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Playing the Shadowy World of Emerging Market Shadow Banking

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Playing the Shadowy World of Emerging Market Shadow Banking

Bryane Michael, Institute of Emerging Market Studies

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Abstract

For emerging market regulators, shadow banking represents an activity which they must control. For businessmen in economies like Russia, Argentina, Saudi Arabia and Mexico, shadow banking represents an important business opportunity. By extending credit to risky (but promising) activities through shadow banking, financiers in these economies can earn far higher returns for excess-cash than placing it in cash management accounts. In this brief, we describe ways that cash-rich individuals and companies can use shadow banking activities to help themselves (by earning more money) and help the economy (by extending credit in these traditionally credit-starved economies). Some of these activities include issuing debt which shadow bankers use as collateral, chopping project-lending into privately-placed share offerings, investing in trade, real estate and insurance securities as well as centring shadow banking activities in regulation-friendly jurisdictions.

Disclaimer: This paper describes a set of policies and practices used in several economies and the potential for adopting these in several emerging markets. Nothing in this paper represents advice to retail or other investors.

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Introduction

Shadow banking has become an important topic among bankers and policymakers. Valued at roughly 100% of world GDP, these transactions have caught policymakers' attention because their contribution to global finance. Under the more mundane (and technically correct) epitaph, these non-bank financial transactions represent about \$67 trillion in credit to many well-deserving projects in emerging markets. Recent discussion has centred on how politicians and international organisations like the Financial Stability Board can regulate shadow banking. No one has written about how businesspersons and financiers should conduct shadow banking. What opportunities exist in emerging markets for shadow banking services? How can entrepreneurs use shadow banking to help themselves (by earning profits) while providing socially-beneficial credit?

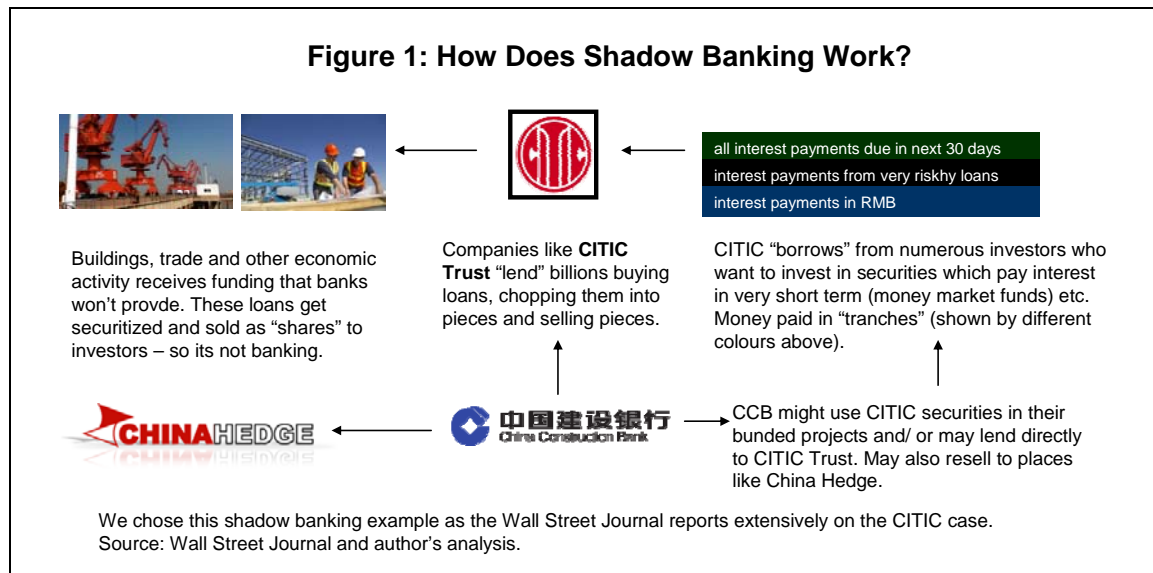
In this brief, we argue that non-bank financial institutions (corporate treasury officers, investment advisors, independent broker-dealers, insurance companies and trade finance groups) can increase their revenues by offering credit through under-regulated emerging market shadow banking sectors. Usually, such shadow banking consists of taking groups of loans, packaging them into securities which funnel loan payments to investors, and dividing up these securities into groups (called tranches) which provide the risk and return that various client groups desire. Non-bank organisations – operating in the emerging markets that we call the Emerging Dozen -- can probably expand their assets under management by \$1 trillion if they capitalise on this growing area of banking.

Uncharacteristically of a policy brief, we must state several caveats in advance. Recent media attention has demonised shadow banking – in some cases (particularly in the US) quite rightly. In this brief, we do not take a normative view on shadow banking (arguing whether such banking is good or bad). We also do not consider the wider implications of such banking on the larger economy, or the extent to which regulators should control such shadow banking. We focus our analysis on the ways that shadow banking can benefit entrepreneurial individuals and businesses in emerging markets. Credit from such “non-bank financial institutions” (as they are called in the literature) can help relieve serious credit constraints in many of the economies we analyse. We want to focus on how entrepreneurial individuals and companies can provide low-cost credit, provide investors with the returns such credit generates and still make a profit.

What And Where Is Shadow-Banking?

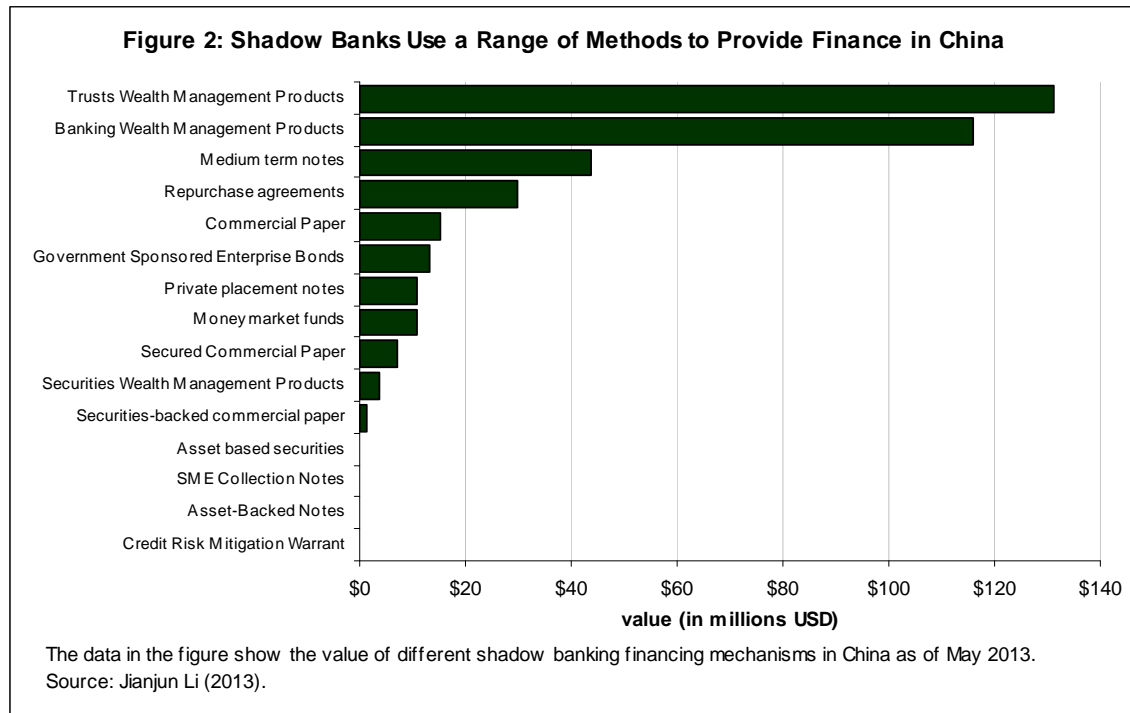
Shadow banking occurs when individuals and institutions (usually not legally incorporated or regulated as banks) give credit, collect interest and pass these interest payments on to investors. When a company, like the Indian *Housing Development Finance Corporation*, provides housing loans outside of the framework of the Banking Regulation Act and/or Banking Companies Act – that's shadow banking. When an

insurance company like the Chinese *Ping An Insurance* resells its policies to others who want to collect monthly premiums from insurance buyers – that’s shadow banking. When a bank like JP Morgan buys trade finance notes in France, bundles them into packages based on their risk and sells slices of those packages in Malta – that’s shadow finance. Or when you (the reader) buy pension fund shares that invest in something that looks like a bond and pays like a bond (but gets its money from housing loans, car loans and credit card debt) – that’s shadow banking. Figure 1 shows the example of a company like CITIC (the letters come from its former name *China International Trust and Investment Corporation*). CITIC might fund a port operation which a typical bank manager may deem to risky. CITIC Trust (and many shadow banks organise themselves as trusts) will often borrow money from “normal” banks to fund the loan or may seek funding from hedge funds, wealthy individuals and other investors. These investors will receive “shares” in the port as collateral (known as collateralised obligations). These investors also receive a higher than market return for assuming such risks. The securitised loan (and the collateral collected for the loan) can pass to a hedge fund, an institutional investor or anyone else.



The size and range of China’s shadow banking markets provide a useful illustration for aspiring shadow bankers in other emerging markets. A range of business loans made outside of the formal Chinese banking system have replaced some of the usual loan applications submitted to Chinese high-street banks. As shown in Figure 2, wealth management products have served as the preferred method of bringing money to speculative business ventures – bringing in over \$240 million in such investment. These products avoid regulatory scrutiny and bring in large amounts of cash because they are sold only to high-net worth individuals with over \$1 million in assets. Pieces of risky projects have also been divided and sold as short-term tradable promissory notes (called commercial paper), money market funds, and the other types of lending shown in the figure. Special kinds of loans -- known as repurchase agreements -- usually provide shadow bankers with a key means of lending. In China’s case (and in many OECD member countries), repurchase agreements serve as one of the key methods of lending

