

**PERCEPTIONS OF BENEFITS AND CHALLENGES OF  
PUBLIC SECTOR ACCOUNTING REFORMS: A CROSS-  
SECTIONAL COMPARISON BETWEEN BRAZILIAN AND  
ENGLISH LOCAL GOVERNMENTS**

by

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## ABSTRACT

Over the last 30 years, the public sector has passed through a wave of reforms worldwide, usually towards the adoption of business-like practices as a way to better manage the public resources. With respect to financial reporting, these reforms have as cornerstones the adoption of accrual-accounting (AA) in place of the traditional cash-basis accounting and the discussions towards the use of a set of international accounting standards (IAS) such as the International Public Sector Accounting Standards (IPSAS) or the International Financial Reporting Standards (IFRS).

Local governments of Brazil and the UK are in different stages of these reforms. While the first are expected to finish these AA and IAS adoption in the next two years, using the IPSAS as guidelines, the last are already using accrual-accounting and IFRS.

Using qualitative and quantitative data collected through questionnaire and interviews, this thesis presents a cross-sectional comparative analysis of the perceptions of Brazilian (*ex-ante*) and English (*ex-post*) local governments in regards challenges and benefits of these reforms.

The research identified that Brazilians and English managers share close perceptions about the benefits of AA. However, in regards to IAS, Brazilian local governments have far better expectations than the English have experienced. The English experience is also presented as a benchmark to drive Brazilian accounting reforms.

**Keywords:** Public sector accounting reforms. Accrual accounting. International accounting standards. Local government.

*This thesis is dedicated to my lovely Daniele  
for all her support and encouragement  
during the most difficult moments.*

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## LIST OF ABBREVIATIONS

AA – Accrual Accounting

ABRASF – *Associação Brasileira de Secretarias de Finanças das Capitais* (Brazilian Association of Capitals' Finance Secretariats)

ASB – Accounting Standards Board

BR GAAP – Brazil Generally Accepted Accounting Practices

CIPFA – The Chartered Institute of Public Finance and Accountancy

GBE – Government Business Enterprise

GEFIN – *Grupo de Gestores das Finanças Estaduais* (Group of Managers of the States' Finances)

EC – European Commission

FEE – *Fédération des Experts Comptables Européens* (Federation of European Accountants)

FRAB – Financial Reporting Advisory Board

IAS – International Accounting Standards

IBGE – *Instituto Brasileiro de Geografia e Estatística* (Brazilian Institute of Geography and Statistics)

IFAC – International Federation of Accountants

IFRS – International Financial Reporting Accounting Standards

IMF – International Monetary Fund

IPSAS – International Public Sector Accounting Standards

IPSASB – International Public Sector Accounting Standards Board

LGA – Local Government Association

MCASP – *Manual de Contabilidade Aplicada ao Setor Público* (Brazilian Public Sector Accounting Manual)

NATO – North Atlantic Treaty Organisation

NHS – National Health Service

NPM – New Public Management

NPFM – New Public Financial Management

OECD – Organization for Economic Co-operation and Development

ONS – Office for National Statistics

PFI – Private Finance Initiative

PSA – Public Sector Accounting

RAB – Resource Accounting and Budgeting

SPSS – Statistical Product and Service Solutions

STN – *Secretaria do Tesouro Nacional* (Brazilian National Treasury Secretariat)

UN – United Nations

UNOPS – United Nations Office for Project Services

UK GAAP – United Kingdom Generally Accepted Accounting Practices

## **CHAPTER I**

### **1. INTRODUCTION**

The importance of good management of the public finances is undeniable to all civilised states. Once governments use resources on behalf of the people they represent, the process of registering and accounting for the use of these resources is an important part of public sector management. To accomplish these goals, governments make use of public sector accounting (PSA), also known as governmental accounting.

The uses of PSA are broad and diverse, varying from country to country according to different traditions and regulations. It can be used to register and control public sector assets, liabilities, revenues and expenses; to plan and control the use of public resources by governments; to show how the decisions of governments' officials reflect on public financial management; to prepare the financial statements used to analyse and compare the finances and management of public sector entities; to generate financial statistics that are used by international funding organizations; and to help organise public sector financial management. To do that, governments have traditionally made use of the cash-basis of accounting, a regime in which the accounting events are registered whenever they affect the cash of the entity (when cash or its equivalent is received or paid).

Over the last thirty years the public sector has gone through a wave of reforms worldwide, usually towards the adoption of business-like practices as a way to better manage public resources. These reforms, usually within the New Public Management (NPM) theme, have introduced changes in public sector accounting practices

supported by the ideas that modernized governmental management needs useful financial information and that business accounting is able to accomplish this need (Christiaens *et al.*, 2010).

In this context, some multilateral institutions, such as the International Federation of Accountants (IFAC) and the International Monetary Fund (IMF), have been presenting the advantages of the 'new' PSA in order to encourage governments to change their accounting frameworks (Kahn and Mayes, 2009; Ball and Pflugrath, 2012). These include: to achieve comparable and consistent financial information across governments; to enhance the process of decision-making; to better manage risks such as the fluctuation in the value of liabilities; to lead towards a better financial performance management of the governments' resources; to link financial resources with service performance; to ascertain the entity's financial position; and to support stakeholders to take a long term view when making financial decisions (IFAC, 2011). To accomplish this, the PSA framework would have to go through changes that would encompass two main factors: i) the adoption of accrual accounting (AA), which is defined as a basis of accounting in which transactions and other events are recognized when they occur and not only when it involves cash flow and; ii) the adoption of international accounting standards (IAS) (Ball and Pflugrath, 2012).

In an international context, the discussions towards PSA reforms have intensified since the sovereign debt crisis starting around 2008 (Ball and Pflugrath, 2012). It created a political and economic context in which, it is argued, governments need to be more transparent regarding public financial management and clearly demonstrate

their financial stability. To do so, the implementation of common accrual-based accounting standards accompanied by high quality financial reporting would be essential, as they would provide a complete and comparable view of the financial position and performance of governments, improving international acceptance and legitimacy (European Commission, 2013).

The acceptance of these reforms by different countries, in central or local levels, has occurred unevenly (Benito *et al.*, 2007). Many countries have adopted the accrual-basis of accounting, but not the IAS. Other countries have adopted both IAS and AA, while some countries still work on a cash-basis combined with their own set of accounting regulation. In some countries it is also possible to identify different levels of governments using different bases of PSA. So, unlike in the private sector, where the entities usually use AA and follow some set of IAS, usually the International Financial Reporting Standards (IFRS), in the public sector neither AA nor IAS are uniformly adopted.

Some studies present disadvantages of the adoption AA by public sector entities. They suggest, for example, that the framework for which it was initially developed, the private sector, is not applicable to the public sector. Therefore, some measures used by companies, such as profit, would be meaningless for governments (Wynne, 2004). In addition, accounting concepts, such as the definition of assets or liabilities, may be significantly different between the public and private sectors. Examples would be military, infrastructure and heritage assets, which are seen by some academics as liabilities because of their characteristics of usually generating a resource outflow to be maintained. Similarly, social insurance programs may be

recognized as a public liability rather than as an accrual expense (Blöndal, 2003). AA demands more resources in terms of accounting staff and skills, and the financial reports prepared on this basis are not always seen to be useful to the everyday management of public sector organisations, which can lead to a perception that the costs outweigh the benefits (Hyndman and Connolly, 2011). Furthermore, the difficulties of accounting for public resources on an accrual-basis may be greater than the cash-basis framework as a result of greater subjectivity in measurement and apportionment. Finally, AA may not add value to decision-making processes, which are made on a political basis (Wynne, 2004).

The process of setting accounting standards for the public sector has often used private sector accounting standards as a benchmark. Therefore, public sector accounting standards may not address particularities of the public sector, such as infrastructure assets and the meaning that should be attributed to results (Brusca and Condor, 2002). Furthermore, the benefits of IAS adoption may not justify the costs of the changes, such as IT systems adjustments, the changes on the workflow processes, the costs of the consultancy services and staff training. Some reasons to justify the use of IAS for the private sector, such as having access to financial markets as sources of funding, are not equally applicable to governments, or at least not to local and regional governments, that in many cases are funded by central governments' transfers. Consequently, instead of being considered an important tool to improve public sector financial management, IAS can be considered as a burden by some governments.

Many studies that support PSA reforms are conducted by international organizations based on the reality of central governments. These studies often do not address regional and local government's particularities, such as the lack of expertise of the technical staff (that may be observed in smaller governments) or the usefulness of the non-financial information in the decision-making process. Other arguments towards the PSA reforms, such as the risk of a sovereign debt crisis or the necessity of governments to be accountable to markets (Ball and Pflugrath, 2012) may also not apply to regional and local governments of countries like Brazil, where local government is not allowed to issue bonds (Brazil, 2001a).

Given the above, it is seen that the claimed benefits of the PSA reforms may not always be experienced in practice. However, even within this scenario, more and more governments, central or local, are adopting or considering adopting AA and also IAS (IFAC, 2013). Brazil is among the countries that are changing their PSA framework from cash to accrual-basis, in central, regional and local levels of governments, and since 2005 the country has been working on a 'Convergence Plan in Brazil towards the use of International Accounting Standards' (IFAC, 2012b). Many actions are still needed in order to make the Brazilian public sector standards compliant with International Public Sector Accounting Standards (IPSAS) (IFAC, 2012b). It is expected that they will be adopted by the whole Federation from 2014 onwards, in the form of a Brazilian Generally Accepted Accounting Practices (BR GAAP) (IFAC, 2012b), and that will use IPSAS as the main benchmark.

Unlike Brazil, the United Kingdom already works with AA and IAS (IFRS). Although AA was introduced for the UK local authorities as early as in the mid-nineteenth



century (Hepworth, 2002), it was only in the early 1990s that it was adopted by central government (Hepworth, 2002; Connolly and Hyndman, 2006). The UK firstly followed a framework of accounting principles and conventions for resource accounting based on United Kingdom Generally Accepted Accounting Practices (UK GAAP), and from 2009 moved to the adoption of IFRS.

The two countries represent different stages of PSA reforms. Brazil can be considered as a country that is on its initial stages (*ex-ante*) while the UK can be considered as a country that has already finished them (*ex-post*). Therefore, a comparison between Brazilian and British perceptions about the challenges and benefits of the PSA reforms, showing which of the expected challenges and benefits were experienced in practice is carried out for this thesis. It is anticipated that the findings from this work will support the decision-making process in regards to AA and IAS adoption in Brazil.

This research analyses PSA changes from the perspective of local and regional governments. For Brazil, all 26 States of the Federation, the Federal District and the 26 States' Capitals were part of the research. For the UK, the study was conducted within English local government, comprising all the English Core Cities, English County Councils, and English Unitary Authorities. To make the comparisons, this study combined methods of quantitative and qualitative research to collect and analyse the data. Therefore, a questionnaire survey and interviews were used to collect the data and statistics and interview coding was used to analyse them.

For this study, the following expressions will be commonly used with a broader meaning:

- Local governments: includes local and regional governments. This last do not exist in England, but are part of the Brazilian Federation, comprising the Brazilian 26 states and the Federal District;
- International Accounting Standards (IAS): any of the two sets of accounting standards commonly used internationally, IFRS or IPSAS. For the purposes of this study, any mention of IAS does not refer to the private sector IAS standards that were approved prior to IFRS;
- PSA reforms: corresponds to the changes that involve the adoption of AA and any set of IAS (e.g. IFRS or IPSAS);
- Financial manager: typically Directors of Finance or Chief Accountants, who are usually the officers responsible for the management of the accounting issues, such as the PSA reforms, in each local government authority.

### **1.1. OBJECTIVES**

In a broad sense, this research tries to identify if the advantages presented by supporters of PSA reforms are observed in practice, and will seek to identify the challenges faced in the transition to AA and IAS by local governments. In a more specific sense, this research will try to identify if the expected outcomes of financial managers in Brazil could be observed in the experiences of financial managers in English local government. Therefore, the research questions are:

*#1: What are the perceived benefits of the PSA reforms?*

*#2: What are the perceived challenges/difficulties of the PSA reforms?*

*#3: Are there any differences in perceptions of benefits and challenges/difficulties between Brazil and England?*

*#4: To what extent are the benefits of PSA reforms perceived to have been realized in England?*

*#5: To what extent are the challenges/difficulties of PSA reforms been observed in England?*

*#6: What can Brazil learn through the English experience in PSA reforms?*

The results obtained can be used as an instrument to help stakeholders of governments that are in the initial stages of PSA reforms, like Brazil, to have a clearer idea of its costs, to identify priorities to be implemented, and to better estimate the necessary resources required. It can also help to identify which sets of IAS are most useful to materialize the reforms, IFRS, IPSAS or national standards. In a more general sense, the results can be used to support arguments in favour or not of some particularities of the reforms, which may help to develop standards that are more useful to local and regional governments' realities.

## **1.2. THESIS STRUCTURE**

To analyse this process of PSA reforms in an *ex-ante* and an *ex-post* context applied to local governments, this thesis is organised into six chapters.

Chapter I, this introduction, briefly contextualise the PSA international context that surrounds the PSA reforms. It presents the research objectives and the thesis structure.

Chapter II is a theoretical foundations step which presents the PSA reforms worldwide, including the process of setting accounting standards for the public sector. It shows comparative studies of governments in regards to their accounting framework and presents their perceptions in regards to the challenges and benefits

of the PSA reforms. This chapter also describes the implementation of the PSA reforms in Brazil and England. Finally, it describes some particularities of both countries, such as the process of PSA regulation in each country and the bodies that have had a relevant impact on the reforms.

Chapter III is a methodology stage which characterises the study and provides a description of the research design and of the tools used in data collection and analysis. It presents the challenges faced during the design stage, such as selecting samples of local governments from Brazil and England that would fit the research purposes as well as the time and funding constraints. It describes the methodology used, based on mixed methods of quantitative and qualitative methods, as well as the decisions taken while developing the data collection instruments for each of these methods and the process of data collection itself. It describes the methods used to analyse the data: descriptive statistics, hypothesis test and coded interviews. Finally, it considers the ethical implications of the research, and the ethical guidelines that were followed during the research process.

Chapter IV corresponds to the questionnaire survey data analysis process. It presents all the descriptive statistics used in the quantitative part of the study and compares the results of the quantitative data for both countries. It also shows the statistical tests used to identify the major similarities and differences of both countries financial managers' perceptions.

Chapter V corresponds to the interview analysis process. The coded interviews are compared and the main points confronting Brazilian and English experiences are

presented. Extracts from the interviews are presented and compared between the countries and also with the quantitative data.

Chapter VI discusses the previous findings and presents the conclusions. It uses both the questionnaire and the interview aspects to answer the research questions, suggests possible future studies that can be derived from the present research, and shows the research limitations. It presents some personal perceptions and final considerations.

## **CHAPTER II**

### **2. PUBLIC SECTOR ACCOUNTING REFORMS**

This chapter firstly presents the NPM/NPFM theories that were in part used to justify the public sector accounting reforms. Secondly, it shows the contexts of these reforms worldwide, in central and local governments. It analyses the benefits of these reforms for governments that have already undertaken them, and considers whether or not they have satisfied initial expectations. It also identifies the challenges faced during the transition to the new accounting framework. Thirdly, it describes the process of PSA reforms in Brazil and in the United Kingdom, presenting a history of the changes to local regulation and the motivations to promote these reforms.

#### **2.1. INTERNATIONAL CONTEXT OF THE PSA REFORMS**

The search for better management techniques in public sector institutions has resulted in different international trends in public administration. According to Hood (1991), one of the most striking theories is the 'New Public Management (NPM)', which describes many different aspects of the public administration and presents a theoretical framework that supports more efficient ways of managing the public services. Some of NPM's characteristics are (i) a focus on results instead of procedures, (ii) a search for administrative efficiency, (iii) a clear assignment of responsibilities, and (iv) a support for more competition in public sector. In order to improve efficiency, NPM's doctrinal components are based on '*stress on private sector styles of management practices and stress on greater discipline and parsimony in resource use*' (Hood, 1991, p.5).

The application of NPM theories involves the adoption of private sector practices, which uses accounting to privilege quantification and results (Lapsley *et al.*, 2009). Therefore, practices such as accrual and cost accounting, performance budget and whole of governments' accounts (Chan, 2003; Broadbent and Guthrie, 2008) are at the centre of PSA reforms. This search for new accounting-based financial management techniques has resulted in the 'New Public Financial Management (NPFM)'. According to Guthrie *et al.* (1999), although there is no globally standardised NPFM system, some common characteristics can be identified, such as the development of market oriented management systems, the development of a performance measurement approach and changes to financial reporting systems.

These changes are usually based on the adoption of AA in financial reporting system instead of the cash or 'cameralistic accounting' that had been the mainstream financial information system in the public sector for many years (Guthrie *et al.*, 1999; Wynne, 2004; Christiaens *et al.*, 2010). AA and cash accounting would be the extremes of the accounting regimes, with the latest being associated to outdated practices (Christiaens and Rommel, 2008). Between these extremes, some variations would be observed combining elements of both previous basis. They would be the modified cash basis, the modified accrual basis and the 'cameralistic' accounting.

AA is understood as '*a basis of accounting under which transactions and other events are recognized when they occur (and not only when cash or its equivalent is received or paid)*' (IFAC, 2012a, p.30). Under AA, revenues are defined as '*the gross inflow of economic benefits or service potential during the reporting period when those inflows result in an increase in net assets/equity, other than increases relating*

*to contributions from owners'* (IFAC, 2012a, p.32). Expenses are defined as *'decreases in economic benefits or service potential during the reporting period in the form of outflows or consumption of assets or incurrences of liabilities that result in decreases in net assets/equity, other than those relating to distributions to owners'* (IFAC, 2012a, p.31). According to IFAC (2011, p.14), AA would consist in a more accurate basis to provide information to the organisation, once it *'provides information on revenues and expenses, including the impact of transactions where cash has not yet been received or paid'*.

Cash accounting is understood as *'a basis of accounting that recognizes transactions and other events only when cash is received or paid'* (IFAC, 2012a, p.1472). Under the cash basis of accounting, revenues would be associated to cash inflows and expenditures to cash outflows.

Similarly to the cash basis of accounting, the modified cash basis of accounting would associate revenues and expenses, respectively, with cash inflows and outflows. The exception would be that cash flows after the year end but related to events in the previous period would also be recorded (IFAC, 1996; Christiaens and Rommel, 2008). The modified accrual basis would be similar to the accrual basis of accounting, with the difference that it would not match the costs of non-financial assets to the periods in which they occur (IFAC, 1996; Christiaens and Rommel, 2008).

'Cameralistic accounting', also known as 'budgetary accounting', registers projected revenues and expenditures and recognises them as realised without any kind of accruals (Filios, 1983). Under this accounting system, revenues and expenditures



would be linked to planning statements (usually the budget) and all authorised and appropriated accounting registries would be driven by budgetary principles (Christiaens and Rommel, 2008). It also separates financial management from assets management, and events like depreciation would not be disclosed in financial reports (Filios, 1983).

Table 1 compares accrual, cash and cameralistic accounting in terms of recognition of revenues and expenses:

**Table 1:** Revenues and purchasing registries under different accounting systems  
(Adapted from Cristiaens and Rommel, 2008, p.67)

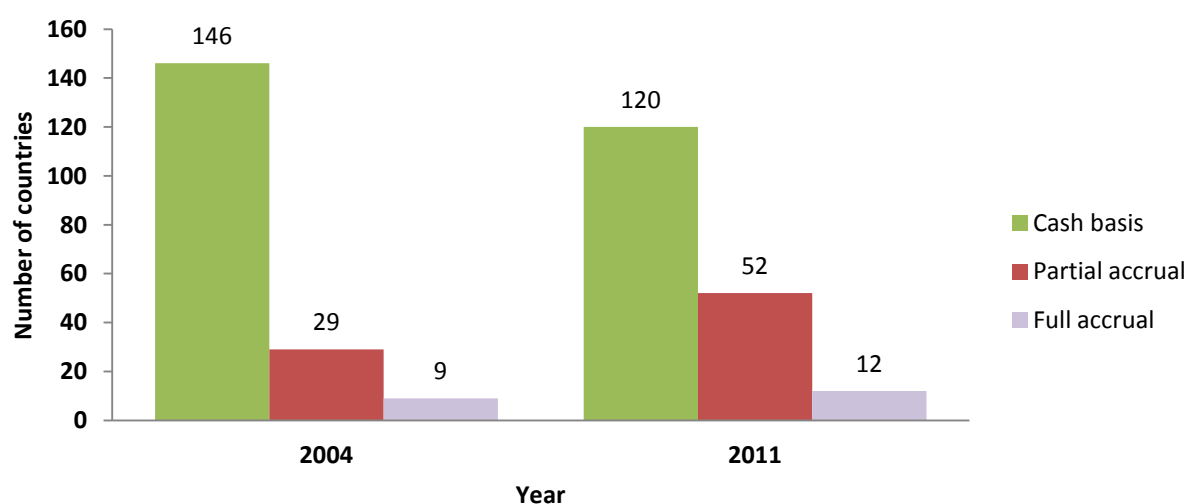
Revenues / Purchasing	Chronological Stages <sup>1</sup>	Cash basis accounting (and modified cash basis)	Cameralistic basis accounting	Accrual basis accounting (and modified accrual basis)
Revenues	1 2/a 3/b	- Cash receipt	- Budget approved - Budgetary recognition - Cash receipt	- Revenues - Cash receipt
Purchasing	1 2 3/a 4 5/b	- Cash Payment	- Budget approved - Funds warranted - Recognition of invoice - Cash Payment	- Invoice - Cash Payment

In order to obtain more efficiency from public resources, from the 1980s different countries have started NPFM reforms that have had direct effects in the way PSA was managed. According to Guthrie *et al.* (1999), Australia started using accrual management systems in several levels of government often through the adoption of techniques already experienced in the private sector, such as cost accounting. German local governments also started using AA, focusing on output-measurement, accrual financial accounting systems and cost accounting tools. New Zealand went further in the NPFM reforms, establishing the use of ‘whole-of-government’ financial

<sup>1</sup> The stages chronology follows Christiaens and Rommel (2008) identification: numbered stages for cameralistic accounting and letters ‘a’ and ‘b’ for AA.

statements on a full accrual basis in order to avoid accounts fragmentation between different levels of governments. Sweden and Switzerland are shown as examples of countries that have adopted AA seeking more cost-transparency, cost-awareness, better monitoring of the impact of value for money and providing relevant information for decision-making purposes. Comparison between IFAC (2000) and Christiaens *et al.* (2010) studies shows AA adoption is becoming more common in the public sector worldwide. According to Benito *et al.*, (2007), AA is more and more prevalent in public administration styles worldwide. This assertion is also confirmed by the IMF (2012), which shows that governments are reporting more and more on an accrual basis for financial statistics purposes, as presented in Figure 1:

**Figure 1:** Number of countries according to the basis of reporting of governments flows (Adapted from IMF, 2012, p.21)



Source: IMF (2012) – Government Finance Statistic Yearbook 2004 and GFSY 2011<sup>2</sup>.

Under the NPFM context, AA is considered as the cornerstone of reforming public sector financial information systems (Lapsley, 1999) and a contributor towards better

<sup>2</sup> Partial accrual includes countries that report transactions and other economic flows on an accrual-basis but do not prepare a full balance sheet. Full accrual includes countries that record transactions and other economic flows on an accrual-basis and publish a full balance sheet.

financial management, planning and decision-making processes (*Fédération des Experts Comptables Européens* (FEE), 2007). However, governments have not always followed a common set of accounting standards in the implementation of AA. Governments often followed their own national set of accounting standards, known as Generally Accepted Accounting Principles (GAAP), which is still a common practice.

In this context, the International Federation of Accountants (IFAC), a worldwide organisation for the accountancy profession comprising 167 members and associates in 127 countries worldwide (IFAC, 2012a), has established an independent body, the International Public Sector Accounting Standards Board (IPSASB), which has, as its primary objective, to develop high-quality accounting standards for the public sector, known as International Public Sector Accounting Standards (IPSAS). Additionally, the IPSASB also works to promote IPSAS acceptance and compliance on an international scale, and publishes studies and other documents that contain guidance on issues and experiences with financial reporting in the public sector (Berger, 2012). To achieve these objectives, IPSASB is composed of members drawn from IFAC member bodies according to their knowledge and/or experience in public sector financial reporting, audit or financial management. They are supported by technical advisors from the accounting profession in their own countries (Sutcliffe, 2003).

Berger (2012) points out that IPSASB publishes standards for financial statements prepared on both accrual and cash basis of accounting. These standards govern the recognition, measurement, disclosure and presentation requirements in relation to

any aspect that will be part of the general purpose financial statements of public sector entities. The accrual basis IPSAS are developed with the aim of convergence with International Financial Reporting Standards (IFRS) (Christiaens *et al.*, 2010; IFAC, 2011). So far, IPSASB has published 32 standards based upon AA (IFAC, 2012a) and one standard on reporting under the cash basis of accounting. IPSASB strongly recommends adopting AA, which is emphasised by one of their studies, 'transition to the accrual basis of accounting: guidance for public sector entities' (IFAC, 2011).

Benito *et al.* (2007) state that many countries already have a significant level of compliance with IPSAS, which is stronger in those countries which already work on accrual basis and that have already been working with private sector accounting standards (mostly countries that follow Anglo-Saxon culture, such as Australia, New Zealand and the UK). They also identify that accrual-based IPSAS have functioned as the main international accounting standards benchmark for the public sector and that many countries may increasingly tend towards these standards. They conclude, however, that for most countries there is still a long way to go in order to be completely IPSAS compliant.

Although the PSA reforms occurred firstly in Anglo-Saxon culture countries, Christiaens *et al.* (2010) identified that other central and/or local governments have already undertaken reforms based on accrual IPSAS or are considering doing so in the future. Examples are the Belgium region of Flanders, Lithuania and Switzerland. PSA reforms using IPSAS as a benchmark are being considered in the Netherlands and Norway.

Christiaens *et al.* (2010) identified that many other governments have planned AA reforms within local accounting regulation, such as local and central governments in Italy, local governments in Greece and the German governments of Baden-Württemberg and Saxony-Anhalt. Additionally, the United Kingdom, in central and local levels, is already working on AA based on IFRS. So, it can be seen that the reforms are not homogeneous, either in the set of accounting standards or in their timetables. A general overview of the accounting standards used by some countries versus the stage of adoption of NPM reforms presented in Table 2 shows that the accrual basis prevails for those with a high intensity of NPM adoption. For those countries in a medium or low intensity of NPM adoption, cash basis prevails.

**Table 2:** Accounting standards vs. NPM intensity of adoption (central governments)  
(Adapted from Connolly and Wall, 2013)

Intensity of adoption of NPM reforms	Country	Public Sector Adoption of IFRS	Applies / in the process of applying IPSAS	Own set of GAAP or non-accrual basis
High	Australia	✓		
	Canada	GBE only		
	New Zealand	✓		
	Sweden			✓
	UK	✓		
Medium	Austria		✓	
	Denmark			✓
	Finland			✓
	France		✓	
	Republic of Ireland			✓
	Italy		✓	
	Netherlands		✓	
	Norway			✓
	Portugal			✓
	USA			✓
Low	Greece			✓
	Germany			✓
	Japan			✓
	Spain		✓	
	Switzerland		✓	

Chan (2003) has identified IPSAS as the main benchmark for public sector governmental accounting purposes. According to him, PSA aims to (i) safeguard the public treasury, (ii) facilitate financial management, and (iii) help government

discharge its public accountability. Due to the public sector particularities, the author believes PSA requires a specific set of accounting standards. Private sector standards, although a traditional reference, would not fit public sector needs, as governments do not have ownership that would make the 'traditional' accounting equations valid ('assets = liabilities + equity' and 'profit/loss = revenues - expenses') and public sector provide public goods that cannot exclude non tax-payers. So, the author believes that a public sector oriented set of accounting standards would be preferable to using private sector standards. IPSAS could fill this void, and even facilitate the entry of private sector accountants in the public sector as they are based on IFRS.

These PSA framework reforms need preconditions in order to be successfully implemented. Hepworth (2003) points out that AA adoption should be inserted within a broader set of reforms. It should involve control bodies (external and internal auditors), standards setting bodies and other stakeholders, such as financial managers and directors. Staff should be trained, IT systems should be adjusted and the accounting standards used should be internally consistent. The reforms have to be driven with as little political bias or interference as possible and it would be important to be conscious that the results take time to materialize. Within this context, Hepworth believes that the risks of discrediting the reforms would decrease. On the other hand, putting efforts only in the technical aspects of the changes without these preconditions would not lead to the expected benefits. This last case was particularly observed in the unsuccessful Nepalese experience with AA and IPSAS which had, as a consequence, the return to a cash basis accounting (but under IPSAS) (Adhikari and Mellemvik, 2011). On the other hand, New Zealand was extremely successful in

AA adoption when it was gradually implemented with strong support from the governments' stakeholders (Schick, 1998).

### **2.1.1. AA and IAS benefits within the context of PSA reforms**

As reasons to support the transition from cash basis accounting to AA, IPSASB presents the fact that financial reporting prepared on accrual basis allows users to *'(a) assess the accountability for all resources the entity controls and the deployment of those resources; (b) assess the financial position, financial performance, and cash flows of the entity; and (c) make decisions about providing resources to, or doing business with, the entity'* (IFAC, 2011, p.12). IPSASB also highlights that reporting under accrual basis *'shows how an entity financed its activities and met its cash requirements; allows users to evaluate an entity's ongoing ability to finance its activities and to meet its liabilities and commitments; shows the financial position of an entity and changes on it; provides an entity with the opportunity to demonstrate successful management of its resources; and is useful in evaluating an entity's performance in terms of its service costs, efficiency, and accomplishments'* (IFAC, 2011, p.12).

IPSASB also highlights some of the disadvantages of cash basis accounting that would limit its use for decision-making purposes. An example is that it *'ignores resource flows other than cash that may impact in the ability of governments to provide goods and services'* and that it *'does not show the impact of current consumption on the stock of net assets held by the governments'* (IFAC, 2000, p.24). Finally, cash accounting guides governments to be accountable solely for the use of cash, and not for the use of resources (IFAC, 2000).

Kahn and Meyes (2009) highlight that AA is important at a macroeconomic level as all assets and liabilities that reflect on fiscal policy and sustainability will be measured, which does not happen with cash basis accounting. Therefore, while cash accounting would measure only conventional debt, AA measures the 'quasi-debt liabilities', such as civil servants pensions and accounts payable to suppliers of service and goods. AA would provide a more reliable basis for recognizing, measuring and disclosing the government financial commitments when compared to the cash basis of accounting. They also advocate that AA helps to better plan fiscal management. An example is a different interpretation of the 'golden rule' (rule that prohibits borrowing to pay for current expenses) based on AA: that the borrowings would be used to support only the net costs of the assets, which according to the authors mean that costs such as depreciation should not be met from borrowing. Finally, they suggest the possibility to determine the full costs of a governmental service as one of the advantages of AA that can lead to better decision-making.

Other claimed benefits of AA adoption in the public sector are the improved accountability, a better management of assets and liabilities, and an increased efficiency in financial management (Wynne, 2004; Bunea-Bontas and Petre, 2009). Wynne also lists some presumed advantages of AA: more comprehensive financial information; more information in regards the full costs of services; a focus on outputs rather than just inputs; a better decision-making process for resources allocation; and a greater comparability of management techniques that are not limited to cash management (that includes information about fixed and current assets and liabilities).



Some academic studies also present expected advantages of AA. Grossi and Sorvechia (2011) advocate that AA provides more useful information to evaluate financial sustainability of long-term public policies, having a direct effect on governments' transparency, performance evaluation and accountability. Cash accounting would not fit for management purposes as it does not link consumed resources with achieved results. Chan (2006, p.6) adds that the *'lack of complete, reliable, and timely information on payables weakens the governments' incentives to discharge its responsibilities'*. In addition, *'the lack of reliable and timely information on non-cash financial resources (receivables) reduces the governments' ability to convert these resources into cash to pay off the liabilities'*.

The sovereign debt crisis from 2008 is another issue that has raised the importance of AA adoption in the public sector. Ball and Pflugrath (2012) state that the possibility that one country may not be able to roll over its debt – the rollover risk – may significantly increase with poor accounting practices. This was particularly observed within this crisis context, in which several governments took actions to stem financial meltdown without being fully aware of the implications of their decisions. Ball and Pflugrath (2012) say that once governments issue bonds, they have to be accountable to the capital markets and present a clear picture of their financial situation. Cash accounting does not present non-debt liabilities and is insufficient to make governments accountable to the public. They point out that the solution goes through the adoption of a robust accrual-based financial accounting framework, which in their opinion would be IPSAS.

