University of Groningen

Monetary and fiscal integration in Europe

Gilbert, Niels

DOI:
[10.33612/diss.96884377](https://doi.org/10.33612/diss.96884377)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2019

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Gilbert, N. (2019). *Monetary and fiscal integration in Europe*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen, SOM research school. <https://doi.org/10.33612/diss.96884377>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Monetary and fiscal integration in Europe

Niels Daniël Gilbert

Publisher: University of Groningen, Groningen, The Netherlands

Printed by: Ipskamp Drukkers
P.O. Box 333
7500 AH Enschede
The Netherlands

ISBN: 978-94-034-1847-6 / 978-94-034-1846-9 (ebook)

© 2019 N.D. Gilbert

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system of any nature, or transmitted in any form or by any means, electronic, mechanical, now known or hereafter invented, including photocopying or recording, without prior written permission of the publisher.

**university of
groningen**

Monetary and fiscal integration in Europe

PhD Thesis

to obtain the degree of PhD at the
University of Groningen
on the authority of the
Rector Magnificus Prof. C. Wijmenga
and in accordance with
the decision by the College of Deans.

This thesis will be defended in public on
Thursday 10 October 2019 at 16:15 hours

by

Niels Daniël Gilbert

born on 30 January 1988
in 's Gravenhage, The Netherlands

Supervisors

Prof. J. de Haan

Prof. J.H. Garretsen

Assessment committee

Prof. S.C.W. Eijffinger

Prof. L.H. Hoogduin

Prof. N. Potrafke

Acknowledgements

When I joined DNB, the eurozone was about to enter an existential crisis. For a young policy economist, times of crisis offer many opportunities, and plans to join a full-time PhD program were quickly shelved. Thankfully, DNB offered a way to combine policy and research. Jakob de Haan, Willem Heeringa, Job Swank and Peter Wierdsma encouraged me to pursue a part-time PhD; Peter van Els and Christiaan Pattipeilohy granted me the time to complete it.

Combining policy and research is a privilege and a challenge, and the successful completion of this thesis owes a lot to my supervisors and co-authors. Jakob de Haan combined eternal optimism and the eye of an experienced editor with a knack for knowing when (not) to push me forward. Harry Garretsen complemented this with sharply targeted yet pragmatic comments and suggestions. While working with Jasper de Jong, Friday afternoons were more productive than (and at least as much fun as) the folksy music and table football sessions may have suggested. Sebastiaan Pool was my indispensable guardian during a brief detour into the world of economic modeling. He also set a bar in terms of combining work, exercise and beer consumption that has always remained unattainable to me.

Many other people at DNB have contributed to this thesis in one way or the other. Data collection has benefited from assistance by Martin Admiraal, Peter Keus and Minke van der Heijden. Special thanks are also due to my two long-term officemates at DNB, Jorien Freriks and Jeroen Hessel, proofreader-in-chief Stephen Kho, and chief critic Mark Mink. This

thesis owes an intellectual debt to many of our discussions on everything (un)related to economics as well as to plenty of coffees.

I would like to express my gratitude to the members of the assessment committee, Sylvester Eijffinger, Lex Hoogduin and Niklas Potrafke, for having taken the time to read and comment on my manuscript.

Less direct, but at least as valuable, has been the contribution by my family. I'd like to thank my parents, for having raised me in a stable and loving environment, Julia, for being her one-of-a-kind self as well as for the occasional push forward, and Lieuwe, for the final push forward and the many smiles put on my face.

Contents

Acknowledgements	i
1 Introduction	1
1.1 Outline	6
2 Sectoral allocation and macroeconomic imbalances in EMU	11
2.1 Introduction	11
2.2 Stylized facts	15
2.3 The model	19
2.3.1 Households	20
2.3.2 Firms	22
2.3.3 Market equilibrium conditions	24
2.3.4 Calibration	26
2.4 Model simulations	27
2.4.1 Two-region model	27
2.4.2 Including the Rest of the World	31
2.5 Empirical analysis	32
2.5.1 Methodology and data	32
2.5.2 Empirical results	36
2.6 Policy options and discussion	38
2.6.1 Increasing competition in the nontradable sector	39
2.6.2 Deepening the internal market	40
2.7 Conclusion	41
Appendix A: Data	43

Appendix B: Model	46
Appendix C: Sensitivity and policy experiments	53
3 Do European fiscal rules induce a bias in fiscal forecasts?	57
3.1 Introduction	57
3.2 Related literature and hypotheses	60
3.2.1 The Stability and Growth Pact	60
3.2.2 Fiscal forecasts and the SGP	64
3.2.3 Related literature	66
3.3 Data description	68
3.3.1 Sources and definitions	68
3.3.2 Statistical properties	71
3.4 Estimation methodology	74
3.4.1 Identification	74
3.4.2 Estimation procedure	76
3.4.3 Instrument selection	79
3.5 Results	80
3.5.1 Main results	80
3.5.2 The role of fiscal councils	82
3.5.3 Robustness	83
3.6 Concluding remarks	86
Appendix	88
4 Testing the effectiveness of the Excessive Deficit Procedure	97
4.1 Introduction	97
4.2 Literature review and hypotheses	101
4.2.1 The Stability and Growth Pact	101
4.2.2 Council recommendations and fiscal behavior	102
4.2.3 Related literature	106
4.3 Data description and empirical approach	109
4.3.1 Fiscal forecasts and realizations	109
4.3.2 Database of EDP recommendations	111
4.3.3 Empirical approach	115

