Intermediaries as arbitrageurs: Revisiting the motivations behind overseas listing*

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1 Introduction

Finance channels capital from investors to entrepreneurs. Investors look for highest returns, while entrepreneurs look for cheapeast capital and newer markets. National boundaries are inconsequential to them. Naturally, for most part of human history, capital has flowed freely across geographies from investors to entrepreneurs. With the advent of modern technology and the integration of the global capital market, the magnitude of such capital flow has increased substantially. So has barriers to cross-border capital movements. These barriers include capital controls, differences in legal regimes, information asymmetry and various transaction costs. In response to these practical constraints, international finance developed depository receipt to integrate capital markets across jurisdictions, opening up newer capital pools and markets to entreprenuers across the world.

Originally developed to raise equity funding off-shore, a depository receipt is a security issued in a foreign jurisdiction on the back of domestic securites in the home jurisdiction. Domestic securities are deposited with a domestic custodian on-shore and against such deposited domestic securities, depository receipts are issued off-shore by a depository bank. Being foreign securities, depository receipts are traded and settled in the foreign jurisdiction like any other security in that jurisdiction. At the same time, they are but mirror-images of the domestic securities deposited with the domestic custodian. Foreign investors can invest in depository receipts like any other security in their home jurisdiction, while at the same time, they reap the benefit of investing in a security outside their home jurisdiction. Domestic entrepreneurs can use depository receipts to tap these foreign investors and markets.

India's tryst with depository receipts started with liberalisation. In fact, the *1993 Scheme* was the first financial law reform immediately after liberalisation.[1] The *1993 Scheme* was a product of the prevailing political economy, which preferred some sectors over others.[2] Although an improvement over the

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[1]See, Department of Economic Affairs, Ministry of Finance, *Issue of Foreign Currency Convertible Bonds and Ordinary Shares (Through Depositary Receipt Mechanism) Scheme, 1993*, GSR 700(E), Nov. 12, 1993.

[2]This is no coincidence since the political economy of the time preferred equity market reforms. The balance of payment crisis in 1991 led to the devaluation of the rupee coupled with substantial reduction in import controls after 1991. This gave a major boost to the export-oriented services sector especially information technology and other knowledge-

pre-liberalisation era, it was not based on sound economic principles to cater to the need of all Indian firms that genuinely required capital. The demand for a liberal depository receipts regime gathered momentum after the global financial crisis. These new dynamics nudged the Indian Government to set up a Committee in September 2013, under the chairmanship of Mr. M.S. Sahoo, to comprehensively review the *1993 Scheme* keeping in view the 'needs of the Indian companies and foreign investors' as well as the 'need for simplification and legal clarity'.[3] Based on this Committee's recommendations, the Government issued the *2014 Scheme* which allows issue of 'unsponsored' depository receipts.[4] This development has seen a flurry of capital market activities in recent times, drawing attention towards depository receipts.[5]

In this backdrop, to fully appreciate the benefits of depository receipts,

based industries. Firms in services sector tend to prefer equity investments because they do not have substantial collateral necessary for debt financing. Moreover, given the high growth potential of the Indian services sector at that time, it was easier for them to raise capital through equity rather than debt. The international capital market was more suitable than the domestic capital market for raising such equity capital since the former was likely to have more sophisticated analysts' for new sectors like information technology. Consequently, Indian technology stocks could get a better valuation in off-shore equity markets. Moreover, the consumer-commercial market bonding theory would suggest that Indian services sector firms catering to the outsourcing demands of developed western economies would want to be listed on their stock exchanges, particularly in the USA. On the other hand, the Indian manufacturing sector at that time already had well established firms from the socialist regime. They had the necessary collateral for debt financing as well as the reputation required to attract equity investors. In contrast, new entrants into the manufacturing sector may have the requisite collateral for debt-financing but would never have the reputation to attract equity investments. Therefore, the crucial players in both the services and manufacturing sector in Indian stood to benefit out of equity market reforms rather than debt market reforms. See, Vikramaditya Khanna and Umakanth Varottil, "Developing the market for corporate bond in India", in: *NSE Working Paper* (2012), URL: `http://www.nseindia.com/research/content/WP_6_Mar2012.pdf` (visited on 03/16/2015).

[3]See, Ministry of Finance, *Constitution of a Committee to Review the FCCBs and Ordinary Shares (Through Depository Receipt Mechanism) Scheme 1993*, F.No.9/1/2013-ECB, Sept. 23, 2013.

[4]See, Department of Economic Affairs, Ministry of Finance, *Depository Receipts Scheme, 2014*, Oct. 21, 2014.

