



Stanford

Center for International
Development

Working Paper No. 247

Accrual Reform in the Public Sector in China

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August 2005



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Abstract

Since the 1990s, the move to the accrual basis for government accounting and budgeting has been one of the main pillars of the on-going reform in international public finance. Analysis of the existing budget accounting system in China shows that transition to the accrual basis is essential to deepen current and future fiscal management reform. Cost-benefit analysis indicates that introducing the accrual basis can make government accounting information more comprehensive, transparent, consistent and sustainable, and thus reduce the financing costs of the government. The author suggests that conversion of the public accounts should follow a gradual, well-planned path, be harmonized with fiscal management reform, and take full account of the demand for information from within and outside of the government. A realistic option would be to apply a modified accrual basis to government accounting and a cash basis to the government budget. The sequence of reform would deal with financial assets and liabilities first, followed by real assets, then contingent liabilities and political promises. The scope for applying the accrual basis should reflect the principles of feasibility and ease of measurement. Simultaneously restructuring the government accounting system and developing accounting standards and a system for financial reporting are fundamental steps for the transition. Staff training, software development and legislative revisions are also necessary to the reform.

***Keywords:* Accrual basis; government accounting; accrual reform; public sector**

***JEL Classification Codes:* H11, H61, H83, M41**

¹ Yinghua Shi is a fellow at the Research Institute for Fiscal Science (RIFS), Ministry of Finance, China. She is a visiting scholar at Stanford Center for International Development (SCID) during 2004-2005. She would like to express her gratitude to her advisor, Dr. Nicholas C. Hope for insightful suggestions and invaluable editorial help. She would also like to express special thanks to Prof. James L. Chan for helpful and detailed comments and discussions. She is also thankful to Anita Alves Pena for excellent editorial assistance and to Hong Qiao for useful comments. All views expressed are the author's personal opinions and do not necessarily reflect the opinion of the Institute. Comments may be addressed to: yinghuas@stanford.edu; yinghuashi@hotmail.com.

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1. Introduction

1.1 Accrual basis

There are two main accounting bases for recognition and measurement: the accrual basis and the cash basis. Accrual-based accounting recognizes receipts and expenses according to occurred claim and obligation. However, in cash-based accounting, receipts are recorded when cash is received and deposited, and payments are recorded only when bills are paid within the accounting period. In contrast, on an accrual basis, income is realized in the accounting period in which it is earned, regardless of when the cash is received. Expenses are recorded when they are owed, instead of when they are paid.

Table 1: Comparison between the Two Accounting Bases

Differences between the two bases	Accrual basis	Cash basis
Criterion for recognition	Whether claim and obligation occurred	Whether cash is received or paid
Target of financial report	Report the operating results and performance, e.g. Profit.	Report the cash flow and balance
Matching operating results with costs incurred or expense item related	Yes	No

Accrual-based accounting avoids several drawbacks of cash-based accounting. Accrual basis matches receipts and related expenses in a given period. Matching receipts and expenses serves to keep accounting information in a relatively stable and reliable status when cash flows are inconsistent with transactions. Therefore, compared with cash-based accounting, accrual accounting could record the profit and loss of an entity in a certain accounting period more accurately, and thus reflect the performance of the entity more genuinely. Accrual accounting is designed to recognize and measure the difference between the economic benefits earned and economic resources consumed of an entity in a certain accounting period. Thus, the target of accrual-basis accounting is to provide: (i) information on the economic resources that the entity owns and controls, (ii) related cost information of operating activities or supplying products and services, and (iii) useful information to assess

properly the financial position of the entity and the cost-effectiveness and efficiency of its activities. Accrual-based accounting encapsulates an entity's operating results and economic resources and the variations in them, and provides the facts needed to assess the performance of management.

As the criterion of recognition and measurement, accrual accounting is widely applied in the private sector. The accrual basis has become the generally accepted accounting principle for accurately recording business practice. As accounting is a designed information system, accrual accounting defines and records accounting elements such as asset, liability, receipts and expenses in a certain accounting period according to two basic assumptions: the going concern and the time period concept. Accounts receivable, accounts payable, provision for expense, expenses to be apportioned, and other items are used to record accounting elements. Recognition and record of these items are subject to given accounting principles. Therefore, accrual accounting should be based on accounting standards or institutions established by either a professional commission or a government agency/department. The practice of accrual accounting should accord fully with the accounting standards or accounting legislation in a specific jurisdiction.

Goods and services in the private sector differ from those in the public sector, meaning that it is undesirable to apply the same full accrual accounting in these different sectors. In the private sector, goods and services are generally rival and excludable. The private nature of these goods/services and transactions makes it possible to practice full accrual accounting. In business accounting, full accrual-basis means to record receipts according to merchandise sale and service delivery, and match these receipts with related expenses. No revenue can be recognized until goods are transferred or services are rendered. However, because goods and services delivered by the government (such as police, national defense, etc.) bear the public features of being indivisible, non-excludable and non-rival, the government is unable to charge for individual use of public goods and services and thus is unable to avoid free-rider problems. Instead, the government has to resort to imposing involuntary

payment - taxes on both users and nonusers alike to finance the public goods, meaning that the government delivers public goods and services to both taxpayers and non-taxpayers (free-riders) alike. Thus, there is a disconnect between taxes and government services in the short-term and at the individual level,² and many transactions are non-reciprocal. If the principle of recognition in business accounting is strictly applied to the government, tax collections would be regarded as liability or unearned revenue before goods are transferred or services rendered. In reality, it is unrealistic to use the same full accrual-basis (as in business accounting) in government accounting. No government has actually linked the recognition of its general revenue to service delivery.³ Therefore, the accrual basis is modified to varied degrees to record certain revenues and expenses, assets and liabilities.

Hence, the accrual basis is defined as the criterion for recognition and measurement, subject to given accounting standards and principles. The following discussion focuses on the accrual basis in the public sector. For purpose of analysis, the discussion considers four divisions: full accrual basis, modified accrual basis, modified cash basis and full cash basis.

1.2 The public sector

The public sector contains agencies to deliver public services as well as enterprises and organizations funded by government.⁴ As far as the current situation in China is concerned, commercial enterprises funded by the government produce private goods/services and their transactions are reciprocal. They implement the enterprise accounting system and observe the standards of accrual-basis accounting.⁵

² James L. Chan, Sept. 2001.

³ James L. Chan, 2003.

⁴ From a wide perspective, the public sector includes government departments; all organizations, and companies controlled and operated by the government; as well as agencies that take on quasi-government functions. Even share-holding companies owned by the government are included in this broad definition.

⁵ In China, financial institutions and organizations should adhere to the financial enterprise accounting system and enterprise accounting standards. Small-scale enterprise should follow the specific accounting system for them. The enterprise accounting system applies to agriculture, industry,

In this paper, I define the public sector to be those government departments that deliver public goods/services. The public sector in China mainly refers to public units and organizations that are funded by government and that carry out the functions of government and deliver public goods/services and quasi-public goods/services. The public sector specifically includes administrative units⁶ and government sponsored public service units.⁷

1.3 Background of the application of accrual accounting in the public sector

Traditionally, the government provides public services with no attention to profit. The main aim of the government's accounting and budgeting is to explain the quality of the public goods and services it provides to its citizens. The government need not report operating costs and benefits the same way a private unit does to its shareholders. The traditional mode of government accounting and budgeting focuses on controlling inputs and emphasizes that funds should be used strictly in accordance with the budget approved by the relevant legislative institution. Cash-based accounting is consistent with this management mode and has been widely applied in the government accounting and budgeting over time.

