



The global financial crisis, government intervention, and Thailand's real estate sector

Abdul-Rashid Abdul-Aziz^{a,*}, Toong Khuan Chan^{b,†}

^a School of Housing Building and Planning, Universiti Sains Malaysia, Penang, 11800, Malaysia

^b Faculty of Architecture Building and Planning, University of Melbourne, VIC 3010, Australia

Article Info:

Article history:

Received 8 August 2016

Revised 17 July 2017

Accepted 29 July 2017

Available online 30 April 2019

Keywords:

financial performance,
government intervention,
sectoral analysis,
shocks

Abstract

The Global Financial Crisis (GFC) of 2008 with its epicenter in the US reverberated around the world. Yet few studies have connected the contagion with the real estate markets. This paper presents the findings of a study which examined how well public-listed real estate companies in Thailand fared during the 2004–2012 period. The first objective was to track their financial performance over the 2004–2012 period, using financial data compiled from their annual reports. The second objective was to document what national policy responses were taken to shield the companies from various shocks by reference mainly to official documents. The final objective was to determine whether the GFC was the most significant shock compared to other shocks during that same study period. For this, panel data regression was applied on selected financial data. The sampled companies were financially challenged before and after the GFC. The GFC years of 2008–2010 were very profitable for the sampled companies, largely due to government intervention. The panel data regression analysis, however, revealed that the GFC affected the sampled companies, but only slightly. The return on average equity (ROAE) was affected in 2009, but not the net profit margin and return on average asset (ROAA). The outcome would have been different if the government had not intervened at all. Conversely, if the government had intervened for a longer duration, the real estate sector might not have been affected at all by the GFC. It is misleading to make the sweeping statement that all sectors were equally affected by the contagion. The study also affirmed the point that any narrative regarding the impact of external shocks on the national real estate sector would not be complete if the role of the government in mitigating them is ignored.

© 2019 Kasetsart University.

Introduction

The Global Financial Crisis (henceforth referred to as GFC) was the worst economic crisis since the Great Depression (Eichengreen & O'Rourke, 2010). In its run-up, credit expansion fueled real estate booms in many developed economies including the USA (Claessens, Dell'Ariccia, Igan, & Laeven, 2010). Following the GFC, the housing bubble proved unsustainable. Many householders could not cope with the rising interest

rates and falling home values. Sharp compression in consumer spending compounded the already difficult real estate situation. The most fragile developed countries of Austria, Hungary, the UK, Iceland, Ireland, and the USA were among the earliest to experience house price declines (Reinhart & Rogoff, 2009).

The GFC demonstrates the powerful links between the housing sector, finance, and the economy (Doling, Vandenberg, & Tolent, 2013). Yet, only a small body of literature investigated the contagion specifically for property or real estate markets even though the GFC originated from a subprime mortgage crisis and was, therefore, heavily related to real estate (Milunovich & Truck, 2013). This comment prompted a study that examined the impact of the GFC on public-listed companies in the four South-East Asian countries of Malaysia, Singapore, Thailand, and Indonesia. When analyzing listed real estate companies

* Corresponding author.

E-mail address: arashid@usm.my (A.R. Abdul-Aziz)

† Co-first author

E-mail address: tchan@unimelb.edu.au (T.K. Chan)

Peer review under responsibility of Kasetsart University.

globally, Moss and Prima (2014) found that Asia underperformed compared to their peers in the US, UK, and Australia between July 2007–March 2009. In contrast, Asia outperformed the rest during the pre-GFC 2002–2007 period. Past studies have made conclusions about the integration or convergence of markets purely based on national data (for example, Lin & Lin, 2011; Liow & Schindler, 2014). However, countries are not powerless when exposed to volatile global markets, and indeed, they have tools to cushion their economies from adverse global shocks (Fratzscher, 2012). By conducting a study that interpreted corporate financial data alongside government responses to shocks, this study hoped to provide a rich narrative of what the sampled companies underwent during the study period. The specific objectives were:

1. To track the financial performance of the sampled public-listed property development companies during the 2004–2012 period.
2. To document what national policy responses were taken to shield these companies from the various shocks.
3. To determine whether the GFC was the most significant shock during that study period.

To achieve the first objective, the financial data of these companies was compiled from their annual reports. To achieve the second objective, secondary sources, mainly official, were relied on, thereby providing context and depth to the entire study. To achieve the third objective, panel data regression was applied on selected financial data. Because of the space limitation, this paper focuses on Thailand.

