

ABSTRAK

KAJIAN PENERAPAN SKEMA PEMBIAYAAN *HYBRID ANNUITY MODEL* PARA SISTEM PENYEDIAAN AIR MINUM (SPAM) DI INDONESIA

Oleh

KLARA NALA RITA

Kebutuhan investasi sektor air minum dalam RPJMN 2025-2029 mencapai Rp 157,2 triliun, di mana 86% atau Rp 135,2 triliun di antaranya diharapkan melalui pembiayaan inovatif untuk menutup *funding gap* anggaran pemerintah. Penelitian ini bertujuan untuk menganalisis tingkat kelayakan finansial proyek Kerja Sama Pemerintah dan Badan Usaha (KPBU) SPAM Regional Lombok melalui penerapan skema *Hybrid Annuity Model* (HAM) dan membandingkannya dengan skema KPBU tanpa dukungan, serta menguji ketahanan proyek terhadap perubahan variabel utama.

Metode penelitian menggunakan pendekatan kuantitatif dengan analisis finansial berbasis pemodelan arus kas (*discounted cash flow*) menggunakan parameter *Net Present Value* (NPV), *Internal Rate of Return* (IRR), *Debt Service Coverage Ratio* (DSCR), dan *Payback Period* (PBP). Hasil penelitian menunjukkan bahwa skema KPBU tanpa dukungan menghasilkan NPV sebesar Rp 132,67 miliar, IRR 12,1%, dan DSCR 1,4. Sementara itu, skema usulan HAM menghasilkan NPV sebesar Rp 55,52 miliar, IRR 12%, dan DSCR 1,5.

Analisis sensitivitas mengindikasikan bahwa skema HAM sangat peka terhadap penurunan pendapatan sebesar 10% serta kombinasi kenaikan investasi dan biaya operasional, yang dapat menyebabkan proyek menjadi tidak layak secara finansial (NPV negatif). Kesimpulannya, baik skema KPBU maupun HAM dinyatakan layak untuk diimplementasikan karena memenuhi seluruh kriteria investasi, namun skema HAM menawarkan keunggulan pada stabilitas pembayaran utang (DSCR lebih tinggi) meskipun memiliki profitabilitas yang lebih rendah dibandingkan skema KPBU murni.

Kata kunci: *Hybrid Annuity Model*, SPAM, KPBU, Kelayakan Finansial, Analisis Sensitivitas.

ABSTRACT

STUDY ON THE APPLICATION OF THE HYBRID ANNUITY MODEL FINANCING SCHEME IN THE DRINKING WATER SUPPLY SYSTEM (SPAM) IN INDONESIA

By

KLARA NALA RITA

Investment requirements for the drinking water sector in the 2025-2029 National Medium-Term Development Plan (RPJMN) reach IDR 157.2 trillion, of which 86% or IDR 135.2 trillion is expected to be fulfilled through innovative financing to bridge the government's budget funding gap. This study aims to analyse the financial feasibility of the Lombok Regional Drinking Water Supply System (SPAM) Public-Private Partnership (PPP) project by applying the Hybrid Annuity Model (HAM) scheme and comparing it with a PPP scheme without support, as well as testing the project's resilience against changes in key variables.

The research method employs a quantitative approach with financial analysis based on discounted cash flow (DCF) modelling using Net Present Value (NPV), Internal Rate of Return (IRR), Debt Service Coverage Ratio (DSCR), and Payback Period (PBP) as parameters. The results indicate that the PPP scheme without support generates an NPV of IDR 132.67 billion, an IRR of 12.1%, and a DSCR of 1.4.

Meanwhile, the proposed HAM scheme yields an NPV of IDR 55.52 billion, an IRR of 12%, and a DSCR of 1.5. Sensitivity analysis indicates that the HAM scheme is highly sensitive to a 10% revenue decrease and a combination of increased investment and operational costs, which could lead to financial unfeasibility (negative NPV). In conclusion, both the PPP and HAM schemes are feasible for implementation as they satisfy all investment criteria; however, the HAM scheme offers superior debt repayment stability (higher DSCR) despite lower profitability compared to the pure PPP scheme.

Keywords: Hybrid Annuity Model, SPAM, Public-Private Partnership, Financial Feasibility, Sensitivity Analysis.