The situation began to change in the 1990s with various events triggering concerns. Some countries wanted to overcome fiscal difficulty or debt crisis; some wanted to maintain the credibility of the public sector and secure reputations as modern or advanced economies; some were asked for change by the international organizations; some came under pressure from the national audit authority or from requirements for capital market development; and some wanted to improve the

transportation, commercial and finance related companies.

⁶ Administrative units refer to administrative, party and political organizations of different levels in China.

⁷ There are three groups of government-sponsored public service units divided by industry and sector: 1. Science, education, entertainment, broadcast, television, information service, sanitation and physical education; 2. Meteorology, water conservancy, agriculture, earthquake, environment protection, family planning and social welfare; 3. Notarization, legislative service and consultancy etc.

accountability and performance of the government and its units by making their activities more transparent. A series of reforms in the public sector began to be carried out. One was to reform public good provision to allow the private sector to participate. The entry of the private sector increased the demand for more transparent and accurate accounting information from government departments, and pushed government departments to present sufficient information to facilitate calculation and comparison of costs. Conversion to the accrual basis in government accounting helped in measuring costs more accurately. Other reforms focused on budget performance and output and outcome-oriented approaches to public expenditure management. These reforms required accounting for net resources or expenses for output measurement. Accrual accounting is believed to be an essential and helpful instrument for the inspection of government efficiency and cost-effectiveness. The pilot reform of program budgets and zero-based budgets also required accrual accounting to measure the resource implications.

Accrual basis accounting is believed to avoid the shortcoming of the cash basis by: presenting a complete picture of the government's assets and liabilities; reflecting objectively the real costs and performance of government operations; relating inputs with outputs and performance by matching, which is consistent with the tendency for output and outcome-oriented public management reform; and satisfying the needs for information from both inside and outside the government. Furthermore, accrual accounting is a better way to report the real situation of existing resources and future obligations of the government and its departments. It contributes to improved information quality and relevance for the government's long-term policy-making.

In addition, financial indicators on an accrual basis are helpful in assessing the influence of fiscal policy on aggregate economic demand. Financial statements of accrual-based accounting provide a basis for assessment of departmental efficiency and effectiveness, and thus reduce the scope for fraud and other corrupt practices.⁸ Therefore, accrual accounting is being used in the public sector by an increasing

⁸ Sarath Lakshman Athukorala, 2003.

number of countries.⁹

2. The practice and research progress of the transition to accrual in the public sector

In recent years, developed countries carried out a series of reforms intended to strengthen accountability, measure performance, and improve transparency. Moving to accrual-based accounting in the public sector has been one of the more important of these reforms.

2.1 Transition to accrual-based accounting.

Since the 1990s, the move to the accrual basis for government accounting and budgeting has been one of the main pillars of the on-going reform in public finance. Nearly half the OECD member countries have implemented the accrual basis to different degrees in their public sectors. Some developing countries are also planning to implement similar reforms. Most countries in Table 2 have adopted the accrual basis in government accounting, and present their government financial statements on an accrual basis. The accrual basis has been widely used in government accounting in most of the developed countries, with each country establishing government accounting standards and systems appropriate for their specific economic and political conditions. In most countries that carried out the reform, local governments always either reformed their accounting prior to the central government or simultaneously with the central branch.¹⁰ Thus, in some countries (e.g. the USA), there are different sets of accounting standards for central and local governments.

Some countries that carried out accrual reform in government accounting (e.g.

⁹ Of course, accrual accounting should always observe a certain accounting standard or system. Otherwise, it will cause misleading information about possible over-reporting or under-reporting in the management's reports of expenses and revenues. This is because accrual accounting gives a picture of more assets and possibly more revenue due to the recognition of receivables. On the other hand, accrual accounting also recognizes more liabilities and expenses than does cash accounting.

¹⁰ Klaus Luder and Rowan Jones, 2003.

New Zealand, Australia, the UK and Finland) also have introduced an accrual-based budget. There are two options for an accrual-based budget: a full accrual basis, which means that records and measurements on an accrual basis have been used in the budget process, and a modified accrual/cash basis which refers to introducing the accrual basis only to certain degree (See notes to Table 2).

The OECD and other international organizations pay continuing attention to accrual reform. Currently, all major international economic statistical indicators systems, such as government financial statistics and national accounts systems are based on accrual accounting. The International Public Sector Accounting Standards Board (IPSASB) of the International Federation of Accountants (IFAC) delivered accounting standards for the public sector. Among them, 21 core standards on an accrual basis and one comprehensive standard on a cash basis (i.e. *Financial Reporting Under the Cash-basis Accounting*) comprise the International Public Sector Accounting Standards (IPSASs); and a manual provides a transition guide: *Study 14, Transition to the Accrual Basis of Accounting: Guidance for Governments and Government Entities*. In practice, the accrual basis has been interpreted and adopted to various degrees. The IPSAS Board would prefer to avoid dealing with many options that employ aspects of both the cash and the accrual basis (i.e. mixed systems).

Table 2. Accounting basis applied for government consolidated financial statements and budget in OECD members

	Consolidated financial statements				Budget approved by legislature			
	FAB	MAB	MCB	FCB	FAB	MAB	MCB	FCB
Australia	×				×			
Austria				×				×
Belgium				×				×
Canada		×				×		
Czech Republic				×				×
Denmark ⁶			×				×	
Finland	×					×		
France			×					×
Germany				×				×
Greece								×
Hungary				×				×
Iceland		×				×		
Ireland				×				×
Italian		×		×		×		×
Japan				×				×
Korea				×				×
Luxembourg				×				×
Mexico				×				×
Netherlands				×				×
Norway				×				×
New Zealand	×				×			
Poland			×					×
Portugal				×				×
Spain	×							×
Sweden	×							×
Switzerland	×							×
Turkey				×				×
United Kingdom	×				×			
United States	×						×	

Notes: FAB stands for Full accrual basis;

MAB stands for Modified accrual basis (accrual basis without capitalization or depreciation of assets);

MCB stands for Modified cash basis (cash basis with the exception of certain transactions on accrual basis);

FCB stands for Full cash basis.

1. Additional accrual basis information to be presented.
2. Full accrual basis budgeting to be introduced.
3. Employee pensions are treated on accrual basis.
4. Began in fiscal year 2005-2006.
5. Interest expenses, certain employee pension plans and loan and guarantee programs treated on accrual basis.
6. Interest expenses and employee pensions are treated on accrual basis.
7. Transfer payments are not treated on accrual basis in budget.
8. For consolidated financial statements, interest expense and certain other transactions treated on accrual basis, full accrual basis is to be introduced.
9. Both modified accrual basis and full cash basis are applied for consolidated financial statements and budget. As an exception, there is no capitalization or depreciation of assets.

Source: OECD international symposium on accrual accounting and budgeting in 2002; Luder and Jones, 2003.

2.2 Main issues in reform and recent research progress

The main issues arising when moving to an accrual basis involve the accrual treatment of specific transactions, assets and liabilities that are unique to the public sector, including non-exchange revenue (taxes), military equipment, heritage assets, infrastructure assets, credit programs (loans and guarantees), and social policy obligations, provisions and commitments. These transactions differ from those in the private sector. Therefore, the accounting standards and systems used in the private sector cannot be used directly to resolve a number of special issues that arise from applying the accrual basis in the public sector. These issues involve the problem of recognition and valuation.