[5]Reportedly, in early 2015, a number of depository banks did a slew of filings with US SEC to issue unsponsored American Depository Receipts (ADRs) against Indian securities. See, Menaka Doshi, *ADRs of over 50 Indian cos to trade over-the-counter in US*, URL: `http://www.moneycontrol.com/news/cnbc-tv18-comments/adrsover-50-indian-cos-to-trade-over-the-counterus_1299852.html` (visited on 07/15/2015).

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Section 2 of this article examines the possible motivations for overseas listing in the context of four different theoretical frameworks in the chronological order of their evolution in financial and legal literature: (1) Portfolio theory; (2) Market segmentation theory; (3) Legal bonding theory; (4) Consumer commercial market bonding theory. Although these theories throw light on the possible motivations for firms to list overseas, this article argues that this existing literature fails to explain recent trends in the overseas listing market – the rise of 'unsponsored' depository receipts.

Since 2008, there has been a surge in unsponsored depository receipts programs globally. The above theories fail to explain the dynamics at work in this market for two reasons. First, the underlying assumption across all these theories is that it is the firm's motivation that determines whether its securities will be listed overseas; if so, in which jurisdiction and so on. However, this assumption does not hold in case of 'unsponsored' depository receipts, where the motivation of the firm is inconsequential. Instead, as will be explained, one of the key players who shape the overseas listing market in this segment are the intermediaries like depository banks and exchanges.[6] However, none of the above theoretical frameworks take into account the possible motivations and interests of these intermediaries in the overseas listing market. Consequently, the implications of these motivations and interests in shaping the dynamics of overseas listing has largely been outside the radar of scholarly investigation. Second, the existing literature has completely overlooked the arbitrage role played by these intermediaries. This article argues that these intermediaries play the role of arbitrageurs, whose incentives are aligned with the integration of capital markets internationally.

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Section 3 argues that the increased demand for international portfolio diversification among investors after the recent global financial crisis coupled with certain crucial changes in the US securities law in October 2008 created adequate incentives for the intermediaries to step in as arbitrageurs, trying to integrate capital markets internationally, primarily through the unsponsored depository receipts channel. This new theoretical framework – the intermediary arbitrage theory – fills the existing lacunae in the present law and

[6] Even in cases of 'sponsored' depository receipts, the influence of these intermediaries is undeniable. A firm suffers from information asymmetry when it comes to overseas listing. This may be due to lack of knowledge about sophisticated pockets of investors. Cultural differences between the issuing firm's jurisdiction and that of the off-shore market may also be immense. Firms need assistance from intermediaries like depository banks and foreign exchanges to overcome these hurdles.

finance literature on overseas listing by explaining the surge in unsponsored depository receipt programs globally.

2 Motivation for overseas listing

Firms have used depository receipts since 1927 to list their securities overseas.[7] Sound commercial prudence must have persuaded them to do so. The corresponding academic literature (in finance and law) on international capital markets reflect these commercial motivations in a systematic manner. Even today, this continuum of developing knowledge about the international capital markets is relevant to understand the possible motives behind overseas listings across time and space. This section reviews this continuum of progressing knowledge to understand and appreciate the possible motivations that have driven and still continue to drive overseas listing.[8]

2.1 Portfolio theory

Harry Markowitz propounded the portfolio theory in 1952.[9] He argued for the first time that investors must avoid investing in securities with high covariances among themselves. Rather, portfolios should be diversified across industries because firms in different industries, especially industries with different economic characteristics, have lower covariances than firms within an industry.[10]

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[7] The word 'listing' has been generally used in this article as a catch-all phrase to include listing on a traditional exchange as well as admission to trading on alternative platforms.

[8] The terms 'overseas listing' or 'listing overseas' have been used generally in this article rather than 'cross-listing' or 'dual-listing'. The rationale for this is that the former are broad enough to include listing of depository receipts abroad by an unlisted company on-shore, which will not be included by the latter terms.

[9] Professor Harry Markowitz was awarded the Alfred Nobel Memorial Prize in Economic Sciences in 1990 for having developed the theory of porfolio choice. See, The Royal Swedish Academy of Sciences, *Press Release*, Oct. 16, 1990, URL: `http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1990/press.html` (visited on 03/11/2015).

[10] See, Harry Markowitz, "Portfolio Selection", in: *The Journal of Finance* 7.1 (1952); also see, J. Tobin, "Liquidity Preference as Behaviour Towards Risk", in: *Review of Economic Studies* 25.2 (1958); Harry Markowitz, *Portfolio Selection: Effecient Diversification of Investments*, John Willey & Sons Inc., New York, 1959.

