Measuring Financial Health of Local Governments A Comparative Framework

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1. Introduction

The Great Recession that started in 2008 has led to serious and structural type fiscal problems for local governments across the industrialized world. These problems have manifested themselves in different ways from problematic interest rate or swap deals to significant declines in tax revenues amidst rising costs. Within countries, analysts and scholars have begun assessing the financial health of local governments (LGs); however there remains a lack of any international comparisons of how financial health is identified and measured across countries by audit bodies. Such international comparisons may spur cross border learning and innovation.

One of the most critical dimensions from the existing literature is that the definition of financial health or what is sometimes called, highlighting its negative side, «fiscal distress», «financial risk», «fiscal crisis», or «fiscal strain», is not unique. In fact, one's views of fiscal distress versus fiscal health likely has an important impact on the nature of the approaches used to assess local governments' situations. This variety of definitions inevitably leads to a diversity of operational measures adopted when attempting to measure or predict LGs' financial distress.

This chapter seeks to identify and explore the different strategies that have been used to measure financial health of LGs across a variety of OECD countries by audit bodies. Specifically, it seeks to measure which fiscal health measures are used in common and whether those measurements have the same meaning. The problem of measuring financial health is tightly intertwined with information available. In terms of accounting information, not only the traditional cash-based accounting versus the «new» accrual accounting is determinant, but also the quality of ~~the~~ information matters. This work also discusses these issues aiming at identifying the strengths and weaknesses in terms of capacity of measuring financial health in different accounting contexts.

2. Definition(s) of Financial Health in Local Governments

At the international level, the literature concerning financial health in LGs is quite limited in number and, with a few exceptions, is restricted to the U.S. and Australian contexts and to municipal government types. Within this literature, there are four generally agreed upon measures ~~see~~ (see Groves et al. 2003 and later). They are cash solvency, budget solvency, long run solvency, and service level solvency and are defined as follows:

- Cash solvency measures a LG's liquidity and effective cash management, and its ability to pay current liabilities.

- Budgetary solvency refers to the ability of the government to generate sufficient revenues to fund its current or desired service levels.
- Long run solvency refers to the impact of existing long term obligations on future resources.
- Service level solvency refers to the ability of the government to provide and sustain a service level that citizens require and desire.

Designers of LG fiscal health systems face a difficult dilemma in choosing among which indicators to select. The dilemma is embodied in the notions of fiscal health and fiscal stress. Fiscal health refers to a local unit's overall ability to maintain services respond to an emergent situation. It emphasizes indicators such as economic and population change, revenue and expenditures per person, debt per person. For example, with reference to the U.S. context, some authors have written that municipal governments' financial health is defined or determined, and therefore measured, by socioeconomic forces (Peterson 1976) or, under a more limited approach, by the municipal bond market (Petersen 1974). Downing has demonstrated that situations perceived by urban counties' public officials «to have the highest validity as indicators of fiscal stress are (1) inability to meet payrolls when due and (2) default on repayment of bonded debt» (Downing 1991: 323). This latter point of view has been predominant for some European authors, who have focused their research onto LGs' credit ratings and solvability assessment (López et al. 2001; Alijarde & López 2001; Manes Rossi 2010).

Fiscal stress, on the other hand, is associated with the ability of a local unit to meet short and long term financial obligations and avoid state takeover or even municipal bankruptcy. Fiscal strain has also been defined considering its dynamic nature as an «incomplete adaptation to changing resources and problems confronting a municipality» (Clark 1977: 55). Others have discriminated short-term, represented by a LG's ability to meet its payroll and generally make payments in a timely manner, from long-term, where the point of view is more on the trends in a LG's tax base relative to its expenditures and commitments (Kloha et al. 2005). In fiscal stress measures, there is a general emphasis on indicators such as fund balance, cash availability, deficits, and property value losses. In this context, there tends to be a correlation between cash and budgetary solvency and fiscal stress type measures.

Some studies have also tried to explore the causes of financial distress. One cause often identified is the lack of organizational resources and managerial skills (Carmeli & Cohen 2001); others emphasize the incapacity to adapt to economic downturns, particularly when some responsibilities are shifted to municipalities without any financial compensation or equal ability to increase revenues (Falconer 1991; Beckett & Camarata 2004).