The recognition of specific assets and liabilities raises fundamental conceptual questions concerning the scope of government accounting. The government has the power to levy taxes. However, none of the countries that have migrated to accrual accounting and budgeting has presented the permanent power to tax as an asset. Only the taxes collected in the fiscal year are recorded as revenue. Heritage assets are undoubtedly government assets, but defining what constitutes a heritage asset and deciding how to record its value are often quite difficult. For example, historical palaces are traditionally regarded as heritage assets. How should they be valued when being used as government offices? Should they be treated as general assets and depreciated like ordinary office buildings, or be treated as valuable heritages? There seems to be various treatments of individual heritage assets both among and within countries.¹¹

Military assets should be recognized because comparatively large amounts of budget resources are usually allocated to this area. The common treatment is that all military property, plant and equipment should be capitalized and depreciated, and written off once they become disused or obsolete. A major difficulty involves how to

¹¹ The recognition of heritage assets could be ignored because heritage assets will not have a significant effect on government finances (especially on cash flow) over time in most of the countries that have carried out the accrual reform.

capitalize military research since military costs may be difficult to track due to subjective accounting decisions on how to separate commercial value from military purpose.

On the liabilities side, the government assumes limitless obligations pertaining to a number of social issues (such as pollution and social security), risks and contingent liabilities. How to apply business accounting approaches to risk evaluation and contingent liabilities disclosure when treating related transactions in the public sector is a topic needing further research. Related questions arise: if non-contractual exchange transactions such as social insurance programs are treated as a liability, then should other important long-term commitments such as expenditures for education and public health be treated as liabilities? The recognition issue requires that reforming countries define the scope of government accounting and specify basic concepts.

The valuation of assets specific to the public sector is also controversial. Usually, there are two valuation approaches: one uses historic cost; the other uses a current cost approach, including depreciated replacement cost, value-in-use and net realizable value. Different valuation methods could be used according to the situation in the private sector; however, the valuation issue is more complicated in the public sector. The historic approach provides an easy way to value and record, because the value can be tracked from the acquisition cost and subsequent depreciation. But even this could create a problem of unrealistic value information and deviation from the current value of the assets, meaning that authorities would be unable to evaluate the performance of an entity correctly. Current valuations are believed to reflect more relevant cost information and better information about performance. The current approaches require many professional judgments to be made, because the depreciated replacement cost, value-in-use, or net realizable value of the assets in the public sector usually are difficult to determine. The valuation issue requires that reforming countries improve accounting techniques and choose different approaches according to country-specific situations.

Important disclosure issues concern whether to disclose contingent assets and liabilities, and -- if yes -- how to disclose them. How should one represent the operating results of the entity? Should the cash flow statement be prepared by a direct or an indirect approach? How does the analyst consolidate the financial statements and related investments --- by the equity approach or some other approach? Reforming countries should decide the structure and content of their financial reports, as well as approaches for preparing reports.

Determining how best to make use of accrual-based accounts is an issue needing further research. The most important aspect is the harmonization of accounting and budget information. It is technically and politically difficult for government organizations that are funded by taxation to establish a relationship between inputs, outputs and outcomes. Essentially, the budget is the main tool to assess performance and control finances. The focus of current accounting standards is exclusively on financial reporting, not on budgeting. That means if accruals are only applied to the government accounts and not to the budget, the financial reports would not be taken seriously; the budget is still the key management document in the public sector and accountability is based on implementing the budget as approved by the legislature.¹² To avoid the risk of an accrual financial report becoming a purely technical accounting exercise, there are several solutions: the budget should be prepared on an accrual basis according to government information on accruals; the budget and financial reports should be harmonized effectively; and other measures should be taken to make effective use of accounting information on an accrual basis. As far as this issue is concerned, reforming countries should consider the degree to which they apply the accrual basis to their government accounts and budget.

International organizations pay close attention to the feasibility of harmonization between different international government accounting and statistical standards, notably the Generally Accepted Accounting Principle (GAAP) standards developed by the International Accounting Standards Board, the International Public Sector

¹² Jon R. Blondal, 2003.

Accounting Standards (IPSASs) developed by the Public Sector Committee (PSC) of the International Federation of Accountants (IFAC), and the Government Finance Statistics Standards (GFS). These standards are supposed to guide the efforts of governments as they plan reforms of their public sectors. The alternative standards differ in their treatment of specific transactions, assets, and liabilities. Hence, it is necessary to consider how to harmonize accounts prepared under different standards and to effect necessary reconciliations. At least, the implications of unresolved differences between the standards should be assessed.¹³

Until now, researches on the application of proposed standards to accrual basis accounting in the public sector mainly focus on the practices of the developed countries. Not much of the literature concerns itself with similar public sector reforms in developing countries. Two exceptions are James L. Chan (2001, 2004) and Sarath Lakshman Athukorala (2003) who have conducted research on accrual reform in developing countries. Additionally however, various international organizations (WB, IMF, OECD, ADB) have proposed advice on reform of government accounting and public expenditure management.

Most of the developing economies either have not implemented or have just introduced accrual-based reforms of accounting practices (See table 3). There are various reasons for this. For example, developed countries have studied each other's reform experiences and have learned lessons from other countries at similar levels of economic development. Meanwhile, there are huge divergences in the economic, social, and political conditions among developing countries that pose vastly different challenges and problems. Even though the IFAC has issued the IPSASs that include the option of or suggestions for moving to accrual-based accounting, the standards are unable to provide reform suggestions specific to the circumstances of each country. Moreover, resources are scarce in developing countries; when considering how to apply resources to implement reform, government accounting reform often might be of comparatively low priority. Currently, the extent to which government accounting

¹³ SBO Newsletter, OECD, February 2004.

reform is a priority for developing countries is controversial.¹⁴

Table 3. Government accounting basis of selected developing countries

Developing member countries of ADB	Current accounting basis
Fiji Island	Modified cash
Indonesia	Modified cash
Marshall Islands	Modified cash
Philippines	Modified accrual
Sri Lanka	Modified cash
Azerbaijan	Accrual
China	Modified cash (1)
Mongolia	Modified accrual
Uzbekistan	Accrual

Notes: Sources are from the report of Asian Development Bank (2003) and (1) from the related budget accounting system in China.

In my opinion, implementing accrual-based accounting in the public sector of developing countries will help (i) to shape sustainable fiscal policy by accurately presenting the fiscal risks that governments have to deal with during development, and (ii) to improve management and efficiency throughout the government. In addition, most developing countries currently are burdened with poor accounting systems and thus provide a poor information base for management. In almost every case, management capacity needs considerable improvement. In light of this, transition to the accrual basis in developing countries should be part of the reform agenda, though many countries would do well to pursue a strategy of reforming prudently and gradually according to their capacities. Given the varying economic and social conditions that countries encounter, reforms should proceed based on case studies to determine whether the process would be both feasible and cost-effective.

As a developing country experiencing rapid growth, China has implemented a series of reforms aimed at strengthening fiscal management. The Ministry of Finance has begun to pay attention to accrual reform in government accounting and budgeting

¹⁴The 10th biennial conference on comparative international government accounting research (CIGAR) in May 26-27, 2005 discussed the topic: Is government accounting reform mimicry, fad or necessity?

and has organized several international symposiums since 2001 to discuss these reforms. Until now, research on the accrual reform in the public sector has mainly focused on the introduction of related reforms internationally and on analysis of the current budget accounting system in China. At present, researchers and policy-makers have reached a consensus that supports the gradual transition to accrual-based accounting in China's public sector, notwithstanding the fact that there is little analysis of the costs and benefits of different approaches to reform. The next section of this paper attempts a cost-benefit analysis of the transition to an accrual basis in government accounting and budgeting in China.

3. Cost-benefit analysis of the transition to accrual-based accounting in China's public sector

3.1 Current system and basis of government budget and accounting

According to the budget law of the People's Republic of China, the government budget comprises central and local budgets. These budgets are respectively approved by the people's congress of the corresponding level. The budget follows the principle of "having one level of budget per level of government." In practice, five levels of budget correspond with the five administrative tiers of government: central, provincial, prefecture, county, and town and village.¹⁵ The central government budget is composed of the central departments' budgets plus the transfers to and from the sub-national governments. At each level, the government's general budget incorporates all sub-level governments' budgets and the budgets of same-level departments.

