Vol : 6, No : 1 Journal of Economic Policy and Research Oct 2010 – March 2011

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Listed in Cabell's Directory

# Journal of Economic Policy and Research

( ISSN 0975 - 8577 )

Vol : 6 | Oct 2010 – March 2011 | No : 1


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Is Responsible Consumption Compatible with Economic Crisis?
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Journal of

# Economic Policy and Research

## Aims and Scope

Journal of Economic Policy and Research, a refereed bi-annual publication provides an opportunity for discussion and exchange of findings across the broadest spectrum of scholarly opinion to stimulate theoretical, empirical and comparative studies in the context of economic policy and research both in India and abroad.



**(For information concerning the preparation of paper, see inside back cover.)**

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# Vietnam's Corporate Bond Market, 1990-2010 : Some Reflections

*VUONG, Quan-Hoang* & TRAN, Tri Dung***

*Corporate bond appeared in 1992-1994 in Vietnamese capital markets. However, it is still not popular to both business sectors and academic circles. This paper explores different dimensions of Vietnamese corporate bond market using a unique and perhaps, most complete data set. State not only intervenes in the bond markets with its powerful budget and policies but also competes directly with enterprises. The dominance of state-owned enterprises and large corporations also prevents small and medium enterprises from this debt financing vehicle. Whenever a convertible term is available, bondholders are more willing to accept lower fixed income payoff. But they would not likely stick to it. On the one hand, prospective bondholders could value the holdings of equity when realized favourably ex ante. On the other hand, the applicable coupon rate for such bond could turn out negative inflation-adjusted payoff when tight monetary policy is exercised and the corresponding equity holding turns out valueless, ex post. Given the weak primary market and virtually non-existent secondary market, the corporate bond market in Vietnam reflects our perception of the relationship-based and rent-seeking behaviour in the financial markets. For the corporate bonds to really work, they critically need a higher level of liquidity to become truly tradeable financial assets. Updated entries in 2010 affirm the findings and conclusions.*

## 1. Introduction

Vietnam has been viewed, *de facto*, as a new market economy after its comprehensive economic reform in 1986 (usually referred to as Doi Moi), launched at the Sixth Communist Party's Congress. For more than 20 years in transformation, the birth of different types of markets has played a critical role in changing the national economic settings and cultivating a better functioning market mechanism in the society, at various levels. Since 2005, the government has set the ambitious economic goal to become an emerging new industrialized economy by 2020 or so. And to achieve this, nobody could dispute the argument that a healthy and fast-growing corporate sector would be the determining factor. Naturally, this sector will have to address a major constraint that many a time slows down their advance i.e., capital shortage. The development of smooth functioning

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capital markets has thus become an apparent medium-term objective for the country, although it is also where we can see most clearly the gap between desirability and achievability.

As to the development of financial markets in general, when studying the transformation set out by Doi Moi, economic and business researchers mostly focused on markets and sectors where impacts could be observed clearly and directly, such as the banking system, the foreign exchange market and more recently, Vietnam's Stock Market (VSM). Thus an increasing number of academic studies and insights on these markets/ sectors have been offered from 2004 to 2009, although the markets are still in their infancy and transformation is expected to take place for many more decades.

Nonetheless, an important part of the financial system, in general and capital market, in particular, that is the corporate bond market has not been studied adequately. The notion of corporate bond market that we use here refers to the entire system of : (i) products; (different types of bonds); (ii) market participants, stakeholders (issuers, investors and regulators); and (iii) microstructure and mechanism for the market to function smoothly and the price discovery process to take place properly.

### *1.1 Rationale*

A justification for the rest of our discussion needs to be given now. Before the existence of any equity market in Vietnam, debt markets had already been established. Debt financing has thus become a common financing vehicle through either formal bank credits, non-bank loans or informal credits. But it is also noteworthy that the debt capital market has been dominated by banks of which state-owned commercial banks always outweigh the rest of the financial market (Vuong & Pham, 2009, pp. 136-137).

This situation leads to a serious imbalance in allocating funds to different economic sectors, with the loser always been private Small and Medium Enterprises (SMEs); the sector that has constantly been labeled by both the government and economists as "the main engine for growth and safety cushion for the economy in transition". Now, if we take into account the argument and all recognition of the critical importance of the SME sector, we must also admit that this growth driver has for long been under-powered, although entrepreneurs constantly try to seek conventional and innovative financing options, both debt and equity. Corporate bonds, despite their new concepts in the transitional economy of Vietnam, are likely to drive up the bond market because of long-staying capital shortage and operational inefficiency of the banking sector and the financial system (Vuong : 1997a, 1997b, 1998a & 2000).

Although they are presented early in Vietnam's modern history, corporate bonds had never been a familiar financing option for the corporate sector. The instrument had not constituted a major portion of the debt market until very recently, after the capital market booming period of 2006-2007.

In the post-Doi Moi period, 1986-2009, the Vietnamese emerging market economy has experienced a big surge in the need of finance, for which domestic innovations in financial products have been brought about by a growing number of financial service firms and a fast-growing demand for different sorts of finance, debt, equity, quasi-equity, etc. However, still bank lending and recently, equity financing, have prevailed. The banking sector continues to have overshadowed the rest of the financial system of the country.

On the other hand, the recent booming of domestic capital markets, mainly seen through the asset price inflation in Vietnam's nascent stock market, now comprising of Ho Chi Minh City Stock Exchange (HSX, starting 2000) and Hanoi Stock Exchange (HNX, starting 2005), has mostly been meaningful to upper-stratum enterprises.

Thus bank lending and equity finance in large scale (such as through capital market operations) have still been beyond the reach of smaller firms, while the majority of the corporate sector in Vietnam is classified as SME. It is noteworthy that since the mid-1990s, the international donor community in Vietnam, a group of developed countries and multi-lateral institutions, has spearheaded the private SME sector as a major source of sustainable growth for Vietnam in the long-run. Different technical and financial assistance initiatives have been pursued, such as microfinance by the French AFD, women entrepreneurship financial support by the Belgian BTC, the MPDF programme for supporting private sector enterprises managed by World Bank's IFC and so on. However, these efforts and financial supports have, perhaps, not brought the most important result for the smaller private enterprise sector : a better functioning debt market.

Access to credits for SMEs continues to be a harsh reality. Alternatives to the overwhelming bank loans are limited. Financial leasing, once expected to become a term financing option, never grew to the necessary critical mass and became short-lived, despite early promising results in the late 1990s (see Vuong, 1997b). The difficulty in obtaining sufficient finance for growth, together with the fast-changing business conditions, made honest private entrepreneurs more cautious in using debt finance, a reality that could be dated back to the mid-1990s. SMEs also realize that both the absence of genuine venture capitalists, higher risk-tolerant investment funds and their management skills, made it impossible for risky debts and risk equity to help them, even from investors and financiers known to have taste for risky investments (Vuong, 1997a, 1998a & 1998b).

Even when equity financing by a wave of venture capital and conventional investment funds became more available, there still exist some critical issues. First, only a handful of startup firms in a few industries (such as ICT, high-profit services) proved to be successful in getting the funds. Second, the amount of funds is usually small, perhaps never close to real need of finance, thus becoming something symbolic only. Third, the question of commercial viability of these young firms is really difficult to answer, leading to a serious question of making business on such equity finance.

Naturally, the facts lead to our consideration of a rather conventional but still under-developed debt financing option in the economy—the corporate bond. In the light of the above, corporate bond should not only be the most promising, but in effect, *sine qua non*.

### 1.2 Institutional Background

Bonds, like modern paper money and stocks, were first introduced in Vietnam by the French colonialists, quite early in the modern economy of the contemporary Vietnam. An example is corporate bond issued by the French railroad firm—*Compagnie des Chemins de Fer des Colonies Françaises*—which was well-known at those times and focused on developing the railroad system in French colonial territories.

Financing needs following infrastructure, mining and manufacturing projects by the French are the *raison d'être* of these bonds. Since these ventures started right in the early years of French invasion and austerity in Vietnam, corporate bonds like the above-mentioned Saigon to My Tho railroad project bond in 1884 are not rare. (The French also issued stocks for many subsidiary firms and projects in this period of Vietnam's history.)

In the central planning regime, State-owned Enterprises (SoEs) fully dominated the economic systems. Their capital needs meant those of government and should be financed by state budget. In the past, the central government of Vietnam at times raised funds for public expenditure and in part to finance SoEs' demand for capital, by issuing the so-called *'công trái'*—an old-fashioned name for government bond. There is neither primary nor secondary market for these government bonds. Popularly, the bondholders—most of them were civil servants and bureaucrats—considered the purchase of *'công trái'* as formal contribution of several days salary. These bondholders usually kept their holdings of bonds until maturity and were entitled to the face value of their holdings plus a pre-determined interest amount. As to non-state enterprises, low saving rate of people as well as absence of capital market prevented them from offering debt instruments to the population.

The shift from the long-standing one-tiered banking system to two-tiered one—which was made to happen from October 1, 1990—was a milestone of Doi Moi. The market-oriented financial systems facilitated the process of separating corporate bonds from government bonds. Starting in the mid-1990s, project bond—a debt instrument in a primitive form of corporate bond—appeared in the olden days of Vietnam's debt market (Vuong, 2010). These bonds were issued by corporate entities having the need of raising external debt funding other than conventional bank loans. The funds were used for specific projects. At this stage, there was a grey area between government and corporate bonds which caused transitional characteristic. Most issues needed some kind of 'guarantee' by the state, for example, a payment ascertained by Vietnam Ministry of Finance. Local state treasury-authorized offices also participated in enhancing a smooth sale of the bonds proactively.

The change in nature of corporate bond issues in Table-1 is noticeable. In 1996, Refrigeration Engineering Enterprise (REE) issued the first convertible bond ever existed in the modern days of Vietnam. Vietnam International Leasing Company (VILC) issued fixed-rate book-entry bonds in 1999. The two issuers are usually thought of as private-sector firms, with REE Corp. being privatized in 1993 and VILC a joint venture with a substantial equity holding by the Korean International Leasing Company. These issues were both unsecured and unguaranteed. Their success in issuing corporate bonds has been remarkable due also to their high leverage at the time of issuing and their overwhelming access to bank loans, a common position that had been shared by a majority of private sector firms. The nature of these unsecured bonds issued reflected the first introduction of project financing concept into the economy of Vietnam, where only issuers' commercial viability and capacity of generating

**Table-1 : Several Issues of Corporate Bonds in 1990s**

| Project | Issuer | Unit | Value | Year of Issue | Term (years) | Coupon (%, p.a.) | Type/Remarks |
|---|---|---|---|---|---|---|---|
| 500 KV power line | EVN Corp. | VND | 334.0 bn | 1992-94 | 3 | 3.8-5.0 | Bond; MOF guaranteed; gold-indexed |
| Cement | Hoang Thach Plant | VND | 44.3 bn | 1994 | 3 | 21 | Bond; State Treasury guaranteed |
| Cement | Anh Son Plant | VND | 7.5 bn | 1994 | 3 | 21 | Debenture |
| Air-con engineering | REE | USD | 5.0 mn | 1996 | 2 | 4.5 | Bond; Convertible |
| Steel casting | Southern Steel Co. | USD | 0.46 mn | 1995 | 3 | n.a. | Debenture |
| Power | Yali Hydro Power | VND | 200.0 bn | 1995-96 | 3 | 8.50 | Bond; State Treasury guaranteed |
| Tourism | Khanh Hoa Tourist | VND | 25.0 bn | 1998 | 5 | n.a. | Debenture |
| Cement | Phuc Son Plant | VND | 63.0 bn | 1997-98 | 3 | 14 | Bond |
| Financial Services | Vietnam Int' Leasing Company | VND | 10.0 bn | 1999 | 5 | 11 | Debenture; Distributed by ICBV |

*Source : Vuong (2000).*

Note : MOF – Ministry of Finance; ICBV – Industrial and Commercial Bank of Vietnam (since 2009 : VietinBank) healthy cash flow in the future really counts. Government-guaranteed debt issues have gradually shifted toward commercial types and on the basis of creditworthiness.

In July 2000, the first stock market was established in Ho Chi Minh City. Corporations since then have had an alternative for finance if equity is their choice. To a certain extent, the existence and vitality of a functioning stock market has induced better activeness of the bond and similar debt finances. Both the number of successful issues and liquidity of corporate bonds have shown significant improvements in recent years, although problems that hamper the development of the corporate bond market remains—the issue that we will deal with later on, in this study.

### 1.3 Legal and Regulatory Foundation

The primary and secondary market transactions of corporate bonds in Vietnam have been governed by a regulatory framework, consisting of several legal documents which issuers and participants in the bond market must observe.

***The Law on Securities, 2006 :*** This highest regulatory document governing the listed and public corporate bond issues and trading was passed by the National Assembly of Vietnam, numbered No. 70/2006/QH11 on June 29, 2006. It stipulates that a firm that wishes to offer a sale of bond to the public must prepare a set of documents and follow disclosure requirements, prior to a formal appraisal/approval by the authorities.

The stipulations focus on the issuing firm's responsibilities of maintaining healthy financials and meeting its financial obligations to bondholders. Information and disclosure practices play a pivotal role to this end. Issuing firms must ensure the validity and completeness of data to bondholders even before the issue.

The financial accounts presented by such bond prospectus must comprise of audited balance sheets, statements of income and statements of cash flows. Annual financial reports must also be provided to bondholders.

***The Enterprise Law, 2005*** paves a debt-issuing path for a shareholding firm by stating that they have right to issue corporate bonds, convertible bonds and other types of bonds, in conformity to laws and the firm's Articles of Association. The law prohibits enterprises from issuing bonds when they do not exhibit a sound financial position, having signals of either low debt servicing capability or below-average profitability. The Board of Directors has the right to determine details of the issue, but it will have to go back to present these to the firm's General Assembly of Shareholders in due course.

In addition, the Decree 52/2006/ND-CP by the Government of Vietnam stipulates details which enable eligible enterprises to issue their bonds, vanilla or with embedded options (convertibility attached with rights). Financial and regulatory obligations pertaining to the issue, rest with the enterprises.

And finally, the decision 07/2008/QD-NHNN by the State Bank of Vietnam (SBV) governs particularly credit institutions operating in Vietnam, including state-run and joint-stock commercial banks, foreign bank branches, 100 per cent foreign-owned banks and banking joint ventures. This decision is devised for banks, on top of other legal documents, since banks are large financial firms that may have profound impacts on stability of the national financial system.

The above law and sub-law documents constitute a regulatory framework that enable the bond markets, formal or informal, to be institutionalized and traded. In reality, they still contain unsolved issues but remain to be important cornerstones for the surge of the corporate bond market in Vietnam from 2005 to date.

## 2. Review of the Literature

There is a rich literature of corporate bond-related issues. Unfortunately, not many research efforts have been extended to the Vietnamese bond market, perhaps because of its early day's negligible size and low significance in international portfolio indexing. To this end, this study makes one of the first major efforts in understanding their foundations and insights.

### *2.1 The Literature*

Oldfield (2004) reports that by issuing bonds and debentures, the corporates start playing a game with claim holders. On the one hand, an issuing corporate takes advantages of setting up terms and conditions of the bond in order to escape covenant restrictions or capture option value for its stockholders. On the other hand, investors keep their right to refuse the game. Bondholders, if existing, resist the issuer's endeavours and capture option value for their coalition. While pursuing their own interests, arbitrageurs and issuers create market equilibria, single or multiple. In this game, Oldfield also suggests the exchange of player's position; that is, stockholders request to convert their holding shares to corporate bonds, especially in financial distress situation.

Interest rates have a particular influence of corporate bond market. Conklin's (1961) definition of the outlook for the corporate bond market is the outlook for interest rates. In the short-run, supply of funds is relatively much more stable than the demand which is affected sharply by performance of businesses. Thus it is not uncommon that outlook for interest rates is expectation of general business results.

In recession times, business demands for funds decline and that trend would likely remain for a while due to recessionary tendencies. In contrast, the demand for low-risk or risk-free fixed income instrument, such as government bond, is rising since large deficit could build up quickly even in the absence of new spending programmes. The decline of demand for fund in the market is easily offset. On the one hand, the impact upon the long market is obvious if businesses are financed as much as possible through the intermediate and long-terms. On the other hand, being financed largely through short-terms and easy bank credit causes inflation surge.

Therefore, the common anti-recessionary monetary policy is to reduce interest rates, since low rates raise expectation of business performance. This, in turn, increases fund demand of corporate sector. Fiercer competition on the capital market results in increasing interest rates because more investors expect a subsequent recovery. Conklin (1961) names such downside reluctance an inflationary psychology of investors. In the 2007-2008 financial turbulence, Vietnamese economy also experienced increasing interest rates in a totally different situation (Vuong & Tran, 2009). Inflation surged from 12.6 per cent by the end of 2007 to 19 per cent at the end of the first five months of 2008. In order to tighten money supply, the central bank in Vietnam increased base rate to 14 per cent per annum (p.a), causing the highest lending rate available in the marketplace to 21 per cent p.a. In tight monetary scheme, we also recorded failures of government bond transactions on secondary market even at very deep discount of up to 50 per cent, for fully secured 10-year instrument, reflecting a serious liquidity problem. In this dark period, although only taking place for about two months, business psychology worsened in no time. In addition, illiquidity of government bond strongly indicated that there was no secondary transaction of corporate bonds because the latter would be much riskier than the former, especially when the overnight interbank lending rate is hiked to the phenomenal level of 40 per cent p.a.

In a recent innovation, a debt issuer can also use a claw-back provision. This tool enables the redemption of a specified fraction of the bond issue within a specified period at a predetermined price and with funds that must come from a subsequent equity offering. Goyal *et al.,* (1998) argues that this option may be taken advantage of by the issuer to mitigate the wealth losses that would otherwise occur when new equity is offered. Their statistical investigation shows that private corporations, especially those which have more intangible assets, have fewer liquid assets and are less regulated, preferred claw-back in their debt contracts. The result provided by Goyal *et al.,* indicates that 80 per cent of the time, claw-back provision is used by private firms. This clearly interests researchers who focus on the impact of debt financing, especially in the form of corporate bond, on possibilities of entrepreneurial finance.

Further on determinants of bond issues, Hotchkiss and Ronen (2002) report that stock price changes do not systematically lead bond price changes. In this study, we do not have opportunity for examining this relationship largely due to the current situation in the Vietnamese securities markets, in which data and statistics are basically fragmented and would not likely constitute a true understanding when illiquidity is very common. Our observations, however, suggest that active transactions and positive price changes of stocks are important indicators for a successful corporate bond issue.

In another study, Bessembinder *et al.,* (2006) sees transparency improvement as a main tool for reducing trade execution costs for corporate bonds, which may cause liquidity externality. Transparency could help reduce both market-maker rents and market-making costs. Primary and secondary trading results of corporate bond market are traditionally reported only to involved parties. Therefore, even institutional investors are hardly able to compare their execution prices to the others. In their study, execution costs reduce approximately 50 per cent for bonds eligible for TRACE[1] transaction reporting. Lack of information may well be a reason for a quiet corporate bond market in Vietnam. Although the stock markets have recently been very noisy and increasingly active, bond transactions are still the game for a small group of players, with professional skills and mandates. In order to disseminate bond market information, the HNX—the only bond market in Vietnam—has requested the bond investors to provide primary and secondary trading results as well as other news and releases in relation to bond transactions on their corporate websites by the end of 2009.

In explaining the current degree of activeness of private bonds, we could refer to Alexander *et al.,* (2000), who hypothesized that bonds issued by private firms (that is companies without publicly traded equity) should have lower volume. Although both public and private companies are requested to provide debt market's players with compulsory disclosure, investors' access to financial accounts of the former appears somehow less challenging. In our case, Vietnamese listed companies must report their business and financial performance quarterly. In addition, their stock prices are considered informative and useful statistics indicating the capacities of the debtors; and this partly explains the reality that a convertible condition is popular in successful corporate bond issues. Results of Alexander *et al.*, however, do not entirely agree with this. Mandatory Fixed Income Pricing System (the FIPS introduced by Nasdaq Stock Market in April 1994) issues of private equity firm trade as actively as securities of public firms. While equity is not available, more investors may prefer debts of promising private firms to those of similar public firms, especially when they still have future chances to convert such debt into equity of the issuers.

As to liquidity of corporate bond secondary market, Alexander *et al.,* (2000), examine the spread between institutional buy and sell prices. Bonds with higher trading volume are from larger issues and are seasoned less than two years because of lower transaction costs. They also assert that transparency improvement is highly important to liquidity. Several bond dealers would lose their informational advantage if disclosure becomes compulsory and standard, hence would be either unwilling to make markets or reluctant to provide quotes with low friction. These acts may reduce the market liquidity. However, Alexander *et al.,* find some issue trades fairly active in FIPS. They, in addition, suggested that low-volume bonds are likely less liquid than high-volume bonds because of larger inventory of dealers that in turn increases transaction costs.

Looking into risk-return determinants of bond performance, Boardmand and McEnally (1981) decompose prices of corporate bonds into three elements : (i) the pure price of time; (ii) the default risk of the agency rating class to which the bond is assigned; and (iii) the unique risk and ancillary features of the bond itself, which exchange a corporate bond will be listed on or whether it will be listed or not, may affect marketability of the bond. On the one hand, a listed corporate bond is more attractive because of investors' expectation of easier trading and lower transaction costs. On the other hand, the fact that corporate bonds are traded largely over-the-counter among institutional investors, both in Boardmand

and McEnally's work and in our observations, implies that the real value of listing act *per se* is minimal.

On the effect of market credit condition on interest rates of corporate bonds, Brimmer (1960) gives us some good and relevant idea. The paradox of pricing process happens when interest rates are high, newly issued corporate bonds are usually offered to investors at yields substantially above those currently provided by seasoned corporate obligations of comparable quality and maturity. If credit market becomes more liquid, then the differential between new and seasoned bond yields narrows appreciably and may even become negative. When facing financial turmoil in 2008, the Vietnamese economy experienced precisely this story. In September 2008, Hoang Anh Gia Lai—a major firm operating in wood processing and real estate development; also a major stock market player—issued a two-year bond at 20.5 per cent p.a. At that time, Vuong and Tran (2009a) report that the central bank base rate was capped at 14 per cent p.a., which allowed the highest commercial bank lending rate to be 21 per cent, most probably for short-term loans. In December 2008, the corporation would be happy to raise funds at 12.25 per cent p.a. for the same maturity when the base rate declined to 8.5 per cent.

Furthermore, while facing a commercial bank credit crunch, corporations may have to sell short-term bonds to obtain working capital. In 2008, most issues carried a maturity of two years or three. Although there existed debentures issued by the major real estate developer Sacomreal, the nature of these issues significantly departs from a pure financing instrument since their creditors aim at asset-purchasing rights embedded in the instrument. This reality gives rise to the mismatch between terms of funds-rising and those of capital expenditure. As to issuers, it is a plus point that their source of capital is somewhat assured. Thus the buyers, facing higher risk, request higher financial payoffs. Because borrowing costs increase, corporations may be forced to investigate other options such as bank loans. Given low the liquidity, bank lending rates keep raising. This vicious cycle probably results in an ever-rising interest rate and strengthens the dependence of corporations on banking system—the structural issue of the Vietnamese transition economy. Brimmer (1960) also argues that the greater reliance on long-term funds would be reflected in the increased flow of new corporate issues and the concomitant rise in the new issue yields.

### *2.2 Relevant Questions for this Research*

In the Vietnamese economy, the market really starts with entrepreneurial activities, which have existed for long but never developed to efflorescence in the entire history. The nationwide reform programme since 1986, Doi Moi, has institutionalized many constitutional and legal aspects of the sector, but financial constraints remain.

In the voluminous literature on entrepreneurship, alertness to profits hypothesis suggested by Kirzner (1973) is quite noteworthy and represents the key element in successful entrepreneurial process. This has been supported by the reality that the majority of most successful entrepreneurs in Vietnam started by nature with trading successes. Nonetheless, to develop a full-blown private sector, at some point of time, financial constraints emerge to be one of the most important issues, yet overwhelmingly challenging to solve.

While equity has always been limited, nascent state of the debt market and other venture capital funding channels is also an impediment. Relationship-based rent-seeking games that prevail in the transition economy of Vietnam further exacerbate the private SME sector's capital constraints. We may have little choice but to look into debt finance alternative as corporate bonds. The instrument has some advantages since they have become increasingly familiar with the investing public (prospective bondholders) and the products could carry with them further innovation features such as embedded options of convertibility, gold-indexed or right to future physical assets (such as in the case of real estate). However, most importantly, the corporate bond option has recently been facilitated with new developments in the regulatory framework, which continues to consummate its functioning and liquidity of secondary markets has gradually improved over time and along the course of transforming the nascent capital market to a more developed state.

## 3. Analysis of Vietnam's Corporate Bond Primary Market

The surge of VSMs, especially in the period of 2006-2008, resulted in increasing interests within not only the business sector but also the academic circle. Despite the existence of several securities market data provi-ders, there has been, however, no data set detailing corporate bonds issues and trading. This reality may explain the vacuum of bond studies in Vietnam, both quantitative and qualitative. This research uses a unique and perhaps, the most complete, data set organized and compiled by the authors with assistance from the research associate at DHV&P[2]. We would briefly describe the data set below and then present our analyses.

### *3.1 Data Set*

We construct a data set using various sources of information, namely : (i) press releases by corporations, market-makers and exchanges; (ii) public media, where some details of corporate bond issues are unveiled at times; (iii) direct interviews with reliable sources, mainly senior managers with dealers and/or issuers; and (iv) occasionally, previous studies and reports if considered relevant.

The data set comprises of 152 corporate bond primary issues. In this study, an issue may be in one of the three states : planned, failed or successful. In theory, a corporation usually makes an announcement on its *ex ante* intention of bond issuing before the actual date. After that day, the issuer should and in many cases, is requested to, report the result of the issue to the relevant authorities and the public. However, this is not always the case in reality. While collecting data, we were facing situations where corporations unveiled their issuing plan without reporting final realizations *ex post*. In other situations, only the final issue results were reported without prior information on issuing intent from the issuer. In our data set, an issue is successful when the issuer or dealer or authority officially reports that all or part of the bonds has been transacted successfully in the primary market.

Each entry includes fourteen fields : Name of the issuer (if the issuer is a listed company, we use its stock trading code, except EVN for Electrics of Vietnam, HUD for Housing and Urban Development Group, MB for Military Bank, PVN for PetroVietnam, SCB for Saigon Commercial Bank and VEC for Vietnam Expressway Corporation); Ownership (value ‘1’ if issuer is an SoE); Listing status (value ‘1’ if the issuer is a listed company at the date of issuance); Major business industry; Year of issuance (with an issue as above-defined); maturity; expected; and successful values of issuance; money unit; status of issue; interest rates; technical term and location.

The majority of corporate bonds issued in Vietnam are in local currency (the Vietnamese Dong; or in short, ‘VND’). There have been only seven corporate bonds issued in US Dollar, with four of which being successful, in full or in part. The data set indicates expected and successful values in USD, using average exchange rates compiled by the authors.

The data set spans over the period from 1992 to 2009,[3] thus covering the entire history of development of corporate bond market in Vietnam’s transition process so far. Legally speaking, the

**Table-2 : Corporate Bonds by Industry**

| Industry | Issuer | Entry | | Value |
|---|---|---|---|---|
| | | Total | Success | (mil. USD) |
| Banking | 13 | 34 | 22 | 1,636.36 |
| Electrics | 2 | 16 | 15 | 752.89 |
| Shipbuilding | 1 | 14 | 13 | 660.60 |
| Others | 4 | 9 | 5 | 609.10 |
| Real estate | 11 | 26 | 22 | 523.67 |
| Construction | 7 | 11 | 8 | 246.13 |
| Mining | 2 | 6 | 3 | 180.83 |
| Infrastructure | 2 | 9 | 6 | 154.50 |
| Steel | 2 | 3 | 3 | 83.82 |
| Finance | 4 | 6 | 4 | 32.04 |
| Cement | 4 | 4 | 4 | 22.23 |
| Construction material | 2 | 3 | 1 | 6.13 |
| Gas production | 1 | 1 | 1 | 5.85 |
| Home appliances | 1 | 1 | 1 | 5.00 |
| Trading | 2 | 2 | 2 | 3.15 |
| Rubber | 1 | 1 | 1 | 2.54 |
| Tourism | 1 | 1 | 1 | 1.88 |
| IT | 1 | 2 | 1 | 0.75 |
| Seafood | 1 | 1 | 0 | – |
| Food | 1 | 2 | 0 | – |
| **Total** | **63** | **152** | **113** | **4,927.47** |

Vietnamese bond market was born with the promulgation of Decree No. 120/1994/ND-CP, issued by the government in 1994. At that time, although the state sector entirely shadowed the economy and corporate bond was simply a financial vehicle to transfer individual funds from the population to SoEs, this first regulation on SoE's bond issuing, indeed, paved the way for the alternative long-term debt capital market.

