

Political Economy of Financial Market Regulation – An Emerging Asia Perspective.

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Abstract: *Clearing of prices in over the counter derivatives (OTC) market has been subject to state intervention via a new regulatory financial frame work in the post Global Financial Crisis (GFC) era. The classical and neo classical approach is being questioned. For Emerging Asia, a financial regulatory framework was already in place even before the GFC of 2008, camouflaging itself as macro prudential policies, with a heavy state led intervention in clearing of prices in the OTC market ala Keynesian. However, many of the emerging Asian financial markets find it difficult to embrace and integrate their localised macro prudential policies with the new global financial regulatory framework. Thus, policy makers need weigh whether they want a sequential approach in relation to financial market liberalisation or to embrace in totality the new global financial regulatory framework.*

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1. Introduction

The liberal approach to economic began with Adam Smith's '*An inquiry into the Nature and Causes of the Wealth of Nations*'. Adam Smith's central theorem rested on three main factors as the key to wealth and prosperity: a) Freedom, where individuals have the right to produce and exchange, products, labour and capital as seen fit; b) Competition, where individuals have the right to compete in the production and exchange of goods and services; c+ Justice, where the actions of individuals must be just and honest according to the rules of society. These three factors would lead to a natural harmony of interest between workers, landlords and capitalists, without the need for state intervention. Adam Smith calls this natural harmony the invisible hand.

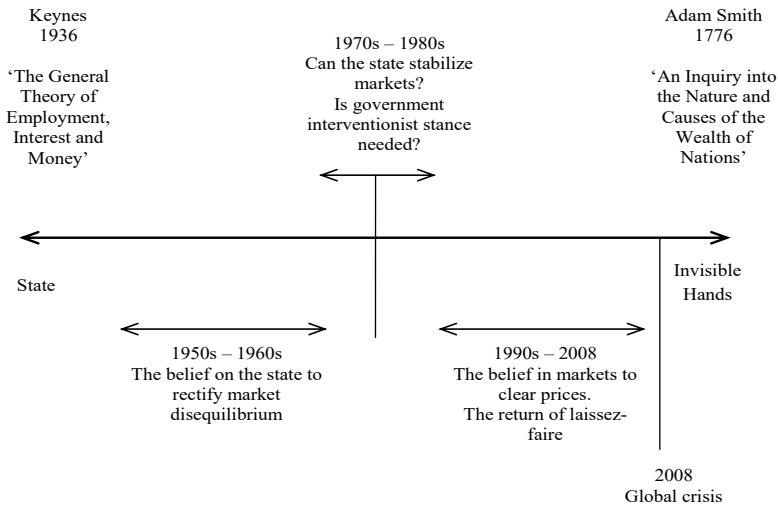
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According to the neo-classical economists, a capitalist market economy could deviate from its equilibrium (in terms of level of output and employment) but it is accepted as a temporary phenomenon since markets would eventually be able to restore the equilibrium. Government intervention is neither necessary nor desirable since it would likely create instability. Classical and neo-classical economists have faith in the invisible hand to stabilise the markets, but that faith was put to test during the Global Financial Crisis (GFC) of 2008. The relationship between state and economy was no longer based on Adam Smith’s original vision.

The rise of Keynesian economics post GFC 2008 was due to market economies being inherently unstable to result in fluctuations in aggregate output and employment. Advocates of Keynesian economics foresaw the need for discretionary monetary and fiscal policies (Modigliani et al., 1977; Tobin, 1996). The role of the state in macro-economic policy however, has evolved since Keynes’s ‘*The General Theory of Employment, Interest and Money*’. In the 1950s and 1960s, economists believed in the capacity of governments to correct market failure. However, the 1970s and 1980s witnessed increasing scepticism over the government’s role in restoring equilibrium in the market and there was a gradual shift towards belief in the market itself to achieve this. The trust placed on markets was at its peak during of 1990s and 2000s until the GFC in 2008 (see Figure 1).