In October 1967, the Wall Street Journal reported that European investors were increasingly purchasing American stocks.[11] This phenomenon caught the attention of finance scholars who tried to understand the possible reasons behind it. The following year, Herbert Grubel for the first time showed how international diversification of portfolios is the source of an entirely new kind of gains from international economic relations. He found that diversification among the assets from the eleven countries in general would have permitted investors to attain higher rates of return or lower variance of their portfolios than they could have by purchasing a portfolio consisting of Moody's industrial average of common stocks. Grubel went to portend that if past experiences are considered to be indicative of future developments, then the data suggest that future international diversification of portfolios is profitable and that more of it will take place.[12]

In 1970 Levy and Sarnat argued that although American investors should not restrict their portfolio to developing countries, the inclusion of these countries in the portfolio materially improves their risk-return position. When stabilising a portfolio, it is better to invest in countries whose economies are not highly correlated with that of the investing country.[13]

In 1973 Lessard observed that complete freedom of international capital movements would provide investors with a maximum opportunity for diversification, but it also would conflict with the objective of economic sovereignty of developing countries. In this backdrop, he proposed creation of an Investment Union to allow international diversification among a group of countries with similar levels of development without loss of economic sovereignty. Accordingly, using historical returns on corporate equities from Colombia, Chile, Argentina and Brazil, Lessard showed that multinational diversification within an Investment Union is superior than investment in single countries.[14]

Evidently, by early 1970s, it was well established that investors in developed economies were better off diversifying their portfolios internationally,

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[11] See, Wall Street Journal, "European Investors Step Up Their Purchases of American Corporate Securities", in: (Oct. 12, 1967).

[12] See, Herbert G. Grubel, "Internationally Diversified Portfolios: Welfare Gains and Capital Flows", in: *The American Economic Review* 58.5 (1968).

[13] See, Haim Levy and Marshall Sarnat, "International Diversification of Investment Portfolios", in: *The American Economic Review* 60.4 (1970).

[14] See, Donald R. Lessard, "International portfolio diversification: A multivariate analysis for a group of Latin American countries", in: *The Journal of Finance* 28.3 (1973).

even across developing economies whose economies were not highly correlated to the investing developed economy. Since then, this has motivated investors from developed economies to invest in overseas listed securities from developing economies. In turn, such a dedicated pool of foreign investors has been a major incentive for issuers from developing countries to list their securities overseas in these developed economies.

2.2 Market segmentation theory

Barriers to international investments segment capital markets across jurisdictions.[15] These barriers include transaction costs, information costs and legal restrictions.[16] The effect of such barriers on portfolio choice entered financial literature a bit late. In 1974, Fisher Black for the first time considered the effect of such barriers on international capital market integration.[17]

In 1977 Stapleton and Subrahmanyam studied how different types of market segmentation, due to investment restrictions, impact corporate financial decisions. They identified four types of segmentations: (1) Complete segmentation, where investors from one country cannot invest in another; (2) A restriction on the amount of investment an individual of a country can make in foreign securities; (3) A percentage premium or tax levied on investment in foreign securities; (4) A restriction on the aggregate amount of investment by one country's nationals in the other. Stapleton and Subrahmanyam found that such segmentation of capital markets depress security prices. Corporations have incentive to increase diversification opportunities available to investors to reduce the effect of market segmentation. Corporations can do this in three ways: (1) Foreign portfolio or direct investment by firms; (2) Mergers with foreign companies; (3) Dual listing on foreign capital markets. With respect to dual listing they showed that the effect of listing a domestic listed company in a completely segmented foreign capital market is that the demand for the stock of the domestic listed company becomes the

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[15]During the post-World War II period, there were more formal and informal barriers to capital transactions on an international than on a domestic level. See, Richard Stehle, "An Empirical Test of the Alternative Hypotheses of National and International Pricing of Risky Assets", in: *The Journal of Finance* 32.2 (1977).

[16]See, Wayne Y. Lee and Kanwal S. Sachdeva, "The Role of the Multinational Firm in the Integration of Segmented Capital Markets", in: *The Journal of Finance* (1977).

