CREATES
Annual Report 2008

The Danish National Research Foundation's
Center for Research in Econometric Analysis
of Time Series CREATES

CREATES
Center for Research in Econometric Analysis of Time Series

DANMARKS GRUNDFORSKNINGSFOND
DANISH NATIONAL RESEARCH FOUNDATION

AARHUS UNIVERSITY

Table of contents

Appendices

1. Highlights 2008

Center for Research in Econometric Analysis of Time Series, CREATES, is a research unit at Aarhus University, hosted by the School of Economics and Management. Research is conducted within the general fields of time series and financial econometrics. The center is funded as a Center of Excellence by Danmarks Grundforskningsfond (Danish National Research Foundation) via a DKK 40.2 mill. (Euro 5.4 mill.) grant plus own and further external financing. The funding period covers a 5-year period starting 1 April 2007. CREATES' core group of members are affiliated with Aarhus University and University of Copenhagen. A number of international fellows of Danish origin, mainly from North America, are associated with CREATES.

As of 31 December 2008, CREATES counts 17 domestic research fellows and 10 international fellows. The junior CREATES faculty counts 8 post doctorates and 16 PhD students. New junior positions at the post doctoral and assistant professor level were posted internationally in the fall of 2007, and during 2008 CREATES employed 3 new assistant professors and 3 new post docs. All new positions have been filled by international scholars. For 2009 additionally 3 junior positions are planned to be filled. Also with respect to PhD recruitments CREATES has attracted promising candidates. 8 new PhD students have been affiliated with CREATES during 2008 (of whom two will start in 2009). 4 of the PhD students affiliated with CREATES are international students.

In 2008 more than 45 papers (an increase of 50% compared to 2007) were published in peer reviewed journals, more than half of them in absolute top econometrics journals including *Econometrica, Journal of Econometrics, Econometric Theory, Journal of Business and Economic Statistics, Journal of Financial Econometrics, American Economic Review,* and *Journal of Economic Literature*. More than 67 papers are presently accepted for publication and forthcoming in peer reviewed journals. 63 working papers have been published in the CREATES Research Paper series in 2008.

In the January 2009 ranking published by *RePEc* that counts more than 1000 research institutions worldwide within the field of econometrics, CREATES now appears on the top 10 list.

The research conducted at CREATES covers a broad range of sub-fields. One of the most active research areas is within econometric analysis of high frequency time series data, especially volatility modeling of financial data. The production in this field is flourishing, and CREATES can document one of the strongest research groups worldwide. This area is further expanding via recent recruitments. Other fields with a very dominant position in CREATES include theoretical time series econometrics: the analysis of non-stationary time series, long memory models, optimal inference, and non-linear time series modeling. Also the fields of forecasting and asset return predictability are very active research areas in CREATES.

CREATES has active seminar series and regularly organizes international symposia and conferences. During 2008 more than 90 seminars and workshop presentations were given at CREATES, the majority being with international researchers. In addition, CREATES organized 8 international symposia and conferences, including a workshop on high-frequency data at Stanford University in June which was organized by CREATES members in collaboration with Stanford Institute for Theoretical Economics (SITE). As the major conference event, CREATES hosted the 2008 NBER-NSF time series conference, an international conference which normally takes place in North America. The conference had more than 150 participants from 25 countries and included amongst the speakers a long list of world leading scientists in time series analysis. In 2009 CREATES will host the annual EC2-meeting, one of the major annual European conference series in econometrics. CREATES organized three "Distinguished Speaker Lectures" in 2008 with contributions from Professor Tim Bollerslev, Duke University, Nobel laureate Professor Robert Engle, New York University, Stern School of Business, and a joint lecture given by Professor Ole Barndorff-Nielsen, Aarhus University, and Professor Neil Shephard, Oxford University.

In the reporting year, CREATES continued being successful in attracting further external funding. Additionally DKK 8 mill. was raised in 2008 from various sources such that cumulated external funding (beyond the DG grant) approaches DKK 18 mill. since the start of the center.

2. Center members and organization

The core group of domestic center members includes time series and financial econometricians from Aarhus University (School of Economics and Management and the Aarhus School of Business) and University of Copenhagen (Department of Economics, Department of Mathematical Statistics).

Over the years, Aarhus University and University of Copenhagen have produced econometrics candidates who today are among the most cited researchers in the profession and with remarkable academic careers. Also, within the past few years promising PhD candidates in econometrics have got their degrees and are now affiliated with some of the best universities internationally. These researchers are affiliated with CREATES as international research fellows and typically spend 1-3 months per year at CREATES, which serves as their Danish research base.

It is vital for CREATES that significant effort is put into high-level graduate (PhD) training and into supporting young promising researchers via post doctoral scholarships. In particular, recruitments of post doctorates have been (and will be) made internationally, and increased efforts will be made to attract international students to PhD scholarships.

As of 31 December 2008, CREATES counts a stock of 17 domestic research fellows, 10 international research fellows, and 8 post doctoral scholars. 13 PhD students are at the host institution, School of Economics and Management, Aarhus University, and 3 PhD students are at Aarhus School of Business. In addition, a number of junior people are associated with CREATES as junior fellows (typically former PhD students), including 4 master students enrolled at the IMSQE-program (International Master of Science in Quantitative Economics), an elite master program established in 2008 supported by the Ministry of Science, Technology and Innovation.

As of 1 October 2008, CREATES employed a full time center administrator, Cand.oecon. Martha V. Berdiin.

Below is a complete list of CREATES members and associates during 2008. See "CREATES Annual Report 2008 – Financial Statement" for a full review of committed research time and financing. Table 1 provides a review of "man-years" (årsværk) according to different affiliation categories and funding sources. In 2008 a total of 44 man-years were used. Of these approximately 25% were associated with PhD students, and 16% were post docs. Regarding the distribution of funding between DG-CREATES, the host institution, and further external funding the ratios were 36%, 37%, and 27%.

CREATES Staff (2008)	Financing (2008)[1]
Director	
Prof. Niels Haldrup	AU, FSE, CREATES
Research Fellows, Aarhus	
Prof. Ole Barndorff-Nielsen	
Assoc. Prof. Henning Bunzel	AU
Prof. Bent J. Christensen	AU, FSE
Assoc. Prof. Charlotte Christiansen	AU, FSE
Assoc. Prof. Christian Dahl	AU, FSE
Prof. Tom Engsted	AU
Prof. Asger Lunde	ASB-AU
Prof. Carsten Tanggaard	ASB-AU
Prof. Timo Teräsvirta	CREATES
Assoc. Prof. Allan Würtz	AU
Assistant Prof. Christos Ntantamis	CREATES
Assistant Prof. Olaf Posch	AU
Assistant Prof. Valeri Voev	AU, CREATES
Research Fellows, Copenhagen	
Prof. Søren Johansen	KU, CREATES
Prof. Anders Rahbek	KU
Prof. Michael Sørensen	KU
International Research Fellows (dates for visits)	
Prof. Torben G. Andersen	Northwestern University, USA 10 – 15 August 2008 10 – 15 September 2008
Prof. Tim Bollerslev	Duke University, USA CREATES 25 – 29 May 2008 21 July – 15 Aug 2008 10 – 15 September 2008
Prof. Peter Christoffersen	McGill University, Canada CREATES January – February 2008 7 – 9 May 2008
Assist. Prof. Peter Reinhard Hansen	Stanford University, USA CREATES August 2008 10 – 15 September 2008
Assoc. Prof. Michael Jansson	UC Berkeley, USA FSE 16 June – 15 July 2008 10 – 15 September 2008
Assist. Prof. Dennis Kristensen	Columbia University, USA 23 June – 6 July 2008 December 2008
Assoc. Prof. Morten Ø. Nielsen	Queen's University, Canada, FSE June – July 2008 6-31 August 2008 10 – 15 September 2008 15 – 19 December 2008

1 Acronyms: AU: Aarhus University, ASB-AU: Aarhus School of Business, Aarhus University, KU: University of Copenhagen, FSE: Forskningsrådet for Samfund og Erhverv (Danish Social Sciences Research Council), DG: Danmarks Grundforskningsfond (Danish National Research Foundation).

Assoc. Prof. Helle Bunzel	Iowa State University, USA CREATES January 2008 26 – 30 June 2008 10 – 15 September 2008
Assist. Prof. Lars Stentoft	HEC, Montreal, Canada 25 -29 February 2008 12 May – 2 June 2008 12 – 26 August 2008 8 – 30 September 2008 10 – 22 December 2008
Prof. Allan Timmermann	UC San Diego, USA

Visiting Professors

Prof. Giuseppe Cavaliere, University of Bologna, Italy	CREATES (1 August – 15 September 2008)
See also "International Research Fellows" above	

Post doctoral scholars

Post doc, Katarzyna Lasak (PhD, Univ. Carlos III Madrid)	AU, FSE
Post doc, Mark Podolskij (PhD Ruhr Univ. Bochum)	AU, ETH Zürich
Post doc, Olaf Posch (PhD, Univ. of Hamburg)	AU
Post doc, Almut Veraart (PhD, Oxford University)	CREATES
Post doc, Jie Zhu (PhD, AU)	AU
Post doc, Valeri Voev (PhD, Universität Konstanz)	AU, CREATES
Post doc, Isabel Casas (PhD, University of Western Australia)	FSE
Post doc, Robinson Kruse (PhD, Leibniz Universität Hannover)	CREATES
Post doc, Michel van der Wel (PhD, Free University Amsterdam)	CREATES, Erasmus University Rotterdam
Post doc, Theis Lange (PhD, KU)	KU

PhD students

MSc(merc), Thomas Q. Pedersen, 5+3	CREATES
BSc(econ), Anders B. Kock, 4+4	CREATES
BSc(econ), Mateusz Piotr Dziubinski, 4+4	CREATES
MSc(econ), Martin Møller Andreasen, 5+3	AU
MSc(econ), Rune Mølgaard, 4+4	AU
MSc(econ), Torben Rasmussen, 5+3	AU
MSc(econ), Stefan Holst Bache, 5+3	AU
MSc(econ), Johannes Tang Kristensen, 5+3	AU
MSc(econ), Christian Bach Kristensen, 5+3	AU
MSc(stat), Zhenjiang Qin, 4+4	AU
MSc(econ), Frank Steen Nielsen, 5+3	FSE
MSc(econ), Eske Stig Hansen, 5+3	Copenhagen Economics, MVTU (Industrial PhD)
MSc(merc) Lasse Bork, 5+3	Jyske Bank, MVTU (Industrial PhD)
MSc(merc) Stig V. Møller, 5+3	ASB-AU
MSc(fin) Leonidas Tsiaras, 5+3	ASB-AU
MSc(math econ), Theis Lange, 5+3	KU

Junior Fellows

Stud. Oecon, Martin Busekist Andersen, elite-student, IMSQE
PhD, Thomas Busch, Danske Bank
PhD, Kim Christensen, Nordea
Stud. Oecon, Niels Dall-Hansen, elite-student, IMSQE
Stud. Oecon, Jeppe Overbeck, elite-student, IMSQE
PhD, Assistant Professor, Alessandro Palandri, University of Copenhagen
Stud. Oecon, Stephanie Bendorff Røpcke, elite student, IMSQE

PhD, Assistant Professor, David Skovmand, ASB-AU

Support staff

Martha Vogdrup Berdiin, Center Administrator	CREATES
Annette Andersen, Secretary	CREATES
Marie Louise Ates, Secretary	AU
Birgitte Højklint Nielsen, Secretary	AU
Niels G. Hørstrup, Accountant	AU
Thomas Stephansen, Secretary	AU

Research assistants (part time)

Klaus Gunnar Jensen	CREATES
Laurent Callot	CREATES
Lasse Jæger Nielsen	CREATES
Troels K. Danielsen	CREATES
Simon Corvenius Lund	CREATES
Jonas Kau	CREATES
Christian Stampe Sørensen	CREATES
Rasmus Schnejder	CREATES
Kenneth D. Petersen	CREATES
Jens R. Nordestgaard	CREATES
Christian Bach Kristensen	CREATES
Yukai Yang	CREATES

Advisory board

Prof. Tim Bollerslev, Duke University
Prof. Clive W. J. Granger, UC San Diego
Prof. Svend Hylleberg, University of Aarhus
Prof. Robert F. Engle, NYU Stern
Prof. Nick Kiefer, Cornell University
Prof. Neil Shephard, Oxford University

Table 1. CREATES affiliates and funding sources, "man-years" (årsværk), 2008

	DG/ CREATES	Host-institution	Other external funding	Other sources	Total
Domestic Research Fellows	2.25	4.81	0.97	4.75	**12.78**
International Research Fellows	0.43	-	0.16	8.91	**9.50**
Visiting Professors	0.13	-	-	-	**0.13**
Post Docs	1.67	0.17	3.84	1.25	**6.93**
PhD students	2.92	3.75	2.00	3.00	**11.67**
Research Assistance	1.11	-	-	-	**1.11**
Support Staff	1.00	0.80	-	-	**1.80**
Total	**9.51**	**9.53**	**6.97**	**17.91**	**43.92**

Note: "Other external funding" includes research grants from FSE (Danish Social Sciences Research Council) and Faculty grants. "Other Sources" refer to salaries paid by other universities to individuals affiliated with CREATES.