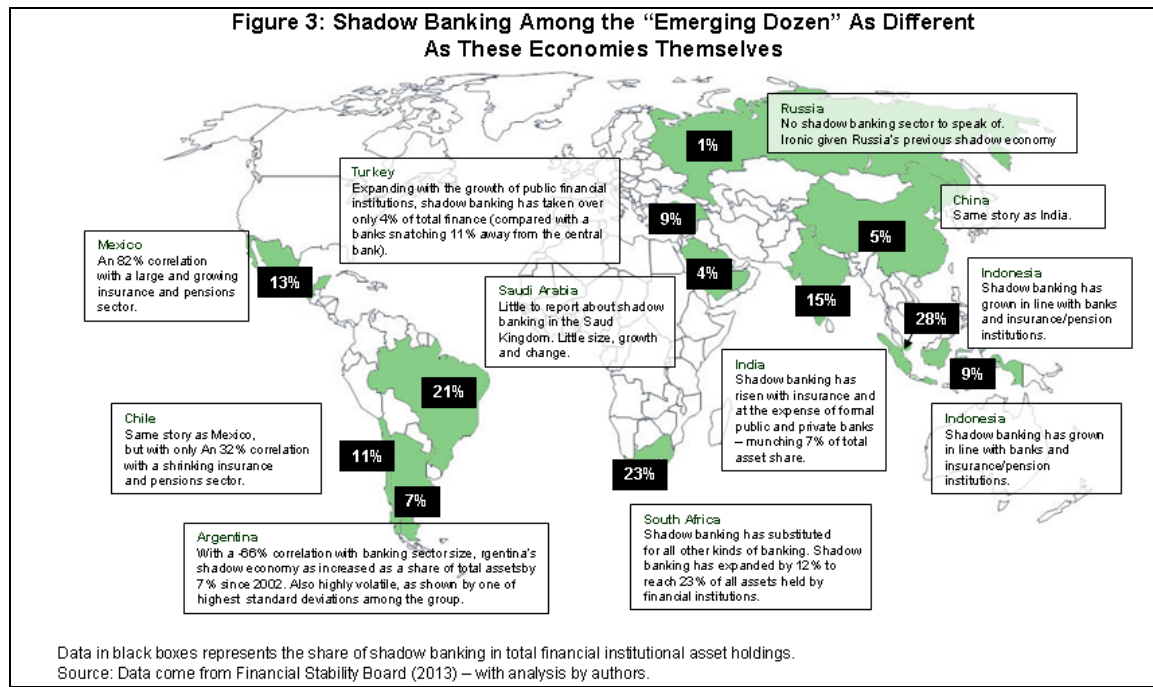
(and borrowing). In the Middle Kingdom, such repurchase agreements – whereby a lender “buys” for a short-time a borrower’s assets with the contractual requirement that the seller buy back the asset at a slightly higher price – represents about 8% of China’s shadow banking market. Some shadow banking instruments – like asset-based securities – have not quite caught on.



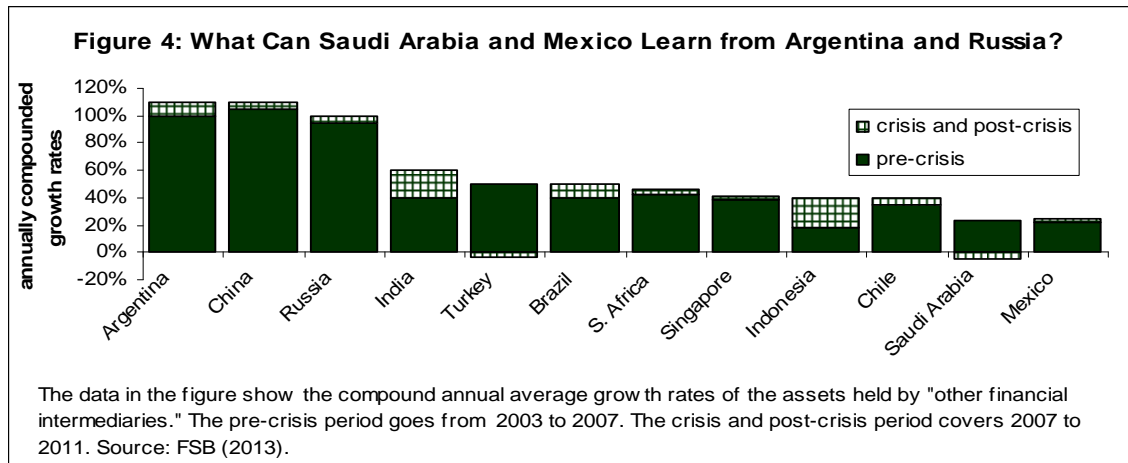
Some emerging markets clearly represent opportunities for aspiring shadow bankers. In the US and Hong Kong, shadow banks manage roughly 40% of the total share of financial assets in their respective financial systems. In advanced economies like Korea, the UK, and the Euro zone, shadow banks manage about 30% (on average) on the financial system’s assets. Yet, a number of countries with large financial systems possess far less developed shadow banking sectors. These economies – representing most non-OECD G20 members – have shadow banking systems which manage a much lower proportion of their financial systems’ assets. These developing countries represent either a best practice in banking regulation or a missed opportunity, depending how you look at it. Given that the Indonesian, Mexican and Indian economies have developed far more slowly than the American and Korean ones, we tend to take the second view. Under-developed shadow banking sectors in these countries represents a missed opportunity.

How big are shadow banking sectors in some of the largest emerging markets? Figure 3 illustrates the size and development of shadow banking in the group of economies we call the Emerging Dozen. These countries -- Argentina, Brazil, Chile, China, India, Indonesia, Mexico, Russia, Saudi Arabia, Singapore, South Africa and Turkey – represent shadow banking sectors with over \$3.5 trillion in assets (about the GDP of Germany). Some shadow banking sectors (like in Argentina) have grown quickly. Others – like in Mexico – have grown slowly. **If these emerging markets had the same proportion of**

shadow-bank-controlled financial assets as those of the OECD member countries (and if such banking complemented rather than substituted for regular banking), shadow banking would add an extra \$1 trillion in financial assets in the Emerging Dozen countries.



Successes in some markets might provide inspiration for aspiring shadow bankers in other markets. Figure 4 shows the growth rates of shadow banking – defined as financial assets managed by “other financial intermediaries.” Argentina’s shadow banking sector has grown fastest – from a relatively low base. China’s shadow banking sector has grown at about the same rate, also from a low base. However, given the magnitude of the Chinese economy, such growth has triggered fears among many global financial market participants. Shadow banking sectors in economies like Mexico, Saudi Arabia and Chile have grown far more slowly. In the post-crisis period, Turkish and Saudi Arabian shadow bank assets have contracted. Pessimistic aspiring-shadow bankers may view such data as a sign of saturation and low-growth prospects in these markets. Optimistic shadow banking pretenders may view these data as a sign of a market opportunity. Low growth in post crises shadow banking may reflect slow uptake of the securities providing important non-bank funding.

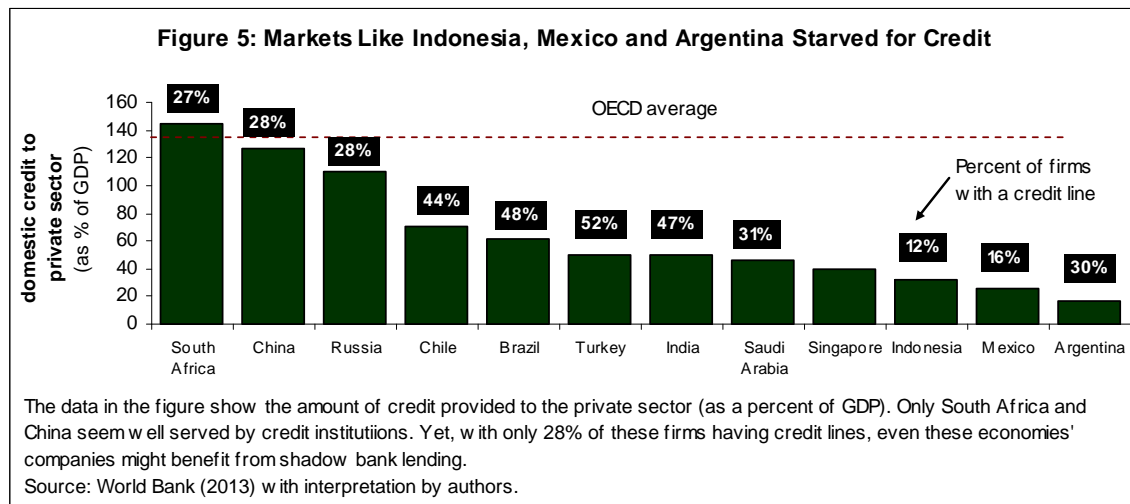


The data suggest that institutions engaging in shadow banking in the Emerging Dozen may profit greatly from their work in the upcoming years. Non-OECD G-20 countries (the group we call the Emerging Dozen) possess only 7% of the world's shadow banking assets. These economies are also under-shadow-banked (for lack of a better term). Such low levels of shadow banking in emerging markets contrasts with the EU and US – which each have shadow banking assets of \$22 trillion (or about two-third's of global GDP). Assets managed by "other non-bank financial institutions" in the post-crisis period (after 2007) have contracted by about 5% in the US and increased a meagre 5% in the EU. In Indonesia, India, and Brazil, such growth rates have exceeded 10% per year from 2007 to 2011. Investors who held shares of these non-banks would have profited greatly.

Where are the Profits for Emerging Market Financial Institutions in Shadow Banking?

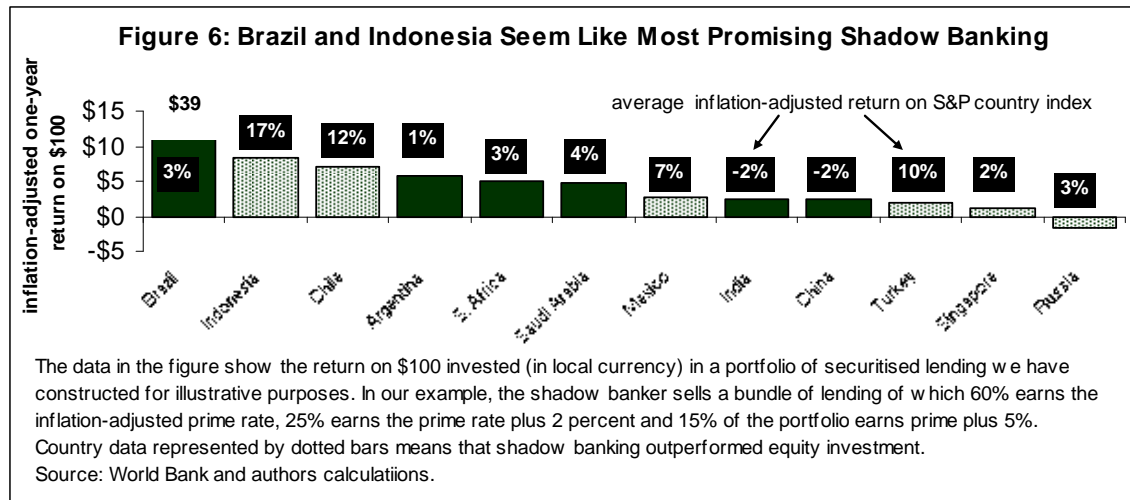
Shadow banking represents a large opportunity for financial institutions, private companies and even individuals. Recently, some policymakers have conceded shadow banking's benefits. The *Wall Street Journal* reported on the 16th of July 2013 that Italian Minister of Finance Fabrizio Saccomanni encouraged companies to engage in shadow banking. As a credit crunch has restricted commercial finance in Italy, shadow banking provides a useful way to provide finance to credit-starved productive enterprise. For over-heating economies like China, shadow banking will likely come under intense government scrutiny and eventually regulatory pressure. In a 4 July 2013 *Wall Street Journal* article, Mark Deweaver describes "Beijing's War on Shadow Banking." China's extreme credit expansion has triggered restrictive monetary policy and a policy of "financial repression" (as recent commentator and book author Joe Zhang has noted). However, for most shadow bankers (or wannabe shadow bankers), many of the Emerging Dozen will represent an important opportunity. Shadow banking can also provide profitable opportunities to companies not presently involved in shadow banking markets – such as those that provide the collateral for shadow banking markets.

