

The value of franking credit balances

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Introduction

- Franking credit balances:
 - Are they of value to the marginal shareholder?
 - Implications for regulators and for investors
- Sample: over 3000 firm-year observations drawn from the period, 2001 to 2006
- Unbalanced fixed effects panel data analysis with robust standard errors.
Results:
 - Levels specification - franking credits appear valuable to shareholders
 - Change in levels specification - franking credits appear valuable to shareholders in smaller companies though not for shareholders in companies falling in the top 100 by book value of assets.
 - Little evidence to support the argument that foreign investor aversion to dividends explains the build up in franking credit balances

Franking credit balances

Effect of imputation for a resident shareholder

	<i>Unfranked Dividends</i>	<i>Partially franked dividends</i>	<i>Fully franked dividends</i>
Gamma	0	0.5	1
Dividends Perpetuity amount	20	20	20
Corporate tax paid perpetuity amount	6	6	6
Discount rate	0.05	0.05	0.05
Dividend component of price	400	400	400
Franking credit component of price	0	60	120
Final share price	400	460	520

Literature

- Impact of imputation system and the tightening of tax regulations from 1 July 1997 on franking credit schemes (Cannavan *et al.* 2004).
- Ex date returns (Walker & Partington, 1999)
- Portfolio return effects (Faff *et al.*, 2001)
- Capital structure effects (Twite, 2001 and Pattenden, 2006)
- Asset pricing issues:
 - Model asset pricing effects of imputation credits (Monkhouse, 1993, Officer, 1994, Boyle, 1996, Monkhouse, 1996, Wood, 1997, Lally & van Zijl, 2003 and Dempsey & Partington, 2008)
 - Are franking credits of value to the marginal shareholder
 - franking credits have no value post 1997 tax changes (Gray & Hall, 2006 and Cannavan *et al.* 2004)
 - franking credits are valuable (Lally, 2008 and Truong & Partington, 2008)

Hypothesis development

- The value of equity to a resident shareholder in an imputation tax system can be written as the sum of the present value of dividend stream plus the present value of the franking credits. Following Officer (1994)

$$S = \frac{D_s}{k} + \frac{gT(X_o - X_D)}{k}$$

S = share price

D_s = Dividend payment

g = Franking credit proportion

T = Corporate tax rate

X_o = operating cash flows

X_D = interest payment

k = discount rate

Hypothesis development

- Share value, to a resident shareholder, is positively correlated with both dividends and the value of franking credits if franking credits are valuable.
- Hypothesis 1
 - Null: Value of franking credits is uncorrelated with share value
 - Alternate: Share value is increasing in the level of franking credits
- Non-resident shareholders may not value franking credits where they face a classical tax system (preference for capital gains over dividends). Non-resident shareholders prefer large, liquid firms with diverse shareholding and a foreign focus. Thus, these firms will accumulate franking credit balances over time if non-resident shareholders control dividend policy.
- Hypothesis 2
 - Null: Franking credit balance is uncorrelated with firm characteristics
 - Alternate: Franking credit balance is increasing in liquidity, size, foreign focus and shareholder diversification

Sample characteristics

Growth in franking credit balances

<i>Year</i>	<i>Companies With franking credit balances</i>	<i>Total franking credit balance (\$ Millions)</i>	<i>Average franking credit balance (\$ Millions)</i>
2001	450	4937	11
2002	460	5457	12
2003	510	11084	22
2004	535	12783	24
2005	576	15383	27
2006	540	16995	31
<i>Total</i>	3071	66638	
<i>Average</i>	512	11106	21

Sample characteristics

Sample counts - full sample

<i>Year</i>	<i>Number of Companies in initial sample</i>	<i>Companies With franking credit balances</i>	<i>Companies paying dividends</i>	<i>Companies with buybacks</i>
2001	1250	450	320	17
2002	1251	460	310	31
2003	1328	510	339	37
2004	1372	535	378	29
2005	1473	576	422	20
2006	1536	540	431	10
<i>Total</i>	8210	3071	2200	144
<i>Average</i>	1368	512	367	24

Models used in tests of hypothesis 1

- Tests based on:
 - Share value using the natural log of market value of equity to the book value of equity

$$LME_{it} = a_{0i} + a_{0t} + a_1 LDIV_{S,it} + a_2 LFCB_{it} + a_3 SIZE_{it} + a_4 SHRCONC_{it} + a_5 INTFOCUS_{it} + e_{it}$$