2.1. Recruitments

According to the contract with Danmarks Grundforskningsfond a number of *new* openings should be filled in the contract period. The following *new* recruitments were made since the establishment of CREATES in 2007 (categorized according to funding):

New positions funded by host institution, AU:

Prof. Tom Engsted (ASB-AU)	1 Sep 2007 –
Assistant Prof., Valeri Voev (University of Konstanz)	1 Sep 2008 –
Assistant Prof., Olaf Posch (University of Hannover)	1 Sep 2008 –
Post doc, Kim Christensen (ASB-AU)	1 June 2009 – 31 May 2012
Post doc, NN	1 Sep 2011 – 31 Aug 2012
PhD student, Zhenjiang Qin, 4+4 (China)	1 Feb 2008 – 31 Jan 2012
PhD student, Christian Bach Kristensen, 5+3 (AU)	1 Sep 2008 – 31 Aug 2011
PhD student, Johannes Tang Kristensen, 5+3 (SDU)	1 Sep 2008 – 31 Aug 2011
PhD student, Stefan Holst Bache, 5+3 (SDU)	1 Sep 2008 – 31 Aug 2011
PhD student, Yukai Yang (KU)	1 Jan 2009 – 31 Dec 2011
PhD student, Kenneth Dencker (AU)	1 May 2009 – 30 Apr 2012
PhD student, Laurent Callot (AU)	1 Sep 2009 – 31 Aug 2012

New positions funded by CREATES:

Assistant Prof., Christos Ntantamis (McGill University)	1 Aug 2008 –
Post doc, Kim Christensen (ASB-AU)	1 Apr 2007 – 31 July 2007
Post doc, Almut Veraart (University of Oxford)	1 Oct 2007 – 30 Sep 2009
Post doc, Valeri Voev (University of Konstanz)	1 Apr 2008 – 31 Aug 2008
Post doc, Isabel Casas (Univ. Carlos III, Madrid)	1 Sep 2010 – 31 Aug 2011
Post doc, Robinson Kruse (University of Hannover)	1 Aug 2008 – 31 July 2010
Post doc, Michel van der Wel (Free Univ., Amsterdam) (part time)	1 Sep 2008 – 31 July 2010
Post doc, Frank Nielsen (Aarhus University)	1 Feb 2009 – 31 Mar 2009
PhD student, Thomas Quistgaard Pedersen, 5+3 (ASB-AU)	1 Sep 2007 – 31 Aug 2010
PhD student, Anders B. Kock, 4+4 (AU)	1 Sep 2007 – 31 Aug 2011
PhD student, Mateusz Piotr Dziubinski, 4+4 (Univ. of Warsaw, AU)	1 Feb 2008 – 31 Jan 2012
Secretary, Annette Andersen	1 Apr 2007 – 30 Sep 2008
Center administrator, Martha V. Berdiin	1 Oct 2008 –

New positions, externally funded:

Post doc, Mark Podolskij (Ruhr Universität Bochum), faculty grant	1 Sep 2007 – 31 Aug 2008
ETH Zurich	1 Sep 2008 – 31 Aug 2009
Post doc, Katarzyna Lasak (University of Barcelona), faculty grant	1Aug 2007 – 31 July 2008
FSE	1 Aug 2008 – 31 Aug 2009
Post doc, Jie Zhu (University of Aarhus), faculty grant	1 Oct 2007 – 30 Sep 2009
Post doc, Olaf Posch (University of Hannover), faculty grant	1 Sep 2007 – 31 Aug 2008
Post doc, Isabel Casas (Univ. Carlos III, Madrid), FSE	1 Sep 2008 – 31 Aug 2010
Post doc, Frank Nielsen (Aarhus University), FSE	1 Apr 2009 – 31 Mar 2011
Post doc, NN, FSE	1 Sep 2009 – 31 Aug 2011

All positions agreed with Danmarks Grundforskningsfond to be funded by the host institution and CREATES at the post doc, assistant professor and higher levels have been filled. It should be noted that the host institution has contributed with additionally 1 assistant professorship, 4 post doc years, and 5 post doc years via (competitive) grants offered by the Faculty of Social Sciences. The latter are registered as external funding.

Since its establishment, CREATES has experienced an overwhelming international interest in junior positions. By 1 September 2009 CREATES will have a stock of 3 assistant professors and 8 post docs, all recruited internationally. It is important that CREATES continues to offer positions at the post doc level in the future. However, additional external funding will be necessary to achieve this goal and initiatives in this direction are already being made.

3 PhD positions funded via the CREATES grant have now been filled, and another 7 positions funded by the host institution have been filled during 2007 and 2008. 40% of the *new* PhD scholarships have been offered to international students, and the challenge is to increase this figure even further in the future. According to the contract with Danmarks Grundforskningsfond, the host institution committed to finance additionally 7 PhD scholarships in the contract period, and hence this commitment has already been fulfilled.

3. Research Plan and publications 2008

3.1 A review of publications

The 2007 Research Plan is specified in the contract between Danmarks Grundforskningsfond and CREATES (January 2007) where milestones until 1 April 2009 are outlined. It is no exaggeration to say that CREATES, in the first two years after its establishment, is already a great success in terms of both research activities and actual publications produced. In fact, productivity in terms of number of publications has been almost four times higher than the milestones set, and more importantly, the high qualitative standards put forth in the 2007 Research Plan have been fulfilled.

It is always difficult to rank journals, and making a short list of top journals is particularly difficult when it has to cover a range of fields: general econometrics, financial econometrics, and statistics/stochastics. In Baltagi (2007, Worldwide Econometrics Rankings: 1989-2005, Econometric Theory 23, pp. 952-1012) a list of 16 major econometrics journals are included in the ranking. However, the Baltagi list does not include publications in statistics and finance journals and it would be unfair to members of the center not to include such journals. In order to benchmark the research conducted at CREATES, the following lists of top journals are suggested (in alphabetic order):

General econometrics:

Econometrica, Econometric Reviews, Econometric Theory, Econometrics Journal, Journal of Applied Econometrics, Journal of the American Statistical Association, Journal of Business and Economic Statistics, Journal of Econometrics, Oxford Bulletin of Economics and Statistics, Review of Economics and Statistics.

Financial econometrics:

Journal of Banking and Finance, Journal of Empirical Finance, Journal of Finance, Journal of Financial and Quantitative Analysis, Journal of Financial Econometrics, Journal of Financial Economics, Journal of International Money and Finance, Journal of Monetary Economics, Journal of Money Credit and Banking, Review of Financial Studies.

Statistics/Stochastics:

Annals of Statistics, Bernoulli, Journal of Royal Statistical Society Series B, Stochastic Processes and its Applications, Journal of Time Series Analysis, Scandinavian Journal of Statistics, Finance and Stochastics, Mathematical Finance

Many more journals deserve to be on these lists. Members of CREATES regularly publish their results in less specialized journals that are considered absolute top journals in economics, for instance *American Economic Review, Journal of Economic Literature, Economic Journal, International Economic Review, Journal of Economic Dynamics and Control,* and many other journals. Several CREATES members have contributions to peer-reviewed handbook series such as *Handbook of Econometrics, Handbook of Financial Econometrics, Handbook of Financial Time Series* etc.; these are publications which are considered highly prestigious by the profession. CREATES members have a significant number of such contributions already published or in press. Likewise, contributions to *New Palgrave Dictionary of Economics* are considered very prestigious, and invitations to contribute to this series are only given to particularly influential researchers who have contributed significantly to the field. CREATES members have 5 such contributions accepted for the next volume of the dictionary.

Details about publications in 2008 are reported in Appendix I, and in Appendix J a full publication review covering the funding period is reported. Publication summaries for 2007 and 2008 are given in Tables 2 and 3 below.

The total number of publications in refereed journals increased from 31 in 2007 to 45 papers in 2008. More than half of the publications appear on the benchmark list. Yet another 2-3 publications appeared in journals considered to be highly prestigious "general" journals such as *American Economic Review* and *Journal of Economic Literature.* In Tables 2 and 3, publications have also be distributed according to whether the author is a CREATES member in Denmark or an international CREATES research fellow. It is remarkable that the production increase from 2007 to 2008 mainly is due to the domestic group of research associates.

Table 2. Review of publications 2007

	CREATES members, Denmark	**International research fellows**	**Total**
Articles in refereed journals	17 (6)	16 (10)	31 (16)
Notes in refereed journals	3 (1)	0	3 (1)
Contributions to refereed books	0	2	2
Refereed books	1	0	1
Published working papers	33	21	50
Forthcoming articles in refereed journals and books	36 (11)	17 (9)	51 (19)
PhD theses	0	.	0

Note: Number in parenthesis indicates the number of publications appearing on the suggested benchmark list. Note that due to co-authorship the total column is not the sum of the other columns.

Table 3. Review of publications 2008

	CREATES members, Denmark	International research fellows	Total
Articles in refereed journals	31 (15)	17 (11)	45 (24)
Notes in refereed journals	0	1 (0)	1 (0)
Contributions to refereed books	5	3	8
Refereed books	0	0	0
CREATES Research Papers	47	12	63
Forthcoming articles in refereed journals and books	43 (20)	29 (17)	67 (31)
PhD theses	4	.	4

Note: Number in parenthesis indicates the number of publications appearing on the suggested benchmark list. Note that due to co-authorship the "Total" column is not the sum of the other columns.

There are also a significant number of papers that are forthcoming in peer-reviewed journals. As of 31 December 2008, the stock of papers in press is 67, of which 31 are on the benchmark list.

CREATES has its own working paper series: CREATES Research Papers (see Appendix I.6). In 2008 (2007), a total of 63 (43) research papers were published in the research paper series by CREATES members. A few CREATES research papers were published by long-term visitors at CREATES. 75% of all CREATES research papers published in 2008 had domestic CREATES members as authors.

3.2 Bibliometric benchmarking

The largest bibliographic database dedicated to the Economics profession is run by IDEAS at the University of Connecticut and uses the so-called RePEc database as its source. More than 32 different ranking measures (number of publications, citations, impact factor weighted citations, working paper downloads etc.) are used, and the summary rank listed reports the average rank using the different measures. In the February 2009 ranking, CREATES was listed as number 113 out of 4187 institutions within *all* fields of economics. When focusing on somewhat narrower fields associated with the research actually conducted at CREATES, a rank of 41 (out of 1359 institutions) was given within the field of "Finance", rank 9 (out of 1094 institutions) within the field of "Econometrics", and rank 3 (out of 857 institutions) within the field of "Time Series Econometrics". Focusing on individuals, 3-5 CREATES members appear on the top 5% author rankings in the different categories mentioned above: Torben G. Andersen, Tim Bollerslev, Søren Johansen, Timo Teräsvirta, and Allan Timmermann.

