The Australian Dividend Imputation System and Corporate Tax Avoidance

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About the Study

Whether and how the Australian dividend imputation system alleviates corporate tax avoidance of Australian listed companies
## Dividend Imputation System

<table>
<thead>
<tr>
<th>Company:</th>
<th>Profit:</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Tax):</td>
<td>(0.3P)</td>
<td></td>
</tr>
<tr>
<td>After-tax profit:</td>
<td>0.7P</td>
<td></td>
</tr>
</tbody>
</table>

**Franked Dividends**

*(carry franking credits 0.3P)*

<table>
<thead>
<tr>
<th>Shareholders’ Tax on Dividends:</th>
<th>Dividends:</th>
<th>0.7P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franking credits:</td>
<td>0.3P</td>
<td></td>
</tr>
<tr>
<td>× Marginal Tax Rate:</td>
<td>P × MTR</td>
<td></td>
</tr>
<tr>
<td>(Franking credits):</td>
<td>(0.3P)</td>
<td></td>
</tr>
</tbody>
</table>

**Total Taxes:**

\[
P \times MTR - 0.3P\]

\[
= \ P \times MTR
\]
Dividend Imputation System

• Foreign shareholders
  - Portfolio shareholders: Pay income tax on dividend income; cannot claim franking credits as tax offset
  - Non-portfolio shareholders: Foreign (home country) tax on the non-portfolio dividends is likely to be exempt or can be deferred indefinitely

• Foreign operations
  Foreign income taxes paid cannot be attached to dividends as franking credits
Dividend Imputation System

- Corporate income tax reduces the after-tax returns of shareholders, if
  - No franked distributions → franking credits (corporate income tax payments) not passed to shareholders
  - Foreign ownership → foreign shareholders cannot claim franking credit tax offset
  - Foreign operations → pay foreign income taxes which cannot be passed to shareholders as franking credits

Undermine the corporate tax avoidance-reducing effect of the dividend imputation system
Dividend Imputation System & Corporate Tax Avoidance

- Franked Dividend Distributions
- Foreign Ownership
- Foreign Operations

Corporate Tax Avoidance

? → ? → ?
Hypotheses

H1: Ceteris paribus, companies with higher franked dividend distributions engage in less corporate tax avoidance than do companies with lower franked dividend distributions.
Hypotheses

**H2:** Ceteris paribus, companies with greater foreign ownership engage in more corporate tax avoidance than do companies with lower foreign ownership.
Hypotheses

**H3A:** Ceteris paribus, companies with more extensive foreign operations have lower tax liabilities than do companies with lesser foreign operations.

**H3B:** Ceteris paribus, companies with more extensive foreign operations have similar tax liabilities to companies with lesser foreign operations.

Foreign Operations

Corporate Tax Avoidance
Research Design (Ordinary Least Square Regression)

\[
\text{CETR} = \alpha + \beta_1 \text{FDD} + \beta_2 \text{FOW} + \beta_3 \text{FOP} + \beta_4 \text{SIZE} + \beta_{5-22} \text{IND} + \beta_{23-25} \text{YEAR} + \epsilon
\]

CETR: current effective tax rate = \text{Current income tax expense} + \text{Tax adjustment} - \text{Royalties and resource rent tax} \over \text{Pre-tax accounting profit before the share of associates' profit or loss}

FDD: franked dividend distribution = \text{Interim dividend} \times \text{Franking percentage} + \text{Final dividend} \times \text{Franking percentage} + \text{Special dividend} \times \text{Franking percentage} \over \text{After-tax accounting profit excluding the amount attributable to non-controlling interest}

FOW: foreign ownership measure = \text{Percentage of foreign shareholdings} \over \text{Total percentage of the top 20 shareholdings}

FOP: foreign operations measure = \text{Segment (non-current) assets located in foreign countries} \over \text{Total segment (non-current) assets}

SIZE: firm size = \ln (\text{Sales revenue})
Research Design

• Sample
  – Australian listed companies
  – Sample period: 2009 – 2012
  – Data source: DatAnalysis Premium, Osiris (ownership)
Sample Selection

• Companies listed on Australian Securities Exchange (obtained from DatAnalysis Premium)

• Excluding:
  – foreign incorporated companies listed on Australian Securities Exchange
  – financial and utility companies (regulated industries)
  – trusts and stapled securities (flow-through entities)
  – loss-making companies (non-positive profit, non-positive income tax expense)
  – companies with CETR > 1 or CETR < 0 (extreme values), or with CETR significantly affected by utilisation of prior tax losses or changes in tax rates or tax laws
  – companies with FDD > 1 or FDD < 0 (extreme values)