Figure 1: State and invisible hand - A timeline since the Global Depression



Source: Author’s configuration

During the 1990s and before the GFC of 2008, the belief on market ability to clear prices was instrumental in shaping the new political macro economy of markets and economies. This was more pronounced in advanced economies compared with economies of Emerging Asia (EA). The EA economies were cautious about outrightly embracing Adam Smith's invisible hand given the experience of the Asian financial crisis (AFC), 1997/1998. Their economic policies and financial market liberalisation were and still is determined by a sequential approach coupled with significant state intervention. This paper explains the political economy of financial market regulation from the perspective of Emerging Asia. The paper begins with a discussion on financial market imperfections with specific reference to dominant economic thoughts pre- and post-GFC 2008, followed by an analysis of EA's financial markets policy within the context of state intervention. The new global financial market framework looks into a specific area, which is Central Clearing Counterparty (CCP) for over the counter derivative (OTC) markets in Emerging Asia. The final section concludes the paper.

2. Financial Market Imperfections - Economic Thoughts Pre- and Post-GFC 2008

The cyclical behaviour and financial instability of our economy can be viewed as the "critical experiment" that refutes the validity of the neoclassical synthesis. Once it is accepted that the neoclassical synthesis "won't do," the question becomes. What will do? What is an apt economic theory for our economy?
(Minsky, 1977, para. 33)

Hyman Minsky's perspective on financial instability best describe the current uncertainty of global economies. Minsky sees financial crisis as rather systematic with a recurrent theme. This financial instability hypothesis related by Minsky lies in the ability to distinguish between hedging and speculative finance. Hedge finance is when cash flow from financial operation is expected meet payment commitment on debts. Speculative finance is when the cash flow from financial operation is not expected to meet payment commitment, even though the present value of expected cash receipts is greater than the present value of payment commitments. Minsky finds that when markets lean closer towards speculative finance and financial products are tailored for such an outcome, there is greater risk for failure than success, and this sets the stage for a cyclical pattern of crisis at the micro level.

At the macro level, Minsky identifies four primary failures contributing to a crisis. This includes excessive risk-taking in the financial sector,

regulatory focus on individual institution risk rather than systemic risk, positions in financial derivative products that produce externalities from individual firm failures and, finally runs on unregulated banking sector that threatened to bring it down (Acharya, Cooley, Richardson & Walter, 2011).¹ By identifying primary failures contributing to a crisis, a critical review of the new financial system was made by Crotty (2009).² According to the author, financial innovation had proceeded to a point where structured financial products are extremely complex that it becomes inherently non-transparent, making it difficult for regulators to ensure adherence to the regulations. Another critical point identified by Crotty (2009) on structural causes of the GFC 2008 is that regulators allowed banks to hold assets in off balance sheets with no capital required to support them. With these assets not in the balance sheet, the assumption made by regulators is that it does not affect the capital adequacy of the financial institution but in reality, when these products fail to be cleared by the market, the risk is transferred to the end user, namely the buyers of these products. When the subprime defaults triggered a housing market crisis in the United States, the value of Mortgage-backed Securities (MBS) and Collateralised Debt Obligations (CDO) fell. This triggered a sell-off in the asset-backed commercial paper market where its (the value of outstanding asset backed commercial paper) value fell from USD 1.2 trillion in July 2007 to USD 840 billion by end of 2007. This drained financial market liquidity for money market funding by financial institutions, setting off a chain of events that forced financial institutions to move these damaged assets back to their balance sheets.

The GFC of 2008 exposed the intricate relationship between financial institutions, corporates and households. This relationship underwent significant evolution since the end of the 1970s (Seccareccia, 2010). Financial markets played a central role in advanced economies as profits and retained earnings of non-financial business sector expanded into a net lender for higher financial returns. Household savings in the meantime had fallen rapidly since the 1990s, becoming a net borrower rather than a net lender. In financial markets, financial institutions maximized their advisory fees and commissions by issuing and managing assets in off balance-sheet affiliate structures. The traditional link between non-financial firms and financial institutions were weak and the role of financial institutions and financial markets took precedence. Financial institutions and financial markets priority were off balance sheet structures that were developed to manage risk, with underlying assets supporting these structures being the cash flow of non-financial firms.

In this setting, with innovation of financial products taking precedence over regulation, the failure of new financial products during the GFC 2008 questioned the belief on neo-liberalism of self-regulated and efficient

markets. Markets moved away from achieving efficiency even with existing financial regulatory framework that was in place during pre GFC.

