular reporting. See Table 13 for responses. Lastly, all respondents were availed the opportunity to provide any comments they wished to provide about PAFRs. A summary of the responses is given in Table 14.

Table 13. Audience/Objectives of popular reporting?

Statement
To provide an easy to read, condensed version of the City's financial position while worded and displayed in such a way a non-financial person can better understand and comprehend the message. This assists us in our continued commitment to our citizens and the residents we serve in ensuring we are transparent and accountable for the receipt and use of their public funds.
To provide fiscal information about our city in a creative way
Citizens, to increase awareness of our city's financial position (numerous times)
Our council and city staff really appreciate the condensed "cliff's notes" version of our financial statements each year. Very positive comments and we plan to continue even if we did not participate in the GFOA Award Program.
Providing the PAFR online has helped us to win the financial transparency award from the state of Texas

Table 14. Additional PAFR Comments

Statement
I think the popular report is a great idea, but it should not be required. Municipalities may have other ways to communicate financial and other information to the public. And, smaller entities may not have the staff or means to put together an annual financial program. I think the GFOA program is a great program, but should remain optional.
I think the PAFR is easier to read for citizens and I like the format of those I have seen. My goal is to prepare the PAFR for the citizens and the following year prepare for the submission to GFOA. It would be helpful to have a template in which information could be added for those of us that do not have staff to set up and prepare. This template could be a fee service.
Last year we were on a path to public a PAFR. The timing ended up being about the time we were presenting budgets. There were so many reconciling differences between how costs were reported for budgeting vs PAFR that we felt it would only create confusion to issue the PAFR. We ultimately dropped it. I feel a well presented budget is the best financial communication tool for most citizens.
Do see value of popular reports. CAFR is best as hard to simplify a complex organization!
While the CAFR and PAFR are meaningful documents to readers of financial statements, they are not particularly meaningful to the general public. Most Cities' budget and budget reporting are much more meaningful and common sense documents to citizens. Combine that with the fact that the CAFR and PAFR appear to the public to report information differently that budgeting by fund. We know that they are reconcilable, but you only get so much time to provide meaningful information to the public.
Our council and city staff really appreciate the condensed "cliff's notes" version of our financial statements each year. Very positive comments and we plan to continue even if we did not participate in the GFOA Award Program.

CONCLUSIONS AND LIMITATIONS

The purpose of the PAFR is to provide financial data in a form that is not confusing or discouraging to those unfamiliar with accounting and financial reporting for a government or municipality. Our research attempts to ascertain the perception of the preparers of these types of governmental reports. We believe this information will be of value to preparers, users and legislative bodies in the continued attempts to make governmental financial data more usable and understandable.

We surveyed financial administrators of municipalities in Texas to ascertain their perceptions about PAFRs and find that few complete the PAFR (18%), and if they do, they have not been preparing the report for long (73% have prepared for 5 years or less). The main reasons they prepare is because they believe it is easier for citizens to understand compared to the CAFR and to participate in the GFOA's Popular Report Award program (all have either won or know someone who has won the award). Unfortunately, 82% of the municipalities responding choose not to prepare a PAFR. When asked why not, the most common responses were personnel and monetary resources. Also concerning is that only 42% have considered preparing this type of report in the future, even though this group also believes that it is easier for citizens to understand than the CAFR. This is only helpful to constituents if they are interested in such reporting, and our findings show that they are not. Of the 61 total responses, 0% stated that they agree (or strongly agree) that their constituents ask for the PAFR. This finding could help explain the lack of participation in the GFOA "encouraged" reports.