Baltagi (2007) (Worldwide Econometrics Rankings: 1989-2005, Econometric Theory 23, pp. 952-1012) reports a ranking of both institutions and individuals based on publications in 16 top econometrics journals for the 1989-2005 period (and sub-periods). The rankings are made according to different criteria including: by theoretical econometrics publications, by all econometrics publications, and according to the number of standardized page counts, number of articles, individual journals, and journal clusters. Reporting all rankings is too detailed, but it is worth noting that the following CREATES members appear on rankings including publications by the top 150 econometricians: Søren Johansen, Tim Bollerslev, Timo Teräsvirta, Allan Timmermann, Morten Ø. Nielsen, Michael Jansson, Ole Barndorff-Nielsen, Anders Rahbek and Niels Haldrup. Note, however, that the list does not include publications in finance and statistics journals where several CREATES members will typically publish and this may bias the view. Readers are referred to Baltagi (2007) for details. Of course, the Baltagi rankings may only be of historic interest since the ranking concerns the period prior to the establishment of CREATES, but it may still indicate the strength of the group and may be a reference point for future rankings in econometrics.

3.3 Research areas, the 2007 Research Plan, and future research directions

In the 2007 Research Plan specified between Danmarks Grundsforskningsfond and CREATES, the main research areas of CREATES was categorized as follows: econometric theory, asset returns and volatility, non-linear time series modeling, forecasting, predictability, and bubbles. These areas are all very active and rapidly expanding research fields where CREATES members contribute with research results at the absolute research frontier as previously documented. The categories have been chosen to provide an overview of the focused research areas, but in fact the different areas often overlap considerably, and in some cases a particular categorization can be somewhat artificial. The fact that the various research overlap considerably is also reflected by the participating researchers in the individual projects. In the 2007 annual report, classification of the publications according to the different categories was attempted, and a description of the various fields was given there. In the present report, the various publications have not been categorized. Notwithstanding, a look at the publication list will document that the research areas of econometric theory and financial econometrics including volatility modeling and the analysis of high frequency data dominate much of the research undertaken at CREATES. Members contribute significantly to the research frontier in these areas, and in several fields CREATES has some of the strongest research groups worldwide. It goes without saying that the mentioned research areas are still very active and will play a major role in the future research at CREATES, which is also reflected in recent recruitments. Also, the areas of dynamic panel data models, quantile regressions, and other fields may play an increasing role in future research.

4. PhD activities

By 31 December 2008 CREATES had a stock of 13 PhD students enrolled at the host institution and 3 PhD students at ASB-AU. 4 of the students are international students. In addition to those already enrolled as PhD students at the establishment of CREATES, 10 new students have been (or will be) enrolled as PhD students by 1 September 2009. 3 of these are financed via the CREATES grant, and 7 are financed by the host institution.

The PhD co-funding by the host institution amounts to the number of scholarships agreed in the contract with Danmarks Grundforskningsfond for the entire contract period. For the remaining funding period, it is expected that additionally 5-6 PhD students will be offered scholarships funded by the host institution. Three of these will be further co-financed via a grant from the Ministry of Science, Technology and Innovation. See Table 4 for a review.

Table 4. PhD students affiliated with CREATES

Name of student	Funding	2007		2008		2009		2010		2011		2012	
PhD students enrolled at host institution:													
Jie Zhu*	AU												
Toke L. Hjortshøj	AU												
David Skovmand	AU												
Martin M. Andreasen	AU												
Rune Mølgaard	AU												
Torben B. Rasmussen	AU												
Frank S. Nielsen	FSE												
Eske Stig Hansen	MVTU												
Thomas Q. Pedersen	CREATES												
Anders B. Kock	CREATES												
Mateusz Dziubinski*	CREATES												
Zhenjiang Qin*	AU												
Christian Bach	AU												
Stefan Holst Bache	AU												
Johannes T. Kristensen	AU												
Yukai Yang*	AU												
Laurent Callot*	AU												
Kenneth Dencker	AU												
PhD NN	AU/MVTU												
PhD NN	AU/MVTU												
PhD NN	AU/KU/ MVTU												
PhD NN	AU												
PhD NN	AU												
PhD NN	AU												
PhD students enrolled at other institutions:													
Lasse Bork	ASB-AU												
Stig V. Møller	ASB-AU												
Leonidas Tsiaras*	ASB-AU												
Theis Lange	KU												

Note: * International students

PhD students' external relations

It is an integral part of the PhD program that PhD students visit international research environments during their studies. The typical duration of a visit abroad is 6 months. PhD students affiliated with CREATES had status as visiting PhD students at the following universities: Duke University, New York (Stern School), Cornell University, Princeton University, Harvard University, Manchester Business School, University of California Berkeley, Northwestern University, and Catholic University Leuven. Currently, there are plans for PhD students to become visiting students at University of California, San Diego, and University of Toulouse during 2009.

During 2008 CREATES has hosted 5 visiting PhD students from other European institutions (from Sweden, Finland, Italy, and Portugal).

PhD students are active in presenting their works at international conferences, seminars, symposia and workshops.

PhD theses

Four PhD theses were defended by CREATES students in 2008:

PhD, Toke Lilhauge Hjortshøj, *Essays on Empirical Corporate Finance – Managerial Incentives, Information Disclosure, and Bond Covenants.*
Committee: Trevor Buck, Professor, Loughborough University, UK; Jesper Rangvid, Professor, Department of Finance, Copenhagen Business School; Charlotte Christiansen (chair), Associate Professor, Aarhus University.
Stay abroad: New York University, Stern School of Business, fall 2006.

PhD, David Glavind Skovmand, *Libor Market Models – Theory and Applications.*
Committee: Klaus Sandmann, Prof. Dr., Friedrich-Wilhelms-Universität, Bonn; Claus Munk, Professor, University of Southern Denmark; Peter Ove Christensen (chair), Professor, Aarhus University
Stay abroad: University of California, Berkeley, fall 2006, spring 2007.

PhD, Jie Zhu, *Essays on Econometric Analysis of Price Volatility Behavior in Asset Markets.*
Committee: Chuck C. Y. Kwok, Professor, University of South Carolina; Carsten Sørensen, Professor, Copenhagen Business School; Christian M. Dahl (chair), Associate Professor, Aarhus University.
Stay abroad: Cornell University, fall 2006

PhD, Theis Lange (University of Copenhagen), *Asymptotic Theory in Financial Time Series Models with Conditional Heteroscedasticity.*
Committee: Thomas Mikosch (Chair), Professor, University of Copenhagen; Christian M. Dahl, Assoc. Professor, Aarhus University; Peter Boswijk, Professor, University of Amsterdam.
Stay abroad: Duke University, Spring 2007.

It is expected that 6-7 CREATES PhD theses will be defended in 2009.

CREATES lunch seminar series

CREATES has a weekly lunch seminar series where PhD students and post doctoral fellows have priority in presenting and discussing their works.

PhD courses organized by CREATES

In collaboration with the Danish Graduate Program in Economics, DGPE, CREATES organizes and finances specialized PhD courses typically lasting from 2-3 days up to a week. The courses are taught by top international researchers who are specialists in their field. In 2008 CREATES organized the following courses (see Appendix B.2 for details):

1. Professor, Alexander McNeill, Heriot-Watt University, *Quantitative Risk Management Modelling Dependence in Market and Credit Risk.* 28-31 January 2008.
2. Professor, Timo Trimborn, University of Hannover, *Dynamic Macroeconomic Modelling with Matlab*. 6-7 March 2008.
3. Professor, Peter Boswijk, University of Amsterdam, *Asymptotic Theory for Integrated Processes*. 1-2 April 2008.
4. Professor, Peter Christoffersen, Mcgill University and CREATES, *Empirical Modelling of Equity Index Options: Discrete and Continuous Time Approaches.* 29-30 May 2008.
5. Professor, Bent E. Sørensen, University of Houston, *Empirical Modelling of Intra-National Macro.* 20-22 October 2008.
6. Professor, Giuseppe Cavaliere, University of Bologna, *Nonstationary Time Series Analysis*. 27-28 October 2008.

In addition to the "short" PhD courses, CREATES faculty members contribute with full 10 ECTS PhD level courses at the School of Economics and Management.

5. External relations and collaborations

CREATES participates in numerous collaborations with institutions as well as individuals (see Appendix A for a full list). A few comments:

CREATES members participate in individual research projects with more than 100 individuals from other institutions worldwide. Approximately 60% of these collaborators participate in joint works with domestic CREATES members as can be seen from the publication review in Appendix I.

In addition to 2 PhD students visiting abroad during 2008, several fellows went on longer visits abroad, see Appendix A.2 for details.

In 2008 CREATES had 79 visitors staying for longer or shorter periods (including CREATES international fellows). Most visitors presented papers in CREATES' weekly seminar series or at symposia organized at CREATES (see Appendix B.1.1, B.3.1, B.3.2).

CREATES also collaborates with a number of international research institutions and centers, including (Appendix A.1):

- Granger Centre for Time Series Econometrics, University of Nottingham, England
- Oxford-Man Institute of Quantitative Finance, Oxford University, England
- ETH Zurich, Switzerland

The form of this collaboration mainly concerns exchange and co-financing of post doctorates, exchange of PhD students and collaboration on the organization of PhD courses and exchange of visitors.

In 2009 CREATES will organize a conference jointly with the Stevanovic Center for Financial Mathematics, University of Chicago. The theme of the conference is "*Financial Econometrics and Statistics: Current Themes and New Directions*" and will be held in Skagen, 4-6 June. The Stevanovic Center co-finances the conference.

In 2008 a European network in time series econometrics was established: ETSERN, Econometric Time Series European Research Network. Prof. Anders Rahbek (Copenhagen) and Prof. Niels Haldrup, CREATES, are members of the funding board of ETSERN. It is planned that CREATES will host a network symposium in the fall of 2009.

CREATES also collaborates with two national research centers: D-CAF, Danish Center for Accounting and Finance, and the Thiele Center for Applied Mathematics in Natural Science. The collaboration is mainly in the form of organizing joint seminars and symposia.

6. D-CAF/CREATES Data Office

CREATES collaborates with D-CAF regarding access to relevant databases in Economics and Finance. Currently CREATES members at Aarhus University and D-CAF members have access to the CRSP, COMPUSTAT, DATASTREAM, and NYSE TAQ data bases in addition to various free data bases. An office has been established to offer support on accessing the relevant data and a data assistant has been employed.

In the future there will be a need for funding data base access and data base infrastructure.

7. Conferences, symposia, and seminar activities

Conference activities, internally and externally, are specified in Appendix B. CREATES members are active in presenting their work internationally at conferences, symposia, etc. In 2008 CREATES members participated in and gave paper presentations at more than 175 international conferences and departmental seminars. Also, CREATES members appear in the program committees for leading international conferences (Appendix B.1.1, B.1.2).

CREATES schedules a weekly seminar series which is organized by Assoc. Prof. Christian Dahl. In 2008 a total of 34 paper presentations were given in the series (Appendix B.3.1). In the lunch seminar series, 25 paper presentations were given (Appendix B.3.2). The lunch seminars are organized by post docs Katarzyna Lasak and Almut Veraart.

Symposia and workshops

An important activity at CREATES is to organize focused symposia and workshops for members with specialist speakers invited. In 2008 5 such symposia were organized:

1. *Stochastics in Turbulence and Finance (Joint with Thiele Center)*, 28 January – 1 February, 2008. Organizer: Ole Barndorff-Nielsen
2. *Symposium on "New Hope for the C-CAPM"*, 8-9 May, 2008. Organizer: Tom Engsted
3. *Symposium on "Statistical vs. Econonomic Significance in Economics and Econometrics"*, 24 June, 2008. Organizers: Tom Engsted and Allan Würtz.
4. *Symposium on "Volatility"*, 11-14 August, 2008. Organizers: Ole Barndorff-Nielsen, Mark Podolskij, Niels Haldrup.
5. *CREATESmas symposium*, 5 December, 2008. Organizer: Niels Haldrup

In collaboration with the Stanford Institute for Theoretical Economics, SITE, CREATES organized a summer workshop at Stanford University 27-28 June 2008: *Econometric Analysis of High-Frequency Data and the Impact of Economic News*. The workshop was organized by CREATES' international fellows Peter Reinhard Hansen, Stanford University, and Tim Bollerslev, Duke University.