Literature Review

Many accept that the GFC began with the Lehman Brothers bankruptcy on September 15th 2008, following accumulated defaults on subprime mortgages and derivative. The fall of Lehman Brothers coincided with the global panic and was characterized by a broad reversal of capital flows, especially in banking, with investors across the globe liquidating holdings abroad (Milesi-Ferretti & Tille, 2010). The full-blown systemic crisis in emerging countries therefore took place in 2008. The contagion was transmitted to Asian economies indirectly through the collapse in exports, commodity prices, and foreign direct investment (Bems, Johnson, & Yi, 2010; Doraisami, 2014). Equally unexpectedly, beginning the second quarter of 2009, the region rebounded impressively followed by sustained recovery, mainly due to the expansion of domestic demand, as well as timely and decisive countercyclical responses by governments and central banks (Das, 2012). The GFC triggered the unprecedented European sovereign-debt crisis which resulted from the real estate bubble burst in Ireland and Spain, and tax revenues deflation in Greece, Italy, and Portugal, beginning in October 2009 when Greece's finance minister revealed that the budget deficit would reach 12 percent of GDP (Burda, 2013).

Specifically in Thailand, Asian Development Bank (ADB, 2010) noted that the government's response to the GFC was delayed because of the political turmoil and the government transition. In 2008 alone, the country had four prime ministers. Thailand launched its first stimulus package (SP1) in mid-2009 (Doraisami, 2014). SP1 was supposed to have worked in tandem with tax measures and extra financial credit from six

Special Financial Institutions (SFIs). The second stimulus package (SP2) was scheduled for implementation over three years beginning 2010. Sangsubhan and Basri (2012) estimated that SP1 and SP2 induced increases in GDP in 2009 of 1.26 percent and 0.11 percent, respectively. Mongkawad and Sethapramote (2013) found that the fiscal policy exerted most of its effects during 2009, while the monetary policy impacted the second half of 2009 and into the first half of 2010. However the global trade slump surpassed the government's policy response. Tillmann (2012) found that the appreciation of house prices in Thailand (together with Malaysia and Taiwan) had a weaker response to capital inflow shocks compared to Hong Kong, Korea, and Singapore. Cross-country differences are due to macro policies, not housing market characteristics or macro-prudential policies to address property bubbles. When analyzing nine Asia-Pacific economies prior to the GFC (up until 2006), Glindro, Subhanij, Szeto, and Zhu (2011) found that Thailand (together with Korea) experienced very low levels of house price bubble activity that was confined only to the luxury market. From 40 countries including Thailand, Crowe, Dell'Ariccia, Igan, and Rabanak (2013) advised that real estate booms financed through credit and involving leverage deserve a policy response.

Methodology

All property companies that were listed on the Stock Exchange of Thailand made up the sample population, providing they met the following criteria: (a) listed from 2004 until 2012 inclusively, (b) stable financial structure, and (c) property development was the core business (at least 50% of revenue came from property activities). Of the companies, 14 failed to meet the first criterion. Ten companies either with missing annual reports or whose annual reports were not in English were eliminated. The final sample was 27 companies. Two types of financial analyses were conducted on the sampled companies: financial statement and financial ratios. Because of size variation, a weight was applied to each ratio based on the annual revenue of the respective company. Secondary sources of materials that were relied on to contextualize the financial analysis included Bank of Thailand's Annual Reports on Thailand's Economic and Monetary Conditions and the Real Estate Information Centre Annual Reports.

Panel data regression analysis was employed to examine the relationship between independent variables and dependent variables for the most suitable pair of event years. Independent variables were represented by Leverage (debt ratio), Size (market capitalization), and Growth (market-to-book value). Profit (net profit margin), ROAA (return on average asset), and ROAE (return on average equity) served as proxies for dependent variables. All market capitalization values were converted to log values in order to have standardized data. The correlations between these six financial variables were examined using SPSS PASW (Predictive Analytics SoftWare). The House Price Index recorded four significant dips in Q1 2008, Q3 2009, Q3 2010, and Q1 2011. The most appropriate years were found to be 2008 (D1 dummy as a proxy) and 2009 (D2 dummy as a proxy). The econometric model was developed which stated that Profit, ROAA, and ROAE were dependent on Leverage, Size, and Growth (Equation 1):

$$Y(P, ROAA, ROAE)_{it} = \beta_0 + \beta_1 L_{it} + \beta_2 S_{it} + \beta_3 G_{it} + \beta_4 D_1 + \beta_5 D_2 + \mu_{it} \quad (1)$$

where $i = 1, 2, \dots, 27$ (company), $t = 1, 2, \dots, 9$ (year), $D_1 = 2008$ (year) $D_2 = 2009$ (year) and μ_{it} is a random error term.