Bresser-Pereira (2010) opined that even though Neo-classical economics and Neo-classical financial theory was prevalent before GFC 2008, belief on market efficiency faced challenges during that period.³ The boundaries of market efficiency were tested during GFC 2008 and when it failed and defending neoclassical economics and neoclassical financial theory became a challenging task for economists. As global financial markets collapsed⁴ in 2008, Altvater (2009) discussed the necessity for disembodiment of financial markets using the concept of market equilibrium and potential efficiency gains. In the neoliberal understanding, financial market equilibrium is possible in each individual market as long as decision makers follow market signals. However, when market signal fails, financial markets are forced to be self-referential in finding the path of equilibrium. This path of equilibrium may not necessarily mean an efficient outcome and when an outcome is inefficient, market clearing prices are distorted, thus, the introduction of Keynesian policies to rectify an inefficient outcome.

Reliance on market or state determined equilibrium path to attain an efficient outcome is not clear. Wray (2011) indicates Keynes rejected the notion of laissez-faire or market determined equilibrium path since classical economics theory dealt with the present and not the future.⁵ In the context of monetary policy, Keynes stated reasons for choosing either rules (market determined) and discretion (state determined) based policies (Muchlinski, 2012). Discretion based policies are better suited during periods of crisis. In deciding the direction of monetary policy, a complete policy rule is infeasible but central banks can improvise on its actions and offer reassurance to smoothen financial markets predictive quality of monetary policy action (Bernanke & Reinhart, 2004).⁶

According to Bernanke & Reinhart (2004), it is essential that central banks behave systematically given the macroeconomic and financial market environment they operate in. Advocates of Keynesian⁷ economic policies believe that by implementing expansionary monetary policy as a long-term development strategy, interest rates can be kept low since there is no constraint to the amount the state can borrow.

Post 2008 GFC, the focal point of low interest rate policy in advanced economies was to expand aggregate demand but as interest rates were reduced to zero bound levels, aggregate output continued to decline while unemployment rate rose. Keynesian economics suggest an expansion of the balance sheet of central banks to address this. Trading of securities that have a broader range of maturity and risk characteristics than short-term securities are used as the standard approach. Central banks introduced new financial instruments such as term auction facility, term securities lending facility and primary dealer credit facility. These financial instruments ensure ample

supplies of liquidity aimed at reducing long term interest rates on high risk financial instruments.⁸

Though policy makers adopt Keynesian economics to address the disequilibrium in global financial markets, the role of financial market expectations cannot be disregarded. Multiple equilibrium outcomes in an environment of financial market uncertainty have implications for financial market outcomes and policy responses. El-Erian and Spence (2012) identified multiple financial market equilibrium structures with two distinctive characteristics. One being financial market expectations that are endogenous, as part of the process to reach equilibrium in the financial market, and the second is their influence on financial market behaviour and financial market outcome that are inherently linked with financial market expectations themselves. Financial markets are in equilibrium when expectations are accurate, if the first characteristic is present. However, if both characteristics are present, then financial market expectations are self-confirming in a serial manner and the sequence of local financial market equilibrium will not lead to a global financial market equilibrium. Therefore, even when there is an appropriate policy response, the outcome of these policies will not necessarily be the most efficient given multiple financial market equilibrium symptoms and policy makers' failure to understand the expectation formation process in financial markets.

In the context of GFC 2008, since there is limitation to Keynesian economics monetary policy and financial market uncertainty, global regulatory reform is vital, which is the subject of discussion in the next section.

