

## International tax arbitrage, tax evasion and interest parity conditions

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#### Summary

Using a finite-horizon general equilibrium model with uncertainty and money, we characterize situations where tax arbitrage opportunities may arise for international portfolio investors in an economy with heterogeneous capital income taxation when there is some scope to evade taxes on foreign capital income. We derive tax-modified uncovered interest parity conditions and forward rates similar to the no-tax ones, but augmented by tax-induced "risk-premium" terms; covered interest parity conditions remain unaffected by the introduction of capital income taxes, a consequence of our approach of bounding tax-based arbitrage without restricting arbitrage per se. © 2001 University of Venice

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#### 1. Introduction

The phenomenon of tax evasion, the "[...] deliberate non-compliance with the tax laws, by such means as failure to notify the tax administration of taxable assets or income activities giving rise to taxable income [...]" (UN, 1984), a non-trivial fiscal problem already in a domestic context,† seems to be particularly prevalent in an international environment. As further noted in UN (1984), "[...] tax evasion and avoidance have acquired a sizable international dimension with the expansion of international trade and investment and a dramatic increase in the ease of international

<sup>†</sup> For an overview see e.g. Tanzi and Shome (1994) and Cowell (1990).

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communications. More and more taxpayers have been exploiting fully to their own advantage the differences between countries as regards tax rates, legal concepts, standards of administration, reporting and enforcement and governmental attitudes towards the liberty and privacy of taxpayers and the confidentiality of financial and business transactions".

When there is scope for some agents to evade taxes on foreign capital income, an intrinsically related theoretical issue arises: it may create opportunities for international tax arbitrage, which has non-trivial implications for the characterization of international asset prices. Tax arbitrage opportunities, i.e. arbitrage opportunities resulting from different (effective) tax treatments across agents and/or assets, are well-known to give rise to existence problems in sufficiently heterogeneous asset economies with taxation unless the equilibrium is suitably bounded.† While international tax evasion has been addressed by several studies in the optimal tax literature‡, the frameworks used stress the role of physical capital and are highly aggregated, thus largely abstracting from these issues.

In the present paper, we use a finite-horizon general equilibrium model with uncertainty and money to characterize more explicitly situations where tax arbitrage opportunities may arise for international portfolio investors when there is scope for some agents to evade taxes on foreign capital income. Extending the Martingale methodology introduced to the tax area by Dybvig and Ross (1986) and Ross (1987), we obtain tax-modified uncovered interest parity conditions and forward rates similar to the ones derived for the no-tax case, but augmented by "risk-premium" terms featuring the conditional Martingale expectation and covariance of one-period-ahead exchange rates and tax factors. Covered interest parity conditions remain unaffected by the introduction of capital income taxes, a consequence of our approach of bounding tax-based arbitrage without restricting arbitrage per se: fully tax compliant tax-payers drive equilibrium pricing relationships in the bond markets, while partially tax compliant tax-evaders' bond holdings are at boundaries of their respective choice sets. This matches the important stylized fact that covered interest parity conditions approximately hold for the major traded foreign currencies. Taxevaders either lend abroad, evading taxes on the associated capital income, or borrow domestically, claiming deduction of their interest expenses; we rule out their exploiting tax arbitrage opportunities by doing both on the grounds that this would provoke sure detection of their tax evasion activities. Individual tax-payers are indifferent

 $<sup>\</sup>dagger$  For general treatments see Jones and Milne (1992) and Dammon and Green (1987).

<sup>‡</sup> See e.g. Schjelderup (1993), Tillmann (1992) and Giovannini (1988).

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