Which markets will likely see the greatest expansion of shadow banking credit? Figure 5 – albeit somewhat confusingly – shows that Argentina and Mexico represent the two markets where shadow banking could greatly expand credit. In Argentina, for example, credit to the private sector represents less than 20% of GDP. Only about 30% of firms have access to lines of credit. Such little access to credit contrasts with South Africa’s 140% of the value of GDP in credit to the private sector. Countries like Brazil, India and Turkey have respectable 50% domestic private sector credit to GDP ratios. However, in comparison with the OECD average of 140%, these countries have a lot of room for credit growth. Shadow banking could provide a quick and easy way of “filling in” these markets.



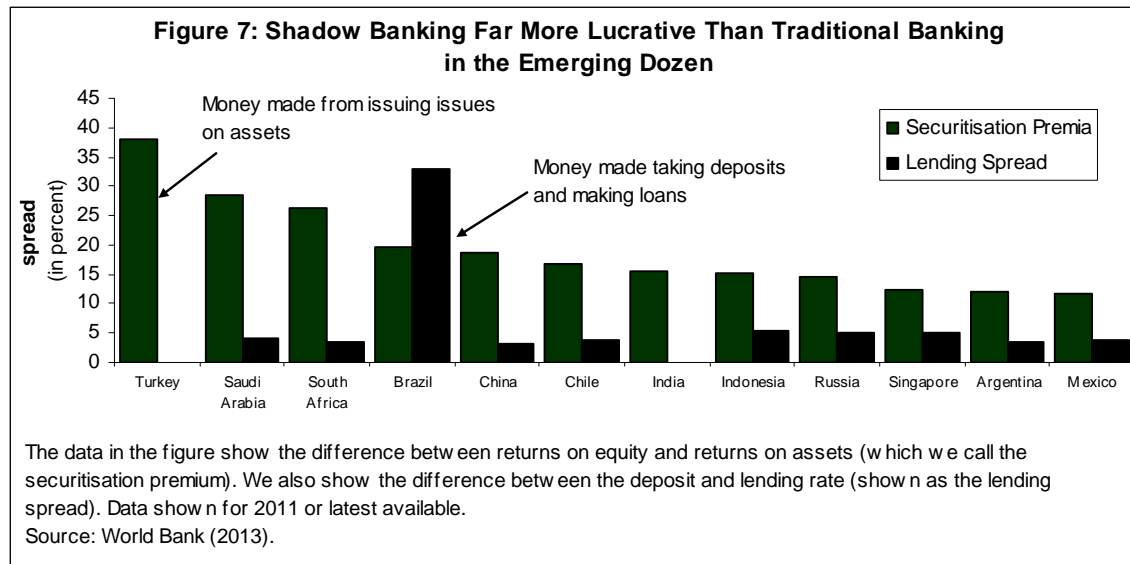
Profits come from saving borrowing costs and earning risk premia

Where do shadow banking’s profits come from? Such profits come from risk premia and cheaper capital (as shadow bankers can collect money from investors rather than depositors). Figure 6 shows the returns to investors who invest in an example portfolio of collateralised lending. In this example, investors who place the equivalent of \$100 in Brazilian *reals* in collateralised lending would have earned \$39 worth of *reales* in interest. In contrast, a similar investment would have earned only about 3% (or \$3 worth of return on an \$100 investment after taking inflation into account) if invested on the Brazilian stock market. In Brazil, Argentina, South Africa, Saudi Arabia, India, and China, investors who bought the collateralised lending we present as a simple example would have earned more (after adjusting for inflation) than investing on the domestic stock market. In Indonesia and Chile, investors would have earned relatively good returns (in excess of 5%) in shadow banking and “normal” equity investment.



Unlike in traditional lending, investors in shadow banking assets who buy collateralised loans can see their investment rise. The price of asset-based securities, collateralised debt obligations, packages of longer-term repurchase agreements and so forth – like all prices – depend on supply and demand. Shadow banking – despite the “banking” moniker – looks like, acts like and earns like equity far more than loans. Shadow banks do not publish information about the market prices of their securitised and packaged loans. However, to the extent that shadow banking assets behave like equities, the spreads on shadow bank lending often far exceed the profits from traditional banking.

The likely profitability of shadow banking varies by country. Figure 7 shows data which might proxy the potential returns to offering shares in a risky project rather than just lending money. In recent years, Turkish shadow bankers securitising projects would have earned a 43% rate of return on assets yielding only 5% (assuming they collateralised and sold loans on projects reflecting the broader equity market). In Saudi Arabia, South Africa, and Brazil, potential shadow bankers would also have earned more than 20% on their assets by selling stakes in them as if they were equity. Only in Brazil would regular bankers (those taking deposits and lending them out) have earned more than shadow bankers earning equity-equivalent rates. Brazil’s eye-popping spreads reflect strong measures to assuage inflation across the Federation. Naturally, shadow bank loans do not always replicate the returns available to equity. However, if these loans pay out what they earn (a concept economists know as the “marginal returns to capital”), the returns to shadow bank lending and equity shouldn’t be far from each other.

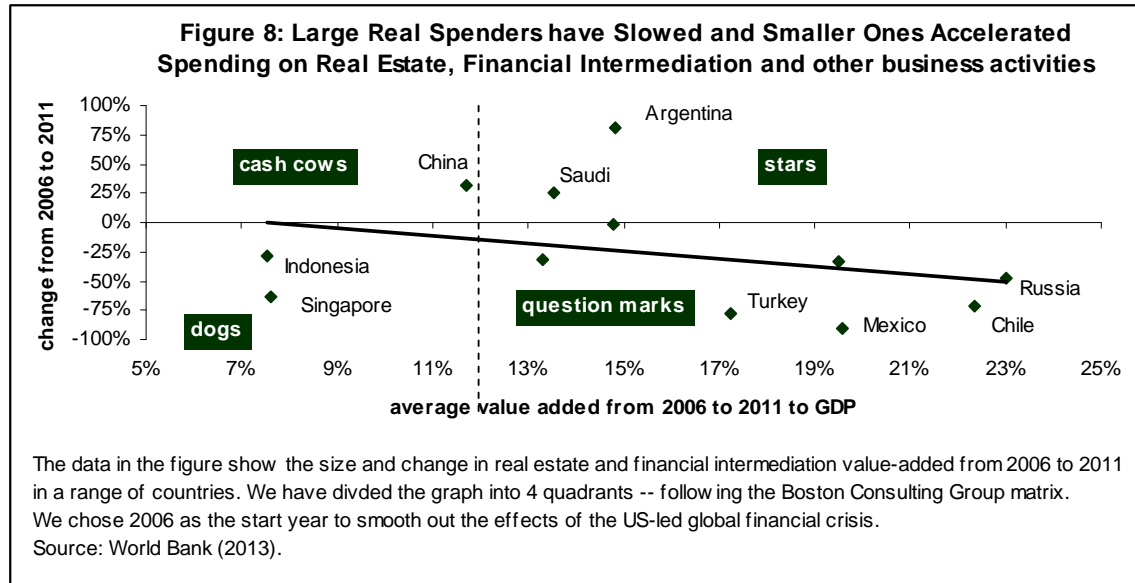


Shadow bankers save money and earn higher returns than traditional bankers in several ways. First, shadow bankers – in theory – do not need to borrow money to relend. They can simply pass on loans to investors in the loan derived-securities. Conversely, shadow bankers simply need to pass on the money collected from investors to “borrowers” – and take a commission. Second, shadow bankers can take these commissions without exposure to the risks underlying these loans. If borrowers do not repay these “off balance sheet” securities, the investors – and not the shadow banker – suffers. Third, and very importantly, **shadow bankers do not need to incur all the costs of complying with banking regulations.** These shadow bankers need to keep large amounts of money (known as reserve capital). They do not need to accurately assess the riskiness of the underlying loans (as the investor needs to worry about that). These shadow banks need not report information to their local regulators about the value of “lending” – as these transactions remain off their balance sheets.

Shadow banking can be underpinned by non-project lending

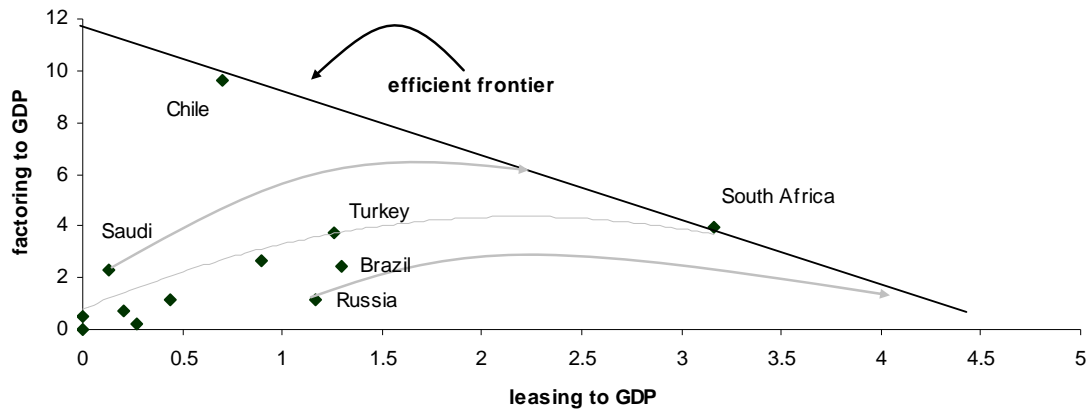
Shadow banks can do more than securitise packages of project-based lending and resell them as tranches of equity-like securities. Shadow banking can help to expand to funds available for residential and commercial mortgage-based lending. Such mortgage-backed investment led infamously to the US sub-prime mortgage crisis. However, not all loans – particularly in the Emerging Dozen – need to be securitized sub-prime mortgages. Growing real estate markets in many of the Emerging Dozen countries will generate more than enough demand for high-grade mortgage-backed securities. Figure 8 shows the size of real estate and financial intermediation services (as a percent of GDP) and the change in these sectors from 2006 to 2011. Some countries – like Russia and Chile – have high amounts spending on real estate and financial intermediation (over 20% of GDP). However, such spending has decreased since 2006 in these countries by over 50%. Given their size – but rapid decline in value – we label these countries as question marks as generators of real estate-based shadow bank lending. In countries like Argentina and Saudi Arabia, their large real estate and financial intermediation markets have grown rapidly. If past trends

point to future performance, these countries will provide important shadow banking opportunities. We show the other markets and provide labels from the Boston Consulting Group growth-share matrix to provide the reader a sense of the real estate-based shadow banking opportunities available in these markets.