As in most research papers, this paper has some limitations. First, the survey results are from only one state—Texas. As such Texas may not be representative of majority of the states. Second, while the response rate is greater than 30%, the actual number of respondents, 61, is relatively low. Additionally, the number of respondents whose government had been awarded a PAFR achievement award, 11, is extremely low to project to the population. Third, the paper only examines the respondents of municipalities; other forms of governments (e.g., counties, school districts, retirement funds, etc.) may have other reasons for preparing or not preparing a PAFR. As such, a survey should be administered to municipalities in several other states to determine the validity of results reported above. Additional opportunities for research in the future might include administering a similar survey to other forms of governments or a larger pool of municipalities. Lastly, a survey of those leaders who are responsible for oversight/implementation of governmental accounting and reporting procedures could be undertaken to identify the expectation gap between those setting the PAFR procedures and those that are responsible to doing the reporting. It appears that all involved agree that the PAFR is a valuable tool for citizens. Unfortunately, for the reasons discussed in this manuscript, the PAFR's perceived value does not mean that it will be prepared by the municipalities.

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APPENDIX

Questionnaire
Municipalities' Popular Reports

PART I.

Questions for classification purposes only:

Population:

- ○ Less than or equal to 10,000
- ○ More than 10,000 but less than 50,000
- ○ More than 50,000 but less than 100,000
- ○ More than 100,000 but less than 200,000
- ○ More than 200,000 but less than 1,000,000
- ○ More than 1,000,000

General Fund Revenue Budget:

- ○ Less than or equal to $5,000,000
- ○ More than $5,000,000 but less than $10,000,000
- ○ More than $10,000,000 but less than $50,000,000
- ○ More than $50,000,000 but less than $100,000,000
- ○ More than $100,000,000

Number of Accounting Employees (excluding internal audit, if applicable):

- ○ Less than or equal to 5
- ○ More than 5 but less than 10
- ○ More than 10 but less than 25
- ○ More than 25 but less than 50
- ○ More than 50

Zip Code _ _ _ _ _

PART II: In addition to preparing the Comprehensive Annual Financial Report (CAFR), do you prepare a Popular Annual Financial Report (PAFR)?

○ No, go to Questions about why not prepare PAFR

○ Yes – then answer the following:

How long have you been preparing a popular report?

- ○ 5 or less years
- ○ More than 5 years but less than 10 years
- ○ More than 10 years but less than 15 years
- ○ More than 15 years

Why do you prepare a Popular Report? (Select all that apply)

- ○ The PAFR is easier for the citizens to understand than the CAFR
- ○ Once the CAFR is prepared, there is little or no cost to prepare the PAFR
- ○ The PAFR distinguishes our city from other comparable cities that do not prepare one
- ○ We want to participate in the GFOA's PAFR Award program
- ○ Other ____

If selected more than one, please rank:

1.________________________
2.________________________
3.________________________
4.________________________

How do you distribute your PAFR? (Select all that apply)

- ○ Send a paper copy to each resident either separately or in other communications.
- ○ Citizens can pick up paper copy at City Hall
- ○ Present it on the City's website
- ○ Other ____

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	NA
You compare your popular report to others posted on-line or award winners?	1	2	3	4	5	NA
You have been a reviewer/judge for PAFR awards?	1	2	3	4	5	NA
You reference the best practices PAFR website to make potential changes or improvements?	1	2	3	4	5	NA
Your constituents ask for the Popular Report?	1	2	3	4	5	NA
There should be more conformity required in the report?	1	2	3	4	5	NA
Popular Reports add value to the regular financial statements?	1	2	3	4	5	NA
Municipalities should be required to make PAFR available to constituents?	1	2	3	4	5	NA
Your state "encourages" these reports (PAFR)?	1	2	3	4	5	NA

If yes:

Who is your audience and objective? Type response
Where and how is your report available? Type response

Do you believe (answer on Likert scale):

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	NA
1) PAFR increases awareness	1	2	3	4	5	NA
2) PAFR increases usage	1	2	3	4	5	NA
3) PAFR allows for application of analytical tools	1	2	3	4	5	NA
4) PAFR Helps avoid disclosure Redundancy	1	2	3	4	5	NA
5) PAFR provides a cost savings to the municipality	1	2	3	4	5	NA
6) I believe that the benefits of PAFR have been worth the costs?	1	2	3	4	5	NA
7) I have (or I know someone who has) won a GFOA award?	1	2	3	4	5	NA

Please write any additional comments you wish to provide.

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If you would like a copy of preliminary results, please enter e-mail address:
____

PART II: In addition to preparing the Comprehensive Annual Financial Report (CAFR), do you prepare a Popular Annual Financial Report (PAFR)?