[17]See, Fisher Black, "International capital market equilibrium with investment barriers", in: *Journal of Financial Economics* 1.4 (1974).

sum of demand from the two markets. The price of the domestic stock goes substantially above its previous value.[18]

In 1987, Alexander, Eun and Janakiramanan recognised that market segmentation along national borders is caused due to transaction cost, information costs and legal restrictions. They agreed with Stapleton and Subrahmanyam's analysis that these barriers create incentive for firms to dual list in foreign jurisdictions. Further, they found that dual listing of a domestic security on the foreign capital market produces an 'externality effect' of indirectly integrating the market for pure domestic securities (which are not dually listed) with the foreign security market. The externality effect varies across domestic securities because it depends on the correlation of the domestic security with the dually listed security. When they are perfectly correlated, the purely domestic security is a perfect substitute for the dually listed security. When they are uncorrelated, dual listing has no externality effect. Therefore, depending upon the net impact of this externality effect, the expected return of a pure domestic security with a dual listing can be greater than or less than the expected return of the same security without a dual listing.[19]

Evidently, by late 1980s, finance literature provided enough evidence that firms may get better pricing for their securities by overseas listing in foreign jurisdictions. Coincidentially, this was also the time when developed economies were dismantling capital controls and by 1990s, there was substantial pressure on developing economies to do the same.[20] These developments created further incentives for firms to list overseas in foreign jurisdictions.

2.3 Legal bonding theory

The legal bonding theory argues that firms from less advanced jurisdictions (with poor minority shareholder protection) list overseas in advanced jurisdictions to 'bond' themselves to the higher corporate governance standards of the latter.[21] In this sense, 'bonding' by overseas listing in an advanced

[18]See, R. C. Stapleton and M. G. Subrahmanyam, "Market Imperfections, Capital Market Equilibrium and Corporation Finance", in: *The Journal of Finance* 32.2 (1977).

[19]See, Cheol S. Eun Gordon J. Alexander and S. Janakiramanan, "Asset Pricing and Dual Listing on Foreign Capital Markets: A Note", in: *The Journal of Finance* 42.1 (1987).

[20]See, Christopher J. Neely, "An introduction to capital controls", in: *Federal Reserve Bank of St. Louis Review* (1999).

[21]For a detailed summary of the mature form of legal bonding theory, see, Nicholas C. Howson and Vikramaditya Khanna, "Reverse cross-listings – The coming race to list in

jurisdiction is a credible and binding commitment by the issuer not to exploit whatever discretion it enjoys under its domestic laws to overreach the minority investor.[22] This theory was propounded by John C. Coffee in 1999.[23]

Coffee developed this theory in the backdrop of the debate on how corporate governance standards across jurisdictions may converge. Neo-classical economist have long argued that efficiency considerations will ultimately prevail and determine corporate structure. On the other hand, Lucian Bebchuk and Mark Roe argued about the path dependencies of corporate structure - they are dependent on the earlier corporate structures with which the economy started and the rules which affect ownership structures. Accordingly, they concluded that inertial political forces would be sufficiently powerful to preserve the less efficient status quo.[24] Coffee, while accepting both the reality of evolutionary competition and the inevitability of political constraints, argued that a functional convergence of corporate governance standards is still possible through the voluntary option of dual-listing.[25] He observed that when a foreign firm upgrades its depository receipts from the Over The Counter (OTC) market in US to NASDAQ and take up U.S. Securities and Exchange Commission (SEC) reporting obligations, they experience significant positive return.[26] Coffee attributed this abnormal price movement to the bonding mechanism - the foreign issuer is increasing the share value of its public shares by agreeing to comply with the generally higher SEC dis-

emerging markets and an enhanced understanding of classical bonding", in: *University of Michigan Law School Scholarship Repository* (Nov. 19, 2014), URL: `http://repository.law.umich.edu/cgi/viewcontent.cgi?article=1219&context=law_econ_current`.

[22]As per Coffee, the term 'bonding' is a term of art in standard 'agency cost' literature. Essentially, the principal can either 'monitor' the agent to reduce inappropriate conduct by the agent, or the agent can 'bond' its own conduct, for example, by posting a surety bond or otherwise subjecting itself to penalties. See fn. 191, Jr. John C. Coffee, "The future as history: The prospects of global converenge in corporate governance and its implications", in: *Northwestern University Law Review* 93 (1999).

[23]See, John C. Coffee, see n. 22; however, it may be worthwhile to note that even before Coffee, another article had already argued that 'better laws mean higher stock prices and vice versa'. See, Amir N. Licht, "Regulatory Arbitrage for Real: International Securities Regulation in a World of Interacting Securities Markets", in: *Virginia Journal of International Law* 38 (1998), p. 563.

[24]See, Lucian Arye Bebchuk and Mark J. Roe, "A theory of path dependence in corporate ownership and governance", in: *Stanford Law Review* 52 (1999).