Berger (2012) points to the interventions undertaken by several governments and institutions to respond to the 2008 sovereign financial crisis typically included financial support, takeover of private sector institutions, recapitalisation/investments in the finance sector and industries, fiscal support to other governments and the provision of financial guarantees. In many situations, the public sector institutions have taken risks from the private sector, and sometimes have become shareholders of these private entities. Therefore, the governments should account for it in a transparent basis, and IPSAS would be the most suitable accounting framework as it addresses particularities of the public sector that are not observed by any other IAS.

Another typical response to crisis is the investment in infrastructure assets to stimulate the economy ('Keynesian model'). According to Berger (2012), the framework to account for infrastructure assets is also covered by IPSAS but not by any other set of IAS.

The IMF (2012) presents that fiscal transparency within the context of this crisis works as a predictor of a government's credibility and performance. IMF states that one key factor to improve fiscal transparency worldwide is the development of a global architecture of fiscal norms and accounting standards, respectively, the *Government Finance Statistics Manual* (GFSM) and the accrual basis IPSAS. This last one would be particularly important as it would '*capture arrears and other net payables that were not captured in initial cash-based forecasts of revenue and expenditure*' (IMF, 2012, p.11). Consequently, it would permit a better understanding of the governments' fiscal position. Finally, they highlight the importance of strengthening the monitoring of compliance with GFSM and IPSAS.

Berger (2012) suggests that IAS (particularly IPSAS) are especially important to developing countries. They have programs funded by international multilateral organisations, such as the World Bank, the Asian Development Bank, the Inter-American Development Bank and the IMF, that ask for transparency in financial reporting. Therefore, IAS adoption could provide an accounting framework suitable to account for these resources and favour the achievement of further financial aid. He also argues that IPSAS are important for the developed part of the world as they bring comparability among the various process of collection and reallocation of resources used by different countries.

Many international organisations already use accrual based IPSAS, such as the European Commission (EC), Organisation for Economic Co-Operation and Development (OECD), North Atlantic Treaty Organisation (NATO) and the United Nations (UN) and all its institutions (European Commission, 2008; Berger, 2012). Some expected benefits are a greater transparency, a strengthened accountability, the improvement of management and planning, the support for a framework based on results and harmonisation across the different offices (United Nations Office for Project Services (UNOPS), 2009). Grossi and Sorvechia (2011) report that the EC has decided to introduce accrual based IPSAS and to use these standards as guidelines to consolidate financial statements for its agencies.

Christiaens *et al.* (2010) lists reasons presented by governments for linking the AA legislation to IPSAS. These are: enhancing international comparability of financial information; avoiding resource wasting in developing accounting standards as they already exist; facilitating the process of the consolidation of financial statements;

improving public/private comparability; using a set of accounting standards that are developed by qualified accountants; and conforming with financial organisations. Sutcliffe (2003) adds that IPSAS were developed with the idea of establishing appropriate financial reporting practices that could be consistently applied within a country/jurisdiction and between countries, and also with the potential of harmonizing financial reporting between economic and accounting bases. Sutcliffe (2003) believes this would promote auditing, increased efficiency and effectiveness of the public sector institutions and facilitate the analysis of economic and financial results. All these aspects would enhance accountability and transparency. Additionally, IPSAS might provide a consistent basis for the emergence of accounting professionals with expertise in IAS, making public sector standards easier to be disseminated in the future.

Another possible benefit of IPSAS is that, just like AA, it would favour decision-making processes. Navarro Galera and Rodriguez Bolívar (2007), suggest that under IPSAS assets would be recognized at fair value rather than historical costs traditionally used by governments. Under fair value, *'the calculation of assets depreciation would be more closely related to their consumption in the delivery of public services'* (Navarro Galera and Rodriguez Bolívar, 2007, p.417), making it easier to manage the public services and making it possible to create a benchmark to compare different management techniques.

A summary of the alleged benefits of the PSA reforms according to the prior literature is presented in Table 3:

**Table 3:** Summary of the alleged benefits of AA and accrual-based IAS adoption

Benefits	AA	Accrual
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		Based IAS
Enhances the accountability process, adding transparency to the financial statements	✓	✓
Enhances the cash flow management	✓	
Improves the overall financial management	✓	✓
Provides an adequate framework to reflect governments' financial position	✓	
Enhances the decision-making process	✓	✓
Provides/enhances links between the resources (inputs) and results (outputs)	✓	✓
Provides a consistent basis to evaluate the entities efficiency to achieve its goals	✓	
Discloses all public sector assets providing a consistent basis to manage them more efficiently	✓	
Provides a consistent accounting framework to identify obligations that are liabilities	✓	
Increases efficiency in financial management	✓	
Provides more comprehensive financial information	✓	
Harmonizes financial reporting between economic and accounting basis		✓
Favours auditing		✓
Enhances comparability in management techniques	✓	
Improves asset management	✓	
Provides a long term view approach to the public finances	✓	
Enhances transparency in financial reporting and management procedures	✓	
Leads to a better management of liabilities and thus prevent financial crisis	✓	✓
Improvement of financial planning	✓	✓
Favours accounting knowledge exchange		✓
Enhances the process of accounts consolidation		✓
Enhances financial reporting comparability		✓
Turns financial reports in conformity with international organisations requirements		✓

### 2.1.2. AA and IAS challenges and limitations within the context of PSA reforms

It is seen that more and more governments are using or considering using AA and/or accrual-based IAS (Benito *et al.*, 2007). However, the expected benefits suggested by supporters of the reforms are questioned by many academics (Lapsley, 1999; Ter Bogt and Van Helden, 2000; Christiaens and Rommel, 2008; Arnaboldi & Lapsley, 2009) and some government officials and agencies are not convinced about its usefulness (Likierman, 2000). Some studies suggest that the success cases in PSA reforms (e.g. New Zealand) may not be replicated in other countries, particularly in developing ones, without being included in a broader context of administrative reforms and the existence of certain preconditions (Schick, 1998).

Some central governments have considered using AA for financial reporting purposes, but after seriously studying it they have decided not to move in that

direction. Hyndman and Connolly (2011) presented the Republic of Ireland (RoI) case, using the UK central government experiences as a benchmark, with the RoI deciding not to change completely to AA but only to make modest year-end accrual adjustments. The reasons were that the UK experience showed no clear evidence that AA adoption has resulted in an improved decision-making process, but presented increased costs and complexity of generating financial reports.

AA financial information may also not be easily understood by managers. Arnaboldi and Lapsley (2009) indicated that only people with strong public finance knowledge can critically analyse PSA reports. So, unlike the UK, RoI did not embrace the NPM reforms enthusiastically and was more 'pragmatic' regarding its alleged benefits. Jones and Lüder (2011) presented that the German federal government abandoned its accrual reforms on accounting and budgeting. The main reason was that this reform would change the budget from an input to an output orientation, which made the parliament concerned that they would lose control over the government's finances. These two experiences show that it is not clear that AA will enhance the decision-making process and that political control of public sector finances may not be considered to be enhanced by the adoption of AA.

Within the context of the Australian PSA reforms, Barton (2009) suggested that providing social assistance to citizens, conducting macroeconomic policies, conserving the natural and cultural environment, and pursuing intergenerational equity are governments' responsibilities that lie outside the business sector of the economy and that could not be evaluated under the private sector measures. However, the search for efficiency through PSA reforms and especially AA adoption

may have been used as an excuse to privatisation, making government smaller. The same situation may have happened in New Zealand (Newberry and Pallot, 2005), where the budget shift to an outputs-based appropriation and the adoption of AA have raised discussions about efficiency on resources management and deviated political discussions from privatisation issues. They add that the NPM reforms brought more challenges to Parliamentary scrutiny, which has severely eroded and was not linked only to raising loans or spending public money. Finally, Christensen (2005) reflects about the real motivations for the support of private sector stakeholders to the PSA reforms. He particularly highlights the role of the consultancy services in NPM reforms through the New South Wales (Australia) case. He points out that in a period of private sector revenues stagnation, consultants found in NSW the ideal conditions to promote PSA reforms based on their business accounting expertise. However, they did not have previous experience with business-like management practices in the public sector, and were not certain about its results.

In regards of local government experiences with AA, Arnaboldi and Lapsley (2009) identified among Scottish Local Authorities that the costs of preparing and presenting information about depreciation on assets exceeded the benefits, and that this information was not useful at all for management purposes. The accountability was also not improved, as the accounting information was not easily understood by the overall public. The local authorities, as used to happen before AA implementation, were more concerned with auditors' feedback. Jorge *et al.* (2008) also identified that little has changed in the decision-making process after the introduction of AA in the Portuguese municipalities, which kept working on a cash basis budget. The main findings were that most municipalities had progressed using AA, but did not use it for

decision-making purposes. The cash basis budget information is more standardized and less subjective than AA and is prioritized in financial management and planning. The benefits of AA coexisting with a cash basis budget were also analysed by Grossi and Sorvechia (2011, p.546), which stated that *“it is not yet clear if accruals information is considered ‘actually used’ where budget is still cash based”*.

The predominance of the budget over AA was identified by Christiaens and Rommel (2008) while studying the Belgium PSA reforms in local government context. Alongside Carnegie and West (2003), they add that the typical accounting logic from the private sector does not apply to governments, but only for the business-like parts of them. Concepts like profitability, financial position or return on assets would be meaningless for governments’ decision-making purposes. Therefore, the accrual concept of profit or loss makes no sense for governments, and, in the public sector, there may be no direct relation between revenues and costs. So, governments’ management should not be evaluated through the differences between revenues and costs, but by different measures.

Another aspect that does not favour the natural acceptance of the PSA reforms is that in many cases it was not a choice of the local authorities. Jackson and Lapsley (2003) present that in the UK changes usually took place because it was forced by regulation, statute or exhortation. PSA reforms were also seen as a trend supported by one specific technical group within the Republic of Ireland and, after this group left government, the reforms weakened (Hyndman and Connolly, 2011).

PSA challenges are not restricted only to making the expected benefits materialize. Transition from cash to accruals is also challenging. Carvalho *et al.* (2006) presented



that Portuguese municipalities had difficulties with the preparation of the first balance sheet under this new accounting framework, particularly because they did not know how to register heritage and infrastructure assets. The following years after reforms were also challenging for them as including or excluding these assets from the balance sheet would change significantly the accounting results and indicators. A simple change in the depreciation policy would affect the economic results, leading to misinterpretation of the local authority situation. Furthermore, many collected revenues, although physically present in the local governments cash account, could not be used as they had to be transferred to the central government. It might lead to a misunderstanding of the real financial situation, and did not favour the decision-making process.

One specific problem arises with assets that do not have correspondence in the private sector, such as infrastructure, art and heritage assets. Adam *et al.* (2011) show that there is no international consensus on how to measure these assets. It is seen that local governments usually work on different measurement basis, such as fair value or historical costs less depreciation. Some governments simply do not disclose these assets in their balance sheets. The authors conclude that within this context, it is impossible to compare the public sector financial statements (one of the main reasons used by the IPSAS supporters in order to promote its adoption), either internationally or within country boundaries. They also conclude that IPSAS do not provide answers to most of these challenges, and are not always followed by the governments that register these assets.

Blöndal, (2003) and Lapsley *et al.* (2009) highlight that the long lives of infrastructure assets, sometimes with an indefinite life-span when frequently maintained, make it harder to define a reliable depreciation schedule for them. They add that it is hard to estimate the original costs under historical cost for old infrastructure assets, separating maintenance costs from acquisition costs. It is also hard to measure them under current value and impossible to do that under fair value if there is no active market for them without using surrogates for market value.

According to Blöndal (2003), the challenges to account for heritage assets derive from their concept that does not have correspondence in the private sector. It is impossible to set a market value for part of them as their value is inherently cultural, not monetary. In addition, unlike the 'ordinary assets', their values are likely to increase over time. Other challenges are to determine the heritage assets acquisition values and to register historical buildings with dual use of government office and historical monument. In this last case, it is not clear if the asset should be treated as a heritage asset or as an ordinary asset. Finally, he presents that the subjective 'emotional' value that these assets have to the local people is an additional challenge while measuring them.

Another difficulty with heritage assets is to identify whether they are really assets. Pallot (1992), in accordance with Mautz (1981), showed that these public assets differ from the private sector concept of assets. Examples are that it is not always possible to determine economic life for many heritage assets and that a national monument usually contributes to cash outflows rather than cash inflows in order to be maintained. Therefore, these elements would be closer to the IPSAS concept of

liabilities than to assets, once they could be seen as '*present obligations of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits or service potential*' (IFAC, 2012a, p.38). If it is questionable if infrastructure and heritage elements are obligations, it is undeniable that they will generate cash outflows in order to be maintained. All these doubts around infrastructure and heritage assets raise questions if the costs of including these assets in financial reporting would outweigh the benefits (Adam *et al.*, 2011).

Military assets are another public sector particular issue. There are discussions if these assets should be treated as ordinary private sector assets or differently, being separated into 'general purpose military assets' and 'military-specific assets'. Due to the fact that the latter are prone to premature destruction (for obsolescence or use) they could be recognized directly as expenses instead of capitalizing and depreciating them. However, the trend is to recognize them as assets, depreciating on a normal basis (Blöndal, 2003). Other doubts also arise: how to account and disclose military assets related to national security? How to account for the military exclusive airspace and telecommunications spectrum due to the opportunity costs it creates for governments as they cannot be commercialised? How to recognise and measure military research?

Besides the differences of concepts between governments and business-oriented entities there are also 'social risks' in adopting private sector standards in governments. As the private sector is profited oriented, some public institutions have the risk that adopting measures that deviate them from their social goals. Examples

are public libraries, art galleries and museums, which ultimately could adopt profit oriented behaviours instead of looking for the public needs (Carnegie and West, 2003). Another concern is that many public sector resources are not of a financial nature, which means they cannot meaningfully be included in a statement of financial position. Besides being time consuming, this information may not be useful for decision-making purposes.

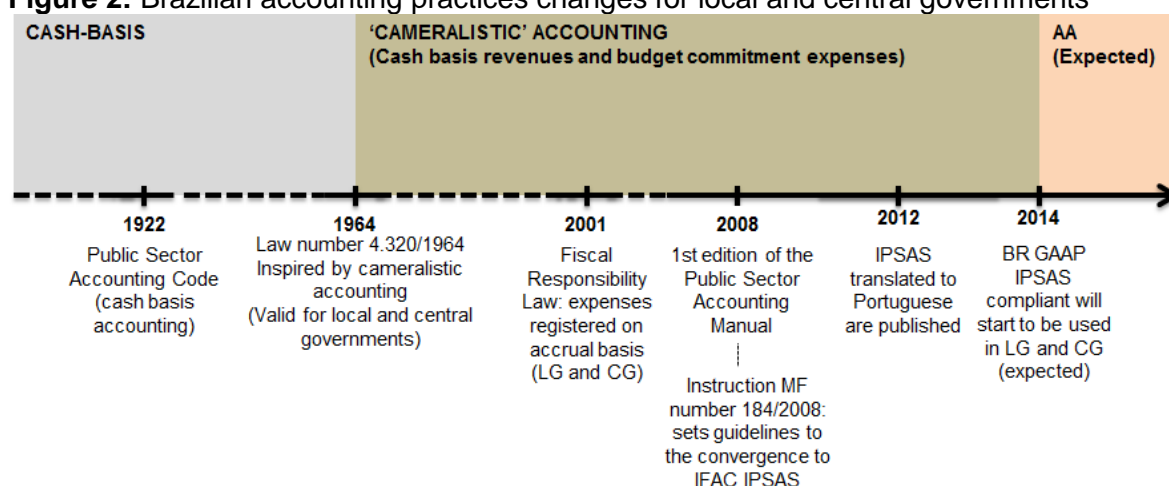
Based on the Australian experiences with its business-like PSA framework, Barton (2005) suggests that it is important to have a critical view before transplanting the private sector standards to governments. Similarities apart, the public sector accountability has to be wider than the private sector. Additionally, the social purposes of the public sector mean that not all public sector assets should be treated as private sector assets. There may be a case for dividing them into two different categories: commercial and social/environmental assets. The concept of liabilities is also different in governments, and it should encompass obligations resulting from legislations, such as the obligation to transfer resources from revenue sharing. Barton also points out that, unlike the private sector, negative net assets in the public sector do not necessarily mean that the entity is insolvent. Finally, it is understood that IPSAS could be a great opportunity to address public sector particularities, if it were not from the fact that these standards use private sector standards as the starting point.

## **2.2. PSA REFORMS IN BRAZIL**

Until the end of the 19<sup>th</sup> century, public sector accounting did not exist in a structured form in Brazil (Piggato, 2007), as shown in Figure 2. The few existent controls were

based on cash bookkeeping. The separation of financial years and the transferences of assets and liabilities from one financial year to another were the first indications that a cameralistic model was used in Brazil. Therefore, in its origins, Brazilian public financial management followed the Continental European doctrine, separating asset management from financial management although registering financial management on a pure cash basis of accounting (Piggato, 2007).

**Figure 2:** Brazilian accounting practices changes for local and central governments



Source: Own elaboration based on Biolchini (1930), Piggato (2007), Brazilian Legislation (Law number 4.320/1964, Law number 101/2001, Instruction number 184/2008) and IFAC (2012b).

Although the cash basis of accounting had driven the Brazilian public sector accounting since its origins, the discussions on which accounting basis should be used to recognize public expenses and revenues lasted until the elaboration of the 1922 Public Sector Accounting Code. According to Biolchini (1930), there were understandings that the financial accounting could lead to delays on settling liabilities. On the other hand, Biolchini (1930) also suggests that there were understandings that financial accounting should be linked to the budget, which would not happen if the private sector accounting basis (by the time understood as accrual accounting) was adopted into the public sector. It is important to address that what

was then known as financial accounting cannot be understood as accrual accounting, but as a cash basis of accounting. Thus, the 1922 Public Sector Accounting Code used a cash basis of accounting for both revenue and expenses, with a single entry bookkeeping system (Biolchini, 1930).

In 1964, Law number 4.320 established budgeting, financial and fiscal regulation for the whole Brazilian public sector. Unlike other countries, in which the financial legislation is different for central and local governments, in Brazil the law 4.320/1964 was valid for central (Federal Government or 'Union'), regional (Federal States and the Federal District) and local government (Municipalities). Law 4.320/64 is still in use (it was legally accepted by the 1988 Federal Constitution) and has introduced concepts that integrated financial and asset management (Piggato, 2007). In addition, it added budget preparation and execution guidelines for the whole Federation and set double entry bookkeeping as the standard for the whole Brazilian public sector.

Although this law brought innovation through the integration of financial and asset management when compared to the traditional cameralistic system used in Europe, it is still significantly linked to the budget. The expenses are registered through budget commitment and the revenues are recognized on a cash basis (Brazil, 1964). These links are reflected in the financial statements required by the law. As an example, the statement of financial position requires governments to present as obligations budget commitments that do not have any liability associated (e.g. services that were not provided or goods that were not delivered, but that have budget commitments associated).

In 2001, based in the public sector fiscal reforms, the fiscal responsibility law was enacted. It presented innovations in accounting, such as registering expenses with personnel on an accrual basis (Brazil, 2001b). However, due to lack of an AA framework, the accrual basis for personnel expenses was considered as the committed budget validated by the governments' authorities rather than the expenses actually incurred in the financial period. It is still being registered in this basis according to the standard report that presents the expenses with personnel (Brazil, 2012).

Presently, the Federal Council of Accounting and the National Treasury Secretariat (*Secretaria do Tesouro Nacional (STN)*) are working together on the convergence of the BR GAAP to IPSAS. This convergence follows the 2008 Finance Ministry's Instruction number 184/2008 in which both bodies will identify ways to make governmental financial statements converge to the international standards while respecting the legal framework. The adoption of IAS on accrual basis is justified as a way to provide all the country with an accounting framework more appropriate to a better decision-making process and enhancing accountability, comparability and transparency (Brazil, 2008). One study group (Convergence Managing Committee) was set to manage the convergence and has completed the IPSAS translation into Portuguese as well as disseminated them into Brazilian Public Sector bodies. The following actions are to give enforcement to IPSAS in the Brazilian Public Sector, to replace the actual BR GAAP standards by IPSAS converged BR GAAP standards, and to maintain the process in order to identify the best strategy to effectively put them in practice. It is expected that by the end of 2014 these standards will already be in use by Brazilian central and regional governments and, by the end of 2015, by

the municipalities (IFAC, 2012b). In addition, the National Treasury Secretariat is editing since 2008 the *Manual de Contabilidade Aplicada ao Setor Público* (MCASP, acronym for Public Sector Accounting Manual, formerly known as 'National Revenues Manual' and 'National Expenses Manual'), which presents the accounting and budgeting rules applied to the whole Brazilian public sector in order to make the consolidation process ('whole of governments accounts') possible. This manual is presently on its 5<sup>th</sup> edition, and is 'IPSAS compliant' and addresses particularities not included in IPSAS, such as the statement of budget execution and the budgetary classifications. It also presents the chart of accounts that will be used by the whole Brazilian Federation in order to make it possible to consolidate the accounts and rules to elaborate the financial statements in order to comply with both legal regulation and international standards.

Brazil will use a 'dual system' similar to the one in use by the European Commission, in which AA coexists with a cash basis budget that records expenses under a modified cash basis (European Commission, 2008; Grossi and Sorvechia, 2011). Thus, the reforms agenda as set with IFAC is limited to AA, and the budgeting basis is not expected to change in the upcoming years, unlike in the UK with the introduction of Resource Accounting and Budgeting.

Even within the context of PSA reforms, Caba Pérez and López-Hernández (2009) identified through a cross-national comparison among the MERCOSUR member countries (Argentina, Brazil, Paraguay and Uruguay) that their financial reports do not include most of the financial information required by IPSAS 1<sup>3</sup> and 2<sup>4</sup>. Specifically

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<sup>3</sup> IPSAS 1: Presentation of Financial Statements.

<sup>4</sup> IPSAS 2: Cash Flow Statements.



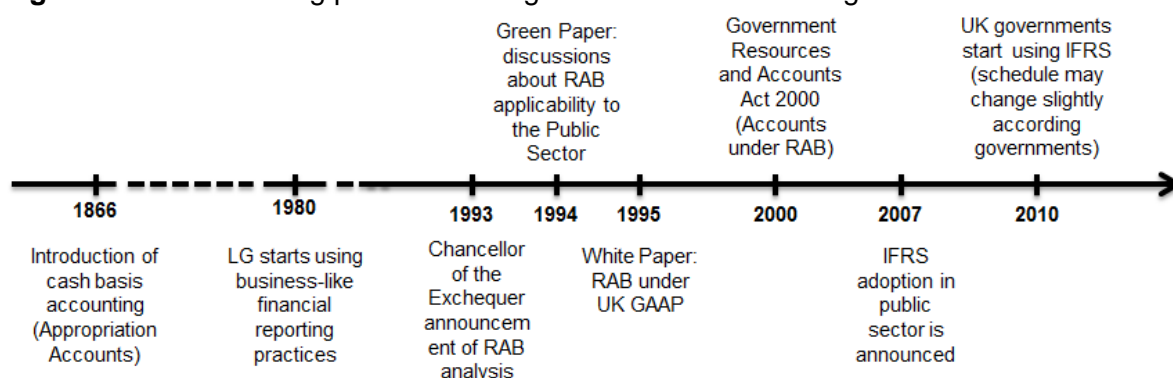
about Brazil, they present that while the country has a statement of financial position and a statement of cash flow following the local regulation (Law 4320/1994), these statements have a very low level of compliance with IPSAS requirements. This low level of compliance is expected to change in the coming years, as soon as the agreement with IFAC is completed.

## 2.3. PSA REFORMS IN THE UNITED KINGDOM

### Central Government Accounting Reforms

The UK central government traditionally planned and reported its financial performance on a cash basis named 'Appropriation Accounts'. Under this basis, the expenses were recorded only when the money was spent, even for capital assets that would be used over many years (IFAC, 2002; Heald, 2005; Connolly and Wall, 2013). This accounting framework was part of the reforms introduced in the UK government in 1866, and it was followed by the British colonies over more than 100 years (Wynne, 2003; Jones, 2004). The 1866 reforms can be considered as the beginning of a structured accounting in the UK, as shown in Figure 3:

**Figure 3:** UK accounting practices changes for local and central governments



Source: Own elaboration based on Likierman (2000), IFAC (2002), Wynne (2003), Jones (2004), Heald (2005), Chow *et al.* (2007), Heald and Georgiou (2009), HM Treasury (2012) and Connolly and Wall (2013).

However, this cash basis accounting framework had perceived limitations, such as the fact that asset acquisitions were considered as expenses without any subsequent action taken to evaluate if assets were still in use had reached the end of their useful lives (IFAC, 2002). In order to improve efficiency in resources use and move towards a managerial decision-making process (under the NPM reforms concepts), in the early 1990s the UK central government decided to change accounting and budgeting framework to the Resource Accounting and Budgeting (RAB) (IFAC, 2002; Jones, 2004; Connolly and Wall, 2013).

According to IFAC (2002, p.1), '*RAB is an accrual based approach to Government accounting and budgeting, which also reflects Parliamentary control and a move to focus on outputs, rather than inputs*'. IFAC highlights that the changes proposed by the central government were wider than simply the adoption of AA techniques. RAB links inputs to outputs, and the resource budgeting makes use of resource accounting information to plan and control the public expenditure.

The movement to RAB was first announced by the Chancellor of the Exchequer in 1993. It was followed by a 1994 Green Paper ('Better Accounting for the Taxpayer's Money: Resource Accounting and Budgeting in Government') which introduced the discussions in order to evaluate if budgets could move from cash to an accruals basis and to analyse the use of the UK GAAP in the public sector. In 1995, a White Paper was published confirming the changes to accrual budgeting, the use of UK GAAP<sup>5</sup>, and setting the initial reforms timetable (Likierman, 2000; IFAC, 2002). This

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<sup>5</sup> Jones (2004) presents that for the national government, all accounting guidance was set by the Treasury and published in the 'Resource Accounting Manual'. However, the Treasury had to take into account any relevant guide issued by the Accounting Standards Board (ASB), which at that time was the body responsible for issuing accounting standards also to the private sector. Furthermore, the

commitment to use UK GAAP as the basis for RAB was also confirmed by the 1998 Code for Fiscal Stability. Finally, the Government Resources and Accounts Act 2000 required a resources basis for budgeting and accounting for government departments, which would follow the Treasury's guidelines (Resource Accounting Manual) in the case of central government financial reporting. This project was endorsed by the Parliament Committee of Public Accounts, which highlighted that *'with cash accounting, there is no requirement to match expenditure with revenues for the period to which they relate'* (IFAC, 2002, p.5), and the initial concerns with losing the control over the cash expenditure were gradually decreasing (IFAC, 2002). The Chartered Institute of Public Finance and Accountancy (CIPFA) added that the concerns that changes would diminish the importance of cash and encourage government departments to use those creative accounting devices were misplaced, although a greater level of subjectivity in the accounting process would be introduced while compared to cash accounting (IFAC, 2002).

Connolly and Wall (2013) state that transition to IFRS in the UK central government was less onerous than transition to RAB. The possible reasons are that important lessons were learned while adopting AA and the government expertise with accounting has increased. The management information systems were not significantly impacted although the extent of disclosures in financial statements has increased. However, they could not identify benefits from IFRS adoption, which according to the financial managers was time and effort-consuming, outweighing IFRS benefits. Transition to IFRS, although time consuming, went smoothly for local

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Treasury had to consult an advisor group on accounting standards, known as Financial Reporting Advisory Board (FRAB), before setting the rules.

governments (Russel, 2011), with no Council receiving any qualified opinion in regards IFRS compliance issues.

### **Local Government Accounting Reforms**

Unlike the central government, the British local government was not regulated in detail by the national government. '*Local government grew from the bottom up, as did local government accounting*' (Jones, 2004, p.988). The accounting profession has driven the policies for preparing local governments' financial statements, and, since 1980, it has chosen to use business-accounting as the public sector benchmark. Local governments were also free to choose their budgeting principles. Thus, local government had different accounting practices when compared to the central government, which was working under cash basis of accounting (Jones, 2004).

It was announced in 2007 that UK public sector bodies would prepare reports in compliance with IFRS from 2008/2009, with local governments adopting IFRS from April 2010 and central government bodies from 2011 (HM Treasury, 2012; Connolly and Wall, 2013). The motivation to use IFRS, as stated in the 2007 Budget, was to use high value performance data in combination with financial data in order to bring benefits in consistency and comparability between financial reports and to follow private sector best practices.

### **Whole of Government Accounts**

In addition, in the late 1990s the UK Parliament starting discussing a consolidate process for all the public sector accounts named 'Whole of Government Accounts'<sup>6</sup>. This process was set to be started after the RAB implementation in the UK, and was initially supposed to be completed for 2005/06 (Chow *et al.*, 2007; Heald and Georgiou, 2009). However, the IFRS adoption by local and central governments delayed the WGA schedule (HM Treasury, 2012). Thus, the first WGA was published in 2012 for the 2010/11 fiscal year, and is IFRS based.

### **PSA reforms in Brazil and in the UK**

It is seen that the PSA reforms context is significantly different between Brazil and the UK. In the UK, AA is already in use in both central and local governments, and IFRS was recently implemented. In Brazil, AA and BR GAAP converged to IPSAS are in process of adoption, which is expected to finish by the end of 2014. However, as presented in Figures 2 and 3, these contexts can present expectations before and after PSA reforms. These expectations will be compared, and the methodology used for that is the topic of the next chapter.

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<sup>6</sup> According to HM Treasury (2012: 5), the WGA '*consolidates the audited accounts of more than a thousand organisations across the public sector*', and it includes central government departments, local authorities, devolved administrations, the health service, academies and public corporations, '*in order to produce a comprehensive, accounts-based picture of the fiscal position in any one year*'.

## **CHAPTER III**

### **3. DESIGN AND METHODOLOGY**

The experience of the challenge and benefits of the adoption of AA and IAS are still unknown in Brazilian local governments. English local governments' practical perceptions may be used as a benchmark to analyse the experience of the results of PSA reforms. The design and methodology used to compare these perceptions are shown in this chapter as well as in Appendices with complimentary information.

This section firstly presents the research design that oriented the development of the data collection tools, and its applicability to the sample of local governments from both countries. Then the instruments and process of data collection are described, as well as the decisions taken while developing them and the motivations that justified their use. Finally, the statistical tools used to analyse the collected data and the interviews technique used are described. Ethical issues are also presented here.

#### **3.1. CHARACTERISATION AND DESIGN**

The design used in this research corresponds to a snapshot picture of the perceptions of the challenges and benefits of the PSA reforms from two groups of local government financial managers: a set of financial managers of English local governments that had already undertaken the reforms (AA and IFRS, in this specific case); and a set of financial managers of Brazilian local governments that have not completed the reform process, but which is expected to be finished by the end of 2014 (Brazil, 2011). Thus, in accordance with the definition of Collis and Hussey (2009), it corresponds to a cross-sectional design as there is only one observation for each group of countries. The local governments' allocation to the groups was

determined by the completeness of the PSA reforms, which corresponds with the country in which it is located. This design used characterizes this study as a cross-sectional comparison of two different groups.

### **3.1.1. Interventions**

There is only one intervention, which is the adoption of accrual based international accounting standards. This intervention is not manipulated or created by the researcher, so it can be classified, according to Gorard (2013), as natural or non-random. This intervention was applied only to the English group of local governments, which had already completed the reforms. The Brazilian local governments have not adopted any IAS (the BR GAAP is still in the process of convergence to the IPSAS) and are in the process of adopting AA. Thus, there were no interventions applied to them.

