Tax Loss Carryforwards, Political Connections and Firm Investment Efficiency: Evidence from Malaysia

Kang Wan Tan[a]
Mei Foong Wong[b]
Tunku Abdul Rahman University of Management and Technology

Abstract: This study examines how tax loss carryforwards (TLCFs) affect firm investment efficiency and whether political connections moderate this relationship. Using firm-level data from Malaysia and ordinary least squares estimation, the results show that longer TLCF shelter periods are associated with higher investment efficiency. However, this positive effect is significantly attenuated among politically connected firms (PCFs). Further analysis reveals that TLCFs mitigate underinvestment but do not significantly affect overinvestment, regardless of political connections. This study contributes to the literature by providing novel evidence on the real effects of tax-based incentives in an emerging market setting. It further highlights how political connections distort the effectiveness of such incentives and underscores the interaction between tax policy and political economy in shaping corporate investment outcomes.

Keywords: Investment efficiency, Malaysia, political connections, tax loss carryforwards
JEL classification: G3, H25, H32, P16

1. Introduction

A notable asymmetry exists in the global treatment of gains and losses within tax systems. Taxes are levied on positive income, but firms do not typically receive unconditional refunds on losses. Instead, tax losses can theoretically be carried back to offset liabilities from previous years or carried forward to reduce taxable income in future periods (Auerbach, 1986; Cooper & Knittel, 2010).[1] In practice, TLCFs serve to mitigate the tax liabilities of current company income, promote new investment opportunities, and influence firm investment decisions (De Waegenaere et al., 2003; Heitzman & Lester, 2021; Sarkar, 2014). As future income derived from incremental investments is tax-exempted, TLCFs could generate an investment-enhancing effect (Max et al., 2025).

[a] Faculty of Accountancy, Finance & Business, Tunku Abdul Rahman University of Management and Technology, Jalan Genting Kelang, 53300, Setapak, Kuala Lumpur. Email: kangwan93tan@gmail.com
[b] Faculty of Accountancy, Finance & Business, Tunku Abdul Rahman University of Management and Technology, Jalan Genting Kelang, 53300, Setapak, Kuala Lumpur. Email: wongmf@tarc.edu.my (Corresponding author)

[1] Carrying back losses is not universally available across all nations. There are limitations to the number of years permitted for such a practice (Cooper & Knittel, 2010). In Malaysia, no provisions exist to carry back losses to previous years of assessment (PwC, 2024). Unutilised losses can only be carried forward for up to ten consecutive years, after which they expire if not offset against taxable income.

Article Info: *Received* 9 July 2025; *Revised* 29 April 2026; *Accepted* 5 May 2026
https://doi.org/10.22452/MJES.vol63no1.5

While past empirical works have assessed the tax asymmetry impact on investment incentives, the TLCF-firm investment efficiency relationship remains relatively underexamined (Armstrong et al., 2019; Bethmann et al., 2018; Cooper & Knittel, 2010; Hanlon & Heitzman, 2010; Langenmayr & Lester, 2018; Max et al., 2025). This relationship warranted closer attention, particularly given the increasing prevalence of loss-making firms in modern economies. The economic downturn caused by the COVID-19 pandemic further heightened the importance of TLCFs by prompting revisions to their utilisation rules, thereby underscoring their relevance for economic policy.[2] A deeper understanding of how loss-making firms adjust their investment decisions in the presence of TLCFs can provide valuable insights for policymakers. Specifically, such insights can inform the design of more effective, targeted investment incentives during economic downturns, particularly when the utility of carryback provisions has been depleted. Therefore, exploring the role of TLCFs in promoting investment efficiency can inform more effective government responses aimed at stimulating economic recovery.

Meanwhile, corporate taxation practices are closely intertwined with the interests and policies of various stakeholders, particularly those with political connections and vested interests in the firm (Abdul Wahab et al., 2017; Tsai et al., 2021). The complex interplay between political ties and corporate taxation influences corporate policies and investment decisions, often reflecting rent-seeking behaviours and objectives that deviate from pure shareholder wealth maximisation. For instance, PCFs may engage in tax avoidance not only to preserve cash for future investment opportunities but also to finance government-linked social expenditures (Tee et al., 2022; Xiang et al., 2023). In the literature, increased corporate investment among PCFs has been interpreted as a strategic effort to enhance political capital and secure ongoing support from ruling elites (Ghazali et al., 2022; Phan et al., 2020). Managers in these firms often have stronger incentives to overinvest, particularly when higher free cash flows arise from government subsidies and politicians' bargaining influence. In this context, political connections have been associated with reduced investment efficiency.

Despite growing interest in the economic significance of TLCFs, limited research has explored how political connections influence their role in shaping firm investment behaviour. It remains unclear whether TLCFs improve or impair investment efficiency in PCFs. Given that PCFs often face weaker governance and may prioritise political or strategic objectives over value-maximising investments, political connections could either reinforce or undermine the efficiency-enhancing effect of TLCFs. Therefore, this study also addressed the question of whether the presence of political connections weakens the relationship between TLCFs and investment efficiency.

A sample of 512 Malaysian publicly listed firms spanning between 2001 and 2017 was employed to determine whether political connections weaken the TLCFs' impact on investment efficiency. Three novel features of Malaysian firms render them ideal for the current analyses. First, a large number of Malaysian organisations have encountered significant financial difficulties in the past decades due to the negative effects resulting

[2] To support post-Covid-19 economic recovery and stimulate long-term growth, the Malaysian government extended the carry-forward period for unutilised tax losses to up to 20 years, particularly for industries characterised by longer investment gestation periods (PwC, 2022).

from local currency depreciation and political instability (Hadian & Adaoglu, 2020; Wong & Hooy, 2021). This feature denotes the large amount of TLCF stocks carried forward by Malaysian firms. Second, Malaysia ranks third in the latest crony-capitalism index (*The Economist*, 2023), demonstrating the significant number of well-established PCFs in Malaysia. Third, the Malaysian government has actively engaged in the capital market following the implementation of the New Economic Policy (NEP) in 1970 (Gomez, 2003). In this regard, government-linked companies are a primary catalyst for crony capitalism and political patronage networks in the country. The NEP was replaced with alternative policies that uphold the government's involvement in the national economy (Gomez et al., 2017).

This study made several important contributions. First, it provided empirical evidence that longer TLCF shelter periods were associated with improved investment efficiency. This finding suggested that TLCFs not only served as a tax relief mechanism but also enhanced capital allocation quality among loss-making firms. While prior research primarily focused on the relationship between TLCFs and the volume of corporate investment (Bethmann et al., 2018; Ljungqvist et al., 2017; Max et al., 2025; Sarkar, 2014), limited attention had been given to whether these provisions promoted more efficient investment behaviour. By addressing this oversight in the context of an emerging economy, the study filled a critical lacuna in the literature concerning the impact of TLCFs on investment outcomes.

Furthermore, unlike Dreßler and Overesch (2013) and Edgerton (2010), who relied on binary indicators to proxy for TLCFs and reported a negative link with investment, this study employed a continuous TLCF-to-income ratio. This refined metric captured the economic significance of TLCF relative to firm performance, allowing for a more precise analysis. The results revealed a positive and statistically significant relationship between TLCFs and investment efficiency, in line with theoretical predictions under neoclassical investment theory. This refined measurement approach reduced the risk of attenuation bias and offered new empirical insights into the role of TLCFs in shaping firm-level investment decisions within politically embedded and institutionally evolving market.

Second, this study provided novel insights into the moderating role of political connections in the TLCF-investment efficiency relationship. The results showed that PCFs benefited less from TLCFs in terms of investment efficiency compared to non-PCFs. This finding suggested that political influence may distort resource allocation and weaken the intended effects of tax-based incentives. While prior research had well established the link between political connections and investment inefficiency (Chen et al., 2018; Du et al., 2018; Ghazali et al., 2022; Tan et al., 2018), the extent to which such connections constrained the effectiveness of tax provisions like TLCFs remained underexplored. This study addressed this gap by showing how political affiliations may diminish the policy effectiveness of tax incentives aimed at stimulating productive investment.

Finally, this study examined whether TLCFs mitigated investment inefficiencies, specifically underinvestment and overinvestment. The analysis revealed that TLCFs were effective in reducing underinvestment but had no significant effect on overinvestment. This distinction highlighted the targeted impact of TLCFs, particularly in easing financing constraints among resource-limited firms. Importantly, this result held across both politically connected and non-connected firms, reinforcing the broader economic value

of TLCFs as a policy tool to address underinvestment during economic downturns. These findings complemented prior studies (Bethmann et al., 2018; Ljungqvist et al., 2017; Max et al., 2025; Sarkar, 2014) by highlighting that, regardless of political connections, TLCFs played a key role in alleviating the underinvestment problem.

The remaining sections are organised as follows: Section 2 details the literature review and hypothesis development, Section 3 highlights the study data and research design, Section 4 denotes the empirical results, and Section 5 concludes the study.

2. Literature Review and Hypotheses Development

2.1 Tax Loss Carryforwards and Firm Investment Efficiency

A substantial and expanding body of literature has investigated the impact of the asymmetric tax treatment of corporate income on investment behaviour (Auerbach & Poterba, 1987; Hanlon & Heitzman, 2010; Hassett & Hubbard, 2002; Hassett & Newmark, 2008). These studies examined the influence of TLCFs on the incentive to invest, often quantifying this relationship through changes in the effective tax rate. As TLCFs reduced expected future tax liabilities, they are theorised to lower the marginal cost of capital, thereby encouraging investment in line with the neoclassical investment theory (Auerbach, 1986; De Waegenaere et al., 2003). In the context of firm-level tax strategy, the tax shield generated by TLCFs constitutes a key advantage, while the deferral of tax depreciation benefits presents a potential drawback (Sarkar, 2014). Tax depreciation typically provides immediate tax savings, whereas TLCFs may delay these benefits by fully shielding income from taxation. As a result, the postponement of depreciation benefits can diminish the present value of the associated tax savings.