The Random Effect Model was chosen after applying the Hausman test. Panel data regression was diagnosed for normality and autocorrelation problems. The Jarque-Bera normality test was conducted to diagnose for normality for all models. The Durbin-Watson statistic test was applied for autocorrelation problems. The Cochrane-Orcutt iterative procedure was also adopted.

Results

The first objective of the study was to track the financial performance of the sampled public-listed property development companies during the 2004–2012 period. The financial analysis revealed that the 2004–2012 period was turbulent for the sampled Thai developers. Apart from the 2008/2009 GFC years, they also experienced abnormal financial performance in 2006 and then later in 2011/2012 (Table 1).

Profit before tax and net profit contracted in 2006 when total revenue stabilized (see Table 1). Growth in total assets also slowed down that year.

The sample companies enjoyed healthy profit before tax and net profit in 2008 and 2009 after two years of contraction. Net profit margin peaked in 2008 (see Table 2). The more

conservative quick ratio, which indicates that the companies were least able to meet their short-term obligations with their most liquid assets, was the lowest for the study period. Conversely, leverage ratios peaked in 2008, but reached their lowest inflexion points the following year. Ironically, investor sentiment as measured by the price-earnings (P/E) ratio was lowest for the study period even though the sample companies performed well in 2008.

The sample companies experienced contractions in total revenue for the first and only time in 2011. Profit before tax shrank, resulting in the lowest profitability ratios. Total equity, which is the residual claim of investors in assets after deducting for liabilities, slowed down in 2011. Debt to equity peaked in 2011 whereas debt ratio did the year after. The broadly rising leverage ratios throughout the study period reflect the companies' increasing reliance on borrowings to run their operations. The price-earnings (P/E) ratio was highest in 2011, reflecting buoyant investor sentiment. In 2012, the companies rebounded with healthy financial performance. Total revenue increased by 30 percent and profit before tax by 59 percent and all profitability ratios improved that year. Liquidity ratios were at their lowest points as business activities increased.

The financial analysis broadly indicated that the 2004–2012 period was a turbulent one for the sampled Thai developers as they were affected negatively by various internal and external shocks, with the GFC being one of them. The rest of this section relates the financial data with these shocks as well as policy response.

Table 1

Total revenue, total assets, total equity, net assets, net profit, and profit before tax (THB billion) from 2004 to 2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total Revenue	87.37	108.01	108.85	121.72	123.90	135.79	156.14	155.67	202.33
Change (%)	-	23.6	0.8	11.8	1.8	9.6	15.0	-0.3	30.0
Total Equity	114.22	124.60	134.20	140.53	151.96	162.93	178.84	186.31	227.73
Change (%)	-	9.1	7.7	4.7	8.1	7.2	9.8	4.2	22.2
Total assets	232.83	256.38	272.73	295.44	332.13	350.99	402.79	467.82	549.54
Change (%)	-	10.1	6.3	8.3	12.4	5.7	14.8	16.2	17.5
Profit before tax	22.06	23.45	20.27	19.10	23.68	29.26	32.50	27.66	43.98
Change (%)	-	6.3	-13.6	-5.8	24.0	23.6	11.1	-14.9	59.0
Net Profit/loss	17.17	18.50	14.41	13.57	17.23	21.44	24.21	19.77	36.16
Change (%)	-	7.8	-22.1	-5.8	27.0	24.4	12.9	-18.3	82.9