[25]See, John C. Coffee, see n. 22.

[26]See fn. 115, ibid.

closure standards that prevail in the US.[27] As far as US firms listing in other jurisdictions is concerned, Coffee referred to an article by Licht to assert that shares of such firms exhibit negative abnormal returns.[28] However, Licht in his article mentioned this as a broad generalisation and did not provide any data or study for the same.[29] Separately, Licht has argued that the bonding role of cross-listing has been 'greatly overstated' and that a large body of evidence indicates that the bonding theory is unfounded.[30]

Evidently, at best, the bonding hypothesis should be treated as one of the various factors that motivate overseas listing and should not be looked at in isolation as a sole motivating factor.

2.4 Consumer-commercial market bonding theory

The consumer-commercial market bonding theory has been recently propounded by Howson and Khanna.[31] This bonding consists of several components:[32] (1) a straight advertising-type appeal to the receiving jurisdiction's products and services markets and the consumers who participate in such markets; (2) reputational enhancement as a global firm with a local identity (and presumably local understanding); (3) the signaling of long-term commitment by the issuing firm to that specific market, as well as the prospect of products/services market consumer ownership; (4) acknowledgment of the sovereign legal- regulatory establishment of the nation in which the issuer is listing; (5) an appeal to the receiving market's regulators for the provision of franchise or licensing benefits. To illustrate, in 2010, when Standard Chartered PLC did an Indian Depository Receipt (IDR) issue in India, it specifically mentioned its long association with India since 1858.[33] Its officially

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[27] This argument was first made by Amir Licht based on an unpublished paper by Darius P. Miller. The unpublished paper was later published. See, Licht, "Regulatory Arbitrage for Real: International Securities Regulation in a World of Interacting Securities Markets", see n. 23; Darius P. Miller, "The market reaction to international cross-listings: Evidence from Depositary Receipts", in: *Journal of Financial Economics* 51 (1999), pp. 103–123.

[28] See fn. 115, John C. Coffee, see n. 22.

[29] See, Licht, "Regulatory Arbitrage for Real: International Securities Regulation in a World of Interacting Securities Markets", see n. 23, p. 634.

[30] See, Amir N. Licht, "Cross-Listing and Corporate Governance: Bonding or Avoiding?", in: *Chicago Journal of International Law* (2003), p. 141, p. 142.

[31] See, Howson and Khanna, see n. 21.

[32] See, ibid., p. 24.

[33] See, Standard Chartered PLC, *Draft Red Herring Prospectus*, Mar. 30, 2010, p. 95.

stated purpose for the issue was to demonstrate its commitment to India's future and its belief that India will remain a growing and key market.[34] The issue was intended to increase its market visibility and brand perception in India, to widen its investor base and provide a new source of capital.[35] Incidentally, Standard Chartered's tag line is 'here for good'.[36] This example quite clearly lends support to the prevalence of consumer-commercial market bonding theory.

Howson and Khanna developed this theory primarily to explain the phenonmenon of firms from developed jurisdictions dual-listing in developing jurisdictions – something that the legal bonding theory fails to explain. However, the consumer-commercial market bonding theory goes beyond that. It predicts that depository receipts will be useful for sectors where firms must gain the trust of the local customers (like banking and financial services) as well as other consumer products firms which need brand recognition in the local markets (like FMCG sector, automobile sector, fast food brands etc.).[37] These motivations may well play a role in the traditional overseas listings from developing to developed jurisdictions.

Evidently, this is a powerful theory that can probably explain the commercial motives behind most dual-listings.[38] It is subtle and may not have any immediate tangible price effect. Probably, that is why earlier academic literature did not envisage this possibility.

[34]See, Standard Chartered PLC, *Draft Red Herring Prospectus*, see n. 33, p. 351.

[35]See, ibid., p. 351.

[36]See, Standard Chartered PLC, *Our brand and values, Here for good*, URL: `https://www.sc.com/en/about-us/our-brand-and-values/here-for-good/index.html` (visited on 03/11/2015).

[37]See, Howson and Khanna, see n. 21, p. 26.

[38]Some dual-listing however have very differnt motives. For example, some Russian firms moved their depository receipt programs to Asia possibly because of the threat of western sanctions being imposed on Russia. See, Alexei Lossan, *Russian companies abandon the London stock exchange in favor of Asia*, Dec. 4, 2014, URL: `http://asia.rbth.com/business/2014/12/04/russian_companies_abandon_the_london_stock_exchange_in_favor_of_asia_41957.html` (visited on 03/11/2015).

