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Financial markets' behavior around episodes of large changes in the fiscal stance

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ABSTRACT

Using a panel of OECD countries from 1960 to 2002, this paper shows that interest rates, particularly those of long-term government bonds, decrease when countries' fiscal position improves and increase around periods of budget deteriorations. Stock market prices surge around times of substantial fiscal tightening and plunge in periods of very loose fiscal policy. In addition, the paper shows that results depend on countries' initial fiscal conditions and on the type of fiscal consolidations: Fiscal adjustments that occur in country-years with high levels of government deficit, that are implemented by cutting government spending, and that generate a permanent and substantial decrease in government debt are associated with larger reductions in interest rates and increases in stock market prices.

1. Introduction

In the last 40 years, periods of large fiscal expansions alternated with years of sharp fiscal contractions in all OECD countries. These episodes have been associated with a variety of macroeconomic outcomes and have attracted the interest of macroeconomists since the early nineties. Several papers have studied the response of private consumption, private investment and GDP growth to substantial changes in the government budget while less is known about the reaction of financial markets around episodes of large fiscal contractions and expansions.[1] Moreover, theory and empirical evidence have not yet delivered clear-cut predictions on the impact of fiscal policy shocks on interest rates and stock market prices.[2]

These considerations, together with the importance of the topic for European and US policymakers, call for additional work on the link between fiscal policy and financial variables and motivate the present paper. In particular, the goal of this paper is to investigate empirically the behavior of government and corporate bonds interest rates, of the LIBOR, and of stock market prices in times of large changes in the fiscal stance. The paper identifies periods of large fiscal contractions and

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[1] See, for example, Alesina and Perotti (1997), Alesina and Ardagna (1998), Ardagna (2004a), Giavazzi and Pagano (1990), Giavazzi et al. (2000), and McDermott and Wescott (1996) for contributions on large fiscal contractions and expansions and the macroeconomy. See Balduzzi et al. (1997) for a model on the slope of the yield-curve around periods of large fiscal contractions.

[2] An incomplete list of papers on fiscal policy and interest rates includes Ardagna et al. (2004), Barro (1987), Barro and Sala-i-Martin (1990), Blanchard and Summers (1984), Canzoneri et al. (2002), Engen and Hubbard (2004), Evans (1985, 1987), Feldstein (1986), Hoelscher (1986), Laubach (2003), Miller and Russek (1991, 1996), Orr et al. (1995), Paesani et al. (2006), Perotti (2002), Plosser (1987), Reinhart and Sack (2000), and Tavares and Valkanov (2001). See, also, Bernoth et al. (2004), and Codogno et al. (2003) for contributions on the determinants of yield differentials in EU countries, and Barth et al. (1991) and Gale and Orszag (2002) for a comprehensive review of the literature.

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expansions in a panel of OECD countries from 1960 to 2002 and it focuses on changes in interest rates and stock market prices from before to after the periods of large changes in fiscal policy.[3] By following this empirical approach, the paper answers the following questions: (i) Do changes in the budget deficit affect financial markets? (ii) Do countries' initial levels of government deficit and public debt matter for the reaction of financial markets to fiscal shocks? (iii) Does the composition of the government budget affect financial variables? (iv) What role do macroeconomic conditions and other economic policies play? (v) Do financial markets react in anticipation of more/less favorable fiscal conditions in the future?

Results suggest that sharp changes in the stance of fiscal policy have the largest and most significant impact on long-term interest rates of government bonds. Interest rates of 10-year government bonds decrease, on average, by 124 basis points around episodes of fiscal consolidations and increase by 162 basis points during periods of loose fiscal policy. Fiscal consolidations and expansions also affect interest rates of 3-months Treasury bills and interest rates measuring borrowing costs for consumers and firms, but results are less robust to specifications' changes. Stock market prices increase when countries' fiscal position improves and decrease during periods of budget deteriorations. Finally, there is evidence that the effects of fiscal consolidations depend also on countries' initial fiscal position and on the nature of fiscal contractions. Fiscal adjustments that occur in country-years with high levels of government deficit, that are implemented by cutting government spending and that generate a permanent and substantial decrease in government debt are associated with larger reductions in interest rates and increases in stock market prices. Instead, around periods of fiscal expansions the interest rates of 10-year government bonds and of corporate bonds increase and stock market prices decrease regardless of countries' initial fiscal conditions.

The contribution of this paper to the existing literature goes beyond documenting the behavior of financial markets around episodes of large changes in the fiscal stance. The paper also provides additional evidence on the impact of fiscal policy shocks on financial variables by focusing not only on interest rates of governments' bonds (as most of the contributions in the literature do), but also on interest rates charged to consumers and firms and on stock market prices. Finally, this paper adds to the literature that investigates why some fiscal consolidations (expansions) have been associated with economic booms (recessions) even in the very short-run while others have not.

The rest of the paper is organized as follows. Section 2 presents the data and describes the methodology used to identify episodes of fiscal contractions and fiscal expansions. Section 3 investigates the relation between large fiscal contractions and expansions, interest rates and stock market prices, discusses the results and relates them to the implications of relevant theory. Section 4 extends the analysis of the benchmark models to account for countries' initial fiscal conditions, characteristics of fiscal consolidations and expansions, macroeconomic conditions, other economic policies, and future fiscal policy conditions. The last section concludes.

2. Data, methodological issues and descriptive findings

2.1. Data

The paper uses yearly data on OECD countries covering a maximum time span from 1960 to 2002. The countries included in the sample are: Australia, Austria, Belgium, Canada, Denmark, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Spain, Sweden, the United Kingdom, and the United States. All fiscal and macroeconomic data are from the OECD Economic Outlook (June 2003, No. 73). Data on financial variables are from various sources. Interest rates of 3-month Treasury bills, of 10-year government bonds and of corporate bonds and data on LIBOR are from Global Financial Data. Data on the discount rate are from the International Financial Statistics database, while stock market data are from Morgan Stanley. Finally, Milesi-Ferretti provided data on indicators of international integration of capital markets, while data on financial development are from the World Bank database on Financial Development and Structure.[4]

2.2. Methodological issues

This section addresses the following issues: The use of yearly data rather than of high frequency data; the choice of studying the behavior of financial variables around episodes of sharp changes in the fiscal stance rather than at the time of the announcements of the policy changes; the strategy used to identify such episodes.

In a rational world with no information asymmetries and credibility problems, financial markets should react when new information is released. One should observe movements of financial variables when governments announce fiscal stabilizations or fiscal expansions, not when they implement the policy changes if the latter had been expected. Ideally, one would like to have information on the exact announcement date and study the reaction of financial variables using high frequency data as, for example, Afonso and Strauch (2004) and Knot and de Haan (1999) do. But information on announcements of sharp fiscal policy changes are not easy to gather for a panel of 16 countries over a period of 40 years. Moreover, reliable data on fiscal variables are available only at a yearly frequency for such a large panel. For these reasons,

[3] The empirical approach is similar to the one used by Chari and Henry (2004) and by Henry (2000, 2002) to study the effect of financial liberalization and disinflation programs on stock markets.

[4] The database is available on line at http://www.worldbank.org/research/projects/finstructure/database.htm.