4.4	Results	117
4.4.1	First results	117
4.4.2	Financial support	119
4.4.3	Controlling for market pressure	122
4.4.4	Kink in the fiscal reaction function	123
4.4.5	Robustness	126
4.4.6	Size of the recommendation	128
4.5	Concluding remarks	130
	Appendix A: Model	132
	Appendix B: Tables	134
5	Euro area sovereign risk spillovers before and after the OMT	147
5.1	Introduction	147
5.2	OMT and spillovers	150
5.2.1	The vulnerability of euro area sovereigns	150
5.2.2	OMT and hypotheses	153
5.3	Empirical literature	154
5.4	Method and data	156
5.4.1	Identification of domestic interest rate shocks	157
5.4.2	Other data	161
5.4.3	Local projections	162
5.5	Results	167
5.5.1	Spain	167
5.5.2	Italy	172
5.5.3	Response of pan-European variables	172
5.5.4	External effects	177
5.6	Sensitivity	178
5.6.1	Shorter and symmetric intervals around OMT	178
5.6.2	Specification of the LP model	180
5.6.3	Including leads and lags of instruments	181
5.6.4	Instrument validity	182
5.7	Concluding remarks	183

Appendix A: Outliers	185
Appendix B: Summary statistics	186
Appendix C: Sensitivity	187
6 Conclusion	201
6.1 Summary	201
6.2 Way forward	203
References	229
Nederlandse samenvatting (summary in Dutch)	231

List of Tables

2.1	Calibrated parameters	26
2.2	Classification	44
2.3	Descriptive statistics	45
2.4	Quarterly data tradable and nontradable definition	45
2.5	Calibrated parameters - RoW	52
3.1	Summary statistics, EU27, 2001-2012	71
3.2	Forecast properties	74
3.3	Main results	81
3.4	Predicting excessive deficits - probit	89
3.5	Predicting excessive deficits - probit, lagged instruments	90
3.6	Role of independent fiscal councils	91
3.7	Pre- vs. post-crisis effects SGP	92
3.8	Main results, sensitivity to outliers	93
3.9	Geographical sensitivity	94
3.10	Final realizations	95
4.1	Homogeneous EDP coefficient	118
4.2	Differentiating w.r.t. financial support programs	120
4.3	Controlling for market pressure	124
4.4	Kink in the reaction function	125
4.5	Descriptive statistics	134
4.6	Only EA12	136
4.7	Constant samples	137

4.8	Excl. GIIPS and Cyprus	138
4.9	Whole European Union	139
4.10	Pre-crisis versus post-crisis	140
4.11	Initial recommendations	141
4.12	Including year dummies	142
4.13	Only recommendations defined in terms of structural budget balance	143
4.14	Size of the recommendations	144
4.15	Size of the recommendations (excl. ESM observations)	145
5.1	Instrument relevance: pre- and post-OMT	164
5.2	Yield spillovers from Spain	170
5.3	Yield spillovers from Italy	174
5.4	Summary statistics	186

List of Figures

2.1	Interest rates and macroeconomic imbalances	16
2.2	Nontradable sector growth and as percentage of GDP	17
2.3	Consequences of monetary integration	28
2.4	Consequences of monetary integration: effects of including the RoW	31
2.5	Real interest rate shock for sample period 1996Q3-2017Q3 . .	37
2.6	Real interest rate shock for sample period 1996Q3-2008Q3 . .	38
2.7	Product market reform in South, transition path	40
2.8	Deepening the EA internal market, transition path	41
2.9	Share of value added from domestic demand in the euro area	43
2.10	Impact of monetary integration on relative sectoral sizes in South, for different values of the NT markup in South	53
2.11	Reaction to a sudden increase in the elasticity of interest rates to debt levels	54
2.12	Product market reform in North, transition path	55
3.1	Average forecast errors, 2001-2012	72
3.2	Distribution of forecast errors, 2001-2012	73
4.1	A government's response to EDP recommendations	105
4.2	EDP recommendations over time	113
4.3	Distribution of EDP recommendations, EMU member states, by forecast vintage	114
4.4	Response to EDP recommendations	129

5.1	Events	160
5.2	Yield spillovers from Spain	169
5.3	Yield spillovers from Italy	173
5.4	Response of pan-European variables	176
5.5	External effects	179
5.6	Yield spillovers from Spain - two year interval around OMT announcement	188
5.7	Yield spillovers from Italy - two year interval around OMT announcement	189
5.8	Yield spillovers from Spain - one year interval around OMT announcement	190
5.9	Yield spillovers from Italy - one year interval around OMT announcement	191
5.10	Yield spillovers from Spain - full set of controls	192
5.11	Yield spillovers from Italy - full set of controls	193
5.12	Yield spillovers from Spain - no control variables	194
5.13	Yield spillovers from Italy - no control variables	195
5.14	Yield spillovers from Spain - including leads and lags of the instruments	196
5.15	Yield spillovers from Italy - including leads and lags of the instruments	197
5.16	Yield spillovers from Spain - excluding overnight events . . .	198
5.17	Yield spillovers from Italy - excluding overnight events . . .	199