The Financial Risks of Insecure Land Tenure:

An Investment View

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This paper investigates the real financial consequences of investing in land with disputed tenure rights. It demonstrates that companies which ignore the issue of land tenure expose themselves to substantial, and in some cases extreme, risks. Using case study analysis, the paper connects ground-up financial thinking with empirical reality. In so doing, it makes a strong case for the need to integrate tenure-related risks more comprehensively into our financial architecture.

INTRODUCTION

In recent years, one of the oldest asset classes in investment – land – has become an issue of international concern and scrutiny. Land acquisitions are being announced at a breakneck pace[1] as companies look to produce more food, wood fiber, minerals and energy.[2]

Through a variety of mechanisms, the capital markets have enabled this acquisition spree, particularly in emerging economies. The undeniably high and sustained profit potential of this land is thought to be offset by meager, manageable costs. Not only is the land itself cheap, but the ongoing outlays required to convert that land's output into saleable goods is quite low.

This all seems very compelling when confined to spreadsheets, but as these acquisitions become more common, we are beginning to see substantive discrepancies between investment concept and operational practice.

In examining the evidence, a pattern emerges. Many investors and operators have committed time, money and effort without understanding some considerable risks, ones usually considered externalities in the normal course of business.

This report gives perspective on one such risk. Completely unknown to most investors, "land tenure" is a catch-all phrase used by field specialists to define a set of problems related to control over a given parcel of land.

Property rights in many emerging markets are dysfunctional to the point that ownership of land can be granted to an investor without the tens of thousands of people living on, or dependent on, that land knowing about it.

Generally tied to their land for many generations, these people have little interest in, or have no reasonable option for, moving to urban areas and are practically impossible to relocate. In other words, the risk is unavoidable once these investments are made.

This report shows that unresolved conflicts over land tenure significantly augment the financial risks for companies in infrastructure, mining, agriculture and forestry. By themselves, delays caused by land tenure problems can inflate a project's expenditures by an order of magnitude - and in some cases these losses have even been great enough to endanger the future of the corporate parent itself.

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[1] This trend has been called the "the global land rush" and has been driven by the expectation of rising commodity demand. Data available at http://landportal.info/landmatrix; see also Deininger & Byerlee (2011) *Rising Global Interest in Farmland*, World Bank

[2] The 2011/2012 European Report on Development (2012), *Confronting Scarcity: Managing Water, Energy and Land for Inclusive and Sustainable Growth*, European Union

After examining the case studies described in the report, we believe land tenure risk is substantial enough to merit serious attention from land-use companies and those who finance their activities.

Moreover, we think that attention should be active rather than passively hoping for these issues to "go away" or "get cleared up". Specifically, we find much promise in the concept of creating a vehicle for investors to manage those risks that would support the policy and technical actions to secure the land rights of historic occupants in an investment area and more broadly in the host country.

With that said, we hasten to add that this report is but a first step. It is not an implementation-ready method for assessing risks posed by insecure land tenure. To build such a method, the next step is to move beyond the specific cases examined here, and to paint a more detailed picture of tenure-related risk. Such a generalizable risk assessment would result in a quantitative risk model for use by creditors and investors and form the basis of the aforementioned risk management vehicle.

Our initial examination shows the potential for bottom-line financial damage range from massively increased operating costs – as much as 29 times over a normal baseline scenario, according to our modeling – to outright abandonment of an up-and-running operation. And this modeling finds firm empirical support in the case studies we analyzed (presented from page 23).

If supported by more rigorous exploration, these financial risks may be significant enough to change the calculus of investing in emerging markets. They suggest a substantial problem.

We do not consider the specifics of solving this problem within this report, which will require further research. Still, our initial examination suggests that risk analysis will not be enough. If the risks prove to be as substantial as this analysis suggests, it will be imperative to create some way to fully understand and address land tenure issues. Otherwise, the identification of the risk will only serve to push capital away from investments, leaving some very real problems unresolved and important opportunities for development foregone.

Although tenure issues are too extensive and complicated for individual firms and investors to resolve independently, risk provides a strong incentive for the private sector to contribute to clarifying and securing tenure rights. We recognize that some major investors (such as the International Finance Corporation) have developed and implemented sound practices and safeguards to evaluate and attenuate tenure risks. But these investors represent a small share of the overall capital investments relevant to the analysis in this paper. A firm signal of support for tenure reform from national governments and international investors would catalyze a change in approach.

This step would clear the way for translating impetus into action.

SECTION ONE:
LAND TENURE AND RISK

According to the United Nations, "land tenure is the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land".[3]

With the exception of Antarctica, virtually all land is governed by a system, or multiple systems, of tenure rights. The absence of formalized legal entitlement does not mean that land is "empty", or unclaimed. In almost all parts of the developing world one finds traditional systems of land management, often called "customary tenure". Customary users of land – such as indigenous peoples – commonly understand their property rights without reference to a legal structure.

This may sound backwards to investors, but it is useful to think of these customary arrangements as legal systems that pre-date the formalized structures of the modern nation-state. For generations, these systems were (and remain) quite functional.

This makes the reliability of national land records of paramount importance to investors. A dependable system, like those generally found in Europe and North America, can mark out which areas are available for investment in a predictable, low-risk way.

By contrast, emerging markets are a very mixed bag when it comes to land rights and record-keeping. In a few cases, national cadastral systems – under which ownership is formalized through legal entitlement – have built themselves upon their inherited customary precedents but, in most others, cadastral systems contain little or no reference to customary arrangements.

In these cases, an external actor arriving on the scene is unwittingly caught up in the structural tensions that exist between customary and cadastral systems. Indeed external claims to land can ignite conflict if local constituencies feel that their property rights, whether considered in legal or customary terms, have been ignored or abrogated.[4]

We detail several such instances in Section Four of this report. These include companies whose tenure-related problems:

- Have caught the attention of credit ratings agencies (Vedanta, page 24);

[3] http://www.fao.org/DOCREP/005/Y4307E/y4307e05.htm

[4] This may include failure to recognize customary ownership rights; failure to consult or adequately inform; failure to offer or deliver adequate compensation; failure to recognize cultural and spiritual values; use of coercive means; use of deception; absence of environmental concern or oversight; absence of conflict resolution initiatives.

- Have seen large financial losses following a delay or hasty retreat (Sime Darby and SN Power respectively, page 30 and page 25);

- Have seen their future endangered (SEKAB, page 27).

And in one example, even the full powers of the state and the support of a huge development bank were overwhelmed by local opposition (TIPNIS, page 31).

Given the increasing frequency of investment deals souring due to land tenure risks, it is surprising that the issue has not received more attention. We believe this to be a "cultural" issue, since most NGO work and media attention have focused on the social and environmental impacts of land acquisitions. Meanwhile, the experiences of investors and project developers have been largely ignored.[5]

Our initial analysis is a first step in filling this gap. Examining a wide range of cases from agriculture, infrastructure and the extractive industries, we have arrived at three broad conclusions:

1. Far from being an "externality", land tenure can be a real threat to stable returns, and one that should be included in any risk assessment of a land-dependent investment, including credit rating analysis and insurance provision.

2. The financial risks posed are multiple, ranging from slippage in construction times and unexpected cash flow loss due to suspensions to expropriation of assets following the loss of insurance coverage. The escalation of risk can be extremely rapid and irreversible, implying that conventional approaches to understanding and mitigating risk need to be augmented to manage the issue.

3. The impact of these risks ranges from substantial to catastrophic for the firm or investor involved. Initial modeling suggests that a typical investment encountering land tenure problems may incur an order of magnitude increase in cost. Such a massive inflation in outlay would be sufficient to change decision-making, assuming awareness of the potential risk.

To be clear, we are not passing a moral judgment on investors. Instead, we believe they are victims of two common problems in finance.

[5] For some notable but limited exceptions see Litovsky et al, *The Land Security Agenda: How investor risks in farmland create opportunities for sustainability*, Earth Security Initiative (2012); The 2011/2012 European Report on Development (2012), *Confronting Scarcity: Managing Water, Energy and Land for Inclusive and Sustainable Growth*, European Union: p95-97; Alden Wily (2011) *The Tragedy of Public Lands: Understanding the Fate of the Commons under Global Commercial* Pressure, International Land Coalition

The first is the difficulty in quantifying non-standard events that impact investment performance. Debacles ranging from the 1998 collapse of Long Term Capital Management[6] to the current Eurozone crisis were cases in which extreme events that were outside the imagination of investors (Russian debt default, Greece covering up its real debt and deficit situation) became real-life risks. Calibrated to a non-extreme world, the associated risk models collapsed as a result of these events.

Second, financial modeling has always struggled to capture the physical reality of investments. This has become particularly evident in recent years, as the global economy has been hit with a series of extreme "black swan"[7] events.

For example, before the 2007 subprime crisis created an unprecedented wave of foreclosures, it was widely assumed that house prices never declined. This assumption omitted the fact that real people live in these houses that they will be forced to sell if they get caught in loans they can no longer afford. If they all get caught at the same time, they all sell their houses at the same time.

As the cases of tenure dispute described later in this document suggest, the physical reality of an investment is often messy, complicated, and complex – mostly because people actually live in, or have historically used, the places where land investments are made.

For these two reasons, land tenure is exactly the sort of problem one would expect traditional risk modeling to miss. Changing this requires a ground-up understanding of the problem and its potential impact.

What Causes the Problem?