- Share value using the change in the natural log of market value of equity

$$dLME_{it} = b_{0i} + b_{0t} + b_1 dLDIV_{S,it} + b_2 dLFCB_{it} + b_3 SIZE_{it} + b_4 SHRCONC_{it} + b_5 INTFOCUS_{it} + e_{it}$$

Fixed effects panel (Natural log of Market value of equity)

	<i>Full sample</i>	<i>Largest 100 firms</i>	<i>Not one of the largest 100 firms</i>
LDIV	0.0183+ (1.89)	0.0245 (1.14)	0.0178+ (1.68)
LFCB	0.0224* (3.73)	0.0238* (2.18)	0.0238* (3.28)
SIZE	1.0172* (40.94)	0.9785* (18.77)	1.0244* (36.17)
SHRCONC	0.1105 (1.16)	0.0250 (0.12)	0.1552 (1.42)
INTFOCUS	0.0432 (1.02)	-0.0047 (-0.09)	0.0692 (1.14)
Observations	2172	434	1738
Groups	633	115	539
F-test	493.13*	107.68*	390.47*

Fixed effects panel (Change in natural log of market value of equity)

	<i>Full sample</i>	<i>Largest 100 firms</i>	<i>Not one of the largest 100 firms</i>
dDIV	0.0014 (0.10)	-0.0165 (-0.70)	0.0014 (0.09)
dFCB	0.0371* (3.72)	0.0090 (0.69)	0.0427* (3.49)
SIZE	0.2960* (8.35)	0.2812* (3.76)	0.3068* (7.73)
SHRCONC	0.2631 (1.37)	0.5452* (2.74)	0.2759 (1.19)
INTFOCUS	-0.1901* (-2.32)	-0.0201 (-0.18)	-0.3310* (-2.60)
Observations	1490	323	1167
Groups	465	100	383
F-test	18.33*	4.17*	16.44*

Models used in tests of hypothesis 2

- Tests based on:

- Share value using the natural log of market value of equity to the book value of equity

$$LFCB_{it} = a_{0i} + a_{0t} + a_1 LDIV_{S,it} + a_2 SIZE_{it} + a_3 SHRCONC_{it} + a_4 INTFOCUS_{it} + e_{it}$$

- Share value using the change in the natural log of market value of equity

$$dLFCB_{it} = b_{0i} + b_{0t} + b_1 dLDIV_{S,it} + b_2 SIZE_{it} + b_3 SHRCONC_{it} + b_4 INTFOCUS_{it} + e_{it}$$

Fixed effects panel (Natural log of franking credit balance)

	<i>Full sample</i>	<i>Largest 100 firms</i>	<i>Not one of the largest 100 firms</i>
LDIV	0.0520 (1.60)	0.1323 (0.79)	0.0348 (1.07)
SIZE	0.8720* (11.50)	1.3725* (4.15)	0.7989* (10.78)
SHRCONC	0.0742 (0.22)	-0.0628 (-0.07)	-0.1271 (-0.34)
INTFOCUS	-0.0147 (-0.07)	-0.0798 (-0.28)	0.0669 (0.25)
Observations	2172	434	1738
Groups	633	115	539
F-test	39.42*	5.07*	37.00*

Fixed effects panel

(Change in natural log of franking credit balance)

	<i>Full sample</i>	<i>Largest 100 firms</i>	<i>Not one of the largest 100 firms</i>
dLDIV	0.0138 (0.44)	0.0523 (0.85)	0.0028 (0.08)
SIZE	-0.1331+ (-1.61)	-0.5975* (-2.83)	-0.0097 (-0.10)
SHRCONC	-0.0637 (-0.17)	-1.5624+ (-1.78)	0.5058 (1.19)
INTFOCUS	-0.0658 (-0.28)	0.0800 (0.23)	-0.1427 (-0.42)
Observations	1508	324	1184
Groups	468	100	386
F-test	0.76	2.84*	0.44

Conclusions

- Franking credits are valuable to marginal shareholders in smaller firms though the results for larger firms in the top 100 are sensitive to model specification – Consistent with:
 - non-resident shareholders = the marginal shareholders in the larger firms
 - resident shareholders = the marginal shareholders in the smaller firms
- Little evidence to support the argument that firms most attractive to foreign investors exhibit greater franking credit balances. Thus while non-resident shareholders might be the marginal shareholders for pricing they do not appear to control dividend policy
- Need further research into this question as it has important policy implications
 - regulators use pricing models based on the assumption that franking credits are valuable - this assumption may be valid for small firms but not for large firms.
 - practitioners commonly assume that franking credits have no value to the marginal investor – this is inconsistent for the smaller firms that operate in the Australian market