3. Emerging Asia Financial Markets Policy

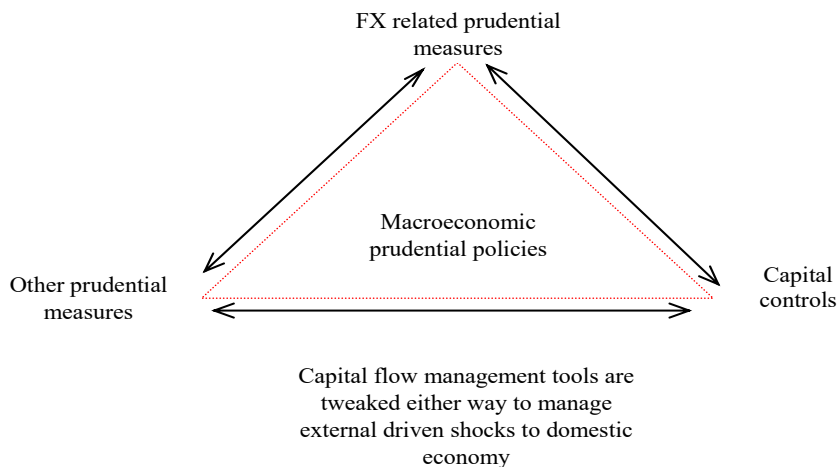
Advanced economies adopted classical economic theory for financial market clearing prior to GFC 2008, while EA economies relied on Keynesian economics. Keynesian economic policy in EA is evident in regulation of financial capital flows using capital flow management tools. The Asian Financial Crisis (AFC) of 1997/98 was a catalyst for adoption of tools to manage capital market since the objective of monetary authorities and financial regulators is to insulate the domestic economy from volatility in capital markets. Findings by Huang and Guo (2006) indicate there is a partial integration of EA financial markets with the global ones.⁹ This is due to the sequencing approach of financial market liberalisation and tightly regulated domestic financial market. The sequencing approach of financial market liberalisation in EA is complemented using capital flow management tools. These tools include foreign exchange related measures, other prudential measures and capital controls (Ostry et al., 2011) (see Figure 2).

The central banks and financial market regulators post AFC 1997/98 have begun to use a combination approach to manage the capital market. The tools to manage capital flow are reviewed periodically and relevant tools are used to manage inflow and outflow of capital. Capital flow management tools complement domestic macroeconomic prudential policies to protect the domestic economy from being exposed to external macro-economic shocks.

3.1 Foreign exchange related prudential measures

Foreign exchange related prudential measures distinguish the currency denomination of capital transaction. These measures are applied to domestic financial institutions primarily to banks. Limits on banks' open foreign exchange position (as a proportion of their capital), will limit banks' investments in foreign exchange assets. The measure curbs foreign exchange lending by domestic banks to borrowers that lack a natural foreign exchange hedge which include differential in reserve requirement on liabilities in the local currency and foreign exchange. This will affect the composition of liabilities and the volume of cross border flows by compelling foreign investors to bear currency and lending risks.

Figure 2: The interface of capital flow management tools and macroeconomic prudential policies in Emerging Asia



Source: Author's configuration

(i) Other prudential measures

Other prudential measures are regulations that make no difference to the currency of financial transaction or the residency of the parties to the transaction. These measures include maximum loan-to-value (LTV) ratios, limits on domestic credit growth, asset classification and provisioning rules, sector limits on loan concentration, dynamic loan loss provisions and counter-cyclical capital requirements.

(ii) Capital controls

Capital control measures restrict capital transactions by virtue of the residency of the parties to the transaction. These controls can be economy wide, sector specific or industry specific. The measures can be applied to all financial and international trade flows or can be differentiated by duration of the flow. There were two significant financial market developments in EA post AFC 1997/98. First, EA interest rate and exchange rate policies were tightly regulated. Capital account non-convertibility was instrumental in this policy, where the degree of capital inflow and outflow was managed by central banks and financial regulators. Second, given barriers to free capital mobility, non-deliverable instruments in US Dollar were introduced. These instruments were tailored for offshore interest rate and foreign exchange markets. The centres for financial trading of these instruments were in Singapore, Hong Kong, London and New York, bypassing restriction on capital account non-convertibility in EA and face no barriers to free capital mobility.

Global financial regulatory reforms and proposals include using a clearinghouse for standardised or clearable derivatives transactions. The Central Clearing Counterparty (CCP) for OTC derivatives include non-deliverable financial instruments which are traded offshore and deliverable financial instruments traded onshore. Since EA's capital account is non-convertible, its financial markets are segmented into offshore and onshore. Central banks and financial market regulators that accept the global financial regulatory reform and proposals will need to integrate their onshore deliverable financial instruments with a central clearing counterparty (CCP) system and fine tune the capital management tools within the new global regulatory reform framework.

4. Central Clearing Counterparty (CCP)

The financial derivatives market consists of three major financial trading instruments, exchange traded derivatives which includes options and futures, derivative securities which include mortgage backed securities, credit debt

obligations and over the counter derivatives (OTC) such as swaps and related products. The OTC derivatives is the main focus of financial regulators. The outstanding amount of over-the-counter (OTC) derivatives as at December 2011 stood at USD 647 trillion (see Table 1).

