QUANTIFYING THE IMPACT OF MORE STRICTLY ENFORCED ENVIRONMENTAL REGULATION

SIGNATORY TYPE
Asset Manager

OPERATING REGION
Brazil

ASSETS UNDER MANAGEMENT
BRL463.3 billion (USD121.0 billion)[1]

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Itaú Asset Management (IAM)'s ESG integration process began in 2004 with the launch of our first SRI equity fund, which served as a laboratory to develop our ESG capabilities. Since 2010, we have been expanding our proprietary ESG integration method to listed equity valuation, credit and, most recently, sovereign bonds. We apply ESG integration to 100% of the IBOVESPA and Corporate Sustainability (ISE) indexes, 70% of our corporate bonds portfolio and 100% of Brazilian sovereign bonds.

The PRI's Fixed Income Case Study series highlights examples of interesting and innovative approaches to responsible investment. Written by fixed income practitioners from around the world, the case studies cover topics such as integrating ESG, negative and positive screening, thematic investment and engagement.

Sharing these examples will enable investors to collectively build a concept of emerging good practice. The PRI aims to publish a set of these short pieces every quarter. If you would like to learn more or contribute your own case study please contact us.

1 Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais (ANBIMA), October, 2015. Utilizing FX rate of 3.83BRL/USD.

WHY STRICTER ENVIRONMENTAL REGULATION MATTERS FOR BRAZILIAN FUEL RETAILERS

Producing and trading liquid fuels represents 5.6% of Brazil's GDP (2014)[2], with the fuel retailers, the service stations, one of the sector's most important agents. Though environmental laws determine that they must have environmental licenses[3], primarily due to the risk of soil contamination, this regulation has historically been under-enforced by the responsible environmental agencies due to their limited resources and reach. The National Agency for Oil, Gas and Biofuels (ANP), responsible for the supervision of stations, in 2014 performed 11,973 inspections with 24% resulting in penalties, mainly due for improper infrastructure and irregular documentation.

However, in August 2015, ANP declared that it would demand environmental licenses from service stations during its inspections. Since many stations were built in the 1970s, when the technology and awareness to avoid soil contamination was limited, and the environmental licensing law for them came into force in 2000, it is expected that 20%-30% of these stations have already contaminated the soil[4].

One study estimates that 75% of the contamination of underground water is from service stations[5].

HOW WE INTEGRATE ENVIRONMENTAL REGULATION CONSIDERATIONS INTO FIXED INCOME ANALYSIS

Our ESG Integration Method in Fixed Income estimates the impact of these issues directly into companies' cash flows, which allows us to analyse how they affect traditional credit/solvency ratios such as debt/equity, net debt/EBITDA or EBITDA/interest expenses.

We monitor eight cross-sector social and environmental "dimensions", allowing our team to identify ESG risks and opportunities such as water stress, community unrest or customer rights before they materialise in balance sheets.

These risks/opportunities can materialise in different forms, such as unplanned capex, operational restrictions, opening of new markets or reputational impacts. For this reason, we track the ESG trends in various economic sectors and create scenarios for how different issues will evolve and how companies respond.