A research dissemination seminar was held 1 February 2008 mainly for practitioners in financial companies: *Applied seminar on Risk Management and Basel II.* The seminar which had more than 80 participants was organized by Henning Bunzel and Carsten Tanggaard.

CREATES held its annual members meeting at Sophiendal Gods 6-7 November 2008.

Distinguished speaker lectures

The following distinguished speaker lectures were organized during 2008:

1. Professor, Tim Bollerslev, Duke University and CREATES: *The Econometrics of Financial Market Volatility: Past Developments and New Directions.* 27 May, 2008.
2. Professor, Nobel laureate, Robert F. Engle, New York University, Stern School of Business: *What is Happening to Financial Market Volatility and Why ?* 11 September, 2008.
3. Professor, Ole Barndorff-Nielsen, Aarhus University and CREATES, and Neil Shephard, Oxford University and Oxford-Man: *Modelling and Measuring Volatility*. 19 November, 2008.

International Conferences

CREATES had the honor of hosting the 2008 NBER-NSF time series conference 12-13 September. The conference was co-sponsored with NBER (National Bureau of Economic Research, USA) and NSF (National Science Foundation, USA), Danmarks Nationalbank, Danish Social Sciences Research Council, and Faculty of Social Sciences. The NBER-NSF time series conference is one of the most prestigious international conferences in time series econometrics. Normally the conference takes place in North America, and we were thus happy that we could host the conference at CREATES. The conference had more than 150 participants from 25 countries. 20 papers were presented by leading scientists in time series analysis. 30 papers were presented as posters. The scientific committee for the conference consisted of

Richard Davis, Columbia University
James Stock, Harvard University

Ruey Tsay, University of Chicago
Tim Bollerslev, Duke University and CREATES
Bent Jesper Christensen, CREATES
Niels Haldrup, CREATES

The local organizers were Bent Jesper Christensen, Christian Dahl, and Niels Haldrup.

Upcoming conference and seminar activities

For 2009 a number of symposia and international conference activities are scheduled:

1. *Symposium on Cointegration, Fractional Processes, and Long Memory*, 10 March.

2. *Symposium on Dynamic Asset Allocation*, 2-3 June.

3. *ETSERN Network meeting*. 1-2 October.

4. CREATES-Stevanovich Center Conference, Skagen: *Financial Econometrics and Statistics: Current Themes and New Directions*, 4-6 June. The conference is organized in collaboration with the Stevanovich Center for Mathematical Finance at University of Chicago.

5. *Conference on Periodicity and Nonstationarity in Economic Time Series*, Hotel Koldingfjord. 21-23 August.

6. *2008 EC^2 –Conference: Real Time Econometrics.* 18-19 December. The conference is expected to have approximately 120 participants. Program chair is Peter R. Hansen, Stanford University and CREATES. Local organizers are Tom Engsted, Asger Lunde, Niels Haldrup.

7. Distinguished Speaker Lecture, Professor Joel Horowitz, Northwestern University, *Non- and Semiparametric Estimation*, 14 May.

8. Distinguished Speaker Lecture, Professor David F. Hendry, Oxford University, *Recent Developments in Automatic Model Selection,* August.

9. Distinguished Speaker Lecture, Professor Søren Johansen, University of Copenhagen and CREATES. Title: TBA. 1. October.

8. Educational activities

In Appendix C the educational activities of "Aarhus-CREATES" faculty at the School of Economics and Management are listed together with short PhD courses organized by CREATES. As seen, CREATES faculty contributes significantly to the teaching at the School at the BA, MSc and PhD levels.

As a consequence of the CREATES grant, a number of new courses in econometrics at MSc and PhD level are already offered or are planned in the future:

- Time Series Econometrics, 10 ECTS, MSc
- Empirical Finance, 10 ECTS, MSc
- Advanced Programming in Quantitative Economics, 5 ECTS, MSc + PhD
- Computational Methods in Econometrics, 10 ECTS, MSc + PhD
- Topics in Time Series and Financial Econometrics, 5 ECTS, MSC + PhD
- Applied Time Series and Financial Econometrics, 10 ECTS, MSc
- Financial Market Volatility, 10 ECTS, MSc

9. Academic services

Appendix D lists journals where CREATES members serve on the editorial board as associate editors. As can be seen, members participate in the editorial board of more than 25 peer reviewed journals. 8 of these journals appear on the CREATES priority list of top-journals.

In addition, all senior (and some junior) members regularly referee articles for a broad range of journals. It is estimated that on average senior members review 6-8 articles per year.

10. External funding

A review of external funding is given in Appendix E. A number of grants were allocated prior to the establishment of CREATES in April 2007 (but are directly relevant to CREATES' activities and the external funding of the center during the funding period). In addition, CREATES received a number of external grants in 2007. During 2008 almost DKK 8,000,000 of extra external funding was raised. In total approximately DKK 18,000,000 of external funding relevant to CREATES has been provided since its start. Of these, DKK 3,200,000 attributes to activities in 2008. Most of the external funding is provided by FSE (Danish Social Sciences Research Council), but the Faculty of Social Sciences has also been generous in providing additional grants to CREATES in the form of post doctoral fellowships.[2] A limited number of grants were provided via private Danish funds (Nationalbanken to arrange the 2008 NBER-NSF time series conference) as well as international funds (NBER, NSF, and the Stevanovich Center for Mathematical Finance at University of Chicago).

11. Awards and acknowledgments

In 2008, a number of acknowledgments were given to CREATES members. Professor Tim Bollerslev, Duke University, received "Rigmor and Carl Holst Knudsen's Research Prize". Assistant Professor Olaf Posch was awarded the "Reinhard Selten Best Paper Prize" and received also a "Distinguished CESifo Affiliate Award". Professor Torben G. Andersen, Northwestern University, became a Fellow of the Econometric Society.

---

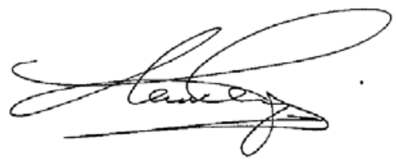
[2] Grants from the Faculty of Social Sciences are considered "external" in the sense that they were given in competition with other schools at the faculty and are beyond the budget of the School of Economics and Management.

12. Signature

(Ved underskriften bekræftes det, at beretning og regnskab med tilhørende noter og oversigter indeholder alle relevante oplysninger, som vedrører årets primære aktiviteter i Danmarks Grundforskningsfonds Center for Tidsrækkeøkonometri.)

To my knowledge, this report and accounts including notes and entry files comprise all the information concerning CREATES (The Danish National Research Foundation's Centre for Research in Econometric Analysis of Time Series).

31 March 2009



Niels Haldrup
Danmarks Grundforskningfonds
Center for Research in Econometric Analysis of Time Series, CREATES

Appendix A: External Relations

A.1 Research Institutions

	Collaborator	Collaboration subject and/or title. Output/results of collaboration if any
1	Danish Center for Accounting and Finance, D-CAF, Denmark	Seminar and research collaboration, Joint PhD courses, applied seminars, research collaboration. Also D-CAF and CREATES collaborates on data access via the D-CAF - CREATES Data Office
2	Granger Centre for time Series Econometrics, University of Nottingham, England	Exchange of seminar visitors, PhD students etc.
3	Oxford-Man Institute of Quantitative Finance, University of Oxford, UK	Exchange of seminar visitors, PhD students, joint postdoc positions. PhD student Silja Kinnebrock, Oxford, regularly visiting CREATES. Director Neil Sheppard in CREATES' Advisory Board
4	The Stevanovich Center for Financial Mathematics, University of Chicago, USA	International Conference organization. Joint Conference scheduled for 2009 in Denmark
5	Thiele Centre for Applied Mathematics in Natural Science, DK	Seminar and research collaboration. Joint seminars and symposia
6	ETSERN - Econometric Time Series European Research Network	Establishment of a European Network organizing Symposia in Time Series Econometrics across Europe. CREATES to organize meetings in 2008 and 2009
7	ETH Zurich	Exchange, postdoctoral students, joint postdoc positions. Mark Podolskij, joint ETH Zurich - CREATES post doc
8	NBER-National Bureau of Economic Research, NSF-National Science Foundation	CREATES organizing 2008 NBER-NSF time series conference

A.2 CREATES members' long visits/sabbaticals abroad

	Venue / Place	CREATES member	Period
1	Australian National University	Allan Würtz	01.01.2008 - 31.01.2008
2	Rady School of Management, University of California, San Diego	Asger Lunde	01.08.2007 - 31.07.2008
3	University of Copenhagen, Department of Economics	Dennis Kristensen	01.12.2008 - 31.12.2008
4	Cornell University, Department of Economics - visiting PhD Student	Frank Nielsen	03.01.2008 - 15.02.2008
5	Northwestern University - visiting PhD student	Leonidas Tsiaras	01.04.2008 - 31.09.2008
6	Osaka University, Center for the Study of Finance and Insurance	Michael Sørensen	01.11.2008 - 30.11.2008
7	Copenhagen Business School, Department of Finance	Peter Christoffersen	01.07.2008 - 31.07.2008
8	Federal Reserved Bank, Atlanta	Peter Reinhard Hansen	01.01.2008 - 31.01.2008
9	Board of Governors, Bederal Reserved Bank, Washington DC	Peter Reinhard Hansen	01.10.2008 - 31.10.2008
10	CREST-ENSAE, Paris	Timo Teräsvirta	03.04.2008 - 19.04.2008
11	Université catholique de Louvain, Institut de statistique	Timo Teräsvirta	06.10.2008 - 21.11.2008
12	Singapore Management University	Torben Andersen	13.07.2008 - 19.07.2008
13	Hitotsubashi University, Tokyo, Japan	Torben Andersen	24.10.2008 - 29.10.2008
14	National University, Singapore	Helle Bunzel	14.01.2008 - 30.06.2008

A.3 Visitors to CREATES 2008

	Name	Affiliation	Period
1	Karim Abadir	Imperial College Londen	1-4 October
2	Abhay Abhyankar	Edinburg University	6-9 May
3	Pedro Albarran	Universidad Carlos III de Madrid	24-26 September
4	Christina Amado	Stockholm School of Economics	3 March - 30 June
			10-22 September
5	Torben Andersen	Kellogg School of Management, Northwestern University	10-15 August
6	Marco Avarucci	Luiss Guido Carli, Rome	23-25 January
7	Anindya Banerjee	University of Birmingham	26-28 November
8	Walter Beckert	University of London	10-12 December
9	Tim Bollerslev	Duke University and CREATES	25-29 May
			18 July - 15 August
10	Charles Bos	Free University Amsterdam	31 August - 13 September
11	Peter Boswijk	University of Amsterdam	1-4 April
12	Helle Bunzel	Iowa State University	24–30 June
13	Isabel Casas	Universidad Carlos III de Madrid	30 January - 1 February
14	Giuseppe Cavaliere	University of Bologna	1-31 August
			22-31 October
15	Valentina Corradi	University of Warwick	16-17 April
16	Le-Yu Chen	UCL	5-7 March
17	Peter Christoffersen	McGill University and CREATES	31 January - 1 February
			8-9 May
			19-21 May
			29-30 May
18	Mariano Croce	UNC Kenan-Flagler Business School	8-9 May
19	Itamar Drechsler	The Wharton School, University of	7-9 May
20	Dobrislav Dobrev	The Federal Reserve Board	10-15 August
21	Robert Engle	New York University, Stern School	10-14 September
22	Martin Englund	CODAN	7-8 February
23	Tue Gørgens	Australian National University	9-13 June
			21 July – 8 August
24	Peter Reinhard Hansen	Stanford University and CREATES	7-29 August
25	Steve Heston	University of Maryland	19-21 May
26	Emma Iglesias	Michigan State University	25 June – 6 July
27	Jean Jacod	Université Paris VI	10-15 August
28	Michael Jansson	UC Berkeley	16 June - 15 July
29	Bjarne S. Jensen	Syddansk Universitet	8-9 May
30	Jan Kallsen	Christian Albrechts Universität zu Kiel	10-15 August
31	Heikki Kauppi	University of Turku	9-11 April
32	Ivana Komunjer	UC San Diego	21-23 May
33	Dennis Kristensen	Columbia University and CREATES	23 June - 6 July
34	Robinson Kruse	Leibniz Universität Hannover	27-29 February
35	Theis Lange	University of Copenhagen and CREATES	10-14 August
			5-6 December
36	Remigijus Leipus	Vilnius University	24 April
37	Lars Lochstoer	London Business School	7-9 May