### **3.1.2. Sampling**

This study investigates the perception of financial managers on implementing AA and IAS in the public sector in Brazil and England. Therefore, the sampling criteria are derived after considering the following five key points:

- #1. The number of local governments: the challenge was to identify a sample of local governments that would balance feasibility with reliability;
- #2. The feasibility of the retrieval of the contacts information: due to the lack of standardisation in local governments' websites, it was not always possible to retrieve information of the contacts. The study considered this challenge while determining the samples;

#3. The feasibility of the proposed design apropos of time and funding: Brazil has almost 5,600 local governments (*Instituto Brasileiro de Geografia e Estatística* (IBGE), 2012), and England more than 350 (Jones, 2004). Therefore, there was neither time nor resources to contact all of them within the interval of 5 months (maximum data collection interval). Thus, the research strategy was driven to retrieve information from a sample of governments that would not create any bias and would not affect the reliability of the study;

#4. The possibility of a biased response for a set of governments: some local governments in Brazil outsource their accounting activities to accounting offices that attend to several governments (Aquino and Cardoso, 2012). Therefore, working with a sample of municipalities whose accounting services are provided by the same accounting offices would lead towards a response bias to the opinion of a few; and

#5. The size of the compared governments: the aim was to compare governments with a same level of importance within each country. This study tried to avoid comparing the big local governments from one country to the small local governments from the other. Whenever possible, the proportional sizes of the compared governments were similar.

In Brazil it was decided to work with the States and States Capitals' governments, comprising a total of 53<sup>7</sup> governments. In England it was decided to work with the

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<sup>7</sup>The total of 53 governments comprises 27 States and 26 States Capitals. According to the 1988 Brazilian Federal Constitution, the Federal District has the legislative competency of both States and Municipalities and cannot be divided in Municipalities (Brazil, 1998, Art. 32). For this research purposes, the Brazilian Federal District was considered as a State.



Unitary Authorities<sup>8</sup>, County Councils<sup>9</sup>, Core Cities<sup>10</sup> and the City of London, comprising a total of 89 authorities<sup>11</sup>. The lists of the Brazilian and English local governments that took part in the study are shown as part of Appendix A. The governments that have answered the questionnaire are not disclosed due to an anonymity clause.

The first advantage of this approach is that the number of governments studied is not impractical (key point #1). Brazil has a total number of local governments of almost 5,600 (5,570 Municipalities, 26 States and one Federal District, according to figures from IBGE (2012)), that share different realities in regards of management structures (Aquino and Cardoso, 2012). Working with all of them would be impracticable as there is no centralized database with staff contact information for these governments. In addition, their websites are not standardized and in many cases they did not provide the necessary information, such as the financial office contacts.

In England, the total number of local governments is lower in comparison with Brazil (353 authorities, according to figures from the Local Government Association (LGA), distributed among Metropolitan District, English Unitary, London Boroughs, Shire

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<sup>8</sup> The list of the Unitary Authorities and County Councils was obtained through the October 2012 version of the Office of National Statistics Code History Database (ONS, 2012). The Isles of Scilly, which is considered as a *sui generis* authority, has a population of only 2,200 inhabitants, and not all statistical bodies consider this authority as a Unitary Authority for statistical purposes – some consider it in separate. It was not included in this study.

<sup>9</sup> LGA response to a formal consultation returned 27 different Shire Counties (County Councils). The CountyCouncil.org.uk website, on the other hand, shows 28 different County Councils. The reason of the difference between both lists is Durham, considered by the last as a County Council. The present study followed LGA classification, which was in accordance with the last structural changes in English local government, occurred in 2009. Durham was part of the study as a Unitary Authority, following LGA response.

<sup>10</sup> The list of Core Cities was obtained through the Core Cities Website (2013).

<sup>11</sup> The sum of these local governments would comprise over 89 authorities, which is explained by the fact that some governments are considered to be, simultaneously, a Unitary Authority and a Core City (such as Bristol and Nottingham, for example). It is also important to consider that the Core Cities were included due to the size and importance of these governments.

County and Shire District). Furthermore, it was possible to identify a central database<sup>12</sup> with all local governments' administrative information (key point #2). However, it was found that this database was not updated to reflect the latest changes in local government structures in England. Thus, just like in Brazil, obtaining the contact of the local governments' financial managers or Section 151 Officers<sup>13</sup> would be impracticable for all 353 local authorities.

The second advantage of this approach was that it fitted the financial resources restrictions. Hard copies of the questionnaire survey were sent to all the English governments that were part of the sample, and it would have been too expensive to sample all local authorities. Similarly, the number of interviews in Brazil and England needed to be restricted due to time and funding limits (key point #3).

A third advantage was that the local governments studied in each country belonged to groups for which it was possible to retrieve information within the time constraints (key point #2). Brazil has one specific group of the regional authorities, called *Grupo de Gestores de Finanças Estaduais* – GEFIN (acronym in Portuguese for Group of Managers of the States' Finances) and one specific group of municipalities that are States' Capitals, called *Associação Brasileira das Secretarias de Finanças das Capitais* – ABRASF (acronym for Brazilian Association of Finance Secretariats of the States' Capitals). For both groups of governments there is an updated list of contacts that could be used in the research. For England, it was also possible to identify all the

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<sup>12</sup> LGA recommended using a private service that collects data from all the UK local governments, called public-sector.co.uk. This service has databases that can be freely consulted in order to obtain different information about the public sector, such as suppliers, authorities and staff.

<sup>13</sup> The Section 151 Officer is a formally nominated officer responsible for the local authority financial affairs administration. It was established by the Local Government Act 1972 (Section 151), which says that 'every local authority shall make arrangements for the proper administration of their financial affairs and shall secure that one of their officers has responsibility for the administration of those affairs'.

necessary contacts for the 89 studied governments through the public-sector.gov.uk service, indicated by LGA. However, it was considerably time consuming as this database was not completely up-to-date. So, more than one contact option had to be used.

A fourth advantage was that all Brazilian governments that took part on the research had their own accounting departments/offices. This is different to many of the Brazilian smaller local governments, which usually outsource their accounting activities (Aquino and Cardoso, 2012) to private accounting offices that attend several municipalities. So, this approach favoured the non-biased responses towards the opinion of a few, once the contacted staffs were not the same for the sample of local governments contacted (key point #4).

Finally, the size of the governments studied was reasonably similar (key point #5). The Core Cities comprise some big local governments that could be compared to the Brazilian States' Capitals. The City Councils and Unitary Authorities, due to its regional importance and size, can be compared to the Brazilian State's Capitals for this research purposes.

The only disadvantage found in this approach was that the number of governments was slightly different (key point #1): 53 and 89 Brazilian and English local governments, respectively. Although the data collected would be statistically analysed, this difference could make the research unbalanced. So, it was considered excluding one of the English groups of governments from the research, such as the Core Cities. However, even though that would create a more balanced number of governments to be compared between the two countries, it would have excluded

relevant governments from the research. So, it was decided to keep working with all the previous selected governments. It proved later to be appropriate, as the response rate to the survey was smaller in England than in Brazil, so that the number of responses turned out to be similar.

### **3.1.3. Design representation**

The notation used for this design follows the structure presented by Gorard (2013), and is represented as follows:

(England)    N        [X]    O

(Brazil)        N                O

This representation shows that there were two different groups, represented by different lines on the page. There was only one intervention (the adoption of accrual based international accounting standards), represented by X. The square brackets around the intervention X represent that this was a natural intervention. It also shows that the allocation to the groups was natural, represented by N, and that there was only be one observation for each group. As time is assumed to flow from left to right, it can be seen that the allocation precedes the intervention, which in turn occurs only for the group of English governments (that have adopted the international accrual based accounting standards) and precedes the observation. It can also be seen that for the group without the intervention (the Brazilian local governments), the observation was made simultaneously to the observation of the other group.

This cross-sectional design provides a simple approach to identify the differences between the perceptions of the challenges and benefits of international accrual

based accounting standards faced by local governments of Brazil and England. Separation into two groups according to countries (and, therefore, to the implementation status of the international accrual based accounting standards) makes comparisons possible. Besides that, as there is only one observation, there is no delay in collecting the data. Furthermore, as it was not a 'before-and-after' causal research, which usually characterizes longitudinal studies, it would not be necessary to wait for some time to observe any effects of the adoption of these accounting reforms.

Another advantage is that the accounting reforms occur without the researcher's participation (the researcher only collects data), so this study is easily replicable by other researchers. Finally, this design can be used with many different methodologies (Lancaster, 2005), and here a mixed methodology of quantitative and qualitative data was used (based on a questionnaire survey and semi-structured interviews, respectively).

The main challenge of this study is that the differences between the two groups of local governments are not limited to the adoption of the PSA reforms, which makes causal claims invalid here. Variables such as culture, education, and legal system, among several others, must be considered in the design of a causal study, which is not the objective here.

### **3.2. METHODOLOGY**

The study was based on primary data collection and analysis through mixed methods of quantitative and qualitative research. The data collection instruments were a

questionnaire survey (quantitative) and interviews (qualitative) with the financial managers of local governments from both countries.

The option of working with mixed methods of quantitative and qualitative research has the advantage of '*adding a different dimension to the study, providing both analysis in breadth* (general questionnaire applied to each sample of local governments) *and depth* (specific interview made with a small number of local governments)' (Moore, 2000, pp.12-13), besides being complimentary (Bryman, 1992; Walliman, 2001).

The analysis of the questionnaire responses would show which expected perceptions as presented in the literature review are experienced by governments from Brazil and England (research questions #1, #2, #4 and #5) and the differences in their perceptions (#3). The interviews would make it possible to identify the reasons why governments from these countries experience these perceptions, helping to identify what Brazil can learn from the English experience (# 6).

The chosen methodology also linked the quantitative and qualitative parts of the study. The questionnaire survey statistical analysis made it possible to establish a ranking based on the significance of the differences of the response distributions for Brazil and England. Therefore, it showed the differences and similarities in their perceptions in regards the PSA reforms, which were the base to develop the interview guide. Furthermore, this made it possible to establish the questions that would be prioritized, which was particularly useful in cases in which the interview time was limited.

Finally, the feedback was analysed according to the data collection instrument. The questionnaire data was analysed through descriptive statistics and hypothesis tests to identify the most significant similarities and differences about the PSA reforms for both countries. The interviews were coded to identify the reasons that support their opinions.

### 3.2.1. Questionnaire survey development

The questionnaire was developed in order to be a self-completion online and/or hard-copy form. It used an analytic survey approach based on closed and objective questions (Gill and Johnson, 2002), as the interviews (mixed methods) would create the opportunity to collect more detailed information.

The questionnaire comprised four different sections: AA benefits, IAS benefits, PSA reform challenges and additional commentaries, comprising closed mandatory questions and an optional space for additional comments<sup>14</sup>. The fourth and last section was comprised of only one open question about particular perceptions and experiences of the PSA reforms. The general structure of the survey questionnaire and its four different parts/sections is presented in Table 4 below:

**Table 4:** Questionnaire structure

Part	Questions
Part 1:	AA Section: 26 mandatory Likert scale closed questions and space for optional comments
Part 2:	IAS Section: 11 mandatory Likert scale closed questions and space for optional comments
Part 3:	Challenge section (PSA reforms challenges): 13 mandatory 'easy to hard' questions and space for optional comments
Part 4:	1 optional open field for additional comments

<sup>14</sup> It was decided that all the closed questions would be required and all the open questions would be made optional. The online version of the questionnaire was easily adjusted, but it was not possible to amend the hard-copy version, which was only distributed to the English respondents.

The first two parts were comprised only of closed questions based almost completely on the Likert scale, which according to Shank and Bircher (2009, p.157) *'is an appropriate tool for comparing opinions with greater precision than a yes-no type question, and greater ease of evaluation than with an open-ended question'*. This type of question is also used in statistical analysis (Field, 2009), which would make it possible to identify the similarities and differences of the perceptions of the Brazilians and English financial managers regarding the PSA reforms. The scale used in the first two parts of the questionnaire is shown in Table 5:

**Table 5:** Likert scale for AA and IAS questions

Disagree	Partly disagree	Neither agree nor disagree	Partly agree	Agree
1	2	3	4	5

To the Likert scale shown above it was also added a 'do not know' option, which would not be considered in any statistical analysis.

The third part of the questionnaire comprised the challenges faced when implementing the PSA reforms, used a simple scale (from easy to hard). The scale used in this part of the questionnaire is shown in Table 6:

**Table 6:** Likert scale for questions about challenges faced when of the PSA reforms

Easy to implement	1	2	3	4	5	Hard to implement
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During the development of the questionnaire, points highlighted by Moore (2000) were observed: the length, the use of simple sentences and words, the presence of closed questions to obtain straightforward information reducing the chance of ambiguity, the use of a cover letter to explain the research purposes, and an 'attractive look'. Terms that could be identified as ambiguous and double-barreled



questions (according to the pilot test) were avoided. Finally, it was decided that the questionnaire would be anonymous, unless the respondent wished to be identified.

All the statements of parts 1 and 2 were based on the IFAC Studies (study numbers 6, 11 and 14) as well as in considerations made by some international organizations (such as the United Nations Office for Project Studies) and academic studies regarding the challenges, advantages and disadvantages of the IAS and AA in the public sector as presented in the literature review chapter. Part 3 statements were based mostly on the points identified by the Brazilian National Treasury Secretariat Instruction number 828 (2011) as the guidelines to materialise the PSA reforms in the Brazilian public sector.

The questionnaire is shown in Appendix A. The cover letter, which was used on the hard-copy versions of the questionnaire submitted to the English respondents and also on the online versions is also shown in the same Appendix.

### **Questionnaire pilot tests**

After finishing the draft version of the questionnaire, a pilot test was conducted with professionals and academics with public sector accounting knowledge and expertise. They were asked to validate the electronic version of the questionnaire according to the following items:

- Content and depth of the questions;
- Terminology;
- Response time;
- Questionnaire length;

- Questionnaire structure (links between pages, use of open and closed questions and number of questions for each section);
- Language mistakes; and
- General considerations they identify as important.

The questionnaire developed for Brazil and England was the same, but in different languages (Portuguese and English). Both versions were sent to pilots in order to identify translation and content mistakes.

5 different pilots took part on the test: 3 for the English version and 2 for the Portuguese version. These pilots were:

Portuguese version:

- Professor of Public Sector accounting at the State University of Rio de Janeiro and former Controller of the City of Rio de Janeiro;
- Former Brazilian Central Government head accountant;

English version:

- Brazilian House of Representatives employee and former member of the Brazilian Public Sector Accounting team responsible for setting the Public Sector Accounts Consolidation Rules;
- IFAC IPSASB's Deputy Director;
- Ernst & Young Public Sector Accounting and Auditing manager and Technical Member/Visiting Fellow of the IPSASB.

The feedback of pilot tests showed an average response time of 20 minutes, which corresponded to expectations (between 15 to 25 minutes). It also identified a few questions with a similar meaning, differing only in regards to 'IAS' or 'AA'. In addition,

it was suggested to make some minor adjustments to avoid terms that could be ambiguous or that could have different meanings for different people, such as 'performance management'. All these suggestions were discussed with the supervisors and almost all of them were followed by adjustments in the questionnaire.

### **3.2.2. Interview guide development**

The interview guide development was divided into three different parts: the identification of the topics that would be included in the interview guide; the definition of the structure of the interview; and the elaboration of the interview guide and consent forms.

To determine which topics would be included in the interview guide, two nonparametric hypothesis tests (Mann-Whitney U and Kolmogorov-Smirnov) were run for each question to identify whether there is statistically significant difference between the feedbacks of Brazilian and English financial managers. Those with the  $p$  value closest to 0 would present the biggest differences between Brazilian and English perceptions. The significance obtained in the Mann-Whitney U test was used to rank the results, and if two or more SPSS variables had the same result, the Kolmogorov-Smirnov result would be used to differentiate and organize the 'similarities and differences ranking'. If the significance results were still the same for both tests, the item order would be used as the criteria to organize the 'ranking'.

To run these tests it was first necessary to identify the test fields and the groups. The test fields correspond to each question, or to each Statistical Product and Service Solutions (SPSS) AA, IAS or CH variables as presented in Appendix C. The groups

correspond to the country, Brazil or England. Nonparametric tests fit the research purposes, as they do not assume the data follows the normal distribution and have as a condition only the fact that the dependent variable needs to be measured on an interval scale (Kerr *et al.*, 2002; Anderson *et al.*, 2011). Furthermore, the Brazilian and English data can be considered independent as '*the criteria for selecting the sample of one country did not affect the selection criteria for the sample of the other*' (adapted from Argyrous, 2000, p.143). Thus, the statistical test used here can be classified as a 'nonparametric test for two independent samples', and the samples are the responses from local governments from each country as presented in Table 7.

The statistical analysis was based on a hypothesis test for each of the AA, IAS, and CH questions (or SPSS variables), grouped according to the country the respondent government belonged. This test had the following null-hypothesis ( $H_0$ ) and hypothesis ( $H_1$ ):

$H_0$  = *Brazilian and English local governments' share the same perceptions about the analysed item of the PSA reforms*

$H_1$  = *Brazilian and English local governments' have different perceptions about the analysed item of the PSA reforms*

In practice, this test showed how likely it was for the Brazilian and English responses to be the same. However, as important as the hypothesis acceptance or not, was the significance value: the closest to 0, the biggest the chances that the Brazilian and English responses are different. This significance was used to establish the 'similarities and differences ranking'.

## Nonparametric Mann-Whitney U Test

The Mann-Whitney U test uses an algorithm that ranks the combined data for the two tests (Brazil and England), sum the rankings of each sample separately and uses a statistic test  $z$  to determine whether the observed value of the sum of the rankings  $T$  for one sample appears to be part of the distribution (Anderson *et al.*, 2011). The statistic test  $z$  is represented by

$$z = \frac{T_{\text{Brazilian}} - \mu_{\text{Brazilian,English}}}{\sigma_{\text{Brazilian,English}}} \quad (1)$$

Where:

$T_{\text{Brazilian}}$  : denotes the sum of ranks based on the scores of Brazilian financial managers

$\mu_{\text{Brazilian,English}} (\sigma_{\text{Brazilian,English}})$ : represents the mean (standard deviation) of ranks based on the scores of both Brazilian and English financial managers.

Considering  $-Z_c$  and  $Z_c$  the critical values of  $Z$  test, the hypothesis  $H_0$  will be accepted if

$$-Z_c < z < Z_c \quad (2)$$

Otherwise, if

$$z \leq -Z_c, \text{ or } z \geq Z_c \quad (3)$$

hypothesis  $H_1$  will be accepted.

## Nonparametric Kolmogorov-Smirnov Test

The Kolmogorov-Smirnov algorithm tests whether two underlying one-dimensional probability distributions (Brazilian  $n$ , and English  $n'$ ) differ. According to this test, the null hypothesis  $H_0$  will be accepted if

$$D_{n,n'} < c(\alpha) \sqrt{\frac{n+n'}{nn'}} \quad (4)$$

where

$$D_{n,n'} = \sup |F_n(x) - F_{n'}(x)|, \quad (5)$$

and

$$F_n(x) = \frac{1}{n} \sum_{i=1}^n I_{X_i} \leq x, F_{n'}(x) = \frac{1}{n'} \sum_{i=1}^{n'} I_{X_i} \leq x \quad (6)$$

where

$I_{X_i \leq x}$ : is the indicator function, equal to 1 if  $X_i \leq x$  and equal to 0 otherwise.

$F_n (F_{n'})$ : is the empirical distribution function of the scores ( $x$ ) of Brazilian (English) financial officers, with  $n$  ( $n'$ ) is number of observation of scores for Brazilian (English) financial managers.

Otherwise, if

$$D_{n,n'} \geq c(\alpha) \sqrt{\frac{n+n'}{nn'}} \quad (7)$$

hypothesis  $H_1$  will be accepted<sup>15</sup>.

### Topics that were included in the interview guide

These hypotheses were tested once for each of the questionnaire item as presented in Appendix C. The  $p$  values for each AA, IAS and CH SPSS variables and for each of the two tests are presented in the same tables used to give an overview of the descriptive statistics (Tables 10 to 12).

<sup>15</sup>  $c(\alpha)$  is the critical value of each confident level  $\alpha$  according to the following table:

Confident level	80%	90%	95%	98%	99%	99.8%
$\alpha$	0.1	0.05	0.025	0.01	0.005	0.001
$c(\alpha)$	1.22	1.36	1.48	1.63	1.73	1.95

The research focused on the most significant differences as signaled by the hypothesis tests significance. Sometimes two different variables could be used in the same question because of the similarities of the subjects. One example is the 'Crisis Prevention': while for 'IAS\_CrisisPrevention' variable both Mann-Whitney and Kolmogorov-Smirnov  $p$  values were 0 (very different), for the 'AA\_CrisisPrevention' they were, respectively, 0.014 and 0.216. Therefore, according to the significance criteria, the 'AA\_CrisisPrevention' variable would not be part of the interview guide. However, once the subject is the same (crisis prevention) the two variables were considered in the same question, which was '*... what are the effects of the adoption of AA and IAS on the prevention of crisis and problems to the public sector?*'

Another important aspect was that not all major differences were included in the interview guide. While for the IAS variables all major differences were included in the interviews, for the AA variables some did not. This was due to the fact that the questionnaire survey open fields already had enough data to understand this difference. The SPSS variables considered while developing the guide are presented in Appendices E and F.

Finally, one general open question not related to the statistic tests results was included in the interview guide. It aimed to get the managers' perceptions of the challenges during the PSA reforms other than the ones listed before in the survey questionnaire. It also aimed to let the interviewee to freely expose his\hers perceptions about the PSA reforms.

## **Structure of the interview**

After deciding the interview guide topics through the 'hypothesis tests significance rankings', the structure of the interviews was designed. The first point was to decide among a structured interview, a semi-structured interview or an unstructured interview. The unstructured interview was immediately discarded because as it is completely open and without any agenda, it probably would not link the respondents answers to the main points as identified by the statistics tests. The structured interview was then considered, as it has the advantage of being more rigidly structured to enable comparative analysis. However, the semi-structured interview is more flexible, and could provide data to support a deeper analysis. As the first phase of the data collection (the questionnaire survey) provided basic comparable answers, it was concluded that in some way it had a similar objective as a structured interview. In addition, the idea was to create an atmosphere for respondents to express their opinions or ideas freely, so the issues concerned by this study could be deeply explored. So, the semi-structured interview structure was chosen.

According to Dunne *et al.* (2005, p.28), the interview approach used here can be classified as formal, semi-structured, individual, one-off and private. It can also be considered as an elite interview (Gillham, 2005), because it was expected that each interviewee would have a deeper understanding than the interviewer in regards the practical issues of the reforms in the local context and would require a formal protocol to be followed in order to make initial contact to schedule a meeting.



### **Consent form**

A consent form was also included in the interview process. It explained some concepts included in the questions and allowed the interviewee to choose between a digitally recorded interview, an interview with written notes or both. It also presented the ethical principles that were observed, such as the data retention period and the anonymity of the responses when presenting the results. This form was read to all the respondents before the interview, and they could opt to approve the interview conditions by signing this form or by letting the interviewer digitally record the session with their consent. This interview consent form can be viewed in Appendix B.

### **3.2.3. Data collection**

This process lasted 5 months, from December 2012 to April 2013, and was split into quantitative and qualitative data collection periods. It was similar for both the Brazilian and English elements of the project.

#### **Questionnaire Data Collection**

After developing the questionnaire, two main concerns were: (i) to approach the financial manager of each of the local governments that took part in the study, and (ii) to derive a significant response rate to make robust comparisons possible.

To approach the Brazilian managers, the questionnaire was sent in an electronic version through email according to the latest email addresses lists obtained from the Group of States Governments (GEFIN) and the Group of States' Capitals Governments (ABRASF). The English email address list was obtained through public-sector.co.uk service, and if one contact was missing, alternative emails addresses, such as that for general enquires, was available.

The online version of the questionnaire was accessible for responses from the second half of December 2012 to the end of February 2013 (two and a half months) for both Brazilian and English samples. In England, besides the online version, a hard copy version of the questionnaire was also made available. The hard copy was sent by post with a return pre-paid envelope and a cover letter (Appendix A) that showed the questionnaire's electronic address. So, the English respondents could feel free to choose between the soft and hard versions of the questionnaire.

In Brazil, the initial email contact achieved a response rate of 44% within one and a half months. Email reminders were sent, and within the end of February 2013, the response rate achieved 73.5%. In England, within one month, the response rate reached 23%. Like in Brazil, email reminders were sent and by the end of February the response rate reached 38%, comprising 34 of 89 governments. The final figures of the questionnaire responses are presented in Table 7:

**Table 7:** Response rate for the questionnaire survey

Country	Total of Surveyed Authorities	Total of Respondents	Final Response Rate
Brazil	53	39	.735
England	89	34	.382

Even with a percentage of Brazilian respondents of nearly twice as much as the percentage of the English respondents, the total number of respondents for each country was close, and was considered satisfactory for the quantitative analysis.

### **Interview Data Collection**

The interviews aimed to contact approximately 10% of the questionnaire respondents, or between 2 to 4 interviews for each country. Only the respondents that had agreed to be interviewed were contacted.

The choice on the managers that would be interviewed was based in four criteria:

- (i) Their willingness to be interviewed, as signaled in the questionnaire forms (hard copy or online version);
- (ii) The size of the local government in terms of population;
- (iii) The feasibility of interviewing them in person; and
- (iv) The availability of the respondent to be interviewed during the survey period (March and April, 2013).

Not all Brazilian and English questionnaire respondents were willing to be interviewed (i). In Brazil, 30 of the 39 questionnaire respondents checked they were available for future interviews (77%). In England, of the 34 questionnaire respondents, only 12 (35%) checked that were willing to be interviewed in the future.

Among these, the biggest governments in terms of population were ranked (ii). The researcher analysed the feasibility of visiting them in person to conduct the interviews, which was particularly important in Brazil, where governments are very far one from another. So, in order to work under this research funding constraints, the researcher tried to interview the biggest local governments within a certain area (iii).

After selecting the 'targets' to be interviewed, they were contacted by email and/or telephone in order to schedule an appointment. Some managers were not available during that period (particularly in England, where they were busy with the end of the fiscal year). For the remaining, a visit was scheduled (iv).

The interviews usually lasted from half an hour to two hours. They were conducted in person in Brazil and in England, with only one exception, due to the interviewee

agenda, that had to be conducted by telephone. The interviews were all digitally recorded (with interviewees' consent) and transcribed in order to be coded and analysed. In two cases, more than one person took part in the interview. The interview response rate is presented in Table 8:

**Table 8:** Response rate for the interview

Country	Total of authorities willing to be interviewed	Total of authorities interviewed (people that took part in the interviews)	Final Response Rate (authorities interviewed / total of authorities)
Brazil	30	3 (4)	.100
England	12	2 (3)	.167

### 3.2.4. Instrument of quantitative analysis

After collecting the data, it was adjusted to be inserted in SPSS. Before this input, the collected data was validated and SPSS was set to fit the data. This process of data input and validation will be detailed in this section.

Brazilian respondents used the online version of the questionnaire, which was set to prevent filling mistakes, such as checking more than one option for the same question or not answering one of the required questions. The only limitation in the online version was that it did not prevent one respondent answering the form more than once. However, within the Brazilian local governments' responses this last problem was not observed. All the responses from Brazil were ready to be analysed.

In regards the English respondents, which had the option to answer a hard copy version of the questionnaire, three problems were identified:

- (i) Answers to both hard and soft copies of the questionnaire;
- (ii) Answers to the online version more than once; and

- (iii) Governments that made use of the hard copy version of the questionnaire and did not answer a few questions or checked more than one response.

Problem (i), which occurred due to the lag between the return of the hard copy questionnaires and the email reminder that was sent with the online version of the research, was solved using a precedence rule of the online version over the hard copy version of the questionnaire. For problem (ii) it was applied the rule of accepting answers that arrived first, and problem (iii) was managed with settings on SPSS in order to ignore missing or mistaken values while generating the statistics.

### **SPSS dataset design**

The SPSS dataset was then devised. One SPSS identification item, which for this study purposes is called a variable<sup>16</sup>, was created for each of the 53 questions in the questionnaire. In addition, two additional SPSS variables were created: one to identify the respondent's country, Brazil or England, and another to identify each response for control purposes (question\_id).

The questionnaire had different sections, and SPSS variables were named with a prefix that would help to identify which section they belong to. The prefixes were AA, for accrual accounting questions, IAS, for international accounting standards questions, and CH, for questions about the challenges faced during the PSA reforms. They were connected to specific labels for each question, forming the SPSS variable name. The list of these variables and the questionnaire items they are linked with is presented in Appendix C.

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<sup>16</sup> For this study purposes, each variable can be understood as one questionnaire item.

The SPSS data dictionary can be viewed in Table 9, and acceptable SPSS variable values are shown in Appendix A (as part of the questionnaire):

**Table 9:** Simplified data dictionary for the quantitative analysis

Variables	Position	Label	Measurement Level
Case	1	Case	Nominal
Country	2	Country where the gov. is located	Nominal
Use AA	3	Use of AA	Ordinal
Budget Basis Elaboration	4	Basis on which the budget is set	Ordinal
AA Variables	5-30	Specific for each AA variable	Scale
Use IAS	31	Use of IAS	Ordinal
IAS Variables	32-42	Specific for each IAS variable	Scale
CH Variables	43-55	Specific for each CH variable	Scale

### **SPSS data input**

After setting the dataset, the data was transferred from the online and hard copy versions of the questionnaire to SPSS. All the hard copy forms unanswered items and questions that had more than one answer checked were signaled in order not to be statistically analysed. After that, duplicate answers were filtered in order to be excluded according to the rules 3.2.4 (i) and (ii).

### **3.2.5. Instrument of qualitative analysis**

The recorded interviews were transcribed in order to be analysed. After that, they were coded using SPSS variable names as the coding structure (codes are the SPSS variables as presented in Appendix F). Each excerpt from the interview was associated with one or more identifiers as presented in Appendix F Table F1. This, Interviews were linked to the questionnaire, and the quantitative analysis could ‘obtain words’ for the biggest differences in perceptions.

The total number of interviews was not big enough to justify the use of any specialized coding tool. It was feasible in terms of time constraint to analyse the

interviews one by one. The most important findings for each question are presented in Chapter 5.

### **3.3. ETHICAL ISSUES**

Ethical procedures were considered during the whole research process. Transparency of the objectives, confidentiality and integrity of the data were observed during the design of the data collection instruments as well as when collecting the data. All the participants were informed that personal information would not be identified, and that all the collected data would be stored according to the University of Birmingham's Code of Practice for Research (2012-13, p.6), which states that the data has to be stored in their original form and for a period of 10 years. In addition, the Data Protection Act (1998) guidelines were observed, as the research investigated aspects related of the personal perceptions of participants.

The participants were neither obligated to answer the questionnaire nor to be part of the interview. They were always informed of the purposes of the research, the procedures of the questionnaire of the interview, and that taking part in the research was voluntary and that they could withdraw at any time. Interviews were recorded but participants were assured that they could request that the recording device be turned off at any time during the interview. During the interview they agreed with instructions presented in a consent form elaborated observing Homan's (1991) considerations, which are (i) to provide a full explanation of the research; (ii) to provide a clear explanation of what the participation involves. They were identified during the interview, but all their comments considered in this study were not identified. For the questionnaire, the respondent could opt to be identified or remain anonymous.

## **CHAPTER IV**

### **4. QUANTITATIVE ANALYSES**

This chapter presents the analyses of the data collected through the questionnaire survey. It uses descriptive statistics to identify the perceptions of the local governments of Brazil and England and gets depth from the commentaries added to each question. To do that, these analyses make use of three main tables (one for each group of questions – AA, IAS and PSA reforms challenges) that consolidate the questionnaire data. Whenever necessary, these analyses make use of detailed descriptive statistics presented in Appendix D.

These three main tables also present the hypothesis tests significance results, which are used to identify the main similarities and differences in the perceptions of Brazilian and English local governments. The descriptive and hypothesis analyses were made using SPSS data analysis features.

This chapter is divided into three different sections. The first one presents Brazilian and English local governments' perceptions of the AA benefits. The second presents their perceptions in regards to IAS benefits, and the third presents their perceptions in regards to the challenges of the PSA reform. All the critical discussions, major findings and answers to the research questions are presented in chapter 6, using not only the analyses presented here but also the qualitative analyses presented in chapter 5.

#### **Descriptive statistics and questionnaire comments**

The SPSS descriptive statistics feature was used to generate the comparative tables from the answers distribution according to each of the questions from respondents of



both countries. It sometimes makes evident the differences of the distribution of the Brazilian and English responses, but it is not sufficient for establishing a ranking of the biggest differences in responses distributions (established through a hypothesis test presented in section 3.2.2).

