

turnover in public sector in Latvia and identifies the most important factors. Taking into consideration the cost cuttings and economic situation, personal development and reward system are the two factors which should be addressed first by management of public sector organization since they have the highest relationship to turnover intentions.

Keywords: Public Sector Human Resource Management, Employee Satisfaction, Worker Turnover

RISK MANAGEMENT I

Room: Room 7

Chair: Antonio Fasano

Pricing Covered Warrants using Observables: An Application to the Taiwanese Market

Isabel Abinzano

Public University of Navarre, Spain

Javier Navas

Universidad Pablo de Olavide, Spain

Abstract

A covered warrant is a security, issued by a bank or a financial institution, that bestows on the holder the right, but not the obligation, to buy or sell an asset at a specified strike price at the end of a specified time period. Unlike corporate warrants, which are written by a corporation on its own shares, covered warrants do not imply the issue of new shares when they are exercised. As a consequence of this lack of dilution, many authors propose to value covered warrants as exchange-traded options (see Chen et al. 2008; Horst and Veld 2008; Chan and de Peretti 2009). However, warrants are subject to credit risk (Loudon and Nguyen 2006), since they are not traded on a derivative exchange via a clearinghouse, but are traded on the cash market like any other primary security. Thus, the buyer of covered warrants is exposed to issuer's credit risk, that is, the risk that the financial institution may not fulfill its obligations, since the issuer is the sole counterparty to its own contracts. To take into account the issuer's credit risk, Chen (2003) considers covered warrants as vulnerable options. The concept of vulnerable option was introduced by Johnson and Stulz (1987) to refer to options with default risk. These options have been valued by Hull and White (1995) and Klein (1996) under different assumptions. Chen (2003) applies the model of Klein (1996) to the pricing of Taiwanese warrants assuming that the underlying asset price and the credit risk of the counterparty are correlated. The implementation of this model requires knowing the value and the volatility of the assets of the issuer, which are unobservable variables. Chen (2003) solves this problem taking the issuer's firm value from the latest quarterly balance sheet before each warrant's issuance date, and calculating the asset volatility by quarterly assets growth rate. In this paper we extend the model of Klein and price covered warrants using only observable variables. Specifically, we obtain an expression for the value of the warrant based on the price and volatility of the underlying stock. As an application, we price covered warrants in the Taiwanese market and study the deviations from actual prices.

Keywords: Covered Warrants, Credit Risk, Observable Variables

JEL: C13, C63, G32

Optimization Models for Sliding Planning an Institution's Project Portfolio Inclusive of Risks and Corporate Social Responsibility

Konstantin Solodukhin

Vladivostok State University Economics and Service, Russia

Lev Mazelis

Vladivostok State University Economics and Service, Russia

Abstract

The objective of this research is to develop the modified multi-period optimization models for support of decision making while selecting a project portfolio in terms of strategic development program of an institution. The institution's corporate social responsibility is manifested while objectives are set consistent with all stakeholders' interests. The allowance for risks is made under the portfolio theory by H. Markowitz using the scenario-based approach. Author uses a general per-unit utility function as a target function where arguments are levels of the institution's strategic goals achievement as results of the project implementation over periods with allowance for the significance of objectives and the amount of present expenditures in the project. The utility of the project is assumed to depend on the manner in which levels of attaining strategic objectives increase across periods, while different objectives would preferably require a different pace of increase in their levels. It is also assumed that different structures for resource investment across periods will be preferred, therefore additional resource constraints are introduced in models for each time period. The main difference of the models introduced is the opportunity to revise the composition of the pre-selected portfolio of projects at each step depending on the already achieved results and changes in the external and internal conditions. The use of the models introduced is illustrated on the example of the University. It is shown that restrictions on risk can lead to the fact that the portfolio does not include projects which budgets allow it (with limits on the total costs set). It is also shown that the restrictions imposed on the costs by period in most cases lead to the selection of different portfolios, which utility does not exceed the utility of the optimal portfolio generated by solution of the problem with the limit on total costs for all periods. In addition a review mechanism at each step of the composition of the pre-selected portfolio of projects is demonstrated depending on the already achieved results and changes in the external and internal conditions.

Keywords: Program for an Institution's Strategic Development, Project Portfolio, Corporate Social Responsibility, Utility Function, Scenario-Based Approach

JEL: C61