Over the past two decades of transition, total value of successful corporate bond issues has reached USD 4.93 billion. This number is approximately 13 per cent of total market capitalization of VSM (about USD 39 billion at the end of 2009). We, however, should note that there are 63 corporate bond issuers while the number of listed firms is 457 at the end of 2009. The overall success rate among the announced bond issues has been nominally high, 113 out of 152 times. Before a detailed examination of the issuers, timing pattern, industry distribution, maturity and interest rates of issued corporate bonds in more details, the following provides a brief look at the primary market situation.

### *3.2 Issuers*

Corporate bond is not a popular financial vehicle to Vietnamese business community. In nearly two decades, there have been only 63 firms attempting to issue 152 bonds. This figure is equivalent to 31.5 per cent of the 200 largest corporations of Vietnam, small portion of the increasing populated corporate sector, now recording 3,50,000 enterprises. On the one hand, bond market is a playing field dominated by large and well-known firms. On the other hand, there exists an ample opportunity for bond market development.

Two features of issuers, ownership and listing status, are presented in Table-3. Although stock markets have some positive effects on the bond issuing, e.g., more issues during the stock market boom times, majority of issuers are unlisted firms. When equity finance is not available, issuing debt is likely the only alternative. The slight difference between the numbers of state ownership and non-state ownership-related issuers is not substantial.

State-run firms tend to have a higher success rate compared to their private counterparts. In addition, their amounts

**Table-3 : Statistics of Corporate Bond Issuers**

| | Total | State-ownership | | Listed | |
|---|---|---|---|---|---|
| Issuer | 63 | 31 | 49% | 22 | 35% |
| Issuance | 152 | 82 | 54% | 46 | 30% |
| Successful issuance | 113 | 69 | 61% | 30 | 27% |
| Value (mil. USD) | 4,927.49 | 3,135.83 | 64% | 1,140.39 | 23% |

of funds raised *via* bond issues also outweigh the private-sector players, occupying 61 per cent and 64 per cent of the market share, in terms of successful issuance and value respectively. The top five firms make up 28 per cent of the number of issues, but mobilize 48 per cent of the total funds raised from bonds. Four out of the five most important bond issuers are state-owned entities : Electricity of Vietnam (EVN); Vietnam Shipbuilding (Vinashin); PetroVietnam (PVN); and Bank for Industries and Development of Vietnam (BIDV). Clearly, they are corporate powerhouses either possessing oligopolistic features or being a financial superpower in the economy.

Take a closer look at the first three state-owned champions among bond issuers. They lead the market in terms of a number of issues with 36 large attempts or 38 per cent of the total bond market mobilization in its entire existence. These champions rarely failed in their issue, although both EVN and Vinashin did experience failure once in their issuing history, but these were their attempts on international bond markets (EVN, 2007, Vinashin, 2008). This is to compare with VIC a top-class non-state firm, operating in highly profitable sectors of real estates, financial industries, media and communications. Although VIC shares have been listed and performing well on VSM, its success is lower, only three out of five attempts. One of their three successful issues was the international bond offering in November 2009, when the firm offered USD 100 million worth of convertible bonds to foreign investors, falling short of its USD 150 million target[4].

**Table-4 : Five Largest Bond Issuers in Vietnam**

| Issuer | State Ownership | Listed | Entry | | Value (mil. USD) |
|---|---|---|---|---|---|
| | | | Total | Success | |
| EVN | 1 | 0 | 15 | 14 | 734.86 |
| Vinashin | 1 | 0 | 14 | 13 | 660.60 |
| BIDV | 1 | 0 | 7 | 7 | 472.60 |
| VIC | 0 | 1 | 5 | 3 | 284.64 |
| PVN | 1 | 0 | 1 | 1 | 219.07 |
| **Sub total** | | | **42** | **38** | **2,371.77** |
| **Total** | | | **152** | **113** | **4,927.49** |

The large SoEs also came first in exploring the bond market capacity, with EVN in the period 1992-94, BIDV 2000, PVN 2003 and Vinashin 2004. Vincom—prominent private-sector bond issuer—only started its path after its VSM debut in 2007. The reality reflects the dominant position of the state-sector firms in Vietnam's transition economy, which has been in part shown by their performance in primary corporate debt market. This timing of SoE role in the bond market of Vietnam was perhaps set by the early legal framework that only dealt with SoEs' bond issuing practices and regulations, setting aside a large portion of finance needed by the private SMEs. Only two first tiny issues were observed in 1998 by EIS—a small private-sector internet services firm—worth USD 0.75 million convertibles and VILC—financial leasing joint venture with the state-run powerhouse Vietinbank—worth USD 0.72 million bond with five-year maturity and 11 per cent coupon rate in local currency.

Observing the financial performance of state-run firms brings about several insights. The lack of transparency and problems of efficiencies tend to obscure the possibility of sales of stock. The question of 'who are the buyer of their shares and at what prices' could only be solved at the boom times of VSM, when many international economists regarded as 'investing mania' and remain a conundrum in normal days of the market. Since direct equity injection into state-run firms is getting harder over time, given budget constraints and growing concern of the congress, naturally corporate bonds have gradually become a major vehicle for long-term capital build-up for SoEs.

However, the case of Vietnam Expressway Corp (VEC) is an example that suggests the 'state-run label' is not enough in the bond market and corporate bond issue is not a 'one-for-all' game, even to a politically backed-up firm. VEC is a state-run infrastructure firm, endowed with many pecuniary rights in developing and operating the booming highways construction industry in Vietnam's emerging economy. Nonetheless, the market has repeatedly signaled its doubt on the firm's management capacity and performance transparency. This led to repeated failures in its bond issuing attempts in a short period of time, representing a high failure rate ever[5]. Out of its six issues, three were considered complete failure, although they had all been guaranteed by the government. Even its 'successful' issue—as per our data classification—in August 2009, VEC's four-year bond with government's guarantee was only able to sell USD 0.19 million of the planned USD 29.27 million, a mediocre 0.7 per cent of the value that the firm has wished to mobilize.

Apart from straight bonds, the phenomenon of convertibles in Vietnam's emerging market is also noticeable. These are quasi-equity instruments, which provide both streams of fixed incomes and a call option against the issuer's common stock. On the one hand, prospective bondholders could value the holdings of equity when realized favourably *ex ante*, especially when the underlying stock flies high. On the other hand, the applicable coupon rate for such bond could turn out negative inflation-adjusted payoff when tight monetary policy is exercised and the corresponding equity holding turns out valueless, *ex post*. In our observation, convertibility in fact adds more risk to the bondholders' part in the early stage of development of bond markets in Vietnam; although some added flexibility is usually highly welcomed by many investors.

In Oldfield (2004), it appears that simple calculation of conversion value and call price is not sufficient to predict a forced conversion or redemption of corporation. When the call protection interval has expired, there are two factors which could prevent a forced conversion through a call. First, issuing corporation needs a credible method for financing the call. Second, call delay is a more significant threat. This is because shareholders structure may be changed if the ownership of the convertible bonds is concentrated among a few co-ordinated investors. Such situation, of course, requires the convertible volume to be large enough to the amount of stock outstanding. In the case of Vietnam's emerging corporate market, the high failure rate of corporate bond with convertible options reflects the fundamental axiom of choice by the market participants. We will not deny the fact that the equity market has attracted an increasing public attention in Vietnam since its first boom in 2005; and this is why the convertible bonds in many issues became the market's favourite. Nonetheless, the real value only appears when issuing firms prove themselves to be profitable operations and growth opportunities promise adequate payoffs in the future. From our data set, Vinaconex (VCG), Vietcom-bank (VCB) and Saigon Securities Inc. (SSI) are typical examples of successful convertibles, while EIS and Viet A Bank failed to meet the market's expectation on their issues of convertibles.

In 2007, VCG issued successfully a large amount of three-year convertible bonds worth USD 62.01 million, at 3 per cent annual coupon rate in local currency and we should note that Vietnam's inflation in 2007 proxied by average annualized CPI reached 8.3 per cent. Also in this year, the foreign-invested IFS listed on HOSE failed to issue its USD 15.5 million lot of three-year bonds with a much higher coupon rate, 9.6 per cent p.a. This same year, USD 12.4 million of two-year bond issued by Vinashin sold out at 8.9 per cent rate. Before that, 100 per cent of VCB's USD 86.29 million seven-year convertibles were sold out with 6 per cent coupon rate, while Song Da Corp., a major SoE in the lucrative real estate industry had to mobilize term finance at 9.3 per cent and 10.5 per cent p.a. for three and five-year maturity, respectively.

Previous success of EIS in 1998 was no guarantee for its next issue of convertibles in 2001 and Viet A Bank failed in two consecutive issues in 2008 and 2009. When the VSM fell in 2009, issues of convertible debt also became much more challenging as in the case of MCG and HSG. Clearly, what we learn from these statistics is that coupon rate and convertibility alone are not able to determine the fate of a corporate issue.

### *3.3 Investors*

From another angle of analysis, the number of players in primary markets is critically important. The more the investors are interested in corporate bonds, the less strict covenants and the lower cost of capital are. Given that large capital investment and narrow return spreads prevent individual investors from bond trading, the number of commercial banks, securities companies, financial companies and other credit institutions involving bond transactions is a small portion to eligible financial organizations. In December 2009, there were 86 primary market members and 27 secondary market members (see Table-5).

In terms of market trading, government bonds outweigh corporate bonds in all aspects such as number of listed bonds,

**Table-5 : Number of Bond Market Members, 2009**

| | Primary Market | Secondary Market |
|---|---|---|
| Bond market member | 86 | 27 |
| Securities companies | 105 | 105 |
| Other eligible financial institutions(*) | 111 | 111 |

*Source : HNX, SBV, December 25, 2009.*

(*) : commercial banks (consist of state-owned, joint stock, joint venture, wholly foreign-owned banks, branches of foreign banks in Vietnam), financial companies and non-bank credit institutions.

volumes and values of each issue, etc. Data compiled from sources of HOSE and an active securities firm in the bond market show that only 11 corporates have been listed on both HOSE and HNX stock markets. The statistics provided by the system have been far from complete and accurate, thus left outside the scope of this analysis.

Financial institutions are raising their interests in corporate bond issuing services such as underwriting. The Vietnamese foreign banks actively involve bond markets in 2010. They are not only investors but also financial service providers. Their involvement, to some extent, improves the liquidity of the markets, particularly primary market. Issuances are more likely successful with those banks as underwriters or guarantors or arrangers. The dispute over underwriting failure between IFS (the issuer) and ANZ Vietnam (the underwriter) may be exceptional. This case, however, warns people of hidden costs possibly occurring while structuring the deals.

We can look at Table-6 with 11 data entries to have a feel about the quality of statistics. Four out of these 11 show some contradiction. Bond coded as BID10107, BID10406 BID1_106 and BID1_206 show their debut trading before their issue date! Now, taking into consideration that HOSE has been the most established stock market operating for 10 years now, such quality of transaction information clearly suggests that the public attention to public trading of corporate bonds is negligible. Naturally, the low liquidity of the Vietnamese corporate bond market has been very much in line with theoretical suggestions by our previous review of the literature[6].

What we could imply directly from lack of liquidity in secondary markets is inactiveness of the primary market. In many cases, dealers and market-makers, if existing at all, have to take on the holdings of the underwritten amount until maturity. This is clearly against the arbitrage-seeking motivation and contributes to the reduction of activeness by financial intermediaries in the bond market. For this reason alone, corporate bond issuers should find it much more difficult to identify primary market buyers and almost impossible to reduce transaction costs as they wish when employing bond financing theoretically.

Given the weak primary market and virtually non-existent secondary market, the corporate bond market in Vietnam reflects our perception of the relationship-based and rent-seeking behaviour in the financial markets, since only a number of large commercial banks and their securities subsidiaries dominate the total corporate

**Table-6 : Listed Corporate Bond**

| Code | Issuer | Date of Issuance | Maturity | Value *(mil. USD)* | Interest rate *(%/ year)* | Bourse | Listed Date |
|---|---|---|---|---|---|---|---|
| PV060902 | PVN | 19-Jun-09 | 3 | 21.35 | 9.05 | HNX | |
| VE061101 | EVN | 20-Jul-06 | 5 | 56.37 | 9.5 | HNX | |
| VE061102 | EVN | 1-Sep-07 | 4 | 37.20 | 9.6 | HNX | |
| VEC10801 | VEC | 1-Sep-09 | 15 | 3.46 | 16 | HNX | |
| BID10106 | BIDV | 12-Jul-06 | 3 | 3.46 | 9.36 | HSX | |
| BID10107 | BIDV | 18-Aug-08 | 5 | 18.39 | 8.15 | HSX | 21-Dec-07 |
| BID10206 | BIDV | 7-Dec-06 | 5 | 2.82 | 9.15 | HSX | |
| BID10306 | BIDV | 18-Dec-06 | 15 | 4.36 | 10.1 | HSX | |
| BID10406 | BIDV | 18-Aug-08 | 20 | 2.15 | 10.45 | HSX | 16-Apr-07 |
| BID1_106 | BIDV | 18-Aug-08 | 10 | 7.29 | 9.8 | HSX | 22-Jun-06 |
| BID1_206 | BIDV | 18-Aug-08 | 15 | 6.23 | 10.2 | HSX | 22-Jun-06 |

*Source : Websites of HSX and BIDV Securities (visited : 1 January, 2010).*

bond primary market. The only way to secure the funding from bond issues for an issuer is to build close relationships with financial powerhouses that could help pre-arrange the required finance prior to the actual announcement of bond issues; and we clearly cannot regard this act as an arm's-length transaction, since the opportunity is not equal among enterprises and does not depend on the only basis of financial viability of issuers. Apart from superficially successful cases of SoEs in the bond market, other private-sector players that have also been successful in the bond market, such as VIC, prove themselves to be in the fields where typical rent-seeking activities in a transition economy prevail.

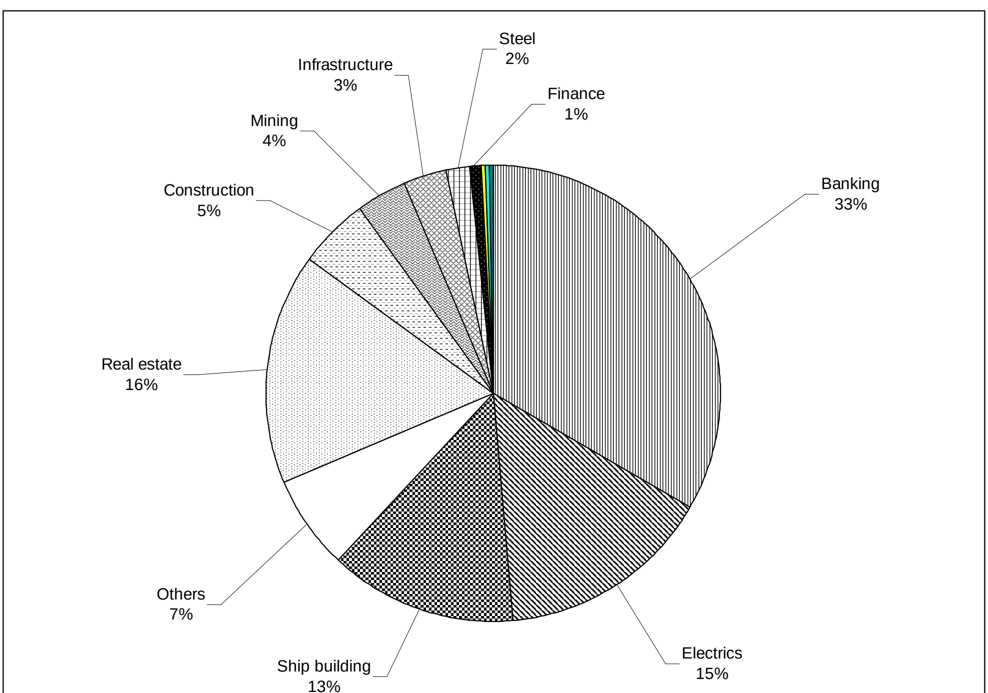
Following the above discussion, it is not surprising that there has been little room for private SMEs to issue bonds. The structural issue in resource allocation continues to remain despite the growing size of the corporate bond market.

### *3.4 Industry Distribution*

Our data sample unveils 152 issues of corporate bonds in 20 industries of Vietnam's transition economy over the period from 1992 to 2009. Industries that have bond value—that was sold successfully—of 10 per cent market and above are, in value rank : (i) Banking; (ii) Electrics; (iii) Shipbuilding; and (iv) Real estate. The 'Others' category is comprised of three large firms VIC, PVN and FPT (the largest IT and communications firm in Vietnam; also privatized SoE)[7]. Figure-1 presents an industry distribution of corporate bond values through successful issues.

The first four industries show a strong concentration of values of up to 78 per cent of total bond market value in the primary market. These industries share the properties of : (i) monopoly, by state or nature; (ii) having large financing need; (iii) close link to state ownership; and, (iv) being classified into strategic fields of development by the government. Within each industry, these four properties also determine the priority for issuers and values, with one particular example being the banking industry. We now look into these properties more closely by visiting several industries.

**Figure-1 : Corporate Bond Values by Industry**



***Banking :*** Three banks participating in the bond market as issuers with failure are : Phuong Dong Bank (once in 2009), Sai Gon Bank (once in 2008) and Viet A Bank (twice in 2008 & 2009). Thus the effective bond finances have been allocated to 10 commercial banks, of which two largest state-run banks, BIDV and Agribank, occupied 40 per cent.

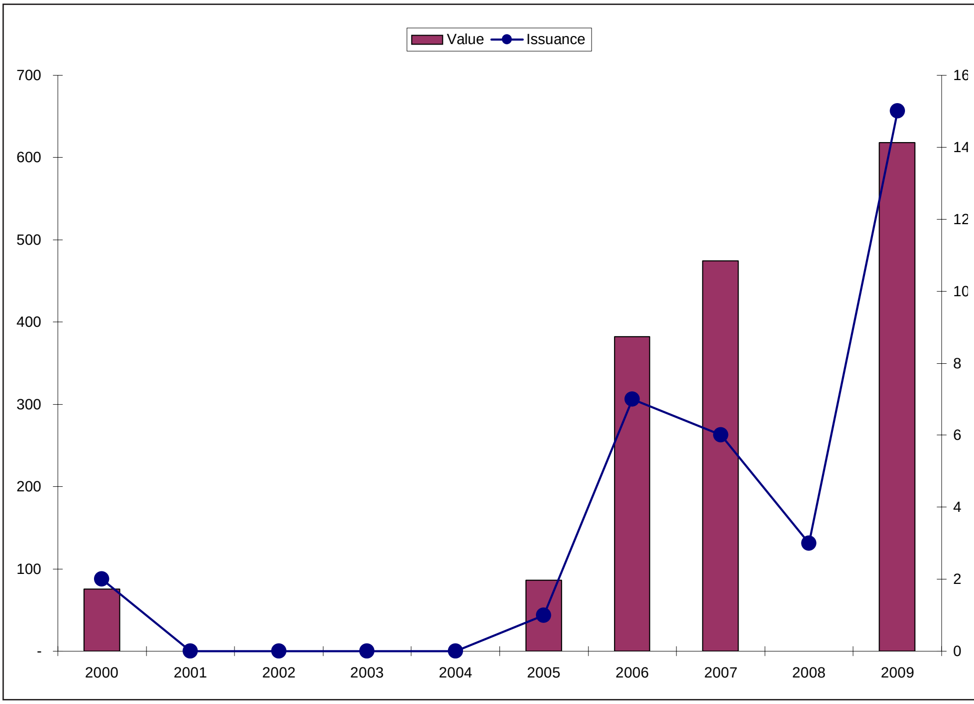
Major motivations for issuing bonds are banks' solution for Asset-Liability Management (ALM) problem and growth in size. Most deposits with commercial banks have been short-term or demand ones. The psychology of depositors has been obsessed with high-inflation periods and currency devaluations that happen periodically. When the economy faces financial turmoil, short-term rate usually skyrockets to adapt unexpected banking liquidity problems and flows of short-term money reflect arbitrage opportunities for many depositors[8].

However, the long-term financing need increases very fast, especially for real estate and infrastructure construction projects. Longer-term corporate bonds are of primary concern for banks to deal with the maturity mismatch in their ALM. The typical case is BIDV, charged with long-term funding for development projects, issue the largest amount of bond and most frequently, following its first two successful issues of five-year bonds worth USD 75.29 in 2000. This bank issued many bonds with maturity running from 5, 10, 15 and 20 years, and has become more active over time, with the number of issues increasing every year. Figure-2 shows the number of banks' corporate bond issues in Vietnam (both success and failure) over time.

However, for four years from 2001 to 2004, the banking industry of Vietnam recorded no success in bond issuing attempts. In 2006, Vietnam's most well-known VCB issued USD 86.29 million of convertible bonds successfully and this was a precursor to a boom period of VSM in the two years 2007, 2008, with the banking industry mobilizing USD 856.39 million from corporate bond sales or 52 per cent total bond values of the industry. Again, when some recovery signals appeared in 2009, the bonds helped banks mobilize USD 618.39 million.

Bonds were at times used as capital cushion for state-run banks that had planned to improve their capital adequacy, but could not issue equity stock immediately, especially in the case of banks in transformation to become shareholding ones. In fact, state-run banks could use the attractiveness of bank stock, once transformed successfully to get public funding at the cost of bondholders, such as in the case of

**Figure-2 : Banking Corporate Bonds**




*Left Axis : Value in USD million. Right Axis : Number of issuances.*

VCB convertibles in 2006. But the market anticipation was wrong in many cases, causing loss of wealth on the part of the bondholders. In the issue of VCB convertibles, the conversion happened in 2008, with stock price set at USD 6.63 each. However, this stock fell to USD 3.51 in the debut session of its listing chapter.

Real estate industry shows a balance between state-run and private-sector players in terms of bond issues. However, the financial concentration in the sector does not indicate a better allocation, but a trend for rent-seeking and arbitrage in real estate markets. The value share of this industry is 16 per cent, only below the banking industry, and four times of mining, five times of infrastructure. Land becomes a major natural and economic resource of the transition economy of Vietnam and rent seeking in this industry is clearly showing a strong motivation of concentration for emerging capitalists.

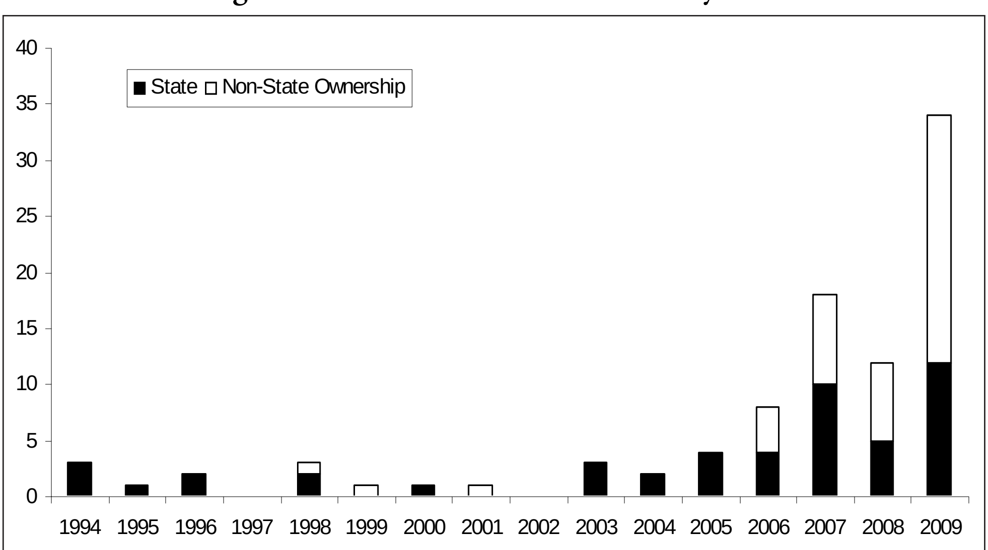
In this sector, we also see an innovation of the bond notion, with Sacomreal debentures embedded with the right to purchase real property at a later date. This bond perfectly suits the speculation needs of the market. The success rate of straight bonds in this industry over 2008-09 has also been high, 85 per cent.

Banking and real estate industries keep dominating the bond market in 2010, especially in terms of volume. Approaching the deadline of December 31, 2010, commercial banks in Vietnam are trying to increase their legal capitals to at least VND 3.000 billion (equivalent to USD 160 million). Issuing convertible bonds is their most preferred option. Despite the fact that banks have to mobilize so much capital, we have to recognize that investors are interested in banking services. Thus all banks' bond issuances are very likely successful. (Although we lack confirmation information.)

### *3.5 The Timing of Bonds*

Before 2005, only SoEs could successfully issue bonds. Both exceptions of EIS and VILC exhibit some 'foreign-ownership factor'. We could mark the year 2006 as the starting point of non-state bond issuers to participate in this game, mainly coming from financial and infrastructure industries. The number of non-state players in the corporate bond market has gradually increased over time, showing more fierce competition in acquiring financial resources between state and non-state sectors. However, although outweighing the state sector in number of firms, the number of non-state issuers in bond market surpassed that of the state sector only after 2008, as shown in Figure-3.

**Figure-3 : State vs. Non-state Issuers by Year**

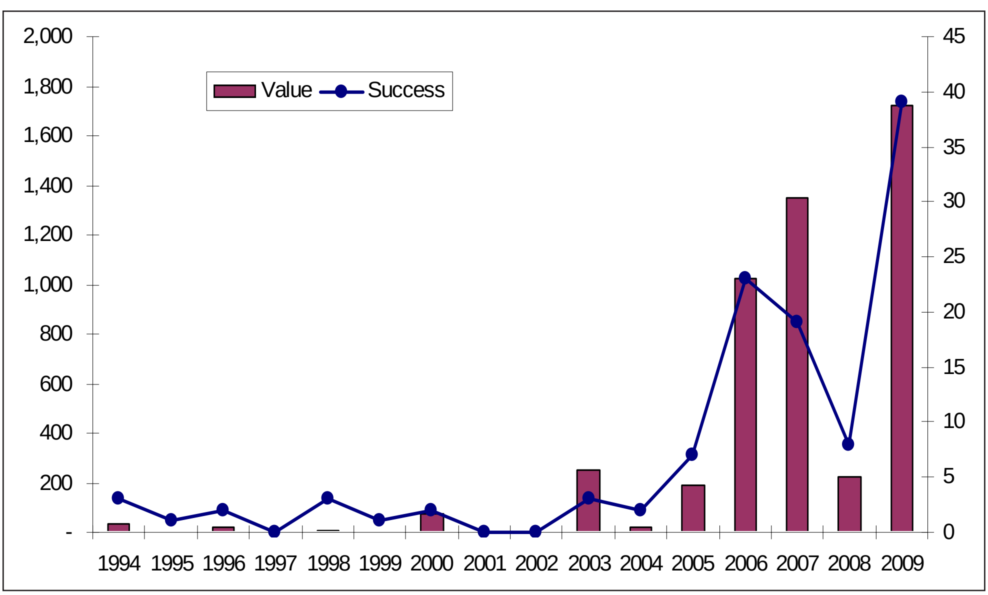


The most active period in the Vietnamese corporate bond market is 2006-2009. We notice an abrupt surge in size of the corporate bond issues of USD 251.29 million in 2003, but this figure is somewhat superficial due to three large state-run firms' issue with government backup, of which the giant PVN alone issued USD 219.07 million.