This variety of definitions and approaches inevitably brings about a wide diversity of operationalizations adopted when trying to measure or predict LGs' financial distress. These techniques range from basic approaches such as accounting information and financial reporting analysis (e.g. Kleine et al. 2003), eventually added of qualitative analysis by reviewing audit reports, LG's reporting, or information gathered from discussions or regional workshops (Honadle 2003), to more sophisticated statistical modelling approaches (e.g., Murray and Dollery 2005).

An important aspect of these quantitative works is the proxy used in order to discriminate financially unhealthy LGs from the healthy ones. Several variables have been proposed for this purpose such as ratio indicators (Clark 1977; ICMA 2003), the incidence of mergers or amalgamations, the quantity or quality of service delivery and the cost of restoring infrastructure assets to satisfactory conditions (Jones & Walker 2007; López et al. 2001).

3. Measuring Financial Health and Accounting Information

More broadly, the problem of measuring financial health is tightly intertwined with accounting information availability. Internationally, there has been a growing pressure about the implementation of accrual accounting replacing or adding to the traditional budgetary cash-based or modified accrual accounting (Guthrie et al. 2005). This has been in answer to the call for suitable accounting systems to generate information to feed the need of tools to measure and monitor economic quantities. At the local level, fiscal autonomy has acted as the utmost affecting driver, since the object of control has moved from the «correct use of governmental grants» to the «efficient and effective use of local citizens taxes» (Caperchione and Mussari 2000).

Not only the traditional cash-based accounting information versus the «new» accrual accounting information availability is crucial, but also the quality of information matters. This is made clear by a recent study within the field of LGs by Pinnuck and Potter (2009), which supports that financial reports based on accrual accounting are economic goods whose quality is determined by market demand. In Europe, with the exceptions of UK and some Nordic countries, municipal governments have introduced accrual accounting without being pushed by a factual market-oriented management style (Pina et al. 2009), therefore the demand of high-quality data seems to be poor and so ought to be the accrual information produced, originating a loop where accrual accounting information is poor, therefore it is not used for performance assessments.

4. Different Scopes of Financial Health Assessment: A Theoretical Framework

In order to carry out a comparative analysis of financial health measurement systems across countries, a conceptual framework is needed. This framework is useful in guiding the analyst towards certain characteristics that serve as the basis for observing differences and similarities across countries. Any conceptual framework will of course focus on certain characteristics to the exclusion of others. However, the framework described below is designed to capture several key dimensions while excluding those that are more difficult either to use or classify, or less useful.

The conceptual framework (shown in Table 1) has two dimensions upon which to compare financial health systems. The first dimension is the *type of accounting system* in use by any given country and used to assess financial health. This dimension is divided into the options: 1) cash accounting or modified accrual, i.e. the traditional budgetary accounting, 2) cash accounting or modified accrual plus nonfinancial information and 3) cash accounting or modified accrual plus full accrual and nonfinancial information. Thus, there are three characteristics of inclusive accounting systems which are built upon each other. The objective of this dimension is to assess the type of accounting system in use by LGs which is used by auditors to assess the financial health conditions. This is a crucial variable in understanding the type of financial and nonfinancial data and information being presented and whether it is comparable across countries. It is also a characteristic that can be agreed upon by any observer of a financial health system.

The second dimension for the framework is the *«type of operationalization»* which in essence means the kind of information that is elaborated by state, provincial or federal authorities in assessing the financial health of LGs. This dimension is also broken into three options including: 1) basic approaches related to accounting ratios, 2) basic approaches plus the inclusion of qualitative data such as review of audit reports and 3) the first two options plus sophisticated statistical and comparative analysis across LG units. These three characteristics should be observable and different analysts should be able to agree of their existence or non-existence. They capture the notion that different governments are willing to expend different levels of effort in capturing and analyzing information regarding local jurisdictions.

