Stamp duty on share trading: what is the effect on UK listed companies?

The ability of companies to raise capital efficiently is one of the cornerstones of a competitive economy. Lower trading costs in equity markets translate into a lower cost of capital, more investment and greater international competitiveness. However, the UK government upholds a long-standing tradition of taxing trades in shares of listed companies, which, evidence suggests, is having an adverse effect on UK public companies

Stamp duty has been levied on share dealing in UK listed companies for many years. It currently stands at 0.5% of the value of share purchases, and is applied to purchases of UK listed companies, irrespective of the location of the trades.[1] Not all transactions are subject to stamp duty, however, with financial intermediaries generally being exempt from this tax.[2]

The impact of stamp duty is not limited to London's Square Mile. Increased trading costs directly contribute to a higher cost of capital, which in turn affects capital investment behaviour and international competitiveness. This article explores the impact of stamp duty on the real economy, focusing on the effect on the cost of capital of UK listed companies.

The effect on share prices and the cost of capital

Stamp duty is a direct cost to investors, increasing the wedge between gross and net returns. In order to compensate for stamp duty (and other transaction costs), companies are required to earn a higher gross rate of return. This in turn affects the cost of capital and level of share prices.

A simple example serves to illustrate the mechanics of the impact of transaction costs on share prices. Consider a stock that is traded once every year, with a per-transaction cost of 1p. Assume that the value of a share of the stock traded without any transaction costs is £1, and that the present value of the transaction costs (discounted at an 8% cost of capital, for example) is 13.5p.[3] In other words, the transaction costs reduce the stock price from £1 to £0.865. If the trading cost declines by 0.25p to 0.75p per transaction, the present value of

the costs of trading will decline to 10.1p, and the stock price will rise to £0.899, an increase of around 4%. Thus, as this example suggests, a seemingly small reduction in transaction costs can generate a substantial increase in stock prices.

The impact of stamp duty on the cost of capital across all UK listed companies can be estimated by considering the relationship between trading costs and the cost of equity capital, and the proportion of total trading costs that can be attributed to stamp duty.

An estimate of the elasticity of the cost of equity to trading costs is provided by Domowitz and Steil (2001), who estimate that the elasticity of the post-tax cost of equity to transaction costs is 0.14–0.17.[4] In other words, a 10% reduction in transaction costs would be likely to result in a 1.4–1.7% reduction in the nominal post-tax cost of equity.

Since stamp duty constitutes around 50% of total trading costs faced by institutional investors in the UK,[5] its abolition would be likely to result in a reduction in the nominal post-tax cost of equity of UK listed companies of 7–8.5%. Assuming that the current average nominal cost of equity of UK listed companies is 9.4%,[6] this is equivalent to a reduction in the post-tax cost of equity of 0.66–0.80 percentage points.

At the same time, given that the current average gearing level of UK listed companies is around 23.5%,[7] the abolition of stamp duty would be likely to result in a reduction in the nominal post-tax cost of capital of 5.4–6.5%. Assuming that the current nominal cost of capital of UK listed companies is 9.2%,[8] this is equivalent

to a reduction of 0.50–0.60 percentage points. Stamp duty therefore clearly has a significant impact on the cost of capital of UK listed companies.

Notably, even a reduction in the stamp duty rate would have a significant effect on the cost of capital of UK listed companies. The effect of a reduction would be similar to that of full abolition, although, in the case of the former, some of the benefits would be offset by the increase in trading activity that is subject to stamp duty. For example, a reduction in the stamp duty rate from 0.5% to 0.25% would be likely to deliver around 40% of benefits that are observed in the case of abolition.

Differences across industries

The impact of stamp duty on the cost of capital of UK listed companies is likely to differ across industries depending on their characteristics. Using a unique trading activity dataset obtained from the London Stock Exchange, these differences can be examined.

The analysis is conducted using a primary dataset relating to the velocity of trading, the proportion of trading volume that is subject to stamp duty, and other characteristics of FTSE All-share companies. The sample consists of 1,501 company-level annual observations covering FTSE All-share companies over the period 2004–06.[9]

Velocity subject to stamp duty

The cost of equity impact of stamp duty on a particular company depends on the amount of stamp duty that investors expect to pay when trading in shares of this company in the future. The impact therefore depends both on the velocity of trading[10] in shares of this company, and the proportion of trading that is subject to stamp duty.[11] Greater velocity of trading implies a greater cost of equity impact, and a greater proportion of trading subject to stamp duty also implies a greater impact on stamp duty. In other words, stocks for which investors

pursue high-velocity strategies, and where a high proportion of trading originates from investors subject to stamp duty (eg, pension funds, private investors) rather than exempt financial intermediaries, are likely to have the strongest impact of stamp duty.