In China, budget accounting is applied to measure, record and supervise the execution of the governments' budgets. It aims to facilitate and to improve budget management. To that end, the system of government accounting is consistent with and

¹⁵ Note that Chinese cities can be assigned the same status as a province, prefecture or county. Current emphasis in government reform is directed at removing one or more of the tiers.

supports the budget. Because the budget is divided into a general budget and unit budgets, budget accounting is divided into general budget accounting for state finances and unit budget accounting. Requirements for general budget accounting of state finances are determined by responsible agencies at different levels including the Ministry of Finance of the central government, the financial bureaus of the provincial governments, and the financial bureaus of city, prefecture and town governments. Unit budget accounting records revenues and outlays, and thus reflects the unit's budget execution. More specifically, unit budget accounting may be further divided into administrative unit accounting (AUA) and public service unit accounting (PSUA). Because the unit budget is the part of the general budget of the same level, AUA and PSUA are components of the general budget accounting of the same level. In addition, there are also requirements pertaining to treasury accounting and accounting for revenue collection, both of which are related to budget execution. All of the above constitutes the accounting network for budget execution.

The current budget accounting system was established in the government budget accounting reform of 1997. At that time, the Ministry of Finance separately released the General Budget Accounting System for State Finances, the Administrative Unit Accounting System, the Administrative Unit Financial System, the Public Service Unit Accounting Standards, the Public Service Unit Accounting system and the State-owned Construction Unit Accounting System (See table 4).

Table 4. Budget and accounting systems and accounting basis

Sector	Name	Issue date	Effective date	Accounting basis
Public sector	The budget law	3/22/1994	1/1/1995	Cash basis
	The implementation rule of the budget law	11/22/1995	11/22/1995	
	General Budget Accounting System for State Finances	6/25/1997	1/1/1998	Modified cash basis
	Administrative Unit Accounting System	2/6/1998	2/6/1998	Cash basis
	Administrative Unit Financial System	1/6/1998	1/6/1998	
	Public Service Unit Accounting Standards	1/17/1997	1/1/1998	

	Public Service Unit Accounting system	5/28/1997	1/1/1998	profitable activities)
Non-public sector	Enterprise accounting system	12/ 2000	1/1/2001	Accrual basis
	Financial enterprise accounting system	11/27/2001	1/1/2002	Accrual basis
	Small business accounting system	4/27/2004	1/1/2005	Accrual basis
	Non-profitable organization accounting system	8/18/2004	1/1/2005	Accrual basis

At present, all public sector budgets are prepared and executed on a cash basis. General budget accounting applies the modified cash basis. Administrative units and public service units accounting are on a cash basis. However, the latter group may use the accrual basis for some activities. There are several exceptions: some public service units such as state-owned hospitals adopt the enterprise accounting system and are on an accrual basis. Science research institutes, universities and colleges are separately subject to specific financial system and treat affiliated profitable ventures on the accrual basis.

Historically, budget accounting was designed to satisfy management needs, as well as to record the budget allocation and execution. Cash-based accounting is an easy and simple approach that records the revenues and outlays of the budget. Accounting treatment on the cash basis is also consistent with the aim of controlling financial resources. That is why the cash basis has persisted for so long. However, as the environment surrounding the implementation of the budget changed, budget accounting systems on the cash basis began to show shortcomings:

1. Budget accounting systems on the cash basis could not accurately record and reflect government liabilities, thus they could not accurately record and reflect the government's financial position. For example, government liabilities incurred but not paid in cash in the current period would be unrecorded, thus exaggerating the government's disposable fiscal resources and misstating the fiscal balance, with the potential consequence of misleading macroeconomic policy-making and impeding market operations. Reporting on the cash basis has the potential to introduce fiscal risk and create trouble for the sustainability of financial and economic development.

2. Budget accounting systems on a cash basis could not accurately reflect the costs of supplying public services. Therefore the cost and efficiency of individual departments that provide public goods and services could not be stated accurately. These systems could be ineffective in assessing performance and improving government efficiency.

3. Budget accounting systems on a cash basis could cause a degree of mismatching of government capacity and responsibility within the same accounting period, and cause undesirable inter-generational transfers between successive governments.

In conclusion, accrual-based accounting can avoid the above shortcomings of the cash basis at least to some degree. It can satisfy the needs of current budget accounting and fiscal reform. The transition to the accrual basis for budget accounting in China is a necessary part of fiscal reform to promote economic development. For the government budget, cash basis accounting can meet China's current budget management needs. A priority for reform is to reclassify revenues and expenses as stated in the budget, as well as to prepare an itemized budget. The rest of this article will discuss aspects of the accrual reform of government budget accounting.

3.2 Cost analysis of reform

Cost-benefit analysis of the transition of Chinese government accounting practice involves comparing estimated costs and benefits that the reform is likely to entail, and thus provide inputs for policy-making. Wherever costs incurred fall short of benefits received, the reform would be favorable.

The cost of accrual reform of government budget accounting includes dominance costs and hidden costs. Dominance costs include legislative or institutional cost. New government accounting standards are required when migrating to the accrual basis. The International Public Sector Accounting Standards (IPSASs) are designed for the guidance of government accounting reform; government accounting standards of developed countries (for example, of the U.S.) provide reference examples. However,

as a developing country, China has budget institutions, status of economic development and market conditions that differ from those of developed countries. Therefore, resources should be spent on research and on the establishment of China-specific budget accounting standards and a system based on accrual methods. Dominance costs also include the cost of developing and operating software, such as financial and accounting management software systems, and of related hardware. Expenses on these items are costly.

Another element is the cost of training personnel and recruiting new staff. As accrual-basis accounting is more complicated than cash basis, it is necessary to train existing accounting and management staff and recruit new professional accountants and managers. Therefore, expense on personnel will increase. A final item is the cost of compiling statistics on assets and estimating asset values. Lots of involved budget units and complicated technological evaluation may imply high costs for statistics on assets. Hidden costs include participation of other staff and mobilization and incentive costs. Accrual reform will increase the workloads of financial staff and management, especially during the initial stages. Additionally, hidden costs might include the unpredictable costs and opportunity costs if transparency results in perverse expectations and market distortions.

3.3 Benefit analysis of reform

The main benefit of accrual reform would be the institutional benefits. Applying an accrual basis to government budget accounting makes possible the improvement of the quality of governments' financial reports and makes government accounting information more comprehensive, transparent, matching and sustainable. Furthermore, accrual reform helps improve the government's image and efficiency.

3.3.1 Benefit to improve and deepen existing reform of fiscal and budget management.¹⁶

¹⁶ The migration of government budget accounting to the accrual basis should serve, as first priority, the requirements of ongoing fiscal management reform.

1. On the accrual basis, there will be an improved technical platform for departmental budget reform.¹⁷ With accrual-based information on the government budget, departmental costs and financial positions will be reflected comprehensively and accurately. Thus, the departmental budgets can be prepared more accurately.

2. The scope and scale of government procurement in China has expanded over time,¹⁸ from purchasing general goods and services to construction. When a large project is constructed, outlays usually occur on a multi-year basis. In this case, the cash basis would not reflect the real budget balance. On the accrual basis, the expense incurred but not paid would be reflected in the accounts. The accrual basis helps to account realistically for funds expended in government procurement.

