Could the Great Depression Repeat Itself in the 21^{St} Century?

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ABSTRACT

By 2031, it will be a century since the Great Depression, touted as the most dreadful depression in the history of U.S. and the rest of the world, had taken place. In the final decades of last century and in the early years of this century, numerous financial crises and economic depressions, not as severe as the Depression, have occurred, particularly but not limited to, developing countries. Looking at the Depression and today's arrangements, will a major global depression be looming? This paper begins with a refresher on the events of the Depression, which is followed by the Friedman and Schwartz hypothesis, criticisms against it, other contributing factors to the Depression, a reconciliation of the theories and finally ends with an assessment of the possibility of a return of the Depression in the 21st century based on today's economic, financial, political, social, and technological considerations.

Keywords: *Depression economics; economic crisis; financial crisis; international business.*

ABSTRAK

Menjelang 2031, satu abad telah berlalu semenjak berlakunya kemelesetan paling dahsyat dalam sejarah Amerika Syarikat dan seluruh dunia. Pada akhir abad yang lalu dan awal abad ini, banyak krisis kewangan and kemerosotan ekonomi berlaku tetapi tidak sedahsyat kemelesetan hebat yang berlaku, khasnya dan tidak terhad kepada negara-negara membangun. Melihat kepada kemelesetan hebat dan keadaan dunia hari ini, mungkinkah kemerosotan dunia akan berulang? Artikel ini bermula dengan imbas-kembali kejadian kemelesetan hebat, diikuti teori dan kritikan teori tentang factor-faktornya, kesimpulan tentang teori-teori sebelum berakhir dengan andaian tentang kemungkinan berlakunya kemelesetan hebat pada abad ke-21 berdasarkan keadaan ekonomi, kewangan, politik, sosial dan teknologi.

Kata kunci: *Perniagaan antarabangsa; kemelut ekonomi dunia.*

INTRODUCTION

In an interview with *Fortune* magazine on the recent mortgage crisis in the U.S. which started in 2006, Paul Krugman undermined the idea of the return of the Great Depression[1] with the following response:

> *Because I think we know something that we didn't then. The Federal Reserve was clueless back then. They were only concerned about protecting the nation's gold reserves, and the federal government believed that austerity and cutting spending was the answer to recession. I think we know more than we did then, and just the fact that we have a big federal government is a stabilizing factor. (Jia, 2008)*

The U.S. mortgage crisis has put back the Depression and the corresponding Federal Reserve (Fed) in the limelight. Therefore, it is significant to rekindle the understanding between the Fed and the Depression. There have been many prominent theories on the causal factors of the Depression (Chari, Kehoe, & McGrattan, 2002). One of the objectives of this paper is to recapitulate the much debated controversial theory by Friedman and Schwartz which links the Fed with the Depression (Bordo, 2003; Christiano, Motto, & Rostagno, 2003; Ohanian, 2003), and some foremost critiques against the theory. Other than the theory by Friedman and Schwartz, a review of other prominent theories is also presented.

Besides, there seems to be a void in the literature on the Depression. To a certain degree, many studies have concentrated on individual crises, but only a handful have discussed the possibility of another worldwide depression based on today's general arrangements. Furthermore, these studies are rigorous and may be incomprehensible to business managers. Thus, this paper also intends to highlight, in basic terms, comparisons between today's arrangements and that of the Depression era to readers who are not meticulously trained in economics.

This paper begins with a brief history of the Depression, followed by the Friedman and Schwartz hypothesis, criticisms against the hypothesis, various other theories surrounding the onset of the Depression, a reconciliation of the theories and finally ends with an assessment of the possibility of a return of the Depression in the 21st century.

The Great Depression (1931-1934)

Three great accounts of the Depression have been written by Galbraith (1954), Morgan (1979), and Gordon (1999) about the events leading to the New York Stock Exchange crash in October 1929 and subsequently the Depression. With a fall of 12.8% of the Dow Jones index on Monday, October 28, 1929, this crisis marked the sharpest fall in the index up till then and for another 30 years. The following brief account of the events of the Depression is extracted and summarised from Galbraith (1954); Morgan (1979); Gordon (1999); Mishkin (2004) and Pugel (2004).

In 1928, President Coolidge was optimistic about the perspectives of the American economy and the boom of the New York Stock Exchange was being fueled by low interest rates and good investment prospects. Speculation played an important role as this was a largely unregulated market where bear raids[2], short sales[3], syndicates[4], and corners[5] were day-to-day operations. Hence, despite the belief that the episode was an anomalous misfortune that hit the U.S., the resulting boom of Wall Street was nothing else but a speculative bubble. One thing was certain and it was that this crisis constituted the first one in which technology accelerated the rate of events and once the process started, it took only three days to erase the value of five billion dollars out of the stock market.