Combing these dimensions, the matrix serves to guide the analyst in assessing the full extent and type of financial health analysis being undertaken by higher level governments with respect to local units of government such as cities, towns and villages. In the upper left hand box, higher level governments are engaging in limited financial health analysis while in the lower right hand box they are engaging in extensive financial health analysis. The reason for these different choices may have to do with the history of relations between the levels of government and the implications of financial health of public debt access.

Type of information used / Type of operationalization	**Cash accounting or modified accrual accounting**	**Cash accounting or modified accrual accounting + nonfinancial information**	**Cash accounting or modified accrual accounting + nonfinancial information + full accrual accounting**
Basic approaches: accounting info and financial reporting analysis	LIMITED FINANCIAL HEALTH ANALYSIS		
Intermediate approaches: basic approaches added of qualitative analysis (review of audit reports, LGs' reporting, discussion or regional workshop, etc.)			
Sophisticated approaches: statistical modeling			EXTENDED FINANCIAL HEALTH ANALYSIS

Table 1: Different Scopes of Financial Health Assessment

5. Different Scopes of Financial Health Assessment: Some OECD Country Cases

We now empirically motivate the theoretical framework presented to comparatively analyze regional and national cases, by using a selection of some OECD countries. The cases taken into considerations are the followings:

- Korea;
- Italy;
- Michigan (United States);
- New South Wales (Australia).

While there are social, political and administrative differences, the structures of local budget resources of these countries are considered comparable in terms of percentage of grants out of total local revenues, ranging from 16% of Australia to 40% of Italy[1]. The selection of cases reflects the data limitations that currently exist in several countries. The four cases presented here are amongst those very few cases which have the availability of extended comparative data and appeared in previous research works done in the field. While they cover four conti-

[1] Grants as percentage of local revenues for the four country cases analyzed: Italy 40% (source: our computation from official financial reports, median of all municipal governments, year 2008); Korea from 10 to 30% for 136 LGs out of 246 (source: Kim 2009); United States 39% (source: World Bank and United Cities and Local Government 2008); Australia 16% (source: World Bank and United Cities and Local Government 2008).

nents, the purpose of these four cases is not to be representative of any group (neither best performers, nor group of countries/regions with similar socio-economic conditions, etc.) but simply to put the theoretical framework presented into context.

Korea has experienced a great change during the 90s, pushing towards a decentralization process to LGs. Korea has a two-tier system: the regional level, which consists of provinces (Do) and metropolitan cities (metropolitan Si), and the very local level, composed of such municipal governments as municipal cities (Si), rural districts (Gun, rural county) and autonomous urban districts (Gu, located inside metropolitan cities), for a total of 246 entities. Albeit their ability to raise taxes and own revenues, LGs still tend to depend on the central government highly.

Supported by the Korea Research Institute for Local Administration, the Korean Ministry of Public Administration and Security, which is in charge to monitor LGs performance, has provided a comprehensive system for analyzing local public finance since 1999. While the system of indicators has changed over time (Kim 2009), the study consist of a scoring system which measures the relative efficiency of Korean LGs in a non-parametric framework approach using Data Envelopment Analysis, allowing the assessment of the extent of local spending that seems to be wasted relative to the best-practice frontier (Korean Research Institute for Local Administration 2008). This means that the Korean case is an example of sophisticated approach of financial health analysis.

In terms of type of information used, the current model of analysis employs thirty different indicators mainly represented by financial ratios divided in four areas (structure of revenue, annual expenditure management, fiscal management, financial obligation management) plus some nonfinancial information about financial transparency and national policy execution. Since full accrual accounting and double-entry bookkeeping have been introduced since 2007, there still is limited use of these types of information (Korean Research Institute for Local Administration 2007), meaning that Korea is in the second level of «type of information» used (cash accounting or modified accrual accounting + nonfinancial information).

In *Italy*, there are three public institutions which are in charge to audit and therefore provide conceptualizations and analysis for the more than 8,200 LGs' (municipalities and provinces) financial distress. These are the Ministry of the Interior, the Audit Office, and the State General Accounting Department within the Ministry of Economic and Finance. According to the LG Act, the Ministry of the Interior in accordance with the LGs' association states every three years those financial ratios which are then used to identify those municipal governments under a pre-financial distress situation. These ten performance indicators, whose last release was issued in September 2009, basically refer only to modified accrual accounting information. In case that half of these indicators go beyond specific thresholds provided by law, the LG is listed within a special «watch list».