In the boom times of VSM 2006-07, bond issuers planned more capital budgeting with corporate bonds. Frequency and size of issues kept rising in this period. In 2006 alone, Vinashin issued five times and EVN nine times, etc. The total primary market size on historical values of bond issues in 2006 for the first time exceeded the USD 1 billion sum. 2007 continued to be a year of booming capital markets in Vietnam; the size of bond market in dollar terms reached USD 1.4 billion, with four issues by Vinashin, worth USD 415 million, Lilama (three issues, USD 124 million) and commercial banks, namely SCB, BIDV, ACB... issuing approximately USD 412.3 million.

The VSM meltdown in 2008 almost put the bond market on hold, but the comeback happened in 2009 with 39 successful issues, worth USD 1.724 billion. It is noteworthy that 22 out of 34 issuers of corporate bonds in 2009 are private-sector firms. Thus the importance of bond finance to SMEs

**Figure-4 : Value and Number of Successful Bonds Issued**




*Left Axis : Value in USD million. Right Axis : Number of issuances.*

is almost equal to the importance of SMEs' own participation to the bond market.

Information also has some role to play in the timing of the bond. In the period 2001-04, information preparation took longer, hence the leading time from the first announcement to the actual offering. In the case of Agribank, the lead time was phenomenally long, from 2003 to 2006; and this was VSM's poor-performance interval. However, the lead time reduced significantly in 2008-2009 to only matter of weeks. Furthermore, most issues with carefully designed information release experienced success. This gives us some important insights and changes of the Vietnamese corporate bond market in the current stage of development : (i) market participants have done a better job with facilitating information flows within the market; (ii) financial arrangement and underwriting capacity of financial intermediaries have improved; and, (iii) most importantly, perhaps, corporate bonds gradually become more promising financial assets in the eye of the investing public.

### *3.6 Maturity*

The majority of bonds offered in the marketplace carry a maturity of medium-term, two, three or five years. Our statistics show that bonds with longer maturity tend to be successful in primary market issuing; an example is the phenomenal 100 per cent success rate of all corporate bonds with maturity of seven years and beyond. Now, by stating this statistics we do not say that those long-term bonds have been more attractive. In fact, we tend to believe that due to technical complication arising in these issues, these primary

**Table-7 : Frequency of Maturity**

| Maturity (year) | Frequency | Success Rate |
|---|---|---|
| 1 | 7 | – |
| 2 | 19 | 100% |
| 3 | 36 | 69% |
| 4 | 4 | 75% |
| 5 | 40 | 88% |
| 7 | 3 | 100% |
| 10 | 10 | 100% |
| 15 | 2 | 100% |

transactions involved most creditworthy capital partners and usually granted more preparatory exercises. Thus once the information is released, success has almost been guaranteed.

The reason for our belief comes from the fact that only large-scaled SoEs are able to pursue large issues with long maturity; reflected through our data set with the names of Vinashin, Vinacomin, EVN, Lilama, BIDV and VEC. The 'state ownership' factor, together with an implication of government-guaranteed re-payment of debts, has still had a strong influence on the psychology of investors in the bond market.

Also bonds with maturity of five years and longer experienced high success rate. The result of our observation indicates that only a small fraction of 55 issues may experience failure. Our data indicates that the sales of long-term bonds appear not to have depended on the particular situation of the market. This leads to a better reasoning of issuing capacity that the depth of inter-relationship among the issuer, institutional bondholders and underwriters may be the single most critical success factor in the Vietnamese bond market.

A case of failure and another of success by the same firm VEC in the same year can be typical and a good explanation for our aforesaid view. In the same year of 2009, VEC issued bonds twice to raise : (1) USD 29.27 million from its four-year bond; and (2) USD 23.14 million from a much riskier 15-year bond. The less risky four-year debt asset issue almost failed with as little as 0.7 per cent of the sales succeeded, at a higher coupon rate of 10.5 per cent p.a. However, it is a whole lot riskier 15-year bond worth USD 23.14 million was sold out at a significant reduction in coupon rate, 9 per cent.

### *3.7 Interest Rate*

We should note one more thing in the last point. The increasing attention of the public to corporate bond started with the convertibility option, but would not likely stick to it. Varying coupon rates and a variety of bond maturities have become important for larger portfolio managers to need to diversify their portfolio with some fixed income assets. In the times of turmoil, some high-yield bonds offered the best investment for investors in the medium-run.

Table-8 shows the range of interest rates that corporate bonds in Vietnam offer their bondholders, primarily from 10 to 15 per cent p.a. Four bonds with low rates, mainly issued by SoEs, are provided in Table-9.

Whenever convertibility option is available, bondholders are more willing to accept lower fixed income payoff,

**Table-8 : Frequency of Interest Rates**

| Interest Rates | Frequency |
|---|---|
| 5% | 3 |
| 8% | 10 |
| 10% | 42 |
| 15% | 39 |
| 20% | 3 |
| More | 4 |

**Table-9 : The Lowest Rate Issuers**

| Issuer | Year | Industry | Term | Value (mil. USD) | Interest Rate | Convertible |
|---|---|---|---|---|---|---|
| VCG | 2007 | Construction | 3 | 62.01 | 3.0% | No |
| REE | 1996 | Construction/ M&E | 2 | 5.00 | 4.5% | Yes |
| EVN | 1992-1994 | Electricity | 3 | 30.23 | 5.0% | No |
| BIDV | 2000 | Banking | 5 | 4.60 | 5.2% | No |

such as in the case of VCG's USD 62.01 million worth of three-year convertible bond, offered at 3 per cent annual coupon. Given the range of inflation in Vietnam running from 6 to 12 per cent annually, most bonds carry an annual payment of 8 per cent or above, except convertibles and some bonds offered in US Dollars.

Coupon rates vary between different groups of issuers and depend on the inflation trend in the economy. The year 2008 showed wide varying bond rates and serious liquidity problems among corporate bonds when the credit crunch was getting serious and banking rates exploded (Vuong & Tran, 2009). In the times of continuous base rate adjustments, most of the corporate bond issues failed. In times of liquidity shortage, corporate bond interest loses its attraction, even if issuer proves itself highly financially viable and the rate is substantially higher than normal standard. It is because investors are not ready for holdings of longer-term debt asset and tend to seek arbitrage opportunities appearing in the financial market. The case of highly regarded real estate firm Hoang Anh Gia Lai (HAG on HOSE) suggested that, given a very high 21 per cent annual coupon rate

**Table-10 : The Highest Interest Rates Issuers**

| Issuer | Year of Issuance | Term in years | Value (mil. USD) | Interest Rates (% p.a.) | Condition |
|---|---|---|---|---|---|
| VIC | 2008 | 5 | 122.63 | 16.0 | Floating rate |
| VEC | 2008 | 4 | 30.66 | 16.0 | Coupon |
| PVF (PVN) | 2008 | 3 | – | 17.5 | Floating rate |
| HAG | 2008 | 2 | 39.86 | 20.5 | Floating rate |
| Hoang Thach Cement | 1994 | 3 | 3.92 | 21.0 | – |
| Anh Son Cement | 1994 | 3 | 0.68 | 21.0 | – |
| HAG | 2008 | 3 | – | 21.0 | Floating rate |

for a three-year maturity, the firm still failed to obtain the debt finance *via* bond issues.

## 4. Insights and Implications for Vietnam's Corporate Bond Market

We now reach some implications drawn upon the analysis of the Vietnamese corporate bond market.

### *4.1 Economic Variables and the Bond Market Performance*

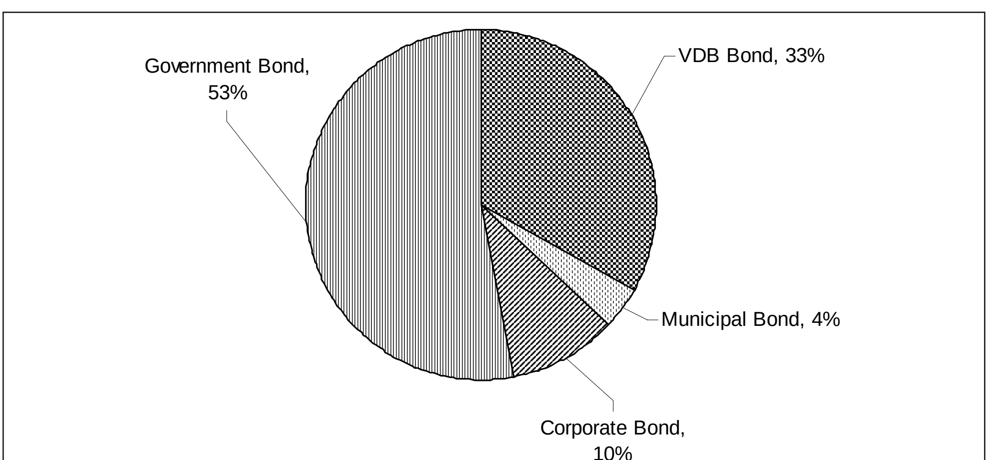
Interest rates on the corporate bond markets could easily be distorted by the influences from the state ownership in larger firms and from the speculators in speculative markets, such as equity exchange. Over the sample of observations, most of the times, bond prices rarely reflected the supply-demand equilibrium. Risk consideration by market participants has thus far been distorted by rent-seeking forces available in the marketplace; leading to the reality that riskier assets may show up with lower financial compensation. The VEC four-year bond at 16 per cent p.a. in comparison with HAG two-year bond at 20.5 per cent p.a., both issued in 2008, could be indicative.

The state also represents a force in the marketplace since it could reduce SoEs' bond risk substantially. In fact, in the secondary market for corporate bonds, all 11 listed assets belong to leading state-run firms, PVN, EVN, VEC and BIDV. The structural issue of the long-term debt market would likely remain if the state continues to guarantee large SoEs' borrowings. However, the government also faces a dilemma since poor-performing is likely to need more debt finance *via* bond issuing. But guaranteeing these issues would subsequently lead to a gradual degrading of the state's financial credibility by itself. In fact, the state's guarantee in capital markets such as bonds would tend to cause negative impacts on their path of development. On the one hand, structural issues and inequalities widen. On the other hand, it serves to be a kind of financial subsidy that destroys motivations of many bond market participants, including the subsidized ones (since guaranteed issuers would soon reach their debt limits and still find no motivation for improving their financial performance.)

The observation from our sample also provides another insight that the state not only intervenes in the bond market with its powerful budget and policies, but also competes directly with enterprises, from time to time and this is a typical contradiction of a centrally planned economy in transition like Vietnam. Figure-5 shows the shares of different types of bonds in the economy where the government bonds clearly outweigh the rest.

Mises (1949) and Klein (1999) argue that just focusing on production and pricing decisions within a given structure of capital means ignoring the vital role of capital markets. As to Mises (1949, pp. 698-715), the mission of a market system is not the pricing of consumer goods but allocating financial capital among different industries. A well-functioning capital market, that is allocating resource efficiently, would facilitate economic growth. To this end, state intervention and competition in corporate bond markets should be reduced. Otherwise, non-market and non-competitive rent-seeking would exacerbate the problem of resource misallocation.

**Figure-5 : Structure of the Vietnamese Bond Market**




*Source : Vietnam's Ministry of Finance, August 2009.*

### *4.2 Investment Psychology*

Investment psychology has become one of the most important factors that drive the financial markets in Vietnam today. However, investors' sentiment has strongly been influenced by 'herd mentality' as has been proved statistically by the stock market (Farber *et al.*, 2006; Vuong & Pham, 2009).

The psychology could produce a profound impact on the corporate market. The majority of individual investors do not pay attention to the corporate bonds since they would mainly seek capital appreciation with the philosophy 'The riskier, the higher return'. Liquidity of bonds is thus a problem of not only the corporate sector, but also government debt. In the past, when liquidity almost ceased to exist, bondholders found ways to 'improve' their liquidity by using illiquid government (then compulsory) bonds, which became cash in wedding ceremonies, where invited guests were supposed to give the couple bonds as 'cheers money'[9].

In the primary market, almost all announcements of corporate bond issue in Vietnam provide no information about the listing plan. Only a handful of international issues of Vietnamese corporate bonds announce their listing schedules. It seems that issuing results have been arranged between issuers and market-makers before the issuance goes to public. This characteristic of corporate bond primary market may result from relationship-based business culture in the Confucian society of Vietnam (Vuong & Tran, 2009b). There are a limited number of commercial banks and securities companies dealing with corporate bond. Only corporations that possess 'trustworthy' track records or established relationship with dealers are able to issue bonds. This rent-seeking behaviour explains why most bond issuers are large and popular corporations. However, the dominance of large issuers may indicate misallocation and inefficiency of resources. If large corporations take full advantages of government support, bank credit, equity offerings and debt financing, then financial resources for entrepreneurs and SMEs are obviously exhausted. The long-standing structural problem of the Vietnamese banking system is not phenomenal but quite universal in the overall financial system (Vuong & Pham, 2009).

Although bond trading is mainly for institutional investors, the liquidity of secondary bond market depends on the interest of individual investors as a major force of Vietnamese securities markets. It is not only the high value of a bond transaction but also the narrow ask-bid spreads which prevent people from investing in corporate debts. Many Vietnamese consider stock market to be just another gamble but legally-accepted and socially-respected. As to the former, people request high returns in a short period. Corporate debts, of course, are less attractive than equity. Most corporate bonds issued in 2010 are convertible. Maturities are sometimes short, two or even one year. It seems that people consider those bonds as stocks not debts.

This also explains why convertible bonds can be issued easily at considerable lower interest rates. Stock speculation gains will offset the lower capital gains. As to the latter, being securities investor is a quick and easy way to be perceived as a rich and knowledgeable person. People who live on winnings of various gambles, namely lottery, playing cards, lotto-derivatives and so on, are often perceived unemployment and at a lower social class. Therefore, people are interested in investment games which are daily and easy to enter with a small amount of money. Again, equity investment is better than giving debt to a corporation. While buying and selling stocks on a daily basis, people become the so-called 'professional investors' without working for any financial institution.

### 4.3 On the Entrepreneurship Development

SMEs and entrepreneurs are increasing their important role in the transition economy of Vietnam (Vuong, 1998c, and Vuong & Pham, 2009). Equivalently, their demand for capital increases from millions US Dollars (Vuong, 1997a) to tens of, even hundreds of millions US Dollars (Vuong & Pham, 2009). Such capital need could be fulfilled by equity and debt offerings. Mergers and Acquisitions (M&A) is a financing source for SMEs but not a substitution of long-term debts because of its equity nature. Moreover, Vuong *et al.,* (2010) reveals that the development of Vietnamese entrepreneurship should not rely on such financial channels. To this end, corporate bond can be of help.

In the case of Vietnam's emerging market, where the majority of non-state firms have been classified into privately-run or joint stock SMEs, the inquiry into the entrepreneurial nature of bond as a debt financing option may well be relevant. A claw-back term, as described by Goyal *et al.* (1998), enables private corporations to re-distribute their wealth better among their shareholders and bondholders, given the fact that informational asymmetries may cause the problem of undervaluation of corporate owners. In the start-up stage, capital input is so essential that 'expensive' debts are accepted. Then in the expansion stage, with the increase in production and prices, equity offerings, particularly Initial Public Offerings (IPOs), make the corporations wealthier. The prices of their equity are higher. Thus creative entrepreneurs take the opportunity to reduce cost of capital by using proceeds obtained from equity offerings to redeem expensive debts. By this claw-back mechanism, the liquidity of corporate bond market may also improve a great deal; the reality that we wish to see in the path of debt market development. When more issuers are ready to pay higher interest rates since they still have chance to re-schedule and reduce debt payments in future, an increasing number of investors would likely pay attention to risky corporate bonds, for example, bonds backed by intangible and illiquid assets, because of both higher interest rates and sooner re-payments.

Our data analyses, however, show that bond issuing is not a realistic financing option for entrepreneurial enterprises, particularly at their early stage. Corporate bond issuers, both state and non-state, are large and popular corporations who are able to build close and trustworthy relationships with market dealers and institutional investors. The structural problem is that those issuers have already received capital through various channels, from state subsidies and transfers to favourable commercial bank credit and high price equities. If they dominate the corporate bond market also, then there is little chance for newly-born and small-scale corporations. Meanwhile their efficiencies of performance are still questionable.

Bond issuing of SoEs or equitized SoEs even worsens the situation. Managements of the issuers may abuse their advantages to mobilize as much fund as possible. Then they use such financial resource to create a business growth at a low level of efficiency, for example, waste investment and high agency costs. Vinashin is a typical case. The corporation absorbed USD 660.60 million corporate bonds in 2004-2008, plus a transfer of USD 750 million from government international bond in 2005. But it has been in serious debt trouble in 2009. In this case, the 'convertible term' which usually attracts attention of investors may provide management with a comfortable solution. That is converting debt into equity. The losses will be distributed over bondholders (now become shareholders) and existing shareholders who are the state as well as institutional and individual investors.

The dominance of SoEs and large corporations in corporate bond market could be considered as a monopoly under the analytical framework of Hayek (1948) and Kirzner (1973). When the demand curve is not perfectly elastic, it is difficult to distinguish a rent-seeking from a profit-seeking activity. But both activities result in higher transaction cost which eliminates SMEs and entrepreneurs from the list of bond issuers.

## 5. Conclusion

In this paper, we have discussed various aspects of corporate bond markets in Vietnam's transitional economy. Despite its appearance in 1992-1994, corporate bond is still not a popular financial vehicle to Vietnamese business community. Frequency and size of issues kept rising since 2006, in line with the surge of VSM.

The large SoEs, for example EVN, BIDV, PVN and Vinashin, to name a few, came first in exploring the bond market capacity. The most active bond issuers in the industries are characterized by : (i) monopoly by state or by nature; (ii) having large financing need; (iii) close link to state ownership; and (iv) being defined as strategic fields of development by the government. In addition, state-run firms tend to have a higher success rate of bond issuing in comparison with their private counterparts.

Our observation unveils that the state not only intervenes in the bond market with its powerful budget and policies, but also competes directly with enterprises, from time to time. The dominance of SoEs and large corporations in corporate bond market, in addition, prevents SMEs from this debt financing option.

Convertibility option raises public attention to corporate bond. Whenever a convertible term is available, bondholders are more willing to accept lower fixed income payoff. But they are not likely to stick to it. On the one hand, prospective bondholders could value the holdings of equity when realized favourably *ex ante*, especially when the underlying stock flies high. On the other hand, the applicable coupon rate for such bond could turn out negative inflation-adjusted payoff when tight monetary policy is exercised and the corresponding equity holding turns out valueless, *ex post*.

Given the weak primary market and virtually non-existent secondary market, the corporate bond market in Vietnam reflects our perception of the relationship-based and rent-seeking behaviour in the financial markets, since only a number of large commercial banks and their securities subsidiaries dominate the total corporate bond primary market. For the corporate bonds to really work, they critically need a higher level of liquidity to become truly tradeable financial assets.

## Notes

1. National Association of Securities Dealers (USA) began to publicly report transactions in about 500 corporate bond issues through the Trade Reporting and Compliance Engine on July 1, 2002.

2. Dan Houtte, Vuong & Partners is a Hanoi-based business consulting and economic research company.

3. We update data set with 12 entries of 2010 but do not integrate those into our analyses.

4. This VIC convertible bond offering also marks the first successful sale of domestic corporate bond issued in an international debt market. REE Corp's convertible issue in 1996 could be considered similar to VIC, but of much smaller scale and to only a single buyer, Dragon Capital-managed VEIL.

5. A top senior manager of VEC was arrested in early 2006 for being engaged in illegal gambling with a large amount in the infamous multi-million dollars corruption case at Vietnam's PMU-18.

6. By direct interviewing the Head of corporate bond section at BIDV Securities (BSC) we also learn that even professionals at institutional investor also experienced shortage of secondary market transaction data. Furthermore, trading of corporate bonds has not been conducted in an organized manner with proper routine.

7. In fact, VIC bond issues could be classified into 'Real estate' but no formal information confirming this is available, we put it in 'Others'.

8. In June 2008, some commercial banks had to offer short-term deposit rate of above 20 per cent p.a. to improve short-term liquidity from the populace (Vuong & Tran, 2009a).

9. The couple of course could not spend these bonds and had only an option of holding them until maturity; a possibility that is highly unlikely (Tuoi tre, Oct. 7, 2005).

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## Appendix : Dataset of Vietnamese Corporate Bonds (1992-2010)

| No. | Issuer | State Owner-ship | Listed | Under-writer | Industry | Year Issuance | Maturity Year | Value (mil. USD) Expected | Value (mil. USD) Successful | Money Unit | Status | Interest Rates | Technical Terms | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EVN | 1 | 0 | | Electrics | 1992-1994 | 3 | | 30.23 | VND | Success | 3.8-5 | | Vietnam |
| 2 | Hoang Thach Cement | 1 | 0 | | Cement | 1994 | 3 | | 3.92 | VND | Success | 21.0 | | Vietnam |
| 3 | Anh Son Cement | 1 | 0 | | Cement | 1994 | 3 | | 0.68 | VND | Success | 21.0 | | Vietnam |
| 4 | REE | 1 | 0 | | Home appliance | 1996 | 2 | | 5.00 | USD | Success | 4.5 | Convertible | Vietnam |
| 5 | Southern Steel Co. | 1 | 0 | | Steel | 1995 | 3 | | 0.47 | USD | Success | – | | Vietnam |
| 6 | Yali Hydro Power | 1 | 0 | | Electrics | 1995-1996 | 3 | | 18.03 | VND | Success | 8.5 | | Vietnam |
| 7 | Khanh Hoa Tourist Co. | 1 | 0 | | Tourism | 1998 | 5 | | 1.88 | VND | Success | – | | Vietnam |
| 8 | Information Tech. EIS | 0 | 0 | | IT | 1998 | | | 0.75 | VND | Success | – | Convertible | Vietnam |
| 9 | Phuc Son Cement | 1 | 0 | | Cement | 1997-1998 | 3 | | 4.75 | VND | Success | 14.0 | | Vietnam |
| 10 | Vietnam Int' Leasing Co. | 0 | 0 | | Finance | 1999 | 5 | | 0.72 | VND | Success | 11.0 | | Vietnam |
| 11 | BIDV | 1 | 0 | | Banking | 2000 | 5 | | 70.70 | VND | Success | 7.5 | | Vietnam |
| 12 | BIDV | 1 | 0 | | Banking | 2000 | 5 | | 4.60 | USD | Success | 5.2 | | Vietnam |
| 13 | Information Tech, EIS | 0 | 0 | | IT | 2001 | | 0.68 | – | VND | | 8.0 | Convertible | Vietnam |
| 14 | EVN | 1 | 0 | | Electrics | 2003 | – | | 19.33 | VND | Success | – | | Vietnam |
| 15 | PVN | 1 | 0 | BIDV | Petroleum | 2003 | 5 | | 219.07 | VND | Success | 8.7 | Floating rate | Vietnam |
| 16 | Agribank | 1 | 0 | | Banking | 2006 | – | 313.19 | | VND | | – | | Vietnam |
| 17 | VICEM | 1 | 0 | | Cement | 2003 | – | | 12.89 | VND | Success | – | | Vietnam |
| 18 | GERUCO | 1 | 0 | VCBS | Rubber | 2004 | 3 | 2.54 | 2.54 | VND | Success | 8.6 | Coupon | Vietnam |

*(Contd...)*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | Vinashin | 1 | 0 | | Ship building | 2004 | 2 | | 19.08 | VND | Success | 8.2 | Coupon | Vietnam |
| 20 | EVN | 1 | 0 | | Electrics | 2005 | 5 | | 12.64 | VND | Success | 8.8 | Coupon | Vietnam |
| 21 | Vinashin | 1 | 0 | | Ship building | 2005 | 2 | 63.22 | 18.96 | VND | Success | – | Coupon | Vietnam |
| 22 | Vinashin | 1 | 0 | | Ship building | 2005 | 2 | | 18.96 | VND | Success | – | Coupon | Vietnam |
| 23 | Vinashin | 1 | 0 | | Ship building | 2005 | 2 | | 25.29 | VND | Success | – | Coupon | Vietnam |
| 24 | Song Da Corp. | 1 | 0 | Vietcombank | Construction | 2005 | 3 | 12.64 | 12.64 | VND | Success | 9.3 | Coupon | Vietnam |
| 25 | VCB | 1 | 1 | | Banking | 2005 | 7 | 86.29 | 86.29 | VND | Success | 6.0 | Convertible | Vietnam |
| 26 | Song Da Corp. | 1 | 0 | | Construction | 2005 | 5 | | 16.44 | VND | Success | 10.5 | Floating rate | Vietnam |
| 27 | BIDV | 1 | 0 | | Banking | 2006 | 10 | 62.64 | 62.64 | VND | Success | 9.8 | Callable | Vietnam |
| 28 | BIDV | 1 | 0 | | Banking | 2006 | 15 | 62.64 | 62.64 | VND | Success | 10.2 | Callable | Vietnam |
| 29 | BIDV | 1 | 0 | | Banking | 2006 | – | 6.26 | 6.26 | VND | Success | – | Callable | Vietnam |
| 30 | CII | 0 | 1 | | Infrastructure | 2006 | 3 | 8.21 | 8.21 | VND | Success | 8.0 | Convertible | Vietnam |
| 31 | ACB | 0 | 1 | | Banking | 2006 | 5 | 103.35 | – | VND | | 8.0 | Convertible | Int' |
| 32 | EVN | 1 | 0 | Deutsche Bank | Electrics | 2006 | 10 | 62.64 | 62.64 | VND | Success | 9.6 | Floating rate | Vietnam |
| 33 | SCB | 0 | 0 | | Banking | 2006 | 1.1 | 62.64 | 62.64 | VND | Success | 8.5 | Convertible | Vietnam |
| 34 | EVN | 1 | 0 | VietinBank | Electrics | 2006 | 5 | – | 21.92 | VND | Success | 9.6 | Floating rate | Vietnam |
| 35 | EVN | 1 | 0 | | Electrics | 2006 | 5 | – | 31.32 | VND | Success | 9.6 | Floating rate | Vietnam |
| 36 | EVN | 1 | 0 | | Electrics | 2006 | 5 | – | 72.03 | VND | Success | 9.6 | Floating rate | Vietnam |
| 37 | EVN | 1 | 0 | | Electrics | 2006 | 5 | – | 56.37 | VND | Success | 9.5 | Floating rate | Vietnam |
| 38 | EVN | 1 | 0 | | Electrics | 2006 | 5 | – | 37.58 | VND | Success | 9.6 | Floating rate | Vietnam |
| 39 | EVN | 1 | 0 | | Electrics | 2006 | 5 | – | 31.32 | VND | Success | 9.6 | Coupon | Vietnam |

