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# IMF Working Paper

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## What Is Shadow Banking?

*Stijn Claessens and Lev Ratnovski*

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Research Department

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Prepared by Stijn Claessens and Lev Ratnovski<sup>1</sup>

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#### Abstract

There is much confusion about what shadow banking is. Some equate it with securitization, others with non-traditional bank activities, and yet others with non-bank lending. Regardless, most think of shadow banking as activities that can create systemic risk. This paper proposes to describe shadow banking as “*all financial activities, except traditional banking, which require a private or public backstop to operate*”. Backstops can come in the form of franchise value of a bank or insurance company, or in the form of a government guarantee. The need for a backstop is in our view a crucial feature of shadow banking, which distinguishes it from the “usual” intermediated capital market activities, such as custodians, hedge funds, leasing companies, etc.

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Author’s E-Mail Address: [sclaessens@imf.org](mailto:sclaessens@imf.org), [lratnovski@imf.org](mailto:lratnovski@imf.org)

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## I. INTRODUCTION

It has been very hard to “define” shadow banking. FSB (2012) describes shadow banking as “credit intermediation involving entities and activities (fully or partially) outside the regular banking system.” This is a useful benchmark, and has been much used in writings about shadow banking, but the definition has two weaknesses. First, it may cover entities that are not commonly thought of as shadow banking, such as leasing and finance companies, credit-oriented hedge funds, corporate tax vehicles, etc., yet that do also intermediate credit. Second, it describes shadow banking activities as operating primarily outside banks. But in practice, many shadow banking activities, e.g., liquidity puts to securitization SIVs, collateral operations of dealer banks, repos, etc., operate within banks, especially systemic ones (Pozsar and Singh 2011; Cetorelli and Peristiani 2012). Both reasons make the description less insightful and less useful from an operational point of view.

An alternative—“functional”—approach treats shadow banking as a collection of specific intermediation services, as summarized in Figure 1. Each of these services responds to its own demand factors (e.g., demand for safe assets in securitization, the need to efficiently use scarce collateral to support a large volume of secured transactions, including repos, etc.). The functional view should always be the starting point for analysis of any financial service and offers useful insights. It stresses that shadow banking is driven not only by regulatory arbitrage, but also by genuine demand, to which intermediaries respond. This implies that in order to effectively regulate shadow banking, one should consider the demand for its services and—crucially—understand how its services are being provided (Claessens et al., 2012; Cetorelli, and Peristiani, 2012; Pozsar, Adrian, Ashcraft, and Boesky, 2010; revised 2012).

The challenge with the functional approach is that it does not tell the researcher and policy makers what the essential characteristics of shadow banking are. While one can come up with a list of shadow banking activities today, it is unclear where to look for shadow banking activities and risks that may arise in the future. As shown, among others, by Adrian, Ashcraft, and Cetorelli (2013), the type of shadow banking activities of concern in 2008 is not the same as in 2013. And the functional approach is challenged to distinguish activities that appear on the face similar, yet differ in their systemic risk (e.g., a commitment by a bank to provide credit to a single firm vs. liquidity support to SIVs). Related, most studies focus on the U.S. and say little about shadow banking in other countries where what it can take on very different forms. In Europe, lending by insurance companies is sometimes called shadow banking. “Wealth management products” offered by banks in China and lending by bank-affiliated finance companies in India are also called shadow banking. It is unclear though how much do these activities have in common with U.S. shadow banking.

Figure 1. Spectrum of Financial Activities

“Traditional ” intermediation by institutions	Activities commonly referred to as forms of “shadow banking”	“Traditional ” intermediation by market entities
Traditional banking (deposit taking and lending) Traditional insurance	<p><b>Securitization</b>, including: tranching of claims, maturity transformation, liquidity “puts” from banks to SIVs, support to par value money funds.</p> <p><b>Collateral services</b>, primarily through dealer banks, including: supporting the efficient re-use of collateral in repo transactions, for OTC derivatives and in prime brokerage; securities lending.</p> <p><b>Bank wholesale funding arrangement</b>, including the use of collateral in repos and the operations of the tri-party repo market</p> <p><b>Deposit-taking and/or lending by non-banks</b>, including that by insurance companies (e.g., France) and bank-affiliated companies (e.g., India and China).</p>	<p><b>In capital markets:</b> Hedge funds Investment companies Underwriters Market-makers Custodians Brokers</p> <p><b>In non-bank sector:</b> Leasing and finance companies Corporate tax vehicles</p>

## II. A NEW WAY TO DESCRIBE SHADOW BANKING

### A. Shadow banking: All activities that need a backstop

To improve on the current approaches and definitions, we propose to describe shadow banking as “*all financial activities, except traditional banking, which require a private or public backstop to operate.*” This description captures many of the activities that are commonly referred to as shadow banking today, as shown in Figure 1. And, in our view, it is likely to capture those activities that may become shadow banking in the future. Indeed some activities that are being mentioned recently as shadow banking, such as the increased use of agency real estate investment trusts (REITs), leveraged finance, and reinsurance in the U.S. (see Adrian et al. in 2013), fall under this definition.

### B. Why do shadow banking activities always need a backstop?

Shadow banking, just like traditional banking, involves risk – credit, liquidity, and maturity risks – transformation. This is well accepted by the existing literature, and fits all shadow banking activities listed in Figure 1. The purpose of risk transformation is to strip assets of “undesirable” risks that certain investors do not wish to bear – as they do not have the competitive advantage, as regulations inhibits the type of risks they can take on, etc.