The first and best indicator of a land tenure problem is local opposition. If strong enough, this is the key driver of large financial losses incurred as a result of tenure risk. The reasons for local opposition can take many specific forms, but it is possible to broadly categorize them for the purposes of risk analysis.

In some cases, local people are reacting to the fact that compensation is insufficient to support them considering the impact of the planned investment, or to the violation of their customary or legal rights in the process of resettlement (page 31).[8] We would categorize this sort of threat to the community as a moderate – but still important – form of financial risk.

The more severe form of risk emerges when the investor or project developer is effectively (if unwittingly) curtailing access to food, water, energy and other vital resources that sustain local

[6] http://www.risk.net/risk-magazine/news/2101953/ltcm-risk-sustainable-myron-scholes

[7] http://www.nytimes.com/2007/04/22/books/chapters/0422-1st-tale.html?pagewanted=all ; Taleb (2010), *The Black Swan: the impact of the highly improbable,* Penguin

[8] See Cotula (2011) *Land Deals in Africa: "What's in the contracts?"*, IIED

populations (pages 24-29).[9] If their farmland is being used, their jobs taken, their water diverted and their forests declared off-limits, the challenge for these communities is more existential than merely financial.

Under these circumstances local communities have strong incentives for direct action to protect their interests. Moreover, if they view the government's actions as illegitimate, they are unlikely to provide any social license to operate.

This is where many emerging markets contrast with traditional investment environments. In addition to the absence of formal property rights, they often lack accessible and legitimate grievance procedures or conflict resolution mechanisms, such as reliably impartial (and speedy) judicial processes. This makes direct action via legal channels an impractical option when viewed from communities' perspectives.

If the operator is unresponsive to local complaints, the only form of redress becomes disrupting the operation through any means available, which simultaneously serves as the best way to attract domestic and international support.[10]

Degrees of Risk

Activities exposed to tenure risk rarely experience either smooth, unobstructed progress or complete catastrophe, although these eventualities represent the poles of a wide spectrum.

At one end of this spectrum even low-level local opposition, like complaints to local officials and national oversight bodies, can lead to delays and an increase in the upfront investment.

Losses really pile up however when discontent is left to fester, leading to mass actions like roadblocks, repeated sabotage and increasingly violent conflicts (see page 31). If the project developer loses local trust early in the process, it must act quickly and sensitively to prevent ongoing operational disruption. Unfortunately, after early negative experiences, further dialogue is regularly perceived as disingenuous.

If, on the other hand, the company decides against engagement and instead becomes more reliant on coercion and host government support, it exposes itself to huge counterparty and reputational risks (see page 29). These are stories that get picked up by the international media and NGOs. Investors may also have to accept reduced profits and increased bureaucratic overhead.

Sustained local opposition can easily undermine the entire investment, leading to total withdrawal. Either regular disruptions, such as roadblocks, occupations and riots impair the commercial

[9] See Hilhorst and Zoomers (2011), *Under what conditions can transnational large scale land acquisitions contribute to inclusive and sustainable growth*, European Report on Development 2011-2012/European Union.
[10] Kachika (2010), *Land Grabbing in Africa: A Review of Impacts and Possible Policy Responses*, Oxfam

viability of the project (see page 25), or the host government, under popular pressure, changes its stance by denying access (see page 24). The latter may well be an act motivated by political survival.

For some businesses, especially those with a high level of financial or geographic concentration, losses at this scale can prove terminal. Companies that survive the ordeal may find themselves labeled as an international pariah, even if reputational damage can be put down to actions taken by the host government without the consent of the business itself.

Cutting corners at the beginning may therefore prove very risky. Our research shows that disregarding customary property rights systems, overlooking the need for consultation, denying adequate compensation, or ignoring dispute resolution may save time and money in the short-term, but it can lead to sizeable expenses down the line (page 30).

Many investors assume that bribery or coercive action will effectively manage land tenure problems. The recent case of Madagascar Daewoo exemplifies the dangers in resorting to such measures. According to the International Land Coalition:

> *The companies involved devoted more time to negotiating access to land with central government authorities than with the populations and the regional and local governments of targeted land. The absence of transparency in these negotiations and the – at best – hasty negotiations at local level drove these projects to failure.*[11]

Partly as a result of these actions, the national government fell to revolution, and Daewoo itself was forced to abandon the investment altogether. Moreover this case has become notorious, dealing considerable damage to the company's reputation.

Coercion and corruption often serve to consolidate, rather than erode, the strength of domestic opposition.[12] Deliberately escalating conflict does not make sense; it necessarily leads to a less stable investment environment.

In short, neither access to national governments nor coercion will always work. Addressing land tenure risk requires a new and different solution, as we suggested in the Introduction.

Because the price investors are willing to pay for that solution needs to be less than the potential for losses from the risk, it is important to quantify the impact of that risk in dollars and cents. The next section makes an initial attempt at doing just that.

[11] ILC (2011) *After Daewoo: Current Status and Perspectives on International Land Acquisitions in Madagascar,* International Land Coalition

[12] See for example the TIPNIS road project in Section 4

SECTION TWO:
QUANTIFYING THE PROBLEM

Persuading financial decision-makers of the seriousness of the risks described in Section One will require a credible framework for gauging those risks.

On an anecdotal basis, it is already apparent that land tenure disputes are capable of creating major social and political volatility.[13] Our task here is to interpret that volatility in concrete financial terms using established and credible financial methodologies.[14]

We begin by describing a quantification approach for risks associated with disruptions or delays, and then outline a corresponding framework for more extreme events, such as those that lead to wholesale withdrawal. On this basis, we examine a model of four representative scenarios and illustrate that the risks are financially significant.

Throughout, the focus is wholly operational and so we have not considered the impact on the operator's reputation (or those of its financiers and/or customers).[15]

Category One: Losses from Delayed Operations

Operational disruptions are a common problem for investors in disputed land. For example, local opposition can have a damaging impact on the investment in the following ways:

1) It undermines an effective risk/reward assessment. This can lead to substantial mispricing as operating costs increase, while returns are diminished.[16]

2) Losses are compounded in the implementation phase. Tenure disputes can cause long and repetitive delays in the planning stages (see Section Four for examples). On many occasions these obstructions, and the prospect of their indeterminate continuation, have resulted in the abandonment of funded projects, which had been attractive to investors prior to revelations of tenure risk.

[13] See for example Hall and Paradza (2012), *Pressures on land in sub-Saharan Africa: Social Differentiation and Societal Reponses,* European Report on Development 2011-2012

[14] We would highlight though that reliable numbers for these losses will require a formal financial model, which would also provide the necessary framework for reducing these losses. However, such a model is beyond the scope of the current paper, in which we restrict ourselves to the first steps of this process.

[15] That is not to say that reputational risks are insubstantial or that companies investing in land are not concerned by reputational damage. Indeed it is clear that some businesses have suffered as a result of tenure disputes and subsequent negative media coverage. But we find it difficult to quantify the risks consistently and credibly.

[16] In addition these projects risk invalidating their insurance coverage. This can be very costly because the insurance company, keen to continue collecting premiums, has no reason to inform the investors of this impairment.

3) Obstructions and delays can even cause the shutdown of active projects (see Section 4). In these cases operators and investors feel compelled to cut and run having seen little return on often sizeable initial investments. The alternative is to sink more money into a potentially bottomless pit.

We view this as a similar problem to that encountered by risk analysts who work on large-scale real estate projects. Therefore, we employ an approach – "slippage"[17] – similar to one from construction finance to quantify the losses caused by such delays.

In our treatment of scenarios, below, we model the costs of disruption or delay. This acts as a simplified example of slippage.

As shown in the charts below, the impact of delays/disruptions is multifold:

- **Green: Uncertainty.** In the base case, upfront, non-recurring capital expenditures (or "capex") decrease as recurring operating expenditures (or "opex") increase. This reflects a shift in the project from construction to operation.

  If there is a disruption, capex becomes unpredictable and varied, as represented by the different heights of the green columns. This uncertainty is usually reflected in higher discount rates, which directly damage profitability.

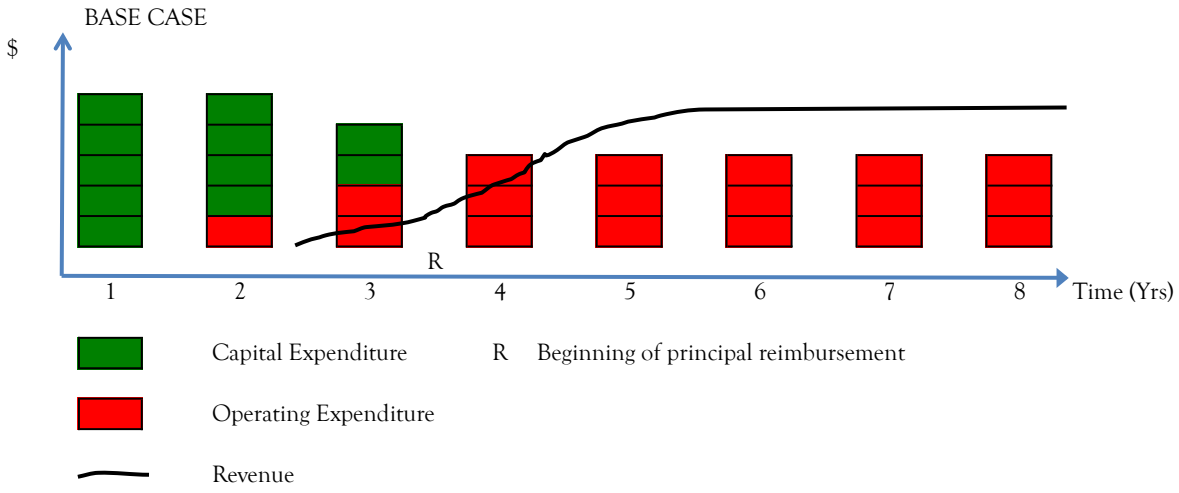
- **Black: Cash flow.** If the project is delayed, reimbursement is pushed back to a later date. As a result, the discounting factors for each year will also be higher, meaning a decrease in the value of the project.