The descriptive statistics analysis was divided in three different sections, following the questionnaire sections 1, 2 and 3: AA, IAS and CH. Besides presenting the distribution statistics, this analysis also included the financial managers' comments. All the 56 descriptive statistics Tables are available in Appendix D.

#### **4.1. DESCRIPTIVE STATISTICS FOR AA DATA**

This section presents the analyses of the descriptive statistics present in Appendix D as well as in Table 10. General questions (e.g. 'in which basis is the budget elaborated in the entity you work in') responses were also presented here, but were not part of a deep analysis as they only present general information about the local framework, and not the financial managers perceptions. Appendix D Table D.1 presents the responses statistics, and was not used for any analysis purposes.

##### **General questions**

The first question (Appendix D Table D.2) identifies whether the local governments use AA. Brazilian respondents answered that their local governments 'do not use AA but will adopt it in the next few years' (46%) and that they 'are already using AA, but only for some accounting aspects' (49%). It reflects the PSA reforms period which the Brazilian local governments are presently going through. On the other hand, English respondents have answered that 'AA is fully implemented in local governments in

which they work' (82%), with a few answering that it is only implemented for some accounting issues (18%). It reflects the advanced stage of adoption of AA in the UK.

The second question (Appendix D Table D.3) showed that for both the Brazilians and English the budget basis they follow is clear: 87% of the Brazilian financial managers answered that their entities follows the modified cash basis budget regime or the cash basis budget regime, while 80% of the English said they follow the accrual basis budget regime. These answers are in line with the literature for the PSA reforms in the UK (Kahn and Meyes, 2009) and in Brazil (Monteiro, 2013).

### **Specific questions**

All other questions are specifically related to the perceptions of the financial managers in regards to AA. These questions are organised in ten different columns, as presented in Table 10. The first column presents the question identification number (question\_id), which is the same as the question number in the questionnaire (Appendix A). The second column presents the question 'SPSS variable' label, which was used in SPSS to identify each of the questions. Third to fifth columns present the descriptive statistics for Brazil, with the Likert scale extreme positions values added in order to provide an overall understanding of the perceptions. Sixth to eighth columns present the same data from the three previous columns, but from the English perspective. Ninth and tenth columns present the statistical significance results ( $p$  values) from the hypothesis tests used to identify the biggest similarities and differences between Brazilian and English local governments. This data was used mainly to drive the elaboration of the interview guide, as previously presented.

**Table 10:** Descriptive statistics and nonparametric tests results for Brazilian and English financial managers' feedback on AA questions

Question Id #	SPSS Variable	Brazil			England			Mann-Whitney U p value	Kolmogorov-Smirnov p value
		Agree / Partly Agree	Neutral	Disagree / Partly Disagree	Agree / Partly Agree	Neutral	Disagree / Partly Disagree		
#3	AA_DecisionMaking	97%	-	03%	94%	03%	03%	0.788	1
#4	AA_Accountability	97%	-	03%	94%	03%	03%	0.241	0.993
#5	AA_IdentifyLiabilities	95%	-	05%	100%	-	-	0.013	0.326
#6	AA_PlanSettleLiabilities	100%	-	-	100%	-	-	0.964	1
#7	AA_FinancialPerformManagement	89%	05%	06%	94%	03%	03%	0.437	1
#8	AA_CostAccounting	100%	-	-	97%	03%	-	0.011	0.38
#9	AA_FinResourcesSerPerformance	97%	-	03%	91%	09%	-	0.638	1
#10	AA_BudgetFormulation	92%	03%	05%	59%	29%	12%	0.009	0.034
#11	AA_FinancialPosition	100%	-	-	97%	-	03%	0.537	1
#12	AA_LongTermView	97%	-	03%	76%	15%	09%	0.01	0.183
#13	AA_AchieveObjectives	100%	-	-	88%	09%	03%	0.457	0.944
#14	AA_LowestFinancialInputs	91%	03%	06%	65%	26%	09%	0.099	0.135
#15	AA_AssetManagement	97%	-	03%	59%	29%	12%	0	0.001
#16	AA_CashFlowManagement	94%	03%	03%	41%	24%	35%	0	0
#17	AA_ExternalUsers	97%	-	03%	78%	13%	09%	0.03	0.394
#18	AA_InternalUsers	97%	-	03%	97%	-	03%	0.426	1
#19	AA_EffectiveCashBudget	42%	06%	52%	30%	28%	42%	0.617	0.433
#20	AA_EffectiveAccrualBudget	78%	08%	14%	94%	06%	-	0.003	0.063
#21	AA_EasytoWork	67%	03%	30%	82%	09%	09%	0.206	0.447
#22	AA_CostBenefit	94%	03%	03%	78%	19%	03%	0.159	0.741
#23	AA_StakeholdersUnderstanding	81%	08%	11%	72%	25%	03%	0.181	0.563
#24	AA_CreativeAccounting	67%	06%	27%	40%	21%	39%	0.017	0.043
#25	AA_CrisisPrevention	94%	-	06%	70%	15%	15%	0.014	0.216
#26	AA_QualifiedAccountants	95%	-	05%	10%	03%	87%	0	0
#27	AA_ParliamentOversight	41%	08%	51%	03%	30%	67%	0.068	0.015
#28	AA_ProfessionalJudgement	92%	-	08%	88%	03%	09%	0.26	0.949

#### 4.1.1. Accountability and decision-making process

Accountability and decision-making are represented by Table 10 questions #3 and #4 (SPSS variables AA\_DecisionMaking and AA\_Accountability), as well as Appendix D Tables D.4 and D.5. This data show that over 94% of the responses from managers in both countries agree or partly agree with IFAC (2011, p.12) Study #14, which states that *'the information contained in financial reports prepared on accrual basis is useful both for decision-making and accountability'*. Some observations from the Brazilian respondents regarding the effects of AA on the decision-making process were:

- That the present Brazilian accounting information, which uses the 'budget basis' accounting, is not best suited for the local financial management, and is almost only used for meeting the requirements of the Courts of Accounts (external audit offices). Therefore, the decisions are presently made with almost no consideration of the accounting information;
- AA will show not only the cash-flow, but also the future payables and receivables. It would create a more adequate framework for the financial management;
- AA will capture all the information that somehow impacts the equity, which is not the case presently;
- The few criticisms were based on the fact that usually in Brazil there is an imbalance between the political and technical decisions. Some respondents agreed that AA provides useful information for financial management, but did not believe that AA would change the way decisions are made. For example, the assets replacement decisions would not use the accrual information, such

as depreciation, but instead it would be based upon political convenience, such as the proximity of elections;

The English governments also highlighted that the accrual basis of accounting better reflects the facts that have affected the entity's equity. In their opinion, it constitutes a more appropriate framework to identify the governments' responsibilities, which improves the accountability process. One example provided was that the accruals raised for all goods and services that were already booked would help to monitor the accounts budget and control cash outflows. Thus, the process would be more transparent for management as well for society.

#### **4.1.2. Management of assets and liabilities**

According to IFAC study #6 (1995, p.16), one disadvantage of the cash basis is the fact that *'the expenditure is not recognized until the following period even though an obligation exists'*. It adds that the cash basis *'ignores not only liabilities arising out of normal operations, but also debt and other long term liabilities'*, even when complimented by non-accounting controls to register the liabilities (such as general notes). This IFAC study also suggests that financial statements prepared under cash basis do not provide vital information to evaluate the government's management. Another IFAC study (2011) presents the possibility to evaluate an entity's ability to finance its liabilities as one of the benefits of AA adoption.

Both Brazilian and English financial managers agree that AA provides a consistent basis to identify the obligations that are liabilities (95% and 100%, respectively, according to Table 10 question id #5). They also agree that AA compels public sector entities to acknowledge and plan for the settlement of their liabilities (100%, for both

countries, according to Table 10 question id #6). Brazilians have also commented that on the accrual basis some liabilities that do not have a budget correspondence, or that arise before the budget is committed, will be finally registered (presently many governments only recognize a liability if there is committed budget associated to it, e.g., liabilities with personnel holidays will only be recognized when budget is committed, even with the civil servants acquiring this right on a monthly basis). According to them, it will also lead to a better planning of the payment of liabilities. The English managers added that AA usually helps in this case, with exceptions where legislation overrides normal accounting practices. These opinions are quite consistent with IFAC considerations.

On the other hand, both countries do not share exactly the same opinions on the effects of AA on the improvement of asset management, as presented by IFAC and Wynne (2004). Table 10 question #15 shows that while Brazilians believe that the use of AA helps to better manage the assets (97%), only a bit more than half of the English agree. Brazilian respondents' questionnaire comments indicate that AA helps to identify when the assets will have to be replaced and establish priorities through a better planning. The English believe that decisions of replacing assets may use accounting information only if the asset management system is integrated to the accounting system. However, the decisions towards the assets replacement usually do not use AA information, such as depreciation. It confirms Marriott *et al.* (2011) findings for capital asset management in the National Health Service (NHS) case, which suggests that the information registered by asset management information systems is not used for decision-making purposes, and this non-useful information would not justify the accounting changes.

#### **4.1.3. Financial position, service performance and cost accounting**

IFAC study #14 (2011) states that the use of an accrual basis of accounting make it possible for users to assess the financial position of an entity and understand the reasons of any changes. Both Brazilians and English respondents agree with it (100% and 97%, respectively, according to Table 10 question #11).

IFAC study #11 (2000, p.68) showed that the U.S. central government has made use of AA to identify the costs of major programs, and that the FASAB has issued '*cost accounting standards (on accrual basis) that require agencies to measure the full costs of goods and services they provide*'. IFAC study 14 (2011, p.12) adds that one of the benefits of AA is that '*(financial reports prepared on AA basis) is useful in evaluating an entity's performance in terms of its service costs, efficiency, and accomplishments.*' Kahn and Meyes (2009) also highlight that cost information, which is essential to assess the efficiency of government services, can only be fully determined when under an AA framework, including noncash costs, such as depreciation and accrued pensions. Both Brazilian and English respondents agree that AA is necessary for effective cost accounting (100% and 97% of respondents, respectively, according to Table 10 question #8), that it leads towards a better financial performance management (89% and 94%, respectively, according to Table 10 question #7), and that it provides an appropriate framework to link the financial resources and services performance (97% and 91%, respectively, according to Table 10 question #9). The comments made by both countries were that, despite the importance to determine the costs, little (or no) cost accounting is done in the public sector. Brazilian respondents have suggested that cost accounting is not used

because the present cash basis framework does not provide reliable information to estimate costs (e.g., no depreciation is registered).

#### **4.1.4. Budget formulation and effectiveness with cash and accrual budget**

The 'cameralistic' basis of accounting used by Brazilian local governments has a strong correspondence with the modified cash basis budget presented by the national regulation applied to all levels of governments. In a context of PSA reforms, and despite their lack of experience with accrual budgeting, Brazilians believe that AA would fit better with an accrual budget basis rather than with a cash budget basis (according to Table 10 questions #19 and #20, 52% of the Brazilian respondents believe that AA is not effective with cash basis budgeting, while only 14% believe that it is not effective with accrual basis budgeting). However, some Brazilian respondents commented that accounting and budgeting are different subjects, and that AA could be suitable for accrual and cash basis budgeting depending on how both accounting and budgeting frameworks are set. On the other hand, the English respondents demonstrate no consensus about the effectiveness of AA with a cash basis budget (according to Table 10 question #19, 30% believe that AA works under a cash basis accounting framework, 28% are neutral and 42% disagree). However, the English strongly agree (94%) that it is effective with an accrual basis budget (Table 10 question #20). Some English respondents commented that they could not understand the existence of a different basis for accounting and budgeting. These opinions accord with Hepworth's (2002) considerations, in which AA should go together with accrual budgeting. They also to some extent reinforce Ball and Pflugrath's (2012, p.12) observation that '*budgets and appropriations (should be) on the same basis*'.



Both Brazilian and English respondents agree that AA helps to formulate budgets (92% and 69%, respectively, according to Table 10 question #10). Brazilians commented that AA brings a complete view of the liabilities and receivables, which could be used to take a long term view of budget planning.

#### **4.1.5. Creative accounting, crisis prevention and parliament oversight**

According to Ball and Pflugrath (2012), one alleged benefit of AA (and, indirectly, of IAS) is that it is part of the solution for the financial crisis such as the sovereign debt crisis faced by many countries since 2008 as it results in greater comparability, accountability and transparency. For example, there may be better disclosure of the liabilities when compared to the cash basis accounting. Therefore, PSA reforms based on AA and IAS would help to prevent further financial crises and also add a long-term view to the political stakeholders, which would have a more reliable overall picture of the financial management of the government while taking decisions.

Most Brazilian and English respondents believe that AA leads to better debt management and helps to prevent financial crisis in a local government context (94% and 70%, respectively, agree or partially agree with that, while 6% and 15% disagree or partially disagree, according to Table 10 question #25). They also agree that AA leads the public sector entities to take a long term view while making financial decisions (97% and 76%, respectively, according to Table 10 question #12). It confirms Ball and Pflugrath's (2012) statement that AA may offer a framework to provide information that would lead politicians to better evaluate the short-term/long-term tradeoffs. Brazilian respondents commented that the recognition of all liabilities would make the financial management more 'crisis-proof' – fewer liabilities would be

discovered 'suddenly and surprisingly'. They commented that even though it might not change the Brazilian politicians' short term view, at least the technical staff would have better instruments to make a long term planning.

However, the opinions were not the same regarding the effects of AA in creative accounting. Most Brazilian respondents believe that it helps to prevent creative accounting practices (67%, according to Table 10 question #25), whereas there is no consensus among the English respondents (40% agree/partly agree while 39% disagree/partly disagree, according to Table 10 question #25). Some comments, for example, suggest that the adoption of creative accounting practices is not related to the accounting basis, and that AA would not prevent it if the managers were willing to adopt creative accounting practices. Brazilian respondents believe that AA would give politicians less freedom to hide liabilities, but it could also give them instruments to manipulate assets, such as adjusting depreciation charges to their needs.

Brazilian and English respondents did not share the same opinions regarding the effects of the complexity of AA on Parliament oversight. Brazilian respondents did not share a consensus of opinions (41% agree or partly agree and 51% disagree or partly disagree according to Table 10 question #27), while English believe that the complexity of AA does not mean that it will lead to less Parliament control (according to Table 10 question #27, only 3% of the English agree that AA will lead to less Parliament surveillance). Therefore, one of the alleged disadvantages of the adoption of AA presented in Wynne (2004, p.11), that '*(AA) complexity may mean that there is less surveillance by Parliament and so the government is less accountable*', was not observed by the English.

#### **4.1.6. Staff qualification to work with AA**

Another disadvantage presented by Wynne (2004) is that with the introduction of AA in the public sector there is a lack of qualified accountants with expertise in this matter. Brazilian governments confirmed this assertion, with 95% of the responses agreeing that the public sector entities have few qualified accountants with experience in AA (according to Table 10 question #26). Brazilian respondents commented that the local governments' culture was based on a modified cash basis of accounting that was traditionally linked to the budget. There is minimal know-how of working with intangible assets, revaluation, or recognizing non-exchange transactions assets, for example. But the English respondents present a different situation, suggesting that the local government has a tradition of employing suitably qualified staff. Opinion about staff qualification was one of the biggest differences between the two countries governments' responses.

Wynne (2004) suggested that AA requires greater professional judgment by the technical staff. Both Brazilians and English agree with that assertion (a rate of 92% and 89% of agreement, respectively, according to Table 10 question #28).

#### **4.1.7. External and internal users**

The literature does not provide conclusive understandings about the advantages of AA adoption in the work of internal and external users. Wynne (2004) presents as one of the disadvantages of AA the fact that it brings challenges to some external users, such as the auditors, that will have to change from an opinion based on budgetary and legal compliance to one based on a true and fair view of the financial position of the organisation. On the other hand, Ball and Pflugrath (2012) believe that

under cash basis of accounting it is unlikely that the work of auditors will provide a credible opinion on the accuracy and reliability of the information presented by the public sector entities. At slightly different levels, both Brazilians and English agree with Ball and Pflugrath: they responded that AA benefits not only external users (97% and 78%, respectively, according to Table 10 question #17) but also internal users (97% for both countries, according to Table 10 question #18). Respondents of both countries agree that AA brings a greater understanding of PSA management issues to political stakeholders (72% and 71%, respectively, according to Table 10 question #23).

On the comments section, Brazilians added that AA could benefit the suppliers, the employees and also the citizens, once they have information prepared on a more reliable basis to make decisions such as, for example, transacting with public sector entities. Furthermore, they add that the internal users would also have more instruments to support the decision-makers with reliable information. The English commented that the information will only be useful to external users if it is disclosed to them in an understandable way.

#### **4.1.8. Achieving the entities' objectives and in identifying financial inputs**

Kahn and Meyes (2009) state that identifying the financial inputs is essential to assess the efficiency of government services. They suggest that AA identifies inputs that do not have a cash correspondence, such as depreciation, and therefore would be a more adequate framework for the public sector performance management (e.g. cost accounting would not be precise without depreciation). According to Table 10 question #14, only 6% and 9% of Brazilians and English financial managers disagree

that AA helps to identify if the public sector is achieving the goals with the lowest amount of financial inputs. However, as presented in the table as well as in comments, almost 25% of the English are neutral to the fact that AA makes it easier to identify the financial inputs that could be used to measure the financial performance of the entity.

Brazilians and English reaffirm that AA is a useful tool for financial management. As according to Table 10 question #13, 100% and 88%, respectively, agree that it helps the public sector to achieve specific objectives within financial constraints. In their comments, however, some respondents from both countries have added that AA is important, but is only part of the solution. Many other accounting tools should be used in conjunction with AA (e.g. cost accounting, explanatory notes, etc.).

#### **4.1.9. Cash-flow management**

In order to show some limitations of the cash basis accounting framework, Kahn and Meyes (2009) provide examples of accounting information that would not be disclosed other than in accrual basis accounting, such as borrowings. Therefore, AA would improve cash-flow management, such as being aware of future cash outflows that will be a result of present accrual commitments. While Brazilian financial managers strongly agree (94% according to Table 10 question #16) that AA enhances cash flow management, the English managers' opinions are dispersed (41% agree while 35% disagree). Some English commented that there are other tools to fill this gap, while the Brazilian managers believe that the simple fact of registering all receivables and payables as assets or liabilities will give them better instruments to accurately estimate the cash flows.

#### **4.1.10. AA ease of use and cost-benefit**

While studying the UK public sector AA adoption, Hyndman and Connolly (2011) identified that the transition costs from cash to accruals were uncertain, but likely to be substantial. They could not identify short term benefits or even alleged long term benefits that would justify AA adoption. Even though the costs may vary significantly according to the scope of the changes, it is difficult to ensure that the benefits are worth these transition costs. When asked about the cost/benefits relationship, both Brazilians and English mostly agreed that the transition costs to AA are justified by the benefits (94% and 78%, respectively, according to Table 10 question #22). Some Brazilian financial managers have commented that the benefits, such as a better property, plant and equipment management and liabilities control, such as pensions, would be shown in the long run.

However, Brazilians are not as confident as the English to say that working with AA will be as easy as working with cash basis accounting. Even though most Brazilians agree with that (67% against 82% of English, according to Table 10 question #21), they say that they are not familiar with certain judgements, such as determining depreciation rates or even the point in which one specific non-cash transaction creates an asset. From a perspective of those that had already completed AA adoption, the English said that many adjustments had to be managed on IT systems and on internal processes, but that gradually the accounting staff became accustomed to the new accounting framework. A few English financial managers said they could not state how easy it was to work with AA compared to cash basis accounting because they have never worked with a cash-only based accounting framework.

#### **4.1.11. General perceptions of AA in public sector entities**

The 26 AA items of the questionnaire had more similarities than differences between both countries financial managers. Brazilians were slightly more optimistic than the English in regard to some alleged AA benefits, such as a better asset or cash flow management.

The main differences were in regards staff qualification (Brazilian respondents believe that local staff is not used to work with AA) and cash flow management (English respondents believe that AA is important, but not indispensable to obtain a good cash flow management). There were also different opinions in regards the possibility of using AA with a cash or accrual basis budget, which may be related to the practical experiences in both countries (Brazil has never used accrual budgeting while many English managers do not remember working with cash basis budget).

The reasons for these few differences were discussed in outline here, and will be further explored in the qualitative part of this study.

## **4.2. DESCRIPTIVE STATISTICS FOR IAS DATA**

This section presents the analyses of the descriptive statistics for the IAS items of the questionnaire (section 2). The data is presented in Appendix D Tables D.30 to D.41 and in Table 11 questions #30 to #40. Appendix D Table D.30 only presents the descriptive statistics that show the number of valid responses, and is not used for analysis purposes.

### **General IAS question**

The first question regarding IAS aimed to identify which set of international standards the respondents were using. From Appendix D Table D.31, it is seen that 94% of the English respondents answered they use IFRS. On the other hand, Brazilians responses were more diverse: 64% said they do not use any set of IAS but will adopt IPSAS in the future and 13% said they will adopt another set of IAS in the next few years (possibly the BR GAAP converged to IPSAS). These answers reflect the transition process that Brazilians governments are going through: although most of the governments know they will indirectly adopt IPSAS in the future, it is not completely clear for a few governments which set of IAS they will use.

### **Specific IAS questions**

All Table 11 questions are specifically related to the perceptions of the financial managers in regards IAS. Table 11 data was organised in the same way the previous Table, presenting the question identification number, the name of the variable, Brazilian and English responses and the hypotheses tests  $p$  values.



**Table 11:** Descriptive statistics and nonparametric tests results for Brazilian and English financial managers' feedback on IAS questions

Question Id #	SPSS Variable	Brazil			England			Mann-Whitney U <i>p</i> value	Kolmogorov-Smirnov <i>p</i> value
		Agree / Partly Agree	Neutral	Disagree / Partly Disagree	Agree / Partly Agree	Neutral	Disagree / Partly Disagree		
#30	IAS_Accountability	69%	-	31%	61%	15%	24%	0.881	0.999
#31	IAS_Comparability	97%	-	03%	70%	09%	21%	0	0.001
#32	IAS_CreativeAccounting	78%	08%	14%	34%	21%	45%	0	0.004
#33	IAS_FinancialManagement	94%	-	06%	32%	41%	27%	0	0
#34	IAS_CrisisPrevention	89%	03%	08%	28%	44%	28%	0	0
#35	IAS_AssetsLiabilities	100%	-	-	55%	24%	21%	0	0
#36	IAS_Planning	97%	-	03%	18%	47%	35%	0	0
#37	IAS_Sovereignty	13%	03%	84%	-	17%	83%	0.865	0.943
#38	IAS_CostBenefit	95%	-	05%	30%	23%	47%	0	0
#39	IAS_Absence	73%	10%	17%	85%	06%	09%	0.028	0.125
#40	IAS_PartiallyApplied	28%	03%	69%	26%	03%	71%	0.906	0.889

#### **4.2.1. Accountability and financial management transparency**

Ball and Plugraht (2011) present the IAS, specifically IPSAS, as a framework that can be used to improve accountability and transparency of the governments. IFAC (2012a, p.11) points out that '*(the development of high quality accounting standards) is intended to enhance the quality and transparency of public sector financial reporting*'.

Most responses from both countries agree that IAS are important to achieve accountability and transparency (69% of Brazilians and 61% of English according to Table 11 question #30). The responses that do not agree with that suggested that it is also possible to achieve accountability and transparency within national standards.

Some English respondents commented that it would not be necessary to use the private sector IAS (IFRS) to achieve that, and characterized these standards as rigorous, complex, and not completely useful for the public sector particularities. These results suggest that both sets of managers believe that IAS, but not necessarily IFRS or IPSAS, are important to enhance transparency and accountability.

#### **4.2.2. Financial reporting comparability**

One of the main reasons given for the use of IAS is that it enhances the quality and comparability of the financial reports over different organizations. Ball and Plugraht (2011, p.13), for example, state that '*consistent and appropriate use of these standards provides high-quality information for politicians and investors, and as global adoption increases it provides for enhanced comparability and analysis*'. Chan (2006) adds that IAS are particularly important to developing countries once they

borrow or rely on foreign aid, and would be a useful tool not only to account for these resources but also to compare the use of them between reporting periods.

While almost all Brazilians respondents agreed with that assertion (87% strongly agree and 10% partly agree, according to Table 11 question #31 and Appendix D Table D.33), the English were rather more critical (41% agree and 29% partly agree). According to their comments, IAS are usually unintelligible to the lay user due to the terminology and complexity, and it would not result in the accounts becoming more comparable in this sense. They also commented that IAS is significantly more subjective than the previous set of standards used, the UK GAAP, and that this does not favour comparability. But they suggested that these standards could be useful for external control bodies once they could support establishing indicators used for control purposes. It would also make financial statements from public sector entities of different countries more comparable. In this sense, IAS would favour comparability.

#### **4.2.3. Creative accounting and crisis prevention**

Unlike the English, most Brazilians believe that the adoption of IAS prevents creative accounting practices at least in a certain level (according to Appendix D Table D.34, while 42% of Brazilians agree and 36% partly agree with that, only 6% and 28% of the English agree or partly agree with that). Some of the English managers' comments were that the benefits on this sense are marginal, AA adoption had already brought these benefits. Brazilian respondents' comments usually associate the decrease of creative accounting with an active role of the control bodies supported by the adoption of IAS.

Regarding crisis prevention, almost 90% of Brazilians agree or partly agree that IAS is a strong instrument to avoid it. On the other hand, only 28% of the English share the same opinion (Table 11 question # 34). English comments said that even though IFRS adoption may highlight some areas of concern, it does not impact the level of council tax, and therefore it does not add significant value. They also highlighted that they rely significantly in central government funding, which is not affected by IFRS adoption.

#### **4.2.4. Management of assets and liabilities**

Several international organizations that have adopted IPSAS have suggested that it may help to manage assets and liabilities. Before adopting IPSAS, the International Labour Office, for example, suggested that one of the expected benefits was that it would *'improve internal control and transparency with respect to assets and liabilities'* (ILO, 2006, p.1). The United Nations Office for Project Services also believes that IAS (IPSAS) brings more comprehensive information on assets and liabilities (UNOPS, 2009).

These positive expectations with IAS (specifically with IPSAS) do not echo with the English respondents, but are in accordance with Brazilian expectations. These last strongly agree that IAS will improve the stewardship of assets and liabilities (Appendix D Table D.37 shows that 100% of the Brazilian respondents agree or partly agree with that, against 23% and 32% of the English, respectively). The English comments suggest that the IFRS emphasizes more the component accounting compared to the UK GAAP. Brazilians believe that a set of IAS will bring

rules that will guide the assets and liabilities registry, and will help to put 'order on chaos'.

#### **4.2.5. Planning and in financial management**

Other common alleged benefits of the IAS are that it drives better financial management and helps the overall planning. IFAC (2012a), for example, states that one of the intentions of the IPSAS is to enhance financial reporting providing better information for public sector financial management. UNOPS (2009) states that IPSAS adoption benefits overall planning.

Brazilian responses confirm IFAC and UNOPS positions: according to Table 11 questions #33 and #36, respectively, 94% of the respondents believe that IAS results in a better management of financial resources and 97% believe that it improves overall management and planning. On the opposite side, only a few English respondents agreed with that: 32% and 18%, respectively, with most of them partly agreeing (according to data from Appendix D Tables D.35 and D.38).

English respondents' comments showed that IFRS adoption did not change the way finances are managed and planned locally when compared to UK GAAP, and the benefits, if existent, were marginal. They also said that IFRS is significantly more related to disclosure in the accounts than with planning. They commented that many political and even technical stakeholders do not understand IFRS, and do not use financial report IFRS information to make decisions. Brazilian respondents added different comments, mostly related to the more general benefits brought by AA (and not IAS), such as registering liabilities as soon as they arise.

#### **4.2.6. Administrative autonomy and sovereignty**

As presented in the literature review, one of the alleged reasons for governments not to adopt IAS is that they would lose authority to determine their own governments' standards (Chan, 2003). According to Table 11 question #37, both countries strongly disagree with that: 84% and 83%, respectively, of Brazilian and English respondents do not believe that the adoption of any set of IAS makes governments give up their administrative independence and sovereignty.

In the comments section, English respondents reported that when IFRS was being implemented, there were worries if it would have any effect on the basis in which taxation is determined. However, during IFRS implementation planning they understood that it would not interfere in the way local finance was managed. Brazilian respondents made comparisons with IFRS adoption in the private sector, which did not interfere in the way companies were operationally managed.

#### **4.2.7. Costs and benefits of the IAS adoption**

According to Chan (2006), while discussing the transition to accrual based IAS, many governments are uncertain if the costs of its adoption outweigh the benefits. However, many multilateral organizations, such as the World Bank, IMF and Asian Development Bank apparently believe that the adoption of IPSAS reduces the cost of accountability.

The cost-benefit relation was one of the questionnaire items where the opinion of both countries was most different. While 95% of Brazilians believe that the benefits of adoption of IAS justify its costs, only 30% of the English agree (Table 11 question #38). English respondents comments were usually negative, that local government

has not had material benefits from the adoption of IFRS, but only a workload increase. Furthermore, they said that IFRS made the accounts even harder for the average reader to understand, as they were not developed with concerns to public sector particularities. Brazilians comments were not conclusive, usually saying that it is hard to be certain as the costs are not completely known.

#### **4.2.8. Use of IAS that do not address public sector particularities**

One of the main concerns regarding the use of IAS is that they do not address all particularities presented in the public sector. In a central government's PSA reforms context, Hepworth (2003) presents that some important accounting policies towards issues such as taxation, military assets, universal health-care programs, heritage assets, and public pensions were not well addressed by IPSAS at that time. Adam *et al.* (2011) sees infrastructure and heritage assets as a challenge for the public sector, as they usually 'behave' more like a liability (generating a cash outflow to be maintained) instead than an asset.

Respondents were questioned if they agree that some public sector accounting issues are not addressed in IAS. According to Table 11 question #39, both countries agree with that (73% for Brazil and 85% for English). The English have a stronger critical view about IAS, saying in their comments that *'government bodies' accountability focuses on impact on taxation and this is not adequately addressed by IFRS*. They add that IFRS does not address infrastructure and heritage assets. Some suggested that it was a result of using a private-sector driven set of IAS. On the other hand, Brazilians suggested that IAS do not address all the public sector's particularities because some of these occur due to local regulation, such as 'revenue

waiver' existent in the Brazilian Fiscal Responsibility Law (government may opt not to collect taxes it should, finding different ways to raise these resources).

These limitations found in most set of IAS may impose resistance to their adoption. Therefore, it was asked if the IAS could be applied without a full understanding of all issues involved. Both Brazilians and English mostly disagree with that (69% and 71% respectively, according to Table D.42). While some Brazilians believe that the IAS adoption may be gradual, but with a full understanding of all issues involved, the English commented that IFRS are more based in interpretation and in judgement, and therefore need a better and deeper understanding to be used.

#### **4.2.9. General perceptions of IAS in public sector entities**

The 11 items of the questionnaire had more differences than similarities between both countries opinions on IAS. Unlike the majority of the English financial managers surveyed, Brazilians mostly believe that IAS brings more comparability, helps to prevent creative accounting and economic crises, leads to a better management of the finances, assets and liabilities, and has a good cost-benefit relation. The only aspects in which their opinions are similar regards to the needs of adoption of IAS only with a full understanding and that IAS adoption does not lead to loss of sovereignty.

Like the AA descriptive data section, the reasons for these differences will be explored more fully in the interview analysis (qualitative part of this research).

#### **4.3. DESCRIPTIVE STATISTICS FOR 'CHALLENGES IN PSA REFORMS'**

Unlike the AA and IAS statements, that were mostly based on IFAC or academic studies, the questionnaire challenges (CH) items were based in the guidelines that



will be followed by the Brazilian governments due to local regulation (Brazil, 2011). These guidelines focus on adjustments to fulfill the PSA reforms in Brazil, and have as some of the main issues the following items:

- Recognition, measurement and disclosure of assets derived from exchange or non-exchange transactions (taxes);
- Recognition, measurement and disclosure of liabilities (provisions included) on accrual basis;
- Recognition, measurement and disclosure of intangible assets, as well as property, plant and equipment;
- Recognition of economic transactions that do not affect cash directly, such as depreciation, regardless of budget correspondence;
- Recognition, measurement and disclosure of the infrastructure assets; and
- Adjustments in the chart of accounts, which will derive from a standard model used by all the Brazilian Federation and will embody AA particularities.