○ No, go to Questions about why not prepare PAFR

Why doesn't your municipality prepare a Popular Report? (Select all that apply)

- ○ The city does not have the monetary resources to prepare and distribute a PAFR
- ○ The city does not have the personnel resources to prepare a PAFR
- ○ Our citizens have no interest in reviewing a PAFR
- ○ The PAFR does not provide enough information to make it useful to our citizens
- ○ Other ____

If selected more than one, please rank:

1. ______________________
2. ______________________
3. ______________________
4. ______________________

Has your municipality considered preparing PAFR?

- ○ Yes
- ○ No

If yes:

Why did you consider preparing a Popular Report? (Select all that apply)

- ○ The PAFR is easier for the citizens to understand than the CAFR
- ○ Once the CAFR is prepared, there is little or no cost to prepare the PAFR
- ○ The PAFR distinguishes our city from other comparable cities that do not prepare one
- ○ We want to participate in the GFOA's PAFR Award program
- ○ Other ____

How would you distribute your PAFR? (Select all that apply)

- ○ Send a paper copy to each resident either separately or in other communications.
- ○ Citizens can pick up paper copy at City Hall
- ○ Present it on the City's website
- ○ Other ____

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	NA
You review other municipalities popular reports posted on-line	1	2	3	4	5	NA
You review award winning PAFR on-line	1	2	3	4	5	NA
You have been a reviewer/judge for PAFR awards?	1	2	3	4	5	NA
Your constituents ask for the Popular Report?	1	2	3	4	5	NA

There should be more conformity required in the report?	1	2	3	4	5	NA
Popular Reports add value to the regular financial statements?	1	2	3	4	5	NA
Municipalities should be required to make PAFR available to constituents?	1	2	3	4	5	NA
Your state "encourages" these reports (PAFR)?	1	2	3	4	5	NA

Do you believe (answer on Likert scale):

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	NA
1) PAFR increases awareness	1	2	3	4	5	NA
2) PAFR increases usage	1	2	3	4	5	NA
3) PAFR allows for application of analytical tools	1	2	3	4	5	NA
4) PAFR Helps avoid disclosure Redundancy	1	2	3	4	5	NA
5) PAFR provides a cost savings to the municipality	1	2	3	4	5	NA
6) I believe that the benefits of PAFR outweigh the costs?	1	2	3	4	5	NA
7) I have (or I know someone who has) on a GFOA award?	1	2	3	4	5	NA

Please write any additional comments you wish to provide.

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If you would like a copy of preliminary results, please enter e-mail address:
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Response to Consultation Paper on Financial Reporting for Heritage in the Public Sector – April 2017, ICGFM

Michael Parry, Chair of the Ad Hoc Committee on International Accounting Standards

Overview

We are supportive of the intent to bring heritage assets within a consistent reporting framework. However, we have significant reservations about the approach adopted as the preliminary view in the Consultation Paper. Our particular concerns are with the following issues:

1. Whether an approach based on financial values can provide useful information on the heritage assets of a country
2. The inclusion within a Governments' Statement of Financial Position heritage assets where there are no legal, cultural or social restrictions on the disposal of such assets
3. The valuation of heritage assets that are subject legal, cultural and/or social restrictions on disposal

These concerns are reflected in our responses to the points for comment in the paper, as listed below.

