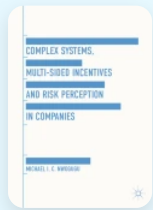


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# Complexity and Some Numerical Algorithmic Turning-Point Problems Inherent in Excessive Outstanding Shares


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## Complex Systems, Multi-Sided Incentives and Risk Perception in Companies

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## Abstract

Having excessive numbers of shares outstanding is either common or prevalent among listed companies in emerging markets and especially in Central/Eastern European, African and Asian stock markets (i.e. where such companies usually have between two-times and twelve-times the average numbers of outstanding shares of listed companies in developed countries like the US, UK and Japan, on an un-diluted basis)—and this condition can cause behavioral anomalies and sometimes contravenes established finance theories.



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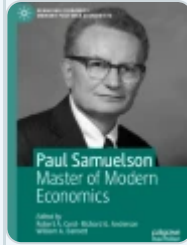
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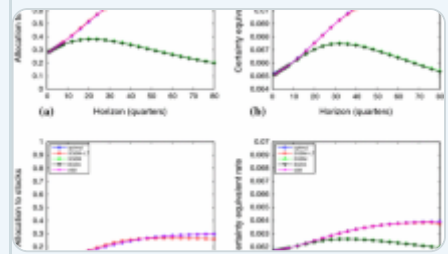
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## Notes

1. See Othman ([2012](#)), Domshlak et al. ([2011](#)), Filipe and Fred ([2011](#)), Melnik et al. ([2013](#)), Miklashevich ([2003](#)), and Arthur ([1999](#)).
2. See Wong et al. ([2017](#)) and Xia ([2011](#)).
3. See Chen et al. ([2013](#)), Cozman ([2010](#)), Seneta ([2013](#)), Li and Du ([2007](#)), and Lan and Zhang ([2017](#)).

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