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3 The missing strands: Intermediaries as arbitrageurs

All the above four theoritical frameworks help explain the commercial motivations behind a firm to list overseas. Two of them specifically help explain the direction of overseas listing: from developing to developed economies (the legal bonding theory) or from developed to developing economies (consumer-commercial bonding theory). But the underlying assumption across all these theories is that the decision to list overseas is that of the firm. Axiomatically, it is the firm's motivation that determines whether its securities will be listed overseas; if so, in which jurisdiction and so on. However, if we define 'listing' broadly to include 'admission to trading' in alternative trading platforms and not just the traditional exchanges, then this assumption itself does not hold true. The decision to issue depository receipts off-shore on the back of existing domestic securities on-shore need not be a decision of the firm - it may be the decision of the holders of such domestic securities.[39] Such depository receipt programmes are referred to as 'unsponsored'. Figure 1 shows that the depository receipt market internationally is primarily fuelled by unsponsored programmes. The incentives of the firm is irrelevant in unsponsored issues.

[39] This is naturally subject to such legal restrictions as may be imposed by the on-shore jurisdiction. For example, as of now, Taiwan does not permit unsponsored depository receipts to be issued abroad against Taiwanese securities.

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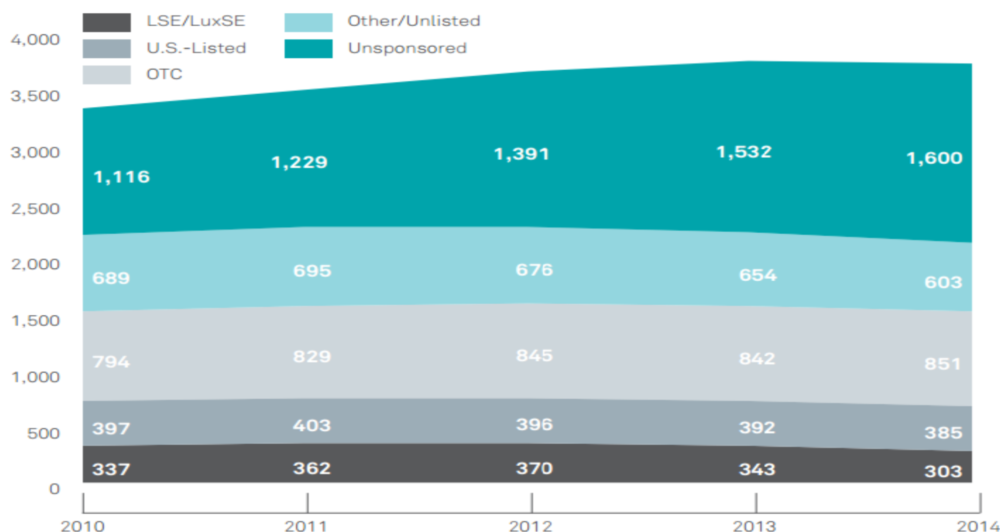

Figure 1: Total DR Programs: Sponsored and unsponsored (Source: BNY)

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The unsponsored ADR market picked up from October 2008 when the US SEC permitted automatic exemption to certain non-US companies from complying with the onerous registration and reporting obligations under US securities laws.[40]. To qualify, a non-US company needs to satisfy certain criteria, like (1) it should have its equity shares listed on one or more stock exchanges outside the US; (2) its non-U.S. disclosure documents must be in English and it must publish them on its website or another electronic medium that is generally available to the public in its primary trading market.[41]

The motivation of the firm is irrelevant for unsponsored programs. Instead, the dynamics of this market is determined by the incentive structure of three types of players: holders of the securities on-shore, the investors in depository receipts off-shore and the intermediaries (depository banks and

[40]See 17 CFR 240.12g3-2(b).

[41]See, Securities and Exchange Commission, *Exemption from registration under section 12(g) of the Securities Exchange Act of 1934 for foreign private issuers*, Release No. 34-58465; International Serial Release No. 1309; File No. S7-04-08, Sept. 5, 2008; also see, Citibank N.A., *Unsponsored American Depository Receipts (ADR)*, 2015, URL: `https://wwss.citissb.com/adr/common/file.aspx?idf=1117` (visited on 03/17/2015).

trading platforms). None of the four theories discussed above take into account this unique feature of the most dominant segment of the international market for depository receipts.