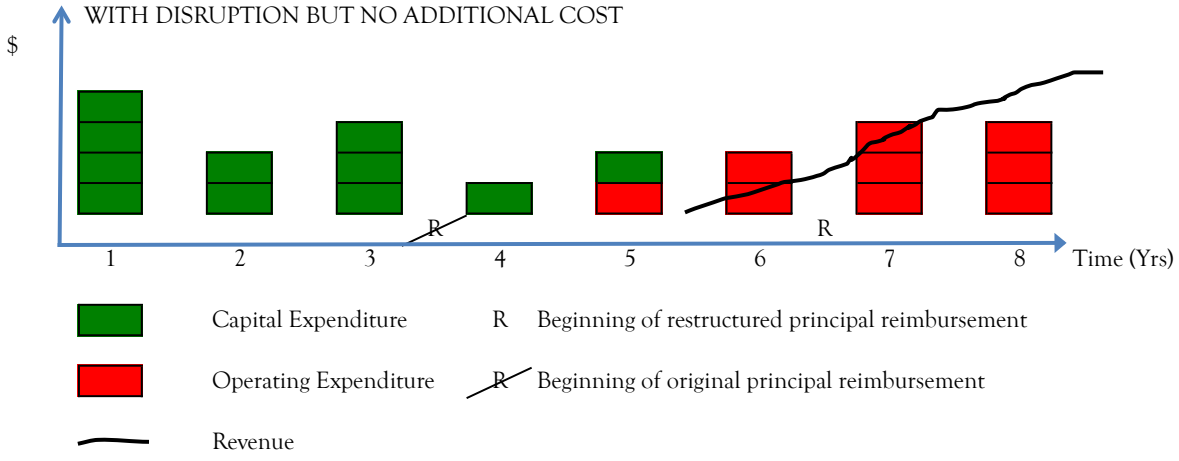
- **Blue: Additional costs.** Delays and disruptions usually incur additional costs. These additional costs compound the effect of the two items described above because they increase the uncertainty and reduce the value of the project.

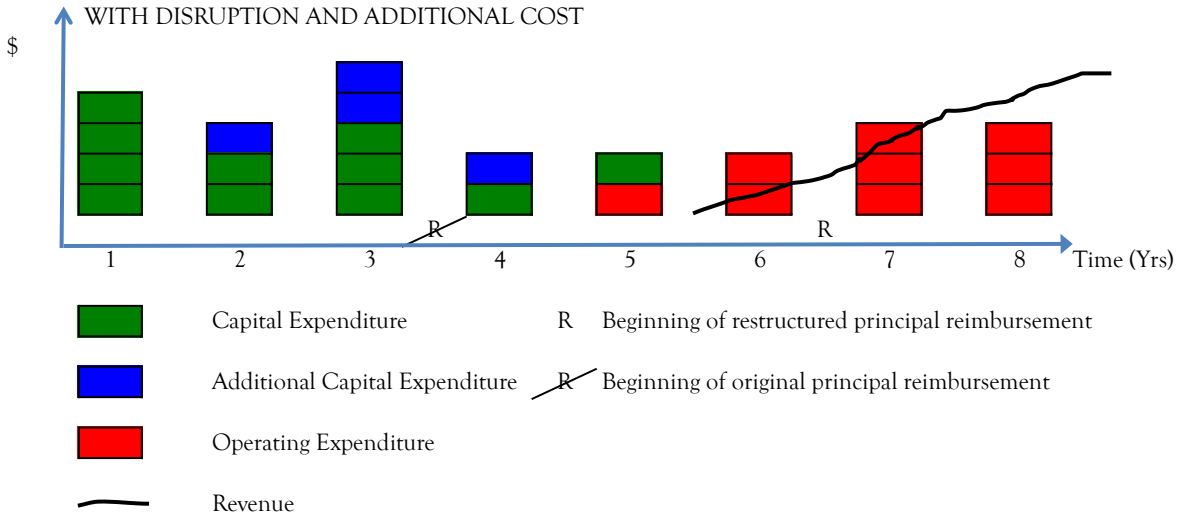
[17] The term "slippage" essentially refers to the difference between the estimated price of an asset that will be delivered in the future, and the actual price that is paid. As such, slippage describes mounting costs. Construction finance provides the best analogy for land investments because a period of high initial investment should be followed by a sustained period of consistent returns.

Slippage is useful for land investments because it reflects the interrelated nature of disruption in a complex project. Businesses that fall behind schedule risk breaking a series of contracts and agreements. For example, the company may be unable to supply a customer with an order, which in turn means that they will not be able to pay their creditor on time or in full.

Disruptions can also interfere with the scheduled delivery of materials necessary to bring the project to a stage where it is earning, leading to costly rearrangement or increased borrowing, since when a project falls behind it may be necessary to rearrange financing. This financing will come at a less favorable rate to cover the additional cost incurred to the lenders and because the risk profile of the investment has been affected by the disruption.







Category Two: Losses from forced withdrawal

As noted above, persistent delays and disruptions may lead an operator to withdraw from a project completely, whether in the planning phases or once activities are underway. This eventuality may also be precipitated by a number of tenure-related causes, including: injury to company employees; difficulty with securing licenses; targeted civil society campaigns; and curtailed market access.

In these instances investors and operators forfeit any expenditure they have made to date and must examine the terms of their insurance for any chance of reimbursement.

Four hypothetical examples demonstrate the implications of delays and withdrawals in clear financial terms. This is a rough exercise but its results are sufficient to show that the financial impacts of tenure disputes merit more comprehensive consideration by risk professionals.

The following table outlines the basic inputs in these investment cases:

Case	Size of investment	Duration
A	**$ 10 million**	3 years
B	**$ 100 million**	5 years
C	**$ 1 billion**	10 years
D	**$ 3 billion**	15 years

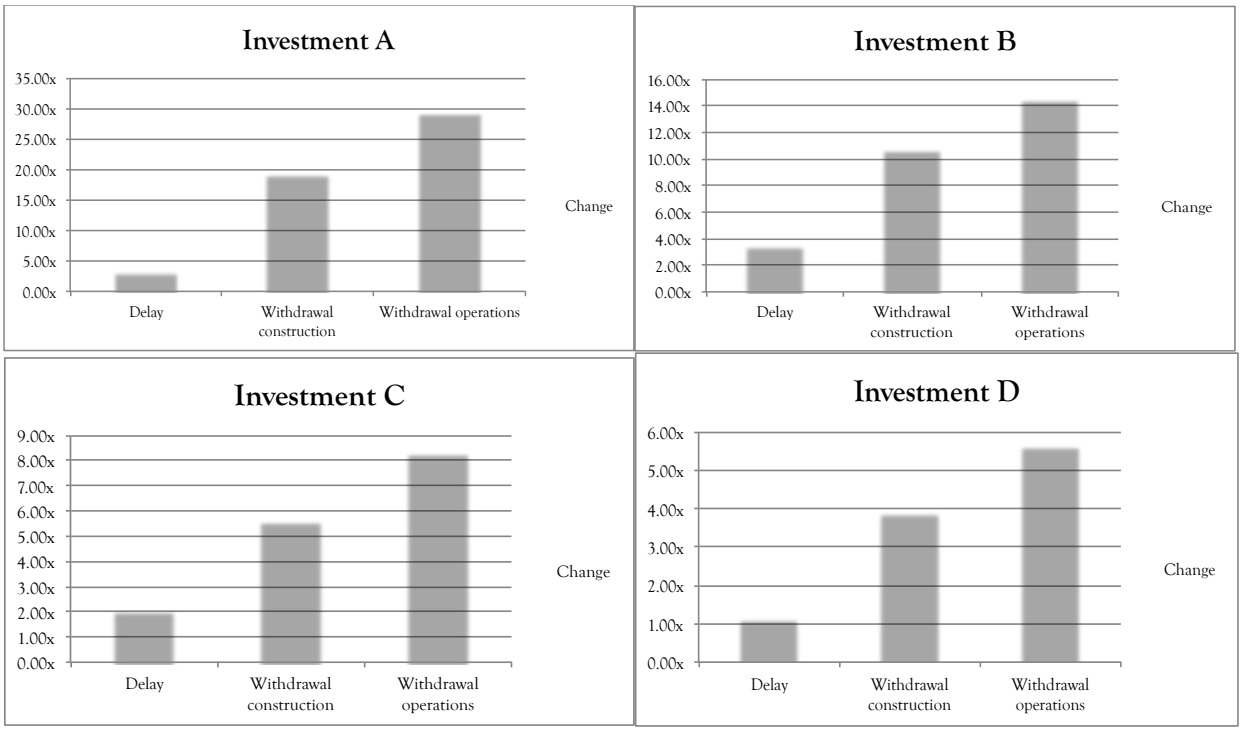
We modeled the impact of the three scenarios (delay/disruption, withdrawal during construction, withdrawal during operations) against a base case scenario where no negative event occurs. This analysis revealed the additional costs incurred by these negative events, expressed as a percentage of the base case scenario's costs.