Text of the Consultation paper	ICGFM response
Specific Matters for Comment—Chapter 1 Do you agree that the IPSASB has captured all of the characteristics of heritage items and the potential consequences for financial reporting in paragraphs 1.7 and 1.8	We agree that matters have been captured, though we do not agree with all of the conclusions in paragraph 1.8, as indicated in further responses
Preliminary View —Chapter 2.1 For the purposes of this CP, the following description reflects the special characteristics of heritage items and distinguishes them from other phenomena for the purposes of financial reporting: Heritage items are items that are intended to be held indefinitely and preserved for the benefit of present and future generations because of their rarity and/or significance in relation, but not limited, to their archaeological, architectural, agricultural, artistic, cultural, environmental, historical, natural, scientific or technological features.	UNESCO has no single all embracing definition of heritage assets, but does provide descriptions of different categories of heritage assets. The IMF GFS 2014 provides a single definition as follows: "*assets that a government intends to preserve indefinitely because they have unique historic, cultural, educational, artistic, or architectural significance*" It is our view that for consistency the IMF definition should be used
Specific Matters for Comment —Chapter 2.2 For the purposes of this CP, natural heritage covers areas and features, but excludes living plants and organisms that occupy or visit those areas and features.	There are situations where plants and organisms meet the criteria for recognition as heritage assets. Example would be the Svalbard Global Seed Vaultand the Sacred Bo-Tree in Sri Lanka. Therefore, we see no justification for this exception
Specific Matters for Comment —Chapter 3 The special characteristics of heritage items do not prevent them from being considered as assets for the purposes of financial reporting.	Yes – but see our comments on the benefits and format of such inclusion

Text of the Consultation paper	ICGFM response
Specific Matters for Comment—Chapter 4.1 (following paragraph 4.17) Do you support initially recognizing heritage assets at a nominal cost of one currency unit where historical cost is zero, such as when an asset was fully depreciated before being categorized as a heritage asset and transferred to the entity, or an entity obtains a natural heritage asset without consideration?	No. There is no valuation base that leads to a nominal valuation. Furthermore, we do not see the benefit of providing a nominal value merely to incorporate an asset in the Statement of Financial Position. Our preferred approach envisages a separate schedule of heritage assets based on their non-financial value to society. This approach would obviate the need for nominal values.
Preliminary view —Chapter 4.1 (following paragraph 4.40) Heritage assets should be recognized in the statement of financial position if they meet the recognition criteria in the Conceptual Framework.	Yes, if they can be assigned a value – see our comments below See Hassan Ouda's paper published in the International Journal of Financial Management 2014: Volume XIV, Number 2, distinguishes between "Unrestricted" and "Restricted" heritage assets. The latter are subject to legal, cultural and/or social restrictions on disposal. Hassan Ouda suggests such assets should be treated as "trust" assets and incorporated in a separate statement of trust assets and liabilities. Many heritage assets of national governments fall into the restricted category. It is useful to provide information on such assets, but their inclusion in the Statement of Financial Position could be positively misleading. A preferred approach is a separate statement of such assets.

Text of the Consultation paper	ICGFM response
Specific Matters for Comment—Chapter 4.2 Are there heritage-related situations (or factors) in which heritage assets should not initially be recognized and/or measured because: It is not possible to assign a relevant and verifiable monetary value; or The cost-benefit constraint applies and the costs of doing so would not justify the benefits? **Preliminary View—Chapter 4.2** In many cases it will be possible to assign a monetary value to heritage assets. Appropriate measurement bases are historical cost, market value and replacement cost.	Heritage assets, as defined, generally do not have active, open and orderly markets. Even where a market exists, for example for a work of art, restrictions on disposal will make such a value inappropriate Conceptual Framework Para 7.27 states that for an orderly market "There are no barriers that prevent the entity from transacting in the market". Clearly restrictions on disposal would be a barrier. By their nature heritage assets are typically irreplaceable, e.g. a work of art may be copied, but cannot be replaced. Therefore, whilst in principle the valuation bases are appropriate, in practice restrictions on disposal and/or irreplaceability make such valuation bases inappropriate for most heritage assets Paragraph 4.24 refers to heritage assets that are to be sold – but the decision to sell heritage assets means that by definition they are no longer heritage assets. This only leaves cost as a valuation base. However, many heritage assets have no cost, or only some items of a collection have a cost, or the acquisition was so long ago as to make the cost meaningless. Our conclusion is therefore that it is only exceptionally that a monetary value can be assigned to a heritage asset
Specific Matters for Comment—Chapter 4.3 *What additional guidance should the IPSASB provide through its Public Sector Measurement Project to enable these measurement bases to be applied to heritage assets? (page 26)*	In our view, a more fundamental discussion is required about the purpose and benefits of including heritage assets in financial reports
Specific Matters for Comment—Chapter 4.2 Are there heritage-related situations (or factors) in which heritage assets should not initially be recognized and/or measured because: (a) It is not possible to assign a relevant and verifiable monetary value; or (b) The cost-benefit constraint applies and the costs of doing so would not justify the benefits?	Our view is that there are such situations, e.g. · Restricted assets as described above · No market for the asset and no or limited direct financial benefits from ownership · The asset is irreplaceable
Specific Matters for Comment—Chapter 4.3 What additional guidance should the IPSASB provide through its Public Sector Measurement Project to enable these measurement bases to be applied to heritage assets?	Empirical evidence is required of the benefits to the users of financial reports of disclosing information in different formats about heritage assets