Table 1: Amounts outstanding of global OTC derivatives (USD billion)

OTC Products	Dec-09	Jun-10	Dec-10	Jun-11	Dec-11
Total contracts	603,900	582,685	601,046	706,884	647,762
Foreign Exchange contracts	49,181	53,153	57,795	64,698	63,349
Interest rate contracts	449,875	451,831	465,260	553,240	504,098
Equity-linked contracts	5,937	6,260	5,635	6,841	5,982
Commodity contracts	2,944	2,852	2,922	3,197	3,091
Credit default swaps	32,693	30,261	29,898	32,409	28,633
Unallocated	63,270	38,329	39,536	46,498	42,609

Source: BIS Quarterly Review (2013). Table 19: Amounts outstanding of over-the-counter (OTC) derivatives. Retrieved from <http://www.bis.org/statistics/otcder/dt1920a.pdf>

The G20 mandated that all standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where they are cleared through central counterparties by end-2012 at the latest (G20 Pittsburgh Summit, 2009) (see Table 2 for respective regional clearing houses for OTC derivatives).

The OTC derivatives that are cleared in a central counterparty clearing (CCP) system increases trading transparency, reduces systemic risks and mitigate counterparty risk. Non CCP cleared OTC derivatives will be subject to higher financial capital requirements. On September 2010, the European Union Commission published the proposed European Market Infrastructure Regulation (EMIR) where all financial counterparties' eligible OTC derivatives contracts are to be centrally cleared and reported to a trade repository. Nonfinancial counterparties are expected to clear and report a financial transaction only if a threshold is exceeded.

Table 2: Regional clearing houses for OTC derivatives Asia Pacific

Clearing House	Location	Markets Served	OTC operations commenced	Current OTC products				
				Credit	Interest rates	FX	Commodity	Equity
Shanghai Clearing House	Mainland China	Mainland China	(Planned)		Planned	Planned		
Hong Kong Exchanges and Clearing Limited (HKEx)	Hong Kong	Hong Kong	(2012)		Planned	Planned		
Clearing Corp. of India Ltd (CCIL)	India	India	2008			Yes		
Japan Securities Clearing Corp. (JSCC)	Japan	Japan	2011	Yes	Planned			
Korea Exchange (KRX)/Korea Securities Depository (KSD)	Korea	Korea	(Planned)					
Singapore Exchange (SGX)	Singapore	Asia	2006		Planned	Planned	Yes	

Source: Respective clearing house websites, World Federation of Exchanges Focus magazine, No 228, February 2012, pp

The CCPs are required to have open and transparent admission criteria and accept eligible financial contracts regardless of the execution venue. These financial contracts are subject to governance and procedural requirements. As US and European financial regulators regulate their OTC derivatives, EA central banks and financial regulators are expected to follow suit. In EA, two issues need to be addressed if OTC derivatives are to be regulated. These relate to operational and geographical challenges.

(i) Operational challenge

The OTC derivatives are bilateral and privately-negotiated contracts where the value of financial derivatives is based on an underlying asset such as commodity, security, interest rate or financial index. Exchange traded derivatives are standardised in terms of contract specification and are cleared in a CCP. The OTC derivatives instead are customised to the need of the counterparty and are cleared bilaterally between financial market traders. The OTC derivatives market and exchange traded markets are interrelated when new financial products that are first developed in the OTC market is traded in a regulated exchange market (when it becomes commoditised and liquidified). The OTC derivatives to be traded in a CCP would face increased competition since the current financial setting disperses these financial products only among a few money brokers and financial institutions. Implementing a CCP dismantles the ability to market make and would force financial market makers to be price competitive.

(ii) Geographical challenge

Current CCPs in EA are domestic based to serve onshore OTC derivatives which adhere to local regulation and insolvency law. There is resistance in integrating domestic CCPs with international CCP's particularly for OTC. The current initiatives to establish CCP are led by China, India, Hong Kong, Singapore and South Korea (see Table 3) derivatives such as interest rate swaps and credit default swaps (CDS) (Council of Financial Regulators, 2011; Clifford Chance, 2011). Overlapping jurisdiction and segmentation of markets between onshore and offshore OTC derivative risk extraterritoriality (ET) (Jones, 2012).