The underlying assumptions of this analysis were as follows:

Scenario	Key Features
Base case	Investor decides to invest in project. The invested money comprises equity and borrowed funds. The project is divided into two phases: first construction, then operation. The project starts generating revenue only in the latter phase. At the end of the investment period, the project is sold and the borrowed funds are reimbursed.
Delay/disruption	At some point during the construction phase, the project is put on hold for a certain period of time. During this time, interest on the borrowed funds accrues while a fee is charged for the unused funds committed by the lending entity. Construction then resumes and the project continues as in the base case scenario.
Withdrawal during construction (this scenario builds on the previous one)	Construction is put on hold for a certain period of time. Instead of resuming construction, the investor or operator decides to withdraw completely because, for example, local opposition has become too fierce. We also assumed that the reasons that forced the investor or operator to withdraw also voided the political risk insurance (PRI) contract: the investor must therefore write the equity off and reimburse the borrowed funds, including accrued interests.

Withdrawal during operations (builds on delay/ disruption as above)	After the delay, construction resumes and operations start. But the environment has become too confrontational: operations must be stopped after a certain period of time and the firm or investor decides to withdraw. We again assume that any PRI contract has become void. The firm or investor is left with the tab for both the equity and the borrowed funds, but these have both increased compared to the previous scenario: since construction was completed, more funds were borrowed[18]; and since operations had started, the equity had increased.

We modeled the cost impact of each scenario (delay/disruption; withdrawal during construction; withdrawal during operations), for each of the four cases (A, B, C & D) described above. Using a standard financial methodology accounting for, among others, interests accruing at a higher rate during the disruption period and opportunity costs, we came to the cost overruns illustrated in the charts below:



The main findings displayed on these graphs can be summarized in three points:

- Depending on the case, the cost associated with each scenario ranged from 1.1 x to 29 x that of the base scenario;

- As a percentage of the cost incurred in the base scenario, the impact of all three scenarios decreased as the projects increase in size (measured in $ amount) and duration;

[18] We assume that funds borrowed for construction are disbursed as construction progresses

- By order of impact, the most serious scenario was withdrawal during operations, followed by withdrawal during construction and then by delay/disruption.

Here we have only focused on the impact that conflicts over land tenure have on the cost of the projects. This does not preclude the projects from being profitable but it does make profitability much harder to attain.

SECTION THREE:
LAND TENURE AND RISK PROFESSIONALS

A greater awareness of land tenure problems among risk professionals at credit rating agencies (CRAs) and insurance providers may create incentives (increased financing costs and loss of insurance) that protect against careless investment in land.

During the analysis process, we noticed that land tenure risks actually fit these institutions' existing methodologies and policies, particularly those regarding counterparty risk. This strengthens the argument for developing the approach described in Section Two into a sophisticated model of risk.

Credit ratings agencies

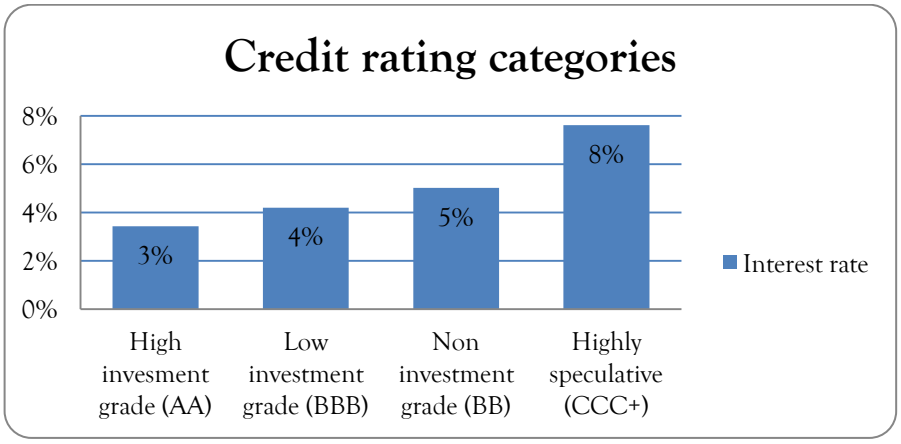
CRAs' primary product – the credit rating – is a measurement of creditworthiness. CRAs arrive at a credit rating via a process that relies on published methodologies, which provide the financial system with a good general sense of how the rating will apply to any given investment.

Once issued, the impact of a credit rating is felt in two areas. One is well understood, but the other is less commonly appreciated outside finance:

Credit Ratings and Interest Rates

A business' credit rating has a major impact on the interest rates it pays when issuing debt to finance commercial activities. A rating downgrade usually signals that the party being downgraded is vulnerable and may need to raise additional capital to continue operations. This additional cost of financing hits a company when it is both weaker and in need of raising capital, further compounding the effect of the downgrade.

Below are four examples of interest rate percentages for different categories of credit ratings which illustrate the impact that a ratings change can have on the costs of doing business:



[19]

These interest rates were derived from the 10-year average corporate spreads over Treasuries for US utilities. If they are applied to a 10-year $100M debt issuance, the resulting increase in interest payments over the high investment grade (AA) is as follows:

	Rating	Interest payments	Change
AA (base case)	High Investment Grade	$34,300,000	-
BBB	Low Investment Grade	$41,900,000	22%
BB	Non-Investment Grade	$50,100,000	46%
CCC	Highly Speculative	$76,100,000	122%

Credit Ratings and Basel III

The Basel Committee on Banking Supervision (BCBS) is the established regulatory body for global banking.[20] Among other things, the BCBS issues the so-called "Basel Accords" to set bank capital requirements based on a standardized measurement of risk.[21]

Credit ratings are a central component[22] of the methodology used to form this measurement. Under the Basel Accords, a bank making an investment in something with a lower credit rating

[19] Reuters Corporate Bond Spread Tables, BondsOnline (http://www.bondsonline.com); FT Interactive Data, accessed 17/11/11

[20] http://www.bis.org/bcbs/about.htm

[21] http://www.bis.org/bcbs/basel3.htm

[22] See http://blogs.reuters.com/felix-salmon/2011/01/20/dodd-frank-vs-basel-iii for an explanation of how this contrasts with the new United States methodologies.

must keep a certain amount of capital[23] to the side in order to protect it against a loss. With Basel III, these capitalization requirements will become even more stringent.

The impact of these capitalization requirements is that businesses have decreasing access to capital as they slide down the ratings scale.

Making the case to CRAs

CRAs are open to well-formulated advice. Contrary to common belief, holistic assessments of risk are germane to credit analysis as applied by CRAs. Moody's provides an excellent example of this philosophy (our emphasis added in red):

> *Because it involves a look into the future, credit rating is by nature subjective. Moreover, because long-term credit judgments involve so many factors unique to particular industries, issuers, and countries, we believe that any attempt to reduce credit rating to a formulaic methodology would be misleading and would lead to serious mistakes. That is why Moody's uses a multidisciplinary or "universal" approach to risk analysis, which aims to bring an understanding of all relevant risk factors and viewpoints to every rating analysis. We then rely on the judgment of a diverse group of credit risk professionals to weigh those factors in light of a variety of plausible scenarios for the issuer and thus come to a conclusion on what the rating should be.*[24]

Our experience is that CRAs have a general willingness to consider any risk factor that is relevant, so long as the scenario it presents is a plausible one.

Existing methodologies and policies: counterparty risk

The risks posed by tenure find a logical fit with existing ratings processes. Project finance supplies the most important example. In this area, CRAs consider risks imposed by non-performance of the counterparty, which is normally the host government in the case of international land deals.

To illustrate how seriously CRAs take this issue, Standard and Poor's, argue that 'contract counterparty risk is one of the key factors considered when analyzing and assigning ratings'.[25] If the counterparty is defined as "irreplaceable", 'by virtue of their market or contract position'[26], then the risk in the deal is substantially higher.[27] The counterparty is defined as replaceable if an

[23] See www.bis.org/publ/bcbs198.pdf for details.

[24] Accessible at http://www.moodys.com/Pages/amr002003.aspx

[25] Standard and Poor's, *Project Finance Construction and Operations Counterparty Methodology* (December 20, 2011), p3: paragraph 1

[26] 'These counterparties typically are contracted for the entire term of a project, as without their support there is no market', Standard and Poor's, *Project Finance Construction and Operations Counterparty Methodology* (December 20, 2011), p9: paragraph 33

[27] 'Standard & Poor's assessment of the risk a counterparty poses to a project financing takes into account: the credit quality of the counterparty; any credit enhancement; factors that may increase or decrease risk in the context of the credit of the project, *such as the ability to replace the party*; the type

alternative contract is available at a similar price and quality; with similar skills; assignable; transferrable; and with effective project management.[28]

For Standard and Poor's, government concessions are classified as irreplaceable counterparties and do receive prominent mention. This raises the importance of any government policy, including dispossession of land, which could lead to marked economic, political and social volatility.[29]

Political Risk Insurance (PRI)

PRI is an important, often enabling guarantee for investments in developing countries.[30] They can be costly, but PRI policies lower financing costs by significantly reducing exposure to risk. Indeed, CRAs have dedicated ratings methodologies that show exactly how risk is mitigated through PRI and how this impacts on a rating.[31]

However, like any insurance policy, PRI can be rendered void by certain actions, which providers have an incentive to identify. Such a loss of coverage would leave the firm or investor in question exposed to serious risks. The potential costs associated with loss of PRI can be determined easily by reversing the CRA methodologies mentioned above.