These items could lead to a high number of questions in the third section of the questionnaire as they usually present multiple challenges. The recognition of assets, for example, has to be preceded by an inventory survey, needs an identification of the best method to measure the asset value (historical cost, current cost, fair value, etc.) and in many cases has to be followed by a new estimation of the useful life of the asset in order to determine the depreciation rate. Each of these issues could lead to specific questions. However, it would make the questionnaire longer, with risk of a low response rate due to the respondents' fatigue. So it was decided to work with 13

questions about the PSA reforms challenges covering the main issues according to the Brazilian National Treasury Instruction Number 828/2011.

A few other items were obtained from the IFAC studies that identify the key aspects for the PSA reforms. IFAC study #14 (2011), for example, highlights the necessity of political support and of the redesign of a new chart of accounts.

There were no general questions in this section, but only specific ones. Appendix D Table D.43 presents the statistics of response from Brazil and England to these CH specific questions, and was not analysed here. Appendix D Tables D.44 to D.56 presents the detailed descriptive statistics for these questions, and Table 12 presents the consolidate responses in the format used previously for the AA and IAS sections (Tables 10 and 11, respectively).

**Table 12:** Descriptive statistics and nonparametric tests results for Brazilian and English financial managers' feedback on challenges statements questions

Question Id #	SPSS Variable	Brazil			England			Mann-Whitney U p value	Kolmogorov-Smirnov p value
		Very Easy / Easy	Neither Easy nor Hard	Very Hard / Hard	Very Easy / Easy	Neither Easy nor Hard	Very Hard / Hard		
#41	CH_TrainStaff	08%	23%	69%	30%	40%	30%	0	0.006
#42	CH_ITSystems	08%	18%	74%	30%	27%	43%	0	0.006
#43	CH_ReceivablesET	21%	28%	51%	44%	41%	15%	0.001	0.015
#44	CH_ReceivablesNET	05%	28%	67%	41%	50%	09%	0	0
#45	CH_Intangible	21%	18%	61%	44%	29%	27%	0.001	0.005
#46	CH_InfrastructureHeritage	06%	08%	87%	24%	35%	41%	0	0.001
#47	CH_PropertyPlant	31%	36%	33%	41%	18%	31%	0.959	0.989
#48	CH_Investm.EquityMethod	38%	26%	36%	35%	41%	24%	0.688	0.944
#49	CH_Inventories	53%	31%	16%	62%	26%	12%	0.756	1
#50	CH_Employees	39%	41%	20%	23%	47%	30%	0.0178	0.813
#51	CH_RedesignChartOfAcc.	31%	36%	33%	56%	29%	15%	0.027	0.202
#52	CH_Liabilities	23%	44%	33%	70%	27%	03%	0	0.001
#53	CH_PoliticalSupport	03%	28%	69%	24%	36%	40%	0.001	0.052

#### **4.3.1. Training the staff to work with AA and IAS**

According to Table 12 question #41, almost 70% of Brazilian respondents believe that training the staff to work with AA and IAS will be hard to be implemented. Some comments suggested that the difficulties are due to the long time culture of 'budget accounting', which in Brazil is closer to the cash basis accounting and would take time to be changed. Therefore, as presented by one of the respondents, the Brazilian public sector accountants would have to '*learn accounting again*'. On the other hand, the English respondents were very diverse, with 30% for each extreme of the scale (Easy/Very Easy and Hard/Very Hard) and 40% for the 'Neither easy nor hard to implement'. Some English respondents reported that to work with AA was easy, but not with IFRS, and that it was hard sometimes to train the staff because this is a limited resource that already has everyday duties and would have no time available for extra activities. In addition, training costs have resulted in extra pressures on budgets.

#### **4.3.2. Adjusting IT systems and redesigning the chart of accounts**

While most Brazilian respondents believe adjusting the IT systems is hard/very hard to implement (74% according to Table 12 question #42), English respondents have very diverse opinions in this issue (according to figures from Table 12 question #42, while 43% believe it will be hard/very hard, 30% believe it will be easy/very easy). They commented that it depends on the system that is already in use, and that these systems were already configured to work with AA.

Brazilian respondents are concerned with the integration of several different systems in use today (one for taxes, other for properties, plant and equipment, and so on),

and in some cases they suggested that the government is already considering the replacement of the IT solution presently in use. The reasons presented to replace the IT system would be to introduce new features as required by AA and IPSAS converged standards (such as depreciation and registering taxes before collecting them), to introduce the new chart of accounts used by the whole Federation as required by Brazilian regulation, and to integrate the modules in use today (so that whenever an asset is revaluated or depreciated in the '*property, plant and equipment control module*', the accounting module will automatically register its effects in results and financial position).

On what matters the chart of accounts, Brazilian respondents have a diverse opinion of the difficulties to redesign it (according to Table 12 question #52, 31% of the respondents believe it will be easy/very easy while 33% believe it will be hard/very hard). English respondents mostly agree that this was not hard to implement (according to Table 12 question #51, only 15% believe it will be hard/very hard to adjust). These perceptions are associated to the local realities: in Brazil, all the public sector will have to adjust their chart of accounts to the new standard. Those that make use of market developed accounting solutions usually believe that these changes will not be hard at all; those who use in-house solutions often believe it will be challenging to adopt this new chart of accounts. On the other hand, English local governments do not have to comply with a standard chart of accounts, and the biggest challenges were presented by those that do not have integrated systems, in which asset management would automatically generate accounting information. Therefore, these governments would have to adapt their chart of accounts. For most, however, there will be only minor changes.

#### **4.3.3. Registering receivables from exchange and non-exchange transactions**

According to Table 12 question #43, Brazilian respondents have a diverse opinion regarding how hard it is to register receivables from exchange transactions on accrual basis (51% believe it is hard to accomplish), while only 15% of the English respondents believe it is hard. Brazilian comments suggested that usually they do not work with exchange transactions or it is unimportant in the whole amount of revenues. The English comments suggested that these revenues are not relevant for them.

For the non-exchange transactions, according to Table 12 question #44, the opinions of the Brazilian respondents are that it will be hard (67%), or neither easy nor hard (28%). The same question shows that only 9% of the English respondents believe it is hard/very hard to register non-exchange transaction assets. Brazilian comments suggest that the cash basis culture is still strong, so the office responsible for taxation only registers the received amounts in the accounting systems. Brazilian respondents also suggested that some IT systems responsible for registering the taxes are not integrated with the accounting system, and doing that is not always easy.

#### **4.3.4. Registering intangible, property, plant and equipment, and infrastructure and heritage assets**

Brazilian respondents mostly believe that it will be hard/very hard to register the intangible assets (according to Table 12 question #45, 61% of the respondents believe it will be hard/very hard), while only 27% of the English respondents believe it will be hard. With one exception, Brazilian comments showed that the information required to register these assets usually does not exist or is not used for this

purpose. Thus, cash outflows used to develop or buy software, for example, are registered as expenses. According to Brazilian managers, the local culture would have to be modified to register these expenses as assets, and IT systems sometimes would have to go through adjustments.

Table 12 question #46 shows that while the great majority (87%) of Brazilians financial managers believe it will be hard/very hard to register infrastructure and heritage assets, English respondents have more diverse opinions (41% agree with that while 24% believe it is easy). On their comments, Brazilian respondents said that these assets were not traditionally registered by the accounting department and that there is no previous experience or even a benchmark to work with them. Comments from the English suggested that these assets are usually registered on a cost basis, and the challenge will be to revalue them in the future.

Table 12 question #47 showed that both Brazilian and English respondents have very heterogeneous opinions in regards the challenges to register property, plant and equipment. 31% of the Brazilian respondents believe it will be easy/very easy, while 33% believe it will be hard/very hard. Figures for the English respondents are, respectively, 41% and 31%.

Brazilian respondents commented that during the transition to the 'new' PSA, the property, plant and equipment assets are being separated into two different groups: the 'old' and the 'recently bought\built' assets. For this last group, the accounting controls already include depreciation (and useful life estimative) in accordance with BR GAAP and AA. On the other hand, the old assets still have to be revaluated (and, after that, receive a new estimated useful life to be depreciated), which makes their

accounting controls not precise for the moment. Furthermore, sometimes these ‘old’ assets are not even registered in the IT systems, which, in turn, are not always integrated with the accounting system. There are, however, different realities, and some governments have already finished the inventory stage and the integration between the accounting system and the IT system responsible for controlling these assets. English respondents commented that some recent changes brought by CIPFA, such as ‘removing one of the options under IAS 16<sup>17</sup>’, require all the governments’ non-current assets to be revaluated, creating a particular challenge. Some authorities also said that specific software had to be acquired in order to implement IFRS, and what was initially a challenge gradually became routine.

#### **4.3.5. Registering investments using the equity method**

This is another item for which the Brazilian and English respondents have heterogeneous opinions (Table 12 question #48): while 38% of the Brazilian respondents believe it will be easy/very easy, 36% believe it will be hard/very hard. Of the English respondents, only 24% believe it is hard/very hard.

Some Brazilian respondents commented that there is no previous experience with the equity method, and the local staff would need training to work with it. Others suggested that the public and private sector accounting calendars are very different, creating the additional risk of not having a true and fair view in the public sector balance sheets. Finally, some said it would not be a challenge at all once ‘*(local) government does not have relevant investments*’.

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<sup>17</sup> CIPFA issues IFRS interpretations for the public sector context in its ‘Code of Practice on Local Authority Accounting in the UK’. Under this Code, IAS 16 (Property, Plant and Equipment) is interpreted in a more restrictive way for some issues, which had as a consequence the necessity to reevaluate non-current assets.



#### **4.3.6. Registering inventories and its consumption**

Table 12 question #49 shows that both Brazilian and English respondents believe that registering inventories and its consumption is not a challenge at all (respectively, only 16% and 12% of Brazilian and English respondents believe it is hard/very hard).

Brazilian respondents suggested in their comments that presently the acquired consumables are usually registered as expenses instead of being registered as an inventoried asset that will become an expense after consumed. Therefore, most Brazilian respondents said that the local procedures and IT systems would need to be adjusted in order to register inventories and its consumption.

#### **4.3.7. Registering employee benefits**

This is another challenge for which both countries' governments opinions are very diverse. According to Table 12 question #50, 20% and 30% of the Brazilian and English respondents, respectively, believe it will be hard/very hard to register employees' benefits. On the other hand, 39% and 23% of Brazilian and English respondents, respectively, believe it will not be challenging at all.

Brazilian respondents were highly variable commenting that some systems had employee benefits already integrated with the accounting system with accounting for some employee benefits on an accrual basis and others not. For the first case, accounting for benefits would be relatively easy. For the last, in which the personnel office/department would only send a notification to the finance office of whom and which amount to pay for, the changes would be more challenging. Finally, Brazilians said that accounting for pensions and retirement could be particularly challenging because of the lack of previous experience with actuarial calculations. However,

some said that this challenge was easily faced by hiring specialized companies to produce this analysis.

#### **4.3.8. Registering liabilities on accrual basis**

Here the Brazilians and English do not share the same perceptions. Table 12 question #52 shows that almost no English respondent believe it is hard/very hard to be implemented (3%), while only 23% of Brazilians believe it will be easy. Some English respondents commented that they have worked on this basis for a long time. On the other hand, for some Brazilian respondents suggested that registering liabilities on accrual basis is relatively new, and that the biggest challenge would be to bring the information timely to the accounting system, due to lack of IT systems integration.

#### **4.3.9. Obtaining political support to the PSA reforms**

Political support to the PSA reforms is a big challenge according to Brazilian respondents (according to Table 12 question #53, 69% of them believe it is hard/very hard to obtain political support to materialize the PSA reforms while only 3% believe it will be easy to be obtained). For the English respondents, this challenge is also presented, but in a lower level (40% believe it will be hard to get political support and 26% believe it will not be challenging to be obtained).

On their comments, Brazilians financial managers complained about the lack of the political commitment to the PSA reforms. They add that the traditional decision-making process do not use accounting information. Furthermore, the reforms would require resources that could be used for more immediate necessities. The political stakeholders usually do not want to spend resources with benefits that will be

observed by society and tax payers only in the long run. English comments showed that IFRS adoption was imposed, so these changes, even though not always well understood, usually had political support.

#### **4.3.10. General perceptions of the challenges of PSA reforms**

The questionnaire challenges section presented 13 'easy to hard' scale questions. For most of them, the perceptions of Brazilian and English local governments' financial managers were different. The comments suggested that these differences are more related to the stage of the reforms in each country: while for Brazilian respondents adopting AA brings some challenges such as registering receivables from non-exchange transactions, for the English respondents challenges are more related to some IAS specific issues, such as understanding IFRS implications on property, plant and equipment. The diversity of the local governments' realities in both countries (different stages of the reforms and different IT systems used) was also reflected in some response distributions: aspects that were challenging for one local government might not be for another.

Like the two previous sections, the reasons for the differences on the challenges while implementing PSA reforms will be explored more deeply in the interview analysis.

#### **4.4. GENERAL COMMENTS ON PSA REFORMS**

The general comments section presented a very broad diversity of topics. Brazilian and English local governments' comments were more related to their particular experiences on implementing the PSA reforms. Thus, Brazilian comments were related to general expectations regarding the changes as well as the strategy adopted to materialize them. English comments were more related to IFRS implementation and utility. Complaints were also made: English in regards IFRS usefulness and Brazilians in regards of general aspects of the reforms, such as its scheduled timing.

##### **Brazilian general comments**

The strategy followed by Brazilian local governments to implement the reforms was usually based in three pillars: qualified staff, systems and processes. A common view was that technical staff are not qualified enough to promote the changes, that most process will have to be reviewed and that the IT systems are not usually compliant or integrated. The technical staff believes that the accounting expertise is not valued by the local stakeholders. Therefore, Brazilian respondents believe that the PSA reforms will be an opportunity to show how important accounting information is in the decision-making process. Consequently, they believe that the accounting profession will be gradually more strategic in the local management as the PSA reforms progresses.

Some local authorities are using the opportunity brought by the PSA reforms to promote deeper changes, such as the coordination between different agencies in order to capture the accounting information timely, and to change local culture from

cash budget oriented to become accrual oriented. Several governments have constituted accounting study groups to analyse, discuss and promote the reforms. In addition, it is said that an accounting career in local government is gaining strength, with new accounting positions being created to attract qualified professionals and, in some cases, significant investments in staff training. Finally, in some cases a partnership was observed between the Court of Accounts and the authorities in which both are learning together how to deal with this new accounting framework.

There are also challenges faced by a significant number of Brazilian local governments. One is the lack of financial and human resources. Some respondents suggested that local governments do not have resources to acquire consulting services or new IT systems and to train the staff. According to them, it may put in risk the PSA reforms locally.

Another challenge is the lack of political and institutional support. Some respondents suggested that the political administration is not against the reforms, but do not support them as the benefits will arise for the future administrations, and not for them.

The strict schedule that has to be followed was also presented as a challenge. It was suggested that the schedule to promote the PSA reforms is not long enough due to all the financial, technical and material challenges faced by Brazilian local governments.

The lack of previous experience with AA and IAS was suggested as another challenge. The cash basis culture is strongly present in the local governments, and it was suggested that AA and IAS are complex to be learnt when compared to cash

accounting. Under the cash basis all the registries would be easier make when compared to the accrual basis, mainly because the latter requires more professional judgment.

The absence of a national benchmark was pointed as another challenge. It was suggested that it is impossible for the technical staff to learn from mistakes made by others. In addition, it was often suggested that the non-accounting or financial departments do not see the PSA reforms as a priority. In some cases, the efforts to complete these reforms would be centralised in the departments of accounting and finance, which are supposed to be the only responsible for the information that will be part of the financial reports. Finally, the low pay for the accounting and finance staff was also presented as a challenge. It was suggested that local governments do not attract skilled accounting and finance professionals due to their low wage policies.

Even though some managers believe that little will be changed by the PSA reforms, most of Brazilians expectations about the results are very positive. Some say that it is the opportunity to make the public sector more responsible with public resources, and making the finance/accounting office a source of information that is more useful than for external control purposes.

### **English general comments**

The English opinions were usually positive regarding AA issues of PSA reforms and very critical about IFRS adoption. An example is that they suggested that while AA is logical, IFRS is driven from an academic viewpoint and would have questionable practical benefits. Some English respondents suggested that the theory presented in IFRS is not relevant for the public sector day-by-day accounting and financial

management. Therefore, it would only add complexity to the financial management, and the concepts presented in IFRS would not improve local management.

Another pointed criticism of IFRS was that it brings little benefits to local authorities or to taxpayers. Respondents suggested that these standards do not bring more transparency on how public resources are used. Therefore, nothing would be changed other than increasing the financial management complexity. Public finances would still be hard to understand by local taxpayers and stakeholders. It was also suggested that even accountants sometimes have difficulties to understand IFRS (e.g. financial instruments). Some respondents suggested that it would lead to an opposite effect to transparency and would not support the decision-making process.

It was also suggested that IFRS brings many transactions (e.g. for fixed assets) that are reversed out and have no effect in decision-making. According to them, it seems to be just 'paper transactions' without any effect other than making the statements harder to be understood by the lay user. These transactions would have to be excluded while determining the cash needed to support local government services.

Finally, English respondents pointed out that IFRS implementation was very resource intensive and had only increased the cost of producing the accounts rather than adding any value to the readership of them. They commented that this is unacceptable in times of financial austerity.

The positive aspect of IFRS implementation was that it was well planned, usually going smoothly. Some minor challenges were found and overcome, such as making the fixed assets software compliant and providing comparative year data.

## **CHAPTER V**

### **5. QUALITATIVE ANALYSIS**

This chapter presents the analyses of the data collected through the interviews. It uses the coded interviews as the basis to identify deeper aspects of the Brazilian and English financial managers perceptions with regards to PSA reforms.

This chapter is divided into two different sections. The first one presents Brazilian and English local governments' perceptions of the AA, IAS and CH aspects. It consists of the analysis of the first nine interview questions. The second section is based in the interview guide last question, which is not linked to any of the questionnaire variables.

#### **5.1. PERCEPTIONS OF PSA REFORMS: SPECIFIC ASPECTS**

This section presents the interviews code extracts from the perceptions of Brazilian and English interviewees (financial managers) with regards to the differences in perceptions as pointed by the 'hypothesis test significance ranking'. The interviewees will not be identified, but whenever cited they will be referred by letters. In cases where more than one person participated in the interview, they will be referred as numbers after the letters (e.g. 'A.1', 'A.2', and so on).

##### **5.1.1. AA and cash flow management**

The descriptive statistics discussed in item 4.1.9 showed that Brazilians have positive expectations regarding the effects of AA on cash management. Some of the reasons were already presented in the comments, such as the fact that the identification of all assets and liabilities on accrual basis would make the cash flow projections more precise. This opinion was reassured by Brazilian interviewee 'B', who said:



*'It is important to be aware of all transactions that may have an effect in the cash flow management. It is important to identify all assets and liabilities in order to establish cash flow projections and establish scenarios. We did not have precise information about it in the past, as the liabilities were not all registered on accrual basis, but on a budget-commitment basis. Therefore, we were not precise when making projections. Now things are changing, but we still need to receive information from several other areas. It is getting better gradually'.*

The overall opinion of the Brazilian interviewees suggest that the cash flow projections that are made presently are not based on accounting information, but from information spread over many different offices/departments. Many liabilities, such as the judicial obligations, are sometimes not registered at all. Thus, the projections are far from precise. Typically management does a simple comparison of how much cash is available (from the bank account) and how much will be needed for short run obligations. If there is no cash available, the government finds a way to provide it, and is not worried with the future implications.

Brazilian interviewee C said as the revenues are registered on a cash basis, the part that was not received was not disclosed in the financial reports. With AA it is expected that the public sector inefficiency in managing the receivables will be exposed, which can lead to changes in the cash management. Technical employees (mainly head accountants and accounting department staff) are using this information to convince stakeholders to support the PSA reforms. The technical directors usually understand the benefits of these PSA reforms, but it is usually hard to convince the political stakeholders to support it.

Another aspect mentioned was that local governments depend a lot on central governments' transfers<sup>18</sup>, which are usually registered on cash basis. When they receive accrual information from the central government (and regional governments, in case of the municipalities), they will be able to register it on accrual basis and better manage the cash flows.

The English financial managers suggested that AA helps them to monitor their budgets and govern the cash outflows. They budget for cash, usually on a monthly basis, in order to meet the accruals raised at intervals. As financial manager 'E' stated:

*'It (AA) does help in the cash flow in the way we are able to match the expenditures of the years foreward and the year we have financing for. So it is useful'.*

Another aspect is that English managers interviewed could not imagine how to work without AA once they have started their careers in the public sector working on that basis. So, even though the English responses in the questionnaire were evenly distributed (slightly more suggesting that AA leads to a better cash management), English interviewees confirmed that AA brings benefits to cash management.

Brazilians expectations were matched by the English experience. Although it may be possible to obtain the same benefits AA brings through other controls, AA is usually used as a tool that favours projections (making them more precise) and helps to budget the cash. Therefore, the differences in the distributions of the responses could also be identified in the interviews.

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<sup>18</sup> According to Brazilian legislation, local governments have the right to receive part of central government's collected taxes (for some specific taxes, such as the income tax).

### 5.1.2. AA and long term view

Appendix D Table D.13 and Table 10 question #12 showed that the perceptions from the financial managers from both countries are usually positive, with a few English managers having slightly more negative perceptions.

Brazilians head accountants believe that AA may bring a long term view to local financial management. However, one of them said that it is still very far from reality. Presently, the financial management is focused almost only in the fiscal year. In a very few cases, such as long term loans, the long term expenditures and liabilities are projected.

Brazilian managers also emphasized that the loans for infrastructure investments would, under AA, generate obligations with interest besides the principal. In this context, AA could help to make projections regarding the ability to meet these obligations, which would be registered as liabilities. As interviewee 'C' presents:

*'(Local) government needs resources to build infrastructure for sanitation, roads, and so on. These resources usually are obtained from long term loans. How are you going to project the effect of these loans in your future cash needs without analyzing the effect of these loans and interests? How are you going to have a clear idea of your liabilities if the other obligations are not registered in accounting? Thus, AA is fundamental for getting a clear picture of the financial position of the entity and to project future cash needs'.*

Another aspect mentioned by Brazilian interviewee 'B' was that presently there are worries with the opinions of the Court of Accounts, which are not usually focused in the long term, but mostly in legal practices referring to past events. AA could help change this 'Court of Accounts culture', which would be reflected in the local financial management. Finally, it was presented that AA would recognise pension liabilities in

the financial reports. It would help to make better cash needs forecasts, which are not clear presently as pension liabilities are usually not disclosed in accounting reports.

English interviewee 'E' did not believe that AA helps the local governments to take a long term view in terms of financial decisions. In his words:

*'From the local authority perspective the main aspect of AA is making sure that the economic expenditure is recorded in the correct year. It is just an issue of a year-end rather than something for we can accrue expenditure many years ahead'.*

English interviewee 'D.2' said that AA is broadly used in the UK, and that when the central government groups all the public sector accounts together (for whole of government accounts) an overall picture can be made, which may be useful on forecasting and planning. Examples of this planning would be the level of grants that may be due to the local authorities.

The interviews confirmed the questionnaire data. While the English managers usually do not experience any practical benefits of AA while making long term financial decisions, Brazilians have high expectations about it. Even the 'future financial scenarios' that Brazilians believe could be projected to guide long term decisions were not experienced by the English. It indicates that financial views are more focused in the near future, and that AA does not help to change that.

### **5.1.3. Management of assets and liabilities under AA and IAS**

Brazilian head accountants presented many expected benefits with the adoption of AA and IAS on the management of assets and liabilities. The first one is that financial reports on an international accounting basis will be better understood by international

funding organizations (particularly important for Brazilian public sector entities), as presented by interviewee 'C':

*'In 2010 our local government was about to take a loan with the Banque Public d'Investissement (French Investment Public Bank). One French technical analyst visited us and asked for the accounting reports, mainly for the statement of financial position. A few minutes after we had started presenting it to him, he asked: 'are all assets and liabilities shown here?' I answered him: more or less... Under AA we expect that it changes. '*

Interviewee 'B' also presented a similar understanding, suggesting that costs of loans could be reduced through better risk management (with a more appropriate disclosure of liabilities and loans guarantees, for example):

*'Before making loan contracts with international banks and development agencies, they usually send auditors to evaluate our accounts. (These auditors) usually make us questions for which I do not have the information... it was not registered previously in our accounting reports. Brazilian regulation did not enforce registering all assets or liabilities as they were mainly cash basis driven. (I believe) AA and IPSAS will change it, adding more transparency to the public accounts, decreasing the 'transparency risk' that may be added to the loans we obtain.'*

This opinion is shared by interviewee 'A.1', who state:

*'Disclosing all the public assets will make the government aware of assets that can be used as loans guarantees. The decisions usually do not consider them because the department responsible for the loans simply does not know that they (these assets) exist.'*

Brazilian interviewee 'A.2' suggested that revenues would be better managed under AA and IAS:

*'I believe that working with revenues under AA will bring to the local government information that can be used to better manage the local revenues. Presently, the*

*government only works with information of collected revenues, and the revenues that were not collected are not disclosed anywhere. Under IPSAS, it will have to be disclosed before being collected, which may drive to better revenue management. We may even show under IPSAS how inefficient we are in collecting our revenues.'*

Other aspects presented by the Brazilian interviewees were that after PSA reforms, government will have a more adequate accounting framework to make decisions and plan ways to obtain revenue, such as allowing the private sector to explore infrastructure assets or selling assets. As presented by Brazilian interviewee 'C':

*'It is important to know all the assets that belong to the local government. Today this information is spread through different departments. It is not disclosed in the statement of financial position. After the reforms, we believe that it will be better disclosed. (The government) will have a better basis to take decisions such as selling assets or even planning concessions.'*

Brazilian interviewees also suggested that after PSA reforms, financial statements would be more trusted and comparable among different governments with regards to assets and liabilities disclosure. They believe it could lead to knowledge exchange and more information to the decision-making process, and suggested that the present cash basis accounting does not result in an adequate framework to present the liabilities.

Another important aspect to highlight is that Brazilian accountants usually associate AA and IAS. It happens due to the way these standards are being implemented locally. Furthermore, it was not possible to analyse results yet, which may or may not match the expectations.

The English managers believe that AA is definitely important for the overall process of decision-making, while IAS (IFRS) is not. As financial manager 'D.1' states:

*'AA is absolutely an integral part of producing information that people use them to produce these decisions [...] In contrast, we don't use IFRS at all to inform our decision-making process [...] These technical changes happen and we have to implement them, but we know in the back of our minds that they actually have no impact on our bottom line, which is how much money we have to raise from Council tax payers, ultimately'.*

*'For the private sector it is a bottom line hit to impact profit or loss, but for local government we have to do exactly the same exercise and accrue holiday pay, for example, but it is reversed out so it does not impact on the Council tax payer. So in that sense it is a notional exercise, but there is a lot of information gathering to be done and then reverse out of the accounts'.*

*'So, we then have to do all the depreciation entries, all the impairment entries, all of the others variables, revaluation type entries within the fixed assets... but again, the notional in our accounts is that it has no impact on the bottom line [...] We don't use that (IFRS) information for asset management purposes'.*

English interviewees highlighted that the importance of AA is mainly because it brings all the assets and liabilities to the balance sheet. On the other hand, they suggested that IAS brought a lot of effort to be implemented and maintained and did not add any benefit to the decision-making process. Many accounting policies changed (e.g. Private Finance Initiative (PFI) and leases), which required the support of expensive consulting services, and many assets and liabilities were brought to the financial reports, but it did not change the way decisions are made. One interviewee suggested that local authorities accounted better for the resources they spend before IFRS.

It was stated that the accounting information is not used for deciding how long an asset will be kept, and for convenience similar policies are used for similar kinds of assets, which does not necessarily reflect assets' consumption. Even though similar

policies are adopted by different Councils, it is reversed out for taxing purposes, and it does not affect fund-raising in any of them. It is quite consistent with Marriott *et al.* (2011) study, which suggests that although the PSA reforms were internalised in the IT systems to control capital assets, the information produced was not used for decision-making purposes.

The interviews were consistent with Appendix D Tables D.6, D.16 and D.37, as well as with Table 10 questions #5 and #15 and Table 11 question #35, which show positive perceptions of AA in public sector management from both Brazilians and English. They are also consistent with the positive expectations Brazilians have with the adoption of IAS and the mostly critical opinion that English managers have of these standards.

#### **5.1.4. Creative accounting under AA and IAS**

Brazilian interviewees suggest that AA and IAS do not avoid creative accounting completely. They suggested that it is naïve to believe that creative accounting will not happen because of the PSA reforms. They add that within a certain time, new ways of cheating may arise, mainly associated with professional judgment practices. Interviewee 'B' seemed to be particularly concerned about how the public sector accountants would deal with the subjectivity brought by professional judgment. As he/she said:

*'Brazilian accounting has a high percentage of creativity. Let's be honest. [...] When we talk about new accounting standards, thinking of the true and fair view that can be based on a subjective perception, I wonder if my colleagues will have maturity to deal with that...'*



This same interviewee said that IPSAS are still a black box in Brazil, and can be used as an excuse for new creative accounting practices until the control bodies better understand them. The importance of the control bodies was also addressed by interviewee 'A.2', who suggested that the role to prevent creative accounting belongs to the external auditors (Court of Accounts). As he/she says:

*'The Courts of Accounts will have to be more prepared to understand the international standards and verify what was done in the local government accounting, and if any creative practice is being used there. PSA reforms do not guarantee that creative accounting will not exist. Only a rigorous audit process can assure that. Therefore, the auditors must understand AA and IAS. '*

The same interviewee said that AA and IAS may help to prevent this practice, but not avoid it completely:

*'If the accounting staff wants, there will be creative accounting. IPSAS and AA may help to better account for the public resources management, but they do not eliminate creative accounting practices.'*

Interviewee 'A.1' suggests that IAS will not prevent completely creative accounting, but may help:

*'IAS adoption cannot prevent creative accounting by itself. [...] (However), AA and IAS are part of a standardized accounting framework that will help to disseminate accounting knowledge to different sectors, such as academy, auditors and society. More people will understand and discuss it. And discussions will happen under the same basis of accounting, using the same concepts, definitions and financial reports structures. Within this scenario, creative practices could be prevented, just as happened after governments had to disclose their expenditures with personnel to fulfill Fiscal Responsibility Law requirements. In this sense, AA and IAS are useful to prevent creative accounting practices. '*

Interviewee 'C' suggested that it will become harder to work with the common 'budgetary creative practices' in use nowadays.

*'Without AA we can see unrealistic results. Positive results under the cash basis do not mean positive results under the accrual basis. In this sense, AA will give a better picture of the real financial position of the government. It will give governments 'less freedom' to create false results.'*

English financial managers believe that the creative accounting prevention is usually more associated with an active role of the audit bodies than with the accounting framework that is being used. As interviewee 'E' stated:

*'All of the material transactions come under some sort of scrutiny. It will be very difficult for creative accounting practices to avoid the auditors.'*

Interviewee 'D.1' stated that the accrual regime itself limits significantly creative accounting practices, when used in conjunction with other controls. He/she added that 'creativity' is more usual in areas primarily oriented by regulation instead of accounting issues. As presented below:

*'The areas with greatest creativity we have are kind of the areas that are primarily governed by statute and not by accounting requirements [...] The sort of the kind of financing expenditure I think is one where there are significant areas where judgment have to be made around when you have to recognize and how you have to repay for those liabilities and... I would say that those are the greatest areas and they are primarily governed by statute, primarily by regulation and not by accounting standards.'*

Brazilian and English interviews responses are consistent with Tables 11 and 12 questions #24 and #32, respectively, which show that Brazilian questionnaire respondents are more positive in regards the benefits of the PSA reforms in preventing creative accounting practices.