38	Edith Madsen	University of Copenhagen	12-14 June
39	Daniele Massacci	Cambridge University	16-19 February
40	Nour Meddahi	University of Toulouse	10-14 August
41	Mika Meitz	University of Oxford	19 May - 15 June
42	Claus Munk	Syddansk Universitet	8-9 May
43	Ganeshkumar Munnorcode	Stockholm School of Economics	5 February - 30 June
44	Tomoaki Nakatami	Stockholm School of Economics	5-29 February 18-22 August
45	Bent Nielsen	University of Oxford	12-14 November
46	Morten Ø. Nielsen	Queen's University and CREATES	1 June – 7 July 1-31 August 15-19 December
47	Ingmar Nolte	Warwick Business School	8-15 November
48	Christos Ntantamis	McGill University	3-6 February
49	Ken Nyholm	ECB	11 March
50	Alessandro Palandri	University of Copenhagen and CREATES	10-14 August
51	Paolo Paruolo	University of Insubria	18-21 November
52	Andrew Patton	Oxford University	11-14 August
53	Mark Podolskij	ETH Zurich and CREATES	5-8 November
54	Anders Rahbek	University of Copenhagen and CREATES	10-15 August 11-13 September
55	Alfredo Rackauskas	Vilnius University	24 April
56	Angelo Ranaldo	Swiss National Bank	13-15 May
57	Jesper Rangvid	Copenhagen Business School	7-9 May
58	Markus Reiss	University of Heidelberg	16-18 January
59	Rickard Sandberg	Stockholm School of Economics	1-31 May
60	Ernst Schaumburg	Northwestern University	10-14 August
61	Peter Schotman	University of Maastricht	28-31 October
62	Ivan Shaliastovich	Duke University	7-9 May
63	Neil Shephard	University of Oxford and Oxford-Man	11-14 August 18-20 November
64	Kevin Sheppard	Oxford University	10-15 August
65	Chris Skeels	University of Melbourne	21 July – 8 August
67	Annastiina Silvennoinen	Queensland University of Technology	10-22 September
68	Lars Stentoft	HEC, Montreal and CREATES	25-29 February 12 May – 3 June 1 August – 30 September 10-22 December
69	Bent Sørensen	University of Houston	19-23 October
70	Michael Sørensen	University of Copenhagen and CREATES	11-12 August
71	George Tauchen	Duke University	10-15 August
72	Robert Taylor	University of Nottingham	4-10 August
73	Timo Trimborn	University of Hannover	6-7 March
74	Viktor Todorov	Northwestern University	5-15 August
75	Michel van der Wel	Free University Amsterdam	6-8 February 7-20 September 5-8 November
76	Mathias Vetter	Ruhr University of Bochum	27 April - 4 May
77	Annette Vissing-Jørgensen	Kellogg School of Management,	7-9 May

78	Daniel Ziggel	Ruhr University of Bochum	6-11 July
79	Stephen Ziliak	Roosevelt University	21-26 June

Appendix B: Conferences

B.1.1 Organization of international conferences, symposia, seminars etc.

	Title and date of event	Number of participants International	Danish
1	28 January - 1 February Symposium, Sandbjerg Manor: Stochastics in Turbulence and Finance (invitation only) Organized in collaboration with the Thiele Centre Organizer: Ole Barndorff-Nielsen	14	10
2	1 February Applied Seminar on Risk Management and Basel II Organizers: Henning Bunzel and Carsten Tanggaard	4	80
3	8-9 May Symposium on "New Hope for the C-CAPM" Invited speakers: Abhay Abhyankar, Peter Christoffersen, Massimiliano Croce, Itamar Drechsler, Lars Lochstoer, Jesper Rangvid, Annette Vissing-Jørgensen, Ivan Shaliastovich Organizer: Tom Engsted	7	17
4	27 May Distinguished Speaker Seminar Series Speaker: Tim Bollerslev, Duke University and CREATES Title: The Econometrics of Financial Market Volatility: Past Developments and New Directions		
5	24 June Statistical vs. Economic Significance in Economics and Econometrics Organizers: Tom Engsted and Allan Würtz	8	29
6	27-28 June Stanford Institute for Theoretical Economics, SITE - CREATES Summer 2008 Workshop: "Econometric Analysis of High-Frequency Data and the Impact of Economics News" Organizers: Tim Bollerslev, The Fuqua School of Business, Duke University and CREATES and Peter Reinhard Hansen, Stanford University and CREATES	24	4
7	11-14 August Symposium on "Volatility" Organizers: Ole Barndorff-Nielsen, Niels Haldrup and Mark Podolskij	14	27
8	11 September Distinguished Speaker Seminar Series Speaker: Nobel Laureate Professor Robert F. Engle, NYU Stern School of Business Title: What is happening to financial market volatility and why?		

9	12-13 September NBER-NSF Time Series Conference Organizers: Christian Dahl, Niels Haldrup and Bent J. Christensen	105	36
10	6-7 November CREATES members meeting at Sophiendal Gods Special Guest: Prof. David F. Hendry	2	32
11	19 November Distinguished Speaker Seminar Series Speakers: Professor Ole Barndorff-Nielsen, University of Aarhus and CREATES and Professor Neil Shephard, Oxford University and Oxford-Man Title: Modelling and Measuring Volatility		
12	5 December CREATESmas Symposium Speakers: Theis Lange, University of Copenhagen and CREATES, Alessandro Palandri, University of Copenhagen and CREATES, Bent Jesper Christensen, Aarhus University and CREATES, Allan Würtz, Aarhus University and CREATES, Tom Engsted, Aarhus University and CREATES.	0	29

B.1.2 Member of program committees / organization of international conferences

	Title of event	Program committee or organizer
1	ETSERN x 2 meetings	Anders Rahbek (organizer)
2	Nykredit Symposium (den finansielle krise)	Carsten Tanggaard (organizer)
3	NBER/NSF Time Series Conference 12-13 September 2008	Christian Dahl, Bent Jesper Christiansen and Niels Haldrup, Tim Bollerslev (program committee)
4	LMDG 2008 (Labor Economics and International Trade)	Henning Bunzel (organizer)
5	CREATES Volatility Symposium, 11-14 August, 2008	Mark Podolskij, Niels Haldrup, and Ole
6	Bio-Math Summer School and Workshop 2008	Michael Sørensen (organizer)
8	Second Risk Management Conference, Mont Tremblant, Canada	Peter Christoffersen (organizer)
10	Forecasting in Rio	Timo Teräsvirta (programme committee)
11	Symposium on "New Hope for the C-CAPM"	Tom Engsted (organizer)
12	Symposium on "Statistical vs. Economic Significance in Economics and Econometrics"	Tom Engsted and Allan Würtz (organizers)
13	2008 Econometric Society European Meeting, ESEM, Milano, Italy	Niels Haldrup, Søren Johansen, Asger Lunde and Anders Rahbek (program committee)
14	Finansial Econometric and Vast Data, Oxford University, UK	Tim Bollerslev (program committee)
15	Conference on Volatility and Time Series Econometrics in Honor of Robert F. Engle, San Diego	Tim Bollerslev (organizer)
16	SITE/CREATES workshop at Stanford University	Tim Bollerslev and Peter Reinhard Hansen (organizer)

B.2 PhD Courses organized at CREATES

1 28-31 January

Alexander McNeil, Heriot-Watt University "Quantitative Risk Management Modelling Dependence in Market and Credit Risk"

2 6-7 March

Timo Trimborn, University of Hannover "Dynamic Macroeconomic Modelling with Matlab"

3 1-2 April

Peter Boswijk, University of Amsterdam "Asymptotic Theory for Integrated Processes"

4 29-30 May

Peter Christoffersen, McGill University, CBS and CREATES "Empirical Modeling of Equity Index Options: Discrete and Continuous Time Approaches"

5 1-5 September

Charles Bos, Free University Amsterdam "Advanced Programming"

6 20-22 October

Bent E. Sørensen, University of Houston "Empirical Modeling of Intra-National Macro"

7 27-28 October

Giuseppe Cavaliere, University of Bologna "Nonstationary Time Series Analysis"

B.3.1 Weekly Seminars

	Date	Speaker	Title
1	17 January	Markus Reiss, University of Heidelberg	Spectral Calibration of Exponential Lévy Models, Joint with The Thiele Centre
2	24 January	Marco Avarucci, LUISS Guido Carli	A Wald Test for the Cointegration Rank in Nonstationary Fractional Systems
3	31 January	Isabel Casas, Universidad Carlos III	Econometric Estimation in Long-Range Dependent Volatility Models: Theory and Practice
4	5 February	Christos Ntantamis, McGill	A Duration Hidden Markov Model for the Identification of Regimes in Stock Market Returns
5	7 February	Michel van der Wel, Free University Amsterdam	Analyzing the Term Structure of Interest Rates Using the Dynamic Nelson-Siegel Model with Time-Varying Parameters
6	18 February	Daniele Massacci, Cambridge University	Identification and Estimation in an Incoherent Model of Contagion
7	28 February	Robinson Kruse, Leibniz Universität Hannover	Testing for a Break in Persistence under Long-range Dependencies
8	6 March	Le-Yu Chen, UCL	Semiparametric Identification of Structural Dynamic Optimal Stopping Time Models
9	11 March	Ken Nyholm, ECB	How Arbitrage-Free Is the Nelson-Siegel Model?
10	3 April	Peter Boswijk, University of	Testing the Number of Factors in GO-GARCH
11	10 April	Heikki Kauppi, University of Turku	Predicting the Fed's Target Rate Decisions
12	17 April	Valentina Corradi, University of Warwick	Macroeconomic Determinants of Stock Market Volatility and Volatility Risk Premia
13	24 April	Alfredas Rackauskas, Vilnius University	Some New Functional Limit Theorems
14	24 April	Remigijus Leipus, Vilnius University	Time Series Aggregation, Disaggregation, and Long Memory
15	29 April	Mathias Vetter, Ruhr-University of Bochum	Bipower-type estimation in a noisy diffusion setting, Joint with The Thiele Centre

16	15 May	Angelo Ranaldo, Swiss National Bank	Segmentation and Time-of Day Patterns in Foreign Exchange Markets
17	20 May	Steve Heston, University of Maryland	Intraday Patterns in the Cross-Section of Stock Returns
18	22 May	Ivana Komunjer, UCSD	Global Identification in Nonlinear Semiparametric Models
19	27 May	Tim Bollerslev, Duke University and CREATES	Distinguished Speaker Seminar Series "The Econometrics of Financial Market Volatility: Past Developments and Future Directions"
20	4 June	Mika Meitz, University of Oxford	Parameter Estimation in Nonlinear AR-GARCH Models
21	12 June	Edith Madsen, University of Copenhagen	GMM-based Inference in the AR(1) Panel Data Model for Parameter Values Where Local Identification Fails
22	4 September	Charles Bos, Free University Amsterdam	Optimal Portfolio Allocation using Daily Correlation Modelling
23	11 September	Robert Engle, NYU Stern School of Business	Distinguished Speaker Seminar Series "What is Happening to Financial Market Volatility and Why?"
24	18 September	Annastiina Silvennoinen, University of Technology Sydney	Multivariate Autoregressive Conditional Heteroskedasticity with Transitions in Conditional Correlations: Possibly Doubly Smooth
25	25 September	Pedro Albarran, Universidad Carloss III de Madrid	GMM Estimation from Incomplete and Rotating Panels
26	2 October	Karim Abadir, Imperial College London	Macro and Financial Markets: The Memory of an Elephant?
27	23 October	Bent Sørensen, University of Houston	Childhood Determinants of Risk Aversion: The Long Shadow of Compulsory Education
28	30 October	Peter Schotman, University of Maastricht	Long-term strategic asset allocation: an out-of-sample evaluation
29	11 November	Ingmar Nolte, Warwick Business School	Trading Dynamics in the Foreign Exchange Market