Part of these ratios are also considered by the Audit Office together with other financial and nonfinancial information which are gathered through a specific questionnaire every year. While at the national level its function is to report on regional and local finances to the Parliament, the Audit Office also operates through independent regional branches which are responsible of financial health audit towards municipal councils. Each regional branch elaborates its own set of financial indicators which usually are limited to financial ratios plus some nonfinancial information about administrative laws compliance.

Furthermore, the State General Accounting Department, Ministry of Economic and Finance has recently produced a report about financial health assessment for LGs which, as well as other institutions, basically refers to financial information derived from budgetary accounting (State General Accounting Department, Ministry of Economic and Finance 2009). In any case, there is no use of accrual accounting information. This may not surprise since while it became compulsory from 1997, no advancement in quality has been widely demonstrated in literature (Farneti & Padovani 2003; Pavan et al. 2009) turning into a non-use by institutions to assess financial health conditions of LGs. It derives that the Italian case falls into the second level of «type of information» used.

In terms of «type of operationalization» the basic approach of accounting information analysis seems to prevail, except some limited example by a few regional branches which adopt an intermediate approach where relevant qualitative information is also gathered through on site visits.

Given the diversity across states within the United States, the State of *Michigan* was chosen as an exemplar case study relative to the measurement of financial health for LGs in the United States. Particularly, Michigan represents a state that has addressed the problem due to the ongoing economic and fiscal stress from serious challenges in the domestic auto industry.

The Michigan Department of Treasury is the primary oversight authority over LGs including counties, cities and townships of which there are over 1,800. The Michigan Legislature passed a law requiring Michigan local governments to follow the U.S. based Government Accounting Standards Board (GASB) rules regarding the use of modified and full accrual accounting standards. The statutory and administrative standards in place in Michigan place it in the third to the right box in terms of the «types of information» used dimension.

The second dimension relates to the «type of operationalization» used by higher level governments. The Michigan Department of Treasury has in place a fiscal scoring system. This scoring system is based on extensive comparative statistical analysis of all LGs in Michigan. The Department also uses audit report investigations and other basic accounting information in order to assess the potential risks of fiscal stress within LGs. This implies that the State of Michigan is in the third level down on this dimension as well. In all, the State of Michigan has an extensive or extended financial health measurement system in place.

With its 152 local councils, the *New South Wales* state represents one of the largest of Australia's eight states and territories, as well as one example of financial health analysis application used to elicit the LG councils classified as being on «financial watch». This system is operated by the local Department of LG which uses a wide set of information from financial statements (accrual accounting), «state of environment» reports, reports on condition of infrastructure (which includes estimates of the costs of providing certain services in the future and bringing infrastructure to a satisfactory condition and further data concerning future budget allocation for that purpose), information about rates increases (Walker & Jones 2006). All this means that the New South Wales example falls into the third level category of «type of information» used.

According to Walker & Jones (2006: 349), the Department of LG carries out its assessment using a qualitative approach given that further than accounting information derived from financial statements its staff also «gain insights from site visits and other discussions with representatives of individual councils», locating the New South Wales as an «intermediate approach».

Type of information used / Type of operationalization	Cash accounting or modified accrual accounting	Cash accounting or modified accrual accounting + nonfinancial information	Cash accounting or modified accrual accounting + nonfinancial information + full accrual accounting
Basic approaches: accounting info and financial reporting analysis		**Italy (general)**	
Intermediate approaches: basic approaches added of qualitative analysis (review of audit reports, LGs' reporting, discussion or regional workshop, etc.)		**Italy (some regions)**	**New South Wales (Australia)**
Sophisticated approaches: statistical modeling		**Korea**	**Michigan (United States)**

Table 2: Different Scopes of Financial Health Assessment: Locating the Cases Analyzed

6. Conclusion

The conceptual framework presented helps in understanding the strategies adopted in the four cases analyzed (Table 2). Comparatively speaking, while Michigan carries out the most extended financial health analysis, using both modified accrual and full accrual systems of accounting and nonfinancial information plus statistical analyses, Italian audit bodies do not use neither accrual accounting information nor sophisticated approaches of analysis. This, of course, tends to limit the capacity of measuring financial health in the latter context, since the economic aspects and their ability to measure efficiency as determinant of financial health conditions are not considered in the analysis. Also, non-statistical approaches of analysis may reveal a higher degree of subjectivity.

