

FINANCING IN A SUSTAINABLE BUILDING PROCESS

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Summary

The paper analyzes financing as a tool to support more sustainable construction. The process of financing, commissioning, designing, constructing, using, operating, maintaining and refurbishing buildings is long and complex. Not only are several different actors going to be involved, but the owner, the user and the operator of a building do not automatically share the same priorities. In order to fulfil sustainability criteria, it is necessary to have input at several stages of the process, starting with the investor and ending up with the criteria for purchasing the services of the caretaker of the building.

The investment decisions made at the very beginning of the process may have greatest impact. However, several other points of the process can be identified, where the financial performance of a building is impacted by decisions that have also environmental and social implications. Investors face various risks, which have relevance for the sustainable construction perspective. Hence, into some decisions that used to be taken based solely on financial merit, sustainability criteria are increasingly being introduced.

Keywords: financing, building process, sustainability criteria, risks, equity

1 Building Process

1.1 Introduction

Ideally, we'd like to see a process where, at every crucial step, the financing decisions and business models support the desired outcome, a sustainable building, instead of hampering the process. The in-built assumption in this paper is that the more rigorously and broadly sustainability criteria are being used to argue for financial decisions, the better.

Most, if not all decisions that are made to choose between different alternatives are financial decisions, as well. The b.a.u. has been that the cheapest alternative gets chosen once the minimum procurement criteria have been fulfilled. The question arises whether new criteria have to be introduced because of the financing perspective, or whether the same sustainability criteria that are used elsewhere in the process should be used for financing, as well. Or, does the financing perspective bring new key points and key actors to the sustainable building process? Further, what are the critical points in the sustainable building process from the point of view of funding and financing?

1.2 Key points in the process and the risks involved

After an analysis of a generic construction process [1], as a working hypothesis, it is assumed that the following points in the process have the most profound impact on the long-term sustainability performance of the building. Each of them is characterized by

a different kind of risk involved with it. On a project timeline, points 1-5 belong to the pre-construction phase, whereas points 5-8 involve primarily post-construction decisions:

- (1) The decision of an investor to choose, in which real estate management and development or construction or building material company to invest, or which shares to buy or get rid of (shareholder's stock market risk).
- (2) Decision of an investor (e.g. a real estate portfolio manager, an insurance company, a developer) to invest in a construction project and own the building(s) (real estate market risk, tenant risk).
- (3) The decision of a financing or funding institution (e.g. a commercial bank or a housing fund) to lend money to a building project and consider it as an asset deposited to guarantee repayment ('underwriting'), including the definition of the interest rate (credit risk, equity risk, reputation risk).
- (4) In-house decision of a developer to invest in integrated design in the early stages of a project (business risk).
- (5) Decision of the client to use sustainability criteria in the procurement of services (e.g. design team, maintenance firm) (business risk).
- (6) Decision of an investor (e.g. a real estate portfolio manager, an insurance company) to buy or to invest in an existing building (tenant risk, real estate market risk).
- (7) Decision of a financing institution (e.g. a private bank) to accept a building as collateral, or security for a loan ('underwriting', credit risk).
- (8) The evaluation of the tax authority whether a building is eligible for a reduced real estate tax rate (data risk).
- (9) Assessment of UNFCCC evaluators whether a group of buildings is eligible as a Clean Development Mechanism (CDM) project (data risk).

Below, some of these points are illustrated through criteria and company cases describing benchmarks both in and outside of the real estate and construction sectors.

2 Examples of sustainability criteria for investment

2.1 Socially responsible project finance - the Equator principles

The purpose of the Equator Principles is that the Financial Institutions such as the World Bank ought to be able to better assess, mitigate, document and monitor the credit risk and reputation risk associated with financing development projects. The Principles for determining, assessing and managing social & environmental risk in project financing, were launched in Washington, DC in 2003. The present project finance threshold is \$10 million (about 7,4 mio Euro).

The reputational risk management aspect of the principles is clearly visible from the categorization of projects that might get financed. The primary assumption is that there will be "unavoidable" adverse social or environmental impacts. In that sense the principles are not designed primarily to promote sustainability. The three categories are revealing: (A) projects with potential significant adverse social or environmental impacts that are diverse, irreversible or unprecedented; (B) projects with potential limited adverse social or environmental impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures; and (C) projects with minimal or no social or environmental impacts.

However, the list of social and environmental issues that might be addressed is broad, extending from human rights to labor issues and involuntary resettlement, impacts on indigenous peoples and efficient use of energy. [2]

2.2 Shareholder value and ‘equity portfolio risk management’

Before you buy shares in a company, you look for various ratings about the performance of the company. One of the firms publishing these ratings is Innovest of the RiskMetrics Group in New York, which evaluates also real estate and construction sector companies. Their “Intangible Value Assessment (IVATM) ratings provide investment managers and asset owners with a valuable tool to help them evaluate hidden risks and opportunities posed by the sustainability practices of their portfolio companies.”

The IVA model combines more than 120 performance factors, which cover risks and opportunities linked with all sustainability aspects. These are categorized under four major areas of focus: Strategic Governance (overall strategy, adaptability, product development and safety), Stakeholder Capital (relationship with local community, as well as partnerships, supply chain and human rights), Human Capital (employee development, labor relations and health and safety), and Environment (overall environmental impact, including strategy, governance, management systems, opportunity and risk). [3]

3 Companies investing in sustainability

3.1 Impacts of climate change.

According to Munich Re AG, one of the world's largest reinsurers, economic and insured losses caused by climate change will continue to grow. The company points to the increase, more or less tripling, in major global weather-related natural disasters since 1950. Munich Re said that losses caused by natural disasters (winter storms, hurricanes, cyclones, floods and earthquakes) cost the global insurance industry around \$22 billion in 2009, which was considered exceptionally low. "Severe weather events accounted for 45%, or nearly half, of global insured losses" in 2009. As a conclusion, the company will step up its own initiatives in fighting climate change, including investments of up to €2 billion in renewable energy. [4]

3.2 Value of real estate

If a real estate is bought or offered as collateral for a loan, reliable information about its value is needed. This is the role of property valuation and underwriting. Thomas Lützkendorf has highlighted the distinction between price, value and worth. Price is the result of negotiation between someone selling and someone else buying, it does not have to do anything with the value of a property. Worth covers further dimensions that cannot necessarily be enumerated but that are important for the owner or potential buyer. [5]

Swiss Re owns real estate worth more than CHF 2.2 billion in Switzerland and Germany. Swiss Re's investment criteria for real estate include accessibility and energy aspects. “Properties should be in attractive surroundings, easily accessible (public/private transport) and with good infrastructure (schools, shops, sports and recreation facilities within reasonable distance). ... We try to ensure that all new buildings meet MINERGIE standards.” MINERGIE is a Swiss system to assess energy performance of a building. [6]

4 Conclusions

Key points of a construction process, where decisions used to be taken based solely on financial merit, but where sustainability criteria are now increasingly being introduced, include 1) rating of the shareholder value of the real estate, construction or construction material company, and 2) real estate investment decisions. Investors face various risks, which have relevance for sustainability, too, such as 1) stock market risk, 2) tenant risk, 3) equity risk, 4) reputation risk, 5) business profit risk, and 6) data risk.

When trying to find points where to improve the sustainability of a building process, we have to look into the investment decisions long before the construction starts and continue until procurement decisions dealing with maintenance. The process is a chain that must not be interrupted at any point. A lot more work is required to spot all the key points of impact and to put together suggestions for the various stakeholders about the criteria which are most appropriate for each financing, investment or funding decision.

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