The financial regulatory framework for EA is closely linked to its capital flow management tools. The global financial regulatory framework with international CCPs would mean EA central banks and financial regulators need to integrate their capital flow management tools and sacrifice their surveillance jurisdiction to international regulators.

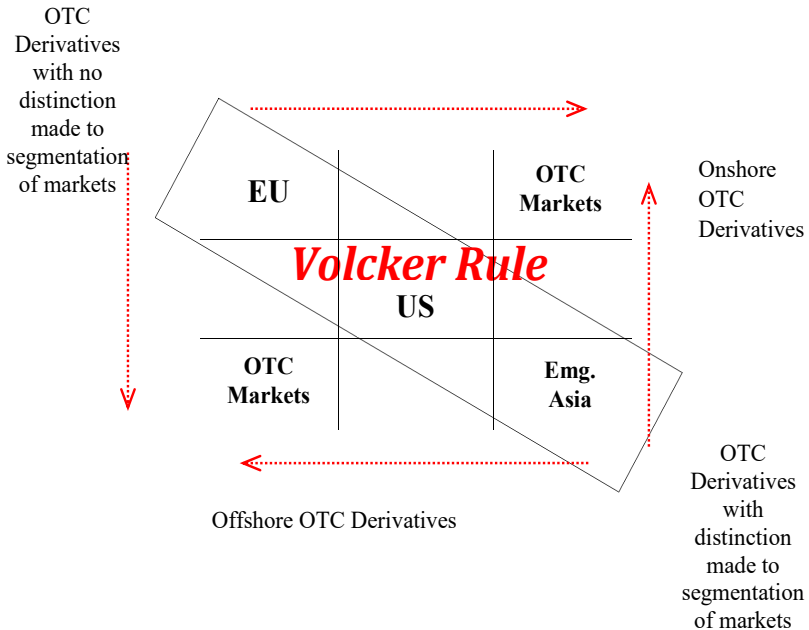
Table 3: The Emerging Asia clearing landscape

China	Likely	China is studying OTC derivative clearing for interest rate derivatives and may also consider clearing for its new credit derivatives market at a later date. The Shanghai Clearing House was incorporated in 2009 to meet G20 Dec 2012 clearing commitments.
Hong Kong	Yes, Legislation pending	HKMA will establish a clearing house via Hong Kong Exchange (HKEx) with an aim to clear IRS and NDF by end of 2012. HKEx has announced it will offer client clearing services from inception
India	Likely	The Clearing Corporation of India (CCIL) offers clearing for INR FX derivatives and trade settlement services for INR IRS and FRA. RBI has said it will move to set clearing requirements for these trades (and for CDS in the future) but has expressed concern about too much risk being concentrated in a single clearing house.
Malaysia	No	Bank Negara Malaysia has stated there are no current plans to establish a CCP
South Korea	Yes	Legislation pending for Korean Won interest rate swaps clearing
Singapore	Yes	MAS announced on 21 st July 2011 that it will mandate clearing with details expected in a policy consultation paper. SGX is now offering central clearing for certain commodities, energy and freight and interest rate derivatives and will extend its offering to Asian foreign exchange forward contracts (NDFs). Client clearing services are also planned.
Taiwan	To be announced	Taiwan is presently evaluating its need for a local CCP.
Thailand	To be announced	Bank of Thailand has a task force analysing the need for a domestic CCP

Source: Keith Noyes, Regional Director, Asia Pacific ISDA, Presentation to the 15th General Meeting of the Asia-Pacific CSD Group, Seoul, 4th November 2011.

The segmentation of OTC derivatives market in EA poses hurdle for setting up CCPs (see Figure 3), where the central banks and financial regulators need to integrate their onshore and offshore OTC derivatives market. There is no segmentation of OTC derivatives market in advanced economies in the case of foreign financial institutions.