Source: Annual Reports of sampled companies

Table 2

Financial ratios from 2004 to 2012

Category	2004	2005	2006	2007	2008	2009	2010	2011	2012
Profitability ratios									
Net profit margin (%)	18.8	19.5	17.4	16.6	18.4	15.5	16.2	15.3	20.9
ROAA (%)	17.3	10.9	7.8	7.5	7.1	7.0	6.8	6.8	8.6
ROAE (%)	29.7	21.0	15.7	15.3	14.6	14.2	14.0	13.4	20.6
Liquidity ratios									
Current ratio	3.95	3.71	2.37	2.84	2.89	2.56	2.54	2.42	2.02
Quick ratio	3.16	1.50	1.47	1.18	1.09	1.21	1.52	1.63	1.23
Leverage ratios									
Debt ratio	0.46	0.47	0.49	0.50	0.51	0.49	0.52	0.55	0.56
Debt to equity	0.92	1.01	1.06	1.14	1.30	1.01	1.18	1.69	1.48
Market ratios									
Earnings per share (Baht)	0.59	0.84	1.02	0.59	0.57	0.62	0.55	0.64	1.14
P/E ratio	7.86	8.17	11.76	13.37	6.17	10.29	10.53	13.60	12.25

The first notable year was 2006. Even though the economy expanded slightly in 2006 from the previous year (see Table 3) due to expansion of exports, it was marred by an oil price hike, continued unrest in southern Thailand, prolonged and severe floods, and political uncertainty (Bank of Thailand [BoT], 2007). Nonetheless, it was government intervention (see below) that actually slowed down real estate activities. From their annual reports, all the sample companies reported 2006 as being a difficult year. One company switched to lower-priced dwellings in the range THB 3–4 million. Another changed its product mix so that condominiums constituted 40–50 percent of its products in 2006 compared to 15 percent previously. Consequently the number of residential housing construction permits dropped by almost 10 percent whereas the number of high-rise construction permits rose by 10 percent (Figure 1). Price indices for single-detached houses and townhouses (including land) rose by 3.8 and 4.2 percent, respectively (REIC, 2007), a decline in growth from 2005 (see Figure 2), partly due to higher rivalry among developers (BoT, 2007). The upshot of all these was that whilst the total revenue of the sampled companies stabilized, profit before tax shrank by nearly 14 percent.

Table 3
Thailand GDP growth rate

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Percentage	6.3	4.6	5.1	5.0	2.5	-2.3	7.8	0.1	7.7

Source: Bank of Thailand

The next significant years from the financial analysis were 2008/2009, the year the GFC unfolded. In 2008, the economy decelerated due to a decline in net exports and internal political unrest (Bank of Thailand [(BoT), 2009). However the real estate market actually turned around and expanded with the help of the government (see below). Even so, construction permits for low-rise and high-rise housing slumped (Figure 1). For the first time in the study period, the economy contracted

by 2.3 percent in 2009. By the latter half of the year, the economy improved due to global recovery and continued stimulus packages (see below). Consequently, the real estate sector expanded. House price indices declined initially over uncertainties regarding the stimulus packages which were supposed to cease at the end of March, before reaching the inflexion point in the third quarter of 2009 (Figure 2). Leverage ratios reached their lowest inflexion points in 2009, in part due to the lowest interest rates in years and also prudent borrowing. One company began offering smaller, more affordable homes below THB 3 million each which could be realized within one year, thereby limiting debt.

The third significant years were 2011/2012. The worst floods in 70 years that took place in the fourth quarter of 2011 crippled economic growth (Table 1). Construction and project launches were slowed down or stalled, as on-going projects had to be protected from flood damage. The real estate sector contracted in 2011. In 2012, the Thai economy grew at 7.7 percent owing to robust private domestic demand (Bank of Thailand [BoT], 2013). Private investment increased on account of flood-damaged repairs. The real estate sector gradually recovered from the “Great Flood”. Later in the year, weak global economic conditions slowed down export goods, but the government again intervened to support the real estate sector (see below), bringing tremendous financial windfall to the sampled companies.

The second objective of the study was to document what national policy responses were taken to shield these companies from the various shocks. Not all government actions served to prop up the real estate sector. A case in point was in 2006. Prompted by large expansion of housing supply in the preceding two years, the Bank of Thailand increased interest rates five times, from 4.0 percent to 5.0 percent for the first six months of 2006 (Real Estate Information Center [REIC], 2008), with 2006 being the year when the interest rate was the highest (see Figure 3), choking new mortgages to individuals and loans to developers (see Figure 4).