*(Contd...)*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | EVN | 1 | 0 | | Electrics | 2006 | 10 | 62.64 | 62.64 | VND | Success | 10.0 | Floating rate | Vietnam |
| 41 | EVN | 1 | 0 | | Electrics | 2006 | 10 | – | 62.64 | VND | Success | 9.7 | Coupon | Vietnam |
| 42 | Agribank | 1 | 0 | | Banking | 2006 | – | | 187.91 | VND | Success | – | Convertible | Vietnam |
| 43 | SSI | 0 | 0 | | Finance | 2006 | 1 | 9.40 | 9.40 | VND | Success | – | Convertible | Vietnam |
| 44 | SSI | 0 | 0 | | Finance | 2006 | 2 | 9.40 | 9.40 | VND | Success | – | Convertible | Vietnam |
| 45 | SSI | 0 | 0 | | Finance | 2006 | 3 | 12.53 | 12.53 | VND | Success | – | Convertible | Vietnam |
| 46 | Vinashin | 1 | 0 | | Ship building | 2006 | 2 | – | 31.32 | VND | Success | 9.6 | Coupon | Vietnam |
| 47 | Vinashin | 1 | 0 | | Ship building | 2006 | 2 | – | 18.79 | VND | Success | 9.6 | Coupon | Vietnam |
| 48 | Vinashin | 1 | 0 | | Ship building | 2006 | 5 | – | 31.32 | VND | Success | 10.0 | Coupon | Vietnam |
| 49 | Vinashin | 1 | 0 | | Ship building | 2006 | 10 | – | 62.64 | VND | Success | 10.5 | Coupon | Vietnam |
| 50 | Vinashin | 1 | 0 | | Ship building | 2006 | 2 | – | 18.79 | VND | Success | 9.6 | Coupon | Vietnam |
| 51 | Vilexim | 1 | 0 | | Trading | 2007 | 3 | – | 0.31 | VND | Success | – | | Vietnam |
| 52 | Vinashin | 1 | 0 | Habubank | Ship building | 2007 | 5 | – | 31.00 | VND | Success | 10.0 | Coupon | Vietnam |
| 53 | EVN | 1 | 0 | | Electrics | 2007 | – | 300-500 | – | USD | | – | | Vietnam |
| 54 | Lilama | 1 | 0 | Habubank | Construction | 2007 | 5 | – | 31.00 | VND | Success | 9.6 | Coupon | Vietnam |
| 55 | Vinashin | 1 | 0 | Deutsche Bank | Ship building | 2007 | 10 | 186.02 | 186.02 | VND | Success | 9.0 | Coupon | Vietnam |
| 56 | VN Steel Corp. | 1 | 0 | Vietcombank | Steel | 2007 | 5 | 24.80 | 24.80 | VND | Success | 9.5 | Coupon | Vietnam |
| 57 | Lilama | 1 | 0 | Habubank | Construction | 2007 | 10 | 62.01 | 62.01 | VND | Success | 9.2 | Coupon | Vietnam |
| 58 | MB | 0 | 0 | | Banking | 2007 | 2 | 26.04 | 26.04 | VND | Success | 8.0 | Convertible | Vietnam |
| 59 | Vinacomin | 1 | 0 | | Mining | 2007 | 10 | 93.01 | 93.01 | VND | Success | 9.5 | Coupon | Vietnam |
| 60 | CII | 0 | 1 | VIP Bank | Infrastructure | 2007 | 7 | – | 31.00 | VND | Success | 10.3 | Coupon | Vietnam |

*(Contd...)*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | Techcombank | 0 | 0 | HSBC | Banking | 2007 | – | 186.02 | – | VND | | – | | Vietnam |
| 62 | BIDV | 1 | 0 | | Banking | 2007 | 5 | 186.02 | 186.02 | VND | Success | 8.2 | Coupon | Vietnam |
| 63 | VCG | 1 | 0 | BIDV | Construction | 2007 | 3 | 62.01 | 62.01 | VND | Success | 3.0 | Convertible | Vietnam |
| 64 | Lilama | 1 | 0 | Habubank | Construction | 2007 | 5 | 31.00 | 31.00 | VND | Success | 8.8 | | Vietnam |
| 65 | ACB | 0 | 1 | Standard Chartered | Banking | 2007 | 5 | – | 139.52 | VND | Success | 8.6 | Coupon | Vietnam |
| 66 | SCB | 0 | 0 | | Banking | 2007 | 1 | 86.75 | 86.75 | VND | Success | 8.5 | Convertible | Vietnam |
| 67 | MB | 0 | 0 | | Banking | 2007 | 2 | 35.96 | 35.96 | VND | Success | 8.0 | Convertible | Vietnam |
| 68 | CII | 0 | 1 | | Infrastructure | 2007 | 7 | – | 61.02 | VND | Success | – | Coupon | Vietnam |
| 69 | VIC | 0 | 1 | BIDV and ANZ | n.a | 2007 | 5 | 62.01 | 62.01 | VND | Success | 10.5 | Coupon | Vietnam |
| 70 | IFS | 0 | 1 | | Food | 2007 | 3 | 15.50 | – | VND | | 9.3-9.6 | Coupon | Vietnam |
| 71 | IFS | 0 | 1 | | Food | 2007 | 5 | 24.80 | – | VND | | 9.7-10.0 | Coupon | Vietnam |
| 72 | VEC | 1 | 0 | Habubank | Infrastructure | 2009 | 15 | – | 23.42 | VND | Success | 9.0 | Coupon | Vietnam |
| 73 | MPC | 0 | 1 | VIBBank | Seafood | 2007 | 5 | 31.00 | – | VND | | 10.0 | Coupon | Vietnam |
| 74 | Vinashin | 1 | 0 | | Ship building | 2007 | 2 | – | 12.40 | VND | Success | 8.9 | Coupon | Vietnam |
| 75 | Vinashin | 1 | 0 | | Ship building | 2007 | 10 | – | 186.02 | VND | Success | 9.4 | Coupon | Vietnam |
| 76 | Sacomreal (Sacombank) | 0 | 0 | | Real estate | 2008 | 0.5 | 6.13 | 6.13 | VND | Success | 8.8 | Convertible | Vietnam |
| 77 | Sacomreal (Sacombank) | 0 | 0 | | Real estate | 2008 | 0.8 | 45.99 | – | VND | | 12.0 | Convertible | Vietnam |
| 78 | VIC | 0 | 1 | | n.a | 2008 | 5 | 122.63 | 122.63 | VND | Success | 16.0 | Floating rate | Vietnam |
| 79 | Techcombank | 0 | 0 | | Banking | 2008 | – | 306.58 | – | VND | Plan | – | | Vietnam |
| 80 | VISCOSTONE (VCG) | 1 | 0 | | Cons. material | 2008 | 3 | 6.13 | 6.13 | VND | Success | 10.5 | Convertible | Vietnam |
| 81 | NBB | 0 | 1 | | Real estate | 2009 | 3 | 17.56 | 17.56 | VND | Success | 11.5 | Floating rate | Vietnam |

*(Contd...)*

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 | VEC | 1 | 0 | Government | Infrastructure | 2008 | – | 30.66 | – | VND | Failed | – | Coupon | Vietnam |
| 83 | VEC | 1 | 0 | Government | Infrastructure | 2008 | 4 | 30.66 | 30.66 | VND | Success | 16.0 | Coupon | Vietnam |
| 84 | VIC | 0 | 1 | | n.a | 2008 | – | 80.00 | – | USD | Plan | – | Convertible | Vietnam |
| 85 | FPC | 0 | 1 | | Construction | 2008 | 3 | 24.53 | – | VND | Plan | – | | Vietnam |
| 86 | PVF (PVN) | 1 | 1 | | Finance | 2008 | 3 | 98.11 | – | VND | | 17.5 | Floating rate | Vietnam |
| 87 | HAG | 0 | 1 | | Real estate | 2008 | 2 | 39.86 | 39.86 | VND | Success | 20.5 | Floating rate | Vietnam |
| 88 | HAG | 0 | 1 | BIDV | Real estate | 2008 | 3 | – | – | VND | Success | 21.0 | Floating rate | Vietnam |
| 89 | Saigon Bank | 0 | 0 | | Banking | 2008 | – | 61.32 | – | VND | Plan | – | Convertible | Vietnam |
| 90 | Viet A Bank | 0 | 0 | | Banking | 2008 | – | 24.53 | – | VND | Plan | – | Convertible | Vietnam |
| 91 | Vinashin | 1 | 0 | | Ship building | 2008 | – | 400.00 | – | USD | Plan | – | | Vietnam |
| 92 | HAG | 0 | 1 | | Real estate | 2008 | 3 | 21.46 | 21.46 | VND | Success | 12.8 | Floating rate | Vietnam |
| 93 | HAG | 0 | 1 | | Real estate | 2008 | 2 | – | – | VND | Success | 12.3 | Floating rate | Vietnam |
| 94 | FPC | 0 | 1 | | Construction | 2009 | 3 | 14.05 | – | VND | Plan | – | | Vietnam |
| 95 | EVN | 1 | 0 | | Electrics | 2009 | 5 | 29.27 | 29.27 | VND | Success | – | Floating rate | Vietnam |
| 96 | MB | 0 | 0 | | Banking | 2009 | – | 292.74 | – | VND | Plan | – | | Vietnam |
| 97 | VPL | 0 | 1 | BIDV | Real estate | 2009 | 5 | 58.55 | 58.55 | VND | Success | 10.1 | Coupon | Vietnam |
| 98 | EVN | 1 | 0 | ANZ | Electrics | 2009 | 5 | – | 204.92 | VND | Success | 10.4 | Floating rate | Vietnam |
| 99 | Vinacomin | 1 | 0 | Citi bank | Mining | 2009 | 5 | – | 68.50 | VND | Success | 10.5 | Floating rate | Vietnam |
| 100 | Vinacomin | 1 | 0 | Citi bank | Mining | 2009 | 5 | – | 19.32 | VND | Success | 10.5 | Coupon | Vietnam |
| 101 | Techcombank | 0 | 0 | | Banking | 2009 | – | 468.39 | – | VND | Plan | – | | Vietnam |
| 102 | MB | 0 | 0 | ANZ | Banking | 2009 | 2 | – | 58.55 | VND | Success | 10.0 | Coupon | Vietnam |

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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 103 | KBC | 0 | 1 | VietinBank | Real estate | 2009 | 5 | – | 40.98 | VND | Success | 11.5 | Coupon | Vietnam |
| 104 | VEC | 1 | 0 | | Infrastructure | 2009 | 3 | 87.82 | – | VND | Failed | – | | Vietnam |
| 105 | MCG | 0 | 1 | | Construction | 2009 | 3 | 5.85 | – | VND | Plan | 12.0 | Convertible | Vietnam |
| 106 | HSG | 0 | 1 | | Cons. material | 2009 | – | 7.26 | – | VND | Plan | – | Convertible | Vietnam |
| 107 | SJS | 1 | 1 | | Construction | 2009 | 3 | 29.27 | 29.27 | VND | Success | 12.5 | Floating rate | Vietnam |
| 108 | Habubank | 0 | 0 | | Banking | 2009 | – | 146.37 | – | VND | Plan | – | Coupon | Vietnam |
| 109 | KSH | 0 | 1 | | Mining | 2009 | 3 | 17.56 | – | VND | Plan | 12.0 | Floating rate | Vietnam |
| 110 | KSH | 0 | 1 | | Mining | 2009 | 4 | 17.56 | – | VND | Plan | 12.0 | Floating rate | Vietnam |
| 111 | KSH | 0 | 1 | | Mining | 2009 | 5 | 23.42 | – | VND | Plan | 12.0 | Floating rate | Vietnam |
| 112 | HBC | 0 | 1 | | Construction | 2009 | 5 | 1.76 | 1.76 | VND | Success | – | Convertible | Vietnam |
| 113 | SDFC (Song Da Corp.) | 1 | 0 | | Finance | 2009 | – | 17.56 | – | VND | Plan | – | | Vietnam |
| 114 | Sacombank | 0 | 1 | | Banking | 2009 | – | 175.65 | – | VND | Plan | – | | Vietnam |
| 115 | KBC | 0 | 1 | | Real estate | 2009 | 3 | – | 17.56 | VND | Success | 12.5 | Coupon | Vietnam |
| 116 | STL (Song Da Corp.) | 1 | 1 | | Real estate | 2009 | 3 | 17.56 | 17.56 | VND | Success | 12.5 | Floating rate | Vietnam |
| 117 | Tin Nghia Group | 1 | 0 | | Real estate | 2009 | – | 58.55 | 58.55 | VND | Success | – | Coupon | Vietnam |
| 118 | Sacombank | 0 | 1 | ANZ, Citibank | Banking | 2009 | 2 | – | 5.85 | VND | Success | 10.5 | Coupon | Vietnam |
| 119 | Sacombank | 0 | 1 | ANZ, Citibank | Banking | 2009 | – | – | 111.24 | VND | Success | – | Floating rate | Vietnam |
| 120 | BIDV | 1 | 0 | HSBC | Banking | 2009 | 10 | – | 79.74 | VND | Success | 10.5 | Floating rate | Vietnam |
| 121 | VEC | 1 | 0 | Government | Infrastructure | 2009 | 3 | 29.27 | – | VND | Failed | – | | Vietnam |
| 122 | VEC | 1 | 0 | Government | Infrastructure | 2009 | 4 | 29.27 | 0.19 | VND | Success | 10.5 | Coupon | Vietnam |
| 123 | KBC | 0 | 1 | | Real estate | 2009 | 5 | 11.71 | 11.71 | VND | Success | 12.5 | Coupon | Vietnam |

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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 124 | Tin Nghia Group | 1 | 0 | | Real estate | 2009 | 5 | | 29.27 | VND | Success | – | | Vietnam |
| 125 | VN Steel Corp. | 1 | 0 | Habubank | Steel | 2009 | 3 | 58.55 | 58.55 | VND | Success | – | | Vietnam |
| 126 | Generalexim | 1 | 0 | | Trading | 2009 | – | | 2.84 | VND | Success | – | Convertible | Vietnam |
| 127 | Maritime Bank | 0 | 0 | | Banking | 2009 | 2 | 105.39 | 105.39 | VND | Success | – | Floating rate | Vietnam |
| 128 | Maritime Bank | 0 | 0 | | Banking | 2009 | 5 | 17.56 | 17.56 | VND | Success | 12.5 | Floating rate | Vietnam |
| 129 | HUD | 1 | 0 | | Real estate | 2009 | 3 | 29.27 | 29.27 | VND | Success | 12.5 | Floating rate | Vietnam |
| 130 | FPT Corp. | 0 | 1 | ANZ | | 2009 | 3 | | 105.39 | VND | Success | 7.0 | Convertible | Vietnam |
| 131 | FBS/GamiLand | 0 | 0 | | Real estate | 2009 | 3 | 17.56 | 17.56 | VND | Success | – | | Vietnam |
| 132 | ASP | 0 | 1 | | Gas production | 2009 | – | | 5.85 | VND | Success | 13.2 | Floating rate | Vietnam |
| 133 | STL (Song Da Corp.) | 1 | 1 | | Real estate | 2009 | 3 | | 17.56 | VND | Success | 13.0 | Floating rate | Vietnam |
| 134 | Techcombank | 0 | 0 | | Banking | 2009 | 3 | 122.95 | 122.95 | VND | Success | 10.5 | Floating rate | Vietnam |
| 135 | Habubank | 0 | 0 | | Banking | 2009 | 2 | 58.55 | 58.55 | VND | Success | 10.5 | Coupon | Vietnam |
| 136 | VIC | 0 | 1 | Credit Suisse | Real estate | 2009 | 5 | 150.00 | 100.00 | USD | Success | 6.0 | Convertible | Int' |
| 137 | SCB | 0 | 0 | | Banking | 2009 | – | 58.55 | 58.55 | VND | Success | 8.5 | Convertible | Vietnam |
| 138 | VISCOSTONE (VCG) | 1 | 0 | | Construction | 2009 | 1 | 9.08 | – | VND | Plan | 9.0 | Convertible | Vietnam |
| 139 | Viet A Bank | 0 | 0 | | Banking | 2009 | 1 | 15.92 | – | VND | Plan | 10.0 | Convertible | Vietnam |
| 140 | KBC | 0 | 1 | | Real estate | 2009 | 5 | 23.42 | 23.42 | VND | Success | 12.0 | Coupon | Vietnam |
| 141 | BCI | 0 | 1 | | Real estate | 2009 | – | 17.56 | – | VND | Plan | – | Callable | |
| 142 | NovaLand | 0 | 0 | | Real estate | 2009 | 5 | – | 112.53 | VND | Success | 12.0 | Coupon | Vietnam |
| 143 | VIC | 0 | 1 | | Real estate | 2009 | 3 | 58.55 | – | VND | Plan | – | | |
| 144 | Phuong Dong Bank | 0 | 0 | | Banking | 2009 | 1 | 35.13 | – | VND | Plan | 10.5 | Convertible | Vietnam |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 145 | KBC | 0 | 1 | | Real estate | 2009 | 5 | 29.27 | 1.71 | VND | Success | 13.8 | Coupon | Vietnam |
| 146 | KBC | 0 | 1 | | Real estate | 2009 | 3 | 17.56 | 1.03 | VND | Success | 12.0 | Coupon | Vietnam |
| 147 | NBB | 0 | 1 | | Real estate | 2009 | 3 | 14.64 | 0.86 | VND | Success | | Floating rate | Vietnam |
| 148 | NBB | 0 | 1 | | Real estate | 2009 | 4 | 8.78 | 0.51 | VND | Success | | Floating rate | Vietnam |
| 149 | Tin Nghia Group | 1 | 0 | EPS/BNP Paris | Real estate | 2007 | | 248.03 | | VND | Plan | | | Int' |
| 150 | Vinatex | 1 | 0 | EPS/BNP Paris | | 2007 | | 62.01 | | VND | Plan | | | Int' |
| 151 | Vinatex | 1 | 0 | EPS/BNP Paris | | 2008 | | 490.53 | | VND | Plan | | | Int' |
| 152 | Tin Nghia Group | 1 | 0 | | Real estate | 2009 | | 17.56 | | VND | Plan | | | Vietnam |
| 153 | CTG | 1 | 1 | | Banking | 2010 | 2 | 160 | | VND | Plan | | Floating rate | Vietnam |
| 154 | Habubank | 0 | 0 | | Banking | 2010 | 1 | 55 | | VND | Plan | 10.49 | Convertible | Vietnam |
| 155 | CII | 1 | 1 | | Infrastructure | 2010 | 5 | 20-25 | | USD | Plan | 4 | Convertible | Vietnam |
| 156 | CFC | 1 | 1 | | Cement | 2010 | | 26 | | VND | Plan | | | Vietnam |
| 157 | TMS | 0 | 1 | | Logistics | 2010 | 2 | 5 | | VND | Plan | 8 | Convertible | Vietnam |
| 158 | REE | 1 | 1 | | General | 2010 | | 42 | | VND | Plan | | Convertible | Vietnam |
| 159 | DXG | 0 | 1 | | Real estate | 2010 | | 26 | | VND | Plan | | | Vietnam |
| 160 | Vinalines | 1 | 0 | Standard Chartered | Logistics | 2010 | 3 | 55 | 55 | VND | Success | 14.5 | Fixed and floating rate | Vietnam |
| 161 | Hamico | 1 | 1 | | Import-export | 2010 | 1 | 3 | | VND | Success | 8 | | Vietnam |
| 162 | Song Da Group | 1 | 0 | ANZ | Real estate | 2010 | 5 | 79 | 79 | VND | Success | 15 | Fixed and floating rate | Vietnam |
| 163 | TDH | 0 | 1 | | Real estate | 2010 | 3 | 32 | | VND | Plan | | Convertible | Vietnam |
| 164 | IFS | 0 | 1 | ANZ | Food processing | 2010 | | | | USD | Failed | | | Vietnam |

* Note : 12 entries were updated for 2010. These figures were not included in the analyses. However, the authors affirm the previous insights and conclusions.

# Local Employment Policies in the Context of the Economic Crisis : Influences of the European Community Structural Instruments

*Lucica Matei* & Ani Matei***

*For several European states, including Romania, the European integration process has overlapped with the effects of the economic and financial crisis. The consequences of such a situation are apparently contradictory. On the one hand, the crisis lowers the European integration process in view of achieving the performance imposed by the single market, the economic and administrative convergence etc. On the other hand, the possibility of accessing the European structural funds becomes a welcome financial resource for diminishing or stopping the effects of the crisis. The second alternative establishes new balances or imbalances at the local community level, with effect on the employment policies. The European structural instruments—Structural Funds, Cohesion Fund, European Commission initiatives—are associated with the effects induced in view to achieve the European Union's objectives such as : economic, social and territorial cohesion, economic growth, competitiveness, employment, sustainable development etc. The current paper aims to emphasize in a theoretic and empiric manner, the influences of these structural instruments on the employment policies at the local level. At the same time, those influences will be correlated statistically with the effects of the financial crisis, obtaining a more comprehensive image concerning the consequences of the mix of national and European Commission policies for the economic integration and fight against the effects of the financial crisis for some European Union states. The authors propose a model of local development based on the theory of the general balance, integrating the resources provided by the structural instruments and emphasizing their compensatory effects related to the financial crisis. The proposed model is empirically exemplified for some development regions in Romania, suggestive for general conclusions, of comparative nature, at the European and the international level.*

## The New Context of the Employment Policies in Europe

Europe is facing an economic and financial crisis that affects the citizens and the European economic activity. The crisis effects are registered on the level of population and labour market, local economies, quality of life, local governance and economic and social increasing disparities. In general, the crisis generates a decrease of the economic activities and an unemployment increase (Table-1).

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**Table-1 : The Evolution of the Unemployment Rate in Certain States**

*(percentage of labour force)*

| | 2007 | 2008 | 2009 |
|---|---|---|---|
| The European Union | 7.1 | 7.0 | 8.9 |
| Australia | 4.4 | 4.2 | 5.6 |
| Austria | 4.4 | 3.8 | 4.8 |
| Belgium | 7.5 | 7.0 | 7.9 |
| Canada | 6.0 | 6.1 | 8.3 |
| Czech Republic | 5.3 | 4.4 | 6.7 |
| Denmark | 3.8 | 3.3 | 6.0 |
| Finland | 6.9 | 6.4 | 8.2 |
| France | 8.4 | 7.8 | 9.5 |
| Germany | 8.4 | 7.3 | 7.5 |
| Greece | 8.3 | 7.7 | 9.5 |
| Hungary | 7.4 | 7.8 | 10.0 |
| Iceland | 2.3 | 3.0 | 7.2 |
| Ireland | 4.6 | 6.4 | 11.9 |
| Italy | 6.2 | 6.8 | 7.7 |
| Japan | 3.9 | 4.0 | 5.1 |
| Korea | 3.2 | 3.2 | 3.6 |
| Luxembourg | 4.2 | 4.9 | 5.4 |
| Mexico | 3.7 | 4.0 | 5.5 |
| The Netherlands | 3.2 | 2.8 | 3.4 |
| New Zealand | 3.7 | 4.2 | 6.1 |
| Norway | 2.5 | 2.5 | 3.1 |
| Poland | 9.6 | 7.2 | 8.2 |

*(Contd...)*

| | | | |
|---|---|---|---|
| Portugal | 8.1 | 7.8 | 9.6 |
| Slovak Republic | 11.2 | 9.5 | 12.0 |
| Spain | 8.3 | 11.4 | 18.0 |
| Sweden | 6.1 | 6.2 | 8.3 |
| Switzerland | 3.6 | 3.5 | 4.4 |
| Turkey | 8.8 | 9.7 | 12.6 |
| The United Kingdom | 5.3 | 5.6 | 7.6 |
| The United States | 4.6 | 5.8 | 9.3 |

*Source : OECD Harmonised Unemployment Rates News Release, February 2010.*

The end of the year 2008 is marked by the reduction of the main socio-economic indicators (the Gross Domestic Product (GDP) growth rate, the employment growth rate, the investment flows growth rate), by significant transformations of the labour market with regard to the decrease of active population and employment, creation of new jobs. This crisis affects the 'real economy' of jobs.

In the middle of the 90s, problems have been identified in the European labour market, like the one presently occurring due to the economic and financial crisis, namely unemployment, a problem that has been approached in the European Employment Strategy (EES) initiated through the 'Luxembourg Process' (1997)—a meeting exclusively dedicated to employment. During that same period, namely the second half of the 90s, the Treaty of Amsterdam (1997) introduced provisions referring to the employment policy and social protection and the assemblies on the employment policies topic from Cardiff (1998)—the Cardiff process—the economic and internal market reform), Koln (1999), Lisbon and Stockholm (2000 & 2005), Barcelona (2002), consecrate the principle of collaboration between the European Union (EU) member states in the field of employment policy and its accordance with the economic policies, thus creating a direct link between employment and economy.

In December 2008, the European Council approved the 'European Plan to re-launch the Economy', aiming at supporting the actions that can combat the crisis in the EU states. The Cohesion Policy's instruments of EU—European Regional Development

Fund (ERFD), European Social Fund (ESF), Cohesion Fund (CF), represent one-third of the total EU budget and are the biggest source of investment in the EU real economy.

The issue of employment approached on a regional level confers realistic arguments in developing the strategies by taking into account the local features.

The ESF is the main financial instrument for structural actions, financing member states' actions comprised in the National Action Plans (NAPs) for employment that aim at preventing and combating unemployment, human resource development and labour market integration, equality of chances between men and women, sustainable development and economic and social cohesion.

The employment policies of the EU member states must facilitate the participation to employment of all persons able to work, being related to other economic policies, of regional development, covering the EES objectives :

a) Full employment;

b) Improving quality and labour productivity; and

c) Consolidating social and territorial cohesion.

The EU member states, in the framework of the National Reform Programmes (NRP) design the employment policies in accordance with the 'Integrated Guidelines for Growth and Jobs' (COM (2009) 34).

The community (EU) dimension of the employment policies, education and training must be used in a creative manner by the member states for developing the strategies of acquiring new competences, improving the jobs' quality and providing support to those who lost their jobs.

## The European Structural Instruments

EU acts through these financial instruments in order to eliminate the economic and social disparities between regions, aiming at reaching an economic and social cohesion, economic growth, competitiveness, employment.

The ESF, the main instrument of EU for investments in the human resources, is one of the structural funds that aim at reaching the strategic objectives of the EU employment policy. During 2007-2013, ESF will invest almost 76 billions of Euros in the member states (Table-2) for projects on employment support and increasing the level of education and competences.

**Table-2 : Planned Cohesion Policy Interventions 2007-2013 by Member States in Millions Euro 2004 prices**

| Country | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Total |
|---|---|---|---|---|---|---|---|---|
| Poland | 7,680.0 | 8,024.9 | 8,365.9 | 8,405.0 | 8,747.9 | 9,073.7 | 9,401.1 | **59,698.6** |
| Czech | 3,136.0 | 3,222.9 | 3,305.9 | 3,391.2 | 3,472.0 | 3,547.7 | 3,621.6 | **23,697.2** |
| Cyprus | 158.2 | 128.9 | 99.7 | 70.4 | 41.2 | 41.2 | 41.2 | **580.8** |
| Estonia | 355.7 | 379.7 | 405.4 | 432.8 | 462.6 | 494.4 | 527.5 | **3,058.1** |
| Greece | 2,914.8 | 2,803.8 | 2,692.9 | 2,582.0 | 2,471.2 | 2,407.9 | 2,344.6 | **18,217.2** |
| Spain | 5,947.0 | 5,329.7 | 4,712.8 | 4,196.2 | 3,879.6 | 3,783.5 | 3,687.4 | **31,536.3** |
| Ireland | 199.9 | 167.4 | 134.9 | 102.4 | 69.9 | 70.0 | 70.1 | **814.5** |
| Italy | 2,774.0 | 28,690.0 | 2,753.0 | 2,744.0 | 2,690.0 | 2,724.0 | 2,714.0 | **19,268.0** |
| Latvia | 480.0 | 513.0 | 549.0 | 584.0 | 619.0 | 655.0 | 691.0 | **4,091.0** |
| Lithuania | 725.3 | 771.5 | 819.6 | 867.8 | 918.3 | 971.5 | 1,023.0 | **6,097.0** |
| Hungary | 2,868.0 | 2,990.9 | 3,121.4 | 3,227.4 | 3,302.7 | 3,414.4 | 3,526.6 | **22,451.5** |
| Malta | 108.1 | 108.5 | 108.8 | 109.1 | 109.2 | 108.8 | 108.3 | **760.8** |
| Portugal | 2,807.2 | 2,783.1 | 2,759.2 | 2,735.3 | 2,711.4 | 2,687.4 | 2,663.4 | **19,146.9** |
| Slovenia | 523.9 | 527.3 | 530.7 | 534.1 | 537.5 | 540.9 | 544.3 | **3,738.7** |
| Slovakia | 1,227.9 | 1,303.3 | 1,385.7 | 1,479.7 | 1,558.0 | 1,631.5 | 1,678.2 | **10,264.3** |
| East Germany | 2,310.0 | 2,264.0 | 2,234.0 | 2,196.0 | 2,157.0 | 2,118.0 | 2,079.0 | **15,358.0** |
| Bulgaria | 486.0 | 682.9 | 900.6 | 929.4 | 974.0 | 1,016.9 | 1,057.5 | **6,047.3** |
| Romania | 1,261.2 | 1,774.2 | 2,339.3 | 2,752.5 | 2,906.6 | 3,063.4 | 3,219.4 | **17,316.6** |
| **Total** | **35,963.2** | **36,645.1** | **37,218.5** | **37,339.5** | **37,628.1** | **38,350.3** | **38,998.2** | **2,62,142.9** |

*Source : DG Regional Policy (2007), in Bradley, J., Untiedt,G., Mitze,T. 2007, p.12, Table 2.2.*

ESF encourages change and adaptation to change and supports Europe's economic recovery.