To understand the dynamics at play in unsponsored issues, it is useful to think of this market in terms of demand and supply. Domestic investors demand international diversification of their portfolio since it reduces exposure to volatility risks. For example, Brazilian investors wanted to invest in foreign stocks because of concerns over inflation and government intervention in local companies.[42] However, various factors like home bias, legal restrictions, transaction costs, prevent them from directly investing in foreign securities off-shore. For example, many US pension and insurance funds cannot invest in foreign securities since their charter conditions allow them to invest only in dollar denominated securities.[43] These investors find it useful to invest in depository receipts to diversify their portfolio internationally. This generates a demand for depository receipts on-shore. On the supply-side however, foreign companies may not be motivated to issue depository receipts in these jurisdictions. This creates a situation where there is a demand for depository receipts, but supply does not exist. Elementary economics suggests that when demand exceeds supply, prices will rise. This creates the opportunity for earning premium on issuing depository receipts on-shore against certain classes of foreign securities. This premium attracts intermediaries like depository banks into the market for unsponsored depository receipts. They purchase these foreign securities, deposit them with a custodian in the foreign jurisdiction and issue depository receipts on-shore against those foreign securities with the objective of earning that 'arbitrage' premium.[44] From this perspective, the intermediaries are arbitrageurs who enter the market for on-shore unsponsored depository receipts to earn the premium generated due to barriers between the domestic and international capital markets.

To illustrate this theory, it is useful to study the unsponsored Brazilian

[42] See, Samantha Pearson, *BM&FBovespa to issue depositary receipts*, June 19, 2011, URL: http://www.ft.com/intl/cms/s/0/648814da-b249-11e0-9d80-00144feabdc0.html#axzz3fqYNxntX (visited on 07/14/2015).

[43] See, The Firm, *New Depository Receipt Scheme*, URL: http://thefirm.moneycontrol.com/story_page.php?autono=1240842 (visited on 07/15/2015).

[44] Subsequently, trading on depository receipts and the ability to redeem them into the underlying foreign security attracts more arbitrageurs into the market. This ensures that the law of one price holds across the on-shore and off-shore markets. These transactions in turn generate transaction fees for intermediaries like exchanges.

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Depository Receipts (BDRs) market in Brazil. Brazil permits unsponsored BDRs on the back of foreign securities.[45] Figure 2 plots the increase in number of foreign companies against whose securities unsponsored BDRs were issued from October 2010 to April 2015 against the increase in market value of unsponsored BDRs over the same period of time.

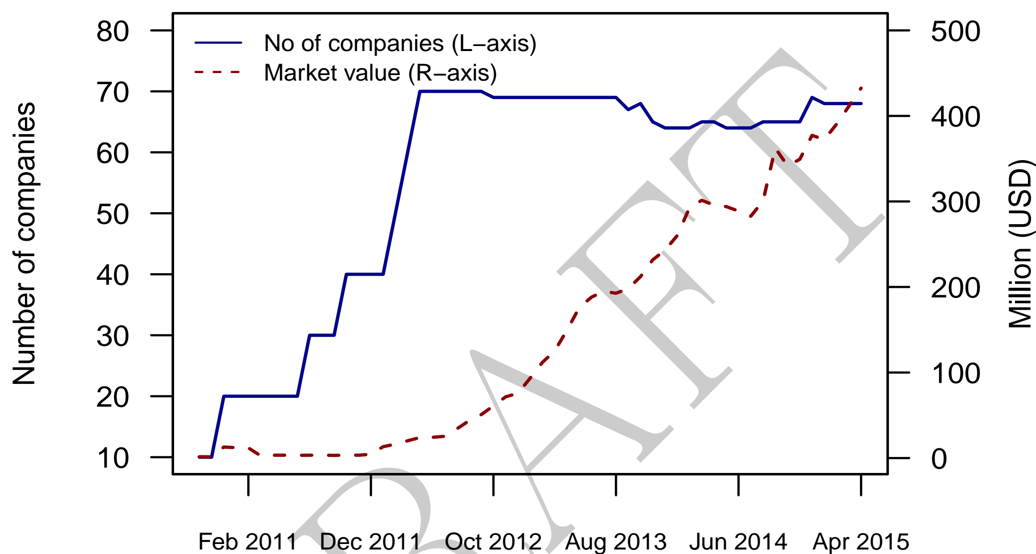

Figure 2: Unsponsored Brazilian DR market (Source: Bovespa)

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Table 1 in the Appendix studies the top 50 US companies by market capitalisation. It reveals that unsponsored BDR programs exist against the securities of 42 of these companies. Out of these 42, 40 have operations in Brazil. These companies did not pro-actively issue their depository receipts in Brazil. Instead, depository banks (intermediaries) outbidded each other to acquire the right to issue unsponsored BDRs against securities of those foreign companies.[46] The data reveals an interesting insight about the market

[45]See generally, BM&F Bovespa, *Circular letter*, Rules for registration of unsponsored level I Brazilian Depository Receipts (BDRs) and manual for registration of unsponsored level I Brazilian Depository Receipts (BDRs), June 3, 2013.