However, most of the aforementioned studies overlooked a crucial aspect of TLCFs' investment-enhancing effect: how firms behave when utilising losses carried forward from prior periods. In practice, TLCFs not only represented valuable tax shields that provided liquidity, but also influenced firms' real economic decisions (Auerbach & Feenberg, 2000; Auerbach & Poterba, 1987; Bethmann et al., 2018; Dobridge, 2021). The additional liquidity generated by TLCFs could assist firms in recovering more swiftly from financial distress and mitigating the effects of economic downturns (Koch et al., 2023). Several studies have assessed the correlation between TLCFs and cash holdings, which transcend simple rule-of-thumb guides. For example, Dreßler and Overesch (2013), Edgerton (2010), and Heitzman and Lester (2021) analysed how cash flow constraints shaped firms' responsiveness to tax incentives, albeit with inconsistent outcomes. While theoretical evidence suggested that TLCFs could stimulate investment by allowing firms to benefit from tax-sheltered future income taxation (e.g., Auerbach, 1986; De Waegenaere et al., 2003; Sarkar, 2014), empirical findings often conflicted with this view, indicating that the impact of TLCFs depends on the level of the statutory tax rate and its countervailing effects.

Researchers examining statutory tax rates have analysed the variations in loss-offset regulations across different countries and US states to examine the impact of these regulations on corporate investment and investment elasticity. Bethmann et al. (2018) found that more generous carryback provisions increased investment,

particularly among firms inclined to pursue high-risk ventures. Under asymmetric tax treatment, this leniency may encourage managers to undertake riskier projects and engage in overinvestment, driven by expectations of future loss recoverability. This concern aligns with agency theory, which predicts that managers, especially those controlling tax-generated free cash flow, may overinvest for personal or political gain. Nevertheless, Ljungqvist et al. (2017) demonstrated that as the ability to carry losses forward or backward increased, the responsiveness of investment to statutory tax rates declined. This occurred because the tax system, by sharing more of the upside than the downside, reduced the marginal benefit of risky investments. Similar findings from Armstrong et al. (2019), and Langenmayr and Lester (2018) further supported the moderating role of loss-offset policies on investment responsiveness across different jurisdictions and time frames.

More recently, Max et al. (2025) offered deeper insights into the role of TLCFs in shaping investment behaviour. They reported that investment projects were more likely to yield positive net present values (NPV) when firms had longer TLCF shelter periods. Importantly, the TLCF investment incentive did not work homogeneously across corporate investments: capital expenditure (capex) and research and development (R&D) investments were strongly incentivised by a shorter and longer TCLF shelter period, respectively. The different payback periods between capex and R&D investments primarily contribute to this difference in TLCF investment-enhancing effects.

Building on these foundations, this study posited that TLCFs could improve firm investment efficiency. Following past studies, TLCFs serve as automatic stabilisers, particularly for financially constrained firms, by stabilising investment activity during downturns (Auerbach & Feenberg, 2000; Koch et al., 2023). Although some evidence linked longer TLCF durations with greater risk-taking, increases in statutory tax rates generally prompted firms to reduce the riskiness of their investments (Ljungqvist et al., 2017). Therefore, while the liquidity benefits of TLCFs could encourage productive investment, their effectiveness in promoting efficiency likely depended on both firm characteristics and external tax policy parameters. These are core considerations within both neoclassical investment theory and agency theory. As such, the following hypothesis was developed:

H1: A positive relationship exists between tax loss carryforwards and investment efficiency.

2.2 Do Political Connections Matter?

In a relationship-based economy such as Malaysia, if TLCF provisions could improve firm investment efficiency, a natural follow-up question would be: does the effect of TLCFs on investment efficiency differ between PCFs and non-PCFs?

Governments are tasked with managing public budgets, which creates considerable fiscal pressure in public goods provision (Abdul Jalil, 2010; Jimenez, 2009). They are driven to enhance the local economy and seek tax revenue. In Malaysia, an authoritarian regime characterised by a centralised tax system and decentralised expenditure framework generates information asymmetry and opportunities for cronyism and

political patronage networks (Abdul Wahab et al., 2017; Gomez et al., 2017; Tee, Lee, & Majid, 2021). Within the taxation domain, under-institutionalisation due to low compliance with the law fosters clientelist or collusive relationships between the government and business entities (Zhang, 2018). Local governments manipulate rent allocation with a side letter, presented in the guise of government subsidies, government procurement contracts, tax deductions, tax returns, state-owned properties offered at discounted prices, and regulatory protections, to benefit specific firms (Tsai et al., 2021). In exchange, businessmen increase local investment or even offer additional rents to local governments (Phan et al., 2020).

Prior studies demonstrated that political connections had a double-edged effect on corporate investments (Cao et al., 2016; Li et al., 2019; Phan et al., 2020). On the one hand, the "helping hand" effect enables PCFs to gain preferential access to government support, thereby facilitating investment. On the other hand, the "grabbing hand" effect motivates these firms to engage in overinvestment behaviour to meet politicians' socio-political goals.[3] Empirical evidence from Yu et al. (2020) and Ghazali et al. (2022) supported this view, showing that PCFs tend to reinvest in their businesses despite challenging institutional environments. The findings are grounded in crony capitalism and political patronage theories, where politicians can leverage their bargaining power to seek rent and extract resources from PCFs. Furthermore, most of the firms tend to acquiesce with politicians' requests, thus benefitting their routine operations. Consequently, PCFs are inextricably linked to investment inefficiency (Chen et al., 2018; Chen, N. et al., 2017; Du et al., 2018; Tan et al., 2018).

Bethmann et al. (2018) asserted that the investment-enhancing effects of TLCFs were largely driven by firms with stronger risk appetites.[4] When combined with the inherently risk-taking nature of PCFs, this dynamic potentially amplified the problem of investment inefficiency. Strictly speaking, the free cash flows generated by TLCF provisions yield sufficient capital to increase their investment scale (Max et al., 2025). Within the "helping hand" framework, PCF managers are prone to allocating free cash flow towards investment endeavours rather than distributing dividends to fulfil shareholder interests (Chen, C.R. et al., 2017). This inclination exacerbates overinvestment and intensified agency conflicts. Based on the political cost hypothesis in positive accounting theory, political connections temper firms' incentives to avoid taxes. Nevertheless, they must invest in nation-building projects and pay increased taxes for the government's social expenses (Phan et al., 2020; Xiang et al., 2023). Put differently, the "grabbing hand" effect leads PCFs to experience low taxable income and high tax shield. This advantage is leveraged for investment decisions aimed at achieving non-wealth maximisation objectives. As political connections reduce investment

[3] According to Chen, C.R. et al. (2017), the beneficial effects of political connections are described as the "helping hand" effect, whereby connected firms leverage their ties for strategic or financial advantage. In contrast, the associated costs, which arise from rent-seeking behaviour by politicians and bureaucrats, are referred to as the "grabbing hand" effect.

[4] In the literature, PCFs are positively associated with greater risk-taking, as political ties offer protection from legal enforcement and regulatory scrutiny (Boubakri et al., 2013; Tee, Lee, & Abdul Majid, 2021). Moreover, PCFs are more likely to receive preferential treatment, such as bailouts, during periods of economic distress (Faccio, 2006).

efficiency, the positive relationship between TLCFs and investment efficiency could be weaker for PCFs. Hence, the following hypothesis was developed:

H2: Political connections weaken the positive effect of tax loss carryforwards on investment efficiency.

3. Research Method

3.1 Sample

The dataset comprised non-financial public listed firms on Bursa Malaysia's Main Market from 2001 through 2017, the final year before the regime change.[5] Financial-statement-related data were downloaded from the Refinitiv database, while political connection and TLCF data were hand-collected from the firms' annual reports available on the Bursa Malaysia website. Firms in the financial services and utilities industries were excluded due to fundamentally different financial reporting norms and investment behaviours (Bae et al., 2017). Additionally, firms with fewer than five years of accounting data and observations with missing control variables were excluded (Cella, 2020; Ghazali et al., 2022). After applying these restrictions, the final sample consisted of 4,683 firm-year observations from 512 firms.

3.2 Investment Efficiency Measure

Richardson's (2006) accounting-based residual measurement model (Cao et al., 2020; Chen et al., 2018; Ghazali et al., 2022; Khaw et al., 2023; Yu et al., 2020) was employed to construct the investment efficiency measure:

$$INV_{i,t} = \alpha + \beta_1 SIZE_{i,t-1} + \beta_2 AGE_{i,t-1} + \beta_3 Q_{i,t-1} + \beta_4 CFO_{i,t-1} + \beta_5 LEV_{i,t-1} + \beta_6 RET_{i,t-1} + \beta_7 INV_{i,t-1} + Industry + Year\,FE + \varepsilon_{i,t} \quad (1)$$

where $INV_{i,t}$ represents the sum of the annual changes in the value of fixed assets, long-term investments and intangible assets scaled by total assets, while $\varepsilon_{i,t}$ denotes the deviation between actual and expected investment levels. The absolute value of $\varepsilon_{i,t}$ was then multiplied by -1 to proxy for investment efficiency, *INVEFF*. As the deviation from the expected investment is lower, a larger $-|\varepsilon_{i,t}|$ indicates greater investment efficiency (Cao et al., 2020; Gomariz & Ballesta, 2014).