30	13 November	Bent Nielsen, University of Oxford	Singular vector autoregressions with deterministic terms: Consistency and lag order determination
31	19 November	Ole Barndorff-Nielsen, Aarhus University and CREATES, Neil Shephard, Oxford University and Oxford-Man	Distinguished Speaker Seminar Series "Modelling and Measuring Volatility"
32	20 November	Paolo Paruolo, University of Insubria	Structured Multivariate Volatility Models
33	27 November	Anindya Banerjee, University of Birmingham	Forecasting with Factor Error Correction Models
34	11 December	Walter Beckert, University of London	Maximal Uniform Convergence Rates in Parametric Estimation Problems

B.3.2 Lunch Seminars

	Date	Speaker	Title
1	15 January	Olaf Posch	Explaining Volatility: The Case of Taxation
2	22 January	Mark Podolskij	New Test for Jumps in Semimartingale Models
3	29 January	Thomas Quistgaard Pedersen	Return Predictability and Intertemporal Asset Allocation: Evidence from a Bias-adjusted VAR Model
4	12 February	Almut Veraart	Inference for the Jump Part of Quadratic Variation of Itô Semimartingales
5	19 February	Matt Dziubinski and Anders Kock	The Smooth Transition Autoregressive Target Zone Model
6	26 February	Tomoaki Nakatani	Positivity Constraints on the Conditional Variances in the Family of Conditional Correlation GARCH Models
7	4 March	Jie Zhu	FIEGARCH-M and International Crisis: A Cross-Country Analysis
8	11 March	Leonidas Tsiaras	Extracting Information about Future Exchange Rate Comovements from Currency Options
9	18 March	Katarzyna Lasak	On Fractional Cointegration
10	8 April	Torben Rasmussen	A Study of Tests for Jumps in High Frequency Data with Noise
11	15 April	Lasse Bork	An Affine Macro-Finance Model of the Yield Curve with Dynamic Macro Factors
12	22 April	Martin Andreasen	DSGE Models, the Central Difference Kalman Filter, and a New Particle Filter
13	6 May	Rickard Sandberg	Critical Values for Linearity Tests in Nonlinear Dynamic Models When Data are Highly Persistent
14	13 May	Ganeshkumar Munnordoce	Modelling with STAR-STGARCH Models
15	4 June	Valeri Voev	Forecasting Multivariate Volatility: An Economic Evaluation Perspective

16	10 June	Stig Vinther Møller	Habit Formation, Surplus Consumption and Return Predictability: International Evidence
17	17 June	Cristina Amado	Conditional Correlation Models of Autoregressive Conditional Heteroskedasticity with Nonstationary GARCH equations
18	26 August	Giuseppe Cavaliere	Unit Root and Cointegration Tests for Bounded Variables
19	16 September	Michel van der Wel	Are Market Makers Liquidity Suppliers?
20	23 September	Charlotte Christiansen	Mean Reversion in US and International Short Rates
21	30 September	Lars Stentoft	Discrete-Time or Continuous-Time Option Valuation Models: A Comparison
22	7 October	Robin Kruse	Unit roots and smooth transitions: either, neither og both?
23	4 November	Olaf Posch	Risk premia in general equilibrium
24	26 November	Anders Kock	Forecasting with Universal Approximators and Learning Algorithms
25	9 December	Paolo Santucci	A No Arbitrage Fractional Cointegration Analysis Of The Range Based Volatility
26	16 December	Lars Stentoft	Bayesian Option Pricing using Mixed normal Heteroskedasticity Models

B.4 Participation in international conferences, symposia, seminars etc.

	Title of event	Venue	Name(s) of participant(s)	Contribution	Invited talk
1	Econometrics Seminar	Zurich, Switzerland	A. Palandri	seminar	X
2	CFE – Computational and Fianciale Econometrics Conference	Neuchatel, Switzerland	A. Palandri	paper	
3	SoFiE – Financial Econometrics Conference	New York, USA	A. Palandri	poster	
4	Australasian Econometric Society Meetings	Wellington, New Zealand	Allan Timmermann	T.J. Hannan Lecture	X
5	Forecasting in Rio Conference	Forecasting in Rio Conference	Allan Timmermann	Keynote Speaker	X
6	Brazilian Finance Association meetings	Brazilian Finance Association meetings	Allan Timmermann	Lecture	X
7	Cambridge University, May 2008		Allan Timmermann	talk	X
8	University of Oxford, May 2008		Allan Timmermann	talk	X
9	Imperial College, May 2008		Allan Timmermann	talk	X
10	Board of the Federal Reserve, June 2008		Allan Timmermann	talk	X
11	Economstric Society European Meeting		Allan Würtz	talk	
12	Stochastics in Turbulence and Finance	Sandbjerg, Denmark	Almut Veraart	talk	
13	STICERD Seminar, London School of Economics	LSE, London, UK	Almut Veraart	talk	
14	8th German Open Conference on Probability and Statistics	Aachen, Germany	Almut Veraart	talk	X
15	SITE - CREATES Summer 2008 Workshop: Econometric Analysis of High- Frequency Data and the Impact of Economics News	Stanford, USA	Almut Veraart	talk	X
16	Fifth World Congress of the Bachelier Finance Society	Imperial College, London, UK	Almut Veraart	talk	X
17	Symposium on Volatility	Aarhus, Denmark	Almut Veraart	talk	
18	23rd Annual Congress of the European Economic Association, 63rd European Meeting of the Econometric Society	Milan, Italy	Almut Veraart	talk	

19	International Conference on High-Frequency Data Analysis in Financial Markets	Tokyo, Japan	Almut Veraart	talk	
20	Recent Advances in High Frequency Financial Econometrics	LSE, London, UK	Almut Veraart	discussion	X
21	CREATES lunch seminar series	CREATES	Anders Bredahl Kock	talk	
22	CREATES lunch seminar series	CREATES	Anders Bredahl Kock	talk	
23	DGPE workshop	Kolle-Kolle, Copenhagen	Anders Bredahl Kock	talk	
24	Seminar	Bologna University	Anders Rahbek	talk	
25	Seminar	Oxford University	Anders Rahbek	talk	X
26	SNDE-Conference	San Francisco	Anders Rahbek	talk	
27	Symposia/Membership Meeting	CREATES	Anders Rahbek	talk	X
28	Seminar	CREST, Paris	Anders Rahbek	talk	X
29	Computational and Financial Econometrics CFE08-Conference	Neuchatel	Anders Rahbek	talk	X
30	LSE Seminar	LSE, London	Anders Rahbek	talk	X
31	ETSERN meetings	Frankfurt; Copenhagen	Anders Rahbek	presentation	
32	DSTS seminar		Anders Rahbek	talk	X
33	SoFiE Opening Conference, NUY Stern, NY, USA, June 4-6		Asger Lunde	poster	
34	SITE workshop, Stanford University, USA, June 27-28		Asger Lunde	paper	X
35	CREATES volatility Conference, Aarhus, Denmark, August 11-14		Asger Lunde	paper	
36	Oxford-Man Conference on Financial Econometrics & Vast Data, September 15-16, Oxford, UK		Asger Lunde	paper	X
37	CREATES members meeting at Sophiendal Gods, Denmark, November 6-7		Asger Lunde	paper	
38	Invited Seminar at Department of Economics, University of Zurich, December		Asger Lunde	paper	X

39	Structural Models of the Labor Market and Policy Analysis	Institute for Fiscal Studies (IFS), London	Bent Jesper Christensen	The Danish Matched Employer-Employee Data: Patterns and Puzzles	X
40	6th INFINITI Conference	IIIS, Trinity College, Dublin	Charlotte Christiansen	talk (with paper) and discussant	
41	SNDE 2008	San Fransisco, USA	Christian Dahl	talk	
42	SETA 2008	Seoul, South Korea	Christian Dahl	talk	
43	The Einaudi Institute for Economics and Finance	Rome, Italy	Christian Dahl	talk	X
44	ESEM 2008	Milano, Italy	Christian Dahl	talk	
45	CREATES ANNUAL MEETING	Sophiendal Gods, Denmark	Christian Dahl	talk	
46	University of Warwick	Warwick, UK	Christian Dahl	talk	X
47	American Real Estate and Urban Economics Association (AREUEA); Doctoral Poster Session, New Orleans 2008		Christos Ntantamis	poster	
48	Bachelier Finance Society	Imperial College, London	David Skovmand	paper	
49	Financial and Actuarial Mathematics Seminar Series	Vienna University of Technology	David Skovmand	talk	X
50	Quantitative Methods in Finance	Sydney, Australia	David Skovmand	paper	
51	SNDE annual symposium	San Francisco Fed	Dennis Kristensen	talk	
52	Microeconometrics Summer Workshop	University of Copenhagen	Dennis Kristensen	talk	
53	25th Canadian Econometric Study Group Conference	Montreal	Dennis Kristensen	talk	
54	CAM Research Workshop	University of Copenhagen	Dennis Kristensen	talk	
55	The 2008 International Symposium on Econometric Theory and Applications (SETA2008)	School of Economics, Seoul National University	Frank Nielsen	poster	
56	Meeting on labor dynamics, R&D, and growth	BI, Oslo	Henning Bunzel		X
57	Structural Models of the Labour Market and Policy Analysis	LSE, London	Henning Bunzel		X
58	NBERNSF	Aarhus University	Isabel Casas	poster	
59	LACEA/LAMES 2008	IMPA (Rio de Janeiro)	Isabel Casas	talk	

60	LAMES 2008	Rio de Janeiro, Brasil	Katarzyna Lasak	talk	
61	European Finance Association Annual Meeting	Athens, Greece	Lars Stentoft	talk	
62	European Meeting of the Econometric Society	Milan, Italy	Lars Stentoft	talk	
63	Northern Finance Association Annual Meeting	Kananaskis Village, Canada	Lars Stentoft	talk	
64	Financial Management Association Annual Meeting	Gaylord Texan Resort, USA	Lars Stentoft	talk	
65	Conference on Numerical Methods for American and Bermudan Options	Vienna, Austria	Lars Stentoft	talk	X
66	Annual PhD Workshop, Danish Doctoral School of Finance	Vejle, Denmark	Leonidas Tsiaras	paper	
67	Stochastics in Turbulance and Finance	Sandbjerg	Mark Podolskij	talk	X
68	Stochastik Tage	Aachen	Mark Podolskij	talk	
69	SITE Conference	Stanford	Mark Podolskij	talk	X
70	Financial Econometrics Conference	London	Mark Podolskij	talk	X
71	Bachelier Finance Society	London	Mark Podolskij	talk	
72	Econometric Society Meeting	Milan	Mark Podolskij	talk	
73	CREATES Member Meeting	Aarhus	Mark Podolskij	talk	X
74	Recent Advances in High Frequency Financial Econometrics		Mark Podolskij	talk	X
75	Swedish Riksbank's conference on "Modeling and Forecasting Economic and Financial Time Series with State Space Models".	Swedish Riksbank's conference	Martin Møller Andreasen	talk	
76	Seminar	UC Berkeley	Michael Jansson	talk	X
77	Seminar	Penn State University	Michael Jansson	talk	X
78	Seminar	Cornell University	Michael Jansson	talk	X
79	Symposium on "Stochastics in Turbulence and Finance"	Sandbjerg, Denmark	Michael Sørensen	talk	X
80	The mathematics and statistics of quantitative risk management	Mathematisches Forschungsinstitut Oberwolfach	Michael Sørensen	talk	X
81	22nd Nordic Conference of Mathamatical Statistics	Vilnius, Lithuania	Michael Sørensen	talk	X
82	Dynstoch Workshop 2008	Padua, Italy	Michael Sørensen	talk	
83	The 7th World Congress in Probability and Statistics	Singapore	Michael Sørensen	talk	

