Chapter 17
How to Measure the Level of Financial Development

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ABSTRACT
The aim of this chapter is twofold: first, to present in the most proper manner the definition of financial development, considering that bad definition leads to bad measurement and taking into account the discussions in the literature. Second, it aims to discuss how to measure the level of financial development. In line with these objectives, financial development index values for 1998-2011 are calculated by principal components analysis for 77 countries considering the suitable indicator in terms of the right definition of financial development. The calculated indices help to obtain a composite measure that evaluates the size, access, efficiency and stability dimensions of financial development together.

INTRODUCTION
One of the fundamental problems of the literature on financial development is about how to define and measure financial development in such a manner to enable comparisons between countries. The fact that the concept of financial development has long been held equivalent to financial size and depth has resulted in the expression of its definition over the size of the financial system. However, financial development is a multifaceted concept. The definition of financial development is required to contain all functions undertaken by the financial system. Therefore, the conventional measures of financial development (M₂/GDP, domestic credit to the private sector/GDP, etc.) that fail to go beyond the assessment of the mobilization of savings are, by themselves, insufficient to evaluate the financial system.

An accurate measurement is essential to identify correct policies regarding the development of the financial sector and its impacts. Numerous studies indicate that the analysis results vary depending on the financial development indicators used. The discrepancy of findings both make it more difficult to reach a general conclusion and hampers policy making. King and Levine (1992) claimed that there was no single precise measure

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that would allow the assessment of the situation of the financial system particularly in comparisons between countries and of the government activities for financial operations. Pill and Pradhan (1995) demonstrated that the conventional measures of financial development relying on real interest and monetary indicators resulted in misleading conclusions. Likewise, Lynch (1996) presented country examples to show it would be fallacious to reach conclusions on the level of financial development through the examination of a single indicator. The causes of the failure to find an appropriate indicator to measure the level of financial development are the difficulty of defining the concept of financial development, the fact that the financial system is composed of numerous financial markets, financial institutions and financial instruments the fulfilment of the functions of the financial system through various services, and the limitations regarding the potential to obtain data. The proofs showing that the level of financial development may not be represented by a single indicator led the researchers to gravitate towards the method of indexation, which enables them to deal with many indicators together.

In this context, the study has two objectives. One of them is to present in the most proper manner the definition of financial development, considering that bad definition leads to bad measurement and taking into account the discussions in the literature. The second one is to discuss how to measure the level of financial development.

In line with such objectives, the plan of the study is as follows: The introduction part will touch upon the importance of the subject and purpose of the study, and contain the problems in the relevant literature. The second section titled “Defining Financial Development” will mention the concepts of financial system, financial structure and financial market, which are frequently confused with each other, and the concept of financial development will be discussed and defined within the framework of the examples in the relevant literature. The third section titled “Measuring Financial Development” will underline the points required to be taken into account in measuring the level of financial development, and the indicators of financial development will be addressed in subsections titled financial size, financial efficiency, financial access and financial stability. Furthermore, the third section titled “Calculation of Financial Development Index” will also present examples of different sub-grouping of financial development indicators used in the literature. In the fourth section, the financial development indicators identified for 77 countries in connection with the previous section will be indexed through principal components analysis. The country rankings to be made separately in terms of the indices established and the indicators used to measure financial development in the literature will be compared, and the results will be interpreted.

DEFINING FINANCIAL DEVELOPMENT

The fact that the financial sector is composed of numerous sub-institutions and sub-markets with diverse functions and dynamics makes it difficult to define financial development. Thus, there is no single, generally-accepted definition of financial development in the literature. While some of the existing definitions have a narrow scope within the framework of the subject addressed, some are so broad in scope that they address the whole functioning of the financial system. Such attempts to define emphasize different measurements or dimensions. Some of the definitions focus on the factors affecting financial development, whereas some focus on the consequences of financial development. In this context, by making use of the different attempts to define financial development in the literature, the study will identify the elements that must be included in the definition of financial development.
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