#### **5.1.5. Crisis prevention under AA and IAS**

In Brazil, past crises in local governments were mainly associated with the lack of funding to support non-discretionary obligations, such as personnel and basic administrative expenses. In the past, central government had to rely on international funding to support basic expenses. Presently, governments still need external funding to promote public policies, such as building transport infrastructure. In this sense, PSA reforms can contribute to create a more reliable picture of the government financial position, once the concepts presented in the financial statements will be clearly understood by the external agencies and offices responsible for providing these resources, such as the Inter-American Development Bank. Besides reducing the costs of loans, it is believed that controls will be more reliable once they are supported by well-known international standards. As Brazilian interviewee 'C' stated:

*'As a developing country, we need resources from international banks and agencies. When we present our financial statements under IPSAS, part of our risk is reduced. The reason is that the funding bodies will more clearly understand our financial statements, and may ask for a lower risk premium – a lower interest rate. It would help to prevent financial crisis. '*

It was suggested that AA will bring more transparency to the governments' obligations and that, as a consequence, governments will be aware of future problems and will have time to plan a strategy to overcome them. An example is accounting for holidays, which was not a common practice in Brazil, and for pension benefits, which is usually a significant liability with long-term funding implications. This perception is presented in Brazilian interviewee 'A.1' words, which believes that AA and IPSAS present a better picture of the financial position of the government:

*'IPSAS and AA not only prevent crisis but also help to make a better governmental planning. Under this accounting framework, government stakeholders will have a more reliable picture of the financial position. It gives them better instruments to avoid crisis. In addition, in situations of change of government, the new stakeholders will not be caught with unacknowledged liabilities, as it sometimes happen today. '*

Interviewee 'A.2' adds that:

*'It is known that AA and IAS provide a more adequate framework than cash basis accounting to register accounting information timely, with more transparency and with greater comparability and comprehensibility. So, on the premise that you need reliable information for better planning and that better planning helps to prevent financial crises, the PSA reforms will definitely help to prevent these crises'.*

English interviewees have a different perception: the present crisis faced by many local governments is not related to poor accounting practices, but mainly to central government's austerity measures, such as cuts on local governments' funding (transferences). As interviewee 'E' presented:

*'All Local Authorities prepare and need some financial plans ... we are looking four years ahead, and we do that on a cash flow basis rather than on an accruals basis, because that better fits how the funding model works [...] I don't think a financial accounting arrangement around IFRS could make a big difference to how we would prepare our budgets or also on how we carried out in terms of financial planning'.*

Interviewee 'D.1' said that borrowings and significant long term liabilities are subject to strict control rules that do not depend on AA or IAS. However, AA and IAS can have a significant impact in central governments' accounts, but only a marginal effect in local governments' finances, that is heavily dependent on central governments' transfers.

These responses, which put in words what is shown in Appendix D Tables D.26 and D.37, show that Brazilian managers have positive expectations that were not met by the English authorities. Once Brazilian local governments, like English local authorities, are heavily dependent on central governments' transfers, it may be expected that these benefits will not be observed in Brazil after PSA reforms. However, Brazil has a different starting point from the English. Brazil does not disclose many significant liabilities, such as pensions. Therefore, even though the expected benefits may not all be observed, some may happen.

#### **5.1.6. Costs and benefits of the adoption of IAS**

Most Brazilian interviewees believe the costs of the PSA reforms will be high. Even though some costs are still unknown, it is certain that there will be expenditures with staff training, IT systems and workflow process changes. Besides that, there is also the opportunity cost with staff and other resources that could be used for different and more immediate purposes. It brings the additional challenge of convincing stakeholders to approve expenditure that will not bring immediate benefits to public services.

However, most Brazilian head accountants believe that benefits will come in the long run. Some expected benefits are the long-term decrease in controls costs, the increase of transparency once an international common accounting language will be used and the decrease in the costs of loans as a result of a lower risk of poor financial information. As presented by interviewee 'B':

*'I have no doubt that the benefits will come. I would not say that they will come in the short term, but in the long term they will. And (these benefits) will be high, but I cannot measure them because it is really complex and not completely known...'*

Interviewee 'C' reaffirms this point of view:

*'IAS brings transparency and comparability. It is a direct benefit. All the people that understand accounting will understand what the government is talking about. Today is different: private sector accountants do not understand anything of the public sector accounts.'*

It is also important to highlight that Brazilian interviewees usually do not separate AA from the IAS adoption. Once the adoption of both AA and IAS is happening simultaneously, some accountants do not know that there is a public sector IAS on the cash basis. Therefore, they usually do not separate AA from IAS costs and benefits. As interviewee 'B' stated:

*'AA adoption is a consequence of IPSAS adoption, isn't it?'*

English financial managers were usually critical about IFRS and positive with regards to AA. English interviewee 'D.1' said that:

*'IFRS, as I said, has mainly increased the complexity of the accounts. [...] and all the work for IFRS and all the information produced... [...] doesn't really affect the decision-making process within the Council... in that point of view, it fails, I'd say... but AA is different... I would say it is an absolutely essential component in the decision-making process.'*

English financial manager 'E' reinforces that IFRS has some theoretical benefits that do not necessarily justify the costs of its adoption:

*'You could argue in a theoretical sense that the accounts prepared on IFRS basis are a more accurate reflection of the costs concerning the year because they do reflect depreciation, they do reflect pension costs... I think that the audience which is interested in that is very, very small, if indeed it exists at all, and the costs as far as we are concerned to provide the accounts on that basis are not insignificant [...] So the*

*costs are not trivial, but the benefits are trivial. So, for me, the costs outweigh the benefits'.*

These opinions are in accordance with the quantitative data presented in Appendix D Tables D.23 and D.40, which show that Brazilian and English agree with that the costs of AA are justified by its benefits, but strongly disagree about it in regards IAS. Thus, the *ex-post* experience of the English financial managers suggests that the expected benefits of AA justify its costs, but the adoption of IAS does not.

#### **5.1.7. Comparability and financial management under IAS**

Brazilian interviewees said that today there are very few standardized processes among different entities, and that this reality does not favour comparability. Even some concepts may be different. One example is accounting for legal liabilities, which are recognized in different ways by different entities according to regional Courts' understandings. Thus, nowadays financial reports of different governments in Brazil may not be comparable, and one government may not understand financial reports of other local authorities. As interviewee 'A.1' states:

*'Local governments cannot read and understand other government's financial reports. We cannot fully understand... (because of) particularities that you need to be deeply involved to understand... After IPSAS adoption, we believe that several concepts will become clearer... for all users of accounting information... (it) will make more reliable comparisons.'*

It is expected in Brazil that IAS adoption will bring a common set of concepts that are not affected by local regulation, and that it will make financial reports more comparable in the long run, as soon as all the governments learn how to work with IAS. One head accountant said that the effects can be similar to the ones brought by the Fiscal Responsibility Law, which made possible, for example, comparisons

between different governments in regards of the percentage of employment expenses. It was stated that IAS is expected to favour private sector entities, e.g. banks and companies interested in Public-Private Partnerships, in understanding public sector financial reports.

It is expected that IAS will help in standardizing cost accounting, once it brings economic transactions to accounts and standardizes concepts. This could be used to compare different administrative costs, resulting in a better management of the government finances.

These positive expectations, which confirm the Brazilian quantitative data presented in Appendix D Tables D.35 and D.37, do not echo the views English financial managers. They believe that prior to IFRS adoption there was already consistency in accounting concepts, mainly due to codes of practices resulting from CIPFA guidance. Therefore, IFRS did not add value in this sense. Furthermore, as suggested by English interviewee 'D.1', IFRS did not make the public sector financial reports more easily understandable. Usually personal contacts were a better way to deeply understand what is really beyond the financial reports:

*'We also look at reports that they (other governments) do, but even those reports get a bit cloaked, a bit of mystery and are subject to people doing things in a different way, but you can obviously take some information, of course... we do that. But it is pretty superficial, I would say, really... You have to go and talk to the people and get more detailed information if you want to some more meaningful comparison.'*

English interviewee 'E' suggested that IFRS made comparisons more complex:

*'Before implementation of IFRS, we still followed a common code... we followed statutory guidance which was set out in the state of recommended practices. So we*



*already prepared our accounts on a consistent basis, not directly comparable with the private sector, but all public sector bodies, all local authorities would have been prepared on the same basis and in fact comparison would have been easier, because... (there are) a lot of non-cash transactions, which IFRS bring into in the accounts, but I don't think it added comparability at all'.*

A common view among the English financial managers interviewed is that a conceptual uniformity is important, but not necessarily based in a complex set of IAS. Furthermore, they said that IFRS did not change the way finances are managed, but brought more workload.

The interviews confirm the questionnaire survey data (Appendix D Table D.33). They shows that while Brazilian financial managers believe IAS will enhance comparability, English managers do not confirm that based upon their experience.

#### **5.1.8. Financial management planning under IAS**

Brazilian accountants interviewed believe that IAS will bring many assets and liabilities into the accounts, which in turn will give more substance to governmental planning. One common challenge presented by some managers is the lack of information about some assets and liabilities. Currently the revenues are only registered when cash or equivalent is received, so the accounting does not show the amount of receivables. These are usually spread between several departments, so that an overall picture of the receivables is not present, resulting in poorer tools to manage the finances. The same challenge is faced with the liabilities. With the IAS, Brazilians believe that accounting will centralize this information, making it easier managers to strengthen financial management. As interviewee 'B' states:

*'When you start using accruals, when you start registering your liabilities, your contingent liabilities... you will better manage your risks. It will result in a better*

*planning... Much better than the one we usually do nowadays, that is almost only used for reporting to the Court of Accounts, instead of really driving the management'.*

On the other hand, the English see the IFRS as process that has not changed the overall process of financial planning. As one manager states:

*'Actually, our whole trouble at the moment is to [...] take everything out to the management accounts that purely is account related and doesn't have any... doesn't have a real bearing on the decision-making process of accounts, so just get it down to the basic, you know, to the very, very basic level... that the audience can understand'.*

Interviewee 'E' confirmed that, presenting that IFRS did not add value to financial planning, such as cash flow management:

*'The way that we forecast our cash flow, the treasury management team that is part of the area that I manage, hasn't actually changed over the past six or seven years. What are our funding streams. [...] That is the operational level. IFRS hasn't made any difference one way or the other'.*

These different perceptions explain the strong and opposite responses obtained in the questionnaire survey (Appendix D Table D.38). Brazilians positive expectations, again, were not confirmed by the English experience.

#### **5.1.9. Accounting Reforms and IT systems**

Brazilians believe that the changes in IT systems will be significant, mainly because they are not ready to register non-cash transactions, such as depreciation or the recognition of assets and liabilities when the transaction occurs. Many systems that control receivables, fixed assets, and judicial liabilities, among others, are not integrated into the accounting system. Therefore, the accounting information is not timely and precise. Furthermore, the chart of accounts used by all governments in Brazil is changing significantly, and the interviewees said that the IT systems will

have to go through significant changes to use it. Thus, many governments are considering changing the whole IT system in use, and also making changes in the local workflows. All these changes bring significant challenges, as interviewee 'B' explained:

*'Significant efforts will be needed to adjust the (IT) systems to work with the new chart of accounts and with BR GAAP... Some governments will change the entire IT framework... Many (governments) are already studying alternatives to change the (IT) systems... So, can you imagine the challenges that we will face to make these systems totally IPSAS compliant?'*

English interviewees said that the IT systems had minor adjustments, but most of these systems were previously ready to work with AA. Most of the changes brought by IFRS were related with staff training and disclosures. Some adjustments on IT systems were also made, but usually in specific areas, such as in the systems that register fixed assets, as interviewee 'D.1' said:

*'We have actually invested in some new software around fixed assets, because the fixed assets area is hugely complex, we are finding that it was taking masses and masses of time [...] The rest of the costs have been largely... disclosures, lots of other requirements under IFRS apart from fixed assets, and it is just people doing the work, really, so it is a cost of resources... Staff training, time...'*

Interviewee 'E' confirms that IFRS did not bring major IT adjustments:

*'It (IFRS) probably wasn't as significant for us with the system that we use [...] The changes that IFRS brought in were related to accounting for fixed assets. We tended to do those transactions largely outside of (our IT system) and upload on (our IT system) at the end of the year. It wasn't so much making IT changes, although some small IT changes that came through. It was more a question of changing the spreadsheets that we use to feed the system'.*

Unlike in Brazil, the English chart of accounts did not have to be considerably modified in order to fit IFRS. Most of the adjustments were made 'in house'. For some particular issues, consulting services were used, but the most significant costs were the staff opportunity cost as well as their training.

The interviewees confirmed data presented in Appendix D Table D.45, which showed not as many significant challenges on adjusting the IT systems to the English financial managers as for the Brazilians. From their experiences and perceptions, the challenges in adjusting IT systems are more associated with AA adoption than with IAS.

## **5.2. PERCEPTIONS OF PSA REFORMS: GENERAL ASPECTS**

This section presents the interviewees perception with regards to general aspects of the PSA reforms. The focus was in identifying the main challenges expected by the Brazilian financial managers and comparing them with those experienced by the English managers.

Brazilian interviewees presented several challenges while materializing PSA reforms. They particularly highlighted the challenges in changing the local administrative culture from a 'budget to accrual way of thinking'. Basically, the technical staff does not completely understand the recognition of expenses without any budget commitment associated (such as accruing for holidays and pensions long before paying or registering depreciation). In addition, they usually believe that some budget/cash appropriations, such as cash used to build infrastructure, are expenses instead of investments. As presented by interviewee 'A.2':

*'There is a cash basis culture in the public sector, (that is) a consequence of the cash basis budget used in our country for a long time. Technical staff does not understand it completely – everything is very new and breaks with a practice that dates from almost 50 years...'*

Brazilian accounting regulation, based mainly on a 1964 Law, is also presented as a challenge as it is sometimes used by some stakeholders in order not to support their understandings in regards some specific issues. These understandings may not be in accordance with AA or IAS guidelines. As interviewee 'A.1' presents:

*'Sometimes the Court of Accounts understandings are not in accordance with the accounting rules. They (Court of Accounts) usually present the Law to support their ideas. It would be important to adjust National Accounting regulation to this new accounting framework...'*

Another challenge was to obtain political support for changes that will bring benefits only in the long run. Some politicians seem not to be willing to use resources to promote long term benefits (usually after their term is finished) that will require immediate cash expenditures. In addition, these changes would not be clearly understood by the population. As interviewee 'B' presents:

*'I have to rely on political support, because I can change a few accounting procedures and processes, but I have not the authority to take the decision (for example) on buying an IT system... It is hard to get this support.'*

Interviewee 'C' also confirmed this perception, and stated that this lack of political commitment had as a consequence less resources available to key issues, such as staff training and adjusting IT systems:

*'We need the directors will to promote the changes. We need resources to train staff, change IT systems... But it is hard to convince them. When they understand the long term benefits and are really willing, changes are smoother. But usually it is not this way... '*

The English interviewees presented as the biggest challenges the necessity to train the staff, the difficulties in changing the accounting framework with the same staff resources responsible for everyday activities, and the necessity to make accounts clear and understandable to be approved by the councillors. As interviewee 'E' stated:

*'Our accounts are approved by a subcommittee of members, [...], and they got to the stage where under the previous regime they pretty much understood what was in the previous accounts. When we took IFRS to them they said 'we just don't understand what is in this'. As the Chief Accountant, I took an explanatory forward, which says 'these are the main points of the accounts'. And effectively, of 160 pages of accounts, members really only look about 4 pages of explanatory forward, so a large part of the accounts is simply unintelligible for people who aren't professional accountants'.*

Another challenge is to make accounting concepts and statements understandable to stakeholders, and general public society. In this sense, it is a common opinion that IFRS does not help. As interviewee 'E' stated:

*'I think that under IFRS profit and loss does become irrelevant, because so many notational costs are included and including particularly revaluation of buildings... and in the UK economy the value of buildings has tended to be falling over the past few years. So we had notional losses as a result of that ... the first year where we had implemented IFRS we showed a loss of £250 million. [...] For a private sector organization it would be disastrous, but on the cash that was flowing on the balance sheet into our reserves, we showed an increase. So, I think it is very difficult, because the only way people can understand the accounts that we prepare are if the accountants are there to explain it to them. That reduces transparency, which reduces the confidence that you are just going to be having in the accounts.'*

Staff training and information gathering were also presented as a challenge, as presented by interviewees 'D.1' and 'D.2, respectively':

*'... clearly there were significant training issue for practitioners like us and the staff to understand the (IFRS) requirements.[...] We had to educate the rest of the organization around some of these things... there were times when we thought some of these changes might actually have an impact on our bottom line... holiday accrual as an example... That was introduced by IFRS, and (we had to learn how to deal with that under) the regulation...'*

*'Information gathering was time consuming, particularly in regards to fixed assets. '*

In some cases IT systems had to be integrated (e.g. fixed assets), requiring some adjustments or even the acquisition of a new system. However, other local governments did not face this challenge as they had very flexible IT systems. So, it is suggested that in England IT adjustments challenges were related to the particular context of each local government.

In summary, it can be seen that the challenges faced by Brazilians and English financial managers are significantly different, even though some similarities exist, such as for staff training. The expectations for Brazilians with regards to these challenges are also higher than what was experienced by the English, mainly because these last already work under an accrual accounting culture.

## CHAPTER VI

### 6. CONCLUSIONS

#### 6.1. DISCUSSION OF THE RESULTS

The results of questionnaire survey and interviews demonstrate that the benefits of the PSA reforms are perceived differently in *ex-ante* and *ex-post* contexts. This section critically analyse the previous findings in regards AA, IAS and CH.

##### 6.1.1. Perceptions of the benefits of AA

The benefits are classified as 'very strong' (100-81%) or strong (80-61%) when most of the opinions were positive (agree or partly agree). Table 13 list these perceived benefits for AA adoption.

**Table 13:** Perceptions of the benefits of AA by Brazilian and English financial managers

Benefits	<i>Ex-ante</i> (Brazil)	<i>Ex-post</i> (England)
AA enhances accountability and decision-making processes.	✓ (very strong)	✓ (very strong)
AA provides a consistent basis to identify liabilities.	✓ (very strong)	✓ (very strong)
AA improves asset management.	✓ (very strong)	-
AA is necessary for effective cost accounting.	✓ (very strong)	✓ (very strong)
AA leads to a better performance management and provides an appropriate framework to link financial resources and services performance.	✓ (very strong)	✓ (very strong)
AA helps to formulate budgets.	✓ (very strong)	✓ (strong)
AA leads to a better debt management and prevent financial crisis.	✓ (very strong)	✓ (strong)
AA leads to a long term view when making financial decisions.	✓ (very strong)	✓ (strong)
AA prevents creative accounting practices.	✓ (strong)	-
AA brings a greater understanding of financial and accounting management to stakeholders.	✓ (strong)	✓ (strong)
AA benefits internal users.	✓ (very strong)	✓ (very strong)
AA benefits external users.	✓ (very strong)	✓ (strong)
AA enhances cash-flow management.	✓ (very strong)	-
AA makes it easier to identify if the entity is achieving specific objectives with the lowest amount of financial inputs.	✓ (very strong)	✓ (strong)
AA costs are justified by its benefits.	✓ (very strong)	✓ (strong)



From Table 13 it is clear that Brazilians and English governments mostly share similar positive opinions towards the benefits of AA. However, while the English have not experienced all the expected benefits, Brazilians believe that they will be observed. Brazilians appear to have an optimistic opinion towards the achievement of benefits that in practice may be overestimated.

Identified reasons for Brazilian optimism are the fact that assets and mainly liabilities will be disclosed in financial reporting independently of budget commitment. Thus, there will be less chance of facing unexpected and sudden liabilities compared to the present accounting framework. As a consequence, Brazilians believe AA helps to prevent financial crisis and can help to plan the financial management.

The English also observed most of the alleged benefits. However, some of them, such as the better management of assets, are not observed. The alleged reason is that the depreciation and evaluation of governmental assets, is useless for decision-making purposes, such as the replacement decision. They also have a more critical view than the Brazilians regarding AA benefits. One of them is related to AA costs and benefits: the English managers have a more concrete idea of these costs and benefits, while Brazilians usually have more subjective and abstract thoughts about that – therefore, English agree that AA costs are justified by its benefits, but to a lower degree than the Brazilians. The English respondents did not think that AA prevented creative accounting, while cash flow could be managed using different controls, and not necessarily accruals. Finally, the English respondents suggested that AA only helps indirectly to prevent financial crisis. Local governments do not have a direct contact with the market, but usually with the central government

(through transfers). As the central governments may experience crises that could affect the transfers, it could have an indirect effect in local government. This analysis partly answers research question #4.

The interviews made clear that part of the differences on the perceptions of AA benefits are related to each country context. For example, while Brazilian state and local governments use international funding (e.g. Inter-American Development Bank) for infrastructure funding, English local governments do not. Therefore, AA could add transparency to Brazilian financial reports to support raising funding.

### 6.1.2. Perceptions of the benefits of IAS

Table 14 presents the perceived benefits of Brazilian and English in regards IAS adoption. It follows the same classification (very strong / strong) than the previous table:

**Table 14:** Perceptions of the benefits of IAS by Brazilian and English financial managers

Benefits	<i>Ex-ante</i> (Brazil)	<i>Ex-post</i> (England)
IAS enhances accountability.	✓ (strong)	✓ (strong)
IAS enhances comparability.	✓ (very strong)	✓ (strong)
IAS prevents creative accounting.	✓ (very strong)	-
IAS prevents financial crisis.	✓ (very strong)	-
IAS leads to a better asset and liability management.	✓ (very strong)	-
IAS leads to a better management of financial resources.	✓ (very strong)	-
IAS improves overall management and planning.	✓ (very strong)	-
The benefits of IAS adoption justify its costs.	✓ (very strong)	-

Table 14 shows a very different perception of Brazilians and English in regards the benefits of IAS. None of the perceptions were similar, and even for the closest responses the English comments were more critical than the Brazilians. An example

is the effects of IAS in comparability: the English believe it can happen in an international context or for control purposes, but they have not experienced that. They do not deeply analyse their peers' financial reports; instead, they use their networking to gain an understanding of the financial position of other local government authorities.

In a general perspective, English financial managers believe that IAS has brought a lot of complexity, making accounts hard to be understood by the decision makers and by the public in general. In the interviews, it was revealed that the managers had to personally explain what was 'behind' the accounts to the decision makers (e.g. a loss that has no effect in everyday financial management might be a consequence of a deficit arising from fixed assets revaluation). The perceived benefits, such as the accountability and more international comparability of the financial reports, which could be used mostly for control purposes, would not justify IAS adoption. Therefore, they strongly believe that IAS, or IFRS in case of England, had few perceived benefits compared with the previous set of standards used. This perception, combined with the perceived benefits of AA, answers research question #4.

Brazilians positive expectations of IAS seem to be related to the fact that moving to IAS is understood as adopting AA. It was commonly said that one of the benefits of IAS was that the liabilities would be disclosed in the financial reports, which would favour a better financial management, and prevent crisis and creative accounting. One of the interviewees, for example, said that AA is a consequence of IAS adoption. One of the reasons for this perception is that, unlike in the UK, the context in which the PSA reforms are occurring in Brazil introduces AA and IAS simultaneously, favouring their association.

Therefore, Tables 14 and 15 list and compare the perceived benefits of the PSA reforms for Brazilian and English managers, answering the research question #1 and partly answering research question #3. They show that for AA, the expectations ‘before’ and ‘after’ are quite similar, while for the IAS they are quite different. However, given the context in which PSA reforms are occurring in Brazil (AA and IAS simultaneously), it cannot be concluded that the Brazilian expectations after the reforms will be similar to the English.

### 6.1.3. Perceptions of the challenges of PSA reforms

Table 15 lists the perception of the financial managers regarding the challenges of PSA reform. It was developed using the main perceptions identified according to the descriptive statistics and detailed in the interviews:

**Table 15:** Perceptions of the PSA reforms challenges by Brazilian and English managers

Challenge	<i>Ex-ante</i> (Brazil)	<i>Ex-post</i> (England)
Staff training.	Hard	Neither easy nor hard
Adjust IT systems.	Hard	Neither easy nor hard
Register intangible assets and its amortization.	Neither easy nor hard	Neither easy nor hard
Register receivables from exchange transactions.	Neither easy nor hard	Neither easy nor hard
Register receivables from non-exchange transactions.	Hard	Neither easy nor hard
Register infrastructure and heritage assets.	Very hard	Neither easy nor hard
Register fixed assets (property, plant and equipment) and its depreciation.	Neither easy nor hard	Neither easy nor hard
Register investments using equity methods.	Neither easy nor hard	Neither easy nor hard
Register inventories and its consumption.	Easy	Easy
Redesign chart of accounts.	Neither easy nor hard	Neither easy nor hard
Registering liabilities on accrual basis.	Neither easy nor hard	Easy
Getting political support to the PSA reforms.	Hard	Neither easy nor hard

Perceptions of the Brazilian managers were that the PSA reforms would be more challenging than perceptions of the English in regards their practical experience. The

most challenging aspect presented in Brazil was the achievement of political support. According to the interviews, Brazilians believe that the political stakeholders usually do not understand the nature and implications of the PSA reforms, and only support it because it is mandatory. Political stakeholders cannot easily identify short term benefits, but understand the costs of reform. They believe that restricted financial resources could be better used for more immediate needs. Another aspect highlighted by the Brazilians was the fact that there are not enough skilled professionals to work with AA and IAS in the public sector, which is a significant concern due to the size of some of these governments. Furthermore, many changes are still not clear, such as registering infrastructure and heritage assets. There are neither practical nor theoretical benchmarks to be used by them. Finally, Brazilian interviewees said that the cultural challenges of moving from cash to accrual basis of accounting will be hard to overcome.

Most English managers did not witness AA adoption, and their perceptions of the PSA reforms were limited to IFRS adoption. Their systems and most processes were already prepared to work with AA, so that IFRS adjustments were not specially challenging. However, they highlighted that staff training, IT adjustments mainly to include information about fixed assets, and processes adjustments were strongly resource consuming. These findings answer research question #2, #5 and, combined with the previous findings, it also answers question #3.

#### **6.1.4. Lessons for Brazil**

There are several lessons Brazil could learn from the English experience (research question #6). It is important firstly to identify what are the purposes of creating the

accounting information. If it is to be useful for decision-making and management, then IAS adoption may not provide much benefit to local government. AA aspects, such as depreciating assets in order to plan their replacement, may be less important than the recognition of all liabilities. Priorities should be registering all liabilities, and trying to make the accounting information a source of data for better planning for overall financial management. A strong link with the budget should be made (preferentially budgeting on an accrual basis).

If the main objective for Brazil is to be compliant with IAS, then it is important to plan the changes. Most English governments said they did not have major problems with IAS adoption because they have planned in advance, and only minor challenges were found during the transition to IAS. This planning has involved funding, contracting consultant services, defining timetables, adjusting IT services and training staff. Most English transitions to IFRS moved smoothly, which was reflected in the opinions of external auditors, who mostly agreed with the adjustments made.

What could be found from the expectations of the Brazilian governments is that AA and IAS adoption will provide useful information for management and decision-making purposes besides being compliant with IAS. It would be interesting to split the PSA reforms, starting with AA adoption for assets and liabilities (such as pension liabilities), and seeking to link the accounting information with financial management decision-making. Meanwhile, as IFRS does not seem to fit to the public sector specific needs and as IPSAS are developed from IFRS, discussions with the IAS standards setters could be made in order to provide a more useful set of standards.

Thus, in the medium term Brazilians governments could gain confidence in the AA and in the long run would move to adopt a more appropriate set of IAS.

## **6.2. FINAL CONSIDERATIONS**

This study had the objective of verifying if the alleged advantages arising from the adoption of accrual accounting (AA) and international accounting standards (IAS) are in practice experienced by local governments. This would provide a benchmark that could be considered during the reforms of the Brazilian public sector accounting (PSA) reforms. Although AA and IAS have been adopted in different ways in an international context in the last three decades, Brazil has only recently started the PSA reforms, which are expected to be finished by the end of 2014. In addition, Brazil has not considered the international experience in order to better plan its PSA reforms.

To shed light in this process, the perceptions of financial managers with regards to the benefits and challenges of the PSA reforms were compared in an *ex-ante* and *ex-post* contexts (Brazil and England, respectively). This involved a survey of financial managers from local governments of both countries, which made it possible to identify their perceptions compared to those presented by international multilateral institutions and scholars that support these PSA reforms. The difference between financial managers in the Brazil and England are further examined by statistical analysis and becomes the guidance for the semi-structured interview with financial managers in both countries. Apart from questionnaire survey, the views of financial managers on adopting AA and IAS in depth were studied via face to face discussion.

## **Considerations on the research findings**

Overall, Brazilians are more positive in regards the PSA reforms than the English. Brazilians are also more concerned about the challenges that will be faced. The English experience showed that while some aspects of the PSA reforms could be experienced in practice, others are limited to theory. In particular, most of the Brazilian expectations regarding the adoption of AA were experienced by the English, such as a better financial management. But the IAS expected benefits were mostly not experienced by the English, who did not identify strong benefits that would justify their adoption.

Brazilians expectations to justify the adoption of AA include better planning of the governmental financial management, better disclosure of the public assets and liabilities, and better identification of the resources and costs used to provide local services. These combined factors would improve accountability and also enhance the decision-making process, being useful for management purposes. The English perceptions, unlike expectations in Brazil, are that AA did not help to plan asset replacement and that cash flow management did not change significantly because of its adoption. Thus, while AA might leads to better financial management practices it may not add value to some specific aspects as expected in Brazil.

Reasons against the use of the IAS were that the framework from which it derives, the private sector accounting framework, does not address particularities of the public sector, such as the infrastructure and heritage assets, and that it is based and oriented by concepts that are meaningless for governments, such as profit. IAS complexity has brought some effects opposite to those expected in Brazil: a difficulty



in comparing financial reports among local governments and a more challenging process to explain the financial results to decision-makers and political stakeholders.

The English experience suggests that PSA reforms have not directly prevented financial crisis in local governments. English local government funding relies strongly on central government transferes. While AA helps to identify the obligations that are liabilities and to better disclose the financial position, IAS did not add significant benefits to justify the costs of its adoption. English managers suggested that regulation followed by the local government would have a direct impact on financial management, and would be more susceptible than IAS to creative accounting. Brazilian expectations were not matched as they expected that a new accounting framework would not favor creative accounting.

The perceptions of the challenges of PSA reforms were related to the particular accounting contexts of each country. While the Brazilians are concerned with their lack of technical expertise to work with AA and IAS, as there is little expertise with this new framework, the English managers went quite smoothly through IFRS adoption due to their previous experience with AA. The English transition from UK GAAP (a set of standards developed on accrual basis) to IFRS presented some challenges such as dealing with revaluation and financial instruments which may increase the cost of information. In Brazil the main challenge is to move from a cash basis accounting to AA and BR GAAP (IPSAS converged) simultaneously. Brazilian governments are still learning how to register assets and liabilities on accrual basis. Challenges such as revaluation and dealing with financial instruments are not

priorities. In addition, they face a lack of local political support, which is presented as the main challenge to materialize these reforms.

Finally, it was possible to identify experiences that can help to guide PSA reforms in Brazil. The presently available sets of IAS are may not be mature enough to be useful for decision-making purposes, and its adoption may be less of a priority than the move to AA in cost/benefits terms. On the other hand, AA is useful in several aspects, such as a fuller disclosure of the relevant liabilities in the public sector and helping to plan the overall financial management. Therefore, it would be important to adopt AA solidly before worrying with IAS compliance.

### **Research limitations**

Overall, the collected data was enough to support both qualitative and quantitative analysis and to provide a general picture of the main aspects of Brazilian and English financial managers' perceptions on PSA reforms. However, the research faced some limitations in the following aspects: (i) time; (ii) scope; (iii) sampling; (iv) questionnaire and interview response rates; and (v) the context of the PSA reforms in Brazil and UK.

The 5 months period used to collect quantitative and qualitative data was understood as enough within the 10 months available for the whole research. It was also planned according to the size of both Brazilian and English governments' samples. However, this period coincided with year-end holidays in Brazil and UK and with carnival holidays in Brazil. It also coincided with the end of the financial year for several English governments and with changes in several positions in Brazilian Municipalities

due to 2012 elections. Many governments had promised to answer the questionnaire or to be part of the interview, but they could not provide a timely response.

Time (i) was also a limitation in the interviews. Due to professional commitments, one of the interviewees had only 30 minutes available to answer all the questions. All the other interviewees spent at least 2 hours in the interview. If there had been more time available in their agenda, more aspects could be deeply explored.

The scope definition (ii) was particularly challenging because the PSA reforms complexity involves several different aspects. While going into details would provide a better understanding of particular issues of the reforms, it would also make the questionnaire and interview guides considerably longer. Therefore, the research topics were taken from the most commented aspects as found in the literature.