Losing PRI Coverage through Coercive Practice

Most PRI contracts are rendered invalid by coercive practices on the part of the client, or associates acting on its behalf. This is particularly relevant to land tenure disputes because of the way that providers define "coercive practices". As an example, we provide MIGA's interpretation (our emphasis added):

> *A "Coercive Practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any person or the property of a person to influence improperly the actions of a person…Coercive Practices are threatened or actual illegal actions such as personal injury or abduction, damage to*

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of commercial role being performed by the counterparty; any differences between the default risk on the counterparty's financial debt; and the counterparty's obligations to the project' Standard and Poor's, *Project Finance Construction and Operations Counterparty Methodology* (December 20, 2011) emphasis added, p14: glossary

[28] Standard and Poor's, *Project Finance Construction and Operations Counterparty Methodology* (December 20, 2011), p7: paragraph 20

[29] 'Country risk is a critical consideration. Issues can include restrictions of currency transfer and convertibility, limitations on foreign-owned profit repatriation, and onerous taxation. In extreme cases, nationalization, expropriation, or forced sale of assets can result in material losses. Country risk is normally highest in countries that have a history of, or clear potential for, marked economic, political, social, and economic volatility' Standard and Poor's, *Key Credit Rating Factors: Methodology and Assumptions On Risks in the Metals Industry* (June 22, 2009), p4: paragraph 1

[30] http://www.miga.org/investmentguarantees/index.cfm?stid=1796; http://www.opic.gov/insurance

[31] Moody's, *Moody's Approach to Rating Securities that Benefit from Political Risk Insurance, Rolling Reinstatable Guarantees and B Loan Participations*, Special Report (20 June 2002)

property, or injury to legally recognizable interests, in order to obtain an undue advantage or to avoid an obligation.[32]

According to the World Bank, many recent land investments have targeted areas with weak local land rights,[33] raising questions about how this land was acquired and whether the process paid attention to legitimate local claims. In some instances businesses, or more commonly their counterparties (host governments and local intermediaries), seize land and deny customary users access to resources (see case study analysis from page 23). Often firms and investors are unaware of the importance of such access to the livelihoods and very survival of local communities. Intent aside, such actions avoid an obligation for inclusive consultation, fair compensation or legitimate grievance settlement and as a consequence, they injure the interests of locals through an undue advantage.

Given the importance of PRI coverage, not least to ratings agencies, cutting costs by avoiding due process through coercion is very risky for the company involved. Not only would it lose its insurance, but it may also see its rating affected as a result.

Financial Resilience in Key Sectors

All businesses pay attention to their financing costs and insurance provisions. However, companies which issue a high level of debt relative to their earnings and assets are particularly vulnerable to interest rate changes and loss of insurance.

For these businesses, managing financing costs is a key aspect of risk mitigation. Some businesses are heavily concentrated in geographic terms, and as such are particularly exposed to the operational delays which we have linked with tenure problems.

Below is an overview of financial resilience in agriculture, extractive industries and infrastructure – sectors which have been closely linked with land investments and tenure abuses. This provides an indication of which industries would be most affected if tenure problems received more comprehensive consideration from risk professionals (see Appendix for data).

Agriculture

Large, diversified agribusinesses, like Nestlé, Unilever and Kraft, issue a relatively low level of debt compared to their assets and earnings. However, an examination of the risk management sections

[32] MIGA, Contract of Guarantee for Non-shareholder loans (2011): p39

[33] Deininger & Byerlee (2011) *Rising Global Interest in Farmland*, World Bank

of these companies' annual reports indicates that they feel obliged to pay close attention to credit rating agencies and methodologies, as well as to consumer opinion.[34]

Given their concern over corporate responsibility and their propensity to look for partnerships with NGOs, these companies can be influenced directly by promoting contract farming and cooperatives[35] as alternatives to acquisitions.[36] The same approach may not, however, gain the same traction with private companies like Cargill, ADM and Bunge.

However, some agricultural industries, such as fruit production and food processing, are more vulnerable to increased financing costs. These companies issue higher proportions of debt when compared to their assets than diversified companies, but also have a lower rate of earning. For fruit companies this is especially significant because their plantations require a high upfront investment with a long maturity. This level of capital commitment as well as geographic concentration leaves plantations particularly exposed to tenure-related operational disruptions. For their part, food processing firms are only vulnerable in connection to their supply-chain agreements.

One industry that is particularly influential when considering international land acquisitions is biofuels and edible oils. In general these companies are able to repay even fairly substantial debts. However, like other plantations, their operations are particularly vulnerable to site-specific disruption. Indeed these companies have the highest investment levels and geographic concentration in the sector. As such, they should be considered susceptible to tenure risk.

Extractive industries

For purposes of practicality, this sector has been split into oil and gas, mining and forestry. Petrochemical and mining industries present quite a different case to forestry, primarily because of the much higher capital requirements involved in exploration and production. This level of expenditure ties companies involved, to a greater extent, to locations they have invested in.

The largest oil and gas companies, the supermajors[37], have high capacity to repay debts due to high profits and huge assets. For example, BP was able to raise $38 billion through asset sales in the wake of the Macondo spill, but it quickly returned to profitability while maintaining an investment grade credit rating.[38] However, mid-sized oil companies that specialize in exploration and

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[34] For a representative example from a successful company, see Unilever's 2011 Annual Report, p93 and p28 (http://unilever.com/images/Unilever_AR11_tcm13-282960.pdf).

[35] See for example http://www.unilever.com/images/es_Growing_for_the_Future_3rd_Ed_tcm13-27805.pdf

[36] De Schutter, *The Right to Food, Item 69(b),* Provisional Agenda of the 66th Session of the UNGA

[37] BP, Chevron, ConocoPhillips, ExxonMobil, Shell, Total

[38] http://www.4-traders.com/MOODY-S-CORPORATION-16724/news/BP-Rating-Could-Handle-Up-To-$40-Billion-In-Spill-Costs-Moody-s-14042092/; http://content.usatoday.com/communities/greenhouse/post/2010/11/bp-gulf-spill-cost-40-billion/1#.T8SyRNVYvi4

production are in a more risky position. These businesses have much greater variability in their earnings. Anadarko, to provide one example of a large and successful operation, suffered from losses of -88.3% in the third quarter of 2011, but turned a profit of 60.7% two quarters later.

Mining reveals a similar story – the biggest players[39] are slightly more exposed than their supermajor counterparts but it is really smaller operations that are most sensitive to tenure-related risks. They generally have higher debts and less predictable earnings. In some instances their activities are also very concentrated geographically. Any financial problems are exacerbated by the widespread belief that mining may be seeing a cyclical decline. Dampened Chinese and European demand is leading a number of investors and ratings agencies to question how some mining groups can support the ambitious and aggressive strategies they have undertaken.

In contrast to mining and petrochemicals most forestry companies working in lumber and forest products have relatively low capital requirements. However, many of these geographically-concentrated companies have struggled to turn a profit as the sector comes under increasing pressure to improve transparency and traceability.[40]

Businesses involved in the processing side, particularly pulp and paper, have higher levels of debt. Companies headquartered in developed countries, and especially in Europe, appear to be financially exposed following successive annual losses. This is a result of a slump in the industry in combination with the intense competitive pressure from the emerging economies, and companies like Asia Pulp and Paper, which are taking advantage of weak accountability mechanisms to avoid regulation.

Infrastructure

Infrastructure investments generally demand extensive public involvement and guarantee. For example, a large number of infrastructure projects in the developing world are now financed by preferential loans from the development banks of emerging economies like China, India and Brazil. These deals often come with a stipulation that only companies from the donor country should be allowed to execute the contract (see for example page 31), or that the loan is collateralized by natural resource.[41]

However, infrastructure has been associated more than any other sector with violent tenure-related conflict. And regardless of the financing for the project as a whole, private construction firms and their suppliers are can be highly leveraged and are often exposed to the risks posed by these

[39] BHP Billiton, Anglo American, Rio Tinto, Vale

[40] Interview with James Hewitt. Examples of struggling companies include Eacom Timber, Merdeka Resources and PNG Resources

[41] http://crgp.stanford.edu/publications/articles_presentations/Orr_Kennedy_proof.pdf; http://www.worldbank.org/en/news/2008/07/10/new-financiers-narrowing-africas-infrastructure-deficit; http://www.ppiaf.org/sites/ppiaf.org/files/publication/Gridlines-43-Finance%20Infrastructure%20in%20Africa%20-%20VFoster.pdf;

conflicts. Efforts to minimize operational challenges by shipping in compliant workers and using trusted foreign suppliers have backfired, creating meaningful popular resentment and unrest. Infrastructure therefore provides some compelling cases of financial losses generated by tenure risk, such as the SN Power dam and TIPNIS road (see pages 25 and 31 for more detail).

SECTION FOUR:
CASE STUDY ANALYSIS

To develop a better understand tenure risks, we analyzed five case studies which have informed our approach. These cases confirm our modeling and lend empirical support to earlier statements on the actions and financial losses taken by some firms and investors interested in acquiring land in developing countries.
These cases were selected on the basis of the relative abundance of information available on them. We recognize that the poor availability of data on land investments is an obstacle to this work, but we have attempted to provide examples which provide an insight into a different sectors and political settings. At least one example is drawn from each of Latin America, Africa, and Asia – the regions that are most under pressure from rising international land investments – and at least one is taken from each of the sectors most closely associated with tenure disputes: agriculture, infrastructure and the extractive industries.