3. Additionally, a centralized treasury collection and disbursement system makes it possible to decrease idle balances and waste caused by a proliferation of treasury accounts at each government level. However, cash balances at the national level increase. Information about revenues and outlays can be quickly recognized and recorded under the accrual basis, especially information about payables and receivables due. Accrual accounting helps to provide reliable information in real time, to strengthen the estimation of treasury cash requirements, and to improve prediction accuracy. Thereafter, it has the potential to improve treasury cash management, and promote reform of the centralized treasury collection and disbursement systems.

3.3.2 Benefit to future fiscal reforms. Two important issues related to fiscal reform warrant discussion. First, the government system of performance assessment may be one of the important measures to promote government efficiency. Fiscal performance assessment would be one aspect of that assessment. Accurate

¹⁷ In 1999, the Ministry of Finance formally submitted to the State Council a document entitled “Views Regarding Improving Fiscal Year 2000 Central Government Budget Preparation”. On September 20, 1999, the Ministry of Finance issued Finance & Economic circular No. 1999/464 “Notice Regarding Improving Fiscal Year 2000 Central Government Budget Preparation”. The circular formally required all central government departments to prepare department budgets in accordance with the requirements of the State Council.

¹⁸ Pilot reform of Government procurement began in 1995 in China. The Government Procurement Law was implemented effectively on January 1, 2003.

information about public service cost and the government's financial position would be an essential input in the process. Compared with the cash basis, accrual accounting may provide better cost information and match performance and outcomes with the cost of providing public goods and services.

Second, the accrual basis may improve the information quality of the Government Financial Report¹⁹ and be beneficial to fully realize the function and objectives of the Government Financial Report. It may provide the information necessary for economic decision-making, macro-regulation and performance assessment. For example, the balance sheet, as the core statement of a financial report, is a tool to measure government assets and liabilities continuously. The accrual basis to some degree may include long-term assets and liabilities and thus may show a more complete picture of the government's financial position.

3.3.3 Benefits for preventing fiscal risks. By applying accrual accounting, current and capital expenditures can be distinguished. This method effectively makes assets visible to the public following their purchase and/or construction.²⁰ The accrual basis may provide a better picture of government assets, especially of non-profitable

¹⁹ The government financial report (GFR) differs from the budget. The government budget shows the flow of receipts and outlays within the fiscal year. GFR presents not only budget receipts and outlays, but also government assets and liabilities. It reflects the results of the execution of the budget of the current year as well as accumulated financial effects of previous budget policy. The financial report is an important source of information for policy-making and for public scrutiny of the government. The complete government financial report has been widely applied in OECD member countries. The annual GFR should be submitted to the parliament and after approval it can be published. Until now, GFR has been absent in China. Without a GFR, some important financial information that is not directly related to budget receipts and outlays will be neglected or omitted and fiscal and economic policy-making will be based on incomplete financial information. In addition, over-simplified budget accounting information may cause nontransparent government financial positions; and thus prevent the legislature and citizenry from overseeing the allocation and operation of the budget. The reform of government accounting and financial reporting has been on the agenda of the Chinese government.

²⁰ Current and capital expenditures are easily confused on cash basis. Cash accounting would count multi-period capital expenditure as expenses and cancel them after verification on the day that cash is paid. Therefore, the information about asset use and service periods after the outlay would not be covered in the budget report. Thus, information on non-profitable state-owned assets will be incomplete. This may result in loss of control of assets and foster embezzlement of funds.

ones. Thus it is helpful to strengthen the supervision and management of government assets. Furthermore, by applying accrual accounting, contingent liabilities from government commitments and assurances may be recognized and recorded by a certain rule.²¹ It is helpful to accurately reflect government liabilities and fiscal positions, to disclose the potential pressures of fiscal outlays, and to remind policy-makers to pay attention to fiscal risks and take measures to avoid them. One suggested measure to improve transparency in this area is to authorize local governments to issue bonds legally and thus make their hidden liabilities apparent to control risks. If this suggestion were adopted, government accounting would necessarily migrate to accrual basis.²²

3.4 Simulation analysis of costs and benefits and comparison of reform plans

All reforms in the public sector would incur costs, however benefits may be intangible or economically invisible. For example, political, social and ideological benefits are intangible outputs, not easily quantified and compared accurately. The main visible benefit would be the savings of government borrowing costs and the more positive response to open financial markets. This section presents simulation analyses of the costs and benefits of reform in China.

²¹ According to the budget law of China, local governments must keep a balanced budget and are not permitted to issue bonds. In fact, there are lots of contingent liabilities at the local government level. For example, some governments accumulate long-term payment arrears to construction companies, and for staff salaries and reimbursable medical expenses. These liabilities are ignored by the government budget and financial report on a cash basis, and thereby could endanger government policy-making and prospects for local economic development.

²² Macro-economic regulation by the central government and functioning capital markets are preconditions for local governments to issue bonds. The former can make sure that the amount of issuance harmonizes with macroeconomic targets. The latter demonstrates the feasibility of issuance by the local government in the capital market and the terms on which it may do so. Both requirements depend on local governments presenting financial information on an accrual basis. Otherwise, incomplete financial information would cause information asymmetry with negative consequences for macroeconomic regulation and performance of the capital markets, thereby adding to fiscal and financial risk. (Suihong Chen and Yinghua Shi, 2004)

Transition of government accounting to an accrual basis makes it possible to accurately present the cost and performance of the government, to fully reflect government assets and liabilities, to reflect and explain fiscal risks in real time, and to make government financial information more transparent. Thereby, it helps credit-rating institutions to accurately assess the government's financial position. The credit standing of the government could be improved, which might enable the government to borrow at a lower interest rate. Analysis of government accounting reforms at the state and local government level in the U.S. shows that states applying accrual accounting borrow on more favorable terms than those states that use solely cash information.²³ In New Zealand, financial markets responded positively when the government abandoned traditional financial reports on the cash basis. Discussion with financial market participants showed that they are less likely to have faith in traditional cash-based information.²⁴

Here, the benefit analysis focuses on the quantifiable benefits, i.e. enhanced credibility and its impact on borrowing costs. In the following analysis, the outstanding gross debt of China in 2003, about 2663.5 billion Yuan, approximately \$321.7 billion, is employed.²⁵ The debt level is assumed to remain constant. It is assumed also that implicit savings on borrowing costs caused by the introduction of accrual accounting are 0.04%.²⁶ Implicit interest saving (benefits) per year is \$129million. It is assumed that benefits begin to be realized in year 4 and only half of interest savings can be realized in the first year. The subsequent benefits are assumed constant for the last 16 years.

The calculation of the transition cost of the Chinese government accounting basis should refer to the cost of the budget accounting reform of administrative units and public service units in 1998 as well as those associated with the enterprise accounting

²³ Brumby Jim in Schiavo-Campo, Salvatore and Daniel Tommasi, 1999.

²⁴ Ian Ball, et al 1999.

²⁵ The debt burden in 2003 is about 22.5% of GDP. The outstanding gross debt does not include government contingent liabilities and other liabilities that are not included in the budget.