In October 1929, the U.S. stock market crashed as a result of the tight monetary policy of the Federal Reserve officials who viewed the booms of 1928 and 1929 during which stock prices had doubled, as excessive speculation.

The crash led to a loss of one-third of U.S. banks, coupled with plummeting sales in the agricultural sector that intensified adverse selection and moral hazard problems, led to a prolonged economic contraction in the U.S. in which unemployment rose to 25 percent.

In the early 1930s, the financial community which had become paranoid about bank deposits and currencies by the early postwar chaos was ever more alarmed by the Wall Street collapse in the U.S. Worse still, the failure of the reputable Creditanstalt bank in Austria caused a run on German banks and mark because Germany had been lending heavily to Austria. The panic soon spread to Britain where the pound sterling had been perennially weak. This was aggravated by Britain's heavy lending to the collapsing Germans. Consequently, in 1931, Britain abandoned the gold monetary standard and let the pound be devalued. In 1933-1934, the U.S. followed suit and let the dollar devalue against the gold, partly because President Roosevelt wanted to manipulate the price of gold to create jobs. Correspondingly, other countries also used devaluations, tariffs, and other trade barriers to boost exports and domestic employment, but restricting imports, leading to beggar-thy-neighbor[6] policies that had probably triggered worldwide depression as a result of the shrinkage in international trade.

The next section discusses the Friedman and Schwartz hypothesis, one of the most debatable hypotheses on the Depression in the U.S., and the critiques against this hypothesis.

Friedman and Schwartz Hypothesis: Depression in the U.S.

While Hayek (1933) and Rothbard (1963) agreed that the Fed had overinflated the money supply in the 1920s which caused an artificial boom and the inevitable depression due to "malinvestments", Friedman and Schwartz (1963), Ratner, Soltow, and Sylla (1979), Dolan (1983), and monetarists generally viewed that the Depression was not a basic flaw in American capitalism but attributed the contraction to a collapse in money supply, initially triggered by tight federal policy in 1928-1929 to stem the stock market boom[7].

Bank panics and failures[8] were consequences of short-term growth fueled by cheap credit in the 1920s (Bernanke, 2000). When demand fell, debtors defaulted while feared depositors began massive withdrawals. This was aggravated by the American Smoot-Hawley Tariff Act[9] which reduced substantial exports. Panic alleviators such as government guarantees and Federal Reserve banking regulations were ineffective or not used. In the face of worsening future prospects, the surviving banks built up their capital reserves and made fewer loans, which intensified the deflationary vicious cycle (Cagan, 1965).

Pertaining to the rising capital reserves, Friedman and Schwartz (1963) put most of the blame on Fed's action which led to substantial and sustained falls in banks' deposit-reserve and deposit-currency ratios. The rise in discount rates in 1929 to curb overheating boom was deemed too late which only hastened the stock market crash and pushed the economy into recession[10]. Bank reserves were initially restrained by the Fed, which discouraged banks to lend. As a result, high-powered money[11] fell in the second quarter of 1929 and in the first three quarters of 1930. It denied the legitimate fund-seekers the funds they needed. Accumulation of bank reserves by feared banks kept rising. Though high-powered money started to increase from 1930-1932, the money supply was actually falling, when the money multiplier dropped due to reduction in productivity.[12]

On the initial reduction of money supply and the subsequent bank runs, Friedman and Schwartz (1963) argued that this would not have happened should the Fed undertake appropriate counter-cyclical policies timely by supplying more high-powered money through larger open market purchases when the market needed liquidity most. Hence, the demand for money could be met and the failure of bad banks would have only affected the depositors and stockholders of these banks; a systemic downfall could be avoided. It was postulated that the Fed did not act reasonably because falling banks were disproportionately small non-member banks while the failure of large member banks were perceived to be attributed to bad management.

This issue was raised because in the earlier recessions of 1924 and 1927, the Fed had used counter-cyclical open market operations that resulted in the brevity of these recessions, but the death in 1928 of Benjamin Strong had resulted in a lack of clear leadership. George Harrison, who succeeded Strong, could not exercise the leadership required.[13]

In short, the incompetencies and complacencies of the Fed should be blamed for the outbreak of the Depression.

Critiques against Friedman and Schwartz Hypothesis

Nevertheless, Friedman and Schwartz hypothesis has received a number of criticisms. Mayhew (1983) argued that the monetary contraction blame on the Fed was exaggerated. Friedman and Schwartz's (1963) argument would have been much stronger had the high-powered money decreased consistently during the critical years of 1929-1933. However, after its initial reduction from the second quarter of 1929 till the third quarter of 1930, high-powered money had instead increased throughout 1931, 1932, and most of 1933. Therefore, he argued that, if indeed the Fed had restrained credits, it was only from the second quarter of 1929 till the third quarter of 1930, but not beyond.