3.3 Tax Loss Carryforward Measure

The main variable of interest is the ratio *TLCF/E*(*TI*), which captures the number of years a firm is expected to shield future income from taxation. *TLCF* represents accumulated tax losses that can be carried forward and offset against future taxable income, subject

[5] The 2018 regime change and 2020 constitutional crisis have changed the political fortunes of the connected firms (Wong, 2020; Wong & Hooy, 2018). The dynamics between older PCFs and politicians may deteriorate with Malaysia's 14th general election (GE14) ending the world's then-longest one-party rule. This situation parallels the emergence of new PCFs with unique benefit exchange agreements relating to the new government or prime minister. Given the potential difficulties in identifying the PCFs in the post-GE14 timeframe, the elicited findings were restricted to the 2001–2017 period to ensure outcome robustness.

to statutory limits. They are constructed by accumulating past losses and adjusting for subsequent utilisation over time. The denominator, $E(TI)$, reflects expected annual taxable income and is estimated using historical taxable income.

Taxable income for each firm-year was estimated following Shevlin (1990):

$$TI_{i,t} = PTBI_{i,t} + \frac{\Delta DTL_{i,t}}{\tau_t} \quad (2)$$

where $TI_{i,t}$ denotes taxable income of firm i in year t, while $PTBI_{i,t}$ implies pre-tax book income entailing income before extraordinary items, income taxes, non-controlling interest, extraordinary items, and discontinued operations. $\frac{\Delta DTL_{i,t}}{\tau_t}$ represents change in the deferred tax liability (DTL), adjusted by statutory tax rate τ. $E(TI)$ was computed using a three-year moving average based on periods $t-2$, $t-1$ and t, rather than relying on a single-year observation to proxy expected future profitability (Max et al., 2025).

Unlike many countries where *TLCF* data are readily available in commercial databases such as Refinitiv, such information in Malaysia is often incomplete or unavailable. Therefore, this study employed an imputation approach following Max et al. (2023), whereby TLCFs are reconstructed by accumulating past tax losses and offsetting them against subsequent taxable profits (see Appendix 1). This approach mitigates measurement error relative to the common practice of substituting missing values with zero (Edgerton, 2010), and improves the accuracy of estimating TLCF effects on firm investment behaviour. The use of TLCF-to-income ratio can elicit the number of years the firm can shield future income from taxation, allowing for the identification and investigation of the TLCF incentive (De Waegenaere et al., 2003, 2021; Max et al., 2025).

3.4 Political Connections Measure

The identification of PCFs in Malaysia adheres to Faccio's (2006) definition, which designates a firm as connected if at least one controlling shareholder or senior executive (e.g., the chief executive officer, executive director, or chairperson) maintains relationships with government officials, cabinet members, or politicians. In the Malaysian context, such connections also extend to immediate family members of ruling elites involved in business or to close personal relationships between business owners and political leaders. This methodology builds on the seminal work of Gomez and Jomo (1997), who systematically documented the intimate ties between prominent business owners and top politicians prior to the 1997 Asian Financial Crisis. Their list of patronised firms has been subsequently updated by Fung et al. (2015), Perangingan et al. (2021), Tee et al. (2017), Tee and Pak et al. (2021), and Wong and Hooy (2018), encompassing PCFS through 2017. To maintain accuracy and contemporaneity, the list was cross-validated with reputable financial media sources such as *BERNAMA*, *New Straits Times*, *The Star*, *The Economist*, and *The Edge*, alongside detailed reviews of annual reports focusing on substantial shareholders, board of directors, and key senior management profiles. See Appendix 2 for the list of PCFs. A binary indicator variable, PCF, was then constructed, coded as 1 if the firm was identified as politically connected, and 0 otherwise.

3.5 Control Variables

A wide array of control variables (*Control*) (Bae et al., 2017; Chen et al., 2018; Ghazali et al., 2022; Jackson et al., 2009; Khaw et al., 2023; Max et al., 2025; Mortal et al., 2020), such as the natural logarithm of total assets (*SIZE*); the natural logarithm of the number of years a firm has been listed on the stock exchange (*AGE*); the market value of equity scaled by total assets (*Q*); the ratio of operating cash flows to total assets (*CFO*); the ratio of total liabilities to total assets (*LEV*); firm's annual stock return (*RET*); tangibility of assets (*TANG*); cash divided by total assets (*CASH*); change of cash position scaled by total assets (Δ*CASH*); change of sales scaled by total assets (Δ*SALES*); and the firm profitability, measured as a binary variable equal to 1 if net income was positive and 0 otherwise (*PROFIT*), was included in the study.

3.6 Regression Model

Consistent with earlier studies (Chen, N. et al., 2017; Langenmayr & Lester, 2018; Ljungqvist et al., 2017; Max et al., 2025; Shahzad et al., 2019; Tee et al., 2022), ordinary least squares was utilised for hypothesis testing. As TLCFs may endogenously relate to future investment, *INVEFF* in $t+1$ was estimated, with current investment efficiency serving as the control variable. Year fixed effects and industry fixed effects were included following the Bursa Malaysia industrial classification in all the regressions. Standard errors were clustered at the firm level. Finally, continuous variables were truncated at 1% of each tail. Equations (3) and (4) served to test H1 and H2, respectively:

H1:

$$INVEFF_{i,t+1} = \beta_0 + \beta_1 TLCF / E(TI)_{i,t} + \beta_k \sum_k Control^k_{i,t} + \beta_t \sum_t Year_t + \beta_j \sum_j Industry_j + \gamma_{i,t} \quad (3)$$

H2:

$$INVEFF_{i,t+1} = \beta_0 + \beta_1 TLCF / E(TI)_{i,t} + \beta_2 PCF_{i,t} + \beta_3 (TLCF / E(TI)_{i,t} \times PCF_{i,t}) + \beta_k \sum_k Control^k_{i,t-1} + \beta_t \sum_t Year_t + \beta_j \sum_j Industry_j + \gamma_{i,t} \quad (4)$$

4. Empirical Results

4.1 Descriptive Statistics

Based on Table 1, the mean value of investment efficiency for Malaysian firms (-0.047) was substantially lower than developed nations such as the US, which reported zero (Verdi, 2006). The average expected TLCF shelter period was approximately 6.04 years.

Table 1. Descriptive statistics

Variables	Mean	S.D.	5%	25%	Median	75%	95%
$INVEFF_{t+1}$	-0.047	0.061	-0.173	-0.060	-0.028	-0.012	-0.002
$TLCF/E(TI)_t$	6.039	8.039	0.000	1.121	2.852	8.581	9.421
PCF_t	0.428	0.495	0.000	0.000	0.000	1.000	1.000
$INVEFF_t$	-0.049	0.064	-0.182	-0.065	-0.029	-0.013	-0.001
$SIZE_t$	5.833	0.594	5.006	5.408	5.748	6.172	7.017
AGE_t	1.402	0.230	1.071	1.255	1.415	1.580	1.724
Q_t	0.630	0.179	0.321	0.503	0.636	0.770	0.901
CFO_t	0.073	0.090	-0.060	0.021	0.064	0.117	0.228
LEV_t	0.368	0.179	0.095	0.227	0.362	0.496	0.674
RET_t	0.093	0.074	-0.300	0.045	0.076	0.128	0.627
$TANG_t$	0.321	0.202	0.020	0.164	0.302	0.459	0.684
$CASH_t$	0.072	0.077	0.007	0.024	0.048	0.091	0.216
$\Delta CASH_t$	0.008	0.050	-0.054	-0.007	0.004	0.019	0.084
$\Delta SALES_t$	0.043	0.416	-0.305	-0.112	0.036	0.197	0.634
$PROFIT_t$	0.626	0.163	0.000	0.000	1.000	1.000	1.000

Note. This table presents the descriptive statistics of all variables. The sample includes firm-year observations from fiscal years 2001 to 2017, where all control variables have non-missing values.

Approximately 42.8% of the firm-year observations constituted PCFs. This finding is consistent with prior research indicating that political connections are both widespread and economically influential in the Malaysian capital market (Nguyen et al., 2023; Wong & Hooy, 2018).

4.2 Correlations

Table 2 reports the correlation matrix for all variables included in the regression models. A positive relationship was identified between the TLCF shelter with the next-period *INVEFF*, offering preliminary evidence that the TLCFs are capable of increasing investment efficiency. The negative correlation between *INVEFF* and *PCF* suggests that political connections decrease investment efficiency. In line with Max et al. (2025), TLCFs demonstrated a negative correlation with profitability measures (*CFO* and *PROFIT*), as they typically arise following periods of poor performance. Most of the correlations proved significant, with magnitudes under the threshold of 0.8. As the variance inflation factors were well below 10.0 in all regression models, multicollinearity proved insignificant in this study.