These examples have not been selected for dramatic effect – they describe recognizable experiences for many investors or operators caught in a protracted tenure dispute.[42]

These cases are divided into two broad categories. On the one hand two cases, Sime Darby in Liberia and the TIPNIS road project in Bolivia, display financially significant disruptions. On the other, three cases – Vedanta, SN Power and SEKAB – provide examples of extreme events, or fat tail risks, which have culminated in forced withdrawal. We highlight the financial implications of tenure disputes but we also lay the foundations for more effective risk mitigation in the future by underlining the causes of these losses.

The focus is on agriculture, infrastructure and the extractive industries because they are key drivers of land-use change and because the connection between these sectors and processes like deforestation is becoming devastatingly clear. For many actors within these industries, land in low-risk areas, where tenure rights are clear and undisputed, has become too expensive. They have therefore been particularly prominent in the global land rush.[43] Unfortunately many have identified an opportunity to take advantage of less-stringent developing country regulations.[44] In exploiting this opportunity, these sectors have propagated socially- and environmentally-damaging activities.

[42] For this reason we have decided to exclude cases like Daewoo in Madagascar, in which a tenure dispute led to the fall of the national government. We have also excluded rare mega-projects, like the Belo Monte dam in Brazil.

[43] See for example Schoneveld (2011), *The Anatomy of large-scale land acquisitions in sub-Saharan Africa,* CIFOR; Cotula (2012), *The international political economy of the global land rush: A critical appraisal of trends, scale, geography and drivers,* Journal of Peasant Studies, DOI:10.1080/03066150.2012.674940

[44] Zagema (2011) *Land and Power: The growing scandal surrounding the new wave of land investments,* Oxfam

Forced Withdrawal

Vedanta (India)

Vedanta is a large metals and mining firm with an emphasis on bauxite and zinc. Its Indian operations are a cornerstone of its business[45] but the company's attempts to access and refine bauxite in Orissa have led to large-scale local opposition. This unrest, along with substantial international reaction, eventually convinced the national government to investigate the issue of tenure disputes. Following a damning report by the Ministry of Environment and Forests, ministers denied Vedanta access to forest reserves. The company also suffered from high-profile disinvestments [46] as a result of NGO campaigns and reputational damage.[47]

This case is particularly significant because credit ratings agencies reacted to tenure-related losses by putting Vedanta on negative outlook. When it published this decision, Standard and Poor's said that 'operational risks in Vedanta's metals and mining businesses in India are growing' and it specifically mentioned 'regulatory hurdles regarding mining licenses'[48]. This statement comes at a time when Vedanta's credit worthiness is coming under increasing scrutiny as a result of its aggressive financing approach.[49]

The problem for Vedanta was that the bauxite reserves it wanted in the Niyamgiri hills lay under land of high cultural and spiritual importance to indigenous peoples. Mining operations would have deprived these communities of the land on which they have lived and relied for generations.[50] Vedanta could have made an effort to mitigate the social and environmental impacts of its activities, but it seems to have viewed these activities as too costly.

Even though Vedanta was aware of these objections, the company completely failed to include the largest indigenous groups, the Kutia and Dongaria Kondh, in the consultation processes. Vedanta also failed to implement proper safety measures for infrastructure and waste management, resulting in fatal road accidents and official reprimands from the Orissa State Pollution Control Board. In addition to numerous compensation claims, the local population responded with direct action. By blocking road and rail connections they effectively brought operations to a halt.

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[45] http://www.vedantaresources.com/where-we-operate.aspx; Reuters regularly describes them as an "India-focused miner" (e.g. http://uk.reuters.com/article/2012/04/10/uk-vedanta-output-idUKBRE83907620120410?type=companyNews)

[46] Church of England; Norwegian pension fund; (http://www.minesandcommunities.org/article.php?a=9871); Rowntree Trust; the Marlborough Ethical Fund; and Millfield House Foundation and PGGM - http://www.survivalinternational.org/news/5563); Martin Currie; and BP [reduced holdings] (http://www.survivalinternational.org/news/5518); see also http://www.pirc.co.uk/news/vedanta-agm-28th-july

[47] E.g. those by Amnesty International and Survival International

[48] Standard and Poor's, *Research Update: Vedanta PLC*, 2012

[49] http://www.ft.com/cms/s/0/59656a32-9b62-11e1-b097-00144feabdc0.html#axzz1upZnQD1S

[50] Data collated from the DKDA (Dongaria Kondh Development Agency, a government body) and the Forest Department shows that, of the total Dongaria population of the 7952, at least 1453 Dongaria Kondh live in villages in and around the Forest Blocks of the proposed mining lease area

The case had by now attracted international concern and national government oversight. Vedanta's application to mine in the Niyamgiri Hills was rejected by the Government of India's Ministry of Environment and Forests[51] on several counts. The company had glossed over the issue of disputed tenure rights and fabricated claims that the project would not require any community displacement at all. Besides which, the Ministry of Environment and Forests' report pointed to the damage the project would have done the natural heritage of local communities.

Local people felt betrayed by the deals the subnational government brokered with Vedanta and subsequently the company's actions have been connected with an upswing of the Naxalite insurgency in Orissa, as locals looked to alternative structures of authority to represent their interests. Despite earlier support, the Indian government was forced to take punitive action against Vedanta to protect its own legitimacy. This shift in stance brought the whole project crashing down.

SN Power (Chile)

SN Power is a renewable energy company that focuses on hydropower. It claims to specialize in generating holistic gains in risky emerging markets.[52] The business is owned by two Norwegian state entities, Statkraft and Norfund, and operates in 14 countries. SN Power became active in Chile in 2005 and, in 2006, took over 80% ownership of a portfolio that included plans for the Maqueo hydroelectric plant. However, following a botched consultation and sustained local opposition, SN Power was forced to withdraw, writing off significant losses.

From a quantitative perspective the most important loss came as an opportunity cost. Between 2006 and 2011, SN Power maintained plans to invest over $1 billion in Chile, its most sizeable overseas venture ever.[53] While this does not mean that it had set that full amount aside, these plans must have excluded participation in other prospects. When the investment disintegrated, the financing set aside therefore became a sizeable opportunity cost.

SN Power failed to recognize that ancestral lands are central to the culture of the Mapuche. It also failed to realize the need to change the image of foreign hydropower projects following the construction of a series of controversial dams by ENDESA.[54] The company compounded its error

[51] http://moef.nic.in/downloads/public-information/Saxena_Vedanta.pdf

[52] http://www.snpower.com/about-us/; http://www.snpower.com/sustainability/society-and-the-environment/community-development/default.aspx; SN Power is also an active member of Transparency International and the UN Global Compact, at times working closely with the UNDP

[53] http://www.bnamericas.com/news/electricpower/Trayenko:_400MW_Maqueo_to_start_up_in_2016

[54] See Haughney D (2012) "Defending territory, demanding participation: Mapuche struggles in Chile", *Latin American Perspectives*; http://www.historiaecologica.cl/Ralco%20(Aylwin).pdf ; http://www.realeyz.tv/en/blog/green-moviesenvironmental-films/the-biobio-dam-construction-project-in-chile-the-endesa-and-the-impending-fusion-with-the-german-energy-corporation-e-on.html

by deciding not to follow its own performance standards, preferring instead to exploit deficiencies in the national framework.[55] SN Power attempted to overhaul its approach in May 2010, but the damage had already been done and it proved too difficult to regain local trust.

The Mapuche are by far the largest indigenous group in Chile and they have a long history of disputes with the state over tenure. The twentieth century was characterized by ebbs and flows in their struggle for greater recognition of their rights and autonomy. Their situation has improved since the 1993 Indigenous law, or Ley Indigena[56] but tactical use of violence, including arson, has been a feature of Mapuche resistance strategies.[57]

Indeed, at the time that SN Power became involved in Chile, the Mapuche were involved in violent disputes over land with foreign forest companies and large Chilean farmers.[58] The Mapuche also use more sophisticated approaches to delivering change, linking up with NGOs and local civil society groups to form a powerful constituency.[59]

The Mapuche have developed a strong distrust of state enforcement authorities.[60] This explains why they took a particularly dim view of the fact that SN Power employees were consistently accompanied by Special Forces and riot police during their consultation exercises. SN Power in part struggled to reach project completion because it was undermined by the local reputation of its counterparty, the Chilean government.

At their very first meetings with company representatives the Mapuche were informed that SN Power had begun survey work without consent.[61] This surveying may have been necessary to provide answers to a range of questions that the Mapuche were likely to ask, such as the size of the reservoir and the impact on water availability, but this unilateral approach proved extremely problematic.