In refuting the monetarist's notion that the Fed was inept, Mayhew (1983) contended that the power of Fed was constrained as it had not been an organisation to which all state and national banks belonged. Moreover, in those days of unfettered capitalism[14], banks had failed in large numbers (exceeded 350 every year between 1920 and 1929) without widespread recessions. Therefore, the Fed might not expect the situation to behave differently in 1930. In further defence for the Fed, Mayhew maintained that the Fed had followed adequate guidelines when making open market purchases. Throughout the 1920s, the Fed had used the reserve status of the New York and Chicago banks to evaluate the banking system position as a whole. Based on these two banks' status, the Fed had achieved the goal of monetary ease by 1930-1931. As remarked by Governor Harrison (Stauffer, 1981), "More liquidity would be worse, at that time when the banks lacked confidence because it would send a bad signal to them. Thus, how could Friedman and his followers be so sure that more reserves would entice frightened banks to lend and the public in general to borrow?"

On why the timely counter-cyclical open market operations were done by the Fed in the 1920s but not in the crisis period, Wicker (1966) speculated that in 1924 and 1927, international rather than domestic considerations dictated the timing of open purchases. It was claimed that the actions were undertaken to ease pressures on London as the banks there were struggling to return to prewar gold standard.[15] In other words, the Fed had no prior experience dealing with a situation as severe as the Depression. Furthermore, laws which required partial gold backing of credit, too, had imposed restrictions on the credit that the Fed could issue (Ellis & Silvano, 1999).

On the blame on the fall of deposit-reserve and deposit-currency ratios, Temin (1976a) pointed out that bank failures resulted from falling deposit-currency ratio can be explained by falling agricultural prices, the structure of American banking, or poor bank management.[16] Thus, he argued that income and production fell after 1929 for non-monetary reasons which in turn reduced the demand for checkable deposits. While checkable deposits were reduced, money in cash or equivalent would be held more even without the initial contractionary monetary policy by the Fed in 1929. Temin (1976b) explained that if money supply was endogenous, then the fall in checkable deposits could be explained by decreased demand for loans by business with new and underutilised factories, farmers who were beset by falling agricultural prices and consumers who were worried about continued employment. Therefore, Fed's policy could not be blamed for the fall of deposit-reserve and deposit-currency ratios.

In summary, the critics contended that various exogeneities governed the outbreak of the Depression rather than the policy of the Fed which was implemented with due diligence.

Bank Failures in the 1920s

Though Friedman and Schwartz hypothesis attributed the Fed as the one who had turned a mild recession into a deep one, the point that the Depression hinged on the spate of bank failures is indisputable. It is worth to discuss the possible factors which led to the extensive bank failures in the crisis period.

Stauffer (1981) found significant relationships between past bank failure and bank failure during the Depression on a state-by-state basis between single year bank failures rates for 1928-1929 and 1930-1931[17]. Stauffer conjectured a process which contributed to short-run trends in bank failures; bad management, and costumer distrust might take their toll for a few years, which then instilled caution on the part of management, and survival of the stronger banks which allowed the failure rate to recede for some time, but only to be followed by increasing problems as new banks arrived and old lessons forgotten. Stauffer also found that the incidence of bank failure was higher in the agricultural states for the entire period from 1927 to 1933. Besides these banks, non-member banks had also experienced high failure rates in the late 1920s till early 1930s.

In this respect, Stauffer (1981) postulated that the rural banking structure, namely the prevalence of small banks and non-member banks that were more prone to poor management, lower banking standards, depositor mistrust, and inadequate liquidity, was a contributing factor as well. Using Spearman correlation coefficients based on 1929-1931 data, Stauffer showed that bank structure was a significant determinant of bank failure while farm income was statistically insignificant.[18] His result was consistent with Cagan's (1965) observation that business conditions generally had little impact on bank failure in the early stages of a downturn.

Stauffer (1981) also cited other possible institutional causes of bank failure such as the lack of deposit insurance, rumor and panic and the failure of the Fed. Hence, Stauffer's proposition is compatible with Friedman and Schwartz hypothesis, and even complements it.

Slump in U.S. Consumption Expenditure

Based on the theory set by Mishkin (2004), Temin (1976a) proposed the "spending hypothesis" to explain the Depression. According to him, Americans had been increasing their indebtedness throughout the 1920's and heavy borrowings in 1929, thus, when the stock market crash came, the net wealth of households was severely reduced and leverage level increased.[19] The decline in the value of their assets both reduced their net wealth and raised the ratio of debts to assets. Consumer expenditures are related to the balance-sheet position of households, in which the stock of money figures only marginally. In addition, costs of selling non-liquid assets or going bankrupt makes household spending a function of leverage. At the same level of net wealth, consumption expenditure would be inversely related to the volume of debt. The slump in expenditure therefore was also a contributing factor to the Depression.