Table 2. Correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1)	$INVEFF_{t+1}$	1.000														
(2)	$TLCF/E(TI)_t$	0.006[a]	1.000													
(3)	PCF_t	-0.017[a]	-0.007	1.000												
(4)	$INVEFF_t$	0.167[a]	0.019[a]	-0.014[a]	1.000											
(5)	$SIZE_t$	-0.053[c]	-0.025[c]	0.326[a]	-0.025[c]	1.000										
(6)	AGE_t	0.088[a]	0.005	0.123[a]	0.095[a]	0.207[a]	1.000									
(7)	Q_t	0.042[a]	0.039[a]	-0.026[c]	0.044[a]	-0.294[a]	0.070[a]	1.000								
(8)	CFO_t	0.017	-0.012[a]	0.006	0.014	0.018	-0.023	0.052[a]	1.000							
(9)	LEV_t	-0.038[a]	-0.043[a]	0.040[a]	-0.086[a]	0.032[a]	-0.071[a]	-0.092[a]	-0.101[a]	1.000						
(10)	RET_t	-0.012	0.004	-0.038[b]	-0.011	-0.023	-0.020	-0.013	0.328[a]	-0.031[b]	1.000					
(11)	$TANG_t$	-0.184[a]	-0.011	0.003	-0.168[a]	0.043[a]	-0.071[a]	0.044[a]	0.166[a]	-0.032[b]	-0.025[c]	1.000				
(12)	$CASH_t$	0.050[a]	0.026[c]	-0.080[a]	0.063[a]	-0.126[a]	0.077[a]	0.163[a]	0.145[a]	-0.199[a]	0.126[a]	-0.168[a]	1.000			
(13)	$\Delta CASH_t$	-0.002	-0.022	-0.024[c]	-0.017	-0.021	-0.013	0.006	0.188[a]	-0.019	0.136[a]	-0.019	0.054[a]	1.000		
(14)	$\Delta SALES_t$	-0.027[a]	-0.031[b]	-0.032[b]	-0.035[b]	-0.003	-0.017	-0.026[c]	0.180[a]	-0.013	0.397[a]	0.026[c]	0.060[a]	0.224[a]	1.000	
(15)	$PROFIT_t$	0.048	-0.022[a]	-0.014	0.010	0.006	-0.022	0.045[a]	0.084[a]	-0.063[a]	0.149[a]	0.043[a]	0.003	0.024[c]	0.144[a]	1.000

Note: The superscripts a, b and c denote significance at the confidence levels of 99%, 95% and 90%, respectively.

4.3 Regression Results

Model (1) of Table 3 presents the regression results examining the relationship between TLCFs and investment efficiency for the full sample. Consistent with H1, the coefficient for *TLCF/E*(TI) proved positive and significant at the 1% level, indicating that longer TLCF shelter periods reflect an increase in investment efficiency. This finding supports neoclassical investment theory, which asserts that reducing the marginal cost of capital strengthens firms' incentives to invest efficiently. To assess the economic significance of this outcome, the change in the likelihood of a firm improving investment efficiency was evaluated following a one-unit increase in the relevant independent variable, *TLCF/E*(*TI*). Economically, an increase of one standard deviation in *TLCF/E*(*TI*) corresponded to an approximate increase of 0.45% (0.0005∗9.039) in the likelihood of improving investment efficiency.

Model (2) incorporated the moderating effect of political connections. As predicted, the coefficient for TLCF/(E(TI)) proved positive and significant, while the coefficient for PCF was negative and significant, indicating that political connections

Table 3. Tax loss carryforwards, political connections and corporate investment efficiency

	Model (1)	Model (2)	Model (3)	Model (4)
	Full sample	Full sample	Sample with political connections	Sample without political connections
TLCF/E(*TI*)	0.0005*** (3.36)	0.0008*** (3.50)	0.0001 (0.89)	0.0008*** (3.39)
PCF		-0.0013*** (-2.78)		
TLCF/E(*TI*)×*PCF*		-0.0001** (-2.25)		
INVEFF	0.1034*** (3.85)	0.1036*** (3.88)	0.1089*** (2.78)	0.0706*** (2.66)
SIZE	0.0014 (0.69)	0.0010 (0.47)	-0.0011 (-0.36)	0.0023 (0.73)
AGE	0.0112** (2.29)	0.0109** (2.20)	0.0185*** (2.91)	0.0024 (0.36)
Q	-0.0939*** (-3.15)	-0.0944*** (-3.15)	-0.1450** (-2.53)	-0.0668** (-2.03)
CFO	0.0499** (2.46)	0.0478** (2.45)	0.0711 (1.54)	0.0490** (2.23)
LEVERAGE	-0.1139*** (-3.70)	-0.1146*** (-3.69)	-0.1763*** (-2.95)	-0.0758** (-2.25)
RET	-0.0488** (-2.20)	-0.0470** (-2.17)	-0.0599 (-1.19)	-0.0563** (-2.22)
TANGIBILITY	-0.0485*** (-7.73)	-0.0485*** (-7.23)	-0.0488*** (-4.50)	-0.0500*** (-5.30)
CASH	-0.0077 (-0.57)	-0.0156 (-0.60)	-0.0014 (-0.07)	-0.0072 (-0.41)
Δ*CASH*	-0.0231 (-1.27)	-0.0200 (-1.28)	-0.0300 (-0.93)	-0.0301 (-1.05)
Δ*SALES*	-0.0039 (-1.42)	-0.0038 (-1.42)	-0.0027 (-0.67)	-0.0050 (-1.51)
PROFIT	0.0089 (1.47)	0.0090 (1.49)	0.0083 (1.06)	0.0091 (1.05)
Constant	0.0791** (2.43)	0.0812** (2.43)	0.1377** (2.37)	0.0182 (0.46)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	4,683	4,683	2,007	2,676
Adjusted R^2	0.0958	0.0971	0.1057	0.1064

Note: The superscripts *, ** and *** denote significance at the confidence levels of 90%, 95% and 99%, respectively. t-statistics are reported in parentheses.

were associated with investment inefficiency. Drawing on the rent-seeking hypothesis, strong and enduring relationships with politicians could hurt investment efficiency (Du et al., 2018; Ghazali et al., 2022; Tan et al., 2018). The negative and significant coefficient for *TLCF/E*(*TI*) × *PCF* supported H2, illustrating that the presence of political connections weakened the positive effect of TLCFs on investment efficiency. From an agency theory perspective, political connections undermine managerial accountability and foster opportunistic behaviour, leading to distorted investment decisions. In a similar vein, theories of crony capitalism and political patronage argue that PCFs often divert resources toward personal or political objectives instead of value-maximising investments, thereby eroding the positive impact of TLCFs on investment efficiency.

To further validate this moderating effect, the study sample was divided into firms with and without political connections based on Wang et al. (2017). Subsequently, the tests were repeated with each sub-sample. In Model (3), the coefficient for TLCF⁄E(TI) was insignificant for PCFs, indicating that TLCFs had no discernible impact on investment efficiency within this group. In contrast, Model (4) showed a positive and significant coefficient at the 1% level for non-PCFs, reaffirming that the efficiency-enhancing effect of TLCFs is more pronounced in firms without political ties.

Overall, these findings highlight the complex role of TLCFs in corporate investment. While TLCFs promote more efficient investment consistent with neoclassical theory, their effectiveness diminishes in PCFs. This supports the view that crony capitalism creates distortions that weaken the intended fiscal incentives, allowing PCFs to secure resources regardless of performance. Consequently, political ties can undermine the disciplinary and allocative functions of tax-based incentives.

4.4 Further Analysis: Over- vs. Underinvestment

As an extended analysis, firms were divided into overinvestment (*OVERINV*) and underinvestment (*UNDERINV*) based on the residual values obtained from Equation (1). A positive residual value indicates overinvestment, while a negative one implies underinvestment. This analysis aimed to examine whether TLCFs and their interaction with political connections could influence overinvestment and underinvestment, both of which are value-distorting activities that undermine investment efficiency (Gomariz & Ballesta, 2014). The tests in Table 3 were repeated with the dependent variables *OVERINV* and *UNDERINV*.

Table 4 details the abridged results. As shown in Panel A, no evidence of TLCFs was found to mitigate overinvestment. Regardless, TLCFs reduced underinvestment in Panel B. The TLCFs incentivised corporate investment in line with H1. Following the interaction results, TLCFs reduced underinvestment (but not overinvestment) in PCFs. The TLCFs are integral for alleviating underinvestment issues, irrespective of the firms' political connections. This suggests that while political connections may distort some aspects of investment decisions, TLCFs remain an important mechanism to alleviate capital constraints that lead to underinvestment. Thus, TLCFs appear effective in encouraging firms to seize profitable investment opportunities, particularly in addressing underinvestment, despite the potential governance weaknesses associated with political ties.

Table 4. Over- vs. underinvestment

	Model (1)		Model (2)	
Panel A: *Overinvestment*				
TLCF/E(*TI*)	0.0001	(0.93)	0.0002	(1.08)
PCF			0.0080**	(2.20)
TLCF/E(*TI*) × *PCF*			-0.0020	(-0.50)
Constant	0.1619***	(3.15)	0.1601***	(3.07)
Observations	1,908		1,908	
Adjusted R^2	0.0912		0.0916	
Panel B: Underinvestment				
TLCF/E(*TI*)	0.0001***	(3.77)	0.0001**	(2.48)
PCF			0.0011	(0.47)
TLCF/E(*TI*) × *PCF*			0.0005**	(2.21)
Constant	-0.1176***	(-3.28)	-0.1171***	(-3.25)
Observations	2,775		2,775	
Adjusted R^2	0.1989		0.1990	

Note: Control variables, industry and year fixed effects are included, but not reported for brevity. The superscripts *, ** and *** denote significance at the confidence levels of 90%, 95% and 99%, respectively. t-statistics are reported in parentheses.