This mapping may also act as a contingency model to help policy makers in understanding the directions for improvement of financial health measurement systems by audit bodies. For example, as demonstrated by previous research, in the case of New South Wales, statistical modeling may advance the compilation of the «financial watch» list; in the Korean case the direction of improvement is the effective implementation of accrual accounting; in Italy there is a need to improve both the type of operationalization and the type of information used.

Generally speaking, the framework presented calls for further research in the vein of comparative studies in the area LG performance. Prevailing efforts to compare government performance, either financial or nonfinancial, have focused on the aggregate national public sector, but better data and standards across countries are also required for LGs. The development of a method for standardizing data and information across countries and also how to standardize given different fiscal federalism mechanisms in place across countries is the next frontier.

Zusammenfassung

Dieses Kapitel beinhaltet die Präsentation eines konzeptionellen Frameworks, welches Forschern und Wirtschaftsexperten, die sich mit Finanzkrisen der Lokalverwaltungen auseinandersetzen behilflich ist, die Thematik unter einem komparativen-länderübergreifenden Gesichtspunkt zu analysieren. Dieses theoretische Modell erfasst und untersucht die unterschiedlichen Strategien, die zur Feststellung der Wirtschaftsstabilität der Lokalverwaltungen in unterschiedlichen Ländern angewandt werden. Speziell durch die Darstellung nationaler und regionaler Fälle einiger OECD-Staaten (Korea, Italien, Michigan und New South Wales) versucht dieses Modell zu erläutern, welche staatenbezogen-vergleichbaren Massnahmen zur Finanzstabilität getroffen werden und gleichsam welche Bedeutung diesen Massnahmen jeweils zukommt. Genannte Aspekte werden in Verbindung mit den Stärken bzw. Schwachpunkten des jeweiligen Bilanzierungssystems betrachtet.

Résume

Ce chapitre élabore un cadre analytique pouvant aider tant les chercheurs que les praticiens qui doivent faire face à la crise fiscale touchant les collectivités. Il vise à permettre d’identifier et comprendre les différentes stratégies mises en œuvre pour mesurer la santé financière des collectivités dans différents pays. Basé sur des études de cas nationales et régionales, issues de pays de l’OCDE (Corée, Italie, Michigan, New South Wales), ce cadre analytique vise à mesurer quelles sont les métriques de santé financière utilisées de manière récurrente et à identifier si ces métriques ont la même signification. Une discussion portant sur la possibilité de mesurer la santé financière de différents systèmes comptables est ensuite proposée.

References

Alijarde, B. I.; López, V. C. (2001) El Analisis financiero en las administraciones locales. In: Revista Española de Financiación y Contabilidad, 108, 475–503.

Beckett-Camarata, J. (2004) Identifying and Coping with Fiscal Emergencies in Ohio Local Governments. In: International Journal of Public Administration, 27(8/9), 615–630.

Caperchione, E.; Mussari, R. (eds.) (2000) Comparative issues in local government accounting. Norwell, Massachussets: Kluwer Academic Publishers.

Carmeli, A.; Cohen, A. (2001) The Financial Crisis of the Local Authorities in Israel: A Resource-Based Analysis. In: Public Administration, 79(4), 893–913.

Clark, T. N. (1977) Fiscal Management of American Cities: Funds Flow Indicators. In: Journal of Accounting, Research, 15 (Supplement), 54–94.

Downing, R. G. (1991) Urban County Fiscal Stress: A Survey of Public Officials’ Perceptions and Government Experiences. In: Urban Affairs Review 27, 314–325.

Falconer, M. K. (1991) Fiscal Stress Among Local Governments: Definition, Measurement, and the State's Impact. In: Stetson Law Review, 20(3), 809–826.

Farneti, G., Padovani, E. (2003) Il Check-Up dell'ente locale. Milano: Ipsoa.