Table 1 summarises the results at the industry level, and shows the value-weighted annual velocity of trading subject to stamp duty observed across different sectors over the period 2004–06. It suggests that there are significant differences across sectors, which implies that, other things being equal, the abolition of stamp duty would be likely to have different impacts across sectors.

The cost of equity impact

For the purposes of this analysis, it is assumed that the impact of the abolition of stamp duty on the cost of equity is proportional to the velocity of trading subject to stamp duty. In other words, the effect of stamp duty on the cost of equity in the sector with a velocity of trading subject to stamp duty that is 20% above that observed in the market as a whole would be 20% higher than the aggregate impact of stamp duty documented above.

Table 2 sets out the average impact of stamp duty across different sectors, based on evidence for the period 2004–06. The table suggests that there are significant differences in the likely effect of the abolition of stamp duty on companies across sectors. For example, abolition would be likely to reduce the cost of equity of technology companies by around 10–12%, while the cost of equity of oil and gas companies is likely to decrease by around 4%.

Liquidity and the cost of capital

Over and above the direct impact on the cost of capital documented above, stamp duty is also likely to have a negative effect on liquidity in secondary markets, further affecting the cost of capital of UK listed companies.

Table 1   Average annual velocity of trading subject to stamp duty, 2004–06

Industry	Annual velocity of trading subject to stamp duty	Industry	Annual velocity of trading subject to stamp duty
Technology	0.72	Utilities	0.50
Travel & leisure	0.69	Construction & materials	0.47
Retail	0.67	Telecommunications	0.44
Financial services	0.64	Insurance	0.43
Industrial goods & services	0.60	Personal & household goods	0.42
Automobiles & parts	0.60	Food & beverages	0.39
Media	0.57	Banks	0.30
Basic resources	0.56	Healthcare	0.30
Chemicals	0.54	Oil & gas	0.26

Source: London Stock Exchange, Datastream and Oxera calculations.

Table 2   The cost of equity impact across sectors (%)

Industry	Cost of equity impact	Industry	Cost of equity impact
Technology	10–12	Utilities	7–8
Travel & leisure	9–11	Construction & materials	6–8
Retail	9–11	Telecommunications	6–7
Financial services	9–10	Insurance	6–7
Industrial goods & services	8–10	Personal & household goods	6–7
Automobiles & parts	8–10	Food & beverages	5–6
Media	8–9	Banks	4–5
Basic resources	8	Healthcare	4–5
Chemicals	7–9	Oil & gas	4

Source: London Stock Exchange, Datastream and Oxera calculations.

Stamp duty and overall trading activity

Stamp duty has a potentially significant impact on the trading activity in UK listed equities—in particular, there is considerable evidence to show that transaction costs affect the *level* of trading activity. For example, Ericsson and Lindgren's 1992 analysis of 23 stock markets from 1980 to 1989 shows that elasticity of trading activity to transaction costs is –1.0, while Lindgren and Westlund's 1990 analysis of the Stockholm Stock Exchange from 1970 to 1988 finds the elasticity of trading activity to transaction costs to be –0.85 to –1.35.[12]

As noted above, data suggests that stamp duty constitutes around 50% of total trading costs faced by institutional investors in the UK. Therefore, given an elasticity of trading activity to transaction costs of –1.0, the abolition of stamp duty is likely to increase the trading volume that is subject to stamp duty by around 50%. Given that, in 2005, the proportion of trading subject to stamp duty was around 29%,[13] stamp duty abolition would be likely to increase total trading activity in UK listed companies by around 14.4%.

Therefore the abolition of stamp duty would be likely to result in a non-negligible increase in liquidity, further reducing the cost of capital of UK listed companies. Robust quantitative estimates of the link between liquidity and trading activity, however, are not available.

Cross-sectional changes in liquidity

There are different ways in which investors can gain access to equity markets. For example, they can invest directly in cash equity markets, or use derivatives instruments including equity futures, options and contracts for differences (CFDs). Over recent years, there has been a shift in the relative importance of the different channels, affecting current levels of liquidity and the way in which stamp duty affects liquidity in secondary markets.

From the perspective of the cost of raising capital, the key consideration is the nature of liquidity that is observed in the cash equity markets, particularly the level of trading activity and proportion of activity that is undertaken directly in cash equity markets, and indirectly through derivatives markets. The dataset of the velocity of trading and the proportion of trading that is subject to stamp duty enables the consideration of those trends in more detail.