4.5 Robustness Tests

In Table 5, several robustness tests were performed to build confidence in the conclusions. Prior literature suggests that TLCFs are more likely to incentivise corporate investment when the available shelter period is sufficiently long (Glaeser & Lang, 2024; Max et al., 2025). To examine whether the baseline results were sensitive to the measurement of TLCFs, a binary variable, *TLCF_D*, which equalled 1 if the firm had a positive TLCF in year *t* and 0 otherwise, was used in place of *TLCF/E*(*TI*) in the main analyses. While this indicator did not capture the length of the shelter period, it reflected the presence of tax loss carryforwards and provided a complementary specification. The results in Panel A provided consistent evidence supporting the findings in Table 3.

Second, the results might have suffered from reverse causality bias. In practice, firms with better investment efficiency were more likely to generate higher TLCFs because of the amortization and depreciation of their investment amount (Max et al., 2025). To address this concern, firms that were likely classified as possessing TLCFs due to substantial investments were excluded. Specifically, firm-year observations with negative *E*(*TI*) were dropped from the sample, and all main tests in Table 3 were rerun.[6] The results in Panel B confirmed all prior findings.

[6] A negative *E*(*TI*) indicates that future profits are likely to be tax-exempt, and consequently, the TLCF may not be utilised due to the low expected income level.

Table 5. Robustness tests

	Model (1)	Model (2)	Model (3)	Model (4)
	Full sample	Full sample	Subsample with political connections	Subsample without political connections
Panel A: Existence of TLCFs				
TLCF_D	0.0171*** (4.52)	0.0188*** (3.79)	0.0134 (0.91)	0.207*** (4.17)
PCF		-0.0047*** (-2.66)		
TLCF_D × PCF		-0.0044** (-2.24)		
Constant	0.0707** (2.19)	0.0706** (2.16)	0.1306** (2.24)	0.0117 (0.30)
Observations	4,683	4,683	2,007	2,676
Adjusted R^2	0.1031	0.1033	0.1090	0.1181
Panel B: Excluding firms with consistent losses				
TLCF/E(*TI*)	0.0002*** (3.69)	0.0006** (2.17)	0.0001 (0.62)	0.0006** (2.04)
PCF		-0.0007*** (-2.52)		
TLCF/E(*TI*) × *PCF*		-0.0001* (-1.61)		
Constant	0.0800** (2.31)	0.0805** (2.33)	0.1109* (1.67)	0.0371 (0.91)
Observations	4,121	4,121	1,792	2,329
Adjusted R^2	0.0902	0.0904	0.0865	0.1119
Panel C: Analyst forecast				
TLCF_AF	0.0001*** (3.71)	0.0002** (2.16)	0.0001 (0.95)	0.0004** (2.23)
PCF		-0.0011** (-2.07)		
TLCF_AF × PCF		-0.0000** (-1.99)		
Constant	0.0794** (2.44)	0.0807** (2.47)	0.1376** (2.13)	0.0188 (0.47)
Observations	4,683	4,683	2,007	2,676
Adjusted R^2	0.0958	0.0962	0.1055	0.1061
Panel D: Alternative measure of investment efficiency				
TLCF/E(*TI*)	0.0007*** (3.37)	0.0007*** (4.22)	0.0001 (0.93)	0.0008*** (3.54)
PCF		-0.0023*** (-2.88)		
TLCF/E(*TI*) × *PCF*		-0.0001** (-2.32)		
Constant	0.1494*** (2.95)	0.1618*** (3.15)	0.1377** (2.37)	0.1821 (0.46)
Observations	4,683	4,683	2,007	2,676
Adjusted R^2	0.0994	0.0999	0.1057	0.1064
Panel E: Firm fixed-effects regression				
TLCF_D	0.0034** (2.27)	0.0032** (2.28)	0.0026 (0.10)	0.062*** (2.88)
PCF		-0.0007** (-2.10)		
TLCF_D × PCF		-0.0000* (-1.84)		
Constant	-0.1435* (-1.85)	-0.1433* (-1.78)	-0.1261 (1.17)	-0.1797*** (2.95)
Observations	4,683	4,683	2,007	2,676
Adjusted R^2	0.0964	0.0968	0.1042	0.1165
Hausman test	517.11***	516.38***	405.85***	347.01***
Panel F: Estimated TLCF values				
TLCF/E(*TI*)	0.0000*** (3.11)	0.0000*** (3.35)	0.0000 (0.68)	0.0000*** (3.29)
PCF		-0.0010** (-2.19)		
TLCF/E(*TI*) × *PCF*		-0.0001** (-2.02)		
Constant	-0.0858*** (-3.17)	-0.0878*** (-3.26)	-0.0260 (-0.64)	-0.1511*** (-4.73)
Observations	4,683	4,683	2,007	2,676
Adjusted R^2	0.0968	0.0969	0.1044	0.1180

Note: Control variables, industry and year fixed effects are included, but not reported for brevity. The superscripts *, ** and *** denote significance at the confidence levels of 90%, 95% and 99%, respectively. t-statistics are reported in parentheses.

Third, the expectation of future profitability, *E*(*TI*), derived from realised income over the past three years, might have introduced noise into the estimations. For instance, loss-making firms might have implemented measures aimed at improving performance, thereby rendering prior periods' performance an unreliable indicator of future firm performance. Furthermore, losses were correlated over time (Hopland et al., 2018). Therefore, the TLCF value was scaled by the average pre-tax earnings forecasts to ascertain the number of years in which a firm's TLCF was anticipated to shield income from taxation. The results reported in Panel C were qualitatively consistent with the main findings.

Fourth, the findings might have been driven by the measure of investment efficiency. As an alternative measure, Biddle et al.'s (2009) investment model was employed, in which investment was determined by growth opportunities, as indicated by the sales growth metrics outlined below:

$$INV_{i,t} = \beta_0 + \beta_1 SG_{i,t-1} + \beta_2 NSG_{i,t-1} + \beta_3 (SG_{i,t-1} \times NSG_{i,t-1}) + \varepsilon_{i,t} \quad (5)$$

where SG represents the growth rate of sales, while NSG is an indicator variable, which takes a value of 1 if the firm reports negative sales growth and 0 otherwise. The absolute value of the residuals was multiplied by -1 to proxy for *INVEFF*2. The tests in Table 3 were repeated with the alternative investment efficiency measure. Overall, the results in Panel D remained robust.

Fifth, to address potential concerns regarding unobserved, time-invariant firm heterogeneity, the models were re-estimated using firm fixed effects regressions. This approach controlled for firm-specific characteristics that may jointly influence TLCF and investment efficiency. The results in Panel E remained qualitatively unchanged, suggesting that the main findings were not driven by unobserved firm-level factors.

Finally, to further examine the sensitivity of the results to the construction of the TLCF variable, the model was re-estimated by replacing all TLCF values with the fully estimated measure.[7] This approach removed reliance on directly reported TLCF data and ensured consistency in variable construction across all observations. The results in Panel F, using the estimated TLCF values, were consistent with the main findings.

5. Conclusions

This study examined the relationship between TLCFs, political connections, and investment efficiency in an emerging market context. Drawing on neoclassical investment theory, agency theory, and theories of crony capitalism and political patronage, the analysis offers several key insights. First, consistent with theoretical expectations, TLCFs were found to improve investment efficiency, underscoring the importance of tax policy as a mechanism for lowering the cost of capital and promoting more efficient allocation of corporate resources. Second, the effect of TLCFs was significantly attenuated among

[7] In the full sample, 3,766 firm-year observations were based on reported TLCF values (Case 1), while the remaining 917 observations were derived using the imputation procedure described in Appendix 1 (Cases 2–4). For Table 5 Panel F, the 3,766 observations were reconstructed using the imputation method, and the tests were then rerun.

PCFs, suggesting that political ties may undermine the efficacy of tax-based incentives by weakening managerial discipline and encouraging non-value-maximising investment behaviour.

These findings carry meaningful implications for policy and practice. The differential impact of TLCFs across PCFs and non-PCFs highlights the critical role of institutional context in shaping the effectiveness of fiscal incentives. In environments where political influence is pervasive, tax policies designed to promote investment may fall short of their intended outcomes unless accompanied by reforms that strengthen governance and curb rent-seeking behaviour. Tailoring investment-related tax provisions to account for firm-level heterogeneity, particularly with respect to political affiliations, may enhance their allocative efficiency and policy effectiveness.

The extended analysis further revealed that TLCFs mitigated underinvestment but had limited effect on curbing overinvestment, regardless of political connections. This asymmetry suggests that while TLCFs are effective in addressing capital constraints, they do not sufficiently deter managerial overinvestment, which may reflect underlying agency problems. These results further support the notion that the incentive structure embedded in TLCFs primarily operates through capital access, rather than through tightening managerial discipline.

Overall, this study advances the literature on taxation, political economy, and corporate investment by providing novel empirical insights drawn from the context of a politically embedded emerging market. The results illuminate how political institutions interact with fiscal policy to shape firm behaviour, offering nuanced insights into the design and implementation of tax incentives.

Nevertheless, several limitations were encountered in this study. First, the influence of valuation allowances was not considered in the research design because the data were not readily available in the Refinitiv Eikon database. Since TLCFs can reduce the need for valuation allowances, this data limitation may affect the accuracy of the TLCF measure. Inflationary effects were also not incorporated, meaning the TLCFs were effectively held constant over time, which may result in the investment-enhancing effect of the tax shield being understated. Future works could incorporate these effects into their research design. Lastly, the elicited outcomes may still be affected by endogeneity problems despite the employment of a time lag, controlled for current investment levels. The results held constant with the exclusion of firms potentially influenced by current investments.