The ERDF is one of the structural funds. Its main objective is promoting the economic and social cohesion inside EU through reducing the imbalances between regions or social groups. The CF is a structural instrument that helps the EU member states to reduce the economic and social discrepancies and to reach a stability of their economies as far back as1994.

The main objective of the EU Cohesion Policies is promoting the economic growth and job creation in accordance with the Lisbon Strategy (the percentage increase to 70 per cent).

The key feature of the Cohesion Policy is that it is based on an efficient programming system, which establishes the way the funds shall be spent on a seven-years period. On a national level, that of the EU member states, the use of the Cohesion Policy's funds influences the national or regional development paths, the programming process thus becoming an important mechanism for planning the development on a 2007-2013 period.

The ERDF, the ESF and the CF contribute to reaching three objectives (Table-3) :

1. 'Convergence' supports the economic growth and employment in 84 regions from 17 states of the EU-27, with 154 millions inhabitants where the value of the GDP per capita is under 75 per cent of the community average. This objective can be found in all the three European funds, having different values of financial contribution. Through 'phasing-out', another 16 regions with a population of 16.4 millions inhabitants and with a GDP per capita slightly above the 75 per cent limit. FC applies for the 15 member states.

2. 'Regional competitiveness and employment' consolidates the regions' competitiveness and attractiveness, the employment capacity, through a dual approach that assumes, on the one hand, development programmes for supporting the regions in anticipating and being favourable to economic changes by stimulating innovation, knowledge society, entrepreneurship and environmental protection and, on the other hand, the increase of the number and quality of jobs by adapting the labour force and making investments in human resources. This objective is found in 138 regions from EU-27, with 314 million inhabitants (states which are

**Table-3 : Objectives and Priorities of Community Structural Instruments**

| Convergence | Regional competitiveness and employment | European territorial co-operation | Objective / Instrument | Priorities: Lisbon Strategy | Infrastructure | Investments | R&D | Small and Medium Enterprises | Training | Employment | Institutional capacity and administrative efficiency | Environment and transport infrastructure | Abroad Transport | Urban Transport | Energy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | ✓ | ✓ | ERDF | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| ✓ | ✓ | | ESF | ✓ | | | | | ✓ | ✓ | ✓ | | | | |
| ✓ | | | CF 85% | | | | | | | | | ✓ | ✓ | ✓ | ✓ |
| 75-85 % | 50-85% | 75-85% | Financing co-efficient | | | | | | | | | | | | |

not eligible for Objective-1). This Objective is financed by ERDF and ESF.

3. 'European territorial co-operation' is designed on three axes : cross-frontier co-operation, transnational and inter-regional.

The ESFs have an impact upon the development of the infrastructure, human resource or directly for economic actions, depending on the absorption capacity.

The programming of the structural and CFs on a national level (Romania) is done through the National Strategic Reference Framework (NSRF) 2007-2013 and the Operational Programmes (OPs).

The convergence objective is accomplished in Romania through seven OPs applicable to the eight Romanian development regions, established by the Law No. 315/2004 on regional development, abiding the EC Regulation No. 1059/2003 referring to establishing a common system for statistical classification of the territorial units (Matei, 2004).

The distribution of funds on development regions in Romania was differentiated in terms of their degree of development, using a 'development index', which reflects the economic and social disparities of the region and using the GDP per capita, adjusted by a population density co-efficient (Table-4).

## The Cumulative Multiplier of Employment

The labour market plays a very important part in transmitting the policies' mechanisms. Recognised as the ensemble of the governmental measures of intervention on the labour market, aiming at creating new jobs, improving the human resource adaptation to the economic needs and ensuring the fluidity and flexibility of the labour force in order to reduce the imbalances and malfunctions, the employment policy became the topic of many scenarios of modelling. These take into consideration the wage policies, regulations on the labour market, indicators like employment, labour participation rate and constraints on the labour market.

The local employment policy goes through changes determined by the effects of the economic and financial crisis upon the national and local economies, upon the governmental allowances on the local level for supporting the economic and social development, upon the investments, the change of the production conditions, etc., the labour force migrates from the less developed regions towards those under a sustainable development and jobs' creation,

## Table-4 : Feature Dimensions of the Development Regions in Romania

| Regions | Area ($Km^2$) | GDP millions lei current prices 2007 | per inhabitant | Inhabitants July 1, 2008 | Population Urban % | Rural % |
|---|---|---|---|---|---|---|
| Macro Region-1 | 68.259 | 1,00,140.8 | 19,090 | 52,45,573 | 56.3 | 43.7 |
| North-West Region (NWR) | 34.159 | 50,724.1 | 18,610.5 | 27,22,063 | 53.3 | 46.7 |
| Central Region (CR) | 34.100 | 49,416.7 | 19,579.5 | 25,23,510 | 59.4 | 40.6 |
| Macro Region-2 | 72.612 | 90,263.1 | 13,804 | 65,38,667 | 48.3 | 51.7 |
| North-East Region (NER) | 36. 850 | 45,990.1 | 12,340.9 | 37,19,102 | 43.2 | 56.8 |
| South-East Region (SER) | 35.762 | 44,273.0 | 15,641.8 | 28,19,565 | 55.1 | 44.9 |
| Macro Region-3 | 36.274 | 1,47,811.7 | 26,717 | 55,32,551 | 62.0 | 38.0 |
| Bucharest-Ilfov Region (BIFR) | 18.21 | 95,798.2 | 43,037.3 | 22,48,026 | 92.2 | 7.8 |
| South-Muntenia Region (SMR) | 34.453 | 52,013.5 | 15,757.8 | 32,84,525 | 41.4 | 58.6 |
| Macro Region-4 | 61.246 | 77,415.6 | 18,486 | 41,87,651 | 54.7 | 45.3 |
| South-West Oltenia (SW Oltenia) | 29,212.000 | 34,419.6 | 15,097.3 | 22,62,274 | 47.5 | 52.5 |
| West Region (WR) | 32.034 | 42,995.7 | 22,341.9 | 19,25,377 | 63.1 | 36.9 |
| Romania | 238.391 | 4,16,006.8 | 19,315.4 | 2,15,04,442 | 55.0 | 44.0 |

*Source : Romanian Statistical Yearbook 2009, p. 86.*

inside the same region from one community to another, from one country to another, from the urban environment towards the rural one or the other way around, from one economic sector to another. There are registered unemployment increases (Table-5), professions' lost for certain categories of population with high qualifications (determined by the lack of jobs or disappearance of some economic activities represented on local, county or regional level). At the same time, we are witnessing an increase of the local authorities' responsibilities, of the social and economic actors with regard to the development of the local community, from the point of view of accessing the development and cohesion structural funds, the European funds for economic growth, infrastructural development, environmental protection, professional conversion, human resource investment growth, new jobs' creation, etc.

Our theoretical argument begins from the premises of the general equilibrium theory, where we identify the following local features : the demand 'D' and supply 'Y' and the relation (1) :

$$Y = D \qquad (1)$$

The demand D is represented by the demand for goods and services on a local level C and by the demand for investment goods $l$ .

The supply Y is intended for the consumption of goods and services C and the savings E.

$$D = C + l \qquad (2)$$

$$Y = C + E \qquad (3)$$

By applying the general equilibrium theory and replacing relation (1), D and Y with relations (2) and (3), we obtain :

$$C + E = C + l \qquad (4)$$

$$E = l \qquad (5)$$

We point out that relation (5) is valid only in an optimum situation, where the demand for goods and services is equal to the supply.

The local supply (Y) also includes the imports of goods and services (C') and the demand (D) the exports of goods and services (C"). The equilibrium conditions become :

$$Y + C' = D + C'' \qquad (6)$$

$$C + E + C' = C + l + C'' \qquad (7)$$

$$E + C' = l + C'' \qquad (8)$$

$$E - l = C'' = C' \qquad (9)$$

Relation (9) represents the condition of local economic equilibrium, where we locate the role of the community structural instruments with regards to the degree of employment and local income.

**Table-5 : The Evolution of the Indicators on the Labour Market in the Development Regions from Romania during 2007-2008**

| Macro Region Development Region | Economically Active Population (thousand persons) | | Employment (thousand persons) | | ILO Unemployed (thousand persons) | | Active Rate % | | Employment Rate % | | ILO Unemployed Rate % | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **2007** | **2008** | **2007** | **2008** | **2007** | **2008** | **2007** | **2008** | **2007** | **2008** | **2007** | **2008** |
| Macro Region-1 | 2,298 | 2,295 | 2,153 | 2,155 | 145 | 140 | 60 | 60.3 | 56.1 | 56.5 | 6.3 | 6.1 |
| NW Region (NWR) | 1,198 | 1,172 | 1,147 | 1,128 | 51 | 44 | 59.6 | 58.7 | 57.0 | 56.4 | 4.3 | 3.8 |
| Central Region (CR) | 1,100 | 1,123 | 1,006 | 1,027 | 94 | 96 | 60.4 | 61.9 | 55.1 | 56.6 | 8.5 | 8.5 |
| Macro Region-2 | 3,047 | 2,999 | 2,851 | 2,830 | 196 | 169 | 62.7 | 61.9 | 58.4 | 58.2 | 6.5 | 5.6 |
| NE Region (NER) | 1,785 | 1,753 | 1,696 | 1,674 | 89 | 79 | 64.8 | 63.6 | 61.3 | 60.5 | 5.0 | 4.5 |
| SE Region (SER) | 1,262 | 1,246 | 1,155 | 1,156 | 107 | 90 | 60.1 | 59.8 | 54.7 | 55.3 | 8.5 | 7.2 |
| Macro Region-3 | 2,661 | 2,661 | 2,486 | 2,517 | 175 | 144 | 65.8 | 65.7 | 61.3 | 62.0 | 6.6 | 5.4 |
| S Muntenia Region | 1,600 | 1,593 | 1,468 | 1,485 | 132 | 108 | 66.3 | 65.9 | 60.5 | 61.1 | 8.2 | 6.8 |
| B If Region (BIFR) | 1,061 | 1,068 | 1,018 | 1,032 | 43 | 36 | 65.1 | 65.5 | 62.4 | 63.3 | 4.1 | 3.4 |
| Macro Region-4 | 1,988 | 1,989 | 1,863 | 1,867 | 125 | 122 | 63.7 | 63.8 | 59.5 | 59.7 | 6.3 | 6.1 |
| SW Oltenia | 1,103 | 1,112 | 1,028 | 1,040 | 75 | 72 | 64.1 | 64.6 | 59.3 | 60.0 | 6.8 | 6.5 |
| West Region (WR) | 885 | 877 | 835 | 827 | 50 | 50 | 63.2 | 62.9 | 59.6 | 59.3 | 5.6 | 5.7 |
| Romania | 9,994 | 9,944 | 9,353 | 9,369 | 641 | 575 | 63.0 | 62.9 | 58.8 | 59.0 | 6.4 | 5.8 |

During 2007-2013, Romania benefits of financial assistance non-reimbursable from the EU through the following structural instruments : ESF, ERDF and CF.

The differentiated repartition of the funds on the development regions of Romania (Table-6) aimed at supporting the Regional Operational Programme (POR) with regard to assisting a well-balanced development of all Romanian regions, ensuring that all the areas have a minimum level of business, social and human resource infrastructure, which allows the economic growth, by using the GDP per capita economic indicator in order to measure the development degree of the regions (Table-4). The regions with a low level of GDP per capita will benefit of a greater share of the total funds of the POR programme (for example, the Eastern Region with a 16.32 per cent allocation), while the share of the financial allocation will be smaller for the regions with a higher GDP per capita (for example, BIFR with an allocation of 8.86 per cent – Table-6).

At the regional level, the Sectoral Operational Programmes (POS) are also developed, the National Programme for Rural Development (PNDR), complementary to the priority axes of POR. The development of a regional employment multiplier based on the impact of POR and POS starts from the development capacity of jobs in the economic sectors : manufacturing industry (T), agriculture (A), market services (N), governmental services (G), using the total working labour equation on a regional level :

$$L_R = L_i + \sum_{j=1}^{4} L_j + L_k + L_z \qquad (10)$$

$L_R$ = employment in the region;

$L_i$ = employment in the activities developed through the POR project;

$\sum_{j=1}^{4} L_j$ = employment in the activities (jobs created) through the POS projects (4 projects : transport, environment, human resource development, competitiveness);

$L_k$ = employment in the activities (jobs created) through the PNDR project (1 project for rural development);

$L_z$ = employment in the region's economy;

We assume that the activities and the infrastructure of the region's economy serve all the economic interventions of the POR, POS and PNDR programmes and this relation can be expressed as follows :

$$L_z = a\,(L_i + \sum_{j=1}^{4} L_j + L_k) \qquad (11)$$

**Table-6 : Financial Allocation on Development Regions and Priority Axes POR (2007-2013)**

| Priority Axes POR | Funds Allocated on axes (FEDR and co-financing) 2007-2013 | | Regions | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | NE | SE | S | SW | W | NW | C | B IF |
| | | | per cent in the total funds allocated | | | | | | | |
| | Millions Euro | % | 16.32 | 13.25 | 14.23 | 14.01 | 10.34 | 12.09 | 10.90 | 8.86 |
| | | | Allocated Funds (FEDR and co-financing) – million Euro – | | | | | | | |
| 1. Supporting the sustainable development of cities | 1,391.17 | 31.73 | 227.04 | 184.33 | 197.96 | 194.90 | 143.85 | 168.19 | 151.64 | 123.26 |
| potential growth poles, FEDR | 1,117.81 | | 182.43 | 148.11 | 159.07 | 156.60 | 115.58 | 135.14 | 121.84 | 99.04 |
| 2. Improving the regional and local transport infrastructure | 876.71 | 20.00 | 143.08 | 116.16 | 124.76 | 122.83 | 90.65 | 105.99 | 95.56 | 77.68 |
| of which FEDR | 758.36 | | 123.76 | 100.48 | 107.92 | 106.25 | 78.41 | 91.69 | 82.66 | 67.19 |
| 3. Improving the social infrastructure | 657.53 | 15.00 | 107.31 | 87.12 | 93.56 | 92.12 | 67.99 | 79.50 | 71.67 | 58.26 |
| of which FEDR | 558.90 | | 91.21 | 74.06 | 79.52 | 78.30 | 57.80 | 67.58 | 60.92 | 49.51 |

*(Contd...)*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4. Supporting the development of the local and regional business environment | 709.89 | 16.19 | 115.86 | 94.06 | 101.02 | 99.45 | 73.40 | 85.83 | 77.38 | 68.89 |
| of which FEDR | 633.42 | | 103.39 | 83.92 | 90.13 | 88.74 | 65.50 | 76.58 | 69.04 | 56.12 |
| 5. Sustainable development and tourism's promotion | 616.77 | 14.07 | 100.65 | 81.72 | 87.77 | 86.41 | 63.78 | 74.57 | 67.23 | 54.64 |
| of which FEDR | 558.90 | | 91.22 | 74.05 | 79.53 | 78.30 | 57.79 | 67.57 | 60.92 | 49.52 |
| **Total Axes 1-5** | **4,252.07** | – | **693.94** | **563.39** | **605.07** | **595.71** | **439.67** | **514.08** | **463.48** | **376.73** |
| **of which FEDR** | **3,627.39** | | **592.01** | **480.62** | **516.17** | **508.19** | **375.08** | **438.56** | **395.38** | **321.38** |
| 6. Technical assistance | 131.51 | 3.00 | The Funds of the Technical Assistance Priority Axis are not regionally allocated | | | | | | | |
| of which FEDR | 98.63 | | | | | | | | | |
| **Total POR (Axes 1-6)** | **4,383.58** | **100.00** | | | | | | | | |
| **of which FEDR** | **3,726.02** | | | | | | | | | |

*Source : POR 2007-2013. Annual Implementation Report 2008, Romanian Government, MDRL, June 2009, p. 14.*

Where α is a positive constant specific to each programme that signifies the cumulative effects of all the programmes upon the level of employment.

A global analysis at Romania's level shows us that in the context in which until 2020 it is foreseen that there will be 5,50,000 jobs created, as an effect of the macroeconomic impact of the Community Support Framework 2007-2013 for the year 2009, α co-efficient will have the value $\alpha_{2009} = 6.19 \times 10^{-3}$.

By substituting (11) into (10), we obtain :

$$L_R = (L_i + \sum_{j=1}^{4} L_j + L_k) + a\,(L_i + \sum_{j=1}^{4} L_j + L_k) \quad \text{...(12)}$$

$$L_R = (1+a)(L_i + \sum_{j=1}^{4} L_j + L_k)$$

By considering the time variation of labour, we obtain :

$$\Delta L_R = (1+a)\Delta(L_i + \sum_{j=1}^{4} L_j + L_k) \quad \text{....(13)}$$

$$\frac{\Delta L_R}{\Delta(L_i + \sum_{j=1}^{4} L_j + L_k)} = (1+a)$$ or, at limit

$$\frac{dL_R}{d(L_i + \sum_{j=1}^{4} L_j + L_k)} = (1+a)$$

(1+α) is the cumulative multiplier of employment, which shows that one supplementary job created due to the activities developed through the POR, POS and PNDR programmes will lead to an increase with (1+α) of the total employment in the region.

## The HERMIN Model

The HERMIN model is designed for environments under structural change (Barry *et al.*, 2000) and used for estimating the impact of structural and cohesion funds upon the national economies of the EU member states (Table-2), presenting various aspects of these with regards to the absorption and distribution, different in terms of destination (the infrastructure's development, human capital's development or directly for economic actions). The HERMIN modelling framework needed to be based on a fairly simple theoretical framework that permitted inter-county and inter-region comparisons.

The HERMIN model (Bradley, Modesto *et al.*, 1995) used in the EU states for estimating the impact of structural and CFs is characterised by the following features :

1) It is a macroeconomic model with an annual time horizon and multi-sectoral coverage area that includes

the following sectors : T sector – manufacturing industry, N sector—market services, A sector—agriculture and G sector—governmental services (Kejak & Vavra, 1998, Barry *et al.*, 2003);

2) It can describe the functioning and flexibility of labour force in relation to the potential influences of the labour migration to inter-regional;

3) It is a medium scale model, empirical, entirely written in structural form, based on the conventional Keynesian mechanisms describing the functioning of the demand-product equilibrium for all the sectors;

4) It ensures the assessment of the economic policies impact upon the individual sectors, emphasizing the sectoral changes;

5) It is a structural model, based on microeconomic fundaments : the supply includes the main mechanisms incorporations through which the Structural and CFs influence the productive potential, the direct externalities (upon the output) and indirect (upon the production factors—capital and labour) (Bradley & Morgenroth, 2004). The model functions as an integrated system of equations with inter-relations between all the sub-components.

The HERMIN model structure (Figure-1), where many branches and economic operators can be found, emphasizes the variations of the capital accumulation, of the technological progress, the relations between the stocks and flows and the retrospective expectations, is built on three blocks : a supply block, an absorption block and an income distribution block (Bradley, Untiedt, Timo, 2007; Bradley, Petrakos, Traistaru, 2004).

In order to be able to estimate the effect of the structural instruments which include a complex system of measures, their aggregation must take place in categories with economic significance represented by three types of expenditures regarding :

1) Physical Infrastructure – PI;

2) Human Resource – HR;

3) direct aid to the productive sector (market services and agriculture)—APS and the possible co-financing sources together with the national one must also be distinguished.

By applying the HERMIN model to the European states with regard to measuring the impact of the Cohesion Policy, Bradley *et al.*, (2007)

**Figure-1 : The HERMIN Model Schema Supply Aspects**

| |
|---|
| **Manufacturing Sector (mainly tradeable goods)** |
| Output = $f_1$(World Demand, Domestic Demand, Competitiveness, t) |
| Employment = $f_2$(Output, Relative Factor Price Ratio, t) |
| Investment = $f_3$(Output, Relative Factor Price Ratio, t) |
| Capital Stock = Investment+(1-$\delta$)Capital $Stock_{t-1}$ |
| Output Price = $f_4$(World Price$*$Exchange Rate, Unit Labour Costs) |
| Wage Rate = $f_5$(Output Price, Tax Wedge, Unemployment, Productivity) |
| Competitiveness = National/World Output Prices |
| **Building and Construction Sector (mainly non-tradeable)** |
| Output = $f_6$(Total Investment in Construction) |
| Employment = $f_7$(Output, Relative Factor Price Ratio, t) |
| Investment = $f_8$(Output, Relative Factor Price Ratio, t) |
| Capital Stock = Investment + (1-$\delta$)Capital $Stock_{t-1}$ |
| Output Price = Mark-Up on Unit Labour Costs) |
| Wage Inflation = Manufacturing Sector Wage Inflation |
| **Market Service Sector (mainly non-tradeable)** |
| Output = $f_6$(Domestic Demand, World Demand) |
| Employment = $f_7$(Output, Relative Factor Price Ratio, t) |
| Investment = $f_8$(Output, Relative Factor Price Ratio, t) |
| Capital Stock = Investment+(1-$\delta$)Capital $Stock_{t-1}$ |
| Output Price = Mark-Up on Unit Labour Costs) |
| Wage Inflation = Manufacturing Sector Wage Inflation |
| Agriculture and Non-Market Services : mainly exogenous and/or instrumental |
| **Demographics and Labour Supply** |
| Population Growth = $f_9$ (Natural Growth, Migration) |

*(Contd...)*

| |
|---|
| Labour Force = $f_{10}$(Population, Labour Force Participation Rate) |
| Unemployment = Labour Force – Total Employment |
| Migration = $f_{11}$(Relative expected wage) |
| **Demand (absorption) Aspect** |
| Consumption = $f_{12}$(Personal Disposable Income) |
| Domestic Demand = Private and Public Consumption + Investment + Stock changes |
| Net Trade Surplus = Total Output – Domestic Demand |
| **Income Distribution Aspects** |
| Expenditure prices = $f_{13}$(Output prices, Import prices, Indirect tax rates) |
| Income = Total Output |
| Personal Disposable Income = Income + Transfers – Direct Taxes |
| Current Account = Net Trade Surplus + Net Factor Income from Abroad |
| Public Sector Borrowing = Public Expenditure – Tax Rate x Tax Base |
| Public Sector Debt = (1 + Interest Rate) $Debt_{t-1}$ + Public Sector Borrowing |
| **Key Exogenous Variables** |
| External : World output and prices; exchange rates; interest rates; |
| Domestic : Public expenditure; tax rates. |

*Source : Bradley, J. et al., 2007, p. 50, Figure 1.1.*

classifies the countries into three groups, based on the size of the cumulative multipliers :

1) High cumulative multipliers : Ireland (4.82); Romania (4.60); Czech Republic (4.38);

2) Medium cumulative multipliers : Estonia (3.65); Lithuania (3.36); Latvia (2.78); Slovakia (2.62); Greece (2.47); Poland (2.39); Hungary (2.37); Spain (2.40); Cyprus (2.21);

3) Low cumulative multipliers : Bulgaria (1.87); Slovenia (1.86); Portugal (1.84).

In Romania, the HERMIN model was implemented for the first time during 1997-1999 (Ciupagea, 2000), and a second version of the HEROM model is currently in use (Ţurlea, 2006), which is based on the specification of the standard HERMIN model (Bradley, Modesto *et al.*, 1995).

The model advances more than 240 equations formed by identities or pre-established functional relations between economic variables, being adapted to the specificities of the Romanian economy and answering the needs of the *ex-ante* studies of the impact of structural funds developed by the EC.

The simulation is done for two scenarios that are based on the Standard HERMIN model for the 2007-2020 period, with the following hypotheses :

***Hypothesis 1 (H1)*** – the structural funds are present with the material contributions which exists in the National Development Plan (PND).

***Hypothesis 2 (H2)*** – the contributions for the structural funds are not present in the PND after, thus maintaining the ceiling to the level of the pre-adherence funds corresponding to 2006, considering an absorption rate of 100 per cent.

The results of the simulations on the indicators regarding the labour market (Table-7) emphasizes differences between the two scenarios.

The modelling of labour market was accomplished through the analysis of the wage policies and regulations on the labour market (taxation), of the two indicators – employment rate and labour participation rate. The mechanism establishing the wages on the labour market take into account the labour cost and world prices (Charemza and Turlea, 1998).

The total employment in the four economic sectors T, N, A, G is equivalent to the labour demand used for estimating unemployment.

The total employment in the four sectors of the economy on the country's level is equivalent to the labour force demand, as it is also of reference for estimating unemployment. The labour market will be significantly influenced by funds so that in the 14 years of the prognosis period over 5,50,000 jobs will be created in H1. The annual growth rate in H2 is – 0.25 per cent, while H1 has positive value of 0.42 per cent annually. This lead to a net difference of employment (L) in 2020 to almost 10 per cent against H2. The Unemployment Rate (UR) in 2020 will be in H1 almost half of its level corresponding to H2. The increase of the labour demand in H1 will be larger in the tradeable goods sector, where, in 2013, the number of jobs will go up by 23 per cent while in agriculture a fall will be registered, according to the two scenarios.

**Table-7 : The Macroeconomic Impact of Structural Funds**

**The Percentage Difference between the Values obtained in H1 and H2 (%)**

| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Employment (L) | 1.93 | 1.75 | 2.57 | 3.39 | 4.01 | 4.60 | 7.46 | 7.04 | 6.98 | 7.38 | 7.61 | 7.68 | 8.40 | 9.74 |
| Employment in N sector | 0.66 | 1.31 | 1.94 | 2.54 | 3.12 | 3.66 | 4.57 | 4.50 | 4.45 | 4.40 | 4.40 | 4.34 | 4.28 | 4.21 |
| Employment in T sector | 7.70 | 5.82 | 8.54 | 11.23 | 13.09 | 14.29 | 25.87 | 23.96 | 23.75 | 26.20 | 27.33 | 26.73 | 30.09 | 36.27 |
| Unemployment Rate (UR) | –23.42 | –27.87 | –42.59 | –46.43 | –47.48 | –50.27 | –59.08 | –47.59 | –45.68 | –43.90 | –42.24 | –44.78 | –47.27 | –3.95 |

*Source : PND, 2007-2013, p. 371.*

## The Input-Output Model on Labour Market on the Development Regions' Level

Another method used for studying the impact is the Input-Output Model designed for local development (Matei, 2007; Matei *et al.*, 2009; McNicoll & Baird, 1980), for inter-regional economic development (Cardenaso & Oosterhaven, 2010) or for the effects of the European funds in Romania's regions (Bonfiglio, 2005).

The analyses determine the effects of the appearance or expansion of some activities in the economic process specific to local development, more precisely establishing the impact of a new activity upon the economic and social local development.