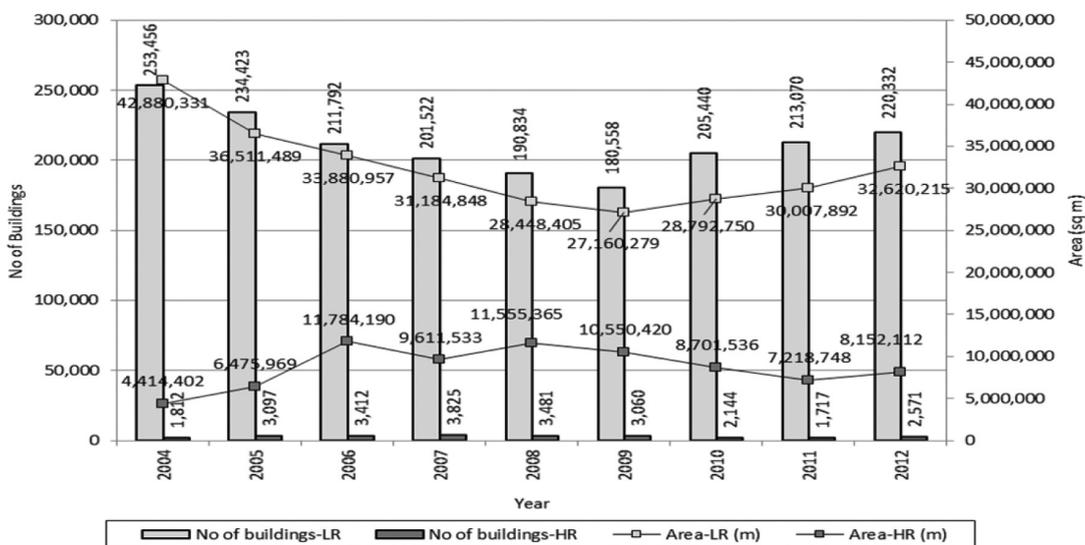


Figure 1 Construction permits for nationwide low-rise (LR) and high-rise (HR) housing
Source: Real Estate Information Center (REIC)

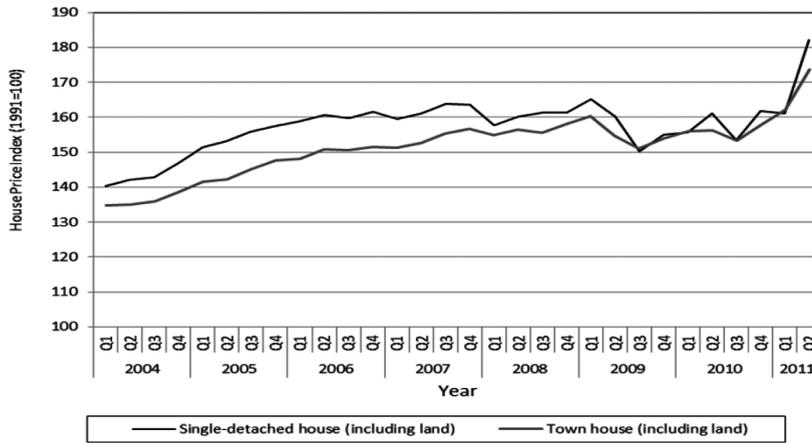


Figure 2 House price index for single detached house and town house (including land) (1991=100)
 Source: Real Estate Information Center (REIC)

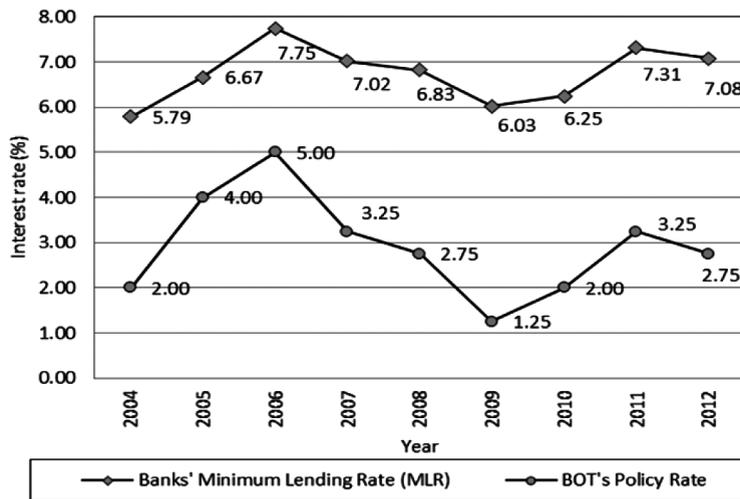


Figure 3 Bank of Thailand policy rate and commercial banks' mortgage rates
 Note: The figures show the highest interest rate for the particular years.