²⁶ The percent here mainly refers to the report of Sarath Lakshman Athukorala, 2003.

reform after 1993 in China. Given the lack of detailed, reliable data, the reform cost²⁷ of the first year is respectively assumed to be 0.15%, 0.1%, and 0.05% of China's fiscal expenditure in 2003 (about 2460.7 billion Yuan, approximately \$297.2 billion). Implementation costs are phased over a 4-year period corresponding to implementation activities. The following three years' costs of the reform are respectively $\frac{3}{4}$, $\frac{1}{2}$ and $\frac{1}{4}$ of the cost of the first year²⁸ (See Table 5-1, 5-2, 5-3). The specified cost ratio includes direct costs such as: financial management system (FMIS) acquisition and implementation; and consulting expenses; as well as indirect expenses, such as staff time.²⁹

The internal rate of return (IRR) calculation is based on a 20-year period. On the basis of above assumptions, static simulation analysis on accrual reform in China is presented on the following paragraph. Table 5-1: Assume that the reform cost of the first year is 0.05% of total fiscal expenditure in 2003, the reform costs of the following three years are respectively 0.0375%, 0.025%, 0.0125% of total fiscal expenditure. Table 5-2: Assume that the reform cost of the first year is 0.1% of total fiscal expenditure in 2003, the reform costs of the following three years are respectively 0.075%, 0.05%, 0.025% of total fiscal expenditure. Table 5-3: Assume that the reform cost of the first year is 0.15% of total fiscal expenditure in 2003, the

²⁷ The analysis refers to the cost analysis methodology used in a study by New Zealand Audit Office. The New Zealand Audit Office estimated the total cost of financial-management reform for the six years between 1987 and 1992 to be NZ\$160-180 million, (equivalent to US\$99 million), or approximately 0.1% of government expenses during this period (Ian Ball, etc, 1999). In addition, there are other data from the reform in Australia. The Department of Finance estimates that the gross cost of introducing full accrual budgeting systems could amount to some \$57m in "non-recurring costs (including software, training and contingencies). Annual maintenance costs might increase by up to \$10m. In overall budgetary terms, if the full \$57m were expensed over 4 years, the average annual expense of some \$14m would represent only one tenth of one percent of total estimated running costs for 1995-1996 or one hundredth of one percent of estimated total outlays (*Costs and Benefits of Implementing Accrual Accounting*, Commonwealth of Australia). According to the Canadian officials, the cost of the accrual reform was about C\$0.66 billion.

²⁸ These ratios are assumed based on the author's knowledge of the Chinese practice of fiscal reform.

²⁹ Refers to the report of Scott, Graham, Ian Ball and Tony Dale (Summer 1997): New Zealand's Public Sector Management Reform: Implications for the United States. *Journal of Policy Analysis and Management* 16.3: 357-381.

reform costs of the following three years are respectively 0.1125%, 0.075%, 0.0375% of total fiscal expenditure.

Table 5-1, 5-2,5-3 (Units: US\$ million)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cost	-149	-111	-74	-37																
Benefit				65	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
Net benefit/cost	-149	-111	-74	28	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
IRR	24%																			

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cost	-297	-223	-149	-74																
Benefit				65	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
Net benefit/cost	-297	-223	-149	-9	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
IRR	12%																			

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cost	-449	-334	-223	-111																
Benefit				65	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
Net benefit/cost	-449	-334	-223	-46	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
IRR	7%																			

According to the simulation analysis above, implementation of accrual reform would yield an internal return rate of 24%, 12%, and 7% respectively based on the different cost assumptions. The analysis is likely conservative given the following considerations: The analysis excludes all unquantifiable benefits described in section 3.3. The cost-benefit analysis shows that the factors analyzed in section 3.3 are positively related to real benefits. Because the effects of these factors could not be accurately quantified, simulation analyses exclude these benefits. In the case of China, reform benefits calculated by this specified methodology can be under-estimated because the outstanding gross debt does not include governments' contingent liabilities and other liabilities that are not included in the budget. In fact, contingent liabilities of the local governments should also be considered in this analysis. Due to complexity and unavailability of the data of governments' contingent liabilities, I omit these unrecognized debts of local governments in my analysis. The implementation costs are overstated, because 0.1% of the total government expense would include the entire estimated costs of New Zealand's financial management reforms, for instance, the costs associated with performance contracting and output specification.³⁰ In fact, all assumed costs (0.15%, 0.1%, and 0.05% of China's fiscal expenditure in 2003) in the model presented here are potentially overstated for the specific case of China given limited resources and China's concurrent priorities in other policy areas.

The three key factors in the cost-benefit simulation analysis of accrual reform in China are outstanding gross debt, implicit savings on borrowing costs and total fiscal expenditure. Sensitivity analysis of the assumptions made about these factors can investigate the impact of changes in each variable on the base-case IRR (calculated from the above analysis) and test the degree of sensitivity of these variables to the assumptions imposed. Each factor is analyzed by considering plus/minus changes of 5% and 10% respectively. Sensitivity analysis of each factor is shown in Table 6:

³⁰ Sarath Lakshman Athukorala, 2003.

Table 6. Sensitivity analysis on key variables

Variables	Change	Base-case IRR	IRR after change	Variation scale (%)
Outstanding gross debt	±5%	24%	23-25%	(-1,1)
		12%	11-13%	(-1,1)
		7%	6-8%	(-1,1)
Implicit savings on borrowing costs	±5%	24%	23-25%	(-1,1)
		12%	11-13%	(-1,1)
		7%	6-8%	(-1,1)
Total fiscal expenditure	±5%	24%	23-25%	(-1,1)
		12%	12-13%	(0,1)
		7%	6-8%	(-1,1)
Outstanding gross debt	±10%	24%	21-26%	(-3, 2)
		12%	10-14%	(-2, 2)
		7%	6-9%	(-1,2)
Implicit savings on borrowing costs	±10%	24%	21-26%	(-3, 2)
		12%	10-14%	(-2, 2)
		7%	6-9%	(-1,2)
Total fiscal expenditure	±10%	24%	22-26%	(-2,2)
		12%	12-14%	(0,2)
		7%	6-8%	(-1,1)

The results of the sensitivity analysis of each variable show that variations from the base-case IRR (within the tested bounds) are acceptable. Outstanding gross debt and implicit savings of borrowing costs have the same sensitivity given the assumed changes. Total fiscal expenditure is less sensitive given assumed changes than the other two variables. Sensitivity analysis shows that changes of key variables have only a slight impact on the base-case IRR. The analysis also shows that the IRR calculation is reliable on the basis of the certain assumptions in this article.

3.5 Comparison analysis of reform plans

Reform costs may differ due to the scale of the reform plans. The following

analysis compares the costs of different reform plans. The costs of implementation of all the considered plans have both a fixed and a variable component. Fixed costs are assumed to be equal across plans, since this measure mainly involves items such as legislative cost, etc., which are likely of the same order of magnitude. The three plans vary however by the scale of implementation, which will affect the variable costs of the reform.

Plan 1: accrual accounting will be applied in all budget units. General budget accounting, administrative unit accounting and public service unit accounting will all migrate to the accrual basis. Under this plan, the reforms will be implemented universally. The cost of software development, hardware installation and system operation associated with the reform will increase because essentially all budget units will be involved in the reform. The reform costs of Plan 1 will exceed those of the other two plans.

Plan 2: the reform will first implement the accrual basis for PSUA. Then, it will apply the accrual basis to the administrative unit accounting and general budget accounting. This reform plan may only affect the Public Service Units at the beginning stage. Moreover, there are various profitable activities in many public service units. These activities are already treated on accrual basis. The accountant and financial staff in this department have been familiar with accrual. Therefore, the cost of the plan is relatively low.

Plan 3: only General budget accounting will migrate to accrual basis. If the accrual reform is only applied in general budget accounting for state finances, the cost would be relatively low. Statements of budget units would have consolidated financial statements on the accrual basis. The reform could be carried out easily and at relatively low cost.

In sum, the variable costs of the above three reform plans are decreasing in the order they are presented here. However, the benefits of the plans are not directly comparable numerically and thus limited to verbal discussion in this paper.

As far as a gradual, prudent reform path is concerned, Plan 3 may be comparatively easy to implement and more acceptable.