• Sample size for regression analyses: 888 firm-year observations
## Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>CETR</td>
<td>0.2526</td>
<td>0.2712</td>
<td>0.1363</td>
<td>0</td>
<td>0.9838</td>
<td>0.5871</td>
<td>6.1145</td>
</tr>
<tr>
<td>FDD</td>
<td>0.3990</td>
<td>0.4485</td>
<td>0.3165</td>
<td>0</td>
<td>0.9998</td>
<td>0.0287</td>
<td>1.6741</td>
</tr>
<tr>
<td>FOW</td>
<td>0.0535</td>
<td>0</td>
<td>0.1597</td>
<td>0</td>
<td>0.9831</td>
<td>3.5664</td>
<td>15.5548</td>
</tr>
<tr>
<td>FOP</td>
<td>0.1340</td>
<td>0</td>
<td>0.2764</td>
<td>0</td>
<td>1</td>
<td>2.1687</td>
<td>6.4308</td>
</tr>
<tr>
<td>SIZE</td>
<td>18.9670</td>
<td>18.8101</td>
<td>1.8341</td>
<td>11.4721</td>
<td>24.7783</td>
<td>0.0857</td>
<td>4.0189</td>
</tr>
</tbody>
</table>
Regression Results

\[ \text{CETR} = \alpha + \beta_1 \text{FDD} + \beta_2 \text{FOW} + \beta_3 \text{FOP} + \beta_4 \text{SIZE} + \beta_{5-22} \text{IND} + \beta_{23-25} \text{YEAR} + \varepsilon \]

| Variables | Coef.         | Std. Err. | t     | P > |t| |
|-----------|---------------|-----------|-------|-----|---|
| FDD       | 0.1366882***  | 0.0131616 | 10.39 | 0.000 |
| FOW       | -0.0473342**  | 0.0234981 | -2.01 | 0.044 |
| FOP       | 0.0038178     | 0.0141473 | 0.27  | 0.787 |
| SIZE      | 0.00827***    | 0.0021456 | 3.85  | 0.000 |
| Year 2010 | -0.0296206*** | 0.0095818 | -3.09 | 0.002 |
| Year 2011 | -0.0199538**  | 0.0098808 | -2.02 | 0.044 |
| Year 2012 | -0.0299622*** | 0.0098378 | -3.05 | 0.002 |
| Constant  | 0.0378584     | 0.0429867 | 0.88  | 0.379 |

‘inward profit shifting’
Additional Analysis (1)

• Interaction effect
  – Examine whether FDD and FOW interact with each other to shape corporate tax avoidance behaviours

\[ \text{CETR} = \alpha + \beta_1 \text{FDD} + \beta_2 \text{FOW} + \beta_3 \text{FDD*FOW} + \beta_4 \text{SIZE} + \beta_5 - \beta_22 \text{IND} + \beta_23 - \beta_25 \text{YEAR} + \varepsilon \]
Additional Analysis (1)

• Interaction effect
  – Regression results

| Variables  | Coef.       | Std. Err. | t      | P > |t| |
|------------|-------------|-----------|--------|-----|---|
| FDD        | 0.1297038***| 0.013281  | 9.77   | 0.000 | |
| FOW        | -0.0734745***| 0.0272487| -2.70  | 0.007 | |
| FDD*FOW    | 0.1420422*  | 0.076475  | 1.86   | 0.064 | |
| SIZE       | 0.008368*** | 0.0021151 | 3.96   | 0.000 | |
| Year 2010  | -0.0292473***| 0.0095641| -3.06  | 0.002 | |
| Year 2011  | -0.0199171** | 0.0098594| -2.02  | 0.044 | |
| Year 2012  | -0.0286638***| 0.009832 | -2.92  | 0.004 | |
| Constant   | 0.038366    | 0.0428465 | 0.90   | 0.371 | |
Additional Analysis (2)

• Inward profit shifting conjecture
  – Provide stronger support for the ‘inward profit shifting’ conjecture
  – Examine whether foreign subsidiary locations affect CETR
    • Without shifting foreign profits to Australia
      ➢ Companies with subsidiaries in foreign low-tax countries (no subsidiary in foreign high-tax countries) → lower CETR
      ➢ Companies with subsidiaries in foreign high-tax countries (no subsidiary in foreign low-tax countries) → higher CETR
  – Sample reduced to include only firm-year observations with FOW=0
Additional Analysis (2)

• Inward profit shifting conjecture

\[ \text{CETR} = \alpha + \beta_1 \text{FDD} + \beta_2 \text{LOW} + \beta_3 \text{HIGH} + \beta_4 \text{LOW} \times \text{HIGH} + \beta_5 \text{SIZE} + \beta_6 -23 \text{IND} + \beta_6 -26 \text{YEAR} + \epsilon \]

• **LOW**: takes the value of 1 if the firm-year observation has at least one subsidiary incorporated in a low-tax country (statutory corporate tax rate not higher than 20% in the particular year)