Trade finance represents another area where shadow banking can make a significant impact on funding profitable commerce. Shadow banks can help extend money to companies needing loans while they wait for customers to pay their invoices (a process called factoring). Shadow banks can also help buy assets which companies or other parties lease. Shadow banks help to write, buy, and resell the loans that underpin these two important activities. Figure 9 shows that many Emerging Dozen engage in far less factoring (buying debts that traders are owed by customers) and leasing than their best-in-class (or at least largest-in-class) peers. In the figure, we show each country's latest factoring-to-GDP and leasing-to-GDP ratios. We also draw several "expansion paths" which show the way that these ratios could increase as each country's companies employ more trade credit and leasing. If past trends reflect future performance, shadow bankers in countries like Saudi Arabia will greatly expand finance for leasing. Interestingly, Emerging Dozen companies seem far less interested in factoring (selling their invoices this month for money will receive next month). Such trends – if they continue into the future – make the securitisation of invoice-collateralised loans – far less important.

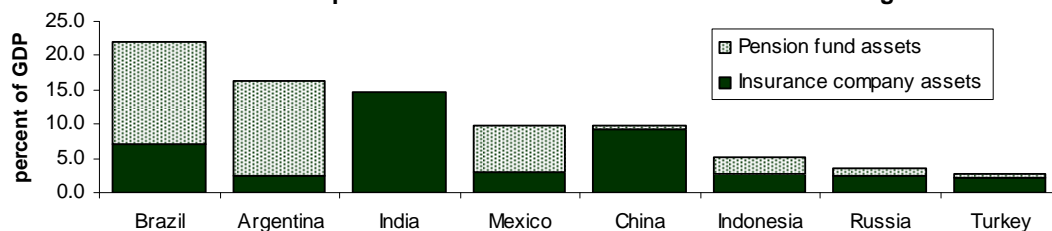
Figure 9: Most of Emerging Dozen Offer Too Little Leasing and Factoring Finance



The data in the figure show leasing to GDP ratios compared with factoring to GDP ratios. We show expansion paths based on the predicted non-linear relationship between leasing-to-GDP and factoring-to-GDP at various levels of each variable.
Source: World Bank (2013).

Insurers and pension companies amass large amounts of lendable funds – in the form of premiums paid for policies. For example, Ping An collected about \$33 million in premiums but only paid out \$20 million in claims in 2012. The company can invest the extra – or lend to policyholders and non-policyholders alike. Figure 10 shows the amount of pension and insurance assets in many of the Emerging Dozen countries (expressed as a percent of GDP for comparability). Insurers and pensions in countries like Brazil and Argentina represent large opportunities for shadow banking. Insurers can sell off the risks underpinned by these insurance policies (a process known as reinsurance) or lend out some of the extra money they do not need to keep to remain sufficiently capitalised and liquid. Countries like Turkey and Russia also represent an opportunity for shadow banking – albeit for a different reason. These countries have a large pension and insurance markets to develop. The sooner shadow banks start thinking about reselling these pension and insurance policies, the deeper they can make these markets.

Figure 10: Turkey and Russia Represent Great or Horrible Prospects for Insurance and Pension-Based Lending



The data in the figure show the value of assets in insurance companies and pension funds (expressed as a percent of GDP) for 2011 -- or the latest year available. Insurance and pension funds receive regular contributions which these companies might lend to individuals and companies.

Source: World Bank (2012).

What types of assets should shadow bankers invest in?

What types of shadow banking transactions likely generate profits for investors in shadow banking services? Generally, more complex methods of splitting risk and farming out debt payments result in higher returns. Figure 11 shows the returns to various types of shadow banking related financing – compiled from a range of sources. Because no benchmark rates exist for these types of finance, the rates of return shown can only approximate the returns to these kinds of funding. Yet, to the extent these returns reflect reality, the various types of collateralised lending actually out-perform short-term word-of-honour lending. At first glance, such data seem puzzling. Why would collateralised lending pay higher returns? Yet, the complex organisation of such lending draws these returns. Investors in asset-based securities gain advantages from lower regulatory costs, focus on targeted risks, and often tax advantages to boot.

Figure 11: “Synthetic” Lending Offers Far Higher Rates of Return than Plain Shadow Banking Instruments

| Instrument | US value | Return* | Description |
|---|----------|-------------|--|
| Repurchase agreements | \$2.8t | 5% | A financial or “normal” business wants to borrow money. The company “loans out” a high quality asset (like government bonds) and buys it back at the prevailing market rates (or better). |
| Money market mutual funds | \$2.6t | 2% | Investors can buy groups of debt issued by banks and companies. Such debt usually comes due quickly (less than 3 months). Interest rate will depend on borrower’s riskiness. Simple – and so not very lucrative. |
| Collateralised debt obligations | 1.8t | 5% | Most what we have talked in this brief. An intermediary buys up banks’ and companies’ debt and repackages such debt as new securities. Investors buy these securities (in tranches depending their riskiness). |
| Non-Agency Mortgage-based securities | 640b | 6% | Same as above – except the mortgages represent the underlying debt. Most readers will recognise these are culprits in the US “sub-prime” mortgage lending crisis. In theory, if the mortgages don’t rate as sub-prime, this represents a sustainable method of mortgage finance. |
| Asset-backed securities | 640b | 5.2% | A misnomer – these are loans on credit cards, student debt, car loans and so forth. These work the same way as the examples we gave previously. |
| Securities lending | 550b | 1.5% | The holder of stock or other securities lends out parts of their portfolio in exchange of a payment. Simple – and so not very lucrative. |
| Asset-based commercial paper | \$280b | 3% | A company issues short-term debt and promises to repay or lose some collateral (like a machine or land). Simple and so not very lucrative. |

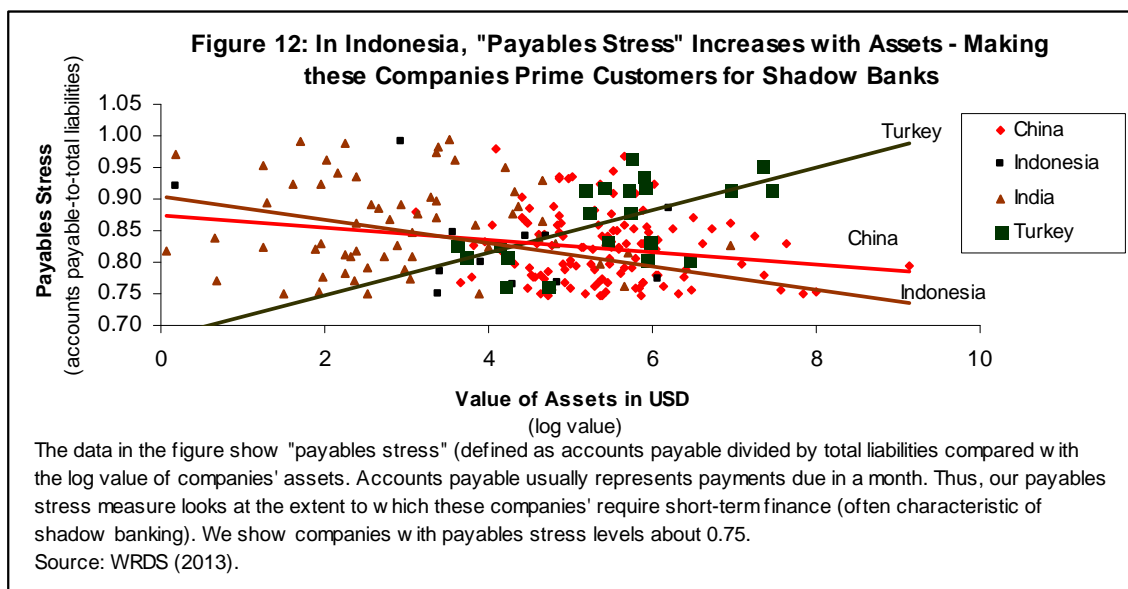
Amounts rounded to nearest significant digit.

Sources: Deloitte Shadow Banking Index for 2012). The asset returns we report reflect our best judgment reporting the historical returns of publicly-traded index and products.

* Returns taken from industry sources, and may

Some types of shadow banking assets clearly correspond differently to different types of clients’ needs. Figure 12 illustrates how different types of shadow banking products can

correspond to differing company needs. In the figure, we present a “payables stress” indicator. The indicator shows the proportion of total liabilities coming due usually within a month (and usually for operating expenses paid for on short-term credit). Three trends in the data point to differing needs (and thus differing ways of profiting from shadow banking aimed at these customers). First, Indonesian companies under high payables stress have more assets to secure these short-term debts than their Indian peers (graphically there are more black dots on the right side of the graph, whereas we see more brown triangles on the left side of the graph). Second, bigger companies (in asset terms) experience less payables stress in China and India. The downward sloping lines labelled China and India in the graph show such a negative relationship. In Indonesia, companies with more assets experienced more payables stress (at least in 2011). Indonesian companies thus represent a better market for shadow bankers. Demand for shadow banking services resulting from payables stress also corresponds with the assets available to collateralise shadow bank borrowing. Third, Indian companies – for the same asset holdings – have higher levels of payables stress than China or India. Such stresses imply demand for shadow banking in India like outstrips such demand in China or Indonesia (at least for payables finance).



Shadow bankers can use such payables stress data to identify likely future customers. Figure 13 shows the names of the companies represented in the previous figure with the highest levels of payables stress. If shadow bankers arranged lending to the 10 highest risk companies using each of the 7 indicators we use, they would (under our simplifying assumptions) earn **\$2.2billion in revenues**.