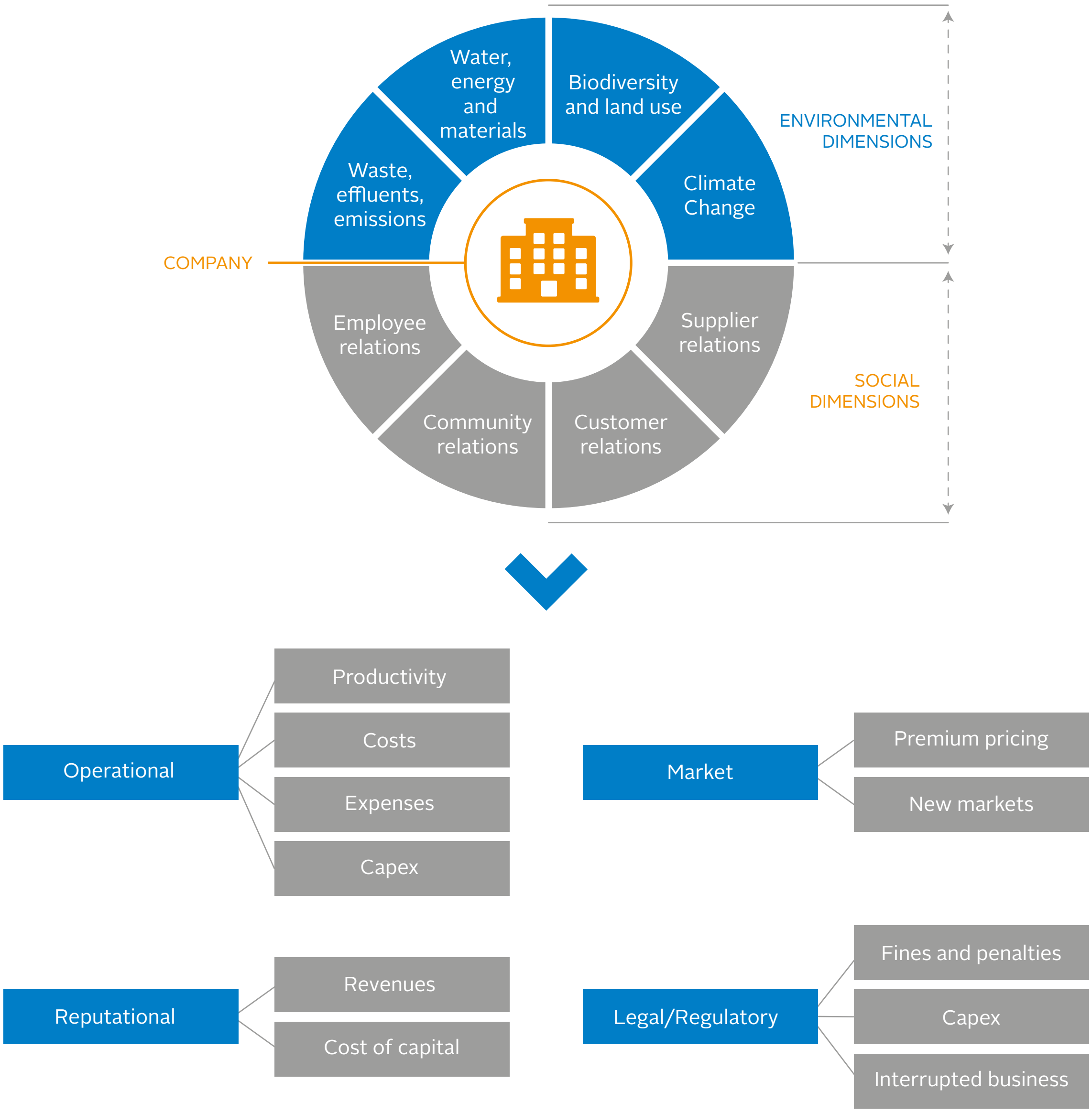
2 http://www.fecombustiveis.org.br/relatorios/relatorio-anual-da-revenda-de-combustiveis-2015/

3 Service station's licensing process is regulated by a specific resolution (nº273/2000) from the National Environmental Council (CONAMA), which was updated by resolutions nº276/2001 and nº319/2002.

4 http://www.hidro.ufcg.edu.br/twiki/pub/ASUB0/ASUB-AL/formatado.pdf

5 http://oglobo.globo.com/economia/falta-de-licenca-ambiental-pode-fechar-ate-40-dos-postos-de-gasolina-17060775

Eight cross-sector social and environmental dimensions to identify ESG risks



THE IMPACT OF STRICTER ENVIRONMENTAL LEGISLATION ON BRAZILIAN FUEL RETAILERS

We first estimated the impact of soil contamination by service stations (included under the "Waste, effluents and emissions" dimension of our ESG radar) while analysing the fuel distribution and retail sector in 2014. We calculated the fines and decontamination costs, as well as how they affect the debt ratios of these firms.

To explore the potential impact of ANP's new regulation on the cash flow of the firms for the next five years , we updated the model to consider stronger enforcement towards environmental licenses and best practices to avoid/ mitigate soil contamination.