In theory, the Input-Output Model (I – O) is designed with a simple, functional structure of the economy, incorporating the links between the flows of intermediary goods, the fact that the 'inputs are themselves current outputs for the other processes of the system' (Lancaster, 1973) being of essence. The I – O Multi-regional Model (described by Bonfiglio, 2005) for the eight development regions (with a NUTS development level, Table-4) of Romania can be described as a model of interactions and transactions between the economic sectors and between regions, as follows :

$$\begin{vmatrix} x^1 \\ x^2 \\ x^3 \\ x^4 \\ x^5 \\ x^6 \\ x^7 \\ x^8 \end{vmatrix} = \begin{vmatrix} \underline{A^{11}} & A^{12} & A^{13} & A^{14} & A^{15} & A^{16} & A^{17} & A^{18} \\ A^{21} & \underline{A^{22}} & A^{23} & A^{24} & A^{25} & A^{26} & A^{27} & A^{28} \\ A^{31} & A^{32} & \underline{A^{33}} & A^{34} & A^{35} & A^{36} & A^{37} & A^{38} \\ A^{41} & A^{42} & A^{43} & \underline{A^{44}} & A^{45} & A^{46} & A^{47} & A^{48} \\ A^{51} & A^{52} & A^{53} & A^{54} & \underline{A^{55}} & A^{56} & A^{57} & A^{58} \\ A^{61} & A^{62} & A^{63} & A^{64} & A^{65} & \underline{A^{66}} & A^{67} & A^{68} \\ A^{71} & A^{72} & A^{73} & A^{74} & A^{75} & A^{76} & \underline{A^{77}} & A^{78} \\ A^{81} & A^{82} & A^{83} & A^{84} & A^{85} & A^{86} & A^{87} & \underline{A^{88}} \end{vmatrix} \times \begin{vmatrix} x^1 \\ x^2 \\ x^3 \\ x^4 \\ x^5 \\ x^6 \\ x^7 \\ x^8 \end{vmatrix} + \begin{vmatrix} fd^1 \\ fd^2 \\ fd^3 \\ fd^4 \\ fd^4 \\ fd^5 \\ fd^6 \\ fd^7 \\ fd^8 \end{vmatrix} \quad ....(14)$$

Where

X is the output column vector;

A is the co-efficient's matrix;

$F_d$ is the vector of the final demand;

$A^{12}$, $A^{21}$, … refer to the flows between sectors and regions;

$A^{11}$, $A^{22}$ ... $A^{88}$ refer to the flows of goods and services on unit of output, and to the trade inside the region;

The multiregional model of I – O can be written in the form of the equation :

$$X = AX + f_d \qquad (15)$$

$$X = (1 - A)^{-1} \cdot f_d$$

The relation for determining the impact (Matei *et al.*, 2009) is

$$\Delta x = \left[1 - \overline{A}\right]^{-1} \Delta F, \qquad (16)$$

Where

$\Delta x$ is the modification in the local outputs derived from the operations specific to the new local activities. $\Delta x$ will be a column vector with n+1 elements.

$\overline{A}$ is the extended I – O matrix of the intermediary flows' co-efficients, which includes a line and a column correspondent to the local activities.

$\Delta F$ represents the changes in the final demand determined by the creation of a new local activity.

In terms of determining, from equation (16) of the outputs correspondent to the n+1 local activities, as well as to knowing the co-efficients of the employees' need, for each output unity $e_i$, i = 1, n + 1, the impact of the new local activity upon the labour force need can be determined.

$$\Delta E_i = e_i \Delta x_i, i = 1, \overline{n-1} \qquad (17)$$

Where $\Delta E_i$ measures the changes in employment from the *i* activity and $\Delta x_i$ is the $i^{th}$ element of the column vector *x*.

In the I – O Model, replacing the flows of goods and services with those of labour and income has been the fundament of developing a study by Bonfiglio (2005), regarding the effects of using the European funds upon the regional development in Romania. The author has developed an I – O Multi-regional Model for Romania, assessing the effects upon the labour market and income as a result of the development policies promoted under the European funds for the 2007-2009 period, analysing the inter-relations from and between (the economic branches) the development regions. The author's conclusions state the fact that the structural funds in general have a positive effect upon the degree of development and reducing the economic disparities, taking into consideration the economic sectors (agriculture, industry, services) and social sectors (labour market and income) between regions (Table-8).

Referring to the creation of new jobs, the distribution of half of the jobs is assigned between industry, 29 per cent and services, 21 per cent, the other half

**Table-8 : The Impact of Structural Funds upon Employment during 2007-2009 in Romania**

| | NE | SE | S | SW | W | NW | C | B If | RO |
|---|---|---|---|---|---|---|---|---|---|
| Agriculture | 55.7 | 46.5 | 63.8 | 52.1 | 38.6 | 48.6 | 36.4 | 7.5 | 49.6 |
| Industry | 24.2 | 27.3 | 22.8 | 28.5 | 35.0 | 29.6 | 41.9 | 45.4 | 29.1 |
| Services | 20.1 | 26.2 | 13.4 | 19.4 | 26.4 | 21,8 | 21.7 | 47.0 | 21.3 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |

*Source : Bonfiglio (2005, p. 26, Table-10).*

being in the agriculture and the income are at a level of 5.3 per cent in agriculture, 44.7 per cent in industry and 50 per cent in services. In terms of effectiveness, policy generates an increase in income by 32 per cent of public expenditure and in employment by 183 labour units for each one million Euro. At a sector level, policy demonstrates to be more effective in services, as for income and in agriculture, as for employment.

## Conclusions

The assessment of the possible effects that the community structural instruments of EU can produce at the economic level in the development regions of Romania can be accomplished through the use of certain economical-mathematical modelling, designed for simulating the national macroeconomic system in the multi-sectoral and multi-institutional variants.

Characterized by the sets' triplet (inputs I, system's status S and outputs O), the regional model is a multitude of parts interacting with one another, described as follows :

$$S = \{T, I, F, S, O, j, g\}$$

Where,

T – is the time for ordering events (as the system has a continuous time);

I – inputs' set;

F – the set of the segment input system;

E – outputs' set;

S – the set of the system's states (that we declare it to be the modelling concept of the internal structure of the system, which contains its 'history' and which affects its present and future and together with the inputs' form determine in an unique manner the system's outputs);

$j$ – is the function of response of the system;

$$j = I * S \rightarrow O$$

That we use in our case, of the community structural instruments in the region, in the sense that : at a certain input I and a certain status of the system S can reach a certain response O.

$g$ – is the function of the states' transition.

The rule of the system's equilibrium, the behavioural equations and the macroeconomic identities have used annual data bases, appealing to Keynesian mechanism for describing the way of functioning of the demand-supply equilibrium for all the economic sectors.

The presented HERMIN model, the HEROM model, the cumulative multiplier of employment based on the community structural instruments and the multi-regional I – O Model are testing different scenarios for European financial instruments allocation on a national economic structure, financial source, distributed on the level of the development regions on a 2007-2020 prognosis time horizon (2007-2013—European financing and 2014-2020 the post-transfer period), a period when employment changes will take place.

The experimented models (HERMIN, HERMON, I – O) or the cumulative regional employment multiplier justify the economic and social policy decision and allow the effects' quantification (credible) if we compare with what has been registered for the 2007-2008 period, a period that for Romania represents the first, respectively the second year when the country's statute is that of EU Member, with rights to access the structural and CFs.

The I – O links on a regional level generate feed-back effects, both direct (the increase of the number of jobs and of the employees' income as a result of the insertion of the structural instruments) and indirect (the increase of demand in the sectors supporting the new activities developed as a result of the European financial instruments, thus increasing the output, employment and income in these sectors) and induced (the employees from the new activities created through the European financial intervention spend a part of their income for buying goods and services on a local level, thus increasing the demand in that sector).

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# The Effect of Mergers and Acquisitions on Bank Performance in Egypt

***Christian Kalhöfer*** * ***& Ahmed Badreldin*** **

*Recent economic reforms in Egypt have significantly improved its macroeconomic indicators and financial sector. Banks have witnessed significant Merger and Acquisition (M&A) activity as a result of these reforms in attempts to privatize and strengthen the banking sector. This study measures the performance of Egyptian banks that have undergone M&As during the period 2002-2007. This is done by calculating their return on equity using the Basic RoE Scheme in order to determine the degree of success of banking reforms in strengthening and consolidating the Egyptian banking sector. Our findings indicate that not all banks that have undergone deals of M&As have shown significant improvements in performance and return on equity when compared to their performance before the deals. Furthermore, extensive analysis was performed yielding the same results. It was concluded that M&As have not had a clear effect on the profitability of banks in the Egyptian banking sector. They were only found to have minor positive effects on the credit risk position. These findings do not support the current process of financial consolidation and banking reforms observed in Egypt and provide weak evidence to support their constructive role in improved bank profitability and economic re-structure.*

## 1. Introduction

The world of finance is expanding and consolidating at an exponentially increasing speed. During the last decade we have seen the formation of many continental trade agreements and expansion in international trade volumes and transactions worldwide. This integration has strengthened financial markets and has given rise to the combination of numerous financial activities to offer even more choices of investment. Recently, banks have sought expansion through waves of Mergers and Acquisitions (M&As) along the years, starting with the United States (US) and Europe and then spreading to other countries around the world (Focarelli, Panetta & Salleo, 2002). Most studies of bank M&A have focused on the US as it was the first country to witness bank M&A in the late 19$^{th}$ century (Hubbard, 2001). More recently, studies have analyzed bank M&A in Europe especially after the consolidation of the European economies and the unification of their currency (Yener & Ibáñez, 2004; Lindblom & Von Koch, 2002). Yet, until now, it has been quite

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rare to find research into bank M&A in the developing countries of the Middle East and North Africa region because such expansion activities were non-existent until recently. This delay in expansion activities may be greatly blamed on the protective regulations in these areas which have inhibited growth of the banking sector and also due to large public sector interference. Nevertheless, with increased liberalizations and economic reforms in some countries in the region, more and more banks are engaging in expansionary activities including M&As. For this reason, it has become important to analyze bank M&A in the region and to determine how liberalization and economic reforms have affected the banking sector.

This paper analyzes M&A in the Egyptian banking sector over the period 2002-2007. This may well be one of the first explorations into this market. The paper begins by introducing M&A in terms of history, benefits and drawbacks along with results of relevant previous research from the US and European Union (EU) with regards to bank M&A. The paper continues with a brief overview of economic reforms in Egypt in general and the banking reforms in specific. These banking reforms have allowed banks to engage in voluntary M&A which has led to high consolidating activity in the banking sector. The sample and methodology of analysis are then introduced along with the results of whether recent M&A in the Egyptian banking sector, spurred by the banking reforms, have actually improved bank performance for those banks involved. The paper concludes by a discussion and interpretation of the results and how they reflect the effects of the Egyptian banking reform programme.

## 2. Bank M&A Drivers in the Egyptian Economy

The need for Egypt's economic reforms spurred from its economic slow-down and below-average performance in the period 2000-2003. During this period, economic growth averaged 3 per cent per year down from an average of 5.75 per cent five years earlier. Egypt was also facing a decline in investments along with a rise in inflation reaching WPI of 21.7 per cent in 2004 up from 10.3 per cent in the previous year. It was also facing high unemployment of 10 per cent in 2003 (Srinivasan 2005; IDSC, 2005). Egypt was and still is, considered to have an underdeveloped financial sector due to the presence of a large amount of money outside the banking sector. It is estimated that only 25 per cent of Egyptians collect regular salaries and only 10 per cent of the population have a bank account. (MENA-OECD 2006; Kalhoefer & Salem, 2008).

Another factor attributing to the previously mentioned decline in economic performance was the existence of a highly interfering public sector in all sectors of the economy; especially in the banking sector (Srinivasan, 2005).

Egypt's economic reform has been quite effective in changing the previously mentioned negative indicators. According to American Chamber of Commerce (AmCham) (2005) Egypt ranked first in economic reform worldwide in 2005. Gross Domestic Product (GDP) growth reached 5.1 per cent in 2004-2005 and is expected to reach 8 per cent in 2008 (up from previously targeted 6 per cent). Another component of the reform was the privatization of State-owned Enterprises (SoEs) by removing them from public sector control and into the management of holding companies (MENA-OECD, 2006). A great share of the improvements in economic performance is attributed to the banking sector reforms, leading to an increased mobilization of savings and channelling of capital into the economy through the capital market and other investments (SIS 2008; Kalhoefer & Salem, 2008).

The latest banking sector reforms began in 2004 in the hope of strengthening the sector and increasing its robustness to be able to face global and regional competition and to act as a base and infrastructure for the overall economic reforms in the country. The banking reforms focused on privatizing and consolidating the banking sector, addressing Non-performing Loans (NPLs), financial and managerial re-structuring of public banks, privatization of a number of state-owned banks and improving central bank supervision of the sector (AmCham, 2005; Srinivasan, 2005). Additionally, the reforms intended to implement the Unified Banking Law and increase minimum-capital requirements in accordance with the Basel-II Standards (IDSC, 2005).

M&As are considered two methods of corporate takeover along with proxy contests and leveraged buyouts. M&As have played a critical role in the success of many modern organizations. Their role in boosting the size of start-ups and increasing their market capitalization allows them to compete with much larger and well-established companies. Engaging in M&A gives companies the advantages of speed to positioning, speed to market and speed to becoming a competitive company, rather than the slower method of building internally (Carey, 2001). One of the main reasons of undergoing M&A is seeking to achieve different types of synergy, which is defined as the enhanced economic value created by the merger of buyer and seller (Wang & Xie, 2009). Other benefits and goals of M&A include : market penetration, vertical expansion to control supply and distribution sources, market entry, identifying asset potential and economics of scale. (Eccles, Kersten, & Wilson, 2001).

Although lots of M&A activities can be observed all over the world, by far not all of them are successful. Some studies conclude that approximately half of the M&As, fail to meet their set objectives (Hubbard, 2001; Eccles *et al.,* 2001). Some research attributes M&A failures to reasons such as mismatches between target and acquirer companies in terms of size, diversification into unrelated industries or cultural barriers where employees find themselves working under new work legislations, different working practices or company procedures. (Eccles *et al.,* 2001, Hubbard, 2001). M&A success depends on factors like the industry or management preferences. Some companies prefer to build internally rather than buying or acquiring especially in cases where management realizes that they have the needed product or process knowledge and can easily capitalize on an opportunity without going through a buying process. Another discouraging fact about M&As is that they are much more visible to the general public and may involve the stockholders (Carey, 2001).

The earlier mentioned banking reforms have had a driving effect on the banking sector, encouraging much consolidation and M&A activity. Beginning with the increase in minimum capital requirement which spurred a wave of domestic M&A followed by the sale of large public sector holdings in joint venture banks which encouraged cross-border M&A for strategic investors looking to enter into the Egyptian market. Previous research has been conducted on bank M&A results. Initially, it is important to highlight Chavaltanpipat, Kholdy and Sohrabian's (1999) results that recent bank M&As have yielded less shareholder value than those M&As concluded in the 1980s. Other results show that cases of bank M&A where targets and buyers are of similar overall size, risk attitudes and other orientations were more likely to result in positive shareholder value than those with mismatches in the given criteria (Yener & Ibáñez, 2004). It is also mentioned that consolidation between banks with matching strategic characteristics result in positive shareholder value creation in the US, yet positive performance may not be ensured if they face cultural barriers (Yener *et al.,* 2004).

According to Yener *et al.,* (2004) and Focarelli *et al.,* (2002) previous studies investigating the effect of bank M&A on performance tend to follow two main empirical methods. The first group is comparing pre and post-M&A performance using financial and accounting data, while the second group uses an event-study type methodology. In that case, the changes in the prices of specific financial market assets (usually share prices of the involved companies) around the time of the announcement of the merger are analyzed. For this paper, (Return on Equity (RoE) was chosen as a measure as it is considered a critical performance indicator by both investors and management (Lindblom & Von Koch, 2002). It is stated that the ultimate measure of the strength of any financial institution is the RoE. RoE also helps to make a fair comparison of banks differing in size and structure. It has been used by Yener *et al.,* (2004), Focarelli *et al.,* (2002) and Lindblom *et al.,* (2002) to measure profitability.

In addition, the RoE is used due to the availability of accounting data for pre and post-M&A, and to be able to obtain accurate results, free from the excessive fluctuations of the Egyptian stock market which do not offer a fair indicator of performance or market value. Another reason for using financial and accounting data is that management seeks to improve accounting profitability through M&A; therefore, accounting measures would be best suited to evaluate these improvements.

## 3. Sample and Methodology

In this analysis of banks that have recently undergone M&A in the Egyptian banking sector during the period of banking reforms, the sample included registered M&A taking place in the Egyptian banking sector during the period from 2004-2007. The sample focused on acquiring banks, not target banks, due to the unavailability of financial information. The sample was composed of 10 banks in total and was divided based on the home-country of the acquiring bank, producing two main groups; Cross-Border M&A and Domestic M&A. Of the sample banks, four had undergone Domestic M&A (namely National Société Générale Bank (NSGB), Banque Misr, Arab African International Bank and the National Bank of Egypt) while the remaining six had undergone Cross-Border M&A in the Egyptian banking sector (namely Blom Bank, Audi Bank, Union National Bank, Ahli United Bank, Intresa San Paolo (San Paolo at the time of M&A), and Piraeus Bank)[1].

Although the size of the sample was relatively small compared to other studies conducted in the US or Europe, it must be noted that the total number of M&As in the Egyptian banking sector is not quite as large as other countries, with the total number of banks at the time of publication totalling to 40 banks (Central Bank of Egypt, 2008).

Using this sample, pre and post-M&A financial performance of acquirer banks was measured using RoE as a dependent

**Table-1 : Selected Banks from recent Mergers and Acquisitions in Egypt**

| Date | Acquirer | Target | Value (L.E. million) |
|---|---|---|---|
| Sept '04 | Banque Misr | Misr Exterior Bank | N/A |
| June '05 | Piraeus | Egyptian Commercial Bank | 133 |
| Sept '05 | NSGB | Misr International Bank | 2,204 |
| Sept '05 | Arab African International Bank | Misr American International Bank | 240 |
| Oct '05 | National Bank of Egypt | Mohandes Bank | N/A |
| Dec '05 | Blom Bank | Misr Romania Bank | 498 |
| Mar '06 | Audi Bank | Cairo Far East Bank | 94 |
| Aug '06 | Union National Bank | Alexandria Commercial and Maritime Bank | 245 |
| Aug '06 | Ahli United Bank | Delta International Bank | 583 |
| Dec '06 | Intresa San Paolo | Bank of Alexandria | 9,215 |

*Source : Reference CASE (2008).*

variable[2]. Mean RoE was calculated for a period of two years before and after the merger. This time range was chosen based on Yener *et al.,'s* (2004) suggestion that two years is sufficient to avoid alteration and inaccuracy of results. He explains that longer time spans may negatively affect accuracy of results due to effects of other external economic factors.

For extensive analysis, Schierenbeck's Basic RoE Scheme Diagram was applied as shown in Kalhoefer and Salem (2008) to trace and further assess the results found. The Scheme involves using numerous financial ratios as shown in the following Table-2 and Figure-1.

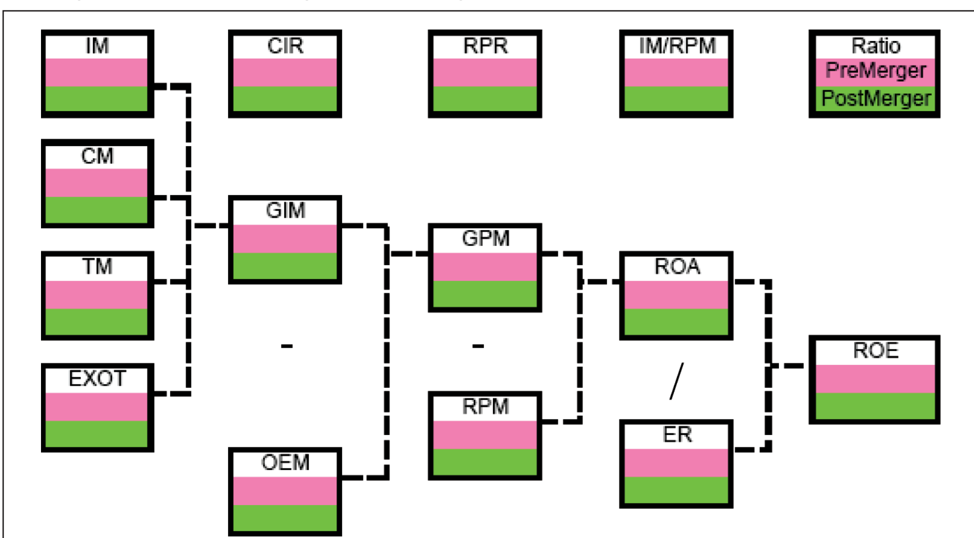
## 4. Analysis and Assessment

Analyzing the aggregated results using the means for Pre and Post-Merger Ratios (Table-3), the most important ratio RoE increased on an average by more than 14 per cent, which is a significant change. It can be seen that neither Gross Income nor Operational Expenditure Margin show significant or diverting changes, so these are not the main drivers for the improvement. In addition, the Equity Ratio also didn't

## Table-2 : Ratios and Abbreviations used in Basic RoE Scheme

| Ratio | Abbreviation Used |
|---|---|
| Interest Margin | IM |
| Commission Margin | CM |
| Trading Margin | TM |
| Extraordinary and other Income Margin | EXOT |
| Gross Income Margin | GIM |
| Operating Expenditure Margin | OEM |
| Gross Profit Margin | GPM |
| Risk Provision Margin | RPM |
| Return on Assets | RoA |
| Equity Ratio | ER |
| Return on Equity (pre-Tax) | RoE |
| Cost Income Ratio | CIM |
| Risk Provision Ratio | RPR |

## Figure-1 : Explaining the Tracing Procedure of the Basic ROE Scheme



change significantly. A decrease of the Equity Ratio would—*ceteris paribus*—lead to an increase of the RoE. For example, the Pre-Tax RoE was found to have increased from 12.61 per cent to 14.45 per cent, a relative change of 14.59 per cent. Initially, this is considered quite a significant change in bank profitability considering the magnitude of a merger or acquisition on a bank. Yet it is important to realize that extreme results exist, such as UNB's decrease in Pre-Tax RoE by approximately 19.35 per cent and Piraeus's impressive increase in Pre-Tax RoE by 254.17 per cent. Such extreme cases do not provide sufficient evidence to suggest a common performance or profitability trend.

This has encouraged further analysis of the results in more details by dividing the results according to their previous classification of Domestic and Cross-Border M&A. It was expected to find a clear trend for either Domestic or

**Table-3 : Total Mean for Pre and Post-Merger Ratios**

| Total Mean | Pre-Merger | Post-Merger | Change | Relative Change |
|---|---|---|---|---|
| Pre-Tax RoE | 12.61% | 14.45% | 1.84% | 14.59% |
| RoA | 1.15% | 1.20% | 0.04% | 3.84% |
| Interest Margin | 1.85% | 1.79% | –0.07% | –3.59% |
| Commission Margin | 0.97% | 0.78% | –0.19% | –19.85% |
| Trading Margin | 0.14% | 0.12% | –0.02% | –12.29% |
| EXOT Margin | –0.01% | 0.14% | 0.15% | 1341.49% |
| Gross Income Margin | 2.96% | 2.83% | –0.13% | –4.37% |
| Operating Expenditure Margin | 1.20% | 1.16% | –0.04% | –3.41% |
| Gross Profit Margin | 1.76% | 1.67% | –0.09% | –5.04% |
| Risk Provision Margin | –0.60% | –0.47% | 0.13% | 22.08% |
| Equity Ratio | 8.68% | 8.21% | –0.47% | –5.39% |
| Cost-Income | 41.66% | 40.57% | –1.09% | –2.62% |
| Deposit/TA | 72.89% | 67.66% | | |
| Loans/TA | 42.26% | 40.46% | | |

Cross-Border cases of M&A with regards to bank profitability, but no clear trend was found (Tables-4 & 5).

For extensive examination of individual banks' performance pre and post-M&A, the position of each bank on an Equity-Ratio RoE Graph was plotted. The Equity Ratio-RoE Graph (Figures-5 & 6) shows how profitable a bank is in relation to its bankruptcy risk. This was done through Dynamic Analysis, which describes how each bank changed following the M&A.

Those banks lying in the upper right corner are those which are able to achieve high RoE while having a low bankruptcy risk reflected by the relatively high Equity Ratio. On the other hand, those in the lower left corner are those that are unable to achieve high RoE and have high bankruptcy risk reflected by the low Equity Ratio.

Diagrams 5 and 6 show the Pre-Merger and Post-Merger positions of the 5 banks per diagram :

**Table-4 : Mean for Pre and Post-Domestic Merger Ratios**

| Domestic Mean | Pre-Merger | Post-Merger | Change | Relative Change |
|---|---|---|---|---|
| Pre-Tax RoE | 12.93% | 14.44% | 1.50% | 11.61% |
| RoA | 1.08% | 0.93% | –0.15% | –13.68% |
| Interest Margin | 1.83% | 1.70% | –0.13% | –7.24% |
| Commission Margin | 1.20% | 0.90% | –0.30% | –25.04% |
| Trading Margin | 0.16% | 0.15% | –0.01% | –8.73% |
| EXOT Margin | –0.23% | 0.03% | 0.26% | 115.04% |
| Gross Income Margin | 2.96% | 2.78% | –0.18% | –6.22% |
| Operating Expenditure Margin | 1.09% | 1.11% | 0.02% | 2.19% |
| Gross Profit Margin | 1.87% | 1.67% | –0.21% | –11.09% |
| Risk Provision Margin | –0.79% | –0.73% | 0.06% | 7.56% |
| Equity Ratio | 7.38% | 5.40% | –1.98% | –26.80% |
| Cost-Income | 38.64% | 40.48% | 1.84% | 4.77% |
| Deposit/TA | 80.72% | 68.16% | | |
| Loans/TA | 39.95% | 34.47% | | |

**Table-5 : Mean for Pre and Post-Cross-Border Merger Ratios**

| Cross-Border Mean | Pre-Merger | Post-Merger | Change | Relative Change |
|---|---|---|---|---|
| Pre-Tax RoE | 12.29% | 14.47% | 2.18% | 17.72% |
| RoA | 1.23% | 1.46% | 0.24% | 19.29% |
| Interest Margin | 1.88% | 1.88% | 0.00% | -0.03% |
| Commission Margin | 0.75% | 0.66% | -0.09% | -11.47% |
| Trading Margin | 0.12% | 0.10% | -0.02% | -17.16% |
| EXOT Margin | 0.21% | 0.24% | 0.03% | 15.26% |
| Gross Income Margin | 2.95% | 2.88% | -0.07% | -2.53% |
| Operating Expenditure Margin | 1.31% | 1.21% | -0.11% | -8.04% |
| Gross Profit Margin | 1.64% | 1.67% | 0.03% | 1.90% |
| Risk Provision Margin | -0.41% | -0.20% | 0.21% | 50.20% |
| Equity Ratio | 9.97% | 11.02% | 1.04% | 10.46% |
| Cost-Income | 44.68% | 40.65% | -4.03% | -9.02% |
| Deposit/TA | 65.07% | 67.16% | | |
| Loans/TA | 44.56% | 46.45% | | |

Banks that have moved from Pre-Merger corner 1 (Figure-2) to Post-Merger corner 3 (Figure- 3) are those that have been able to maintain high RoE after the M&A, yet faced a decrease in Equity Ratio because of the M&A (UNB, NSGB and AAIB).

- Banks that have moved from 2 to corner 1 are those that have not been able to improve their high RoE, but were able to decrease their bankruptcy risk through increasing their Equity Ratio (BLOM).
- Banks that have moved from corner 3 to corner 2 are those that been able to improve their low RoE while maintaining relatively constant Equity Ratio (Piraeus).
- Banks that have moved from corner 3 to corner 4 are those that have not been able to improve their low RoE, but were able to decrease their bankruptcy risk through increasing their Equity Ratio (Audi).

- Banks that have remained constant show no significant reaction to M&A deals regarding Equity Ratio and ROE (NBE, Banque Misr, San Paolo, Ahli United).

It can be interpreted from these results that M&A had no clear impact on the performance of involved banks whether domestic or cross-border as measured through RoE. Returning back to the fact that these M&A were a direct result of economic reforms in general and banking reforms in particular in the Egyptian economy, it can be concluded that banking reforms in Egypt have not been entirely successful in increasing bank profitability. On the other hand, these M&A were found to have a positive effect on decreasing NPL in the Egyptian banking sector as a whole. In general, they have led to a positive effect on banks through encouraging consolidation and easing the process and regulations governing the issue of M&A, yet they have not been able to achieve a clear significant increase in bank profitability in the broad manner. A possible reason why some of the analyzed banks have not shown similar profitability improvements as those witnessed in the US and the EU could be the result of the not-so-mature economy of Egypt compared to those of the US and the EU.