Figure 13: Using Company Data to Prospect for Shadow Banking Customers

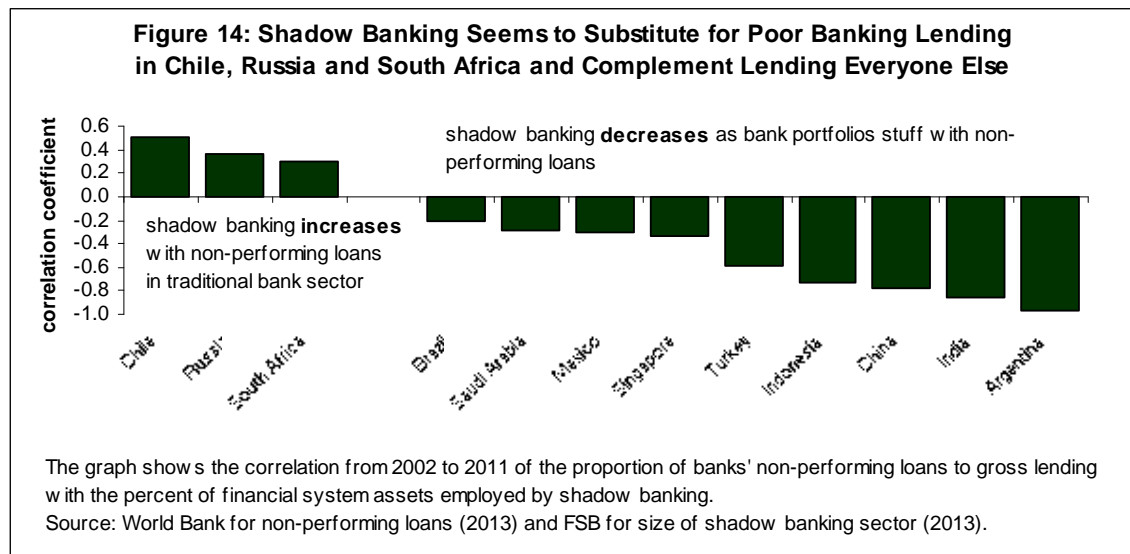
| Demand for Shadow Banking Indicator* | Top 10 Companies | Revenues** |
|--|---|-------------------|
| Payables stress (accounts payable-to-total liabilities) | Suning Commerce Group (CN) 9.3b, Reunert (ZA) \$6.1b, Blue Label Telecoms (ZA) 4.9b, Dongfeng Automobile (CN) \$3b, Wuhu Port Storage & Trans (CN) \$2.6b, Combined Motor (ZA) \$2.5b, Xiamen King Long Motor (CN) \$2.1b, BYD Electronic Intl (CN) \$1.9b, Protek (RU) \$1.8b, M Video (RU) \$1.8b. | \$108m |
| Collection stress Receivables-to-revenue | BTG Pactual Group (BR) \$67.4b, Quinenco (CL) \$50.1, Saudi Kayan Petrochemical (SA), \$12.5b, United Aircraft (RU), \$8.2, Gafisa SA (BR) \$5.7b, Yazicilar Holding (TR) \$5.5b, Mendes Jr. Construction (BR) \$5.5b, China First Heavy Industry (CN) \$5.3b, Sinovel Wind Group (CN) \$5.4b, Energy Transmission Alliance (BR) \$3.9b. | \$510m |
| Quick interest stress Interest payments to current liabilities | Cemex (MX) \$44b, National Steelmaking Company(BR) \$28.1, Fibria Celulose (BR), \$16.7b, Cosan (BR), \$13.3, OGX Petroleum (BR) \$85.9b, All-America Latino Logistics (BR) \$8.5b, Videocon Industries (ID) \$8.4, United Aircraft (RU) \$8.2b, Hyperbrands (BR) \$8.0b. | \$471m |
| Debt load Debt-to-total liabilities | China National Building Materials (CN) \$24.5, CIA Mining Energy (BR) \$22.4, Mobile Telecommunication Company (SA) \$7.1, UOL Group (SG) \$6.8, GAFISA (BR) \$5.7, COSCO (SG) \$5.6, Xinren Aluminium (SG) \$4.3b, Chelyabinsk Pipe Rolling (RU) \$4.2b, Sunvic Chemical (SG) \$4.1 | \$265m |
| Cash-out-risk Cash-to-current liabilities | Consciencefood (SG), \$48b, OGX Petroleum (BR) \$8.6, NMDC (ID) \$5.7, National Petrochemical (SA) \$5.3b, Southwest Securities (CN) \$2.8b, Saudi Arabian Fertilizers (SA) \$2.5, Jinduicheng Molybdenum (CN) \$2.3, Aneka Tamang (ID) \$1.7, Changtian Plastic & Chemical (SG) \$900m, Shenzhen Yantian Port (CN) \$838m. | \$153m |
| Short interest stress Interest to accounts payable | Quinenco (CL) \$50.1, Companhia Siderurgica Nacion (Br) \$28.1, China Yangtze Power (CN) \$24.5, Powergrid (In) \$20.2, China Longyuan Power Group (CN) \$14b, Nhpc (In) \$12.9b, Telekomunikasi Indonesia (ID) \$11.8b, Cesp-Cia Energetica Sao Paul (Br) \$10.9b. All America Latina Logistica (BR) \$8.5b, Reliance Power (IN) \$8.4b, United Aircraft Corp Jsc (RU) \$8.2b. | \$568m |
| Receivables stress Accounts receivable to accounts payable | Indofood Agri Resources (SG) \$26b, Bumitama Agri (SG) \$5.2, Samko Timber (SG) \$1b, Global Palm Resources (SG) \$970m, Consciencefood (SG) \$480m, Gazprom (RU) \$370m, Petrobras-Petroleum (BR) \$360m, Petrochina (CN) \$300m, China Petroleum and Chemical (CN) \$180m, Vale (BR) \$140m. | \$106m |

* Ranges for the following indicators: payable stress (1 to 0.75), collection stress (1 to 100), quick interest stress (0.25 to 2), debt load (1 to 0.33), cash-out risk (0.05 to 1.0), short-interest stress (100 to 2),

** Revenues assume that these stressed companies borrow 30% of the value of their assets and the shadow bank “underwriter” earns a 1% commission on such borrowing (irregardless of whether the company pays 2% or 12% in interest payments) and receivables stress between 10-100.

What causes the growth of shadow banking in the Emerging Dozen?

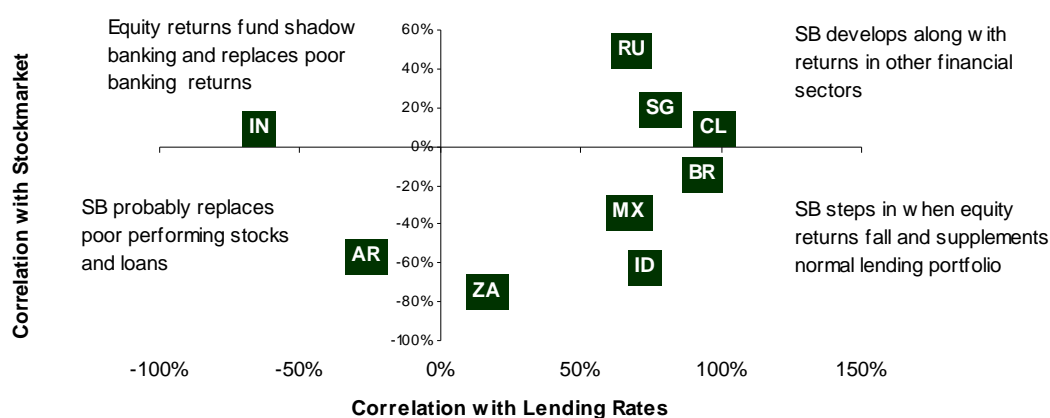
Does shadow banking increase as the quality of traditional bank lending worsens? As shown in Figure 14, in some countries (like Chile, Russia and Saudi Arabia) shadow banking grows as the percent of non-performing loans on traditional banks' balance sheets increases. In the other Emerging Dozen countries, shadow banking activity (as a percent of financial sector activity) decreases as more non-performing loans appear on banks' books. In Argentina, India and China, increases in non-performing loans have very strongly correlated with decreases in shadow banking. Shadow banking thus serves as a complement to traditional banking in some countries and as a substitute in others. From 2002 to 2011, a 1% decrease in the proportion of non-performing loans on Argentine banks' balance sheets corresponded with a 0.4% increase in the proportion of shadow banking assets (relative to total). The 8% decrease in the proportion of non-performing loans on Indian balance sheets corresponded almost perfectly with the 8% increase in the proportion of shadow banking assets (relative to total). Yet, in Russia, shadow banking peaked around the middle of the decade while the proportion of non-performing bank loans bottomed out. By the end of the decade, the trend reversed. **Such data suggest that shadow banking serves as a complement to traditional banking in some countries (like South Africa) and as a substitute in others (like the rest of the Emerging Dozen).**



Other data supports the hypothesis that shadow banking tends to complement traditional banking activity in some countries – and substitute for such activity in other countries. Figure 15 shows the relationship between the growth of shadow banking, changes in equity prices and changes in lending rates among the Emerging Dozen economies. In India, rising equity returns have correlated with increased amounts of shadow banking assets. Higher lending rates though have correlated with less shadow banking activity on the sub-continent. In Mexico, shadow banking asset volumes seem to follow the opposite pattern. Higher proportions of shadow banking have corresponded with falling equity

prices and rising lending rates. One possible interpretation of these trends (among many) might argue that investors who lose money on *La Bolsa* seek to make up for lost returns through shadow banking and to supplement a generally growing lending portfolio (or industry).

Figure 15: Some Shadow Banking Sectors Seem to Complement Rising Stock Markets and Bank Margins, Others Substitute for Them



The data in the graph show the bivariate correlation (correlation between two variables) between the proportion of “other non-bank financial institution” assets relative to total financial sector assets two variables. On the y-axis we show correlations with the S&P equity market index rates of return for each market. On the x-axis, we show the correlation with average annual lending rates in each market from 2002 to 2011.

What have we learned about the profit opportunities in each market for current and aspiring shadow bankers? Figure 16 ranks the attractiveness of various Emerging Dozen countries – based on the shadow banker’s particular objective. For example, individuals and companies looking to offer trade credit-based finance may find Argentina and China the best candidates for prospecting for clients. On the other hand, they may find only niche markets or more-expensive-to-service markets in South Africa and Chile.

Figure 16: The Scorecard – Deepening Shadow Banking Activity Depends on Objective in Each Market

| Indicator | Top 2 best markets | Bottom 2 markets |
|--|-------------------------|----------------------|
| Market size | Mexico, Argentina | South Africa, China |
| Real estate based lending | Argentina, Saudi Arabia | Indonesia, Singapore |
| Trade credit and leasing | Argentina, China | South Africa, Chile |
| Insurance and pensions | Russia, Turkey | Argentina, Brazil |
| Take advantage of traditional banking non-performing loans | Chile and Russia | Argentina, India |
| Shelter against falling equity prices | South Africa, Indonesia | Russia, Chile |
| Shelter against falling bank margins | India, Argentina | Chile, Brazil |
| Protection against payables stress* | China, Turkey | Brazil, Chile |

Source: authors (each ranking based on data presented in the various figures in this brief).