Temin's (1976a) argument supported the critiques against the Friedman and Schwartz hypothesis, which basically stated that factors uncontrollable by the Fed had caused the Depression.

Various Exogenous Factors

Contrary to the monetarists who emphasised that the Fed's action had turned a mild recession into a Depression, Mayhew (1983) listed a variety of problems that had developed in the 1920s and early 1930s that contributed to the Depression; the collapse of the agricultural prices[20], England's attempt to return to prewar gold standard[21], reparations and war debts[22], restraints on international trade[23], end of housing boom, and maturation of U.S. automobile industry, among others. Meanwhile, Temin (1976a) ascribed the decline in housing and stock exchange in the late 1920's, particularly the New York Stock Exchange, along with the instability of the foreign exchange markets, large shifts in

international lending and changes in terms of trade in the early 1930's as primary causes of the Depression.

In conclusion to what had caused the Depression in the U.S., perhaps, Gandolfi and Lothian (1977) were right when they suggested investigating the interrelationships between real and monetary factors, instead of using a dichotomous approach when assessing the factors associating with the Depression.

Friedman and Schwartz Hypothesis: Transmission of Depression to the Rest of the World

Friedman and Schwartz (1963), using evidence from August 1929 to August 1931, indicted that the U.S. had transmit the depression to the rest of the world by draining reserves away from them. The Fed raised interest rates in August 1929, which led to money stock contractions in the rest of the world.[24] In addition, the transmission of depression was aggravated when the U.S. deviated from the "gold standard rules" by more than 100 percent sterilisation of gold flows; rendering domestic monetary base not to increase as much as otherwise would be further drained reserves out from other deficit countries.[25]

In the 1920s, the Fed began to do open-market operations, even though these were not contemplated by the original enabling legislation (Formaini, 2005). And these early open-market operations were undertaken, unfortunately, to sterilise gold inflows from England's over-valuation of its pound sterling.[26] Sterilisation is the process by which the money supply is kept constant regardless of the inflow of gold; ordinarily, under the international gold exchange standard in force at that time, the gold flow into the U.S. would have caused monetisation[27] that would raise U.S. prices and make Britain more competitive as its prices fell. The U.S. and France prevented this from occurring. Both nations' gold stocks rose dramatically while, at the same time, their central banks sold securities to reduce the monetary impact of the new gold to zero.

As a result, during the late 1920s, the U.S. should have experienced inflation due to this gold inflow; but instead, it experienced a mild deflation due to the sterilisation policy. Therefore, it is postulated that the U.S. deflated the money supply in the rest of the world and thus transmitted the depression to them.

Critiques against Friedman and Schwartz Hypothesis

Friedman and Schwartz's argument on the transmission of the Depression to the world was rebutted by Fremling (1985) by saying that their proposition focused only on the situation in the U.S. but ignored the situation in the rest of the world. Gold flows to the U.S. did not necessarily imply falling gold reserves elsewhere, since mining of gold as well as conversion from private gold stocks could have increased total world reserves. According to Fremling, the gold reserves in the rest of the world had in fact increased during the first two years of depression, which was contradictory to Friedman-Schwartz's argument.[28] Fremling also showed that, even with a reduction in total foreign reserve assets owned by the rest of the world, the rise in their gold reserves was about double, thus their net reserves were actually increasing rather than decreasing. In parallel with Fremling, using Federal Reserve data, Hardy (1936) revealed that between December 1929 and December 1931, the U.S. share of world gold had instead declined from 37.8 to 35.9 percent. Therefore, these arguments undermine Friedman and Schwartz hypothesis which says that the U.S. had siphoned out gold reserves from the rest of the world.

Fremling (1985) also refuted the accusation that U.S. had violated the gold standard rules. Since at that time, reliable currency data were available but credit data were sketchy for most nations, currency data should be evaluated instead of M1[29]. If it were measured using currency data, U.S. sterilisation was not as high as that of the rest of the world. To further support his point, Fremling showed that although U.S. had a series of trade surplus from 1919 to 1931, its surplus was actually decreasing from 1929 to 1931, thus it could not have generated a downswing in the rest of the world even through the balance of trade.

In short, based on the arguments above, it can be concluded that the U.S. had not caused a massive shrinkage of money supply in the rest of the world and therefore did not transmit the Depression to the rest of the world.

A RECONCILIATION

If Friedman and Schwartz (1963) and the monetarists were right, then the Fed had actually transformed a "mild" recession into a prolonged and severe depression. It was Fed's delayed tight monetary policy which had aggravated the stock market crash when enormous speculation had already taken place. Though the stock market crash was something perceived to be imminent irrespective of Fed's action, its severe impact and the outburst of fear could have been assuaged if the Fed had provided ample liquidity to the banks.