**Figure-2 : Five Bank Pre & Post-Merger Equity-Ratio RoE Graph**

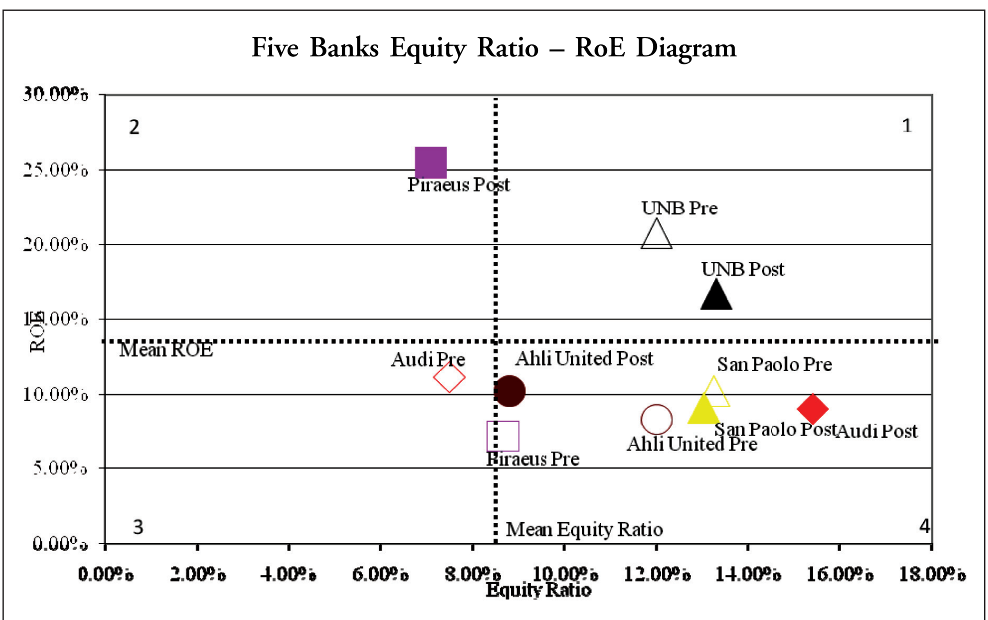
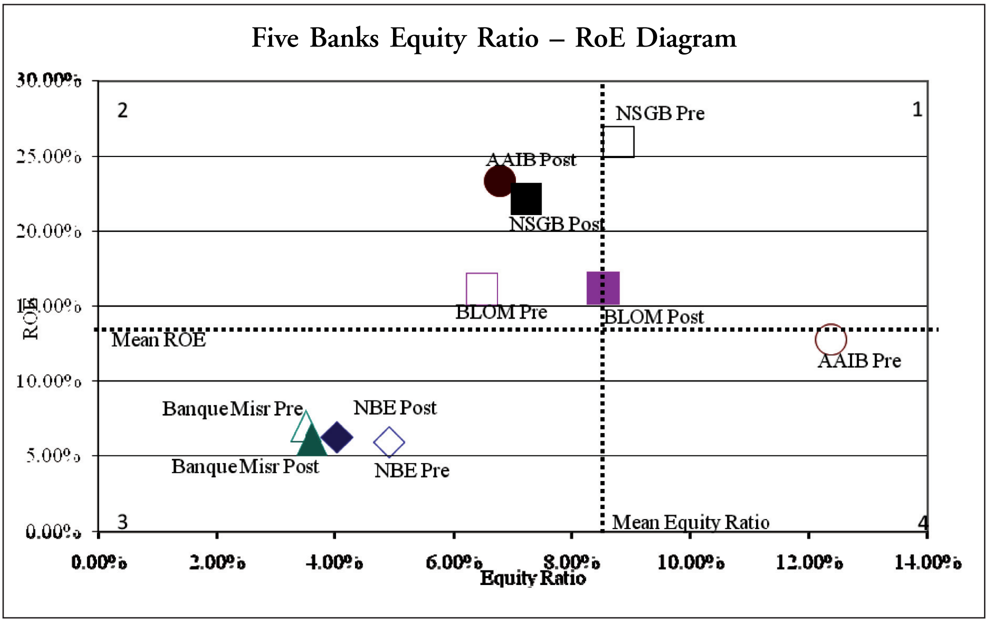


**Figure-3 : Five Banks Pre & Post-Merger Equity-Ratio RoE Graph**




The complete findings of this paper suggest that bank M&A in Egypt does not result in improved RoE. These findings are in contradiction to Yener *et al.,'s* (2004) results that bank M&A in the EU resulted in improved RoE as well as other studies stating that reforms in the US in the late 1980s and similar reforms in the EU in the early 1990s resulted in increased banking consolidation which led to improved bank performance (Yener *et al.,* 2004; Focarelli *et al.,* 2002).

Owing to the scarcity of the research into the Egyptian banking sector in general (especially research after the more recent reforms) and the effects of reforms on bank M&A and performance in particular, this study is interesting in itself. It fills a gap of research and proves that the application of the US and the European studies cannot automatically be applied to the Egyptian environment.

Deeper analysis of M&A performance pre and post-M&A with regards to comparisons between relative size of target and acquirer were not feasible. Neither was research into the relation between strategies used by each company and its effect on profitability post-M&A. These analyses were not possible because of the lack of financial databases containing financial statements of the target firms that became eliminated after the M&A. No target firms' financial statements were available for analysis or comparison.

Another limitation existed in terms of available information for selected banks. Financial statements for San Paolo for the year 2004 and Ahli United Bank for the year 2007 were unavailable for analysis. For this reason, they were subtracted from the denominator of the mean RoE when calculating in order to avoid inserting an unrealistic zero value for RoE for those two years. This method of omission assumes that these two banks had the same average RoE as the rest of the banks in these two missing years.

In further research, it could be interesting to determine if strategies undertaken by those banks that showed profitability and were involved in M&A had a role in their positive performance. Based on the findings of this paper, it might suggest that positive bank performance found can be attributed to having similar strategies in asset structure, diversity of loans or credit risk strategies. Research into negative bank performance might include analyzing the presence of cultural barriers between target and acquirer banks which may have led to the failing performance. Further research can also be done to determine whether those M&A that were found profitable will be sustainable in the long-run. Such research can conclude more accurately whether the banking and economic reforms have been at least successful on the long-run or not.

## 5. Conclusion

While recent reforms in the general economy and the banking sector in specific have greatly improved Egypt's macroeconomic indicators and have encouraged consolidation of banks, those banks that have undergone M&As on an average were not found to be as profitable as expected or suggested by studies conducted in the US or the EU. Measurement of the profitability of Egyptian banks that have been involved in M&A during the period 2002-2007 was achieved by calculating their RoE using the Basic RoE Scheme. Through the analysis, sufficient evidence to conclude that M&As have clear effects on the profitability of banks in the Egyptian banking sector was not found. Only minor positive changes to risk provisions reflecting improved credit risk positions were found. These findings suggest that the process of financial consolidation and banking reforms have not completely achieved their desired results in improving the banking sector.

## Notes

1. See Table-1 for the list of Acquirers, Targets, Dates and Value of M&A.
2. RoE was calculated as net profit after tax/ Shareholder Equity using individual accounting data of each bank's official audited financial statements which are considered as secondary data.

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# Four Decades of Research on Econometric Modeling of Commodities : Past Evidence and Future Directions

***Srinivas Kolluru* & K.Trivikram****

*Econometric modeling of commodities has attracted substantial interest among researchers and economists worldwide. About more than 50 developing countries, including a majority of the least developed countries in the world, in general and Africa, in particular, depend on exports of three or fewer agricultural commodities, typically tropical beverages (cocoa, coffee and tea) to earn foreign exchange between 20 and 90 per cent. This higher dependence is leading them to high price volatility and the degradation of terms of trade. Vast survey of literature was conducted to explore the nature and type of models that were used over the last 40 years. It was found that most of the models developed since the 1960s till date, are particularly one product focused or fewer products with concentration on a particular country or a region. It was also observed that there is a need to improve commodity modeling by providing a realistic picture of the role of market interventions and disruptions and related aspects of market structure to the less developed and the developing countries that are highly dependent on the tropical beverages exports. The investigation also found that there are problems of the quantity of the commodity exported and revenue stabilization stemming from international commodity price instability. Therefore, better understanding is needed of commodity investment formation, supply control and disruption and the impact of import fluctuations on the developed economy markets.*

## 1. Introduction

Commodity modeling has occupied a unique place in econometric literature and in the interests of researchers and economists worldwide. It may seem to be a narrow area of research but is vast and multi-dimensional. The development of commodity modeling led to the initiation of international commodity data banks, different statistical models and procedures and several studies on global, regional and country basis. Generally, a commodity model is defined as a quantitative representation of a commodity market that empirically reflects the demand and supply aspects of price determination as well as other

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*The authors wish to thank Prof.K.Krishnamurthy, Honorary Professor, Administrative Staff College of India (ASCI), Hyderabad, India, for his constructive comments and suggestions on the earlier versions of the paper. Usual Disclaimers apply.*

related economic, political and social phenomena. Over the past four decades, researchers worldwide are encountering overwhelmingly constructing and simulating commodity models to adapt them to the current changing economic situations (Labys, 1975). Labys (1988) described that the commodity models are being used more than ever to produce commodity price forecasting and to perform market analyses. The development of these models helped commodity specialists to gain a deeper understanding of commodity market or industry. Researchers developed various kinds of quantitative modeling methodologies to meet different purposes in commodity modeling. During the 1960s, the model builders focused increasingly on the markets for primary commodities. This is due to : increasing demand for primary commodities in industrial economies owing to the economic boom, the need for an accurate market forecast and the usefulness of commodity models, which made possible to evaluate the costs and benefits of alternative market policies (Labys & Pollak, 1984).

The development of the models led to the creation of a variety of modeling analyses and statistical techniques. Table-1 shows the range of modeling analysis techniques that were employed in the modeling process.

In the present investigation, the authors have tried to restrict their research only to primary agricultural commodities, typically tropical beverages such as cocoa, coffee and tea. Hence, the review of modeling techniques and methodologies are also confined to primary commodities i.e., tropical beverages (Table-2).

Some of the initial works on supply-demand models concerned is primary agricultural commodities. Examples of the earliest econometric models for the tropical beverages (coffee, tea and cocoa) include the research of Murti (1966) on tea, Weymar (1968) on cocoa, Parikh (1974) and Edwards and Parikh (1976) on coffee. The basic types of commodity models and modeling methodologies developed are based on the competitive market model (Labys, 2006). Generally, market models are applicable to all agricultural, mineral or energy product categories. The greatest utility of these models lies in providing a consistent framework for planning and expansion, market equilibrium (an adjustment process between demand and supply), inventory and price variables, forecasting market price movements and studying the effects of regulatory policies. Mostly, they would consist of the following equations (Labys, 1975, 1988 & 2006) :

$$D_t = d\,(D_{t-1}, P_t, PC_t, A_t, T_t)\text{....}(1)$$

$$Q_t = q\,(Q_{t-1}, P_{t-\theta}, N_t, Z_t)\text{........}(2)$$

$P_t = p\ (P_{t-1}, dI_t)$.......................(3)

$I_t = I_{t-1}, + (Q_t - D_t)$ ...................(4)

Where : D is demand, Q is supply, P is price, PC is price of substitutes, $P_{t-\theta}$ is price with lag distribution, I is inventories, A is income or activity level, T is technological factors, N is resource characteristics and Z is policy variables influencing supply.

The stimulus for this research has come from various papers and studies that have appeared in referred journals.

**Table-1 : Examples of Modeling Analysis**

| **Kinds of Modeling Analysis** | **Different Purposes** |
|---|---|
| Market Forecasting Analysis | Finds the short, medium and long-run forecasting of commodity quantities and prices. |
| Policy Simulation Analysis | Judges how markets or industries react to changes in national and international policies. |
| Market Stabilization Analysis | Helps in finding those control mechanisms and forms of market organizations which led to a more stable price or equilibrium position. |
| Market Planning Analysis | Helps in projecting the long-run outcomes, depending on the policy problems or market strategies of interest. |
| Supply Restriction Analysis | Describes the possibilities of sudden supply or import disruptions that can be integrated with domestic market analysis. |
| Agricultural Process Analysis | Explains how the farm level decisions, technology, aggregate demand and prices influence agricultural output. |
| Industrial Process Analysis | Analyses the relationship between the national activities and technical transformation processes and commodity input demands. |
| Spatial flow Analysis | Determines the relations of demand, supply and transportation costs to commodity trade flows. |
| Economic Growth Analysis | Analyses the problems of planning for growth. |

*Source : Labys (1988), p. 8.*

**Table-2 : Commodity Modeling Processes and Methodologies**

| | |
|---|---|
| Commodity Applications | Coffee, cocoa, tea |
| Methodology | Market models |
| Purpose of the Methodology | Demand, supply inventories interact to produce an equilibrium price in competitive or non-competitive markets. |
| Quantitative Method used | Dynamic micro-econometric system composed of difference or differential equations. |
| Specified Economic Behaviour | Interaction between decision-makers in reaching market equilibrium based on demand, supply inventories, prices, trade, etc. |

*Source : Labys & Pollak (1984), Commodity Models for Forecasting and Policy Analysis, Croom-Helm Publishing Co., London.*

For example, research on tea by Murti (1966), Parikh (1974), Tyler (1976), Adams and Behrman (1976), Deppler and Ripley (1978), Food and Agriculture Organization (FAO) and UNCTAD (1979), Chung and Ukpong (1981), Nguyen and Rose (1987), Aidid and Silver (1999), research on coffee by Parikh (1974), Edwards and Parikh (1976), Deppler and Ripley (1978), Akkiyama and Duncan (1982), Lehmann and Edward (1996), Milas and Otero (2002), Courville (2003) and research on cocoa by Akkiyama and Duncan (1982) and Trivedi (1992). Other important studies which relate to modeling of tropical beverages include Talbot (2002), Blowfield (2003), Peters (2007) and Santiago (2008). Santiago (2008) highlighted the issues of the fullest liberalization in tropical trade, diversification and management of supply chains to bridge the gaps in the modeling process.

### *1.1 The Research Objective*

The aim of this present research is two fold : (i) first, the initial aim of this paper is to present the multi-disciplinary nature of commodity modeling and to bring together the collection of various high quality papers published in referred journals and studies by various international organizations that captured a range of different perspectives on commodity modeling over the last four decades; and (ii) second, this paper also makes an attempt to capture some recent advancements in commodity modeling of tropical beverages and further identifies the future directions of research.

### *1.2 Data Sources and Methodology*

The principle sources for this research include academic journal articles and popular studies on the topic. Ebscohost's Business Source Premier, Emerald Insight and EconLit (online periodical databases) were used as the primary information sources in obtaining peer reviewed academic and practitioners' journals like *Journal of Development Economics, Journal of Development Studies, Journal of Applied Statistics, Applied Economics, Applied Economics Letters, American Journal of Agricultural Economics, Review of International Political Economy, Advances in Consumer Research, Oxford Development Studies, Staff Papers : International Monetary Fund*, etc. The popular studies on the topic have been obtained from the websites of Food and Agricultural Organization (FAO), The World Bank, United Nations Conference on Trade and Development (UNCTAD) and the United Nations websites.

To define the research scope, various search items like world coffee model, world tea economy, world cocoa model, econometric modeling : coffee, tea, cocoa; modeling tropical beverages, etc., were used in Business Source Premier and Emerald Insight to develop the literature review. From a pool of large number of papers, articles were finally selected on the basis of their relevance to the topic.

## 2. Literature Review

Development and use of commodity models have been a major activity for researchers and economists. In this present paper, a review is made of the major contributions of researchers and economists to primary commodity modeling with particular reference to tropical beverages. With the establishment of UNCTAD in the early 1960s, lot of emphasis was laid on studying primary commodity exporting countries to assess development assistance required for primary commodity price stabilization. International Monetary Fund (IMF) in the 1970s instituted Commodity Financing Facility (CFF) to help short-term shortfalls in export earnings for regions largely outside the control of exporting countries. One needs to take note of studies done under the auspices of FAO primarily concerned with agricultural commodities. With the emergence of World Trade Organization (WTO) and other international organizations mentioned above, has laid emphasis on the phenomena of long-term decline in primary commodity prices relative to manufacturers. In the 1960s, academic scholars at different universities in the United States (US) (especially under the supervision of Nobel laureate, Lawrence Klein at the University of Pennsylvania, USA), undertook substantive research on commodities modeling. Many of them emphasized on econometric modeling of primary commodities.

**Table-3 : Summary of the Research Papers and Studies on Tropical Beverages, 1966-2008**

| Authors | Key Findings |
|---|---|
| Santiago (2008) | The paper identifies options for liberalizing trade in tropical and diversification products. The paper also seeks to balance the position of a group of Latin American countries that are seeking the fullest liberalization of trade in tropical and diversification products under the WTO with that of the African, Caribbean and Pacific (ACP) countries. |
| Peters (2007) | This paper highlights few considerations during constructing a model for commodities. The major considerations the paper highlights during a model construction are : the simplicity of the model i.e., the number of factors considered in the model; identifying how well the model would accommodate economic rational and theory and can predict empirical findings; interpretability of the major components in the model; use of the model in estimation, forecasting and prediction. Also, the paper highlighted that the commodity models should be flexible enough to deal with practical issues related to missing or incomplete data and other data issues. |
| Blowfield (2003) | Examined how ethical trade is being applied to smallholder growers of tea, coffee and cocoa in Asia, Africa and South America. The paper argues that, although civil society organizations have influenced the direction and scope of ethical trade standards, the cultural and ideational dimensions to ethical trade impose limits on what can be modified and improved. |
| Courville (2003) | The paper examines the challenges and considerations of using sustainability indicators in coffee supply chains in Mexico and Costa Rica as case studies. It also proposes that sustainable supply chain management requires convergence of sustainability frameworks and increased flexibility in the implementation. |
| Talbot (2002) | Presents a comparative analysis of three tropical commodity chains for a set of commodities (coffee, cocoa and tea). The paper focused on to move forward into the more advanced processing stages of the chains in order to realize higher returns for their commodity exports by the producing regions. |

| | |
|---|---|
| Milas & Otero (2002) | Examined the non-linear behaviour of four coffee price series, such as unwashed Arabicas, Colombian Mild Arabicas, other Mild Arabicas and Robusta coffee. The paper first identifies the co-integrating relationships and then that these enter the error correction equations in a non-linear way. The estimates suggest a rather common pattern of non-linear adjustment for the same variety Arabica coffees. |
| Aidid & Silver (1999) | Presented market share modeling for individual segments of the UK tea market using scanner panel data. The study is novel in its introduction of the use of volatility as one of the bases for segmentation, others being usage, loyalty or switching between product types and product forms. The segmentation is undertaken on *a priori*, quasi-experimental basis, allowing nested tests of constancy of elasticities across segments. The estimated equations benefited from extensive specification including price variable, variables for promotion and distribution and macroeconomic variables. |
| Lehmann & Edward (1996) | The paper discusses the issues on brand loyalty for coffee, segmentation of consumers based on their loyalty, structure of the mental representation of brands, use of game theory to develop some consequences of promotional strategy and changes in the role of coffee. |
| Cuddington (1992) | Examined the pricing trends for certain goods over the period 1900-1983. Presented a time-series analysis of the Prebisch-Singer hypothesis, which states that there has been a secular deterioration in primary commodity prices in terms of manufactured goods. |
| Trivedi (1992) | Presented a case study of investment decisions in the cocoa sector in Brazil for the period 1966-1985. The paper emphasizes the role of producer prices and investment subsidies in investment decisions. |
| Nguyen & Rose (1987) | The study estimated, price and income elasticities of demand for tea in the UK and explained the growth in tea consumption over the period 1874-1938. It also found various other factors, economic and social, contributing to the changing patterns of tea consumption. |

| | |
|---|---|
| Akkiyama & Duncan (1982) | Simulations of the model are carried out to show the susceptibility of coffee prices and export revenues to increases in production at rates faster than the growth in demand resulting from population and income increases. |
| Chung & Ukpong (1981) | Estimated supply functions for some individual tea producing countries. The authors attempted to distinguish between long-term effects of investment and short-term price effects on yields. The model included 14 country or region-specific demand functions. The demand for tea was postulated in per capita terms as a function of the relative price of tea with respect to coffee and per capita GDP. The price equation was estimated with the London auction average price as a function of the proportion of implied stocks to total world tea consumption, the fertilizer price and the price of coffee. |
| FAO & UNCTAD (1979) | Jointly constructed an econometric model of the world tea economy to analyze the prospective supply/demand balance of tea and the implications of an international buffer stock arrangement and an export quota system. |
| Deppler & Ripley (1978) | The paper developed a simple model of world merchandise trade disaggregated by commodity class and country or country grouping. The model estimated the responsive of merchandise trade to variations in income and activity levels in the industrial economies. The empirical results on price sensitivity appear to be less reliable. |
| Edwards & Parikh (1976) | The paper analyses the structure of the world coffee markets and suggests policies that stabilize the export earnings of coffee-exporting countries. The major cyclical characteristics of the coffee economy explained by a simultaneous equation model, which considers the lagged response of supply to price. |
| Adams & Behrman (1976) | Analyzed the world tea economy in a regional framework. The authors specified three supply and three demand functions for three groups of countries. The price equations that were estimated were related to stocks and with an assumption of lagged adjustment. |

| | |
|---|---|
| Tyler (1976) | Designed world tea model to determine exports using the data of average London price of tea and a time trend. The equilibrium price of tea ensures total import demand equals total available exports. The trend in exports represents the combined effects of assumed steady trends in the productivity of existing estates and smallholdings and in the extension of acreage. |
| Parikh (1974) | Analyzed the structure of the world coffee market from 1950-68. A simultaneous equation model of the world coffee economy is developed to explain the structure of the world coffee market. The results show that the policy of output control can help to avert the adverse effects of cyclical changes in production on the prices of primary products. The model is used for short-term forecasting and although its predictive performance is not entirely satisfactory, it can be clearly seen that the model performs better than naive forecasts. |
| Murti (1966) | Developed the earliest econometric model for the world tea economy. In this model, the author estimated the demand equations for tea for eight countries or regions. The study estimated two price-linkage equations modeling the relationship between the London auction price and the internal price of tea in India and the unit value of imports of tea in the US. |

The literature on the subject is vast. Table-3 briefly summarizes the research papers that have appeared in the leading economic and econometric journals and studies by various international organizations over the last 40 years.

## 3. Observations and Results

### *3.1 Observations from Past Research*

It is found from the survey of literature that most of the models have developed since the 1960s till date, majority focusing on aggregate of commodities, some concentrated on specific commodities and countries and regions. Some are dated and some recent. Since the beginning, a constructive direction has been followed in the development of modeling on tropical beverages. The comprehensive commodity models that are developed over the decades are generally based on the microeconomic and econometric theory. Also, other modeling theories included are optimization, programming, input-output and computable general equilibrium (2006). Greater focus has been paid concerning macroeconomic influences in the form of national and international cyclical fluctuations that affect these commodity markets the most.

### *3.2 Recent Advances*

The role of market interventions and disruptions have also been included in the recent commodity modeling process (Labys, 2003, 2006). But a lesser amount of work has been done in the area of tropical beverages. Talbot (2002) focused on the more advanced processing stages of the supply chains of three tropical beverages (cocoa, coffee and tea) in order to realize higher returns by the producing regions. Privolos and Duncan (1991) and Claessens and Duncan (1993) described some amount of research had started during the early 90s dealing with developing countries on how to deal better with commodity price derivatives and financial instruments in the form of commodity risk management.

Labys (2003 & 2006) highlighted the recursive and simultaneous adjustments of commodity markets and important market variables like production, consumption, inventories, imports and exports, besides prices. He also suggested that commodity models should include imperfect competition, government intervention, regulation and special characteristics. Chen and Besseler (1990), Gerlow *et al.* (1993), and Goodwin (1994) described the model applications by employing newer approaches to markets and policy simulation and forecasting for evaluating risk impacts in the commodity markets.

### *3.3 The Points to be Noted*

Commodity modeling and forecasting are based on numbers, which are fixed, but not produced from statistical experiments. Improved data sources are the pre-requisite for commodity modeling research. Labys (2006) asserted that due to the non-availability of practical data, most of the commodities do not have demand and supply elasiticities. Therefore, the data problems such as short-length series, missing observation, measurement error and stochastic behaviour, etc., need to be solved. Generally, publications, data-banks and websites provide a variety of commodity data. Table-4 shows the available data on tropical beverages that are needed by serious researchers and economists. Apart from the mentioned sources in Table-4, commodities information and related economic indicators data available in the Survey of Current Business by the US Department of Commerce, the Commodity Year Book by the Commodity Research Bureau, International Financial Statistics by the

**Table-4 : Improved Data Sources for Future Research**

| Commodities | Sources | International Organizations |
|---|---|---|
| Cocoa | Average of daily prices of the nearest three active future trading months on the London Terminal market and on the New York Coffee, Sugar and Cocoa exchange at the time of the London Close. Article 26 of the International Cocoa Agreement, 1986. | International Coffee and Cocoa Organization, London. |
| Coffee | Average of daily prices (Secretariat of the International Coffee Organization, London). Robustas, weighted average of ex-dock New York (60 per cent), Angola Ambriz 2 BB, Uganda Standard. | International Coffee Organization, London. |
| Tea | London auction prices, all tea (International Tea Committee, London). | International Tea Committee, London. |

*Source : Labys (2006), Modeling and Forecasting Primary Commodity Prices, p. 196.*

IMF, main economic indicators by the Organization for Economic Co-operation and Development (OECD), World Tables by the World Bank and Hand Book of Statistics by the UNCTAD, etc., provide authenticated data on all primary agricultural commodities.

## 4. Concluding Remarks

Directly, but to a certain extent, commodity trade affects the prospects of sustainable development (2004). FAO (2006) estimated that about 2.5 billion people in the developing countries depend on agriculture and a major portion on agriculture commodities exports. The most prominent feature of the exports of commodities from the developing countries is that one single or relatively a few commodities account for a large share of their total export earnings. Santiago (2008) and Samuel (2008) investigated that more than 50 developing countries, including a majority of the least developed countries depend on exports of three or fewer agricultural commodities, typically cocoa, coffee and tea for between 20 and 90 per cent of their foreign exchange earnings. FAO (2006) warned that this higher dependence is leading these countries to long-term decline of agricultural prices, high price volatility and the degradation of terms of trade.

Therefore, there is a need to improve commodity models in this direction by presenting a realistic picture of the role of market interventions and disruptions and related aspects of market structure to the less developed and developing countries that are highly dependent on these commodity exports. It has been observed that there are problems of commodity export quantity and revenue stabilization stemming from international commodity price instability. Therefore, better understanding is needed of commodity investment formation, supply control and disruption and the impact of import fluctuations. Labys (2006) suggested the understanding of specification, estimation and simulation of structural commodity models before the construction of theoretical and statistical process. He also averred the necessity of the move of univariate to multivariate analysis, where the disequilibrium dynamic interactions between quantity and price variables are re-considered.

Another important aspect that the research on commodity modeling should address is the issues on how inflationary adjustments, monetary and exchange rate policies in the developing and less developed countries are linked to commodity market fluctuations should be explored carefully, including simultaneous inter-relationships. Finally, over the last 40 years, researchers and economists worldwide experienced continuity in financial research *via* the IMF, economic development research by the World Bank. But no commodity research *via* 'COMMOD' (Labys, 2006). Labys (2006) suggested that greater amount of research funding must be directed to this need for developing a more profound understanding of these extremely complicated and diverse commodity markets.

### *4.1 Future Directions of the Research*

The present study is one of the few studies to investigate the developments in the commodity modeling area over the last four decades. The commodity modeling is a broad area and developments have taken place in a variety of commodities ranging from primary agricultural commodities to minerals to energy. As a result, in the present investigation, the authors confined their research only to the primary commodities, especially in the case of tropical beverages i.e., cocoa, coffee and tea. The study also suggests some improvements in the global tropical beverages models, which should answer several complementary measures to help the low-income countries from the primary agricultural commodity crises. It also suggests developing development strategies for better supply chains and price mechanisms for the development of primary commodity markets in these countries. As a result, the low-income developing economies can overcome from the risk of over dependence, which stimulate their development process.