* Other country rankings based on stress provided in Appendix I.

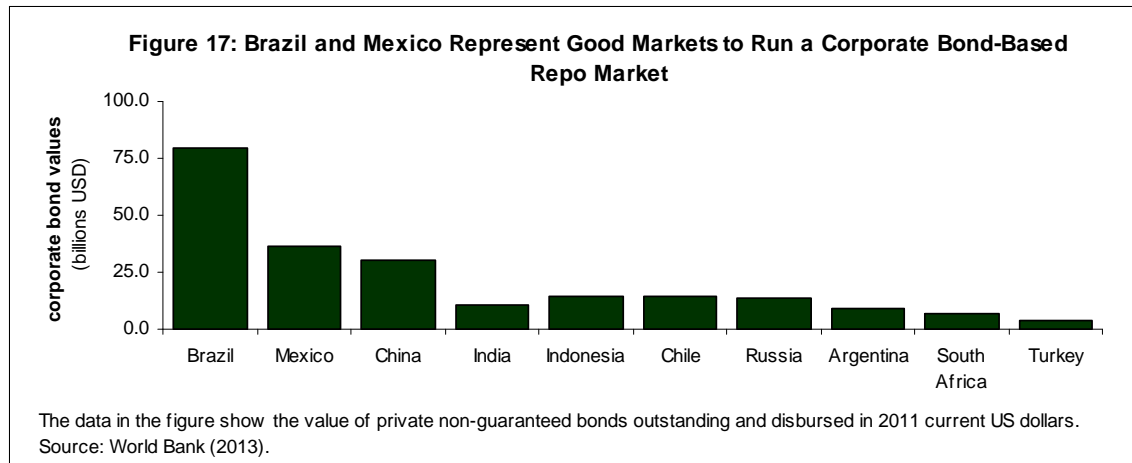
Buffing Up a Shadow Banking Shop

What can the “non-bank, other, financial institutions” in the Emerging Dozen (which we have been calling shadow banks) do to bolster the size of their securities sales? These firms will want to increase the amount of loans written and consolidated as well as increase the interest rates paid on those loans, increase the volume of securities derived from those loans (that’s why they are called derivatives). They will also want to increase demand for those “derived” securities – thus increasing their price and yield. Shadow banks can work with a number of partners and potential clients in order to expand the market for shadow banking.

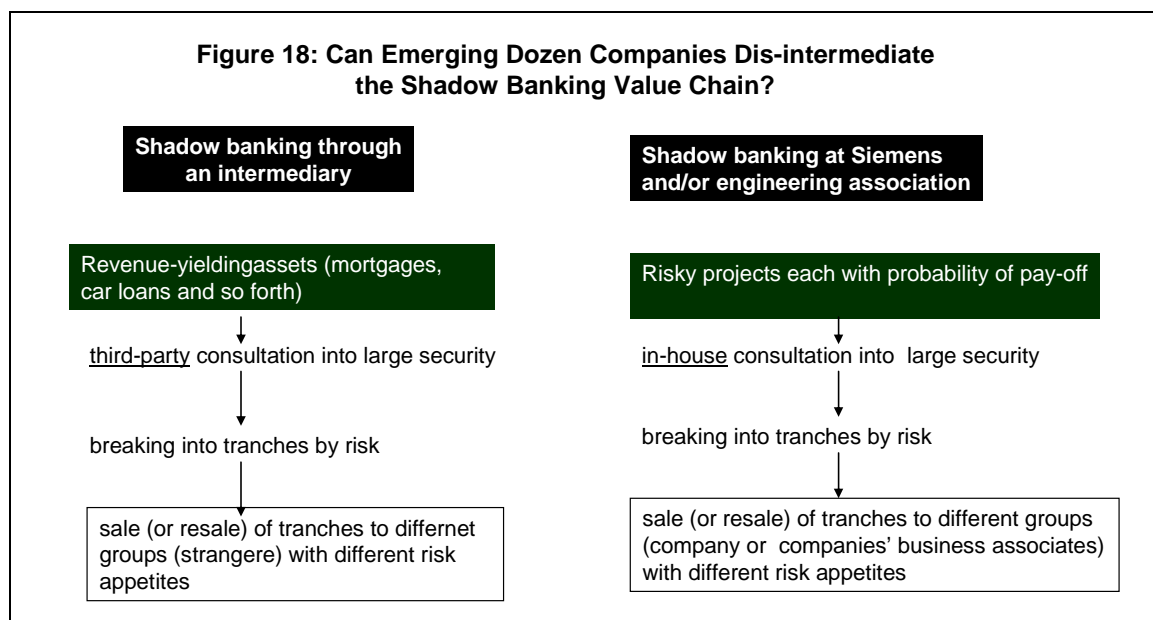
Work with Large Credit Worthy Companies to Issue Bonds

Most of the shadow banking sector – particularly in emerging markets – thrives using high-grade bonds as collateral. In repurchase agreements (or repos), borrowers “sell” high-grade bonds for a couple of days to lenders and buy them back a higher price which reflects prevailing interest rates. In Russia, 26% of all repurchase agreements use bonds as collateral. In other countries, the proportion varies. Typically in OECD countries, companies use government bonds because of their safety. The extensive use of government debt in shadow bank transactions has encouraged analysts like US Treasury Department expert Zoltan Pozsar to encourage the US government to create more Treasury bills as a way to expand the base for shadow banking. However, in many Emerging Dozen countries, companies may trust other large companies far more for repayment than the government. Companies – rather than governments – in the Emerging Dozen should issue more short-term promissory loans.

Shadow banks can encourage larger, credit-worthy, and reliable companies to issue more short-term loans. Such loans – known as commercial paper and short-term notes – can serve as the base of a growing (yet stable) shadow banking sector. Figure 17 shows the size of such lending markets in many of the Emerging Dozen. Brazil and Mexico has – in absolute terms – the largest markets for such lending. Turkey, South Africa and Argentina have the smallest markets. On the one hand, shadow bankers looking to capitalise on relatively deep markets in corporate debt to securitise short-term lending should focus on Brazil and Mexico. On the other hand, shadow bankers looking to develop corporate debt markets should concentrate on Turkey and South Africa.

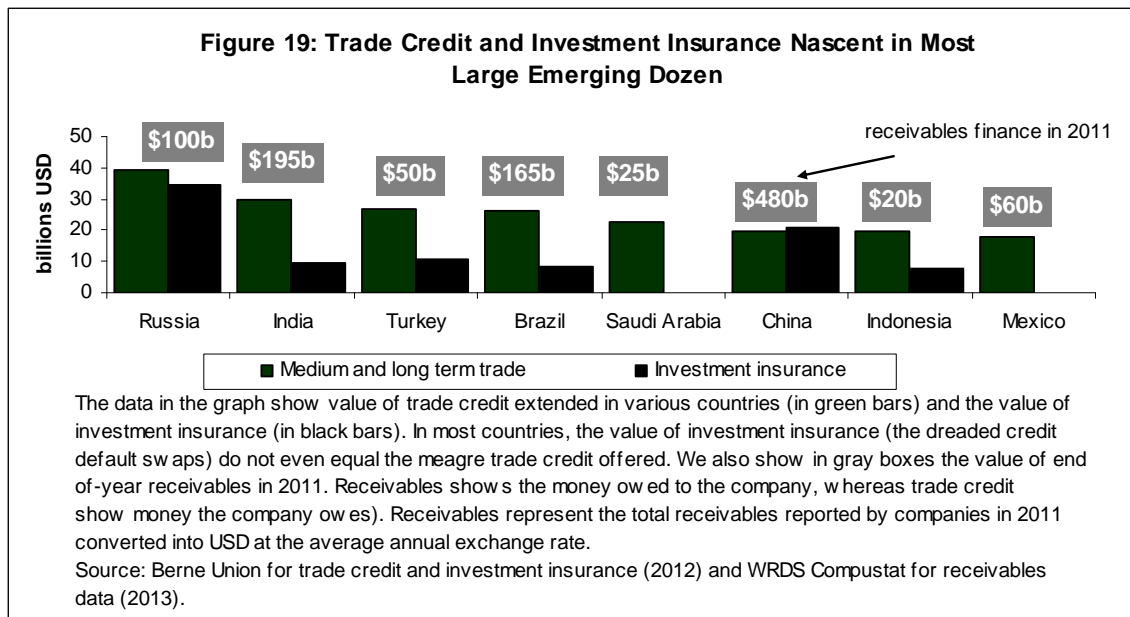


Companies can engage in the same kind of securitisation that shadow banks do. Figure 18 compares the traditional shadow banking value chain with a similar value chain potentially constructed by large Emerging Dozen conglomerates. In the traditional shadow banking process, shadow bankers collect risky loans (or any revenue-generating asset) into bundles. They then split these bundles into tranches (divided by the risks of the assets in each tranche) and sell off these tranches to investors which want them. Why can't companies do this directly? A large conglomerate can borrow money to fund the range of literally hundreds of its projects through shadow banking. The company's finance department can set up a corporation and transfer the loans onto the balance sheet of the newly created corporation (sometimes called a special purpose vehicle). The special purpose company can issue shares and use the proceeds to pay back the bank loans. From then on, the company's shadow banked company can issue dividends using the money by the loans.