Traditional banking transforms risks on a single balance sheet. It uses the law of large numbers, monitoring, and capital cushions to “convert” risky loans into safe assets – bank deposits. Shadow banking transforms risks using different mechanisms, many more akin to those used in capital markets. It aims to distribute the undesirable risks across the financial system (“sell them off” in a diversified way). For example, in securitization shadow banking strips assets of credit and liquidity risks through tranching and providing liquidity puts (Pozsar et al. 2010; Pozsar 2011; Gennaioli et al 2012). Or it facilitates the use of collateral to reduce counterparty exposures in repo markets and for OTC derivatives (Gorton 2012; Acharya and Öncü 2013).

While shadow banking thus uses many capital markets type tools, it differs also from traditional capital markets activities – such as trading stocks and bonds – in that it needs a backstop. This is because, while most undesirable risks can be distributed and diversified away, some residual risks, often rare and systemic ones (“tail risks”), can remain. Examples of such residual risks include systemic liquidity risk in securitization, risks associated with large borrowers’ bankruptcy in repos and securities lending, and the systematic component of credit risk in non-bank lending (e.g., for leveraged buyouts). Entities involved in shadow banking need to show that they can absorb these risks so as to minimize the potential exposure of the ultimate claimholders who do not wish to bear them.

Yet shadow banking cannot generate the needed ultimate risk absorption capacity internally. The reason is that shadow banking activities have margins that are low, too low to support a backstop by themselves. To be able to easily distribute risks across the financial system, shadow banking focuses on “hard information” risks that are easy to measure, price and communicate, e.g., through credit scores and verifiable information. This means that these services are contestable, with too low margins to generate sufficient internal capital to buffer residual risks. Therefore, shadow banking needs access to a backstop, i.e., a risk absorption capacity external to the shadow banking activity.

The backstop for shadow banking also needs to be sufficiently deep. First, shadow banking usually operates on large scale, to offset significant start-up costs, e.g., of the development of infrastructure, and given the low margins. Second, residual, “tail” risks in shadow banking are often systemic, so can realize en masse.

There are two ways to obtain such a backstop externally. One is private – by using the franchise value of existing financial institutions. This explains why many shadow banking activities operate within large banks or transfer risks to them (as with liquidity puts in securitization or with backstops for REITS). Another is public – by using explicit or implicit government guarantees. Examples include, besides the general implicit guarantee provided to the “too-big-to-fail,” large banks active in shadow banking, the Federal Reserve securities lending facility (TSLF) that backstops the collateral intermediation processes, the implicit too-big-to-fail guarantees for tri-party repo clearing banks and other dealer banks (Singh 2012), the bankruptcy stay exemptions for repos which in effect guarantee the exposure of lenders (Perotti, 2013), or the implicit, reputational and other guarantees on bank-affiliated

products (as widely described in the press regarding so called “wealth management products” in China; Lardy, 2013) or on liabilities of non-bank finance companies (as noted for India; Acharya et al., 2013).

### C. The need for a backstop as a “Litmus test” for shadow banking

Assessing whether an activity requires access to a backstop to operate could be used as the key test of whether it represents shadow banking. For example, the “usual” capital market activities (in the right column of Figure 1) do not need external risk absorption capacity (because some, like custodian or market-making services, involve no risk transformation, while others, like hedge funds, have high margins and investors that do not seek to avoid specific risks), and so are not shadow banking. Only activities that need a backstop – because they combine risk transformation, low margins and high scale with residual “tail” risks – are systemically-important shadow banking.

## III. POLICY IMPLICATIONS

Acknowledging the need for a backstop as a critical feature of shadow banking offers some useful policy implications and guidance for future research and data collection.

- First, it gives direction on where to look for new shadow banking risks: among financial activities that need franchise value or government guarantees to operate. Non-traditional activities of banks or insurance companies are “prime suspects.” It is hard to point to the shadow banking-like activities which may give rise to future systemic risk conclusively, but one example could be the liquidity services provided by sponsor banks to exchange traded funds (ETFs), or large-scale commercial bank backstops for leveraged financing and buyouts.
- Second, it explains why shadow banking poses significant macro-prudential and other regulatory challenges. Shadow banking uses backstops to operate; backstops reduce market discipline and thus can enable shadow banking to accumulate (systemic) risks on a large scale. In the absence of market discipline, the one force which can prevent shadow banking from accumulating risks is regulation and supervision, but this is a large task.
- Third, it suggests, when the right questions are asked, that shadow banking is nevertheless almost always within regulatory reach, directly or indirectly. Regulators can control shadow banking by affecting the ability of regulated entities to use their franchise value to support shadow banking activities (as was done in the aftermath of the crisis by limiting the ability of banks to offer liquidity support to SIVs). Or by managing the (implicit) government guarantees (as is attempted in the US Dodd-Frank Act by limiting the ability to extend the safety net to non-bank activities and entities; or by general attempts underway to reduce the too-big-to-fail problem).

- Finally, it suggests that the migration of risks from the regulated sector to shadow banking – often suggested as a possible unintended consequence of tighter bank regulation – is a lesser problem than some fear. Shadow banking activities cannot migrate on a large scale to areas of the financial system that do not have access to franchise values or government guarantees. This by itself does not make spotting the activity occurring within the reach of the regulator necessarily easier, but at least it narrows the task. And it provides for a starting point when it comes to measuring the shadow banking system: activities within banks.



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