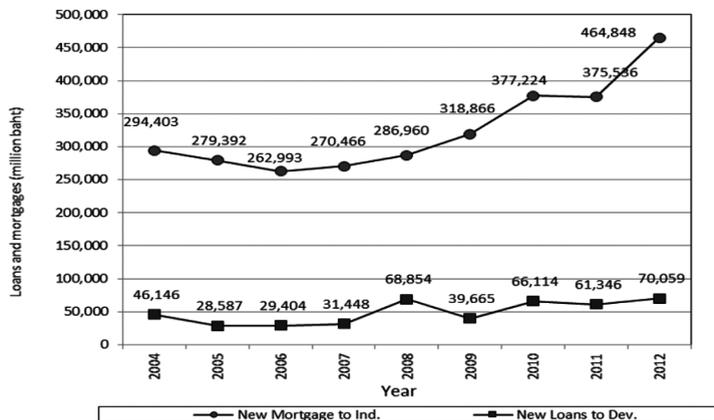


Figure 4 New mortgage to individuals and new loans to developers

The next significant years were 2008/2009. Instead of being badly hit by the GFC, the sample companies enjoyed robust demand because the government introduced economic stimulus packages which included reduced property transfer fees (from 2% to 0.01%) and mortgage registration fees (from 1% to 0.01%) effective 29 March 2008 (REIC, 2009). According to two of the sampled companies, lower transfer fees helped, as did declining mortgage rates (Figure 3). Developers rushed to complete their projects to take advantage of this incentive scheduled to end in March 2009. Fresh loans to developers more than doubled from the previous year (Figure 4). In the fourth quarter of 2008, when real estate demand declined considerably due to a loss of consumer confidence following prolonged GFC and political instability, the government extended the real estate incentive program for another year. Income tax deductible for new residential property purchases was extended to the end of March 2009, and eventually to end of that year. Low-interest loans from financial institutions were also a boon for property purchasers. New loans to individuals breached the THB 300 billion mark for the first time in the study period (Figure 4).

The next significant years were 2011/2012. Initially, amid worries of a possible property bubble—house price indices had been rising sharply after the third quarter of 2010 (Figure 2)—the Bank of Thailand set the maximum loan-to-value (LTV) ratio for certain dwelling types in 2011 (REIC, 2012). However, with the market softening, the LTV ratio for low-rise houses was postponed by one year to 1st January 2013 (BoT, 2012). In mid-2012, the government introduced the Soft-Loan Program and First-Home Initiative (REIC, 2013). New mortgage loans to individuals breached the THB 400 billion mark for the first time ever (Figure 4).

The third objective of the study was to determine whether the GFC was the most significant event for the sampled Thai public-listed companies during the study period. Panel regression analysis was used to provide the answer. As stated in the Methodology section, 2008 (D1) and 2009 (D2) were the most appropriate years for the model. Equation 2 shows the transformed first model for profit (after three iterations of the Cochrane-Orcutt procedure):

$$\text{Profit (3)} = -1.4763 - 0.7115L3 + 0.2183S3 - 0.2438G3 \quad (2)$$

Leverage (signified by the variable L), size (S), and growth (G) impacted the companies' net profit margin, but not D1 and D2. Equation 3 shows the transformed second model for ROAA (after five iterations of the Cochrane-Orcutt procedure):

$$\text{ROAA (5)} = -0.1518 - 0.1920L5 + 0.0280S5 - 0.0121G5 \quad (3)$$

Once again, ROAA was impacted by leverage, size, and growth, but not by the two events. The third model for ROAE was free from autocorrelation, and therefore did not require the Cochrane-Orcutt iterative procedure. Equation 4 shows this third model:

$$\text{ROAE (1)} = -2.6074 - 0.7276L + 0.1477S - 0.1194G - 0.2279D2 \quad (4)$$

ROAE was impacted by leverage, size, growth, and the D2 (2009) event. Hence, the sampled companies were impacted by the GFC of 2009, but only slightly.

Discussion

The question that can be posed is whether the Thai government should have intervened at all to support the real estate sector during the GFC? Should it not have left free-market adjustments to weed out inefficient companies? Was it morally correct for the Thai government to intervene?