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# Public-Private Partnerships in China

*LooSee Beh**

*This article deals with Public-Private Partnerships (PPPs) in China. The partnership approach provides the government with access to additional sources of capital and able to avoid waiting for future budget cycles funding, though in the case of China, this is not an issue. This paper draws on a recent series of policies, guidance materials and rules relating to the provision of public facilities and services. Drawing upon selected project cases, this paper also highlights some of the key challenges facing PPPs in China. The debate over the obligation of governments to provide services for the common good of the people lies with the political process and inherently political. PPPs have been and will be the essential element in the development of infrastructure, transport and technical innovation given the current impressive accomplishments around the world today despite the negotiated risks, higher costs, limitations and criticisms associated with PPPs. China can draw upon other countries' experiences for better governances of PPPs in China. With checks and balances and tools for achieving partnerships, PPPs will thrive with the right procurement principles, integrity and transparency through competition to meet local policies and practices and societal goals.*

## Introduction

Public-Private Partnerships (PPPs/PPP) are the latest 'new public management' developments for the public services, a worldwide development, an alternative means of providing public infrastructure with a focus on services and/or outputs. The PPP model we have most in mind is that developed in the United Kingdom (UK), Australia and Canada under which a PPP project results in a contract for a private entity to deliver public infrastructure-based services, a switch from traditional public procurement methods to provision of infrastructure. Many countries have released their policy on PPPs and China relatively new in joining governments around the world in exploring and developing PPPs, has potential due to the internal demand for more and improved public facilities and services. Partnership has been the fashionable trend since the UK Thatcher government embarked on a large-scale privatization programme beginning with the sale of British Telecom in 1984. In China, the position was only experienced in the year 2000 where a series of policies, guidance materials and rules relating to the provision of public facilities and services for example, the Ministry of Construction issued the 'opinions on acceleration of privatization process of public facilities' in December 2002 and the

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'rules on management of franchised operation of public facilities' in May 2003. Among others, the Shenzhen Government also advocated the 'rules for the franchised operation of public facilities' in May 2003 and the Beijing Government the 'rules for the franchised operation of basic urban facilities' in October 2003.

## New Initiative in Partnership

China has been fortunate to have a history of economic prosperity. With a strong resource base and natural advantages, the capacity to provide responsible financial management of the nation is essential for future growth. The government is mindful of keeping within the financial targets and in delivering infrastructure projects and ancillary services to its citizens.

In recent years, the terms PPPs and later Private-Finance Initiatives (PFIs, though not much yet in China) have been used throughout the world to describe joint approaches to infrastructure and service delivery between the public and private sectors. In many countries, this engagement has occurred in the presence or the absence of a formal policy to protect the public interest and to guide the private sector. In some countries like Australia, UK and Canada, such formal policy and related documents are evident for commitments to the highest standards possible for strategic partnerships in order to establish a strong record of responsible economic management.

However, in China, it is not clear when and how PPPs should apply as there are still insufficient legal policy frameworks in use compared to other countries. Successful partnerships between the public and private sectors do rely on the creation of a business opportunity, which in turn relies largely on the existence of sufficient consumer demand. If bringing forward PPP projects simply because there exists the possibility of a private funding source, then it is unlikely to lead to a successful partnership arrangement.

Though there exists policy frameworks such as 'opinions on acceleration of privatization process of public facilities' in December 2002; 'rules on management of franchised operation of public facilities' and 'rules for the franchised operation of public facilities' both in May 2003 and the 'rules for the franchised operation of basic urban facilities' in October 2003, they are relatively minimum as compared to other developed countries who have been practising PPPs. Though minimum, it serves as a start towards the circumstances of supporting PPPs.

## Development of PPPs in China

Within the China context, the reasons for advocating PPPs in China are mainly :

- Due to inadequate investment in public facilities and services given the high rate of urbanization, relatively low standard of public facilities and services;
- Limited funding sources and inadequate private investment in public facilities and services given, the main source is of government funding; and
- Slow rate of reform of State-owned Enterprises (SoEs) and poor provision of public facilities and services.

On the last point above, perhaps many have viewed the SoEs as relics of a failed economic experiment as had been in the pursuance of privatization policy by the Conservative Administration of Thatcher and Major from 1979 to 1997 of majority of SoEs. In the case of China, an out-of-date impression of SoEs distorts the picture of China's competitive landscape as the line between the SoEs and private-sector companies has blurred considerably (Woetzel, 2008). Many observers define a Chinese SoE as one of the 150 or so corporations that report directly to the central government. Thousands more fall into a grey area, including subsidiaries of these 150 corporations, companies owned by provincial and municipal governments and companies that have been partially privatized yet retain the state as a majority or influential shareholder. The oil company China National Offshore Oil Corporation (CNOOC) and the Chinese utility State Grid Corporation of China (SGCC), for instance, are clearly SoEs under the first classification, while the computer maker Lenovo and the appliance giant Haier are less clear-cut cases, in which the state is the significant shareholder. A majority of the equity in the automaker Chery Automobile belongs to the municipal government of Wuhu. Further, market forces unleashed by government reforms are pushing SoEs to become more open (Woetzel, 2008).

The Chinese government has been promoting PPPs in the provision of public services to meet the needs of public facilities and improve quality, service delivery and efficiency. In the early October 2004, 54 infrastructure projects involving RMB 70 billion were bid for by private companies through the Ministry of Finance. There are 14 different modes of PPPs existing within three generic types—outsourcing, concession and divestiture (for more information, see Beh, 2007).

## Selected Cases of PPPs in China

The government remained much in control of public sectors such as water services, energy, waste management, and public transport. In the mid 1990s, the China government promulgated the circular on attracting foreign investment through Build-Operate-Transfer (BOT) approach (No. 89 Policy Paper of 1994, the former Ministry of Foreign Trade and Economic Co-operation, January 16 of 1995) and the circular on major issues of approval administration of the franchise pilot projects with foreign investment (No. 208 Policy Paper of foreign investment, the former National Development and Planning Commission, the Ministry of Electric Power Industry and the Ministry of Communications, 1995). These legislative circulars formed the basis for PPPs and foreign capital investments. Following that, the National Development and Reform Commission firstly approved three BOT infrastructure projects in 1996 including Chengdu No. 6 Water Supply BOT Plant, Guangxi Laibin Power BOT Plant and Changsha Wangcheng Power BOT Plant (failed) (Zhong, Mol & Fu, 2008).

## Water and Waste Management

In China, BOT/BTO contracts, transferring risk and payment to the public sector (i.e., with payments by a public authority rather than end-users), have been used for the development of new water-services projects. This is a positive phenomenon, but how real is any risk transfer? It might be argued that if the PPP fails it is quite likely that the public authority will incur extra costs to maintain the public service, so risk transfer will fail anyway to this extent. However, it would not be correct to suggest that this is what always happens if PPP projects get into trouble.

One of China's first wastewater treatment plants to be delivered using a PPP, the Guangzhou Xi Lang Wastewater Treatment Plant, was recently completed by the Guangzhou Sewage Treatment Co., (GSTC) and Earth Tech. (Anonymous, 2008). The consulting firm, which also helped arrange part of the project's financing, served as the plant's designer and construction manager and operator. As part of Guangzhou's commitment to promote sustainable development and improve water quality in the Pearl River, the city decided to pursue an innovative approach to constructing new wastewater treatment facilities. The BOT project was completed six months ahead of schedule and came in under a budget cost of approximately USD130 million. It has a maximum capacity to treat 2,60,000 $m^3$/d and features a biological nutrient removal process and an ultraviolet disinfection system that are both state of the art. Earth Tech will operate and maintain the plant's treatment systems for 17 years, after which operation of the plant will be returned to GSTC. The plant's design includes a possible second phase that would double its capacity. The plant was financed in part by Tyco International, Earth Tech's parent company and a major Chinese bank.

Direct investment demand for urban wastewater infrastructure (including wastewater treatment, sewers and sludge treatment) in China is expected to be over USD 30 billion between 2006 and 2010, to meet the objective of 60 per cent municipal wastewater treatment. Accordingly, local governments prefer direct private sector investment in new wastewater management resulting in high levels of Greenfield modes where financing is based on negotiated prices between the government and the private sector and is less dependent on the user fee/charge (Zhong, Mol, & Fu, 2008).

In the rural water management, it involves a four-year USD 6.792 million joint project by UNDP, Ministry of Water Resources, China International Center for Economic and Technical Exchange under the Ministry of Commerce and the Coca-Cola Company in the provinces of Sichuan, Heilongjiang, Xinjiang and Liaoning in providing basic sanitation, water safety technologies, re-building of drainage pipelines and ecologically sustainable agricultural technologies for water conservation.

## Health

The China Health Alliance (CHA) is a new PPP catalyzed by the World Economic Forum's Global Health Initiative. Founding members and partners of the China Health Alliance to date include Accenture, China National Textile and Apparel Council (CNTAC), Constella Futures, Esquel, Institute of Contemporary Observation, iKang, Karstadt Quelle, Marie Stopes International China, Pfizer, Social Accountability International, Standard Chartered Bank, Swire Beverages, UNAIDS, UNDP, World Health Organisation (WHO) and World Vision International. Each member is actively supporting the set-up and implementation of the Alliance's programmes.

The partnership is designed to educate, test, treat and support Chinese company employees at the risks of TB and AIDS besides raising public awareness of growing public health threats in China witnessing the pilot project in Guangdong (*China Daily*, 14 September, 2007).

Merck Sharp & Dohme and Daimler Chrysler have formed partnerships with China's non-governmental organizations and government agencies for example Ministry of Health on USD 30 million project on HIV/AIDS prevention and treatment. Other partnerships include Quality Brands Protection Committee, International Council of Toy Industries, the China Business Council on Sustainable Development and Global Business Coalition on HIV/AIDS.

## Infrastructure

Infrastructure development in China increased tremendously especially over the past 15 years. There are numerous projects to be elaborated upon within the complex interdependencies and networks. One such project is the Citong project where there were many challenges faced. Among those challenges were that the ownership of local transportation facilities localized from provincial government to the municipal government, revenue of Quanzhou Bridge is channelled fully into the city public accounts instead of partially as agreed upon earlier and the design of the connectivity of the highway to the city. Others include absence of operation right assurance, finance, standardized operation procedures, complex procedures of obtaining approval and lack of regulation. Hence, the situation in which difficulties arise due to changes of agreements from time to time, deficiencies and unnecessary secrecy surrounding the contracts and public interests and allocation of risks accurately defined in the policy seems vital.

China's rapidly growing aviation industry has challenged the on-going efforts to maintain effective safety and security operations. The US Training Development Aviation, helped to structure the China Aviation Co-operation Programme with the goal of facilitating US Gvernment and US aviation industry training and technical co-peration with China identified by the General Administration of Civil Aviation of China (CAAC). This programme is supported by 21 US private sector member companies and public sector contributions from the Federal Aviation Administration and the CAAC.

## Other PPPs

China Gas Holdings enters into PPPs with municipal governments to distribute natural gas supply. There are 48 PPPs to date, serving 8,00,000 households with projects worth USD 4 million. With the expanding potential of abundant natural gas reserves, capital expansion and expertise available, there is a large potential for demand in power generation and residential use and opening downstream activities to private sector thus introducing competition as compared to distribution traditionally controlled by municipal governments.

## Key Challenges facing PPPs in China

Since relatively PPPs is a new initiative in China, there exist commonly the key challenges namely :

- Limited capacity of civil society/ NGOs to manage partnership;
- Lack of experience on commercial, technical, legal and political aspects of PPPs;
- Too much emphasis on attracting investment from private sector and too little attention to market competition;
- PPPs have been treated as privatization of public facilities/services focusing on short-term return without a spirit of long-term partnership;
- The financial risk and burden shifted to public without the corresponding increase in service quality;
- Inadequate knowledge on PPPs, lack of proper risk assessment; and
- Lack of administrative framework for PPP projects.

A key aspect of PPPs, as the name suggests, is the central involvement of a private-sector entity with a public-sector entity. The objective of the partnership is to import private sector to the delivery of a service which has previously been accepted as the responsibility of government and it is the introduction of a private-sector entity which creates an accountability dilemma. After all, the choice of using a PPP as a medium to deliver services is a policy decision of the government. Rosenau (1999) argued that the success of a partnership arrangement was dependent on setting out clear goals and clear lines of responsibility. This can only be accomplished if the problem is well understood and the government service required is clearly specified.

PPPs are generally entered into for a lengthy period of time and are developed in an environment of uncertainty. Hence it is important to develop a governance framework that would involve performance aspects, tools of analysis and key issues. There are many suggestions as to how PPPs can be better managed. One of these is pointed out here. According to Grimsey and Lewis (2004), among the key ingredients in developing a typical PPP project together with the roles of the government at each stage are :

- A focus on defining services, with the emphasis on the delivery of infrastructure services using new or refurbished public infrastructure assets;
- Planning and specification, so that government's desired outcomes and output specifications are clear to the market;
- Creating a viable business case for the private party;
- Certainty of process, ensuring that any condition to be fulfilled is clearly understood before the project proceeds;
- Project resourcing to enable government to advance the project and address issues in line with published time-frames;
- Clear contractual requirements, centred on key performance specifications, to promote performance and minimize disputes;
- Formation of a partnership to encourage good faith and goodwill between government and the private party in all project dealings; and
- Contract management to monitor and implement the contract.

The key question that needs to be addressed is "Do PPP projects deliver better results in terms of time and cost outcomes in comparison to traditional projects?" Regardless of any viable complex risks allocation framework and service delivery performance in place, it should be mindful that the ultimate responsibility for service delivery and performance of essential public services rests with the government.

## Concluding Remarks

PPPs may be a new initiative and still developing in China. It is a new expression in the language of public management even though history indicates there has always been some degree of co-operation between the public sector and the private sector and in some cases blurs distinctions between the governments' SoEs beneath the line of reasoning and interpretation. Nevertheless, China can draw comparisons from PPPs experiences in different countries in areas where the private sector has a proven track record in the successful delivery of assets and their ancillary service needs. This provides the opportunity for major public assets to be maintained and preserved to a standard which is higher than has been traditionally possible by the public sector. Whilst this is evidenced, the procurement plan must clearly justify why a PPP is the preferred procurement approach. In developing the expressions of interest in a PPP project, development and evaluation of those interests must be fully documented with all recommendations fully justified. On the other hand, the case made by a public authority for a PPP can be equally one-sided, for example, with claims of large cost savings compared to public-sector procurement which cannot be proved objectively or which do not compare like with like and PPPs may be promoted for short-term political advantage. Further, PPPs have been subjected to considerable controversy following some high profile 'failures' in many countries which have long developed PPPs. In the context of the on-going debate on PPPs, many governments of the day continue to support the PPP model with well-developed implementation frameworks.

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# Is Responsible Consumption Compatible with Economic Crisis?

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*Market economy intrinsically features mass consumption. Individual consumption decisions should be free and it would be desirable they were carried out in an ethical and responsible way. On the other hand, taking into account that in economic crisis periods, authorities ask the citizens to keep on consuming so as to stem the private consumption reduction, some natural questions arise : What is responsible consumption? What a responsible consumption behaviour pattern under strict economic constraints should be? Would it be more appropriate to talk about socially responsible products instead of responsible consumption? In addition, consumer information is a basic requirement to be able to choose. But in spite of the fact that information is acknowledged as a consumer's basic right, its practice effectiveness is not enough yet. All in all, in this work in progress, we propose a future research consisting of the analysis of the information obtained from three different groups of people representing opposite economic situations so as to get a deeper knowledge of what responsible consumption represents for them in an economic crisis scenario depending on information access and social values in Spain.*

## 1. Introduction

Developed societies based their concept of quality of life on the increase of consumption levels. Different disciplines like economy, politics, science, sociology and philosophy point out mass consumption as a characteristic of advanced modern societies, what represents not only an economic phenomenon but basically, a social one too.

People in pursue of constant satisfaction of needs and pseudo-needs—those which do not clearly constitute a need—fall into an extreme hedonism whose main objective consists of the satisfaction of absolutely all wishes. This way of approaching life eventually leads to an excessively individualist and unsupportive society. In this point, it is important to distinguish between wishes and needs and also between real and false needs, what does not seem to be an easy task because of their subjective definition. In any case, satisfaction is what matters in spite of the fact that satisfaction of all of our wishes is not a feasible achievement, because they could be unlimited. Consequently, unfulfilled expectations impoverish individual and societal quality of life (Kilbourne, *et al.*, 1997).

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The ideology of consumption states that increasing material well-being provides the basis for the well-being social state (Hetrick, 1989). According to Cortina (2002), this well-being social state is a failure. It has not been able to understand that from an exclusively socio-economic perspective, its goal should not be to provide the greatest satisfaction to citizens, instead its ultimate aim should be the search of justice. But this is not that simple in practice since the first difficulty to overcome would be to identify which are the basic needs and who should define them. These questions so difficult to answer are specially important in an economic crisis context where on the one hand from an exclusive economic viewpoint, people are prompt to keep on consuming so as to re-activate the economy; and on the other, from an exclusive social perspective, people are also asked to be responsible consumers in terms of ethical values. In this sense : does an ethical behaviour depend on an individual's conscience or the logic consequences it implies for the society? Then who is more responsible, the one that does not fall into consumerism or the one who does? Which behaviour is more beneficial to overcome the economic crisis, to consume or to save? In this scenario, we aim to look into people consumption issues' perceptions focusing on responsible consumption aspects and different socio-economic status. It is of great interest for researchers, authorities and thinkers to know the gap, if any, between theory developments and real consumption patterns.

In this work in progress, first, we discuss some current questions on responsible consumption and in the second place, we put forward the present situation as for consumers' information right which plays a central role in determining consumers' buying decisions. Then we link the two, responsible consumption and information and aim to analyse the combination of both in an economic crisis context like the current one. Finally, we present the methodology research in progress to shed some light on these complex questions.

## 2. Responsible Consumption

The expression 'responsible consumption'[1] is being used to explain the consumption of those consumers concerned for a series of ethical values. The evolution of the consumer profile, at least from a theoretical perspective, could be summarized in three different categories : the opulent (70s), the narcissist (80s & 90s) and the responsible one (present). The definition of the latter is what this paper is about.

According to Fisk (1973 : 24) "responsible consumption refers to rational and efficient use of resources with respect to the global human population"; Webster (1975 : 188) defined the socially conscious consumer as "a person who takes into account the public consequences of his or her private consumption or who attempts to use his or her purchasing power to bring about social change"; Mohr *et al.,* (2001 : 47) defined socially responsible consumer as "a person basing his or her acquisition, usage and disposition of products on a desire to minimize or eliminate any harmful effects and maximize the long-run beneficial impact on the society". These are some remarkable definitions of responsible consumption, in general, they refer to the consequences of the individual buying that act on the society as the main criterion to determine the consumer's responsibility; and in particular, it is widely accepted that a responsible consumption takes into account the consequences of health, environment and labour work conditions of people involved in the production and distribution process (Burns, 1995; Barber, 2001; Alonso, 2005). This raises the question of whether being a responsible consumer has to do only with the aforementioned aspects or far from it, it is a broader concept.

Civil services and some private associations strive to change the consumer's mentality towards normative responsible consumption—the theoretical concept—in three fields : individual, enabling healthier, safe, rational and efficient consumption habits; environmental, that is, the so-called eco-consumption or sustainable consumption[2]; and social, that aims to educate supportive consumers. Some examples of these actions are re-cycling, energy saving, efficient driving, eco-design or ecological labelling campaigns.

However, it cannot be asserted that the majority of consumers have really changed their consumption habits towards normative responsible consumption[2]. Normative responsible consumption consumer's attitude will vary according to several factors : economic and socio-cultural consumer's level, kind of consumption and the information the consumer can access.

Applying these considerations to the developed countries, the consumer with a medium-high economic and sociocultural level should not be compared to that belonging to an inferior scale in terms of consumption attitude. The awareness and concern level about problems affecting his or her health, work conditions, environment and the knowledge of social corporate responsibility policies should be higher in the first. As they have higher incomes they also have the capacity to opt for certain products considering other characteristics apart from the price, unless they do not have enough information to make a free choice.

Coming back to our previous question, could we assert then that the ideal responsible consumer is one with high purchasing power and capacity to gather enough information about the supplier's social responsibility policies and practices before buying a product[3]? Or on the contrary, all consumers could be responsible to some extent. We do not aim to deepen into the consumers' moral responsibility, which is a complex and controversial subject. However, consumption as a human and free act can be approached from a moral perspective, in this sense, when talking of responsible consumption : what kind of responsibility is being considered, moral, legal, social…? In other words, e.g., a consumer has the choice to buy some vegetables from a successful company that guarantees that it only uses ecological production methods, consequently, protecting the environment; or on the other hand s/he can buy the same products from a humble farmer that cannot afford those ecological methods but needs the money to live on. Considering that the consumer does not mind to eat non-ecological products, a normative responsible consumer would choose the first choice : is that really responsibility?

There are many more situations like the farmer's who raises the following question : could economic-related aspects affect the theoretical definition of responsible consumption? In this sense, a flexible evaluation of responsibility should start by asking what and how to consume and why. Probably a prioritization of ethical values would help in this but the great subjective component link to this task would make it practically unfeasible. In any case, it is clear that consumer's education and information access are fundamental to determine responsible consumption acts.

## 3. Information for Responsible Consumption

As a right, consumer information is regulated in modern societies. The problem arises when this regulation is not enough as for its practice effectiveness. At present, consumer protection represents a current tendency since there is a greater awareness of consumer's inferiority position in relation to suppliers. In Spain, neither the Civil Law nor the Trade Law in their regulations on contracts matters took into account this unbalanced position. In Europe, the Treaty of Rome, 1957, establishing the European Economic Community (EEC), did not contemplate any consumer protection policy either and until the adoption of the Single European Act, 1986, competences in consumption matters were not conferred to it.

The Spanish Constitution (1978), in its Article 51, establishes the principle, pro-consumer when claiming that authorities will guarantee its defence. This Article lists consumer's basic right as information and education right, which should be promoted compulsorily by the authorities. In Europe, the Maastricht Treaty (1992), Amsterdam Treaty (1997) and the EU Constitutional Project follow the same line.

In this context, the Spanish General Law for consumer and user protection includes in their basic rights "the proper information about products and services and the education and spreading to ease knowledge about correct use, consumption and enjoyment (Art. 2.1, d). In addition, in Articles 13 to 17, it is more specific as for that right content establishing that products and services must include 'enough truthful and effective information about essential characteristics' like origin, composition, price, quality, quantity, manufacture and use-by-date, instructions, possible risks, etc., referring to labelling regulations to determine specific demands for each case.

Information society and legal framework should lead to the assertion that average consumer has access to greater information but this is so hardly ever. In addition, the fact that companies usually use some non-ethical and even illegal practices tending to misinform the consumer, contribute to reduce consumer's freedom. We cannot assert that a consumer has enough information to carry out a free responsible consumption buying decision. Few companies inform about the origin of their products, information contained in products labels usually misinforms consumers and very few of them communicate their employees' work conditions. That is, evidence shows that still there is much to do to achieve a fair framework for consumers so as they can make a real free choice and then being able to assess his/her responsibility. In other words, to what extent a consumer must investigate a company's manufacture/distribution processes before buying a product? If consumers' information right is acknowledged in most modern societies, shouldn't there be more effective control mechanisms to ensure the existing regulation is observed? Therefore, although information is a consumer's right : how many of us are confident that the providers of the products we buy are socially responsible? According to Fisk (1973), responsible consumption requires both a new attitude toward the meaning of consumption and a new social organization to put it into practice. Nowadays these two factors are still required and a great part of that new social organization involves a greater development of consumers' information right, among others.

## 4. Responsible Consumption in Crisis Periods

Economic crisis periods raise different scenarios as to responsible consumption : on one side, products deemed to be socially responsible usually entail an extra charge for the consumer. Thus if a consumer would like to consume ecological agro-products, s/he has to be willing to pay a higher price as long as s/he can afford it. On the other side, those consumers who buy socially responsible products on a regular basis, unless they have a good purchasing power, in crisis periods they can feel that they are forced to buy other products less expensive in spite of the fact that they do not satisfy their real needs. Therefore, they have no option but to become non-responsible consumers. Taking the supply perspective, usually, small and medium-sized companies do not stand out for their policies on social responsibility, which means that encouraging normative responsible consumption is detrimental to them unless they could obtain financial support to carry out a specific social responsibility programme and communicate it. In addition, these companies often find themselves at great financial risk in crisis periods. Therefore, giving a boost to normative social consumption could involve dramatic consequences for many local families who cannot survive extreme negative economic circumstances. Probably, consumerism could have/couldn't have some positive effects on them in this context.

With the aim to shed some light to all the questions set out herein, we will explain the future research we intend to carry out. With it we will try to find out the perceptions and conceptions of different groups of consumers featuring opposite socio-economic profiles.

## 5. Work-in-progress Methodology

In the present context of economic crisis and 'lack of information', it is of great interest to know consumers' perceptions and motivation on 'responsible consumption'. In this sense, this paper aims to find the answers to current problems derived from the mentioned factors, which may be cyclical and for a medium-term.

The following are some of the main questions to do research on :

- What do consumers understand by responsible consumption? According to the defined concept, to what extent s/he would define himself/herself as a responsible consumer? What do consumers understand by responsible consumption products?

- Do you consider yourself to have enough and truthful information to act with responsibility when buying a product? What kind of information would you like to find about the provider and the product?

- Do you usually buy products from companies responsible with the environment and its workers or collaborate with solidarity causes?

- How important are the responsible consumption aspects in your buying acts? Could you arrange in order of importance the following criteria : quality, price and responsibility?

- Could you say there has been a change in your general consumption behaviour because of the economic crisis? To what extent this change affects your 'responsibility' when buying?

- In your opinion : in crisis periods, are responsible consumption practices closer to either a reduction or an increase of consumption? Your responsible consumption is basically on : perishable products (regular shopping), durable products (television, white appliances, etc.), extraordinary products (holidays, second car, etc).

To explore the questions presented, we will use focus group research. Focus group research is a qualitative research method particularly valuable in situations where there is little pre-existing knowledge and the matters are sensitive and complex, (Bowling, 1997); is particularly useful for discovering different people's views and attitudes towards the phenomenon of interest and for providing data about the issues that are being explored (Krueger, 1988). This research is specially indicated to find the answers to 'how' and 'why' questions instead of 'what' and 'how much/many' and it is especially used in social sciences. It distinguishes from one-to-one interviews in the feature of interaction between research participants and argues for the overt exploration of this interaction (Kitzinger, 1994). And also, focus groups are distinguished from the broader category of group interviews by 'the explicit use of the group interaction' as research data (Merton, 1956; Morgan 1988 : 12; Kitzinger, 1994).

We will form three focus groups of seven to ten people in order to represent the different social characteristics relevant for the research and considering the objectives pursued through the discussions and our resource constraints. Thus, according to the objectives set in this research, these groups will be made up of : (a) students (from Universities); (b) unemployed people; and (c) people holding a permanent contract.

The following characteristics will be considered for each group : age, gender, incomes, marital status, number of kids and time in their work-related situation.

We will conduct the focus groups and subsequent analysis of data obtained according to the established procedures.

## Notes

1. It is important here to make clear that responsible consumption is a different concept—although related—from the fair trade. Thus the fair trade is defined by the World Fair Trade Organization as a trading partnership based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to and securing the rights of marginalized producers and workers—especially in the South.

2. As the EU Commission's Green paper promoting an European Framework for Corporate Social Responsibility reports.

3. The EU calls 'average consumer', who is attentive, perceptive and usually informed. According to this definition, it seems that these concepts start from the premise that the majority of consumers have a comprehension level that allows them to be aware of the implications of the contracts they sign.

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- All quotations should be checked carefully for accuracy and should be unaltered except for ellipses and bracketed insertions.
- Acronyms should be spelt out on first occurrence. Capitalization should be kept to the minimum and applied consistently.
- Use British spellings rather than American. Thus 'labour' not 'labor'.
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## Numbers & Percentage

- The word per cent, not the symbol % should be used in the text.
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