Liquidity was essential because with a weakness in the agricultural sector, together with tight money, and numerous adverse events going on, a contagion of fear actually erupted and subsequently led to massive bank withdrawals. Bank withdrawals might not happen if the general public knew that the Fed was going to supply banks with more credit after the stock market crash since banks suffered a great deal of bad debts when debtors were unable to repay.

Nonetheless, the Fed let bank collapse one after another as it was ignorant of the great impact the bank collapse would trigger. If the Fed had not restrained credit, borrowers with legitimate needs (not speculative) would have been able to obtain continued credit and thus alleviate the downturn partly caused by a fall in the agricultural sector. Besides, should the agricultural sector be able to obtain credit easily, it might be able to go through the transitory fall in prices and the contagion of fear would not have arisen. It was also assumed that the recession would be a more temperate and a shorter one if the Fed had restrained credit at an earlier time of market boom or eased credit right after the bubble crashed. Though credit was eventually eased by 1930-1931, it might be too late as massive bank failure had already transpired.

Alternatively, if Temin (1976a, 1976b), Mayhew (1983), and other non-monetarists were right, then the Fed had actually been innocent and had in fact done the right thing; irrespective of its action or inaction, the Depression would still materialise since the situation in 1929 was different from the recessions in the 1920s. Various unfavourable domestic and international events were taking place, and even with a lax monetary policy by the Fed, the fear would have overwhelmed any reassuring measures and eventually massive withdrawals would still happen.

In summary, it may be reasonable that the Fed shoulders part of the blame for the onset of the Depression since various exogenous factors (some are nonmonetary) as mentioned in previous sections could easily emasculate the intervention by the Fed. In fact, current literature has focused on these exogenous factors with advanced quantitative methods to look at the significance of the Fed's factor in the depression. Among them are Bernanke (2000), Bordo (2003), Christiano et al. (2003), Federico (2005), and Formaini (2005). These studies in general, complemented the factors discussed earlier with sophisticated techniques.[30] As to the question of whether the U.S. had transmitted the Depression to the rest of the world, the answer can be more ambiguous as external and internal factors had come into play at that time. Perhaps, World War I is the unquestionable culprit in this case. Nonetheless, the ambiguity of whom or what is at fault does not hinder the succeeding discussion on the impossibility of another Depression in the 21st century.

THE IMPOSSIBILITY OF A GREAT DEPRESSION IN THE 21ST CENTURY

Upon contemplation of some of the significant but certainly not exhaustive literature on the Depression, I would like to weigh the possibility of an episode of a similar or a greater version of the Depression, considering the various developments and changes since then. The discussion is this section encompasses the economic and financial considerations, and the political, social, and technological considerations.

Economic and Financial Considerations

Since the stock market crash was a prominent factor in the Depression, the likelihood of a similar crash as eventful as the October 1929 crash would be assessed. It is generally accepted that the crash or any other major stock market crashes are by and large outcomes of speculative bubbles. To curb the speculation movement, it is agreed that short-selling and capital lending be controlled and monitored. From the lessons learnt from stock market panics in 1819, 1873, 1884, 1893, 1896, 1901, 1907, Black Friday (1869), Black Monday (1987), downturn of 2002, and certainly Wall Street Crash of 1929; the U.S. or any other respectable monetary authorities would have ample foresight should a crash is forthcoming.[31] Benjamin Graham (Can Crashes be Forecasted?, 2006) discovered some signs that may lead to a stock market crash: people of average means become exceptionally wealthy, news media become overly euphoric, and inflation is rampant. In Asia, Chen (1999) found that the price behaviour of shares and convertible bonds give a clear signal of market reversal in the 1997 financial crisis.

Besides the advantage of a foresight, the technical aspects of stock market transactions have also been perfected since.[32] For example, the circuit breaker system was implemented, which electronically stops stocks from trading if prices plummet too quickly (Black Monday, 2006), besides the employment of price limit (Chang, 2006).

The emerging of international portfolio diversification since the last two decades of the 20th century should in certain ways, temperate any major stock market crash in any single economy. Though interrelated, the asymmetries in economic fundamentals, industrial structure and competitive advantage across nations in the Western hemisphere, Middle East, and Far East of Asia, should reduce the likelihood or the intensity of a worldwide recession outbreak. For instance, as the U.S. stock market deteriorated in the 2000-2002 period, international diversification, despite the presence of substantial country risk, would have saved many a portfolio from massive losses or from a total calamity altogether (Khoury, 2003).[33]

On the likelihood of bank failure, capital overlending can be curbed in many ways. The risks of imprudent lending have been widely discussed since the outbreaks of financial crises throughout the 19th and 20th centuries, be it domestic or international. Therefore, banks all over the world should have shielded themselves with sufficient precautionary tools and foreknowledge in preventing overlending and bank panic. [34] For example, at the U.S. federal level, anti-predatory lending bills have been introduced in Congress, such as the Predatory Lending Consumer Protection Act of 2000, and Anti-Predatory Lending Act of 2000 (Perrow, 2000). In fact, stockholders evidently perceived a general decrease in the risk of the banking industry as a result of International Lending Supervision Act (Billingsley & Lamy, 1988).