Figure 3: Emerging Asia’s segmented OTC derivatives market



Source: Author’s configuration

Cost of trading in OTC derivatives and internationalisation of CCP are two factors that must be taken into account by EA central banks and financial regulators in establishing CCPs. Its establishment of may increase the cost of trading OTC derivatives in these countries (Armstrong, 2012). The increase is due to the lack of integration of EA CCPs with international CCPs that are established by advanced economies. The cost is also a result of segmentation of EA’s OTC derivatives market that consists of onshore and offshore OTC derivatives.

The EA CCPs need to meet the international standards for clearing houses set by the global markets supervisory body which is the International Organization of Securities Commissions (IOSCO) and the central bankers’ Committee on Payment and Settlement Systems (CPSS). If the cost is

prohibitive, the risk of financial liquidity drying up could occur. Commonly traded OTC derivatives in EA are currently cleared in onshore CCPs rather than in offshore CCPs. The current stance by US financial regulators indicate no approval has been given to US financial institutions banks to join EA CCPs if there is no cap on the degree of liability they would face in the event of OTC trades are not cleared while European financial regulators have yet to indicate which EA CCPs are appropriate for European financial institutions.

4.1 *How OTC derivatives are used in Asian Markets*

Dealing firms use OTC derivatives to generate profits through market-making for clients, including investors and issuers. At the same time, dealers may hedge their own positions. Hedge funds in Asia engage in OTC derivatives to return superior risk-adjusted returns to investors, often in tandem with cash products such as bonds. Commercial banks primarily transact for proprietary trading purposes, to manage assets and liabilities, and to hedge. Central bank use is more limited, as FX swaps are used for multiple purposes. Non-financial firms and corporates engage in OTC derivatives extensively to hedge a number of different types of risk using different products. As the market changes, however, participants change their use of OTC derivatives accordingly.

Table 4: Summary of Asian drivers of the use of OTC derivatives

Asian Market Participant	Primary purpose of Derivative
Banks, Brokers (Dealers)	Traditional role as market-makers across multiple OTC derivatives products; participate in dealer-to-dealer and dealer-to-client markets; demand comes from serving corporate customers including other FIs and issuers of offshore and onshore instruments. Offshore investors look for relatively high yield while on shore investors look for diversification
Hedge Funds (Financial Institution)	Engage in OTC derivatives to return superior risk-adjusted returns to investors; OTC instruments can be used in tandem with cash products
Commercial Banks (Financial Institution)	Transact in OTC derivatives for proprietary trading purposes and to manage assets, liabilities and structural positions. Hedging involves managing exposures to interest rate, foreign currency, and credit risks arising from banking activities.
Central Banks (Financial Institution)	More limited; use FX swaps for two main purposes including domestic liquidity management and shifting settlements forward in time.

Table 4: (Continued)

Asian Market Participant	Primary purpose of Derivative
Corporates (Non- Financial Institution)	Use multiple OTC instruments for hedging; use cross currency interest rate swaps to hedge interest rate risk and cash flow hedges to hedge currency risk arising from issued bonds. Use cross currency swaps as net investment hedges for foreign currency exchange risk on international operations. Use forward foreign exchange contracts as cash flow hedges for exposure to foreign currency exchange risks arising from forecasted or committed expenditure. Use OTC commodity derivatives, often with international counterparties and exchanges to hedge exposure due to commodity import and export.

Source: Celent (2013). The Asian OTC Derivatives Market.

5. Concluding Remarks

The 2008 GFC highlighted the need for state intervention in global financial markets. The foundation of economic thought in financial markets now has reversed course from being led by classical economics to one that is Keynesian led. State intervention in advanced economies financial markets will be legitimised under the new global financial regulatory framework. For EA economies, the segmentation of financial markets between onshore and offshore poses risk to the process of integrating its financial markets under the new global financial regulatory framework. The EA capital flow management tools risk slowing this process of integration, more so given EA's CCP having to meet international standards required by the new global financial regulatory framework. The questions to be answered for EA policy makers is whether the embracement of a new global financial market framework is a trade off against safeguarding its domestic macro prudential framework that has been in place since the AFC of 1997/1998. If there are lessons to be learnt from the GFC of 2008, EA have been well taught but the current impasse that EA faces may be its biggest test just yet.