84	Bio-Math Summer School and Workshop 2008	Middelfart, Denmark	Michael Sørensen	lectures	X
85	Workshop on Stochastic Analysis and Statistical Inference III	Tokyo, Japan	Michael Sørensen	talk	X
86	NBER-NSF Time Series Conference	CREATES	Morten Nielsen	talk	
87	NBER-NSF time series conference, 12-13 September 2008	Aarhus	Niels Haldrup	organizer	
88	CORE seminar, 24 September, 2008	Louvain la Neuve, Belgium	Niels Haldrup	paper	X
89	ETSERN meeting, 17-18 November	Copenhagen	Niels Haldrup		
90	Royal Economic Society, Third PhD Meeting (Jan 2008)	London	Olaf Posch	presentation	
91	CESifo Area Conference on Public Sector Economics (April 2008)	Munich	Olaf Posch	presentation	X
92	Society for Computational Economics (June 2008)	Paris	Olaf Posch	presentation	
93	Symposium on Stochastic Dynamic Models in Finance and Economics (August 2008)	Odense	Olaf Posch	presentation	
94	European Economic Association, 23rd Annual Congress (August 2008)	Milan	Olaf Posch	presentation	
95	Verein für Socialpolitik, Annual Conference (September 2008)	Graz	Olaf Posch	presentation	
96	CREATES Lectures	Aarhus	Peter Christoffersen	Invited lecture	X
97	Invited Lecture at University of Zurich	Zurich	Peter Christoffersen	Invited lecture	X
98	American Finance Association	Chicago	Peter Christoffersen	paper presentation	
99	Western Finance Asssociation	Hawaii	Peter Christoffersen	paper presentation	
100	Federal Reserve Bank of New York	NY	Peter Christoffersen	paper presentation	X
101	York University	Toronto	Peter Christoffersen	paper presentation	X
102	Stockholm School of Economics	Stockholm	Peter Christoffersen	paper presentation	X
103	Princeton Conference on Ma	Los Angeles	Peter Christoffersen	paper presentation	X

104	Time Series Econometrics with Applications to Macroeconomics and Finance	S. Louis Federal Reserve Bank	Peter Reinhard Hansen	talk	X
105	Financial Econometrics	Imperial College	Peter Reinhard Hansen	talk	X
106	Society for Financial Econometrics, Inaugural Conference	New York, NYU	Peter Reinhard Hansen	talk	
107	Working Group on Forecasting & Empirical Methods in Macroeconomics & Finance	NBER-NSF, Summer Institute Boston, MA	Peter Reinhard Hansen	talk	X
108	Vast Data Conference	Oxford Man Institute, Oxford University.	Peter Reinhard Hansen	talk	
109	Forecasting in Rio	Rio de Janeiro	Peter Reinhard Hansen	talk	X
110	Volatility Symposium	CREATES, University of Aarhus	Peter Reinhard Hansen	talk	
111	High-Frequency Data Analysis in Financial Markets	Hitotsubashi University	Peter Reinhard Hansen	talk	X
112	Seminar	San Francisco Reserve Bank	Peter Reinhard Hansen	talk	X
113	Seminar	University of California, Berkeley	Peter Reinhard Hansen	talk	X
114	Seminar	University of California, San Diego	Peter Reinhard Hansen	talk	X
115	Seminar (on Volatility)	Board of Governors, Washington DC	Peter Reinhard Hansen	talk	X
116	Seminar (on Forecasting)	Board of Governors, Washington DC	Peter Reinhard Hansen	talk	X
117	Seminar	Columbia University, New York	Peter Reinhard Hansen	talk	X
118	Seminar	Bank of Japan, Tokyo	Peter Reinhard Hansen	talk	X
119	NBER-NSF Time Series Conference	Aarhus University	Robinson Kruse, Philipp Sibbertsen	poster	
120	CORE Econometrics Seminar	CORE, Louvain-la-Neuve, Belgium	Robinson Kruse	talk	X
121	SIRE Conference	Glasgow	Søren Johansen		X
122	In honour of Hashem Pesaran	Frankfurt	Søren Johansen		X
123	OxBridge Symposium	Oxford	Søren Johansen		X
124	Recent Advances in Time Series	Cyprus	Søren Johansen		X

125	European Financial Manager	Athens	Stig Vinther Møller		
126	Society of Non-linear Dynamics and Economics	San Francisco Federal Reserve Bank	T. Lange	talk	
127	14th International Conference on Computing in Economics and Finance	Universite de la Sorbonne	T. Lange	talk	
128	Eastern and South Asian Meeting of the Econometric Society	Singapore Management University	T. Lange	talk	
129	NBER/NSF Time Series Conference	University of Aarhus	T. Lange	poster	
130	NBER-NSF time series conference	University of Aarhus	Thomas Busch		
131	Ph.D. workshop (Danish Doctoral School of Finance)	Hotel Munkebjerg, Vejle, Denmark	Thomas Quistgaard Pedersen	talk	
132	CREATES lunch seminar series	Aarhus University, Denmark	Thomas Quistgaard Pedersen	talk	
133	CREATES symposium: New hope for the C-CAPM?	Aarhus University, Denmark	Thomas Quistgaard Pedersen	talk	
134	CREATES member meeting	Sophiendal Manor, Denmark	Thomas Quistgaard Pedersen	talk	
135	Ph.D. workshop (Danish Graduate Program in Economics)	Kolle Kolle Conference Hotel, Denmark	Thomas Quistgaard Pedersen	talk	
136	21st Australasien Finance and Banking Conference	Shangri-La Hotel, Sydney, Australia	Thomas Quistgaard Pedersen	talk	
137	Quantitative Methods in Finance Conference	Amora Hotel, Sydney, Australia	Thomas Quistgaard Pedersen	talk	
138	The Mathematics and Statistics of Quantitative Risk Management	Oberwolfach	Timo Teräsvirta	talk	
139	Statistical inference and tests	Marseille	Timo Teräsvirta		X
140	Forecasting in Rio	Rio de Janeiro	Timo Teräsvirta		X
141	COMPSTAT conference	Porto	Timo Teräsvirta		X
142	Applied Economics Ruby Conference	Cambridge	Timo Teräsvirta		X
143	NoonToNoon Conference	Jyväskylä	Timo Teräsvirta		X

144	CREATES Members' Meeting	Sophiendal Gods	Timo Teräsvirta	paper	
145	ETSERN Workshop	København	Timo Teräsvirta		X
146	CIMF Workshop "Forecasting under Model Instability"	Cambridge	Timo Teräsvirta	paper	
147	EEA-ESEM 2008	Milano	Timo Teräsvirta	paper	
148	Econometric Society, Winter Meetings 2008	New Orleans, Louisiana, U.S.A.	Torben G. Andersen	talk	
149	Conference in Honor of Rob Engle	San Diego, CA	Torben G. Andersen	talk	
150	SITE, Segment 3, Econometric Analysis of High-Frequency Data and the Impact of Economic News	Stanford University, CA	Torben G. Andersen	talk	X
151	Far-Eastern Meeting, Econometric Society, 2008	Singapore Management University	Torben G. Andersen	talk	X
152	Conference in Honor of Peter C.B. Phillips	Singapore Management University	Torben G. Andersen	talk	
153	Volatility Symposium, CREATES	University of Aarhus	Torben G. Andersen	talk	
154	NBER Time Series Conference	University of Aarhus	Torben G. Andersen	talk	
155	Financial Econometrics and Vast Data Conference	Man Institute, University of Oxford	Torben G. Andersen	talk	
156	CME Group University Research Roundtable	Chicago Mercantile Exchange	Torben G. Andersen	talk	
157	High-Frequency Data Analysis in Financial Data	Hitotsubashi University, Tokyo	Torben G. Andersen	talk	X
158	Finance Seminar	Tokyo University	Torben G. Andersen	talk	X
159	Finance Seminar	Bank of Japan	Torben G. Andersen	talk	X
160	What Went Wrong? Financial Engineering, Financial Econometrics, and the Current Stress	Cass School of Business, London	Torben G. Andersen	talk	X
161	Recent Advances in High Frequency Financial Econometrics	London School of Economics	Torben G. Andersen	talk	X
162	Pfingsttagung der Deutschen Statistischen Gesellschaft	Technische Universitaet - Berlin	Valeri Voev	presentation	
163	SITE CREATES workshop	Stanford university	Valeri Voev	presentation	
164	ESEM Conference	Bocconi university	Valeri Voev	presentation	
165	NBER-NSF Conference	Aarhus University	Valeri Voev	poster	

166	Volatility symposium	Aarhus University	Valeri Voev	presentation	
167	NBER Asset Pricing Program Meeting	Chicago, April	Tim Bollerslev		
168	International Monetary Fund	Washington DC, April	Tim Bollerslev		X
169	Distinguished Lecture	University of Aarhus, Denmark, May	Tim Bollerslev		X
170	Inaugural Conference for The Society for Financial Econometrics	New York, June	Tim Bollerslev		X
171	Conference on Volatility and Time Series Econometrics	San Diego, June	Tim Bollerslev		X
172	SITE Conference	Stanford University, June	Tim Bollerslev		
173	Symposium on Volatility	University of Aarhus, Denmark, August	Tim Bollerslev		
174	NBER-NSF Time Series Conference	September	Tim Bollerslev		
175	Conference on Financial Econometrics and Vast Data	Oxford, UK, September	Tim Bollerslev		
176	New York University, November		Tim Bollerslev		
177	Swiss Finance Institute, Geneva, Switzerland, November		Tim Bollerslev		

Appendix C: Educational activities

	Title of activity	Level	ECTS	Number of participants
1	Microeconomics, Statistics, Mathematics	BA	20	179
2	Regression Analysis	BA	5	150
3	Finance and Investments	BA	10	180
4	Topics in Applied Economics and Finance	BA/MSc	5	8
5	Econometrics	BA	10	90
6	Applied Time Series and Financial Econometrics	MSc	10	7
7	Time Series Econometrics	MSc	10	29
8	Investments	MSc	10	40
9	Microeconomics, Math-Econ	BA	10	35
10	PhD Econometrics	PhD	10	9
11	Quantitative Risk Management Dependence in Market and Credit Risk	PhD	2	12
12	Asymptotic Theory for Integrated Processes	PhD	2	6
13	Empirical Model of Index Options: Discrete and Continous Time Approaches	PhD	2	18
14	Advanced Programming	PhD	2	25
15	Empirical Modelling of Intra-National Macro	PhD	2	14
16	Nonstationary Time Series Econometrics	PhD	2	12

Students surpervised at the centre by staff members		
Number of graduated PhD-students:	12	(3 at School of Economics and Management)
Number of graduated Master-students (estimated):	30	(School of Economics and Management only)

Appendix D: Academic services

D.1 Scholarly communication

	Title of journal	Person	Editorial work
1	ALEA - Latin American Journal of Probability and Mathematical Statistics	Michael Sørensen	Associate Editor
2	Brazilian Journal of Probability and Statistics	Michael Sørensen	Associate Editor
3	Annals of Finance	Christian Dahl	Associate Editor
4		Allan Timmermann	Associate Editor
5	Applied Financial Economics	Timo Teräsvirta	Advisory Editor
6	Econometric Theory	Michael Jansson	Associate Editor
7	Econometrics Journal	Michael Jansson	Associate Editor
8		Dennis Kristensen	Associate Editor
9		Anders Rahbek	Associate Editor
10		Allan Timmermann	Associate Editor
11	Economic Policy Review	Allan Timmermann	Associate Editor
12	European Finance Review	Tim Bollerslev	Associate Editor
13	Finans/Invest	Charlotte Christiansen	Editorial Board
14		Tom Engsted	Editorial Board
15	Foundations and Trends in Econometrics	Tim Bollerslev	Associate Editor
16	Internat. Financial Markets, Institutions & Money	Tim Bollerslev	Associate Editor
17	Journal of Applied Econometrics	Tim Bollerslev	Co-editor
18		Niels Haldrup	Associate Editor
19		Peter Christoffersen	Associate Editor
20		Peter Reinhard Hansen	Associate Editor
21		Allan Timmermann	Associate Editor
22	Journal of Asset Management	Allan Timmermann	Associate Editor
23	Journal of Business and Economic Statistics	Allan Timmermann	Associate Editor
24	Journal of Economic Dynamics and Control	Allan Timmermann	Associate Editor
25	Journal of Financial Econometrics	Torben Andersen	Associate Editor
26		Peter Christoffersen	Associate Editor
27		Allan Timmermann	Associate Editor
28	Journal of Financial Forecasting (Risk Journals)	Allan Timmermann	Associate Editor
29	Journal of Futures Markets	Charlotte Christiansen	Associate Editor
30	Journal of Risk	Peter Christoffersen	Associate Editor
31	Journal of the European Mathematical Society	Ole Barndorff-Nielsen	Editorial Board
32	Journal of Time Series Econometrics	Niels Haldrup	Associate Editor
33	Mathematical Finance	Bent Jesper Christensen	Associate Editor
34	Monetary Studies	Timo Teräsvirta	Associate Editor
35	Oxford Bulletin of Economics and Statistics	Anders Rahbek	Associate Editor
36	Quantitative Finance	Peter Reinhard Hansen	Associate Editor
37	Research in International Business and Finance	Tom Engsted	Associate Editor
38	Scandinavian Journal of Economics	Niels Haldrup	Associate Editor
39	Statistical Inference for Stochastic Processes	Michael Sørensen	Associate Editor
40	Stochastic Processes and Their Applications	Michael Sørensen	Associate Editor

NOTE: The list includes editorial positions where the CREATES members serve in the editorial board as editor or associate editor. In addition, CREATES members regularly review journal articles as referees for peer reviewed journals. On average, senior CREATES members handle 6-8 papers annually.