[46]Under Brazilian regulations, a depository institution has to bid for structuring new unsponsored Level I BDRs. See, BM&F Bovespa, *Circular letter*, Further expansion of the unsponsored level I BDR program, Apr. 27, 2015.

for unsponsored depository receipts – there is a bias towards securities of the biggest foreign companies which have presence in the on-shore jurisdiction where the depository receipts are being issued. This is probably because of familiarity of investors with such big companies as well as ease of access to information about them because of physical proximity. None of the existing four theories adequately explain this phenomenon of issue of unsponsored depository receipts against the securities of certain foreign companies. The intermediary arbitrage theory seeks to fill this lacuna in the current theories on overseas listing.

4 Conclusion

This article reviews the existing literature in law and finance on overseas listing. Accordingly, it focusses on four different theoretical frameworks in the chronological order of their evolution in this literature: (1) Portfolio theory; (2) Market segmentation theory; (3) Legal bonding theory; (4) Consumer commercial market bonding theory. Although these theories throw light on the possible motivations for firms to list overseas, this article argues that two crucial strands are missing from the existing literature. First, the underlying assumption across all these theories that it is the firm's motivation that determines whether its securities will be listed overseas or not, does not hold true for unsponsored programs. Instead, intermediaries like depository banks and exchanges are key players who shape the unsponsored depository receipts market. Second, the existing literature overlooks the arbitrage role played by these intermediaries. This article addresses these lacunae in the present literature on overseas listing by proposing a new theoretical framework – the intermediary arbitrage theory – to explain the dynamics of the unsponsored depository receipts market. This theory is based on the premise that issue of unsponsored depository receipts is independent of motivations of firms against whose securities these depository receipts are issued. Instead, this theory shows that it is the incentive of the intermediary as an arbitrageur that helps understand the recent surge in unsponsored depository receipt market globally.

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Appendix

Table 1: Top 50 US companies by market capitalisation

Company	**Unsponsored BDRs**	**Presence in Brazil**
3M Co	Yes	Yes
AbbVie Inc.	**No**	Yes
Actavis plc	**No**	Yes
Altria Group Inc	**No**	Yes
Amazon.com Inc	Yes	Yes
Amgen Inc	Yes	Yes
Apple Inc.	Yes	Yes
AT&T Inc	Yes	Yes
Bank of America Corp	Yes	Yes
Berkshire Hathaway B	Yes	Yes
Biogen Inc	**No**	Yes
Boeing Co	Yes	Yes
Bristol-Myers Squibb	Yes	Yes
Chevron Corp	Yes	Yes
Cisco Systems Inc	Yes	Yes
Citigroup Inc	Yes	Yes
Coca-Cola Co	Yes	Yes
Comcast Corp	Yes	Yes
CVS Health Corporation	**No**	Yes
Exxon Mobil Corp	Yes	Yes
Facebook Inc	Yes	Yes
General Electric Co	Yes	Yes
Gilead Sciences Inc	**No**	Yes
Google Inc A	Yes	Yes
Google Inc C	Yes	Yes
Home Depot Inc	Yes	**No**
Intel Corp	Yes	Yes
Intl Business Machines Corp	Yes	Yes
Johnson & Johnson	Yes	Yes
JP Morgan Chase & Co	Yes	Yes
Mastercard Inc A	Yes	Yes
McDonald's Corp	Yes	Yes
Medtronic plc	**No**	Yes
Merck & Co Inc	Yes	Yes
Microsoft Corp	Yes	Yes
Oracle Corp	Yes	Yes
PepsiCo Inc	Yes	Yes

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Pfizer Inc	Yes	Yes
Philip Morris International	Yes	Yes
Procter & Gamble	Yes	Yes
QUALCOMM Inc	Yes	Yes
Schlumberger Ltd	Yes	Yes
United Technologies Corp	Yes	Yes
Unitedhealth Group Inc	Yes	Yes
Verizon Communications Inc	Yes	Yes
Visa Inc	Yes	Yes
Wal-Mart Stores	Yes	Yes
Walgreens Boots Alliance Inc	Yes	**No**
Walt Disney Co	**No**	Yes
Wells Fargo & Co	Yes	Yes

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