Besides the concern of stock market crash and bank failures in individual countries, the widespread of the Depression was partially attributed to the beggar-thy-neighbor policies by the policymakers back then. But today, increasing international interrelatedness in real and capital markets means that the much higher probability of the adverse impacts of beggar-thy-neighbor policies is well understood and therefore no rational nation will let its neighbour fall. In fact, this is one of the reasons for the formation of the International Monetary Fund and its sister, the World Bank, in mitigating the vicious cycle of beggar-thy-neighbour policies.[35] The measure against beggar-thy-neighbour policies and subsequent widespread of panic is even more strengthened with regional economic integration that enhances the survival of troubled member countries. Among the successful regional integrations are EU, NAFTA, and to a certain extent, Mercosur. In Asia, the recent change in the leadership of Taiwan, which promises more economic ties with China, suggests that the regional economy is getting more integrated and stronger (Callick, 2008).

On the global concern of an international chaos triggered by a single country, the U.S., from the downward pressures on dollar as a result of substantial U.S. current account and balance of payment deficits over the last two decades[36], there

are at least two arguments that can mitigate the fear. The first is the sustainability of the dollar value. As mentioned by McKinnon (2001) and McKinnon and Schnabl (2004), the dollar value today is sustainable as the rest of the world has been holding a large portion of their assets denominated in dollars and thus would not let the dollar value to plummet. Back then, cross-national holding of assets was restricted, which might lead to more selfish beggar-thy-neighbor policies where every nation raced to devalue its currency to enhance its competitiveness. Secondly, with the economic power shifts from the West to East Asia (i.e. China and India), the world has reduced its reliance on the U.S. and the West for its input and output markets (Casetti, 2003; Garver, 2002), hence a global recession triggered by a single country or region today is more unlikely than the time of the Depression. Since 2000, China has more than doubled its share in world merchandise exports and ranks as the third largest exporter and importer in merchandise trade in 2006, and in the second half of 2006, China's merchandise exports exceeded those of the U.S. for the first time (World Trade Organisation, 2007). As with the conventional wisdom of a competitive market, a more distributed economic power may make people better off.

Based on the economic and financial considerations summarized above: foreknowledge of a stock market crash, technical control against excessive stock market price movement, international portfolio diversification, measures against overlending, economic cooperation and regional integration, sustainability of the dollar value and a more distributed economic power globally, it can be seen that it is less possible for the Depression to erupt again with all these settings unchanged.

Political, Social, and Technological Considerations

Besides the economical and financial considerations, the role played by political, social, and technological considerations too, cannot be ignored when assessing the possibility of another Depression.

The good news is that a global war is unlikely in the 21st century; though we have had Sept 11 tragedy, intermittent terrorist threats across the Western hemisphere, junta strikes, ceaseless tension in the Middle East and suspicious nuclear endeavors in Iran and North Korea, among others, it is perhaps uncontroversial to say that an international war as deadly as the World War will not recur at least in the foreseeable future.[37] And, this is in part nobly attributed to an increasing worldwide economic integration (Blanton & Apodaca, 2007; Momani, 2007). Thus, socially, a general sense of peace and stability is developed and reinforced even though the world audience at large still loathes about the world police role of the U.S. and its close ally, Britain. Unless a world crisis triggered by, say, climatic catastrophes from global warming, food shortage, or an extraterrestrial intrusion, a universal world peace will prevail (Chao, 1995). This is very dissimilar to the circumstances prior to the outbreak of the Depression where the people were still deeply traumatised by World War I. Given that another World War will not erupt, the problems brought about by war debts and reparations after World War I should not arise. [38]

Besides a world free of world wars, education plays a role too. With years of education in economics and finance, together with exposure from the media, baby boomers, and later generations are more aware of how the financial and banking systems function, and thus are presumably able to cope with more risks and uncertainties than the generation in the Depression era.[39] It was found that participation in college level personal finance course was associated with higher levels of investment knowledge while experience with financial instruments appeared to explain the variance in both investment knowledge and savings rates (Peng, Bartholomae, Fox, & Cravener, 2007).

Lastly, with tremendous advancement in information and communication technology (ICT), it is becoming harder for private information to remain private, and therefore information asymmetries are greatly reduced. With greater transparencies and information dissemination efficiencies, stock markets become more efficient,

thus, abrupt market shocks can be significantly moderated. [40]On the contrary, information took much more time and effort to disseminate in the interwar period.

A general sense of world peace, a more finance-savvy generation, and mushrooming of information technology may imply a more moderated financial economy worldwide than during the Depression era, thus reducing the likelihood of Depression's return.