4. Suggestions for introducing accrual reform in China

4.1 Basic principles

4.1.1 Accrual reform should be harmonized with fiscal management reform.

The basis on which accounts are prepared is only one of the technical tools and necessary components of the overall system of government accounting and financial reporting. The latter items are part of the fiscal management system. Government accounting information should satisfy the needs of fiscal management. Therefore, accrual reform of government accounting should be based on the requirements of budget preparation and execution, as well as on those of audit supervision. During the period of deepening the reform, and transition to a market economic system and related political and fiscal system in China, the transition of the basis for government accounting should (i) be consistent with ongoing reforms, such as the reform of departmental budgets, centralized treasury collection and disbursement systems, government procurement system and performance assessment of fiscal expenditure, and (ii) should meet the technical accounting requirements of planned reforms including treasury cash management, multi-year budgets, and government performance assessments, as well as the day-to-day needs of management of budget execution and audit supervision.

4.1.2 Information requirements inside and outside the government should be considered during the accrual reform. The first primary user of government accounting information in China would be the fiscal administrator of different levels of government, for the purpose of budget preparation and execution as well as overseeing the treasury cash flow. Secondly, macroeconomic policy-makers would make decisions about macro-economic policy and regulation partly on the basis of government accounting information. Thirdly, after budget approval, the

legislature will use the information to supervise budget execution. Fourthly, the audit department will use the information for supervision. As different agents would use the government accounting information for different purposes, they would have different requirements for the information. Analysis on respective information needs would be essential to accrual reform in China.

4.2 Scope of accrual basis

Financial reports of different government levels should apply the accrual basis uniformly, while government budgets should be prepared on a cash basis. China is a country with a unitary political system. The main economic system and policies of governments of all levels are uniform; however, they have independence in their local budget and fiscal administrations. Coherence and comparability of accounting information of the government at different levels is beneficial to macroeconomic and fiscal management. Therefore, it is essential for central and local governments to apply the same accrual accounting basis.

In most countries, including China, budget information aims to reflect planning receipts and outlays of a given year. Furthermore, the main task of government accounting and financial reporting at China's current stage would be oversight of whether funds are used according to the approved budget. Cash basis budgeting is sufficient for the basic needs of management. Also, it is good to retain simple information processes and stable budget systems. Therefore, the government budget would remain on the cash basis. Preparing a multi-year budget could make up for the shortcomings of a cash basis budget, e.g. for the lack of long-term information. Government financial reports could reflect the financial position of the government for a past year. The information on government receipts, outlays and balances in a financial report based on an accrual basis will differ from that of previous year's budgets, which were still on cash basis. This is not necessarily an obstructing factor. American experience shows that government accounting and financial information based on an accrual basis and budget

information on a cash basis can be harmonized by reconciliation or comparison.³¹ At the same time, financial reports and budgets can play their respective and individual roles.

4.3 Degree of accrual basis

The accrual basis could be divided into modified accrual and full accrual to different degrees. Countries all over the world have applied accrual in the public sector to varied degrees. Some countries (such as New Zealand and Australia) have applied the accrual basis fully and uniformly, and have supported fiscal activities with accrual accounting similar to that used by the private sector, for example, in accounting for the depreciation of fixed assets of government departments. During the reform, many countries gave full consideration to their condition and management needs, retaining cash accounting to a certain extent while introducing the accrual basis in the public sector. Therefore, different kinds of modified accrual accounting are applied. The most common kind of accrual-based accounting is to define the scope of government assets and liabilities, for example, to recognize short-term financial assets and liabilities; to recognize non-financial assets, such as defense infrastructure and heritage assets as they are acquired or built; and to recognize all liabilities except pension liabilities.

There should be some basic conditions when applying full accrual in the public sector: first, government assets and their value should be recorded fully. It is necessary to make lots of preparation (such as asset statistics and valuation) when applying accrual at the national government level. It will take plenty of time, human effort and resources, and data. Furthermore, many assets in the public sector differ from those in the private sector. Examples include heritage assets, military assets and infrastructure assets, which may be acquired free of charge or

³¹The Federal Accounting Standards Advisory Board (FASAB) and the Governmental Accounting Standards Board (GASB) have taken somewhat different approaches to relating actual results to the budget. The FASAB favors the reconciliation approach, while the GASB favors both reconciliation and comparison. The reconciliation approach explains the difference between two sets of numbers. (Chan, 2004)

recorded with no historical cost. In this case, their historical costs and current value may greatly diverge. In addition, comparable markets may not exist. The value of many precious heritage assets are subjective and may rise (or decrease) continually; however, they can only be kept and maintained at high cost by the responsible department because it is illegal to sell or otherwise dispose of them. Therefore, it would be difficult to fully record the value of these assets in the public sector.

Secondly, a good system of cost measurement is essential. If the reform focused on the financial performance of a budget unit, depreciation should be recorded and recognized on the unit level, which would require appropriate tools to assess cost and relevant mechanisms to constrain the budget unit. Thirdly, full accrual accounting would require sound accounting standards and competent accountants inside and outside of the government. It would be essential for the user of government accounting information to fully understand the concepts of the accrual basis.

As far as all these factors are concerned, consideration should be given to how extensive should be the adoption of the accrual basis and how gradual should be its introduction. A realistic choice would be to apply the accrual basis to government accounting and the cash basis to budgets. Because accounting and financial information is mainly aimed at satisfying the needs of compliance in budget disbursement and fiscal management and since there are limitations of measurement and cost, applying a modified accrual basis to government accounting would be feasible and cost-effective.

4.4 Reform steps

The accrual reform should be a gradual process of reform proceeding from the easiest steps to the most difficult. The reform order would emphasize defining financial assets and liabilities first, followed by fixed assets, contingent liabilities, and political promises. The scope for applying the accrual basis should be defined

by the principles of feasibility and ease of measurement.

Government assets should include cash and financial resources. Government liabilities should include current and long-term liabilities. For example, the payment of principal and interest on treasury debt should be recognized in different periods on the accrual basis. If obligations for loan assurance and lending actually become bad debt, they should be accounted on an accrual basis to fully disclose hidden debt by the government and prevent fiscal risk. As for receipts, they should be accounted mostly on a cash basis as in common international practice, i.e. only the negative receipt (subsidy) that is both promised by government policy and measurable would be recognized on the accrual basis.

Depreciation of government-held fixed assets would be helpful to accurately assess the cost and efficiency of public service provision by departments and to oversee performance. However, many existing fixed assets of the government would need to be valued, which involves considerable cost and is technically difficult. I would recommend leaving the conversion of accounting for the depreciation of fixed assets until the second stage of reform, when statistics on assets and their value have been compiled.

There are many state-owned enterprises (SOEs) in China. If the government's responsibility for SOEs is of concern, it would be reasonable to include the commercial activities of the public sector (SOEs, state-owned commercial banks) in government financial reports.³² This would more fully reflect the financial position of the government as a whole and link the government budget and state equity-operating budget. The issue should be settled later because the measurement issue also involves reporting entity issues, and there may be considerable technical difficulties and measurement costs. At the initial stage, accounting information about this aspect could be disclosed in a note

³² SOEs, state-owned commercial banks and other commercial activities in the public sector apply accrual accounting. The financial reports of SOEs are separately reported from those of administrative and public service units.

on the balance sheet. For similar reasons, government obligations for pensions and social security should be reflected on an accrual basis only in the second or third stage of reform.

4.5. Institutional arrangements

4.5.1 Restructure the government accounting system; define the scope of government accounting. The accounting basis is a measurement standard. The accrual basis would be important only with a parallel effective frame of government accounting and financial reporting. China's existing budget accounting focuses on the budget activities of receipts and outlays. If the accrual basis were applied under the existing frame, the purpose of reflecting the funds flows and financial position of the government as a whole would not be fully realized. Therefore, it is essential to change the existing budget accounting system fundamentally in two areas: non-profit organization accounting and government accounting.