The analysis suggests that changes in the way individuals trade appear to be affecting different-sized companies in different ways.

The velocity of trading in small companies (companies outside the FTSE 350) does not appear to have changed significantly over recent years compared with a marked increase in the velocity of trading in large and medium-sized companies (companies in the FTSE 350).

The proportion of trading that is subject to stamp duty (ie, trading related to direct activity in cash equity markets) in small companies appears to have declined slightly over recent years compared with a more significant decline in the proportion that is subject to stamp duty in large and medium-sized companies.

Overall, therefore, the main changes in trading activity and channels that are used to access equity markets are taking place in large and medium-sized stocks. This raises an interesting question about whether stamp duty could have played a role in these changes. In particular, these patterns are consistent with the prediction that stamp duty is likely to have a stronger effect on the relative attractiveness of the cash equity and CFD route for large capitalisation (ie, higher velocity) stocks.[14]

At the same time, different levels of overall activity, and the proportion of activity that is carried out directly in

cash equity markets between large and small stocks, also imply that the effect of stamp duty abolition on liquidity is likely to vary according to the size of stocks. However, further analysis would be required to explore these questions in more detail.

Conclusions

Stamp duty on share transactions affects the everyday activities of UK listed companies. The analysis set out in this article shows that the abolition of stamp duty would be likely to result in a reduction in the nominal post-tax cost of equity of UK listed companies of, on average, 7–8.5%, or equivalently 0.66–0.80 percentage points. Moreover, the effect could be considerably greater for some companies. This evidence once again demonstrates the link between capital markets and the activities of companies, and therefore the importance of considering the effects that regulatory or any other changes in capital markets would be likely to have on the wider economy.

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[1] A higher rate (1.5%) applies when UK securities are converted into depository receipts, and when UK equities are transferred to, or issued into, a depository receipt facility. The charge of 1.5% is intended to represent a higher 'entry charge' to compensate for the fact that subsequent dealings in the depository receipts themselves (which represent the underlying share held by the depository receipt issuer) are not subject to the stamp duty charge. There is normally no stamp duty charge on the re-conversion of depository receipts into the underlying UK equities.

[2] Since 1997, registered financial intermediaries trading at any UK-recognised exchange have been exempt from stamp duty. Therefore, activities such as market-making and hedging of sold derivatives contracts by financial intermediaries are exempt.

[3] The present value (PV) of the trading costs is calculated as the discounted value of perpetual annual expected transaction costs:
$PV = \sum_{i}^{\infty} \{E[TC_i]/(1+r)^i\}$ where i is the period, TC is transaction costs, and r is the cost of capital.

[4] Domowitz, I. and Steil, B. (2001), 'Innovation in Equity Trading Systems: The Impact on Transaction Costs and Cost Of Capital', in B. Steil, D. Victor and R. Nelson (eds.) (2002), *Technological Innovation and Economic Performance*, Princeton University Press.

[5] Based on Elkins & McSherry data.

[6] Based on the average historical equity returns documented in Barclays (2006), 'Equity Gilt Study 2006', February, 51st edition, Barclays Capital.

[7] Gearing is estimated as a ratio of total debt to the sum of total debt and book value of equity. Source: Datastream and Oxera calculations.

[8] For illustrative purposes, the nominal cost of capital is calculated based on the average historical equity and debt returns documented in Barclays (2006), gearing of 23.5% (Datastream and Oxera calculations), and assuming a debt premium of 1%.

[9] The industry analysis is conducted using a Datastream Level 3 industry classification.

[10] Number of shares traded/number of shares outstanding.

[11] As a result of the intermediary tax relief, only part of the trading activity in UK listed companies is subject to stamp duty.

[12] Ericsson, J. and Lindgren, R. (1992), 'Transaction Taxes and Trading Volume on Stock Exchanges: An International Comparison', Stockholm School of Economics Working Paper, No. 39; and Lindgren, R. and Westlund, A. (1990), 'How Did Transaction Costs on the Stockholm Stock Exchange Influence Trade and Price Volatility?', *Skandinaviska Enskilda Banken Quarterly Review*, **2**, 30–5.

[13] Source: HM Revenue and Customs, Datastream and Oxera calculations.

[14] For example, with respect to CFDs, there is a trade-off between stamp duty (equities) and interest payments (CFDs). Since stamp duty payments vary with trading velocity, while interest payments are largely independent of trading velocity, switching to CFDs is more attractive for high-velocity strategies.

If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email d_holt@oxera.com

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