Groves, S. M.; Valente, M. G. (2003) Revised Nollenburg, Karl. Evaluating Financial Condition: A Handbook for Local Government, 4th edition. Washington DC: International City/County Manager Association (ICMA).

Guthrie, J.; Humphrey, C.; Jones L. R.; Olson, O. (eds.) (2005) International Public Financial Management Reform. Progress, Contradictions, and Challenges. Greenwich, Connecticut: Information Age Publishing.

Honadle, B. W. (2003) The States' Role in U.S. Local Government Fiscal Crises: A Theoretical Model and Results of a National Survey. In: International Journal of Public Administration,. 26(15), 1431–1472.

ICMA – International City/Country Management Association (2003), Evaluating Financial Condition: A Handbook for Local Government. Washington DC: ICMA.

Jones, S.; Walker, R. (2007) Expanators of Local Government Distress. In: Abacus, 43(3), 396–418.

Kim, S. (2009) Fiscal Performance and Voting Behavior: A Selection Bias Approach, paper presented at the 2009 IPMN Conference «Government Performance in Comparative Perspective», June 22–24, 2009, Seoul National University, Seoul, Korea.

Kleine, R.; Kloha P.; Weissert, C. S. (2003) Monitoring Local Government Fiscal Health. In: Government Finance Review, 19(3), 18–23.

Kloha, P.; Weissert C. S.; Kleine, R. (2005) Developing and Testing a Composite Model to Predict Local Fiscal Distress. In: Public Administration Review, 65(3), 313–323.

Korean Research Institute for Local Administration (KRILA) (2007) A Study on the Settlement of Account System by Introduction of Program Budgeting and Double-Entry Accounting in Local Government. Seoul: KRILA.

Korean Research Institute for Local Administration (KRILA) (2008) Improving the Spending Efficiency of Korean Local Governments. Seoul: KRILA.

López, B. B.; Alijarde, B. I.; Montesinos Julve, V. (2003) Utilidad de la información contable en los rating de dueda pública. In Revista Española de Financiación y Contabilidad, 117, 501–537.

Manes Rossi, F. (2010) La ricerca, il controllo e la valutazione dell'equilibrio finanziario negli enti locali. Torino: G. Giappichelli.

Murray, D.; Dollery, B. (2005) Local Council Performance Monitoring in New South Wales: Are «At Risk» Councils Really at Risk? In: Economic Papers 24(4), 332–345.

Padovani, E.; and Scorsone, E. (2009) Comparing local Governments' Performance Internationally: A Mission Impossible?. In: International Review of Administrative Sciences, 75(2), 219–237.

Pavan A.; Reginato E.; Conversano C.; Fadda I. (2009) La contabilità dei comuni italiani alla vigilia della riforma federale. Indagine sul grado di attuazione del modello informativo/contabile e di controllo previsto dal TUEL. Roma: Osservatorio per la finanza e la contabilità degli enti locali – Ministero dell'Interno.

Petersen, J. (1974) The Rating Game. New York: The Twentieth-Century Fund.

Peterson, G. (1976) Finance. In: Gorham W.; Galzer N. (eds) The Urban Predicament, Washignton, DC: The Urban Institute, 35–118.

Pina V.; Torres, L.; Yetano, A. (2009) Accrual Accounting in EU Local Governments: One Method, Several Approaches. In: European Accounting Review, 18(4), 765–807.

Pinnuck, M.; Potter, B. (2009) The Quality and Conservatism of the Accounting Earnings of Local Governments. In: Journal of Accounting and Public Policy, 28, 525–540.

State General Accounting Department, Ministry of Economic and Finance (2009) Le risultanze delle indagini svolte dai servizi ispettivi di finanza pubblica in materia di bilanci degli enti locali. Prospettive e proposte operative [Audit report on local governments]. Rome.

Walker, R. G.; Jones, S. (2006) An Alternative Approach to Identifying Councils 'At Risk'. In Economic Papers 25(4), 347–357.

World Bank and United Cities and Local Government (2008) Decentralization and Local Democracy in the World: First Global Report. Barcelona, Spain: United Cities and Local Governments.

Tables