References

Abdul Jalil, A.Z. (2010). Fiscal efficiency of Malaysian state governments: Effects of inter-governmental grants. *Malaysian Journal of Economic Studies, 47*(1), 55–72.

Abdul Wahab, E.A., Ariff, A.M., Madah Marzuki, M., & Mohd Sanusi, Z. (2017). Political connections, corporate governance, and tax aggressiveness in Malaysia. *Asian Review of Accounting, 25*(3), 424–451. https://doi.org/10.1108/ARA-05-2016-0053

Armstrong, C.S., Glaeser, S., Huang, S., & Taylor, D.J. (2019). The economics of managerial taxes and corporate risk-taking. *Accounting Review, 94*(1), 1–24. https://doi.org/10.2308/accr-52193

Auerbach, A.J. (1986). The dynamic effects of tax law asymmetries. *Review of Economic Studies, 53*(2), 205–225. https://doi.org/10.2307/2297647

Auerbach, A.J., & Feenberg, D.R. (2000). The significance of federal taxes as automatic stabilizers. *Journal of Economic Perspectives, 14*(3), 37–56. https://doi.org/10.1257/jep.14.3.37

Auerbach, A.J., & Poterba, J.M. (1987). Tax loss carryforwards and corporate tax incentives. In M. Feldstein (Ed.), *The effects of taxation on capital accumulation* (pp. 305–342). University of Chicago Press.

Bae, G.S., Choi, S.U., Dhaliwal, D.S., & Lamoreaux, P.T. (2017). Auditors and client investment efficiency. *Accounting Review, 92*(2), 19–40. https://doi.org/10.2308/accr-51530

Bethmann, I., Jacob, M., & Müller, M.A. (2018). Tax loss carrybacks: Investment stimulus versus misallocation. *Accounting Review, 93*(4), 101–125. https://doi.org/10.2308/accr-51956

Biddle, G.C., Hilary, G., & Verdi, R.S. (2009). How does financial reporting quality relate to investment efficiency? *Journal of Accounting and Economics, 48*(2–3), 112–131. https://doi.org/10.1016/j.jacceco.2009.09.001

Boubakri, N., Mansi, S.A., & Saffar, W. (2013). Political institutions, connectedness, and corporate risk-taking. *Journal of International Business Studies, 44*, 195–215. https://doi.org/10.1057/jibs.2013.2

Cao, X., Kleit, A., & Liu, C. (2016). Why invest in wind energy? Career incentives and Chinese renewable energy politics. *Energy Policy, 99*, 120–131. https://doi.org/10.1016/j.enpol.2016.09.015

Cao, Y., Dong, Y., Lu, Y., & Ma, D. (2020). Does institutional ownership improve firm investment efficiency? *Emerging Markets Finance and Trade, 56*(12), 2772–2792. https://doi.org/10.1080/1540496X.2018.1486705

Cella, C. (2020). Institutional investors and corporate investment. *Finance Research Letters, 32*, Article 101169. https://doi.org/10.1016/j.frl.2019.04.026

Chen, C.R., Li, Y., Luo, D., & Zhang, T. (2017). Helping hands or grabbing hands? An analysis of political connections and firm value. *Journal of Banking & Finance, 80*, 71–89. https://doi.org/10.1016/j.jbankfin.2017.03.015

Chen, J., Dong, W., Tong, J.Y., & Zhang, F.F. (2018). Corporate philanthropy and investment efficiency: Empirical evidence from China. *Pacific-Basin Finance Journal, 51*, 392–409. https://doi.org/10.1016/j.pacfin.2018.08.008

Chen, N., Sung, H-C., & Yang, J. (2017). Ownership structure, corporate governance and investment efficiency of Chinese listed firms. *Pacific Accounting Review, 29*(3), 266–282. https://doi.org/10.1108/PAR-12-2015-0046

Cooper, M.G., & Knittel, M.J. (2010). The implications of tax asymmetry for U.S. corporations. *National Tax Journal, 63*(1), 33–61. https://doi.org/10.17310/ntj.2010.1.02

Cutillas Gomariz, M.F., & Sánchez Ballesta, J.P. (2014). Financial reporting quality, debt maturity and investment efficiency. *Journal of Banking & Finance, 40*(1), 494–506. https://doi.org/10.1016/j.jbankfin.2013.07.013

De Waegenaere, A., Sansing, R.C., & Wielhouwer, J.L. (2003). Valuation of a firm with a tax loss carryover. *Journal of the American Taxation Association,* 25(s-1), 65–82. https://doi.org/10.2308/jata.2003.25.s-1.65

De Waegenaere, A., Sansing, R., & Wielhouwer, J.L. (2021). Tax loss carryovers in a competitive environment. *Contemporary Accounting Research, 38*(1), 180–207. https://doi.org/10.1111/1911-3846.12627

Dobridge, C.L. (2021). Tax loss carrybacks as firm fiscal stimulus: A tale of two recessions. *Accounting Review, 96*(6), 153–181. https://doi.org/10.2308/TAR-2019-0371

Dreßler, D., & Overesch, M. (2013). Investment impact of tax loss treatment—empirical insights from a panel of multinationals. *International Tax and Public Finance, 20*, 513–543. https://doi.org/10.1007/s10797-012-9240-1

Du, J., Li, W., Lin, B., & Wang, Y. (2018). Government integrity and corporate investment efficiency. *China Journal of Accounting Research, 11*(3), 213–232. https://doi.org/10.1016/j.cjar.2017.03.002

Edgerton, J. (2010). Investment incentives and corporate tax asymmetries. *Journal of Public Economics, 94*(11–12), 936–952. https://doi.org/10.1016/j.jpubeco.2010.08.010

Faccio, M. (2006). Politically connected firms. *American Economic Review, 96*(1), 369–386. https://doi.org/10.1257/000282806776157704

Fung, S.Y.K., Gul, F.A., & Radhakrishnan, S. (2015). Corporate political connections and the 2008 Malaysian election. *Accounting, Organizations and Society, 43*, 67–86. https://doi.org/10.1016/j.aos.2015.04.001

Ghazali, A., Khaw, K.L-H., & Zainir, F.B. (2022). Development vs. political views of government ownership: How does it affect investment efficiency? *Finance Research Letters, 48*, Article 103034. https://doi.org/10.1016/j.frl.2022.103034

Glaeser, S., & Lang, M. (2024). Measuring innovation and navigating its unique information issues: A review of the accounting literature on innovation. *Journal of Accounting and Economics, 78*(2–3), Article 101720. https://doi.org/10.1016/j.jacceco.2024.101720

Gomez, E.T. (2003). Political business in Malaysia: Party factionalism, corporate development, and economic crisis. In Edmund Terence Gomez (Ed.), *Political business in East Asia* (1st ed., pp. 82–114). Routledge.

Gomez, E.T., & Jomo, K.S. (1997). *Malaysia's political economy: Politics, patronage and profits* (1st. ed.). Cambridge University Press.

Gomez, E.T., Padmanabhan, T., Kamaruddin, N., Bhalla, S., & Fisal, F. (2017). *Minister of Finance Incorporated: Ownership and control of corporate Malaysia*. Springer Nature.

Hadian, A., & Adaoglu, C. (2020). The effects of financial and operational hedging on company value: The case of Malaysian multinationals. *Journal of Asian Economics, 70*, Article 101232. https://doi.org/10.1016/j.asieco.2020.101232

Hanlon, M., & Heitzman, S. (2010). A review of tax research. *Journal of Accounting and Economics, 50*(2–3), 127–178. https://doi.org/10.1016/j.jacceco.2010.09.002

Hassett, K.A., & Hubbard, R.G. (2002). Tax policy and business investment. In A.J. Auerbach & M. Feldstein (Eds.), *Handbook of public economics* (vol. 3, pp. 1293–1343). Elsevier. https://doi.org/10.1016/S1573-4420(02)80024-6

Hassett, K.A., & Newmark, K. (2008). Taxation and business behaviour: A review of the recent literature. In J.W. Diamond & G.R. Zodrow (Eds.), *Fundamental tax reform: Issues, choices, and implications* (pp. 191–214). MIT Press. https://doi.org/10.7551/mitpress/7659.003.0012

Heitzman, S., & Lester, R. (2021). Net operating loss carryforwards and corporate savings policies. *Accounting Review, 97*(2), 267–289. https://doi.org/10.2308/TAR-2019-0085

Hopland, A.O., Lisowsky, P., Mardan, M., & Schindler, D. (2018). Flexibility in income shifting under losses. *Accounting Review, 93*(3), 163–183. https://doi.org/10.2308/accr-51907

Jackson, S.B., Liu, X. (Kelvin), & Cecchini, M. (2009). Economic consequences of firms' depreciation method choice: Evidence from capital investments. *Journal of Accounting and Economics, 48*(1), 54–68. https://doi.org/10.1016/j.jacceco.2009.06.001

Khaw, K. L-H., Chen, J., Gulzar, M.A., & Tajuddin, A.H. (2023). Equity pledge, pledgor type and investment efficiency. *Applied Finance Letters, 12*(1), 22–32. https://doi.org/10.24135/afl.v12i1.616

Koch, R., Holtmann, S., & Giese, H. (2023). Losses never sleep – The effect of tax loss offset on stock market returns during economic crises. *Journal of Business Economics, 93*, 59–109. https://doi.org/10.1007/s11573-022-01134-4

Langenmayr, D., & Lester, R. (2018). Taxation and corporate risk-taking. *Accounting Review, 93*(3), 237–266. https://doi.org/10.2308/accr-51872