Text of the Consultation paper	ICGFM response
Preliminary view —Chapter 5 Subsequent measurement of heritage assets: (a) Will need to address changes in heritage asset values that arise from subsequent expenditure, depreciation or amortization, impairment and revaluation. (b) Can be approached in broadly the same way as subsequent measurement for other, non-heritage assets.	In view of our above comments we do not agree with the approach
Specific Matters for Comment—Chapter 5 Are there any types of heritage assets or heritage-related factors that raise special issues for the subsequent measurement of heritage assets?	See above Also, it is necessary to take into account the special status of objects protected by UNESCO.
Preliminary view —Chapter 6 The special characteristics of heritage items, including an intention to preserve them for present and future generations, do not, of themselves, result in a present obligation such that an entity has little or no realistic alternative to avoid an outflow of resources. The entity should not therefore recognize a liability.	We concur with the preliminary view
Specific Matters for Comment —Chapter 7 Information about heritage should be presented in line with existing IPSASB pronouncements.	It is our view that because of the problems of restrictions on disposal and consequent issues concerning valuation, heritage assets cannot in generally be usefully disclosed in financial terms. Instead there should be a separate schedule of heritage assets indicating their value to society rather than their monetary value

Review of "Government Budgeting and Expenditure Management"

Salvatore Schiavo-Campo, Routledge 2017

This is an important book and should be read by all those involved in Public Financial Management (PFM). The author has extensive and senior level practical and academic experience of government and public sector issues in financial management, and this is reflected by the breadth of coverage and the number of practical examples.

The book addresses the whole gamut of PFM from budget through to delivery, and includes key areas of concern such as public finance policy, governance, corruption, procurement and the impact of globalisation. The target audience would appear to be those responsible for, or advising on, fiscal and financial management policy issues. The author would probably agree that this book is not primarily aimed at accountants, and many of the issues regarded as significant by the accounting profession are barely, if at all, mentioned. Nevertheless, accountants involved in PFM will learn much from a study of this book.

The book has two themes. The first is summarised in an amended quote from Montesquieu[3] "It is good for men to be in a situation where although their passions inspire them to do evil [*the rules]* prevent them from doing so" – amended wording in parenthesis. The second theme of the book is to link PFM and the political and governance context in which it operates, articulated through the four pillars of accountability, transparency, participation and the rule of law.

Based on these two core themes, the stated aim of the book is "to combine the conceptual foundations of PFM with the lessons of international experience, and to counter the perennial tendency to push technocratic solutions". This reinforces the focus on policy issues rather than technical processes, as indicated above.

The book is divided over six areas:

- An introduction which deals at a high level with budgeting and links to politics and society
- Part I describes the infrastructure of budgeting, including budget systems
- Part II addresses the so-called upstream stages of the budget process – budget preparation
- Part III moves on to the downstream stages of budget execution, procurement and financing
- Part IV is about public accountability
- Part V addresses a series of special issues.

In each area, the approach is to move from broad policy to specific financial management issues. Thus, for example, the first section commences with a discussion of the nature of government and the role of the budget before moving on to consider policy issues of public finance, and then to specific technical subjects. Throughout the book issues are illustrated by practical examples and real world situations.