Another limitation was the sample size (iii). While planning the research, it was considered to work with as many governments as possible from both Brazil and England. However, the 5,600 local governments in Brazil made it impossible to get in contact with all of them. The total number of English local governments would also not fit the time constraints of this research. Decisions previously explained (section 3.1.2) were made to identify the sample size that would better fit time constraints, while providing reliable results.

All these aspects are reflected in the response rate (iv). Although the questionnaire response rate was satisfactory within these constraints, the interview response rate could have been better specifically in regards to English local governments. Only two governments (three persons) were interviewed in England, which limits the understandings to a few perceptions.

Furthermore, it cannot be concluded that Brazilian managers' perceptions after the completion of the PSA reforms will be as negative as the English perceptions, because the contexts in which they were implemented were different (v). In the UK, AA has been used in local governments for a long time and IFRS was only recently implemented, while in Brazil both AA and IPSAS converged standards are expected to be implemented simultaneously. Brazilians commonly believe that IAS are always based on AA, which can make them take as a benefit of IAS what was by the English associated as a benefit of AA only.

In addition, it is likely that the English local governments' financial managers responding to the questionnaires would not be familiar with the transition to AA as this occurred many years ago in the UK. The perception of the challenges faced in moving to AA may not have been familiar to the English managers, unlike the Brazilian ones (v).

A final limitation is that the set of IAS local governments' from each country are using are not exactly the same. English governments adopt IFRS and Brazilian will adopt of IPSAS converged BR GAAP. Although IPSAS use IFRS as their main benchmark, there are some differences between them. There are some issues addressed by IPSAS and not by IFRS, such as accounting for non-exchange transactions and service concessions arrangements.

### **Personal experience**

In Brazil, the PSA reforms have neither been questioned nor analysed in a critical manner. The international PSA experience has not been directly observed, and usually what is suggested by the international multilateral organizations is accepted

as guidelines that should be followed. In this regard, this study was particularly elucidatory to understand that the international PSA context is less homogeneous than was expected, and that many aspects (mostly related to IAS adoption) still have to mature significantly to justify their use.

The most significant challenges faced while conducting the research was the primary data collection in England and understanding the particularities of this country. Unlike in Brazil, where the researcher understood the local government arrangements and could easily contact the financial managers, in England not all the managers could be easily contacted and were willing to be part of the study. The challenge was to increase the English response rate without creating any pressure on them that could lead to biased responses. In addition, the arrangement of the public sector in the UK, with different responsibilities assigned to each type of local government, was not easily understood at first.

A personal experience with the English everyday local governments' accounting activities would enrich this analysis as practical details would be better understood in order to be compared with the Brazilian experience. It would make the researcher more aware of the everyday challenges faced by the local governments within the British accounting framework, providing better instruments to compare with local government accounting activities in Brazil. However, this would require more time to be accomplished, and would not fit the researcher's time restrictions.

### **Further studies**

Due to the importance of the PSA reforms, in particular for governments that are still analysing and considering the transition to IAS and AA, it would be interesting to

keep track of the Brazilian PSA reforms and revisit this issue in the future. Expectations from the Brazilian managers could be analysed after the completion of the local accounting reforms and compared to the data here collected, showing an *ex-ante* and *ex-post* comparison based on the Brazilian PSA reforms. It would add a longitudinal dimension of the PSA reforms based only in one country's point of view, and some previously presented limitations would be eliminated (such as the fact that the compared countries here, Brazil and England, use different sets of IAS in their reforms).

A different route that may be followed is to check how theories of transfer and diffusion of public policies may explain the PSA reforms acceptance in local governments of different countries. The adoption of these reforms from the perspective of models of formation of public policy agendas is also a possibility for future research.

Another future study could analyse the effects of the feedback of the governments that have already undertaken compliance with IAS. It would be particularly valuable to understand how the IPSASB reacts to aspects presented as the weaknesses of IPSAS, such as not being useful for the decision-making process and not presently covering issues in the public sector accounting literature, such as heritage and infrastructure assets.

## **APPENDICES AND REFERENCES**

### **APPENDIX A – SURVEY QUESTIONNAIRE**

Birmingham, xx December 2013

#### **ACADEMIC RESEARCH IN PUBLIC SECTOR ACCOUNTING**

Dear

The purpose of this letter is to invite you to participate in a questionnaire survey about investigating the challenges and benefits faced by the financial officers at the public sector accounting when the government plans to adopt accrual accounting and/or international accounting standards. This research is conducted by Mr. Bruno Mangualde, M.Sc. Research student and a Brazilian National Treasury civil servant under the joint supervision of Professor Ron Hodges and Dr. Chun Yu Mak of Department of Accounting & Finance, University of Birmingham. This study will help the Brazilian Government in identifying issues in the implementation of accrual accounting in the public sector.

Unlike the United Kingdom, Brazilian governments, either central or local, have not yet adopted accrual accounting and/or international accounting standards. Brazil plans to adopt them in the near future, but some challenges, impacts and benefits of these reforms are still uncertain. So, our target respondents are financial directors and managers with public sector accounting expertise.

The questionnaire consists of four brief sections: 1. Accrual accounting issues; 2. International accounting standards; 3. Public sector accounting standards; 4. Additional commentaries. It takes about 20 minutes to be completed. For your convenience, we provide both soft and hard copies of questionnaires. Please feel free to choose either one of them to express your view. The hard copy is attached for you with this letter. The soft copy is available at the following webpage:

<http://goo.gl/BTish>

Your responses will be used for academic purposes only. Respondents will not be identified either by name or position. Your feedback will be treated as confidential and your answers will be protected by the University of Birmingham ethical procedures and in accordance with the Data Protection legislation.

Your valuable feedback, time and support are all highly appreciated. Please contact any of us if you require further information about the study.

Yours sincerely,

# CHALLENGES AND BENEFITS OF THE PUBLIC SECTOR ACCOUNTING REFORMS

## M.Sc. Survey Questionnaire

\* Required fields

### SECTION 1 – ACCRUAL ACCOUNTING ISSUES

**1\*. Does the entity in which you work use accrual accounting?**

- ( ) No, and it is not expected to use accrual accounting in the next few years.  
 ( ) No, but it will adopt accrual accounting in the next few years.  
 ( ) Yes, but only for some accounting issues.  
 ( ) Yes, accrual accounting is fully implemented in the entity in which I work.  
 ( ) Other: \_\_\_\_\_

**2\*. In which basis is the budget elaborated in the entity you work in?**

- ( ) Cash basis.  
 ( ) Modified cash basis.  
 ( ) Accrual basis.  
 ( ) Other: \_\_\_\_\_

### QUESTIONS 3 – 28

From your knowledge and experience of ACCRUAL ACCOUNTING (AA) in the public sector, tick the response that represents your view to the following statements:

ITEM		DISAGREE	PARTLY DISAGREE	NEITHER AGREE NOR DISAGREE	PARTLY AGREE	AGREE	DO NOT KNOW
3*	Accrual accounting (AA) improves the decision-making of public sector entities.						
4*	AA increases the accountability of the public sector entities.						
5*	AA provides a consistent approach to identifying obligations that are liabilities						
6*	AA compels public sector entities to acknowledge and plan for the settlement of their liabilities.						
7*	AA leads towards a better financial performance management of the governments' financial resources.						
8*	AA is necessary for effective cost accounting.						
9*	AA provides a link between financial resources and service performance.						
10*	AA makes it easier to formulate the budget.						
11*	AA makes it possible to ascertain the entity's financial position as well as changes to financial position between reporting periods.						
12*	AA leads public sector entities to take a long term view when						



	making financial decisions.						
13*	With AA it is easier to evaluate if the public sector entity is achieving specific objectives within financial constraints.						
14*	With AA it is easier to evaluate if the public sector entity is achieving specific objectives with the lowest amount of financial inputs.						
15*	AA improves asset management.						
16*	AA enhances the cash flow management.						
17*	AA benefits external users.						
18*	AA benefits internal users.						
19*	AA financial accounting is effective with cash basis budgeting.						
20*	AA financial accounting is effective with accrual basis budgeting.						
21*	When fully implemented, working with AA is as easy as working with cash accounting.						
22*	The costs of AA implementation are justified by its benefits.						
23*	AA implementation results in greater understanding of public sector management issues by political stakeholders.						
24*	The adoption of AA prevents creative accounting practices.						
25*	AA leads to better debt management to prevent future financial crises.						
26*	Public sector entities have few qualified accountants with experience in AA.						
27*	The complexity of AA may mean that there is less effective oversight by Legislature/Parliament.						
28*	AA requires greater professional judgement than the cash basis accounting.						

Sources: IFAC Studies (Studies 5, 6, 8, 9 10 and 11) and Occasional Papers (Papers 1, 3, 5, 6 and 7)

**Additional Comments (insert number of the item followed by comments)**

e.g. #17 – AA benefits some external users only, such as auditors. However, the social control does not obtain any benefits from AA.

## SECTION 2 – INTERNATIONAL ACCOUNTING STANDARDS

**29\*.** Does the entity in which you work adopt any kind of intern. accounting standards?

- ☐ No, and it is not expected to adopt any IAS in the next few years.  
☐ No, but it will adopt IFRS (or converged IFRS) in the next few years.  
☐ No, but it will adopt IPSAS (or converged IPSAS) in the next few years.  
☐ No, but it will adopt other set of IAS in the next few years.  
☐ Yes, IFRS (or converged IFRS).  
☐ Yes, IPSAS (or converged IPSAS).  
☐ Yes, other set of international accounting standards.  
☐ Other: \_\_\_\_\_

### QUESTIONS 30-40

From your knowledge and experience of INTERNATIONAL ACCOUNTING STANDARDS and its application in the public sector, tick the response that represents your view:

ITEM		DISAGREE	PARTLY DISAGREE	NEITHER AGREE NOR DISAGREE	PARTLY AGREE	AGREE	DO NOT KNOW
30*	A major impediment to the achievement of enhanced accountability and financial transparency of governments and their agencies is the absence of generally accepted international accounting standards.						
31*	International accounting standards enhance the quality and comparability of financial reports over time and over different organizations.						
32*	The adoption of international accounting standards prevents creative accounting practices.						
33*	The adoption of international accounting standards results in better management of financial resources.						
34*	The adoption of international accounting standards leads to a better debt management and helps to prevent future financial crisis.						
35*	IAS improve the stewardship of assets and liabilities.						
36*	The adoption of international accounting standards improves overall management and planning.						
37*	The adoption of international accounting standards causes governments to give up their administrative independence and sovereignty.						
38*	The benefits of the adoption of IAS justify their costs.						
39*	Some public sector accounting issues are not addressed in international accounting standards.						
40*	The international accounting standards can be applied without the full understanding of the issues involved.						

**Additional Comments (insert number of the item followed by comments)**

e.g. # 38 – It depends on how the information will be used: some information cannot be worth registering once it is hard to obtain and it does not bring advantages, such as the infrastructure assets.

**SECTION 3 – PUBLIC SECTOR ACCOUNTING CHALLENGES****QUESTIONS 41-53**

From your knowledge and experience towards **Public Sector Accounting challenges**, tick the response that represents your view to the following statements:

41*	Train the staff to work with accrual accounting and international accounting standards.						
	Easy to implement	1	2	3	4	5	Hard to implement
42*	Adjust IT systems to meet accrual accounting requirements as well as international accounting standards.						
	Easy to implement	1	2	3	4	5	Hard to implement
43*	Register receivables from exchange transactions on accrual basis (IPSAS 9 / IAS 18).						
	Easy to implement	1	2	3	4	5	Hard to implement
44*	Register receivables from non-exchange transactions on accrual basis (mainly taxes and transfers – IPSAS 23).						
	Easy to implement	1	2	3	4	5	Hard to implement
45*	Register intangible assets (and its amortization – IPSAS 31 / IAS 38).						
	Easy to implement	1	2	3	4	5	Hard to implement
46*	Register of infrastructure and heritage assets (and its depreciation).						
	Easy to implement	1	2	3	4	5	Hard to implement
47*	Register property, plant and equipment (and its depreciation – IPSAS 17 / IAS 16).						
	Easy to implement	1	2	3	4	5	Hard to implement
48*	Register investments using the equity method (IPSAS 7 / IAS 28).						
	Easy to implement	1	2	3	4	5	Hard to implement
49*	Register inventories and its consumption (IAS 2).						
	Easy to implement	1	2	3	4	5	Hard to implement
50*	Register employee benefits, pension and retirement liabilities (IPSAS 25 / IAS 19).						
	Easy to implement	1	2	3	4	5	Hard to implement
51*	Redesign the chart of accounts to fulfill the accounting changes.						
	Easy to implement	1	2	3	4	5	Hard to implement
52*	Register provisions and liabilities on accrual basis (IPSAS 19 / IAS 37).						
	Easy to implement	1	2	3	4	5	Hard to implement
53*	Getting political support for the public sector accounting reforms.						
	Easy to accomplish	1	2	3	4	5	Hard to accomplish

**Additional Comments (insert number of the item followed by comments)**

e.g. # 52 – Some provisions and liabilities are easy to register, such as liabilities with suppliers. However, others are hard to register, such as retirement benefits.

**SECTION 4 – PERSONAL EXPERIENCE**

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**54. Please, feel free to present your personal experiences and perceptions about the Public Sector Accounting Reforms.**

## ADDITIONAL DATA

\* Please, inform the local government you work for (needed only for response control purposes):

BRAZIL – STATE OR STATE CAPITAL (MUNICIPALITY)					
Governo do Estado do AC	Governo do Estado do MS	Governo do Estado do RS	Prefeitura Municipal de Vitória/ES	Prefeitura Municipal de Rio de Janeiro/RJ	
Governo do Estado de AL	Governo do Estado do MT	Governo do Estado de SC	Prefeitura Municipal de Goiânia/GO	Prefeitura Municipal de Natal/RN	
Governo do Estado do AM	Governo do Estado do PA	Governo do Estado de SE	Prefeitura Municipal de São Luís/MA	Prefeitura Municipal de Porto Velho/RO	
Governo do Estado do AP	Governo do Estado da PB	Governo do Estado de SP	Prefeitura Municipal de Belo Horizonte/MG	Prefeitura Municipal de Boa Vista/RR	
Governo do Estado da BA	Governo do Estado de PE	Governo do Estado do TO	Prefeitura Municipal de Campo Grande/MS	Prefeitura Municipal de Porto Alegre/RS	
Governo do Estado do CE	Governo do Estado do PI	Prefeitura Municipal de Rio Branco/AC	Prefeitura Municipal de Cuiabá/MT	Prefeitura Municipal de Florianópolis/SC	
Governo do Estado do DF	Governo do Estado do PR	Prefeitura Municipal de Maceió/AL	Prefeitura Municipal de Belém/PA	Prefeitura Municipal de Aracaju/SE	
Governo do Estado do ES	Governo do Estado do RJ	Prefeitura Municipal de Macapá/AM	Prefeitura Municipal de João Pessoa/PB	Prefeitura Municipal de São Paulo/SP	
Governo do Estado de GO	Governo do Estado do RN	Prefeitura Municipal de Manaus/AP	Prefeitura Municipal de Recife/PE	Prefeitura Municipal de Palmas/TO	
Governo do Estado do MA	Governo do Estado de RO	Prefeitura Municipal de Salvador/BA	Prefeitura Municipal de Teresina/PI		
Governo do Estado de MG	Governo do Estado de RR	Prefeitura Municipal de Fortaleza/CE	Prefeitura Municipal de Curitiba/PR		

ENGLAND - LOCAL GOVERNMENT				
Bath and NE Somerset	Derby	Leeds	Nottingham	Stockton-on-Tees
Bedford	Derbyshire	Leicester	Nottinghamshire	Stoke-on-Trent
Birmingham	Devon	Leicestershire	Oxfordshire	Suffolk
Blackburn with Darwen	Dorset	Lincolnshire	Peterborough	Surrey
Blackpool	Durham County	Liverpool	Plymouth	Swindon
Bournemouth	East Riding of Yorkshire	Luton	Poole	Telford & Wrekin
Bracknell Forest	East Sussex	Manchester	Portsmouth	Thurrock
Brighton and Hove	Essex	Medway	Reading	Torbay
Bristol	Gloucestershire	Middlesbrough	Redcar & Cleveland	Warrington
Buckinghamshire	Halton	Milton Keynes	Rutland	Warwickshire
Cambridgeshire	Hampshire	Newcastle	Sheffield	West Berkshire
Central Bedfordshire	Hartlepool	Norfolk	Shropshire	West Sussex
Cheshire East	Herefordshire	North Lincolnshire East	Slough	Wiltshire
Cheshire West and Chester	Hertfordshire	North Lincolnshire	Somerset	Windsor and Maidenhead Royal
City of London	Isle of Wight	North Somerset	South Gloucestershire	Wokingham
Cornwall	Kent	North Yorkshire	Southampton	Worcestershire
Cumbria	Kingston Upon Hull	Northamptonshire	Southend on Sea	York
Darlington	Lancashire	Northumberland	Staffordshire	

\* I am willing to be contacted in the future (and if necessary) to talk briefly about specific points of the research. ( ) Yes / ( ) No

If you answered yes, please, provide the following information (all information provided will be treated as confidential and will not be disclosed to third parties. This information will be used exclusively for this research's purposes in accordance with the ethical procedures of the University of Birmingham):

<b>Name</b>		<b>Email</b>	
<b>Phone</b>		<b>Department</b>	
<b>Position</b>		<b>Academic Degree</b>	
<b>Experience with Public Sector Accounting (years)</b>	( ) 0-2 ( ) 3-5 ( ) 6-10 ( ) 11-15 ( ) Over 15		

## APPENDIX B – INTERVIEW GUIDE

### PUBLIC SECTOR ACCOUNTING REFORMS: CHALLENGES AND BENEFITS

#### Perceptions of the Local Government's Financial Managers and/or Head Accountants

**Research overview:** This interview is part of a comparative study that aims to identify the perceptions of the financial managers to the challenges and benefits of the Public Sector Accounting reforms (adoption of accrual accounting and international accounting standards) in an *ex-ante* (Brazilian local governments) and *ex-post* (English local governments) context.

This academic study is conducted by Mr. Bruno R. Mangualde, a M.Sc. Research student and a Brazilian National Treasury civil servant under the joint supervision of Professor Ron Hodges and Dr. Chun Yu Mak of Department of Accounting & Finance, University of Birmingham.

**Ethical issues:** Your answers will be used for academic purposes only. You will not be identified either by name or position. Your feedback will be treated as confidential and your answers will be protected by the University of Birmingham ethical procedures and in accordance with the Data Protection legislation.

Your participation is strictly voluntary. If you have any questions, please ask and be sure you are satisfied with the answers before participating.

#### CONSENT AGREEMENT

- I confirm that I have read and understood the information leaflet and that I have been given the opportunity to ask questions and have had them answered. ☐
- I have been informed of and understand the purpose and procedures of this study and the purpose and procedures of this interview. ☐
- I understand that my participation is voluntary and that I am free to withdraw my consent and discontinue my participation in this interview at anytime. In such a circumstance, any data I have given will be destroyed and not used in the study. ☐
- I understand that I can choose to answer only the questions that I wish to answer. ☐
- I understand that the interview will be digitally recorded and then transcribed. ☐
- I agree to take part in the study ☐
- I agree to be digitally recorded. ☐

#### PARTICIPANT

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_ / /

#### RESEARCHER

Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_ / /

## INTERVIEW QUESTIONNAIRE

### **AA – Accrual accounting**

### **IAS – International accounting standards**

1. **AA Cash Flow Management:** According to your experience, how has the adoption of AA reflected on the way local government works with its cash flow?
2. **AA Long Term View:** Do you believe that the adoption of AA has changed the long term view of the local financial management? Why? How?
3. **AA Asset Management / AA Identify Liabilities / IAS Assets Liabilities:** How have the changes brought by AA and IAS impacted the local government management of assets and liabilities?
4. **AA Creative Accounting / IAS Creative Accounting:** What are the consequences of the adoption of the AA and the IAS on the prevention of Creative Accounting?
5. **AA Crisis Prevention / IAS Crisis Prevention:** According to your experience, what are the effects on the adoption of AA and IAS on the prevention of crisis and problems to the public sector?
6. **IAS Cost Benefit:** According to your experience, which were the benefits brought to society by the adoption of the IAS? Are these benefits worth their costs?
7. **IAS Comparability / IAS Financial Management:** It is commonly argued that the adoption of IAS increases the comparability of the accounts between different entities. Did it happen to the government you work for? If so, which were the effects of this comparability on the management of the local finances?
8. **IAS Planning:** What were the effects of the International Accounting Standards adoption on the financial management planning?
9. **CH IT Systems:** What were the main challenges faced by your local government while adapting the IT systems to IAS requirements?
10. **General:** According to your experience and perceptions, which were the main difficulties of reforming the public sector accounting (accrual accounting and international accounting standards adoption)?



## APPENDIX C – QUESTIONNAIRE ITEMS AND CORRESPONDING SPSS VARIABLES

The following tables present the list of questionnaire items and the correspondent SPSS variables, used for the quantitative data analysis:

QUESTIONNAIRE SECTION 1: ACCRUAL ACCOUNTING	
AA_DecisionMaking	Accrual accounting (AA) improves the decision-making of public sector entities.
AA_Accountability	AA increases the accountability of the public sector entities.
AA_IdentifyLiabilities	AA provides a consistent approach to identifying obligations that are liabilities
AA_PlanSettleLiabilities	AA compels public sector entities to acknowledge and plan for the settlement of their liabilities.
AA_FinancialPerformanceMngmt	AA leads towards a better financial performance management of the governments' financial resources.
AA_CostAccounting	AA is necessary for effective cost accounting.
AA_FinancialResourcesServicePerfm	AA provides a link between financial resources and service performance.
AA_BudgetFormulation	AA makes it easier to formulate the budget.
AA_FinancialPosition	AA makes it possible to ascertain the entity's financial position as well as changes to financial position between reporting periods.
AA_LongTermView	AA leads public sector entities to take a long term view when making financial decisions.
AA_AchieveObjectives	With AA it is easier to evaluate if the public sector entity is achieving specific objectives within financial constraints
AA_LowestFinancialInputs	With AA it is easier to evaluate if the public sector entity is achieving specific objectives with the lowest amount of financial inputs.
AA_AssetManagement	AA improves asset management.
AA_CashFlowManagement	AA enhances the cash flow management.
AA_ExternalUsers	AA benefits external users.
AA_InternalUsers	AA benefits internal users.
AA_EffectiveCashBudget	AA financial accounting is effective with cash basis budgeting.
AA_EffectiveAccrualBudget	AA financial accounting is effective with accrual basis budgeting.
AA_EasyToWork	When fully implemented, working with AA is as easy as working with cash accounting.
AA_CostBenefit	The costs of AA implementation are justified by its benefits.
AA_StakeholdersUnderstanding	AA implementation results in greater understanding of public sector management issues by political stakeholders.
AA_CreativeAccounting	The adoption of AA prevents creative accounting practices.
AA_CrisisPrevention	AA leads to better debt management to prevent future financial crises.
AA_QualifiedAccountants	Public sector entities have few qualified accountants with experience in AA.
AA_ParliamentOversight	The complexity of AA may mean that there is less effective oversight by Legislature/Parliament.
AA_ProfessionalJudgement	AA requires greater professional judgement than the cash basis accounting.

Table H.1: List of the questionnaire questions regarding accrual accounting and the correspondent SPSS variable labels

QUESTIONNAIRE SECTION 2: INTERNATIONAL ACCOUNTING STANDARDS	
IAS_Accountability	A major impediment to the achievement of enhanced accountability and financial transparency of governments and their agencies is the absence of generally accepted international accounting standards.
IAS_Comparability	International accounting standards enhance the quality and comparability of fin. rep. over time and over different organizations.
IAS_CreativeAccounting	The adoption of international accounting standards prevents creative accounting practices.
IAS_FinancialManagement	The adoption of international accounting standards results in better management of financial resources.
IAS_CrisisPrevention	The adoption of international accounting standards leads to a better debt management and helps to prevent future financial crisis.
IAS_AssetsLiabilities	International accounting standards improve the stewardship of assets and liabilities.
IAS_Planning	The adoption of international accounting standards improves overall management and planning.
IAS_Sovereignty	The adoption of international accounting standards causes governments to give up their administrative independence and sovereignty.
IAS_CostBenefit	The benefits of the adoption of international accounting standards justify its costs.
IAS_Absence	Some public sector accounting issues are not addressed in international accounting standards.
IAS_PartiallyApplied	The international accounting standards can be applied without the full understanding of the issues involved.

Table H.2: List of the questionnaire questions regarding international accounting standards and the correspondent SPSS variable labels

QUESTIONNAIRE SECTION 3: PSA REFORMS CHALLENGES	
CH_TrainStaff	Train the staff to work with accrual accounting and international accounting standards.
CH_ITSystems	Adjust IT systems to meet accrual accounting requirements as well as international accounting standards.
CH_ReceivablesET	Register receivables from exchange transactions on accrual basis.
CH_ReceivablesNET	Register receivables from non-exchange transactions on accrual basis (mainly taxes and transfers).
CH_Intangible	Register intangible assets (and its amortization).
CH_InfrastructureHeritage	Register of infrastructure and heritage assets (and its depreciation).
CH_PropertyPlant	Register property, plant and equipment (and its depreciation).
CH_InvestmentsEM	Register investments using the equity method.
CH_Inventories	Register inventories and its consumption.
CH_Employees	Register employee benefits, pension and retirement liabilities.
CH_RedesignChartOfAccounts	Redesign the chart of accounts to fulfill the accounting changes.
CH_Liabilities	Register provisions and liabilities on accrual basis.
CH_PoliticalSupport	Getting political support for the public sector accounting reforms.

Table H.3: List of the questionnaire questions regarding accounting challenges and the correspondent SPSS variable labels

QUESTIONNAIRE GENERIC VARIABLES	
Case	Identifies each question.
Country	Identify the country of the respondent.
Use_AA	Identify the level that AA is applied in each local government.
Use_IAS	Identify if there is any set of IAS applied in each local government.
BasisBudgetElaboration	Identify the basis in which the budget is set in each local government.

Table H.4: List of the questionnaire items used to identify specific aspects from each local government

## APPENDIX D – DESCRIPTIVE STATISTICS TABLES

This Appendix has three different groups of tables: the group of accrual accounting issues (Tables D.1 to D.129), the group of international accounting standards issues (Tables D.30 to D.42), and the group of challenges faced during the PSA reforms (Tables D.43 to D.56). Each variable presented corresponds to one of the questionnaire survey questions.

### Accrual accounting

Table D.1 presents the amount of respondents and valid responses for each question regarding AA. Table D.2 shows the stage of adoption of accrual accounting in local governments. Table D.3 shows the budget basis used by the local governments. Tables D.4 to D.29 present the answers for both countries regarding accrual accounting issues.

Table D.1: Total of responses and valid responses for the AA questionnaire items

AA Variable	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
AA_DecisionMaking	73	100%	0	.0%	73	100%
AA_Accountability	72	98.6%	1	1.4%	73	100%
AA_IdentifyLiabilities	73	100%	0	.0%	73	100%
AA_PlanSettleLiabilities	73	100%	0	.0%	73	100%
AA_FinancialPerformanceMngmt	73	100%	0	.0%	73	100%
AA_CostAccounting	73	100%	0	.0%	73	100%
AA_FinancialResourcesServicePerformance	72	98.6%	1	1.4%	73	100%
AA_BudgetFormulation	73	100%	0	.0%	73	100%
AA_FinancialPosition	73	100%	0	.0%	73	100%
AA_LongTermView	72	98.6%	1	1.4%	73	100%
AA_AchieveObjectives	73	100%	0	.0%	73	100%
AA_LowestFinancialInputs	72	98.6%	1	1.4%	73	100%
AA_AssetManagement	73	100%	0	.0%	73	100%
AA_CashFlowManagement	73	100%	0	.0%	73	100%
AA_ExternalUsers	69	94.5%	4	5.5%	73	100%
AA_InternalUsers	72	98.6%	1	1.4%	73	100%
AA_EffectiveCashBudget	65	89.0%	8	11.0%	73	100%
AA_EffectiveAccrualBudget	70	95.9%	3	4.1%	73	100%
AA_EasyToWork	70	95.9%	3	4.1%	73	100%
AA_CostBenefit	69	94.5%	4	5.5%	73	100%
AA_StakeholdersUnderstanding	70	95.9%	3	4.1%	73	100%
AA_CreativeAccounting	70	95.9%	3	4.1%	73	100%
AA_CrisisPrevention	73	100%	0	.0%	73	100%
AA_QualifiedAccountants	69	94.5%	4	5.5%	73	100%
AA_ParliamentOversight	70	95.9%	3	4.1%	73	100%
AA_ProfessionalJudgement	73	100%	0	.0%	73	100%

Table D.2: Descriptive statistics for the use of accrual accounting

Variable Use_AA		Country		Total
		Brazil	England	
Does the entity in which you work use accrual accounting?	No – will adopt AA in the next years	18 / 46%	0 / 0%	18 / 25%
	Yes – only for some accounting issues	19 / 49%	6 / 18%	25 / 35%
	Yes – AA is fully implemented	2 / 5%	27 / 82%	29 / 40%
Total		39 / 100%	33 / 100%	72 / 100%

Table D.3: Descriptive statistics for the budget basis

Variable Basis_Budget_Elaboration		Country		Total
		Brazil	England	
In which basis is the budget elaborated in the entity you work in?	Cash basis	7 / 18%	3 / 9%	10 / 14%
	Modified cash basis	27 / 69%	4 / 11%	31 / 43%
	Accrual basis	4 / 10%	26 / 80%	30 / 42%
	Other	1 / 3%	0 / 0%	1 / 1%
Total		39 / 100%	33 / 100%	72 / 100%

Table D.5: Descriptive statistics for AA and Accountability

Variable AA_Decision_Making		Country		Total
		Brazil	England	
Accrual accounting (AA) improves the decision-making of public sector entities.	Partly disagree	1 / 3%	1 / 3%	2 / 3%
	Neither agree nor disagree	0 / 0%	1 / 3%	1 / 1%
	Partly agree	4 / 10%	3 / 9%	7 / 10%
	Agree	34 / 87%	29 / 85%	63 / 86%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.5: Descriptive statistics for AA and Accountability

Variable AA_Accountability		Country		Total
		Brazil	England	
Accrual accounting increases the accountability of the public sector entities.	Partly disagree	1 / 3%	1 / 3%	2 / 3%
	Neither agree nor disagree	0 / 0%	1 / 3%	1 / 1%
	Partly agree	3 / 8%	5 / 15%	8 / 11%
	Agree	34 / 89%	27 / 79%	61 / 85%
Total		38 / 100%	34 / 100%	72 / 100%

Table D.6: Descriptive statistics for the effects of AA and the identification of liabilities

Variable AA_IdentifyLiabilities		Country		Total
		Brazil	England	
AA provides a consistent approach to identifying obligations that are liabilities	Partly disagree	2 / 5%	0 / 0%	2 / 3%
	Partly agree	9 / 23%	2 / 6%	11 / 15%
	Agree	28 / 72%	32 / 94%	60 / 82%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.7: Descriptive statistics for the effects of AA in the settlement of liabilities

Variable AA_PlanSettleLiabilities		Country		Total
		Brazil	England	
AA compels public sector entities to acknowledge and plan for the settlement of their liabilities.	Partly agree	9 / 23%	8 / 23%	17 / 23%
	Agree	30 / 77%	26 / 77%	56 / 77%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.8: Descriptive statistics for the effects of AA in financial performance

Variable AA_FinancialPerformanceMngmt		Country		Total
		Brazil	England	
Accrual accounting leads towards a better financial performance management of the governments' financial resources.	Disagree	1 / 3%	1 / 3%	2 / 3%
	Partly disagree	1 / 3%	0 / 0%	1 / 1%
	Neither agree nor disagree	2 / 5%	1 / 3%	3 / 4%
	Partly agree	7 / 18%	5 / 15%	12 / 16%
	Agree	28 / 71%	27 / 79%	55 / 75%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.9: Descriptive statistics for the effects of AA in cost accounting

Variable AA_CostAccounting		Country		Total
		Brazil	England	
Accrual accounting is necessary for effective cost accounting.	Neither agree nor disagree	0 / 0%	1 / 3%	1 / 1%
	Partly agree	2 / 5%	8 / 23%	10 / 14%
	Agree	37 / 95%	25 / 74%	62 / 85%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.10: Descriptive statistics for the effects of AA in linking financial resources &amp; service performance

