CALCULATION OF NORMAL CONTRIBUTION, ACTUARIAL LIABILITY, AND ACCUMULATION NORMAL CONTRIBUTION USING PROJECTED UNIT CREDIT METHOD AND ENTRY AGE NORMAL METHOD

UNDERGRADUATE THESIS

Submitted as one of the requirements to obtain
Sarjana Aktuaria

By

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ABSTRACT

Preparing retirement funds is very important in achieving financial security when entering retirement. Lack of financial preparation often causes financial difficulties during retirement. Therefore, the planning and management of periodic employee payments through the pension fund program includes the Normal Contribution and the Accumulation of Actuarial Liability Normal Contribution as part of the pension planning calculation. In the context of financing pension funds, two general methods are used to calculate pension obligations, namely the Projected Unit Credit (PUC) Method and the Normal Entry Age (EAN) Method. The Projected Unit Credit (PUC) method considers the participant's length of service and salary growth. Meanwhile, the Entry Age Normal Method (EAN) calculates pension obligations based on the age of participating in the pension program. This second method has a different approach and provides other benefits for both participants. The calculation results show that the Normal Contribution value using the Normal Entry Age method remains constant yearly. In contrast to the Projected Unit Credit method, this value increases with length of service. Actuarial liability values using the Entry Age Normal and Projected Unit Credit methods increase as years of service increase, with a more significant increase in the EAN method occurring in the middle of the year. The Normal Entry Age method is more profitable because it provides stability and predictability in financial planning. On the other hand, the Projected Unit Credit Method can be increasingly burdensome for participants due to the increase in Normal Contributions from year to year.

Keywords: *Retirement Fund Preparation, Pension Fund, Normal Contribution, Actuarial Liability, Accumulation Normal Contribution*

ABSTRAK

Mempersiapkan dana pensiun sangat penting dalam mencapai keamanan finansial saat memasuki masa pensiun. Kurangnya persiapan finansial seringkali menyebabkan kesulitan keuangan di masa pensiun. Oleh karena itu, perencanaan dan pengelolaan pembayaran berkala pegawai melalui program dana pensiun mencakup Iuran Normal dan Akumulasi Kewajiban Aktuaria Iuran Normal sebagai bagian dari perhitungan perencanaan pensiun. Dalam rangka pembiayaan dana pensiun, ada dua metode umum yang digunakan untuk menghitung kewajiban pensiun, yaitu Metode Projected Unit Credit (PUC) dan Metode Normal Entry Age (EAN). Metode Projected Unit Credit (PUC) mempertimbangkan masa kerja peserta dan pertumbuhan gaji. Sedangkan Entry Age Normal Method (EAN) menghitung kewajiban pensiun berdasarkan usia keikutsertaan program pensiun. Cara kedua ini memiliki pendekatan yang berbeda dan memberikan manfaat lain bagi kedua partisipan. Hasil perhitungan menunjukkan bahwa nilai Kontribusi Normal dengan metode Normal Entry Age tetap konstan setiap tahunnya. Berbeda dengan metode Projected Unit Credit, nilai ini meningkat seiring dengan lamanya layanan. Nilai kewajiban aktuaria dengan metode Entry Age Normal dan Projected Unit Credit meningkat seiring dengan bertambahnya masa kerja, dan peningkatan yang lebih signifikan pada metode EAN terjadi pada pertengahan tahun. Metode Normal Entry Age lebih menguntungkan karena memberikan stabilitas dan prediktabilitas dalam perencanaan keuangan. Di sisi lain, Metode Projected Unit Credit dapat semakin memberatkan peserta karena Iuran Normal yang terus meningkat dari tahun ke tahun..

***Kata kunci**: Persiapan Dana Pensiun, Dana Pensiun, Iuran Normal, Kewajiban Aktuaria, Akumulasi Iuran Normal.*

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