At present, three individual budget accounting systems are established according to the different transactions and financial features of the budget units. There are drawbacks of the current budget accounting system because they disconnect the fiscal funds flows of different units. Furthermore, public service units in China have diverse backgrounds and complicated fund sources. It would confuse the financial obligations of different features to apply one budget accounting system to all kinds of public service units. Therefore, the scope of a new system of government accounting should accommodate these standards according to: whether the unit or organization uses government resources; whether it operates under the dominance of the government; and whether the government will be responsible for the operating results of the unit or organization.

If the unit or organization meets all of these standards, it would be covered in the scope of the government accounting system. Therefore, all government departments (administrative units) that meet these standards should be included in

the government accounting system. Although SOEs dispose of state-owned assets, which are government resources by nature, after the reform of SOEs, they are supposed to be legal entities that would operate and be responsible for profit and loss independently. Theoretically, the government would not intervene directly in their operation nor bear financial responsibility for their operating results. Thus SOEs will not be included in the government accounting system³³. In regard to public service units, if they receive no financial support from the government except, possibly, for small, irregular subsidies, and instead have their own operating revenue, operate independently, and are responsible for their own profit and loss, then they could be defined as enterprises or non-profit organizations and could follow enterprise accounting and non-profit organization accounting standards respectively. Those state-owned public service units that receive all or most of their financing from the government budget should be covered in the scope of government accounting and adhere to government accounting standards.

4.5.2 Set the government accounting standards system to define the accrual basis. The government accounting standards system would be the precondition for an accrual basis reform in the public sector. It is essential to establish an accounting standards system, especially conceptual standards and/or basic principles of government accounting.

At present, conceptual statements of government accounting standards have been issued by many countries. For example, in the U.S., the Federal Accounting Standards Advisory Board (FASAB) and the Governmental Accounting Standards Board (GASB) have issued conceptual statements to guide specific government accounting standards (See table 7).

Table 7. The Conceptual Statement of FASAB and GASB

Board	Name	Issuance Date
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³³ All SOEs that have state equity should be covered by the enterprise accounting systems in the future. Consolidated GFR should include financial statements of SOEs. This would be considered at the final stage of the accrual reform.

FASAB	No. 1	Objectives of Federal Financial Reporting	Sept.2, 1993
	No. 2	Entity and Display	June 5, 1995
	No. 3	Management's Discussion and Analysis- Concepts	April, 1999
	No. 4	Intended Audience and Qualitative Characteristics for the Consolidated Financial Report of the United States Government	Jan.27, 2003
GASB	No. 1	Objectives of Financial Report	May, 1987
	No. 2	Service Efforts and Accomplishments reporting	April, 1994
	No. 3	Communication Methods in General Purpose External Financial Reports that Contain Basic Financial Statements	April, 2005

The conceptual framework of government accounting in China should accord with Chinese conditions under the requirements of market economic development and fiscal management. The main contents are suggested at table 8.

Table 8. Suggested Contents of China's Conceptual Framework for Government Accounting

Objectives of Financial Report	Demonstrating compliance with legally adopted budget and other finance-related legal or regulatory requirements, providing information about governments' financial positions and performance, providing information on sustainable operation and service and disclosing potential fiscal risk.
Entity	Reporting entity of budget accounting in China is the budget unit of different levels. For general budget accounting, the reporting entity is the government of different levels. For administrative units that get full or most financial support from the government, the reporting entity is the administrative unit of different levels. For public service units that are funded partially by the government and for which the government would bear financial responsibility, the reporting entity would be changed from the individual unit to the individual fund.
Accounting basis	Applying modified accrual basis.
Qualitative characteristics	Qualitative characteristics would be a symbol of usefulness of accounting information. The information should be reliable, relevant, comparable, consistent, timely and understandable. Reliability and relevance are the core characteristics of accounting information.
Accounting elements	There are five factors in the existing budget accounting standards and system: asset, liability, net asset, receipt, and outlay. It is essential to define the dimensions of these factors as they apply to recognition and measurement so as to adapt to a new system.
Financial report	Financial report provides information to facilitate analysis, assesses financial performance and accountability, and provides information for decision-making. Government financial reports should reflect reported objectives. The reporting entity, content, main statements, preparation procedures and approaches,

	approval procedures, and disclosure should be defined clearly.
Others	Accounting assumptions, specific procedures and management mechanism.

The system of specific standards should be guided by conceptual standards or basic principles. The system should contain the standards of financial reporting, general transactions, and specific transactions. The standards of general transactions would include standards of receipt, outlay, investment and depreciation, fixed asset, government subsidy and contingent liability. The standards of specific transactions would cover recognition, measurement, and disclosure of different transactions according to the requirements of fiscal management, macro-economic policy-making and accountability. The specific standards would define the detail of applying the accrual basis to different transactions.

4.5.3 Set the government financial report system. Under the existing government budget and accounting systems, the budget accounting report consists of statements of general budget accounting and administrative unit accounting. The final account of the annual budget reports the actual results of budget execution. These statements disclose government financial information to a certain degree; however, there is no regular financial report of the government-as-a-whole.

China is now implementing reforms of fiscal management. The objective of financial reporting should be defined as demonstrating compliance with the legal budget and meeting the requirements of fiscal management. Financial reports should be prepared to cover the activities of the government as a whole. Likewise, the reporting entity for consolidated financial statements should be the whole of government. Thereafter, the financial reports and government budgets would be comparable and could match each other effectively. In addition, the financial reports of certain important funds (e.g. the social security fund) should be prepared to strengthen their management and supervision.

Financial statements should include: (a) the balance sheet, which reflects the financial position of the entity at the end of a fiscal year. It is the most important source of information on the financial performance of the government; (b) the income statement, which reflects the receipts, outlays and net position of the entity; (c) the operating statement, which reflects the receipts and expenses and operating results of the entity in a fiscal year; (d) the cash flow statement, which helps the user to predict the cash demand and the capability of future cash flow of the entity; and (e) the budget execution report, including the harmonization of financial reports and the budget. This makes it possible to compare and harmonize the budget on a cash basis and to issue a financial report on a modified accrual basis.

To satisfy the needs of the users of the financial reports, they should include comprehensive analysis of financial positions, brief reviews of the basic economic condition and development trends. Relevant additional information and notes should be included as complementary information of the government in the financial report.

4.5.4 Staff training and software development. A government accounting system migrating from a cash basis to an accrual basis needs to train staff and develop software. Most of the existing staff responsible for government budget accounting may be unfamiliar with accrual accounting. Thus, professional training of the financial staff would be essential for the reform. In recent years, many software packages for budget accounting have been developed. The software should be changed or updated in accordance with the new accrual accounting system. Some new software may need to be developed to adapt the accounts to the accrual basis and to link seamlessly with the existing financial management information system.

4.5.5 Revise the Accounting Law and related fiscal management legislature. The Accounting Law is the basic law and fundamental regulatory framework for accounting in China. Accounting standards of enterprises and governments should be under the guidance of the Accounting Law. Because government accounting

entities differ from those of enterprises and some of them have considerable delegated authority, the public as the principal is poorly placed to make the government comply with the accounting standards. The law is essential to assure compliance of the entity. However, current legislation does not cover government accounting standards. Therefore, it will be necessary to revise the accounting act and add an article about government accounting standards that specifies the position and role of government accounting standards, the legal obligations of the accounting entities, and the procedures of establishment, issuance, implementation and revision of government accounting standards that should be regulated. At the same time, government accounting legislation should be harmonized with other related economic regulations, such as the Budget Law, treasury regulation, Government Procurement Law, treasury payment regulation, and Taxation Collection Law.

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