Variable AA_FinancialResourcesServicePerformance		Country		Total
		Brazil	England	
Accrual accounting provides a link between financial resources and service performance.	Disagree	1 / 3%	0 / 0%	1 / 1%
	Neither agree nor disagree	0 / 0%	3 / 9%	3 / 4%
	Partly agree	11 / 29%	9 / 26%	20 / 28%
	Agree	26 / 68%	22 / 65%	48 / 67%
Total		38 / 100%	34 / 100%	72 / 100%

Table D.11: Descriptive statistics for AA and budget formulation

Variable AA_BudgetFormulation		Country		Total
		Brazil	England	
Accrual accounting makes it easier to formulate the budget	Disagree	0 / 0%	2 / 6%	2 / 3%
	Partly disagree	2 / 5%	2 / 6%	4 / 6%
	Neither agree nor disagree	1 / 3%	10 / 29%	11 / 15%
	Partly agree	8 / 20%	4 / 12%	12 / 16%
	Agree	28 / 72%	16 / 47%	44 / 60%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.12: Descriptive statistics for AA and financial position

Variable AA_FinancialPosition		Country		Total
		Brazil	England	
AA makes it possible to ascertain the entity's financial position as well as changes to fin. position between reporting periods.	Partly disagree	0 / 0%	1 / 3%	1 / 1%
	Partly agree	3 / 8%	3 / 9%	6 / 8%
	Agree	36 / 92%	30 / 88%	66 / 90%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.13: Descriptive statistics for AA and long term view

Variable AA_LongTermView		Country		Total
		Brazil	England	
Accrual accounting leads public sector entities to take a long term view when making financial decisions.	Disagree	0 / 0%	1 / 3%	1 / 1%
	Partly disagree	1 / 3%	2 / 6%	3 / 4%
	Neither agree nor disagree	0 / 0%	5 / 15%	5 / 7%
	Partly agree	9 / 23%	9 / 27%	18 / 25%
	Agree	29 / 74%	16 / 49%	45 / 63%
Total		39 / 100%	33 / 100%	72 / 100%

Table D.14: Descriptive statistics for AA and achieving objectives

Variable AA_AchieveObjectives		Country		Total
		Brazil	England	
With AA it is easier to evaluate if the public sector entity is achieving specific objectives within financial constraints.	Disagree	0 / 0%	1 / 3%	1 / 1%
	Neither agree nor disagree	0 / 0%	3 / 9%	3 / 4%
	Partly agree	14 / 36%	4 / 12%	18 / 25%
	Agree	25 / 64%	26 / 76%	51 / 70%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.15: Descriptive statistics for AA and lowering financial inputs

Variable AA_LowestFinancialInputs		Country		Total
		Brazil	England	
With accrual accounting it is easier to evaluate if the public sector entity is achieving specific objectives with the lowest amount of financial inputs.	Disagree	1 / 3%	1 / 3%	2 / 3%
	Partly disagree	1 / 3%	2 / 6%	3 / 4%
	Neither agree nor disagree	1 / 3%	9 / 26%	10 / 14%
	Partly agree	10 / 26%	4 / 12%	14 / 19%
	Agree	25 / 65%	18 / 53%	43 / 60%
Total		38 / 100%	34 / 100%	72 / 100%

Table D.16: Descriptive statistics for AA and asset management

Variable AA_AssetManagement		Country		Total
		Brazil	England	
Accrual accounting improves asset management.	Disagree	0 / 0%	4 / 12%	4 / 5%
	Partly disagree	1 / 3%	0 / 0%	1 / 1%
	Neither agree nor disagree	0 / 0%	10 / 29%	10 / 14%
	Partly agree	3 / 8%	5 / 15%	8 / 11%
	Agree	35 / 89%	15 / 44%	50 / 69%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.17: Descriptive statistics for AA and cash flow management

Variable AA_CashFlowManagement		Country		Total
		Brazil	England	
Accrual enhances the accounting cash flow management.	Disagree	1 / 3%	10 / 29%	11 / 15%
	Partly disagree	0 / 0%	2 / 6%	2 / 3%
	Neither agree nor disagree	1 / 3%	8 / 24%	9 / 12%
	Partly agree	10 / 25%	3 / 9%	13 / 18%
	Agree	27 / 69%	11 / 32%	38 / 52%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.18: Descriptive statistics for AA and external users

Variable AA_ExternalUsers		Country		Total
		Brazil	England	
Accrual accounting benefits external users.	Disagree	1 / 3%	1 / 3%	2 / 3%
	Partly disagree	0 / 0%	2 / 6%	2 / 3%
	Neither agree nor disagree	0 / 0%	4 / 13%	4 / 6%
	Partly agree	6 / 16%	6 / 19%	12 / 17%
	Agree	30 / 81%	19 / 59%	49 / 71%
Total		37 / 100%	32 / 100%	69 / 100%

Table D.19: Descriptive statistics for AA and internal users

Variable AA_InternalUsers		Country		Total
		Brazil	England	
Accrual accounting benefits internal users.	Neither agree nor disagree	1 / 3%	1 / 3%	2 / 3%
	Partly agree	6 / 16%	8 / 24%	14 / 19%
	Agree	31 / 81%	25 / 73%	56 / 78%
Total		38 / 100%	34 / 100%	72 / 100%

Table D.20: Descriptive statistics for AA and cash budget

Variable AA_EffectiveCashBudget		Country		Total
		Brazil	England	
Accrual financial accounting is effective with cash basis budgeting.	Disagree	13 / 36%	6 / 21%	19 / 29%
	Partly disagree	6 / 16%	3 / 9%	9 / 14%
	Neither agree nor disagree	2 / 6%	8 / 28%	10 / 15%
	Partly agree	5 / 14%	8 / 28%	13 / 20%
	Agree	10 / 28%	4 / 14%	14 / 22%
Total		36 / 100%	29 / 100%	65 / 100%

Table D.21: Descriptive statistics for AA and accrual budget

Variable AA_EffectiveAccrualBudget		Country		Total
		Brazil	England	
Accrual financial accounting is effective with accrual basis budgeting.	Disagree	5 / 14%	0 / 0%	5 / 7%
	Neither agree nor disagree	3 / 8%	2 / 6%	5 / 7%
	Partly agree	7 / 19%	1 / 3%	8 / 12%
	Agree	22 / 59%	30 / 91%	52 / 74%
Total		37 / 100%	33 / 100%	70 / 100%

Table D.22: Descriptive statistics for AA and ease of use

Variable AA_EasyToWork		Country		Total
		Brazil	England	
When fully implemented, working with AA is as easy as working with cash accounting.	Disagree	5 / 14%	1 / 3%	6 / 9%
	Partly disagree	6 / 16%	2 / 6%	8 / 11%
	Neither agree nor disagree	1 / 3%	3 / 9%	4 / 6%
	Partly agree	7 / 19%	8 / 24%	15 / 21%
	Agree	18 / 48%	19 / 58%	37 / 53%
Total		37 / 100%	33 / 100%	70 / 100%



Table D.23: Descriptive statistics for AA and cost benefit

Variable AA_CostBenefit		Country		Total
		Brazil	England	
The costs of accrual accounting implementation are justified by its benefits.	Partly disagree	1 / 3%	1 / 3%	2 / 3%
	Neither agree nor disagree	1 / 3%	6 / 19%	7 / 10%
	Partly agree	7 / 18%	5 / 16%	12 / 17%
	Agree	28 / 76%	20 / 62%	48 / 70%
Total		37 / 100%	32 / 100%	69 / 100%

Table D.24: Descriptive statistics for AA and stakeholders understanding

Variable AA_StakeholdersUnderstanding		Country		Total
		Brazil	England	
Accrual accounting implementation results in greater understanding of public sector management issues by political stakeholders.	Disagree	0 / 0%	1 / 3%	1 / 1%
	Partly disagree	4 / 11%	0 / 0%	4 / 6%
	Neither agree nor disagree	3 / 8%	8 / 25%	11 / 16%
	Partly agree	6 / 16%	8 / 25%	14 / 20%
	Agree	25 / 65%	15 / 47%	40 / 57%
Total		38 / 100%	32 / 100%	70 / 100%

Table D.25: Descriptive statistics for AA and creative accounting

Variable AA_CreativeAccounting		Country		Total
		Brazil	England	
The adoption of accrual accounting prevents creative accounting practices.	Disagree	7 / 19%	6 / 18%	13 / 19%
	Partly disagree	3 / 8%	7 / 21%	10 / 14%
	Neither agree nor disagree	2 / 6%	7 / 21%	9 / 13%
	Partly agree	11 / 31%	13 / 37%	24 / 34%
	Agree	13 / 36%	1 / 3%	14 / 20%
Total		36 / 100%	34 / 100%	70 / 100%

Table D.26: Descriptive statistics for AA and crisis prevention

Variable AA_CrisisPrevention		Country		Total
		Brazil	England	
Accrual accounting leads to better debt management to prevent future financial crises.	Disagree	1 / 3%	1 / 3%	2 / 3%
	Partly disagree	1 / 3%	4 / 12%	5 / 7%
	Neither agree nor disagree	0 / 0%	5 / 15%	5 / 7%
	Partly agree	9 / 23%	8 / 23%	17 / 23%
	Agree	28 / 71%	16 / 47%	44 / 60%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.27: Descriptive statistics for AA and qualified accountants

Variable AA_QualifiedAccountants		Country		Total
		Brazil	England	
Public sector entities have few qualified accountants with experience in accrual accounting.	Disagree	2 / 5%	25 / 80%	27 / 39%
	Partly disagree	0 / 0%	2 / 7%	2 / 3%
	Neither agree nor disagree	0 / 0%	1 / 3%	1 / 1%
	Partly agree	3 / 8%	0 / 0%	3 / 5%
	Agree	33 / 87%	3 / 10%	36 / 52%
Total		38 / 100%	31 / 100%	69 / 100%

Table D.28: Descriptive statistics for AA and parliament oversight

Variable AA_ParliamentOversight		Country		Total
		Brazil	England	
The complexity of accrual accounting may mean that there is less effective oversight by Legislature/Parliament.	Disagree	15 / 40%	15 / 46%	30 / 43%
	Partly disagree	4 / 11%	7 / 21%	11 / 16%
	Neither agree nor disagree	3 / 8%	10 / 30%	13 / 18%
	Partly agree	8 / 22%	1 / 3%	9 / 13%
	Agree	7 / 19%	0 / 0%	7 / 10%
Total		37 / 100%	33 / 100%	70 / 100%

Table D.29: Descriptive statistics for AA and professional judgement

Variable AA_ProfessionalJudgement		Country		Total
		Brazil	England	
Accrual accounting requires greater professional judgement than the cash basis accounting.	Disagree	2 / 5%	3 / 9%	5 / 7%
	Partly disagree	1 / 3%	0 / 0%	1 / 1%
	Neither agree nor disagree	0 / 0%	1 / 3%	1 / 1%
	Partly agree	6 / 15%	8 / 23%	14 / 19%
	Agree	30 / 77%	22 / 65%	52 / 71%
Total		39 / 100%	34 / 100%	73 / 100%

### International accounting standards

Table D.30 presents the amount of respondents and valid responses for each question regarding IAS. Table D.31 shows the stage of adoption of international accounting standards in local governments of Brazil and England. Tables D.30 to D.42 present the answers for governments of both countries regarding international accounting standards issues:

Table D.30: Total of responses and of valid responses for the IAS questionnaire items

AA Variable	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
IAS_Accountability	73	100%	0	.0%	73	100%
IAS_Comparability	73	100%	0	.0%	73	100%
IAS_CreativeAccounting	70	95.9%	3	4.1%	73	100%
IAS_FinancialManagement	73	100%	0	.0%	73	100%
IAS_CrisisPrevention	71	97.3%	2	2.7%	73	100%
IAS_AssetsLiabilities	73	100%	0	.0%	73	100%
IAS_Planning	73	100%	0	.0%	73	100%
IAS_Sovereignty	69	94.5%	4	5.5%	73	100%
IAS_CostBenefit	71	97.3%	2	2.7%	73	100%
IAS_Absence	61	83.6%	12	16.4%	73	100%
IAS_PartialyApplied	70	95.9%	3	4.1%	73	100%

Table D.31: Descriptive statistics for the use of IAS

Variable Use_IAS		Country		Total
		Brazil	England	
Does the entity in which you work adopt any kind of international accounting standards?	No – Not expecting to adopt any IAS	2 / 5%	0 / 0%	2 / 3%
	No – Will adopt IFRS in the next few years	4 / 10%	0 / 0%	4 / 6%
	No – Will adopt IPSAS in the next few years	25 / 64%	0 / 0%	25 / 35%
	No – Will adopt another set of IAS in the next few years	5 / 13%	0 / 0%	5 / 7%
	Yes – IFRS (or converged IFRS)	0 / 0%	30 / 94%	30 / 42%
	Yes – IPSAS (or converged IPSAS)	2 / 5%	1 / 3%	3 / 4%
	Other	1 / 3%	1 / 3%	2 / 3%
Total		39 / 100%	32 / 100%	71 / 100%

Table D.32: Descriptive statistics for IAS and accountability

Variable IAS_Accountability		Country		Total
		Brazil	England	
A major impediment to the achievement of enhanced accountability and financial transparency of governments and their agencies is the absence of generally accepted IAS.	Disagree	8 / 21%	4 / 12%	12 / 16%
	Partly disagree	4 / 10%	4 / 12%	8 / 11%
	Neither agree nor disagree	0 / 0%	5 / 15%	5 / 7%
	Partly agree	14 / 36%	11 / 32%	25 / 34%
	Agree	13 / 33%	10 / 29%	23 / 32%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.33: Descriptive statistics for IAS and comparability

Variable IAS_Comparability			Country		Total
			Brazil	England	
International accounting standards enhance the quality and comparability of financial reports over time and over different organizations.	Disagree		0 / 0%	2 / 6%	2 / 3%
	Partly disagree		1 / 3%	5 / 15%	6 / 8%
	Neither agree nor disagree		0 / 0%	3 / 9%	3 / 4%
	Partly agree		4 / 10%	10 / 29%	14 / 19%
	Agree		34 / 87%	14 / 41%	48 / 66%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.34: Descriptive statistics for IAS and creative accounting

Variable IAS_CreativeAccounting			Country		Total
			Brazil	England	
The adoption of international accounting standards prevents creative accounting practices.	Disagree		3 / 8%	8 / 24%	11 / 16%
	Partly disagree		2 / 6%	7 / 21%	9 / 13%
	Neither agree nor disagree		3 / 8%	7 / 21%	10 / 14%
	Partly agree		13 / 36%	10 / 28%	23 / 33%
	Agree		15 / 42%	2 / 6%	17 / 24%
Total			36 / 100%	34 / 100%	70 / 100%

Table D.35: Descriptive statistics for IAS and financial management

Variable IAS_FinancialManagement			Country		Total
			Brazil	England	
The adoption of international accounting standards results in better management of financial resources.	Disagree		1 / 3%	7 / 21%	8 / 11%
	Partly disagree		1 / 3%	2 / 6%	3 / 4%
	Neither agree nor disagree		0 / 0%	14 / 41%	14 / 19%
	Partly agree		11 / 28%	8 / 24%	19 / 26%
	Agree		26 / 66%	3 / 8%	29 / 40%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.36: Descriptive statistics for IAS and crisis prevention

Variable IAS_CrisisPrevention			Country		Total
			Brazil	England	
The adoption of international accounting standards leads to a better debt management and helps to prevent future financial crisis.	Disagree		1 / 3%	7 / 22%	8 / 11%
	Partly disagree		2 / 5%	2 / 6%	4 / 6%
	Neither agree nor disagree		1 / 3%	14 / 44%	15 / 21%
	Partly agree		9 / 22%	5 / 16%	14 / 20%
	Agree		26 / 67%	4 / 12%	30 / 42%
Total			39 / 100%	32 / 100%	71 / 100%

Table D.37: Descriptive statistics for IAS and assets and liabilities

Variable IAS_AssetsLiabilities			Country		Total
			Brazil	England	
International accounting standards improve the stewardship of assets and liabilities.	Disagree		0 / 0%	4 / 12%	4 / 5%
	Partly disagree		0 / 0%	3 / 9%	3 / 4%
	Neither agree nor disagree		0 / 0%	8 / 24%	8 / 11%
	Partly agree		7 / 18%	11 / 32%	18 / 25%
	Agree		32 / 82%	8 / 23%	40 / 55%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.38: Descriptive statistics for IAS and overall planning

Variable IAS_Planning		Country		Total
		Brazil	England	
The adoption of international accounting standards improves overall management and planning.	Disagree	0 / 0%	9 / 26%	9 / 12%
	Partly disagree	1 / 3%	3 / 9%	4 / 5%
	Neither agree nor disagree	0 / 0%	16 / 47%	16 / 22%
	Partly agree	11 / 28%	4 / 12%	15 / 21%
	Agree	27 / 69%	2 / 6%	29 / 40%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.39: Descriptive statistics for IAS and sovereignty

Variable IAS_Sovereignty		Country		Total
		Brazil	England	
The adoption of international accounting standards causes governments to give up their administrative independence and sovereignty.	Disagree	29 / 74%	21 / 70%	50 / 72%
	Partly disagree	4 / 10%	4 / 13%	8 / 12%
	Neither agree nor disagree	1 / 3%	5 / 17%	6 / 9%
	Partly agree	4 / 10%	0 / 0%	4 / 6%
	Agree	1 / 3%	0 / 0%	1 / 1%
Total		39 / 100%	30 / 100%	69 / 100%

Table D.40: Descriptive statistics for IAS and cost benefit.

Variable IAS_CostBenefit		Country		Total
		Brazil	England	
The benefits of the adoption of international accounting standards justify its costs	Disagree	0 / 0%	11 / 32%	11 / 16%
	Partly disagree	2 / 5%	5 / 15%	7 / 10%
	Neither agree nor disagree	0 / 0%	8 / 23%	8 / 11%
	Partly agree	8 / 22%	5 / 15%	13 / 18%
	Agree	27 / 73%	5 / 15%	32 / 45%
Total		37 / 100%	34 / 100%	71 / 100%

Table D.41: Descriptive statistics for IAS and absence of PSA specific issues

Variable IAS_Absence		Country		Total
		Brazil	England	
Some public sector accounting issues are not addressed in international accounting standards.	Disagree	4 / 14%	2 / 6%	6 / 10%
	Partly disagree	1 / 3%	1 / 3%	2 / 3%
	Neither agree nor disagree	3 / 10%	2 / 6%	5 / 8%
	Partly agree	8 / 28%	3 / 10%	11 / 18%
	Agree	13 / 45%	24 / 75%	37 / 61%
Total		29 / 100%	32 / 100%	61 / 100%

Table D.42: Descriptive statistics for IAS and full understanding

Variable IAS_PartialyApplied		Country		Total
		Brazil	England	
The international accounting standards can be applied without the full understanding of the issues involved.	Disagree	22 / 61%	18 / 53%	40 / 57%
	Partly disagree	3 / 8%	6 / 18%	9 / 13%
	Neither agree nor disagree	1 / 3%	1 / 3%	2 / 3%
	Partly agree	5 / 14%	9 / 26%	14 / 20%
	Agree	5 / 14%	0 / 0%	5 / 7%
Total		36 / 100%	34 / 100%	70 / 100%

## Challenges in public sector accounting reforms

Table D.43 presents the amount of respondents and valid responses for each question regarding the challenges faced while materializing the PSA reforms. Tables D.44 to D.56 present the answers for governments of both countries regarding international accounting standards issues:

Table D.43: Total of responses and of valid responses for the CH questionnaire items

AA Variable	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
CH_TrainStaff	73	100%	0	.0%	73	100%
CH_ITSystems	72	98.6%	1	1.4%	73	100%
CH_ReceivablesET	73	100%	0	.0%	73	100%
CH_ReceivalbesNET	73	100%	0	.0%	73	100%
CH_Intangible	73	100%	0	.0%	73	100%
CH_InfrastructureHeritage	73	100%	0	.0%	73	100%
CH_PropertyPlant	73	100%	0	.0%	73	100%
CH_InvestmentsEM	73	100%	0	.0%	73	100%
CH_Inventories	73	100%	0	.0%	73	100%
CH_Employees	73	100%	0	.0%	73	100%
CH_RedesignChartOfAccounts	73	100%	0	.0%	73	100%
CH_Liabilities	72	98.6%	1	1.4%	73	100%
CH_PoliticalSupport	72	98.6%	1	1.4%	73	100%

Table D.44: Descriptive statistics for CH and staff training

Variable CH_TrainStaff		Country		Total
		Brazil	England	
Challenge: Train the staff to work with accrual accounting and international accounting standards.	Very easy to implement	1 / 3%	2 / 6%	3 / 4%
	Easy to implement	2 / 5%	8 / 24%	10 / 14%
	Neither easy nor hard to implement	9 / 23%	14 / 40%	23 / 31%
	Hard to implement	15 / 38%	8 / 24%	23 / 31%
	Very hard to implement	12 / 31%	2 / 6%	14 / 20%
Total		39 / 100%	34 / 100%	73 / 100%

Table D.45: Descriptive statistics for CH and IT systems

Variable CH_ITSystems		Country		Total
		Brazil	England	
Challenge: Adjust IT systems to meet accrual accounting requirements as well as international accounting standards.	Very easy to implement	0 / 0%	4 / 12%	4 / 6%
	Easy to implement	3 / 8%	6 / 18%	9 / 12%
	Neither easy nor hard to implement	7 / 18%	9 / 27%	16 / 22%
	Hard to implement	12 / 31%	13 / 40%	25 / 35%
	Very hard to implement	17 / 43%	1 / 3%	18 / 25%
Total		39 / 100%	33 / 100%	72 / 100%

Table D.46: Descriptive statistics for CH and receivables from E.T.

Variable CH_ReceivablesET			Country		Total
			Brazil	England	
Challenge: Register receivables from exchange transactions on accrual basis.		Very easy to implement	0 / 0%	4 / 12%	4 / 6%
		Easy to implement	8 / 21%	11 / 32%	19 / 26%
		Neither easy nor hard to implement	11 / 28%	14 / 41%	25 / 34%
		Hard to implement	13 / 33%	4 / 12%	17 / 23%
		Very hard to implement	7 / 18%	1 / 3%	8 / 11%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.47: Descriptive statistics for CH and receivables from N.E.T.

Variable CH_ReceivalbesNET			Country		Total
			Brazil	England	
Challenge: Register receivables from non-exchange transactions on accrual basis (mainly taxes and transfers).	Very easy to implement	Easy to implement	0 / 0%	3 / 9%	3 / 4%
			2 / 5%	11 / 32%	13 / 18%
			11 / 28%	17 / 50%	28 / 38%
			16 / 41%	2 / 6%	18 / 25%
			10 / 26%	1 / 3%	11 / 15%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.48: Descriptive statistics for CH and intangibles

Variable CH_Intangible			Country		Total
			Brazil	England	
Challenge: Register intangible assets (and its amortization).	Very easy to implement	Easy to implement	3 / 8%	3 / 9%	6 / 8%
		Neither easy nor hard to implement	5 / 13%	12 / 35%	17 / 23%
		Hard to implement	7 / 18%	10 / 29%	17 / 23%
		Very hard to implement	7 / 18%	8 / 24%	15 / 21%
			17 / 43%	1 / 3%	18 / 25%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.49: Descriptive statistics for CH and infrastructure and heritage assets

Variable CH_InfrastructureHeritage			Country		Total
			Brazil	England	
Challenge: Register of infrastructure and heritage assets (and its depreciation).	Very easy to implement		1 / 3%	0 / 0%	1 / 1%
	Easy to implement		1 / 3%	8 / 24%	9 / 12%
	Neither easy nor hard to implement		3 / 8%	12 / 35%	15 / 21%
	Hard to implement		13 / 33%	11 / 32%	24 / 33%
	Very hard to implement		21 / 54%	13 / 9%	24 / 33%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.50: Descriptive statistics for CH and property, plant and equipment

Variable CH_PropertyPlant			Country		Total
			Brazil	England	
Challenge: Register property, plant and equipment (and its depreciation).	Very easy to implement		4 / 10%	1 / 3%	5 / 7%
	Easy to implement		8 / 21%	13 / 38%	21 / 29%
	Neither easy nor hard to implement		14 / 36%	6 / 18%	20 / 27%
	Hard to implement		6 / 15%	9 / 26%	15 / 21%
	Very hard to implement		7 / 18%	5 / 15%	12 / 16%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.51: Descriptive statistics for CH and equity method

Variable CH_InvestmentsEM			Country		Total
			Brazil	England	
Challenge: Register investments using the equity method.	Very easy to implement		5 / 13%	2 / 6%	7 / 10%
	Easy to implement		10 / 26%	10 / 29%	20 / 27%
	Neither easy nor hard to implement		10 / 26%	14 / 41%	24 / 33%
	Hard to implement		9 / 23%	7 / 21%	16 / 22%
	Very hard to implement		5 / 13%	1 / 3%	6 / 8%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.52: Descriptive statistics for CH and inventories

Variable CH_Inventories			Country		Total
			Brazil	England	
Challenge: Register its inventories and consumption.	Very easy to implement		10 / 25%	7 / 21%	17 / 23%
	Easy to implement		11 / 28%	14 / 41%	25 / 34%
	Neither easy nor hard to implement		12 / 31%	9 / 26%	21 / 29%
	Hard to implement		3 / 8%	3 / 9%	6 / 8%
	Very hard to implement		3 / 8%	1 / 3%	4 / 6%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.53: Descriptive statistics for CH and employee benefits

Variable CH_Employees			Country		Total
			Brazil	England	
Challenge: Register employee benefits, pension and retirement liabilities.	Very easy to implement		4 / 10%	0 / 0%	4 / 5%
	Easy to implement		11 / 29%	8 / 23%	19 / 26%
	Neither easy nor hard to implement		16 / 41%	16 / 47%	32 / 44%
	Hard to implement		4 / 10%	9 / 27%	13 / 18%
	Very hard to implement		4 / 10%	1 / 3%	5 / 7%
Total			39 / 100%	34 / 100%	73 / 100%



Table D.54: Descriptive statistics for CH and chart of accounts

Variable CH_RedesignChartOfAccounts			Country		Total
			Brazil	England	
Challenge: Redesign the chart of accounts to fulfil the accounting changes.	Very easy to implement		4 / 10%	4 / 12%	8 / 11%
	Easy to implement		8 / 21%	15 / 44%	23 / 32%
	Neither easy nor hard to implement		14 / 36%	10 / 29%	24 / 33%
	Hard to implement		9 / 23%	5 / 15%	14 / 19%
	Very hard to implement		4 / 10%	0 / 0%	4 / 5%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.55: Descriptive statistics for CH and liabilities

Variable CH_Liabilities			Country		Total
			Brazil	England	
Challenge: Register provisions and liabilities on accrual basis.	Very easy to implement		1 / 3%	6 / 18%	7 / 10%
	Easy to implement		8 / 20%	17 / 52%	25 / 35%
	Neither easy nor hard to implement		17 / 44%	9 / 27%	26 / 36%
	Hard to implement		7 / 18%	1 / 3%	8 / 11%
	Very hard to implement		6 / 15%	0 / 0%	6 / 8%
Total			39 / 100%	34 / 100%	73 / 100%

Table D.56: Descriptive statistics for CH and political support

Variable CH_PoliticalSupport			Country		Total
			Brazil	England	
Challenge: Getting political support for the public sector accounting reforms.	Very easy to implement		0 / 0%	3 / 9%	3 / 4%
	Easy to implement		1 / 3%	5 / 15%	6 / 8%
	Neither easy nor hard to implement		11 / 28%	12 / 36%	23 / 32%
	Hard to implement		11 / 28%	10 / 30%	21 / 29%
	Very hard to implement		16 / 41%	3 / 10%	19 / 27%
Total			39 / 100%	33 / 100%	73 / 100%

## APPENDIX E – SPSS VARIABLES ORDERED BY SIGNIFICANCE RESULTS

This Appendix present three tables, one for each group of questions (AA, IAS and CH), with the SPSS variables ranked according to their significance p values. These tables are organized showing the question identification number in the questionnaire (column 'Id. #'), the SPSS Variable (column 'Variable'), and the used tests (Mann-Whitney U test and Kolmogorov-Smirnov columns).

**Table E.1:** Ranking of the biggest similarities and differences in regards of perceptions towards AA issues in Brazil and England

Id. #	Variable	Mann-Whitney U Test	Kolmogorov-Smirnov Test
16	AA_CashFlowManagement	0	0
26	AA_QualifiedAccountants	0	0
15	AA_AssetManagement	0	0,001
20	AA_EffectiveAccrualBudget	0,003	0,063
10	AA_BudgetFormulation	0,009	0,034
12	AA_LongTermView	0,01	0,183
8	AA_CostAccounting	0,011	0,38
5	AA_IdentifyLiabilities	0,013	0,326
25	AA_CrisisPrevention	0,014	0,216
24	AA_CreativeAccounting	0,017	0,043
17	AA_ExternalUsers	0,03	0,394
27	AA_ParliamentOversight	0,068	0,015
14	AA_LowestFinancialInputs	0,099	0,135
22	AA_CostBenefit	0,159	0,741
23	AA_StakeholdersUnderst.	0,181	0,563
21	AA_EasytoWork	0,206	0,447
4	AA_Accountability	0,241	0,993
28	AA_ProfessionalJudgement	0,26	0,949
18	AA_InternalUsers	0,426	1
7	AA_FinancialPerformManag.	0,437	1
13	AA_AchieveObjectives	0,457	0,944
11	AA_FinancialPosition	0,537	1
19	AA_EffectiveCashBudget	0,617	0,433
9	AA_Fin.ResourcesSerPerf.	0,638	1
3	AA_DecisionMaking	0,788	1
6	AA_PlanSettleLiabilities	0,964	1

**Table E.2:** List of the biggest similarities and differences regarding the perceptions towards IAS issues in Brazil and England

Id. #	Variable	Mann-Whitney U Test	Kolmogorov-Smirnov Test
33	IAS_FinancialManagement	0	0
34	IAS_CrisisPrevention	0	0
35	IAS_AssetsLiabilities	0	0
36	IAS_Planning	0	0
38	IAS_CostBenefit	0	0
31	IAS_Comparability	0	0,001
32	IAS_CreativeAccounting	0	0,004
39	IAS_Absence	0,028	0,125
37	IAS_Sovereignty	0,865	0,943
30	IAS_Accountability	0,881	0,999
40	IAS_PartiallyApplied	0,906	0,889

**Table E.3:** List of the biggest similarities and differences regarding the perceptions towards the challenges of the PSA reforms in Brazil and England

Id. #	Variable	Mann-Whitney U Test	Kolmogorov-Smirnov Test
44	CH_ReceivablesNET	0	0
46	CH_InfrastructureHeritage	0	0,001
52	CH_Liabilities	0	0,001
41	CH_TrainStaff	0	0,006
42	CH_ITSystems	0	0,006
45	CH_Intangible	0,001	0,005
43	CH_ReceivablesET	0,001	0,015
53	CH_PoliticalSupport	0,001	0,052
50	CH_Employees	0,0178	0,813
51	CH_RedesignChartOfAcc.	0,027	0,202
48	CH_Investm.EquityMethod	0,688	0,944
49	CH_Inventories	0,756	1
47	CH_PropertyPlant	0,959	0,989

## APPENDIX F – SPSS VARIABLES INCLUDED IN THE INTERVIEW GUIDE

The list of the chosen SPSS variables with the significance that were taken to the interview guide (Appendix B) is shown in the Table below. The SPSS variable names was also the base for the interviews coding.

**Table F.1:** List of the variables that guided the development of the interview

Interview Question	SPSS Variable	Significance (Mann-Whitney U Test)	Significance (Kolmogorov-Smirnov)
01	AA_CashFlowManagement	0	0
02	AA_LongTermView	0,01	0,0183
	AA_AssetManagement	0	0,001
03	AA_IdentifyLiabilities	0,013	0,326
	IAS_AssetsLiabilities	0	0
04	AA_CreativeAccounting	0,017	0,043
	IAS_CreativeAccounting	0	0,004
05	AA_CrisisPrevention	0,014	0,216
	IAS_CrisisPrevention	0	0
06	IAS_CostBenefit	0	0
07	IAS_Comparability	0	0,001
	IAS_FinancialManagement	0	0
08	IAS_Planning	0	0
09	CH_IT_Systems	0	0,006
10	General question (no SPSS variable associated)	-	-

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