

SpringerBriefs in Economics

Development Bank of Japan Research Series

Series Editor

Keimei Kaizuka

Editorial Board Members

Akiyoshi Horiuchi

Toshihiro Ihori

Eiji Ogawa

Masayuki Otaki

Masaharu Hanazaki

Masaaki Komiya

Jun-ichi Nakamura

Akihiko Mori

This series is characterized by the close academic cohesion of financial economics, environmental economics, and accounting, which are the three major fields of research of the Research Institute of Capital Formation (RICF) at the Development Bank of Japan (DBJ). Readers can acquaint themselves with how a financial intermediary efficiently restructuring firms in financial distress, can contribute to economic development.

The aforementioned three research fields are closely connected with one another in the following ways. DBJ has already developed several corporation-rating methods, including the environmental rating by which DBJ decides whether or not to make concessions to the candidate firm. To evaluate the relevance of this rating, research, which deploys not only financial economics but also environmental economics, is necessary.

The accounting section intensively studies the structure of IFRS and Integrated Reporting to predict their effects on Japanese corporate governance. Although the discipline of accounting is usually isolated from financial economics, structural and reliable prediction is never achieved without sufficient and integrated knowledge in both fields.

Finally, the environmental economics section is linked to the accounting section in the following manner. To establish green accounting (environmental accounting), it is indispensable to explore what the crucial factors for the preservation of environment (e.g. emission control) are. RICE is well-equipped to address the acute necessity for discourse among researchers who belong to these three different fields.

More information about this series at <http://www.springer.com/series/13542>

Jun-ichi Nakamura

Japanese Firms During the Lost Two Decades

The Recovery of Zombie Firms
and Entrenchment of Reputable Firms

Jun-ichi Nakamura
Research Institute of Capital Formation
Development Bank of Japan
Tokyo
Japan

ISSN 2191-5504 ISSN 2191-5512 (electronic)
SpringerBriefs in Economics
ISSN 2367-0967 ISSN 2367-0975 (electronic)
Development Bank of Japan Research Series
ISBN 978-4-431-55916-0 ISBN 978-4-431-55918-4 (eBook)
DOI 10.1007/978-4-431-55918-4

Library of Congress Control Number: 2016944917

© Development Bank of Japan 2017

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer Japan KK

Acknowledgments

The studies presented in this book, mainly those in Chap. 2, are based on joint works with Professor Shin-ichi Fukuda on the recovery of “zombie” firms and the lost two decades of the Japanese economy. The basic concept of this book was inspired by discussions with Professor Fukuda. At the same time, the studies in Chap. 4 are indebted to joint works with Professor Kazumi Asako and Professor Konomi Tonogi on the “multiple q ” investment equation. I am deeply grateful to these three co-authors for their permission to use the data and include some of the research outcomes. I would also like to thank the editors of SpringerBriefs in Economics DBJ Research Series for offering me the opportunity to publish this book as well as the participants of the review conference held on September 25, 2015 for their helpful comments. All the remaining errors are my own. Any opinions, findings, or conclusions expressed in this book are those of the author and do not reflect the views of the Development Bank of Japan.

Contents

1	Introduction	1
1.1	The Lost Two Decades of the Japanese Economy: Still a Puzzle.	1
1.2	Zombie Firm Hypothesis and Its Limitations	2
1.3	Purpose and Outline of the Book.	4
	References	6
2	Evolution and Recovery of Zombie Firms: Japan’s Experience	7
2.1	Background on the Controversy over Evergreen Lending and Secular Stagnation.	7
2.2	Identification of Zombie Firms	9
2.2.1	Conceptual Framework and Methodology	9
2.2.2	Features of the Modified Criteria and Exclusion of “One Shot Zombie Firms”	12
2.3	Evolution and Recovery of Zombie Firms by Three Categories of Financial Support.	14
2.4	Empirical Framework to Analyze How Zombie Firms Recovered.	17
2.4.1	Multinomial Logistic Model	17
2.4.2	List of Explanatory Variables	18
2.5	Descriptive Statistics	21
2.6	Estimation Results for the Entire Sample Period	21
2.7	Estimation for the Sub-periods	25
2.7.1	Importance of the Sub-period Analyses.	25
2.7.2	The First Sub-period (Escalating Phase)	27
2.7.3	The Second Sub-period (Resolution Phase)	27
2.8	Estimation of the Sub-periods by Industry.	28
2.9	Concluding Remarks	35
	References	36

3	Sluggish Reallocation of Productive Resources After the Recovery of Zombie Firms	37
3.1	Framework of the Decomposition Analyses of Changes in Aggregated ROA	37
3.2	Result of the Decomposition Analyses of Changes in Aggregated ROA	39
3.3	Weak Demand of Productive Resources from Healthy Firms	40
3.4	Concluding Remarks	43
	Reference	44
4	Investment Behavior of Reputable Firms After the Recovery of Zombie Firms: “Conservatism” and the “Pseudo Financial Constraint Effect”	45
4.1	Introduction	46
4.2	Literature Review	47
4.3	Methodology	48
4.4	Explanatory Variables	50
4.4.1	Data Construction	50
4.4.2	List of Explanatory Variables	51
4.5	Descriptive Statistics	54
4.6	Estimation Results and Interpretation	56
4.6.1	Baseline Estimation for 2005–2010	56
4.6.2	Long-Run Changes in Investment Behavior from 1995 to 2010	60
4.7	Concluding Remarks	64
	References	68
5	Final Remarks	69
5.1	Main Findings of the Book: Unified View for the Lost Two Decades of Japan	69
5.2	Policy Implications and Remaining Issues	71
	References	73