Notes

1. Viral V. Acharya, Thomas Cooley, Matthew Richardson and Ingo Walter (2011). Market failures and regulatory failures: Lessons from the past and present financial crises. This paper analyses the financial crisis through the lens of market and regulatory failures. There were four primary failures contributing to the crisis: excessive risk-taking in the financial sector due to mispriced government guarantees; regulatory focus on individual institution risk rather than systemic risk; opacity of positions in financial derivatives that produced externalities from individual firm failures; and

- runs on the unregulated banking sector that eventually threatened to bring down the entire financial sector.
2. James Crotty (2009). Structural causes of the global financial crisis: a critical assessment of the ‘new financial architecture’. He opines that the ultimate cause of the current global financial crisis is to be found in the deeply flawed institutions and practices of what is often referred to as the New Financial Architecture (NFA) – a globally integrated system of giant bank conglomerates and the so-called ‘shadow banking system’ of investment banks, hedge funds and bank-created Special Investment Vehicles. These institutions are either lightly and badly regulated or not regulated at all, an arrangement defended by and celebrated in the dominant financial economics theoretical paradigm – the theory of efficient capital markets.
 3. Luiz Carlos Bresser-Pereira (2010). The 2008 financial crisis and neoclassical economics. The 2008 Global crisis was the consequence of the process of financial modernisation that begun in the 1980s. From the current crisis, a new form of capitalism will emerge with its character being difficult to be predicted.
 4. Elmar Altvater (2009) Post neo-liberalism or post capitalism? The failure of neo-liberalism in the financial market crisis. Altvater says that the implied autonomy and self-reliance of financial markets are by no means a guarantee against financial crisis tendencies. On the one side, crises have their origins in the ‘real economy’ in the case that real flows of income are not sufficient to service the claims of financial investors. On the other side the crisis tendencies spill over from finance to the real economy and to society and nature, as the recent crises at the end of the first decade of the 21st century have demonstrated so dramatically. The concept of ‘disembodied markets’ therefore does not mean that they are really autonomous and independent of each other. On the contrary, markets are highly interrelated and interdependent. Keynes and Marx are right, and neo-liberalism is wrong. A strong argument against neo liberalism and free market policies, and sees the need of intervention policies.
 5. L. Randall Wray (2011). The Dismal State of Macroeconomics and the Opportunity for a New Beginning. Wray critically examined these developments and returns to the earlier Keynesian tradition to see what were left out of post-war macroeconomics. The stagflation of the 1970s ended the great debate between “Keynesians” and “Monetarists” in favour of Milton Friedman’s rules.
 6. Bernanke and Reinhart (2004). Asset prices embed the current short-term. Commitment can take two forms: interest rate and its expected future path. Unconditional commitment is when the central bank pledges to hold short-term rates at a low level for ‘x’ period of time. Conditional commitment is when the central bank pledges to hold short term rates at a low level until ‘y’ happens.

7. Joan Robinson (1943) *The Problem of Full Employment*, London: Workers Educational Association and (1944) 'The currency plan', *Socialist Commentary*, June 9, 246–50. Excerpts of Joan Robinson's view on monetary policy were taken from G. C. Harcourt and Prue Kerr book on Joan Robinson, *Great Thinkers of Economics*, 2009.
8. Docherty, P., (2011), - Keynes Analysis of Economic Crises and Monetary Policy in the General Theory: It's Relevance after 75 Years. *Review of Political Economy*, Volume 23, Number 4, 521–535, October 2011. This paper argues that Keynes's treatment of economic fluctuations and monetary policy in the General Theory is still relevant after 75 years. His treatment of severe economic crises provides considerable insight into the possibility of crises emanating from financial markets, and for understanding how financial disturbances may have real economic effects. Keynes's insights into the potential limitations of using monetary policy to deal with periods of crisis and how these limitations may be addressed are also shown to be relevant to the recent global financial crisis. The paper also argues that the General Theory has insights to offer on the use of Taylor rules and on the possibility of addressing persistent unemployment.
9. Ying Huang and Feng Guo (2006), *An Empirical Examination of Capital Mobility in East Asia Emerging Markets*, *Global Economic Review* Vol. 35, No. 1, 97/111, March 2006. While findings for China show strong financial autarky, that is, though has been implementing extensive capital control measures and is not financially integrated with the rest of the world, this is mainly due the period of analysis (between 1990 to 2003), a period when the Renminbi was pegged to the Dollar and financial liberalisation was slow.

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