SN Power responded to initial rebuff by deliberately adopting a divisive approach. It attempted to discredit legitimate community leaders and supplant them with more compliant individuals.[62] This backfired, and the company became the focus of unified community discontent, which

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[55] Larraine and Schaffer: (2010) *Conflicts over water in Chile: between human rights and market rules*, Chile Sustentable: p51

[56] See Haughney D (2012) "Defending territory, demanding participation: Mapuche struggles in Chile", *Latin American Perspectives*: p3

[57] http://www.speroforum.com/a/20549/Mapuche-struggle-for-autonomy-in-Chile

[58] http://www.historiaecologica.cl/Ralco%20(Aylwin).pdf; http://www.globalpost.com/dispatch/chile/090817/indigenous-mapuche-land-battle

[59] Carruthers and Rodriguez (2009), *Mapuche Protest, Environmental Conflict and Social Movement Linkage in Chile,* Third World Quarterly, available at http://patriciarodriguez.net/Jan09TWQ-Mapuche.pdf

[60] http://www.speroforum.com/a/20549/Mapuche-struggle-for-autonomy-in-Chile

[61] http://senseofirony.blogspot.it/2008/02/true-face-of-nils-huseby-and-sn-power.html

[62] http://www.mapuche.info/index.php?kat=8&sida=77

included eco-tourism operators and farmers. By that point the company had lost its license to operate, and its machinery was being removed by members of the community, making surveys increasingly problematic.

One of the most influential developments in SN Power's decision to withdraw came when Mario Marchese, the subsidiary manager, was shot at in Santiago by a gunman claiming affiliation with Coordinadora Arauco-Malleco (CAM) – a Mapuche organization dedicated to the recovery of Mapuche land.[63] SN Power decided to suspend operations and reform its approach as of May 2010.[64] Although the company claims to have made progress since this change, it was unable to generate enough momentum to push the project forward. In April 2011 SN Power announced it was abandoning its investment, effectively writing off a loss of NOK 130M for 2010 alone.[65]

The fact that a company with such significant expertise of operating in developing countries has failed to account for the risks around tenure governance supports the argument that tenure is an issue that currently sits in a blind spot of risk assessment and requires some special consideration. SN Power itself now recognizes that its approach was flawed and admits that it needed dedicated external assistance.[66]

SEKAB (Tanzania)

SEKAB is the largest importer of biofuels in Europe, supplying over 90% of Sweden's ethanol demand. Swedish municipalities own 70% of the company, with the remaining 30% held by a company called EcoDevelopment.[67] In 2005 SEKAB initiated plans to lease an initial 22,000 hectares of arable land in Tanzania for the production of sugar-based first generation biofuels, with plans to expand with another acquisition of 400,000 ha.

However, the company failed to complete feasibility studies and submitted a disingenuous impact assessment. As a result, SEKAB was denied access to land and to a credit guarantee necessary to finance the project. This forced the company to pull out of Tanzania and the East African region, writing off a loss of at least $20m in the process.[68]

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[63] http://www.santiagotimes.cl/business/48-other-news/12656-CHILE-BUSINESSMAN-SHOT-AT-IN-LAS-CONDES; http://patagonia-under-siege.blogspot.it/2008/01/sn-power-statkraft-norfund-to-cancel.html - CAM leaders denied responsibility and dissociated themselves from the assailant

[64] Threats to employee safety are treated very seriously by risk professionals, particularly CRAs.

[65] http://www.development-today.com/magazine/2011/dt_6/news/sn_power_writes_off_loss_of_nok_130m_exits_trayenko_project_in_chile

[66] For example SN Power Chile's Assistant Manager for Corporate Responsibility has since stated that 'we can see that it is highly necessary to design and implement strategies, methodologies and tools to establish a relationship with the community, particularly in multicultural contexts, from an early stage in the project development... a well prepared team plus expert input is very important' – Miquel, *The Journey of SN Power Draft*, SN Power and IAIA conferences. See also http://www.iaia.org/conferences/iaia11/proceedings/presentations/SNP%20journey%20presentation.pdf

[67] http://www.nai.uu.se/research/areas/land_governance/Final-report-project-SEKAB-experiences-in-Tanzania.pdf

[68] http://www.development-today.com/magazine/2009/DT_12/Business/4644

This case demonstrates two important aspects of our quantification approach. First, the fraudulent impact assessment would have rendered any political risk insurance void, even in the absence of coercive action. Second, since the biofuels produced from this project would not have met EU Sustainability Criteria[69] on transparency or appreciation of local needs, market access would have been heavily curtailed.

SEKAB ran into difficulties following its attempts to take advantage of the current lack of policy support for land acquisitions in Tanzania.[70] Rather than contribute to the regulatory improvement of tenure governance in Tanzania, funded by the Norwegian and Swedish governments, SEKAB attempted to find loopholes. It started by acquiring 22,000 hectares of land in the Bagamoyo district from the Revolutionary Government of Zanzibar. This land had been part of a people's ranch and was used by a large number of customary owners.

Village and district officials soon became concerned that they were being deliberately by-passed. When SEKAB began to acquire a larger 400,000 hectare plot, it negotiated directly with villagers[71]. However, further investigation revealed that 18 villages had assigned almost all of their land to SEKAB.[72] These villagers were not informed that they were giving up their rights of access to virtually all of the natural resources around them, including the land they used to grow food and the firewood that provided their primary source of energy. [73] By putting local food security in such jeopardy, any biofuels produced on this land would have been disqualified from lucrative European markets.[74]

The problems really started for SEKAB when it emerged that it had tampered with an independent environmental and social impact assessment (ESIA) for its Bagamoyo project compiled by consultancy firm ORGUT, leading to a legal dispute.[75] Submitting this fraudulent assessment would have voided the company's political risk insurance. It would also have contravened EU biofuels directives on transparency, accountability, and social welfare, thereby heavily curtailing SEKAB's market access.[76]

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[69] The EU has demanded that the biofuels it imports meet standards for environmental protection and social wellbeing. For detail see European Union Biofuels Sustainability Criteria, *Directive 2009/28/EC*

[70] http://www.nai.uu.se/research/areas/land_governance/Final-report-project-SEKAB-experiences-in-Tanzania.pdf; Maliano et al., *Biofuels and Neo-colonialism*, available at https://docs.google.com/document/pub?id=1xTEIeJ5bzeURSZJSGZ4QKufgSm37Z3aOeKrpnYLF8Uo&pli=1

[71] Suelle and Nelson (2009), *Biofuels Land Access and rural livelihoods in Tanzania*, IIED: p48-54, available at http://pubs.iied.org/pdfs/12560IIED.pdf

[72] Suelle and Nelson (2009), *Biofuels Land Access and rural livelihoods in Tanzania*, IIED: p51available at http://pubs.iied.org/pdfs/12560IIED.pdf

[73] http://farmlandgrab.org/post/view/3032

[74] European Union Biofuels Sustainability Criteria, *Directive 2009/28/EC*: Article 1, Paragraph 9; Article 23, Paragraph 1 & 2; Article 17, Paragraph 7; see also http://www.cifor.org/publications/pdf_files/WPapers/WP75German.pdf

[75] http://www.development-today.com/magazine/2009/DT_4/Business/4304; http://www.development-today.com/SEKAB_biofuel_affair

[76] European Union Biofuels Sustainability Criteria, *Directive 2009/28/EC*: Article 18, Paragraph 5

In the fallout of this dispute it became evident that SEKAB intended to clear forested grassland and to expand into sensitive biodiversity hotspots. In the process the Wami River would be over-exploited to sustain the thirsty sugar crops, with a devastating impact on wildlife in the Saadani national park.[77] Finally, excessive nitrogen and pesticide run-off would damage local ecosystems, including wetland mangrove forests and coral reefs.

These factors, along a remarkable failure to complete a financial feasibility study, contributed to the Swedish International Development Cooperation Agency's (SIDA) decision to reject SEKAB Tanzania's applications for credit enhancement in October 2009.[78] The guarantee was crucial to the viability of the project because it allowed access to capital from Tanzanian banks.

Upon its refusal SEKAB announced that it would pull out of East Africa. Unable to find any willing buyers for such problematic and uncertain projects, SEKAB was forced to sell assets for a nominal price and at a loss of over $20m.[79]

SEKAB lost not only a substantial amount of money but also a very good reputation. It had recently won a "Sustainable Bioethanol Award", and was looking for development finance for equity.[80] Subsequently the company has been involved in lawsuits and has lost the support of both SIDA and the Swedish public.

Its finances were already weak following a bruising experience of the financial crisis. Now it seems likely that the company will be taken over by foreign buyers, with municipal owners keen to reduce their exposure.

Delays and disruptions

Sime Darby (Liberia)

In 2009 Sime Darby, the world's largest palm oil producer, signed a 63-year concession agreement with the government of Liberia for 220,000 hectares of land to be developed into oil palm and rubber plantations. It announced its intention to invest $3.1bn in its Liberian operations over 15 years, and promised to create around 35,000 jobs.[81]

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[77] Maliano et al., *Biofuels and Neo-colonialism*, available at https://docs.google.com/document/pub?id=1xTEIeJ5bzeURSZJSGZ4QKufgSm37Z3aOeKrpnYLF8Uo&pli=1

[78] Indeed they said that SEKAB's application documents made it "impossible to assess the economic, social as well as the environmental sustainability of the proposed intervention, see http://www.nai.uu.se/research/areas/land_governance/Final-report-project-SEKAB-experiences-in-Tanzania.pdf

[79] http://www.development-today.com/magazine/2009/DT_12/Business/4644

[80] http://www.sekab.com/about-us/our-history; http://www.development-today.com/SEKAB_biofuel_affair

[81] http://af.reuters.com/article/liberiaNews/idAFN1925797320110519

Due to serious inadequacies in the consultation process and in the delivery of compensation, these operations have been repeatedly disrupted by tenure disputes. While the company claims to be committed to Liberia, continuing problems would add to already substantial financial losses and so would surely lead the company to question its future in the country.