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[3] Charles de Secondat, Baron de Montesquieu "The Spirit of the Laws" 1748

The sections on budget preparation are wide ranging and commence with the political role of the budget. Much in this section is important, for example, the discussion of fiscal risk uses a broader definition than the typical approach of equating fiscal risk simply with contingent liabilities, and includes practical guidance on the management of fiscal risk.

The importance of good budgeting as the basis for the downstream stages of budget management is rightly emphasised and there is extensive discussion on how can be achieved. The author reemphasises the importance of "getting the basics right". The analysis of the concept of fiscal space and different budget approaches is important.

However, two caveats: firstly, as the author himself admits, the book is US-centric. Even though examples are drawn from around the world, they are interpreted from a US perspective, and the language is that of the US, e.g. "pork" to describe politician's obtaining budget allocations to satisfy their local electorate. Secondly, despite the initial description of the political role of the budget, the focus is primarily fiscal. There is only limited discussion of the budget not merely reflecting, but influencing, public policy, e.g. on gender issues.

The section on the so-called "downstream" stages of budget execution includes sections on the important issues of procurement – one of the major sources of corruption and losses to governments around the world – and the management of public debt, including a discussion of the role of "Public Private Partnerships" (PPP).

It is in the section on accountability and accounting that accountants will find relatively brief, and often written using terms with which accountants are unfamiliar. For example, general purpose financial reports are referred to simply as the "annual budget report." Again, the text refers International Public Sector Accounting Standards (IPSAS) as "setting standards as appropriate to different basis of accounting", which represents a very narrow view of IPSAS. Furthermore, the text subsequently indicates that annual budget reports should comply with the IMF Government Finance Statistics (GFS) requirements, which in some areas are different to IPSAS requirements and do not lead to audited financial reports. Finally, the book recommends for many countries what is described as "limited accrual accounting", which is what most accountants would call modified accrual, an accounting base not recognised by IPSAS or GFS – though a recommendation with which the reviewer would concur.

Despite, or perhaps because of, the above comments, the accountability section should be read by all government accountants. It provides a policy maker perspective on accounting, and serves to illustrate how unimportant many of the debates between accountants on very technical issues are perceived by those at a policy level. The conclusions on accounting issues are worthy of consideration.

The book contains a discussion of how committees of the legislature can review financial and audit reports and the role of civil society, but this is an area where the author's experience could have provided further valuable insights into how accountability can be made effective through civil society participation.

The sections on procurement, debt management and budget financing all contain valuable descriptions of the issues, illustrations from the real world, and guidance. The advice on PFM reform synthesises much of the author's own experience with the experience of the major multilateral institutions, and is a "must read" for all involved in such reform programmes.

One omission is one that is common amongst policy makers – to see technology as merely a tool, rather than a driver of change. There is no discussion of the role of web based budget and accounting systems eliminating many of the conflicts between centralised and decentralised control, or the potential of block chain solutions to transform financial transaction processing, control and audit.

It is inevitable that a book by one author has a particular perspective, and this book is from the perspective of the fiscal and economic policy maker. This is an important perspective, and as stated at the start, this is a book with a wealth of valuable information, examples and guidance. It should be read by all involved in public financial management, perhaps especially by accountants.

ABOUT IJGFM

The *International Journal on Governmental Financial Management* (IJGFM) is a peer-reviewed and open access journal and aims to provide a forum for practitioners and academics to discuss the many disciplines involved with governmental financial management. These include accounting, auditing, budgeting, performance measurement, debt management, information technology, tax management and treasury management.

We publish articles and comments which will:

- encourage collaboration among professionals, academics and others concerned about public financial management;
- contribute to the advancement of government financial management principles and standards, especially through describing existing good practice;
- identify problems or weaknesses through the critique of currently dominant views on public sector financial management reforms; and
- assist public sector financial managers in identifying their own solutions to common challenges.

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§ Reference to a report. World Commission on Environment and Development (1987) Our Common Future (‘The Brundtland Report’) Oxford, Oxford University Press references to material on the Internet.

§ Dorotinsky, Bill (2008) Public Financial Management Reform: Trends and Lessons, ICGFM DC Forum, June.

§ http://icgfm.blogspot.com (6 September 2008).

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