CONCLUSION

Certainly, this paper does not intend to assess in detail the various factors impinging on the possibility of another Depression and unquestionably the aspects evaluated above are not exhaustive. Nevertheless, it is hoped that businesspersons and non-economic academics can benefit from reading this article; adding to their knowledge pool regarding the world's greatest depression, the theories behind its outbreak, current economical, financial, political, social, and technological arrangements, and a straightforward comparison between these arrangements of the 21st century and that of the Depression era. Looking at these current developments, I uphold that the world will be free of such an awful depression in the 21st century.

END NOTES

1 Great Depression is written as the Depression thereafter throughout the text for simplicity.

2 Bear strategy in which someone sells borrowed stock for which the seller will pay later for it in the hope that the price will fall.

3 A group of sellers start selling short in order to push the price down and benefit from the price fall.

4 They are groups of investors that manipulate the prices by selling and buying among themselves.

5 Syndicates would buy all the floating stock secretly and then impose prices once the market is 'cornered'.

6 Beggar-thy-neighbour, or beggar-my-neighbour; policies that seek benefits for one country at the expense of others. Such policies attempt to remedy the economic problems in one country by means which tend to worsen the problems of other countries. The term was originally devised to characterise policies of trying to cure domestic depression and unemployment by shifting effective demand away from imports onto domestically produced goods, either through tariffs and quotas on imports, or by competitive devaluation. More recently, beggar-thy-neighbour policy has taken the form of reducing domestic inflation through currency appreciation. This improves the terms of trade and thus reduces cost-inflationary pressure in the appreciating country but tends to increase cost inflation in the country's trading partners.

7 Current Federal Reserve System chairman Ben Bernanke, has admitted that the Great Depression was caused by monetary contraction, which was the consequence of poor policy making by the American Federal Reserve System. See http://www.worldnetdaily.com/ index.php?fa=PAGE.view&pageId=59405.

8 In total, 9000 banks failed in the 1930s.

9 The American Smoot-Hawley Tariff Act was enacted on June 17, 1930. The debt crisis was associated with the Act which seriously reduced international trade and causing retaliatory tariffs in other countries (Kindleberger, 1973). The average ad valorem rate of duties on dutiable imports for 1921–1925 was 25.9 percent but under the new tariff it jumped to 50% in 1931–1935. Though foreign trade was a small part of economy in the U.S. and was concentrated in farming, it was a much larger factor in many other countries. Consequently, U.S.

physical volume of exports fell in half and the hardest hit ones were farm commodities. This led to American farmers' default on their loans before runs on small rural banks that characterised the early years of the Great Depression.

[10] As been pointed out by Krugman in Jia (2008) on the current U.S. mortgage crisis, the Fed should have acted in boom rather than in the slump since the Fed has substantial regulatory and moral-suasion power.

[11] High-powered money = reserves held by banks + currency in circulation held by the public.

[12] See (Mishkin, 2004: p 375), $M = \times MB$ where M is the money supply, m is the money multiplier and MB or monetary base is the currency in circulation plus reserves. Monetary base is also known as high-powered money. M can fall when the increase in MB is more than offset by a decrease in m.

[13] Dispute between George L. Harrison, governor of the New York Fed and Roy A. Young, governor of the Federal Reserve Board took place amidst a background of already wildly fluctuating stock and commodity markets and increasing financial stress abroad. This led to delays of the decisions on open market purchases. Before this, the governor of N.Y. Fed had always played the *de facto* leader role.

[14] In the 1920s, impact of bank failures had been limited without spillovers to the whole economy. Bank failure was thought as a normal consequence of competitive market forces and capitalism.

[15] While libertarians and monetarists claimed that the Fed spread the Depression to the rest of the world by more than 100 percent sterilisation of gold inflows in the 1920s (to be discussed later), Wicker (1966) thought that the easing of U.S. money supply in 1924 and 1927 was not due to domestic recession but rather a conformity to England's call to return to gold after World War I.

[16] The fall in deposit-reserve and deposit-currency ratios can be explained by the supply side as argued by Friedman and Schwartz (1963) which can be set by the Fed; or by the demand side as argued by Temin (1976b) which is determined by the public. However, both can happen at the same time.

[17] On the other hand, Temin (1976b) could not find significant relationships between past bank failure and bank failure during the Great Depression. Using state cross section regression analysis, he regressed the state failure rate for the combined 1921-1929 period against the single year failure rates for 1930 and 1931 and found no significant relationship on a state-by-state basis between the single years of the 1930s and the nine-year period of 1920s.

[18] Bank structure was measured by the ratio of nonmember deposits-to-total deposits, and the ratio of deposits at country national banks-to-deposits at all national banks while bank failures was measured by the ratio of failed deposits by state-to-total deposits, and the ratio of number of failed banks by state-to-total banks.