In addition to the direct losses caused by these disruptions and delays, financiers will now view this operation as riskier than they had before. Frequent disruptions have pushed Sime Darby behind schedule and at the end of last year the company was forced revaluate its approach following an official complaint by local communities to the Roundtable on Sustainable Palm Oil (RSPO) in October 2011.[82]

When 700 contractors joined local communities in a riot in December, seizing equipment and endangering Sime Darby employees, the company implemented a suspension of operations which it had considered since October.[83] After three months Sime Darby started to ramp up operations again, but at this time many operations, such as the plantations in Grand Cape Mount, are not up to strength.[84]

By assuming that national government assent was sufficient for smooth operations, Sime Darby left itself vulnerable to counterparty risk. The national government was not a legitimate or transparent representative of the local people and so the company's failure to establish direct lines of communication with the local population generated substantial financial risks. Indeed, it appears that even the local government, which struggled to maintain contact with Sime Darby representatives, is now requesting that Sime Darby lives up to its side of the bargain by delivering fair compensation.[85]

The company failed in its duty to inform to the extent that members of the local population were surprised when clearing work started.[86] They were further dismayed when they saw how much land had been allocated to them for subsistence farming and how little they would get in the way of compensation.[87] However, there were no means available for discontented people to address their

[82] http://www.forestpeoples.org/sites/fpp/files/publication/2011/10/sime-darby-complaint-liberia-affected-communities-oct-2011.pdf; see also http://www.oxfam.org/en/pressroom/pressrelease/2011-10-14/palm-oil-company-redress-violations-communities-rights-indonesia

[83] Center for International Conflict Resolution, *"Smell-no-taste": The Social Impact of Foreign Direct Investment in Liberia*, Colombia School of International and Public Affairs: p38,42,46

[84] http://www.frontpageafricaonline.com/index.php?option=com_content&view=article&id=2874:sime-darby-stumbles-in-grand-cape-mount-residents-claim-firm-neglects-promises&catid=43:business&Itemid=126; http://theinquirer.com.lr/content1.php?main=news&news_id=113

[85] http://www.frontpageafricaonline.com/index.php?option=com_content&view=article&id=2781:i-have-no-right-to-cancel-sime-darby-deal--sen-johnson-lashes-at-critics&catid=61:county-news&Itemid=131

[86] Some reports describe local residents walking out of their homes to find bulldozers, unexpectedly, on their doorstep

[87] http://www.guardian.co.uk/global-development/2012/feb/29/liberia-land-deals-could-seed-conflict

grievances to Sime Darby.[88] The dispute between local people and Sime Darby therefore escalated from low-level operational disruption and legal dispute to a violent series of events.

Throughout, Sime Darby has stuck to the line that it is in the right because it had not 'evicted any *legal* landowners nor relocated *legal* residents' (emphasis added).[89] Such an inflexible and insensitive response has subjected Sime Darby's Liberian operations to face substantial tenure risk. Local discontent has certainly not been quelled and so operational disruptions and reputational damage in the future should be expected. Without a reformed attitude, it is likely that the same problems will afflict its proposed investment in Cameroon.[90]

The TIPNIS Road project (Bolivia)

In an attempt to improve infrastructure connections between the North and South of the country, the Bolivian government announced plans for a 300km road which would cut straight through the Isiboro Sécure National Park and Indigenous Territory (Territorio Indígena y Parque Nacional Isiboro Sécure or TIPNIS).

The proposed project would cost $415m of which $332m would be provided by BNDES, the powerful and prevalent Brazilian development bank. This financing came with the condition that a Brazilian construction firm was employed to deliver the road. At present, following well-organized local resistance and the dismissal of Brazilian contractor OAS, the project is on hiatus.[91]

The salient aspect of this case is the extraordinary length of time lost to disruption. A contract between the Bolivian government and OAS was first signed in 2008. Since then construction work has been very limited and it seems unlikely that the road will be finished. This may be surprising given that the project is driven by the Bolivian government. However, this case shows very clearly that even the full powers and resources of state are not sufficient to mitigate tenure risk in the absence of a well-designed and widely-accepted process.

Evo Morales' government made no attempt to enforce its own law on mandatory consultations with indigenous communities.[92] It even failed to complete or publish basic impact assessments for the TIPNIS road. As a result, many inhabitants of TIPNIS felt shock and betrayal when they heard the plans. In response, the highland indigenous confederation CONAMAQ announced in

[88] Center for International Conflict Resolution, *"Smell-no-taste": The Social Impact of Foreign Direct Investment in Liberia*, Colombia School of International and Public Affairs: p42

[89] http://www.simedarby.com/False_and_Inaccurate_Reports_on_Liberian_Operations.aspx

[90] http://www.bloomberg.com/news/2011-02-28/sime-darby-considers-2-46-billion-cameroon-palm-oil-plantation-ft-says.html

[91] http://nacla.org/blog/2012/4/16/new-twist-tipnis-road-bolivia-cancels-highway-contract

[92] http://www.ftierra.org/ft/index.php?option=com_content&view=article&id=6272:rair&catid=98:noticias&Itemid=175

July 2011 that it would participate in a national march opposing the project. The march began on August 2011 arriving in the capital, La Paz, on October 19th.

In September it began to draw substantial support from the Bolivian public, as a result of the government's crude and oppressive crackdown. Indeed the case became so high profile that the Interior Minister resigned in response to public anger, while the Minister of Defense chose to resign in solidarity with the indigenous peoples of the area.[93] In desperate recourse to this political crisis Morales suspended the project and pushed through law 180, known as Ley Corta, making road construction in TIPNIS illegal.[94]

This decision critically undermined the outlook of the project but prospects were further damaged when, in April 2012, the Bolivian government cancelled OAS' contract, on grounds of non-compliance. OAS had already been paid at least $16m, some claim much more[95]. However, Bolivia also lost access to the $332m pledged by BNDES. Due to the politically-motivated nature of these actions, the Brazilian authorities subsequently indicated that the decision would have a negative impact on Brazil's investment in Bolivia.[96]

Financing for the project may still be available, but completion has certainly been jeopardized.[97] Morales has pointed to the CONISUR march in April, which included communities from TIPNIS, as a justification for putting Ley Corta to referendum.[98] However, the prospect of prolonged and potentially violent internal dispute over the project has done little to assure external investors, who are generally steering clear.[99]

Costly rerouting may now be the only solution short of total abandonment. Had greater consideration been devoted to tenure rights in the design process, the parties pushing the TIPNIS road forward might have saved a huge amount of money, as well as political capital. Furthermore, they would have a much greater chance of completing the job, which now appears to be a remote prospect.

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[93] http://www.bbc.co.uk/news/world-latin-america-15144719; http://www.businessweek.com/news/2011-10-21/morales-agrees-to-reroute-bolivian-highway-after-protests.html;

[94] http://www.businessweek.com/news/2011-10-21/morales-agrees-to-reroute-bolivian-highway-after-protests.html

[95] http://www.bolpress.com/art.php?Cod=2012041008; http://nacla.org/blog/2012/4/16/new-twist-tipnis-road-bolivia-cancels-highway-contract

[96] http://www.valor.com.br/internacional/2610616/bolivia-rompe-com-oas-e-gera-mal-estar-com-brasil; http://www.lostiempos.com/diario/opiniones/editorial/20120411/el-controvertido-contrato-con-oas_167388_351158.html

[97] http://nacla.org/blog/2012/4/16/new-twist-tipnis-road-bolivia-cancels-highway-contract

[98] http://nacla.org/blog/2012/1/20/bolivia%E2%80%99s-tipnis-highway-redux

[99] Monday, April 16, 2012, Catherine Setterfield, Business News Americas; http://www.nacla.org/blog/2012/5/23/bolivia%E2%80%99s-tipnis-march-changing-political-environment; http://www.lostiempos.com/diario/opiniones/editorial/20120411/el-controvertido-contrato-con-oas_167388_351158.html

APPENDIX: SAMPLE FINANCIAL RESILIENCE DATA[100]

Agriculture

Industry	Company	Asset-to-debt ratio (%)	Debt/EBITDA ratio (%)
Diversified	Nestlé	19.55	3.59
	Unilever	28.87	4.11
	Kraft	29.32	7.32
Fruit	Dole	39.1	9.69
	Chiquita	28.8	8.45
	Del Monte	32.5	3.59
Processing	OLAM	58.2	13.52
	Marfrig	50.22	10.11
Biofuels	Sime Darby	20.36	3.12
	IOI Group	27.64	3.00
	Cosan	37.64	5.7

Extractive Industries

Industry	Company	Asset-to-debt ratio (%)	Debt/EBITDA ratio (%)
Oil and gas	Anadarko	28.2	4.54
	Salamander Energy	28.76	2.47
	GALP	25.42	7.22
Mining	Imerys	29.5	7.23
	Newmont	21.2	5.61
	Vedanta	36.9	11.41
Forestry (timber)	PNG Resources	31.86	-46.82
	Merdeka Resources	32.99	-39.61
Forestry (pulp and paper)	Oji Paper	49.99	12.47
	Weyerhauser	35.88	10.78

[100] Data accessed at http://www.bloomberg.com/markets/

Infrastructure

Company	Asset-to-debt ratio (%)	Debt/EBITDA ratio (%)
ACS	36.3	18.44
Larsen and Toubro	35.24	13.57
Kajima	34.7	35.7
Spark	41.74	43.93