The Chebychev cabal

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Abstract
In this paper, I describe the Chebychev cabal.
The paper ends with "The End"

Introduction

In previous papers, I've described the cabal.
In this paper, I describe a theoretically important type of cabal called a **Chebychev cabal**.

The Chebychev cabal

The Chebychev cabal is a cabal where the weights of the companies and the capital of the companies can be expressed in terms of Chebychev polynomials.

The mathematics of the Chebychev cabal

The mathematics of the Chebychev cabal is

$$-1 \leq \theta < 1$$

$$w_i(\theta) = \frac{T_i(\theta)}{\csc\left(\frac{1}{2}\cos^{-1}(\theta)\right)\cos\left(\frac{1}{2}(n+1)\cos^{-1}(\theta)\right)\sin\left(\frac{1}{2}n\cos^{-1}(\theta)\right)}$$

$$C_i(\theta) = \frac{\Xi}{nT_i(\theta)\sin\left(\frac{1}{2}\cos^{-1}(\theta)\right)\csc\left(\frac{1}{2}n\cos^{-1}(\theta)\right)\sec\left(\frac{1}{2}(n+1)\cos^{-1}(\theta)\right)}$$

Then the Chebychev cabal satisfies

$$\sum_{i=1}^{n} w_i(\theta) = 1$$

$$\Xi(\theta) = \frac{\sum_{i=1}^{n} w_i(\theta)C_i(\theta)}{\sum_{i=1}^{n} w_i(\theta)}$$

where
θ is the **control** of the cabal
n is the number of companies in the cabal
$w_i(\theta)$ is the **weight of the i^{th} company** in the cabal
$T_i(\theta)$ is the Chebyshev polynomial of the first kind
$C_i(\theta)$ is the **capital of the i^{th} company** in the cabal
$\Xi(\theta)$ is the **total capital** of the cabal

The End