The assumptions we used to estimate the financial impact of the original and updated model are:

- **BRL10,000 penalty for service stations without environmental licenses**

Even though environmental licenses will be necessary for service stations to operate, Fecombustíveis highlighted that most will not be able to meet the new standards in the short term. It is also reasonable to assume that the entities responsible for issuing the licenses will have limited capacity to deal with the considerable increase in demand. Therefore, in the short/medium term, it is expected that these service stations will be financially penalised instead of being unable to operate. The estimated value of the penalty is based on a large number of past cases.

- **BRL250,000 penalty for decontamination and adaptation costs for the new regulation**
ANP and Fecombustíveis estimated these costs.
- **40% of each company's service stations not having environmental licenses and 30% having to deal with decontamination costs**
These values are based on the national average (because neither company detailed below discloses this information already nor did so on request).
- **Growth in net debt and EBITDA based on CAPEX and development expectations for the sector, respectively**
These factors are considered in all scenarios described below.

RESULTS

The following tables analyse the impact on two companies under three different stress scenarios:

- **Ex-ESG Analysis** Environmental licensing enforcement is not considered, only growth in net debt and EBITDA.
- **ESG Baseline** The financial impact considering the enforcement of environmental licensing as in 2014.
- **ESG Stress** The total financial impact of ANP's new regulation, considering all service stations without licenses and with soil contamination will demand investment.

6 We calculated the effect for each year individually, not the cumulative effect along a five-year course.

COMPANY 1

DEBT INDICATORS (SCENARIOS)	BASELINE YEAR	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Net debt / EBITDA (1)	**3.98**	4.01	4.04	4.08	4.11	4.14
Net debt / EBITDA (2)		4.47	4.49	4.51	4.54	4.56
Net debt / EBITDA (3)		5.56	5.55	5.53	5.52	5.51
EBITDA / Interest expenses (1)	**1.51**	1.50	1.49	1.48	1.46	1.45
EBITDA / Interest expenses (2)		1.35	1.34	1.33	1.33	1.32
EBITDA / Interest expenses (3)		1.08	1.08	1.09	1.09	1.09

(As of November 2015)

COMPANY 2

DEBT INDICATORS (SCENARIOS)	BASELINE YEAR	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Net debt / EBITDA (1)	**1.75**	1.85	1.96	2.08	2.21	2.34
Net debt / EBITDA (2)		1.98	2.09	2.21	2.34	2.48
Net debt / EBITDA (3)		2.23	2.35	2.48	2.62	2.76
EBITDA / Interest expenses (1)	**3.91**	3.69	3.48	3.28	3.10	2.92
EBITDA / Interest expenses (2)		3.46	3.27	3.09	2.92	2.76
EBITDA / Interest expenses (3)		3.06	2.90	2.76	2.61	2.48

(As of November 2015)

ANP's new resolution has the potential to affect companies' cash flow significantly and, thus, their credit ratios. Decontamination costs and investments in infrastructure, in addition to the value of penalties, can represent relevant CAPEX or unexpected expenses, which might boost debt and interest expenses. Given these costs are similar for all companies in the sector, those with higher liquidity and better debt/equity ratios may be better prepared for the worst-case scenario.

Company 1 relies significantly more on debt to finance its operations. It has also demonstrated a lower level of management regarding soil contamination (awareness, initiatives and technology) than Company 2. In this sense, our stress scenario indicates that Company 1 could get into highly uncomfortable credit ratios and risk of breaking covenants with debt-holders.

A bond investment in either company would need to be backed by a strong due diligence scrutinising environmental licenses, along with company engagement to obtain an adequate action plan for mitigating such risks. The investment decision is a responsibility of the credit committee, which takes into account the ESG analyst's analysis on the subject.

To avoid higher impacts, companies will have to invest in adapting the older service stations in their portfolio, whilst considering best practice and technologies in the development of new ones. Such issues must also be considered when acquiring non-branded stations.

This Institution has adhered to ANBIMA's Regulation and Best Practices Code for Investment Funds.

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