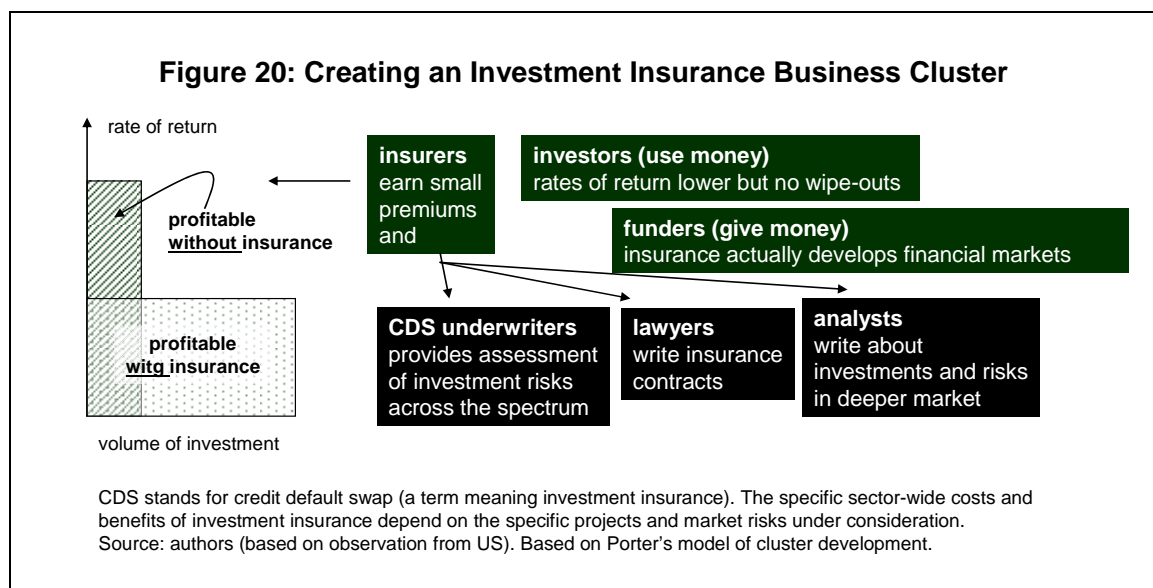
Extend more credit for trade

Shadow banks looking to increase their volumes of lending should consider expanding into trade credit. Trade credit consists of money producers, sellers and shippers need to deliver goods before they receive payments from their customers. Yet, in many Emerging Dozen countries, traders sorely lack such funding. Figure 19 shows the value of medium and long-term trade finance reported by the Berne Union (a collection of finance and insurance companies). In the Emerging Dozen countries where we could obtain data, the volume of such trade credit appears microscopic relative to the value of trade these countries do. In Russia, for example, medium and long-term trade finance of \$40 billion in 2011 – or roughly 8% of Russia’s trade with the EU alone. Other large economies like India, Brazil, and even China have extremely small volumes of such medium and long-term trade finance (we could not obtain data for short term finance).



Two other trends in the trade finance data point to opportunities for shadow bankers. First, receivables finance exceeds trade-related payables finance. In other words, Indian companies (and the other countries, to the extent these data are comparable) give far more trade credit to their partners than they receive from their banks. In the figure, Indian companies in 2011 gave \$195 billion compared with the \$30 billion they received in medium and long-term trade credit. These companies can easily securitise these pools of receivables in the same way we described above. Second, aspiring shadow bankers can write insurance on investment losses coming from their shadow banking practices – or other people’s investment activity. The figure shows that less than \$10 billion in investment insurance (whereby banks collect insurance premiums and make payments in case investments lose money).

The investment insurance – which helps to reduce the risk of extending trade credit -- can help increase shadow banks' profits, stabilise these countries' notoriously chaotic investment environment and deepen credit markets. Figure 20 shows the way that deeper insurance investment activities can develop a range of banking-related activities. Investment insurance reduces returns – as investors must pay insurance premiums. However, such insurance makes a wide-range of very risky investments potentially profitable. The data seem to support the view that deeper markets for investment insurance (at least for insurance related to sovereign bond default) correlates with deeper markets for corporate counsel, analysts, and different types of investments. According to IMF data, by end 2012, credit default swaps on Brazilian sovereign debt equalled \$156 billion. These amounts compare with \$109 billion for Russia. Most of this insurance is written (underwritten) outside of these countries. The demand for credit default swaps (sovereign debt investment insurance) relates in large part to the actual riskiness of the underlying bonds as much the funds available to hedge risks related to these bonds. However, the business-cluster view of investment insurance which we argue in this brief seems to hold. **Countries which develop deeper and more liquid markets in investment insurance tend to have a broad range of services which support all kinds of banking (including shadow banking).**



Expand (but don't over-extend) real estate lending

America's sub-prime mortgage crisis has resulted in a strong dislike for mortgage-backed assets world-wide. Such views are unfortunate. Securitisation of real estate helps spread risks and increase funds available to families and investors who can best use such real estate. Figure 21 shows that the Emerging Dozen relies extremely little on credit finance for real-estate purchases. On a share of GDP basis, South Africa leads the list – with 33% of GDP in residential lending. In Argentina, less than 1% of the value of GDP goes out in the form of residential lending. If residential lending reflects commercial lending, the lack of lending reflects an opportunity for lenders who can find new ways to get money to markets.

Figure 21: Real Estate Lending Desultory in Most of the Emerging Dozen

| | residential lending to GDP | Loan-to-Income | Percent loans secucuritised | Insurance widely used |
|--------------|-------------------------------|----------------|--------------------------------|--------------------------|
| South Africa | 33% | 27% | limited | No |
| Mexico | 10% | 28% | 10% | about 12% |
| India | 7% | - | small | No |
| Turkey | 5% | 30% | - | - |
| Brazil | 3% | 33% | incipient | No |
| Indonesia | 3% | 33% | less than 1% | - |
| Russia | 2% | 30% | some (large banks) | Yes |
| Saudi Arabia | 2% | 27% | Some | Yes |
| Argentina | 1% | - | very few | No |
| China | - | - | large | No |
| Singapore | - | - | 0% | No |

- means we could not obtain these data.

In some cases, we have summarised ranges provided in the original by mid-point of the ranges. For example, we summarise the range of 20%-40% for Turkey's loan-to-income ratios as 30%.

Source: Financial Stability Board (2011).

The data show that real-estate backed shadow banking may very much represent an opportunity in the making. First, except in South Africa and Mexico, residential lending in most of the Emerging Dozen remains at less than 10% of GDP. These ratios represent a far cry from the US's 85% of GDP. With average loan-to-income ratios ranging at 30% across the Emerging Dozen, extensive sub-prime loan underwriting appears unlikely. While the US probably went to one extreme in terms of securitising, insuring and scaling up mortgage lending, most of the Emerging Dozen appears at the other extreme. In Saudi Arabia and Argentina, lending remains desultory. **The extremely marginal amounts of securitised loans in these countries mean both less saving as well as investment opportunities in mortgage-related banking.**

Getting Ready for Post-Crisis Lawmaking

The US (and to a lesser extent, the EU's) experience has encouraged Emerging Dozen countries to copy their legislative restrictions on shadow banking. In some cases, like China in 2013, increased legislation containing the growth of China's shadow banking markets may make her markets more stable. Yet, Brazilian, Indian, Turkish and Indonesian regulators do their credit markets a disservice when they copy supposed shadow-banking related legislative "best practice" from the US and EU. CEOs in the Emerging Dozen's finance corporations, trade associations, wealth management firms, and (for lack of a better term) bucket shops will need to grab existing shadow banking opportunities before they disappear.

Use jurisdictions friendly to derivative-based finance

Regulators in many of the Emerging Dozen countries seek to clamp down on the trade in derivatives which form the heart of a shadow banking transaction. Collateralised debt obligations represent derivatives of the loans that underlie much of shadow banking. Figure 22 provides numerical ratings for each jurisdiction's progress in implementing Financial Stability Board proposed reforms of their over-the-counter derivatives markets.

Mexico and China have evaded much the international trend toward requiring public disclose and trading of derivative contracts. Brazil, Indonesia, and Saudi Arabia do not even report on the extent to which they have progressed on adopting such rules. Such data clearly points to an ambivalent view of regulatory reform aimed at the over-the-counter derivatives trade in these countries. At first glance, then, these countries seem like potentially friendly jurisdictions for writing, selling and reselling much international shadow banking activity. **Clearly, countries that resist implement FSB recommendations will be able to attract shadow banking activities from abroad – enriching their financial institutions who earn trade in shadow banking assets.**

Figure 22: Progress toward Over-the-Counter Derivative Market Reform
(as of April 2013)

| | Central clearing | Exchange/ platform trading | Reporting to TR | Capital | Margin |
|--------------|------------------|-------------------------------|-----------------|---------|--------|
| Argentina | 4 | 4 | | 6 | |
| Brazil | | | 5 | 4 | |
| China | 2 | 4 | 4 | | |
| India | 4 | 3 | 5 | 4 | 3 |
| Indonesia | | 5 | 5 | | |
| Mexico | 1 | 1 | 1 | 5 | |
| Russia | 4 | 4 | 4 | 4 | |
| Saudi Arabia | - | - | 4 | 4 | |
| Singapore | 4 | 1 | 4 | 6 | |
| South Africa | 4 | 4 | 4 | 6 | |
| Turkey | 4 | | 4 | | |

Source: Financial Stability Board (2012).

Yet, regulators are probably a long way away from imposing tight restrictions on shadow banking in even seemingly co-operative Emerging Dozen countries. Figure 23 provides a flavour of language used by the Financial Stability Board's recommendations for reforming shadow banking across the G-20. All the recommendations – without exception – use language too vague to adopt. Recommendations aimed at “reviews” and “assessments” propose no change to the status quo. Recommendations to “assess” regulations about shadow banks' liquidity and capital requirements provide no guidance whatsoever. On the one hand, current and potential shadow bankers should worry about such vagueness (or less charitably vacuousness). Financial regulators in the Emerging Dozen have a history of erring on the side of over-regulation. The FSB's recommendations provide a regulatory impetus – without guidance -- to national regulators like the China Banking Regulatory Commission, the Reserve Bank of India and the Russian Federal Financial Markets Service. On the other hand, such vagueness probably means that regulators will need decades before arriving at suitably concrete regulations which implement these abstract principles.

Figure 23: Regulators Could Destroy Incipient Shadow Banking Sectors in the Emerging Dozen if Over-Zealously Interpreting Vaguely-Worded FSB Recommendations

| Provision from FSB Recommendations | Impact | Likely Impact |
|--|--------|--|
| 1. “Include” shadow banking activities on banks’ balance sheets | Low | Transparency usually helps markets – even if harms individual participants. |
| 2. “Enhance” banks’ limits on exposures to shadow banks | Medium | Such limits could restrict access to capital and/or clients for SB services. |
| 3. “Review” shadow banks capital-adequacy requirements | High | Requiring these “conduits” to hold large amounts of capital would be disastrous. |
| 4. “Restrict” banks’ ability to bailout shadow banking operations | High | Great provision – as less risky operations should not subsidize more risky ones |
| 5. “Enhance” reform of money market mutual funds | Low | Tough to know what exactly the FSB has in mind. |
| 6. “Assess” regulations about shadow banks’ liquidity and capital requirements | High | Shadow banks have personal as well as systemic interest in preventing capital-run outs and reusing collateral. |
| 7. “Address” securitisation-related incentives like keeping part of risk and increasing transparency | High | This could spell disaster – as the shadow bank model revolves on the transfer of risks and preventing rivals from seeing how operation works. |
| 8. “Assess carefully” repos and securities lending regulations | High | These form the backbone of shadow banking. Extra rulemaking would reduce liquidity in the current system (at least in the OECD part of the G20). |
| 9. “Continue to improve” transparency and reporting of information. | High | Lack of reporting aimed at keeping rivalry away rather than regulators. Goal will be to inform, without destroying markets. |
| 10 “Be rigorous” with underwriting standards | High | The days of passing sub-prime assets onto unsuspecting institutional investors are (or should be) over. |
| 11. “Reduce” role of credit rating agencies | Medium | An excellent move from perspective of shadow bankers as well as regulators. |

Source: Financial Stability Board (with scores by authors).