The idea that inefficient firms should be left to liquidate during economic shocks can be traced to Schumpeter (1942) with his notion of 'creative destruction' with its cleansing effect that bodes well for long-term benefits. This process results in the reallocation of productive resources so essential for capitalist evolution. Hence his work is associated with non-intervention.

However no government would acquiesce to its economy faltering. Political economists argue there are moral dilemmas associated with the pursuit of economic self-interest (Alt & Chrystal, 1983). Political intervention is necessary when real markets are not perfectly competitive or when individual resources are distributed so inequitably that market outcomes are not fair. Even Schumpeter (1942) himself believed that there is a role for government intervention when a depression becomes 'pathological' in that the modern market system becomes incapable of recovery by itself from such an event. When the recuperative powers of capitalism are compromised, many enterprises which could and would have survived are destroyed. Carvalho (2016) argues that the GFC was a manifestation of such a pathological depression. Various explanations have been mooted as to why the GFC unfolded. One commonly accepted narrative evokes the predatory character of 'sub-prime' lending in the US, and also its repackaging and the speed and greed with which financiers from around the world jumped onto an ultimately unsustainable round of speculation (Dunn, 2014). Visser (2010) also ascribed the GFC to executive and corporate greed. The GFC, like the Asian Financial Crisis before it, wreaked havoc on the economies of developing countries including Thailand (Kaplan, 2013). They, like other nations across the world injected economic stimulus into their economies to encourage a return to faster rates of growth and lower employment (Kates, 2010).

Conclusion

The sampled companies were assaulted by a series of negative events during the 2004–2012 period, with the GFC being one of them. Ironically, during a crisis of global proportions, the sampled companies enjoyed windfall net profits for three years consecutively—from 2008 to 2010—thanks in large part to government intervention. The panel data regression analysis showed that the sampled companies were only slightly affected by the GFC. The situation could have been worse if the government had not intervened at all. If the government had not set the deadline of the intervention measures too prematurely which stalled house buyer interest (March 2009), and was then forced to extend later (December 2009, then June 2010), the sampled companies might have

sailed through the GFC with even lesser effect. Other sectors in the Thai economy may have been severely affected by the GFC, but as this paper has shown, the real estate sector was not one of the main casualties.

Acknowledgments

The authors would like thank the National Institute of Valuation of Malaysia in its capacity as the National Real Estate Research Coordinator (NAPREC) for providing the research grant that resulted in this paper.