• **HIGH**: takes the value of 1 if the firm-year observation has at least one subsidiary incorporated in a high-tax country (statutory corporate tax rate not lower than 35% in the particular year)
Additional Analysis (2)

- Inward profit shifting conjecture
  - Regression results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>t</th>
<th>P &gt;</th>
<th>t</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FDD</td>
<td>0.1225628***</td>
<td>0.0147211</td>
<td>8.33</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOW</td>
<td>0.0072191</td>
<td>0.011251</td>
<td>0.64</td>
<td>0.521</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>-0.0079877</td>
<td>0.0143897</td>
<td>-0.56</td>
<td>0.579</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOW*HIGH</td>
<td>0.0203705</td>
<td>0.0196679</td>
<td>1.04</td>
<td>0.301</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.0033873</td>
<td>0.0026361</td>
<td>1.28</td>
<td>0.199</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2010</td>
<td>-0.0326359***</td>
<td>0.0108003</td>
<td>-3.02</td>
<td>0.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2011</td>
<td>-0.0201143*</td>
<td>0.0109994</td>
<td>-1.83</td>
<td>0.068</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2012</td>
<td>-0.0333831***</td>
<td>0.0109464</td>
<td>-3.05</td>
<td>0.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.1373469***</td>
<td>0.0519328</td>
<td>2.64</td>
<td>0.008</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary

- Investigate the corporate tax avoidance-reducing effect of the Australian dividend imputation system on profit-making listed companies

- Findings:
  - Companies distributing more franked dividends have higher CETR (less corporate tax avoidance)
  - Companies with greater foreign ownership have lower CETR (greater tax avoidance)
  - No significant relation between foreign operations and CETR is found
Summary

• Findings
  – When a company with foreign ownership pays more franked dividends to meet the demands of its Australian shareholders, it tends to engage in less corporate tax avoidance
  – Different locations of foreign subsidiaries (low-tax countries, or high-tax countries, or both) do not contribute to variations in CETR (corporate tax avoidance) → supporting ‘inward profit shifting’ conjecture
Implications

• The future of the dividend imputation system in Australia
  – The system has been adopted for three decades
  – Abolishing the system?
    • The system introduces biases against
      
    \[\begin{align*}
    \text{domestic investors investing abroad} \\
    \text{domestic companies acquiring investments overseas} \\
    \text{foreign investments into Australia}
    \end{align*}\]
Implications

- The future of the dividend imputation system in Australia
  - Negative impact of abolishing the system
    - Decreases in dividend payouts $\rightarrow$ less disciplined use of equity capital
    - Increases in difficulty in obtaining capital for domestic companies
    - Increases in corporate tax avoidance by domestic listed companies
  - Improving the system
    - Current system not interact well with foreign ownership
    - Extending the tax benefits to foreign shareholders?
    - Extending the franking credits to include foreign taxes paid?
Implications

• A global dividend imputation system
  – Allow both domestic and foreign shareholders to claim the franking credit tax offset for corporate income taxes paid on the underlying profits, regardless of the source countries of the profits
    → maximise the corporate tax avoidance-reducing effect
  
  – Solve the problems of the current (national-level) system
    • Foreign shareholders can claim the franking credit tax offset in their home countries
    • Foreign taxes paid can be passed to shareholders as franking credits
    → No more discrimination against foreign investors and foreign investment
Implications

• A global dividend imputation system
  – How to achieve?
    • A global central clearing house
      – Originally proposed by Commission of the European Communities in 1975 to harmonise corporate taxes and dividend relief in the European Economic Community
      – Feasible nowadays
        - advancement in technology
        - close coordination and cooperation between countries (OECD/G20 members)
        - potential organisation responsible for administering the arrangement (e.g. OECD, UN, World Bank, or a standalone International Tax Organisation)
Implications

- **A global dividend imputation system**
  - A global central clearing house
    - Responsible for collecting franking credits and settling the franking credit balances of all countries

**Diagram:**
- **Australian Company:**
  - Pays a dividend + a voucher stating amount of tax credit
  - Pays tax

- **Foreign Shareholder:**
  - Collects the tax credit stated on voucher

- **Foreign Tax Authority:**
  - Submits tax return with voucher to claim tax offset

- **Clearing House:**
  - Collects the tax credit stated on voucher

**Flowchart:**
1. Australian Company pays a dividend + a voucher stating amount of tax credit.
2. Australian Company pays tax.
3. Foreign Shareholder collects the tax credit stated on voucher.
4. Foreign Shareholder submits tax return with voucher to claim tax offset.
5. Clearing House collects the tax credit stated on voucher.
6. Australian Taxation Office pays tax.
Implications

- A global dividend imputation system
  - Feasible
  - Corporate tax avoidance-reducing effect
  ➔ complementary to the international corporate tax avoidance counter-measures in the OECD BEPS Action Plan