Terms in quotes from original text to illustrate the interpretation difficulties inherent in the FSB Guidelines.

The Emerging Dozen’s non-bank financial institutions (shadow banks) should obtain as many profits as possible before the window closes on shadow banking opportunities. **We see a 3-4 years window of opportunity for shadow bankers exclusively operating in the Emerging Dozen.** First, EU-based and US-based financial institutions (particularly their non-bank kin) will need to comply with enhanced surveillance, capitalisation and liquidity requirements – even though they operate in a foreign jurisdiction. Lax regulatory standards in Emerging Dozen countries will not necessarily help them. Thus, they will have incentives to level the playing field – by removing any competitive advantages Emerging Dozen companies have from such lax regulation. Second, EU and US regulators have only recently introduced the specific provisions which implement the broad legislation passed by their legislatures (like Dodd-Frank). As these regulations become better known by both bankers and regulators, pressures to copy them in the Emerging Dozen will build up.

Expand Shadow Banking Activities Before New Regulations Emerge

Rapid changes to the legislation governing shadow banking make competing in this market increasingly difficult. The FSB recommendations look relatively anodyne. However, new legislating in the EU and US pose two problems for shadow bankers (and their would-be peers). First, many shadow banking relationships “touch” the US or EU in some way. A US or EU bank or national may sell loans packaged in Russia or Indonesia. An American or European institutional investor may purchase the securities collateralised with these Russian or Indonesian loans. Such “touches” expose these traditions to US and EU law. Second, regulators in the Emerging Dozen will eventually copy legislation in the EU and/or EU.

A simple example shows why regulators in Mexico and/or China might copy such regulation. Imagine hypothetically that a shadow banking group in the Turkish *Finansbank* wants package loans from Bulgaria and these sell securities to large American institutional investors operating in the Balkans. The US Dodd-Frank Act and the European Market Infrastructure Regulation require increased reporting about such transactions. Does *Finansbank* need to report to the Bulgarian authorities? Do they need to clear these transactions at a Turkish clearing house? Or a US one? If regulators just copy, these can reduce such problems – and drive down compliance costs for financial institutions operating across borders.

Which laws will most likely affect shadow banking in the Emerging Dozen in the upcoming years? Figure 24 shows the major shadow banking-related lawmaking (at both the legislative and regulatory levels) in the EU. The US has similar laws. These nine laws have already started to put the FSB’s recommendations into practice – at least in the EU. Taken together, these laws will have three impacts on shadow banking. First, shadow banking will operate far more like traditional banking. Shadow bankers will need to hold far more capital and participate in some of the underlying risk. Second, these laws remove much of the “shadow” in shadow banking. Increased reporting and the use of centralised clearing means that shadow bankers can no longer transact business secretly. Third, increased compliance costs will decrease shadow banking profitability. Shadow banking has grown to 100% of global GDP because market actors have had a strong profit motive to use shadow bank transactions. **Increased compliance costs will raise the cost of borrowing, lower shadow bank profit markets and thus decrease the amount of credit available.**

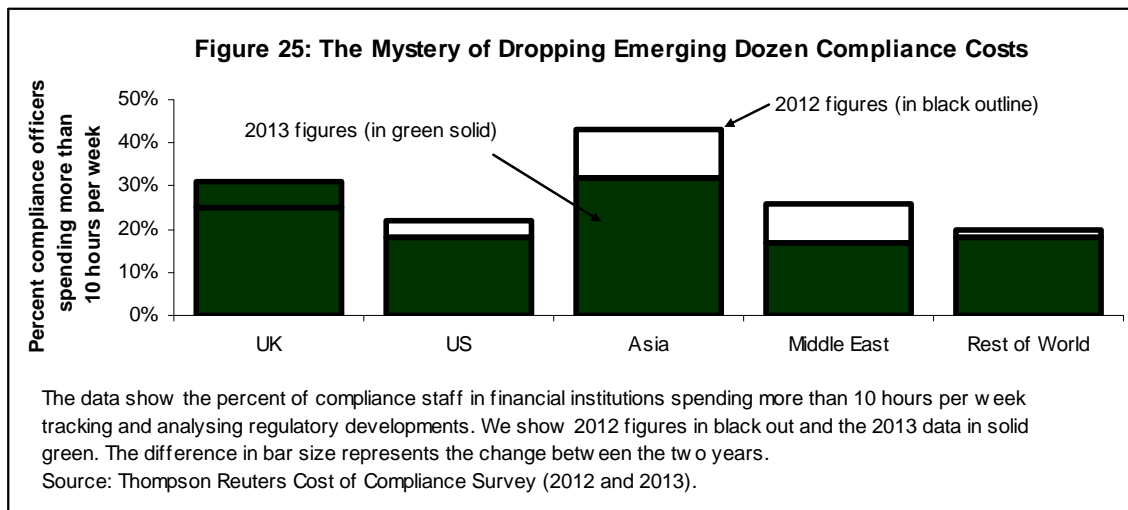
Figure 24: Examples of Laws from EU Which Will Come to Your Market

| Acronym | Legislation and Description | Effect on Shadow Banking |
|---------------|---|--|
| AIFMD | Alternative Investment Fund Managers' Directive Brings hedge fund managers and private equity managers stricter set of rules. | Do-it-yourself securitizers will have far more over-sight, but still less than "respectable" mutual fund and pension fund managers. |
| CRR | Capital Requirements Regulation Imposes minimum levels of capital for banks and non-banks. Levels determined by risks taken. | Shadow banks will likely fall under these capital requirements at some point. |
| CVA | Contingent Valuation Adjustment An adjustment to capital based on risks. Financial institutions must account for possible counterparty default. | Shadow banks likely to need to consider the effect of counterparty default when borrowing and lending. |
| DVA | Debt Valuation Adjustment If we understood this correctly, if a financial institution loses money on its derivative trades, it should reflect those losses so its trading partners can react to extra risk posed by those losing investments. | Making counterparties value each other would reduce shadow banking activity – as much of this lending reflects risks normal banks won't take. |
| EMIR | European Market Infrastructure Regulation Requires reporting of all bespoke derivatives and requires some to be cleared by central clearing house. | Would-be shadow bankers like Joe Zhang will need to report selling shares of a small rice farm – and maybe even clear these shares in a clearing house instead of offering to investors who want these shares. |
| MiFID2 | Markets in Financial Instruments Directive Organised in 5 pillars – greater reporting of bespoke (called over-the-counter) derivatives, investor protector, transparency, governance, and operations in third-countries. | Many of these provisions will seep into emerging market regulations in the upcoming years. While regulations still remain lax in many emerging markets, opportunities for "regulatory arbitrage." |
| PD2 | Prospectus Directive Requires certain types of potential investors to receive a prospectus. | The days of arranging a shadow banking placement on a talk and a hand-shake will end across the world. |
| SEFs | Swap Execution Facility Swaps (exchanging different kinds of loans or getting insurance on some assets) must go through a clearing house. | Private insurance contracts (the infamous credit default swaps) harder to organise. Another area for regulatory arbitrage. |

Source: Banker (2013) and Thompson Reuters Compliance Complete Database (2013).

Enhanced US and EU policymaking represents a temporary opportunity for Emerging Dozen companies and banks. The costs of shadow banking will rise, margins will fall and credit will contract in the US and EU. The sellers of money will look for jurisdictions where they can still agglomerate loans, package them and sell them cheaply and abundantly. **Politicians in Emerging Dozen countries should be ready to stall in implementing FSB reforms. Such stalling tactics – if combined with shadow bank-friendly policies – could attract large amounts of capital to these countries' banks and non-banks.**

So far, emerging market politicians seem extremely unable – or unwilling – loosen compliance burdens governing shadow banking and other financial services. Figure 25 shows the percent of compliance staff in the large financial institutions who spend 10 or more hours monitoring changes in the regulations affecting their companies' business. These compliance staff represents the lawyers, internal auditors, risk officers, and other staff who advise on the ways new laws affect their employers' banks, insurance companies, investment houses and similar enterprises. More compliance officials in Asia work more than 10 hours than those in other jurisdictions. The Middle East and the Rest of the World (the non-Anglo Saxon world) has compliance “intensities” at about the same level as jurisdictions where swathes of new financial regulations have come into force. Why do these supposedly less regulated jurisdictions' compliance staff work just as hard as places where Dodd-Frank and the European Market Infrastructure Regulation have come into force? **Such data suggest that policymakers in the Emerging Dozen's geographical areas are failing to take advantage of the opportunities tightening regulations in the OECD provides. Emerging Dozen countries seem to engage in too much – rather than too little – compliance.**



And what about the risks of shadow banking? We would argue that businessmen need not worry about the systemic risk their business poses to the economy. Regulators will clamp down on shadow banking – in your country and internationally. Yet, credit remains a scarce commodity – in part thanks exactly to the shadow banking practices of the mid-2000s. Current and potential shadow bankers in the Emerging Dozen should worry about their own bottom lines. Let professional regulators – who's job consists of worrying about the big picture – worry about that big picture. The window of opportunity which might allow Emerging Dozen shadow banks to profit from rising regulation in the US and EU will close soon enough.

Conclusion

Shadow banking represents an opportunity too good to last. Current legislative changes in many jurisdictions mean the shadow banking opportunity won't last. How can current and wanna-be shadow bankers expand their lending in Emerging Dozen countries? In this brief, we show that at least \$1 trillion in untapped opportunities remain. We also identify the markets in which shadow bankers can maximise their profits. The best markets depend on the type of shadow banking the reader wishes to engage in. Those interested in focusing on the largest potential market size for all types of shadow banking may wish to focus on Mexico and Argentina. Those interested in targeting markets lending in markets where borrowers often do not repay their traditional bank loans should focus on Chile and Russia. We provide 14 other criteria that shadow bankers may use in deciding which market is best for them.

Shadow bankers can do a number of things in order to build the portfolios. First, they can work with large credit worthy companies to issue bonds. Such bonds often represent the trust-worthy assets that borrowers and lenders use as collateral in transactions known as repurchase agreements. They can securitise and lend for short-term trade. They can also expand their real estate lending practices and encourage the development of clusters which specialise in offering investment insurance. Finally, shadow bankers can operate in jurisdictions mostly likely to delay implementing legislation recommended by the Financial Stability Board aimed at chocking off shadow banking. Brazil, Mexico and Russia seem like likely candidates in the near-term.