References

- Alt, J. E., & Chrystal, K. A. (1983). *Political economics*. Berkeley, CA: University of California Press.
- Asian Development Bank (ADB). (2010). *Outlook 2010*. Manila, Philippines: Author.
- Bank of Thailand (BAT). (2007). *Thailand's Economy and Monetary Conditions in 2006*. Bangkok, Thailand: Author. [in Thai]
- Bank of Thailand (BAT). (2009). *Thailand's Economy and Monetary Conditions in 2008*. Bangkok, Thailand: Author. [in Thai]
- Bank of Thailand (BAT). (2012). *Thailand's Economic Conditions in 2011*. Bangkok, Thailand: Author. [in Thai]
- Bank of Thailand (BAT). (2013). *Thailand's Economic Conditions in 2012*. Bangkok, Thailand: Author. [in Thai]
- Bems, R., Johnson, R. C., & Yi, K.-M. (2010). Demand spillovers and the collapse of trade in the Global Recession. *IMF Economic Review*, 58(2), 295–326.
- Burda, M. C. (2013). *The European debt crisis: How did we get into this mess? How can we get out of it?* (SFB 649 Discussion Paper 2013–019). Berlin, Germany: Humboldt University. Retrieved from <http://edoc.hu-berlin.de/series/sfb-649-papers/2013-19/PDF/19.pdf>
- Carvalho, F. J. (2016). 'Is this it?' An outline of a theory of depressions. *Revista de Economia Política*, 36(3), 451–469.
- Crowe, C., Dell'Ariccia, G., Igan, D., & Rabanak, P. (2013). How to deal with real estate booms: Lessons from country experiences. *Journal of Financial Stability*, 9, 300–319.
- Claessens, S., Dell'Ariccia, G., Igan, D., & Laeven, L. (2010). *Lessons and policy implications from the global financial crisis* (Working Paper WP/10/44). Washington, DC: IMF.
- Das, D. K. (2012). How did the Asian economy cope with the Global Financial Crisis? An evaluation and review. *Asia Pacific Business Review*, 18(1), 7–25.
- Doling, J., Vandenberg, P., & Tolent, J. (2013). *Housing and housing finance—A review of the links to economic development and poverty reduction* (ADB Economics Working Paper Series, No. 362). Manila, Philippines: Asian Development Bank.
- Doraisami, A. (2014). Macro-economic policy responses to financial crises in Malaysia, Indonesia and Thailand. *Journal of Contemporary Asia*, 44(4), 581–598.
- Dunn, B. (2014). *The political economy of global capitalism and crisis*. Abingdon, UK: Routledge.
- Eichengreen, B., & O'Rourke, K. (2010). *A tale of two depressions: What do the new data tell us?* VoxEU. Retrieved from http://www.voxeu.org/index.php?q_node/3421
- Fratzscher, M. (2012). Capital flows, push versus pull factors and the Global Financial Crisis. *Journal of International Economics*, 88, 341–356.
- Glindro, E., Subhanij, T., Szeto, J., & Zhu, H. (2011). Determinants of house prices in nine Asia-Pacific economies. *International Journal of Central Banking*, 7, 163–204.
- Kaplan, S. B. (2013). *Globalisation and austerity politics in Latin America*. Cambridge, UK: Cambridge University Press.
- Kates, S. (2010). Introduction. In S. Kates (Ed.), *Macroeconomic theory and its failings: Alternative perspectives on the global financial crisis* (pp. 1–13). Cheltenham, UK: Edward Elgar.
- Lin, T. C., & Lin, Z.-H. (2011). Are stock and real estate markets integrated? An empirical study of six Asian economies. *Pacific-Basin Finance Journal*, 19, 571–585.
- Liow, K. H., & Schindler, F. (2014). An assessment of the relationship between public real estate markets and stock markets at the local, regional, and global levels. *International Real Estate Review*, 17(2), 157–202.
- Milesi-Ferretti, G.-M., & Tille, C. (2010). *The great retrenchment: International capital flows during the global financial crisis* (Working Paper, No. 18/2010). Geneva, Switzerland: GIIIS.
- Milunovich, G., & Truck, S. (2013). Regional and global contagion in real estate investment trusts: The case of the financial crisis of 2007–2009. *Journal of Property Investment & Finance*, 31(3), 53–77.
- Mongsawad, P., & Sethapramote, Y. (2013). *The global financial crisis 2007–2009: Consequences to international financial market and implication to the Thai economy* (Final Report). Bangkok, Thailand: National Institute of Development Administration.
- Moss, A., & Prima, A. D. (2014). *Asia Pacific listed real estate: A contextual performance analysis*. Singapore: Asia Pacific Real Estate Association.
- Real Estate Information Center (REIC). (2007). *Annual Report 2006*. Bangkok, Thailand: Author. [in Thai]
- Real Estate Information Center (REIC). (2008). *Annual Report 2007*. Bangkok, Thailand: Author. [in Thai]
- Real Estate Information Center (REIC). (2009). *Annual Report 2008*. Bangkok, Thailand: Author. [in Thai]
- Real Estate Information Center (REIC). (2012). *Annual Report 2011*. Bangkok, Thailand: Author. [in Thai]
- Real Estate Information Center (REIC). (2013). *Annual Report 2012*. Bangkok, Thailand: Author. [in Thai]
- Reinhart, C. M., & Rogoff, K. S. (2009). The aftermath of financial crises. *American Economic Review*, 99(2), 466–472.
- Sangsubhan, K., & Basri, M. C. (2012). Global financial crisis and ASEAN: Fiscal policy response in the case of Thailand and Indonesia. *Asian Economic Policy Review*, 7(2), 248–269.
- Schumpeter, J. A. (1942). *Capitalism, socialism and democracy*. New York, NY: Harper & Row.
- Tillmann, P. (2012). *Capital inflows and assets prices: Evidence from Emerging Asia* (Joint Discussion Paper Series in Economics No 15-2012). Marburg, Germany: University of Marburg. Retrieved from <http://hdl.handle.net/10419/73086>
- Visser, W. (2010). CSR 2.0: From the age of greed to the age of responsibility. In W. Sun, J. Stewart, & D. Pollard (Eds.), *Reframing corporate social responsibility: Lessons from the global financial crisis* (pp. 231–251). Bingley, UK: Emerald Group.