[19] This hypothesis is parallel with what Krugman explained in Jia (2008) where he predicted that the current U.S. mortgage crisis could produce 20 million Americans with negative equity.

[20] Agricultural distress in the 1920s is routinely quoted among the causes of the Great Depression. However, Federico (2005) challenged the conventional wisdom. He claimed that world agriculture was not plagued by overproduction and falling terms of trade. The indebtedness of American farmers, a legacy of the boom years 1918-1921, did jeopardise the rural banks, but the relation between their crises, the banking panic of 1930, and the Great Depression is

tenuous at best. By discounting the agriculture factor, this argument indirectly strengthens the Friedman and Schwartz hypothesis.

[21] U.S. is said to have helped England's return to gold, devalued its currency to be in par with pound sterling after World War 1. it is often cited that this had exaggerated the depression. However, using forward exchange rates and interest rate differentials to measure devaluation expectations, Hsieh and Romer (2006) found virtually no evidence that the large monetary expansion led investors to believe that the U.S. would devalue. By discounting the dollar devaluation factor, their argument indirectly strengthens the Friedman and Schwartz hypothesis.

[22] It is possible that without the large short-term international debt amassed by German banks in the process of rolling over the war-related debts, the German banking system would have withstood the failure of the Austrian Kreditanstalt. War-related debts critically disrupted the international financial system, possibly started the Great Economic Depression of 1929, and probably aggravated it (Fleisig, 1976).

[23] Madsen (2001) showed that world trade contracted by 13% because of falling income, 8% because of discretionary tariff escalations, 7% because of the imposition of discretionary nontariff trade barriers, and 5% as a result of deflation-induced tariff increases, from 1929 to 1932.

[24] At the conclusion of the World War I, every major western country owed something to someone, but on net most of the war debts were owed to the U.S. by France, Great Britain, and Italy; these four countries in turn, were to receive most of the payments by Germany on the reparations account (Fleisig, 1976). This arrangement, together with the rise in interest rates could be a reason for money contraction in other parts of the world.

[25] Should the inflows of gold were not sterilised, the U.S. domestic monetary base would be inflated, and the effect of the interest rates rise would have been reversed.

[26] One of the factors of the over-valuation was England's financing of the world war. Pound sterling holders converted sterling into gold and placed them in U.S. which was deemed to be safer at that time.

[27] Monetisation is the process of converting or establishing something (i.e. gold, silver, or diamond) into legal tender. In this case, it refers to conversion of gold. It usually refers to the printing of banknotes by central banks.

[28] Based on the Federal Reserve Bulletin, 1933, Fremling (1985) proved that gold reserves outside U.S. indeed increased from $6.255 billion in 1929 to $6.665 billion in 1931, the same period examined by Friedman and Schwartz.

[29] In the U.S., M1 includes currency, demand deposits, and other checkable deposits.

[30] They applied the foundations laid by the earlier authors with advanced techniques. The results in general do not reject the earlier propositions. Discussion on these techniques is beyond the scope of this paper.

[31] See Wood (1989), Dickinson, (2003), and Dewey (2000) for comprehensive discussions of major crashes since 1900.

[32] Margin requirements are much tighter now and not every investor or every stock is eligible for a margin account. The market will halt trading for an hour if the Dow drops 10% before 2 pm. Trading will halt for two hours if there is a 20% drop in the Dow before 2 pm. If the Dow drops 30%, trading is halted for the day. Significant events, such as the tragedy of September 11, 2001 may be cause for not opening the markets at all or closing them early to prevent a panic (Little, 2008).

[33] For an analysis of the advantages of investing in countries with different industrial structure,

see Heston and Rouwenhorst (1994); for an extensive econometrics approach on risk reduction using international portfolio, see Levy and Sarnat (1970), and for the reasons why international diversification is not popular, see Baxter and Jermann (1997).

[34] For an in-depth discussion on recent financial crises and moral hazard, see Krugman (1999) and Yeyati (1999).

[35] On the effectiveness of IMF and World Bank, read Feldstein (1998) and Stiglitz (2002a).

[36] Refer to United Nations Conference on Trade and Development website (http://www.unctd.org) for current discussions on the threat of constant U.S. current deficits and economic slowdown. U.S. annual net international reserves has been falling since 1990, see (http://www.bea.gov/international/xls/table1.xls).

[37] For discussion on world peace, see Mandelbaum (2002). Particularly, on September 11 tragedy, see Poynting and Mason (2006); on terrorist threats, see Giuliani (2007); on tensions in Middle East, see Grodofsky (2007) and Momani (2007); on nuclear endeavors, see Litwak (2008).

[38] After World War I, U.S. was said to have siphoned out reserves from the in-war countries.

[39] See Saunders (1970).

[40] See Stiglitz (2002b) and Welfens (2005).

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