Li, M., Sun, X., Wang, Y., & Song-Turner, H. (2019). The impact of political connections on the efficiency of China's renewable energy firms. *Energy Economics, 83*, 467–474. https://doi.org/10.1016/j.eneco.2019.06.014

Ljungqvist, A., Zhang, L., & Zuo, L. (2017). Sharing risk with the government: How taxes affect corporate risk-taking. *Journal of Accounting Research, 55*(3), 669–707. https://doi.org/10.1111/1475-679X.12157

Max, M.M., Wielhouwer, J.L., & Wiersma, E. (2023). Estimating and imputing missing tax loss carryforward data to reduce measurement error. *European Accounting Review, 32*(1), 55–84. https://doi.org/10.1080/09638180.2021.1924812

Max, M.M., Wielhouwer, J.L., & Wiersma, E. (2025). Tax loss carryforwards and firm investments. *Journal of the American Taxation Association, 47*(2), 103–130. https://doi.org/10.2308/jata-2023-005

Mortal, S., Nanda, V., & Reisel, N. (2020). Why do private firms hold less cash than public firms? International evidence on cash holdings and borrowing costs. *Journal of Banking & Finance, 113*, Article 105722. https://doi.org/10.1016/j.jbankfin.2019.105722

Nguyen, T.X., Hoang, K., Nguyen, C.C., & Bach, T.N. (2023). Do different political connections affect firms' distress risk differently? *International Journal of Emerging Markets, 18*(2), 376–398. https://doi.org/10.1108/IJOEM-08-2020-0874

Peranginangin, Y., Lee, M.Y., & Tee, C.M. (2021). Does corporate governance matter for politically connected firms? — Evidence from the regime change in Malaysia. *China Accounting and Finance Review, 23*(2), 22–55.

Phan, D.H.B., Tee, C.M., & Tran, V.T. (2020). Do different types of political connections affect corporate investments? Evidence from Malaysia. *Emerging Markets Review, 42*, Article 100667. https://doi.org/10.1016/j.ememar.2019.100667

PwC. (2022). *TaXavvy: Budget 2023 Edition*. https://www.pwc.com/my/en/assets/publications/Taxavvy/2022/pwc-taxavvy-budget-2023-edition.pdf

PwC. (2024). *Worldwide Tax Summaries: Malaysia*. https://taxsummaries.pwc.com/malaysia/corporate/deductions

Richardson, S. (2006). Over-investment of free cash flow. *Review of Accounting Studies, 11*, 159–189. https://doi.org/10.1007/s11142-006-9012-1

Jimenez, B.S. (2009). Fiscal stress and the allocation of expenditure responsibilities between state and local governments: An exploratory study. *State and Local Government Review, 41*(2), 81–94. https://doi.org/10.1177/0160323X0904100202

Sarkar, S. (2014). Valuation of tax loss carryforwards. *Review of Quantitative Finance and Accounting, 43*(4), 803–828. https://doi.org/10.1007/s11156-013-0393-5

Shahzad, F., Rehman, I.U., Colombage, S., & Nawaz, F. (2019). Financial reporting quality, family ownership, and investment efficiency: An empirical investigation. *Managerial Finance, 45*(4), 513–535. https://doi.org/10.1108/MF-02-2018-0081

Shevlin, T. (1990). Estimating corporate marginal tax rates with asymmetric tax treatment of gains and losses. *Journal of the American Taxation Association*, 12, 51–67.

Tan, W., Yu, S., & Ma, Z. (2018). The impact of business groups on investment efficiency: Does capital allocation matter? *Emerging Markets Finance and Trade, 54*(15), 3539–3551. https://doi.org/10.1080/1540496X.2018.1509791

Tee, C.M., Gul, F.A., Foo, Y.B., & Teh, C.G. (2017). Institutional monitoring, political connections and audit fees: Evidence from Malaysian firms. *International Journal of Auditing, 21*(2), 164–176. https://doi.org/10.1111/ijau.12086

Tee, C.M., Lee, M.Y., & Majid, A. (2021). Heterogeneous political connections and stock price crash risk: Evidence from Malaysia. *Journal of Behavioral and Experimental Finance, 31*, Article 100552. https://doi.org/10.1016/j.jbef.2021.100552

Tee, C.M., Pak, M.S., Lee, M.Y., & Majid, A. (2021). CEO generational differences, risk taking and political connections: Evidence from Malaysian firms. *Journal of Behavioral and Experimental Finance, 31*, Article 100518. https://doi.org/10.1016/j.jbef.2021.100518

Tee, C.M., Teoh, T.T.M., & Hooy, C.W. (2022). Political connection types and corporate tax avoidance: Evidence from Malaysia. Malaysian Journal of Economic Studies, 59(2), 199–220. https://doi.org/10.22452/MJES.vol59no2.2

The Economist. (2023). The 2023 crony-capitalism index. https://www.economist.com/international/2023/05/02/the-2023-crony-capitalism-index

Tsai, P-H., Liu, Y., & Liu, X. (2021). Collusion, political connection, and tax avoidance in China. *Kyklos, 74*(3), 417–441. https://doi.org/10.1111/kykl.12265

Verdi, R.S. (2006). Financial reporting quality and investment efficiency. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.930922

Wang, Z., Chen, M-H., Chin, C.L., & Zheng, Q. (2017). Managerial ability, political connections, and fraudulent financial reporting in China. *Journal of Accounting and Public Policy, 36*(2), 141–162. https://doi.org/10.1016/j.jaccpubpol.2017.02.004

Wong, C-H. (2020). Parliament as Prime Minister's electoral college: The defection game in Malaysia's democratic backsliding. *Round Table, 109*(5), 586–607. https://doi.org/10.1080/00358533.2020.1819631

Wong, W-Y., & Hooy, C-W. (2018). Do types of political connection affect firm performance differently? *Pacific Basin Finance Journal, 51*, 297–317. https://doi.org/10.1016/j.pacfin.2018.08.009

Wong, W-Y., & Hooy, C-W. (2021). Market response towards different types of politically connected firms during political events: Evidence from Malaysia. *International Journal of Managerial Finance, 17*(1), 49–71. https://doi.org/10.1108/IJMF-09-2019-0331

Xiang, J., Zhang, H., Dang, D., & Guan, J. (2023). Involuntary political connections and private firms' tax avoidance. *Pacific Basin Finance Journal, 79*, Article 102025. https://doi.org/10.1016/j.pacfin.2023.102025

Yu, X., Yao, Y., Zheng, H., & Zhang, L. (2020). The role of political connection on overinvestment of Chinese energy firms. *Energy Economics, 85*, Article 104516. https://doi.org/10.1016/j.eneco.2019.104516

Zhang, C. (2018). Trapped into collusion: The under-institutionalized taxation system and local business–state relations in China. In X. Zhang & T. Zhu (Eds.), *Business, government and economic institutions in China* (pp. 139–163). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-64486-8_5

Appendix

Appendix 1

Illustration of Estimating and Imputing Missing TLCF Data

Case 1: If reported TLCF > 0

- TLCF is valid and can be used directly.
- No imputation needed.
- Proceed with reported TLCF.

Case 2: If reported TLCF < 0

- TLCF cannot be negative – this is invalid.
- Reconstruct TLCF using historical taxable income (TI).
- Accumulate past losses and apply carryforward concept.

FY	TLCF	TI (RM)	Imputed TLCF	Notes
2011	Missing	-70	70	Start: TI < 0, so TLCF = 70
2012	Missing	-30	100	Add loss to prior TLCF
2013	-20	60	40	Ignore negative TLCF, subtract income
2014	Missing	20	20	Subtract income from TLCF

Case 3: If TLCF Missing, previous TLCF > 0

- Impute TLCF by rolling forward the previous year's TLCF.
- If TI > 0: Subtract TI from previous TLCF.
- If TI < 0: Add the loss to previous TLCF.

FY	TLCF	TI (RM)	Imputed TLCF	Notes
2011	100	-50	100	Valid TLCF, loss adds to pool
2012	Missing	-30	130	Add loss to prior TLCF
2013	Missing	60	70	Subtract income from TLCF
2014	Missing	20	30	Subtract income from TLCF

Case 4: If TLCF Missing, previous TLCF < 0

- Negative TLCF in prior year is invalid.
- Reconstruct TLCF from scratch using accumulated TI history.
- Start with first valid loss year, then apply carryforward.

FY	TLCF	TI (RM)	Imputed TLCF	Notes
2011	-75	-100	100	Rebuild due to invalid TLCF
2012	Missing	-150	250	Add more net operating loss
2013	Missing	-50	300	Add more net operating loss
2014	Missing	80	220	Utilise part of TLCF

Case 5: If TLCF Missing, no previous TLCF data

- Begin imputation with earliest available year.
- Sum all past losses (TI < 0) and subtract income (TI > 0).
- Follow tax law rules (e.g., 10-year carryforward)

FY	TLCF	TI (RM)	Imputed TLCF	Notes
2011	Missing	-80	80	Start with net operating loss
2012	Missing	-40	120	Add more net operating loss
2013	Missing	50	70	Subtract from TLCF
2014	Missing	-20	90	Add more net operating loss

* The measure is capped at the statutory maximum TLCF period of 10 years, with any losses beyond this horizon deemed expired and unused. It is assumed that firms prioritise utilising TLCF options with the earliest expiration dates first, and adjustments are accordingly applied to the carryforward amounts.

