

ARITHMETIC AND FUZZY NUMBERS IN THE
KUMING EMP'S TRANSACTIONS

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ARIMA MODEL AND FUZZY MAMDANI IN THE
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DECLARATION

I hereby declare that this thesis entitled ARIMA Model And Fuzzy Mamdani In The Kijang Emas Transactions is the result of my own research except as cited in the references.


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ABSTRACT

This paper represents a design procedure for Mamdani Fuzzy logic controller including rule base minimization. The rules are modeled with binary weights on which constraints are imposed in order to ensure consistency. At the beginning steps, time series ARIMA is used to forecast the buying and selling price of Kijang Emas which weight 1 oz. The ARIMA model has four main stages which are model identification, parameter estimation, diagnostic checking and forecasting. After that, the buying and selling price of gold bullion coins are used by Fuzzy Mamdani method for finding stabilizing controllers that minimize the number of rules. The number of fuzzy sets for the input and the control variables are set by the user and the design procedure is concerned only with the rule base and the distribution of the fuzzy sets in the universes of discourses.

TRANSAKSI KIJANG EMAS DENGAN KAEDAH ARIMA DAN MAMDANI KABUR

ABSTRAK

Kajian ini mengenalkan satu bentuk proses untuk pengawalan Logik Kabur Mamdani yang termasuk peminimuman Sistem Aturan Asas Kabur. Aturan-aturan adalah dimodelkan dengan binary keberatan di atas kekangan yang ditetapkan supaya mengenal pasti kesatuan. Pada langkah yang awal, harga jual beli Kijang Emas akan diramalkan dengan menggunakan kaedah siri masa yang bermodel ARIMA melalui empat langkah utama, iaitu, pengecaman kasar, penganggaran, penyemakan diagnostic dan peramalan. Selepas itu, harga jual beli emas digunakan untuk mencari keuntungan iaitu meminimumkan nombor aturan melalui kaedah fuzzy Mamdani. Nombor set kabur bagi input dan pengawal pembolehubah adalah ditetapkan oleh pengguna serta bentuk proses hanya berkaitan dengan Sistem Aturan Asas Kabur dan pengagihan set kabur dalam komunikasi global.