Appendix 2

List of politically connected firms

ADVANCE SYNERGY BERHAD
AHB HOLDINGS BERHAD
AHMAD ZAKI RESOURCES BERHAD
AMCORP PROPERTIES BERHAD
AMVERTON BERHAD
ANCOM LOGISTICS BERHAD
ANCOM NYLEX BERHAD
ANN JOO RESOURCES BERHAD
APM AUTOMOTIVE BERHAD
APOLLO FOOD HOLDINGS BERHAD
AVILLION BERHAD
AXIATA GROUP BERHAD
AXTERIA GROUP BERHAD
AYER HOLDINGS BERHAD
BATU KAWAN BERHAD
BCB BERHAD
BERJAYA ASSETS BERHAD
BERJAYA CORPORATION BERHAD
BERJAYA LAND BERHAD
BERJAYA MEDIA BERHAD
BESHOM HOLDINGS BERHAD
BINA PURI HOLDINGS BERHAD
BINTULU PORT BERHAD
BONIA CORPORATION BERHAD
BOUSTEAD HEAVY INDUSTRIES CORPORTATION BERHAD
BOUSTEAD HOLDINGS BERHAD
BOUSTEAD PLANTATIONS BERHAD
BREM HOLDING BERHAD
BRITISH AMERICAN TOBACCO (M) BERHAD
BTM RESOURCES BERHAD
C.I. HOLDINGS BERHAD
CCK CONSOLIDATED HOLDINGS BERHAD
CELCOMDIGI BERHAD

CENTRAL GLOBAL BERHAD
CHEMICAL COMPANY OF MALAYSIA BERHAD
CJ CENTURY LOGISTICS HOLDINGS BERHAD
CN ASIA CORPORATION BERHAD
COMPUTER FORMS (M) BERHAD
COUNTRY HEIGHTS HOLDINGS BERHAD
CYCLE & CARRIAGE BINTANG BERHAD
DAGANG NEXCHANGE BERHAD
DAIMAN DEVELOPMENT BERHAD
DAMANSARA HOLDINGS BERHAD
DIALOG GROUP BERHAD
DKLS INDUSTRIES BERHAD
DRB-HICOM BERHAD
DUOPHAMA BIOTECH BERHAD
DUTALAND BERHAD
EASTERN & ORIENTAL BERHAD
ECO WORLD DEVELOPMENT GROUP BERHAD
EDARAN BERHAD
ENCORP BERHAD
FACB INDUSTRIES INCORPORATED BERHAD
FAJARBARU BUILDER GROUP BERHAD
FGV HOLDINGS BERHAD
FIAMMA HOLDINGS BERHAD
FRASER & NEAVE HOLDINGS BERHAD
GAMUDA BERHAD
GENTING BERHAD
GENTING PLANTATIONS BERHAD
GLOMAC BERHAD
GOPENG BERHAD
GRAND CENTRAL ENTERPRISES BERHAD
GUOCOLAND (M) BERHAD
HAP SENG CONSOLIDATED BERHAD
HARBOUR-LINK GROUP BERHAD
HEINEKEN MALAYSIA BERHAD
HEITECH PADU BERHAD
HO HUP CONSTRUCTION COMPANY BERHAD
HONG LEONG INDUSTRIES BERHAD
HUA YANG BERHAD
HUME CEMENT INDUSTRIES BERHAD
HUNZA PROPERTIES BERHAD
HWA TAI INDUSTRIES BERHAD
IGB BERHAD
IJM CORPORATION BERHAD
IJM PLANTATIONS BERHAD
INTEGRAX BERHAD
IOI PROPERTIES GROUP BERHAD
ISKANDER WATERFRONT CITY BERHAD
JASA KITA BERHAD
JAYA TIASA HLDGS BERHAD
JAYCORP BERHAD

JENTAYU SUSTAINABLES BERHAD
JOE HOLDING BERHAD
KECK SENG (M) BERHAD
KEN HOLDINGS BERHAD
KESM INDUSTRIES BERHAD
KFC HLDGS BERHAD
KHIND HOLDINGS BERHAD
KIAN JOO CAN FACTORY BERHAD
KINSTEEL BERHAD
KOMARKCORP BERHAD
KONSORTIUM TRANSNASIONAL BERHAD
KPJ HEALTHCARE BERHAD
KUALA LUMPUR KEPONG BERHAD
KUMPULAN FIMA BERHAD
KWANTAS CORPORATION BERHAD
LAND & GENERAL BERHAD
LANDMARKS BERHAD
LBI CAPITAL BERHAD
LBS BINA GROUP BERHAD
LEADER STEEL HOLDINGS BERHAD
LINGKARAN TRANS KOTA HOLDINGS BERHAD
LION INDUSTRIES CORPORATION BERHAD
LION POSIM BERHAD
LYSAGHT GALVANIZED STEEL BERHAD
MAGNUM BERHAD
MAH SING GROUP BERHAD
MALAYAN CEMENT BERHAD
MALAYAN FLOUR MILLS BERHAD
MALAYAN UNITED INDUSTRIES BERHAD
MALAYSIA AIRPORTS HOLDINGS BERHAD
MALAYSIA BUILDING SOCIETY BERHAD
MALAYSIA MARINE AND HEAVY ENGINEERING HOLDINGS BERHAD
MALAYSIA PACIFIC CORPORATION BERHAD
MALAYSIAN AIRLINE SYSTEM BERHAD
MBM RESOURCES BERHAD
MCE HOLDINGS BERHAD
MEDIA PRIMA BERHAD
MELEWAR INDUSTRIAL GROUP BERHAD
MERCURY INDUSTRIES BERHAD
MIECO CHIPBOARD BERHAD
MINHO (M) BERHAD
MISC BERHAD
MITRAJAYA HOLDINGS BERHAD
MK LAND HOLDINGS BERHAD
MMC CORPORATION BERHAD
MTD ACPI ENGINEERING BERHAD
MUI PROPERTIES BHD
MULPHA INTERNATIONAL BERHAD
MYCRON STEEL BERHAD
NAIM HOLDINGS BERHAD

NCB HOLDINGS BERHAD
NYLEX (M) BERHAD
OLYMPIA INDUSTRIES BERHAD
OMESTI BERHAD
OPCOM HOLDINGS BERHAD
ORIENTAL FOOD INDUSTRIES BERHAD
ORIENTAL HOLDINGS BERHAD
ORIENTAL INTEREST BERHAD
OSK HOLDINGS BERHAD
PADINI HOLDINGS BERHAD
PAN MALAYSIA CORPORATION BERHAD
PAN MALAYSIA HOLDINGS BERHAD
PANASONIC MANUFACTURING MALAYSIA BERHAD
PARAGON GLOBE BERHAD
PARAMOUNT CORPORATION BERHAD
PARKSON HOLDINGS BERHAD
PASDEC HOLDINGS BERHAD
PERMAJU INDUSTRIES BERHAD
PETRONAS DAGANGAN BERHAD
PHARMANIAGA BERHAD
PJ DEVELOPMENT HOLDINGS BERHAD
PLB ENGINEERING BERHAD
POH HUAT RESOURCES HOLDINGS BERHAD
POS MALAYSIA BERHAD
PPB GROUP BERHAD
PRICEWORTH INTERNATIONAL BERHAD
RESORTS WORLD BERHAD
REX INDUSTRY BERHAD
RHONG KHEN INTERNATIONAL BERHAD
S P SETIA BERHAD
SAPURA ENERGY BERHAD
SAPURA INDUSTRIAL BERHAD
SAPURA RESOURCES BERHAD
SARAWAK CONSOLIDATED INDUSTRIES BERHAD
SBC CORPORATION BERHAD
SCOMI ENERGY SERVICES BERHAD
SCOMI ENGINEERING BERHAD
SCOMI GROUP BERHAD
SEACERA TILES BERHAD
SEAL INCORPORATED BERHAD
SEE HUP CONSOLIDATED BERHAD
SHH RESOURCES HOLDINGS BERHAD
SHL CONSOLIDATED BERHAD
SIME DARBY BERHAD
SINMAH CAPITAL BERHAD
SKB SHUTTERS CORPORATION BERHAD
SPORTS TOTO BERHAD
SPRITZER BERHAD
STAR MEDIA GROUP BERHAD
SUBUR TIASA HOLDINGS BERHAD

SUIWAH CORPORATION BERHAD
SUMATEC RESOURCES BERHAD
SUNWAY CONSTRUCTION BERHAD
SUPER ENTERPRISE HOLDINGS BERHAD
SURIA CAPITAL HOLDINGS BERHAD
SYMPHONY LIFE BERHAD
TAN CHONG MOTOR HOLDINGS BERHAD
TECHNA-X BERHAD
TELEKOM MALAYSIA BERHAD
TH HEAVY ENGINEERING BERHAD
TH PLANTATIONS BERHAD
TIEN WAH PRESS HOLDINGS BERHAD
TIMBERWELL BERHAD
TIME DOTCOM BERHAD
TIONG NAM LOG HOLDINGS BERHAD
TOMYPAK HOLDINGS BERHAD
TSR CAPITAL BERHAD
UEM EDGENTA BERHAD
UMW HOLDINGS BERHAD
UNISEM (M) BERHAD
UNITED MALACCA BERHAD
UNITED PLANTATIONS BERHAD
UTUSAN MELAYU MALAYSIA BERHAD
WARISAN TC HOLDINGS BERHAD
WCE HOLDINGS BERHAD
XL HOLDINGS BERHAD
YEE LEE CORPORATION BERHAD
YONG TAI BERHAD
ZELAN BERHAD