D.2 Assessments, international panels, membership and supervision

Number of staff conducting academic services	Number of grant and/or career/tenure assessments plus international panels	Number of positions and council seats in learned societies	Number of Ph.d. and doctor evaluations, national and international	Number of primary supervisions of Ph.D and master students
35	**20**	**7**	**22**	50

Appendix E: External funding

E.1 Public Danish Funds

	Funding Body	Title/Purpose	Grant holder	Activity Period	Granted Amount, 1000 DKK	Amount for reported year, 1000 DKK
1	Danish Social Sciences Research Council	Dynamic Modelling of Long Memory and Persistence in Economic Time Series	Niels Haldrup	2006-2009	3.225	870
2	Danish Social Sciences Research Council	Analysis of Fractionally Integrated and Co-integrated Time Series with applications to Nordic Electricity Market Volatility	Morten Ø. Nielsen	2006-2008	560	190
3	Danish Social Sciences Research Council	Guest Professorship, Timo Teräsvirta	Niels Haldrup	2006-2007	912	0
4	Danish Social Sciences Research Council	Post doc Scholarship	Katarzyna Lasak	2008-2010	1.300	271
5	Danish Social Sciences Research Council	Quantile Regression on panel data in the presence of unobserved heterogeneity	Christian M. Dahl	2007-2008	563	200
6	Danish Social Sciences Research Council	Towards Integration of International Financial Markets	Charlotte Christiansen	2006-2008	611	203
7	Faculty of Social Sciences, Aarhus University	1-year post doc Faculty Grant	Mark Podolskij	2007-2008	430	287
8	Faculty of Social Sciences, Aarhus University	1-year post doc Faculty Grant	Olaf Posch	2007-2008	430	287
9	Faculty of Social Sciences, Aarhus University	1-year post doc Faculty Grant	Katarzyna Lasak	2007-2008	430	251
10	Faculty of Social Sciences, Aarhus University	2-year post doc Faculty Grant (Globalization)	Jie Zhu	2007-2008	860	430
11	Danish Center for Scientific Computing	Computing time at DCSC	Bent Jesper Christensen	2007-2008	400	200
12	Danish Social Sciences Research Council	2008 NBER-NSF time series conference, CREATES	Niels Haldrup	2008	96	96
13	Danish Social Sciences Research Council	Visiting Professorship, Gilles Teyssiere	Per B. Overgaard	2009	475	0

14	Danish Social Sciences Research Council	Empirical Modeling of Financial Markets during Turbulent periods and Structural Change	Charlotte Christiansen	2009-2011	2.970	0
15	Danish Social Sciences Research Council	Estimation, Testing, and Representation in Fractional Integration and Cointegration models subject to non-linearities	Frank S. Nielsen	2009-2011	1.381	0
16	Danish Social Sciences Research Council	Volatility Modelling: Leverage and Long Memory	Isabel Casas	2009-2011	1.436	0
17	Ministry of Science, Technology and Innovation	3 PhD Scholarships, Co-financing	Niels Haldrup	2008-2011	1.856	0
	Total				**17.935**	**3.285**

E.2 Private Danish Funds

	Funding Body	Title/Purpose	Grant holder	Activity Period	Granted Amount 1000 DKK	Amount for reported year 1000 DKK
1	Danmarks Nationalbank	2008 NBER-NSF time series conference, CREATES	Niels Haldrup	2008	76	76

E.3 International Funds

	Funding Body	Title/Purpose	Grant holder	Activity Period	Granted Amount 1000 DKK	Amount for reported year 1000 DKK
1	NBER-National Bureau of Economic Research and NSF-National Science Foundation	2008 NBER-NSF time series conference, CREATES, 12-13 September 2008, 12.000 USD	Niels Haldrup	2008	66	66
2	Stevanovich Center for Mathematical Finance, University of Chicago	Stevanovich Center - CREATES joint conference in 2009: Financial Econometrics and Statistics, Current Themes and New Directions	Niels Haldrup	2009	300	0 kr

Note: The list only includes grants for CREATES members at the Host Institution, Aarhus University

Appendix F: Awards and acknowledgements

Award/Acknowledgement	Recipient	Granted amount in DKK, if relevant
Queen's University Research Grant	Morten Nielsen	45.000
Reinhard Selten Best Paper Prize (Verein für Socialpolitik, Graz)	Olaf Posch	11.250
Distinguished CESifo Affiliate Award Session (CESifo Area Conference, Munich)	Olaf Posch	3.500
Fellow of the Econometric Society	Torben G. Andersen	
"Rigmor and Carl Holst-Knudsen's Research Prize" from Aarhus University, Denmark	Tim Bollerslev	75.000

Appendix G: Public outreach

G.1 Electronic media

G.2 Press

Specific media	Date	Type of communication	Subject/ Title	Contributor from the centre
Economist Intelligence Unit's Executive Briefing (eb.eiu.com, under the Finance and Performance category) Web and Hard Copy	03-10-2008	Research Summary Article written for Business audience - per web and hard-copy distributed to selected executives	The VIX, CIV and MFIV: Measuring Up the Accuracy of Option-Based Predictors of Volatility	Torben G. Andersen

G.3 Other (talks at secondary educational institutions etc)

Specific type of communication	Date	Subject/Title	Contributor from the centre
Dissemination Seminar, Applied Seminar on Risk Management and Basel II	01-02-2008	Seminar held for general audience in the financial sector	Henning Bunzel and Carsten Tanggaard

Appendix H: Patents and applications

Appendix I: Publications

I.1 Articles in refereed journals

1 2008, Jason Abrevaya and Christian M. Dahl , The effects of birth inputs on birthweight: evidence from quantile estimation on panel data, Journal of Business and Economic Statistics, 26(4), 379-397 (PR) (CO)

2 2008, Ole E. Barndorff-Nielsen, Peter R. Hansen, Asger Lunde and Neil Shephard, Designing Realized Kernels in to Measure the Ex-Post Variation of Equity Prices in the Presence of Noise, Econometrica, 76(6), 1481–1536 (PR) (CO)

3 2008, O.E. Barndorff-Nielsen and V. Pérez-Abreu, Matrix subordinators and related Upsilon transformations, Theory of Probability and its Applications, 52, 1-23 (PR) (CO)

4 2008, O.E. Barndorff-Nielsen and J. Schmiegel, A stochastic differential equation framework for the timewise dynamics of turbulent velocities, Theory of Probability and its Applications, 52, 372-388 (PR) (CO)

5 2008, O.E. Barndorff-Nielsen and F. Hubalek, Probability measures, Lévy measures, and analyticity in time, Bernoulli, 14, 764-790 (PR) (CO)

6 2008, O.E. Barndorff-Nielsen, J. Rosinski and S. Thorbjørnsen, General upsilon transformations, ALEA, 4, 131-165 (PR) (CO)

7 2008, O.E. Barndorff-Nielsen and M. Maejima, Semigroups of Upsilon transformations, Stochastic Processes and their Applications, 118, 2334-2343 (PR) (CO)

8 2008, F. Bec, Anders Rahbek and Neil Shephard, The ACR Model: A Dynamic Mixture Autoregression, Oxford Bulletin of Economics and Statistics, 70, 583-618 (PR) (CO)

9 2008, F. Bec, M. Ben-Salem and Anders Rahbek, Nonlinear Adjustment towards the Purchasing Power Parity Relation: A Multivariate Approach, Economics Bulletin, 6, 1-6 (PR) (CO)

10 2008, Eric Bentzen, Peter R. Hansen, Asger Lunde and Allan A. Zebedee, The Greenspan Years: An Analysis of the Magnitude and speed of the Equity Market Response to FOMC Announcements, Financial Markets and Portfolio Management, 22, 3-20 (PR) (CO)

11 2008, Tim Bollerslev, Tzuo Hann Law and George Tauchen, Risk, Jumps, and Diversification, Journal of Econometrics, 144(1), 234-256 (PR) (CO)

12 2008, Isabel Casas, Estimation of stochastic volatility with LRD, Mathematics and Computers in Simulation, 78, 335-340 (PR)

13 2008, Isabel Casas and Jiti Gao, Econometric estimation in long-range dependent volatility models: Theory and practice, Journal of Econometrics, 147, 72-83 (PR) (CO)

14 2008, Isabel Casas and Jiti Gao, Specification Testing in Discretized Diffusion Models: Theory and Practice, Journal of Econometrics, 147, 131-140 (PR) (CO)

15 2008, Charlotte Christiansen, Juanna Schrøter Joensen and Jesper Rangvid, Are Economists More Likely to Hold Stocks?, Review of Finance, 12(3), 465-496 (PR) (CO)

16 2008, Charlotte Christiansen, Level-ARCH Short Rate Models with Regime Switching: Bivariate Modeling of US and European Short Rates, International Review of Financial Analysis, 17(5), 925-948 (PR)

17 2008, Peter F. Christoffersen, Kris Jacobs, Chay Ornthanalai and Yintian Wang, Option Valuation with Long-run and Short-run Volatility Components, Journal of Financial Economics, 90, 272–297 (PR) (CO)

18 2008, Christian M. Dahl, Henrik Hansen and John Smidt, The cyclical component factor model, International Journal of Forecasting, 24(4), 119-127 (PR) (CO)

19 2008, H. Dette and Mark Podolskij, Testing the parametric form of the volatility in continuous time diffusion models - an empirical process approach, Journal of Econometrics, 143, 56-73 (PR) (CO)

20 2008, Graham Elliott, Ivana Komunjer and Allan Timmermann, Biases in Macroeconomic Forecasts: Irrationality or Asymmetric Loss?, Journal of European Economic Association, 6, 122-157 (PR) (CO)

21 2008, Graham Elliott and Allan Timmermann, Economic Forecasting, Journal of Economic Literature, 46(1), 3-56 (PR) (CO)

22 2008, Julie Lyng Forman and Michael Sørensen, The Pearson diffusions: A class of statistically tractable diffusion processes, Scandinavian Journal of Statistics, 35, 438-465 (PR) (CO)

23 2008, P. Frederiksen and M. Ø. Nielsen, Bias-reduced estimation of long-memory stochastic volatility, Journal of Financial Econometrics, 6, 496-512 (PR) (CO)

24 2008, P. H. Frederiksen and M. Ø. Nielsen, Finite sample accuracy and choice of sampling frequency in integrated volatility estimation, Journal of Empirical Finance, 15, 265-286 (PR) (CO)

25 2008, Andrés González and Timo Teräsvirta, Modelling autoregressive processes with a shifting mean, Studies in Nonlinear Dynamics and Econometrics, 12(1), Article 1 (PR) (CO)

26 2008, Massimo Guidolin and Allan Timmermann, Size and Value Anomalies under Regime Shifts, Journal of Financial Econometrics, 6, 1-48 (PR) (CO)

27 2008, Massimo Guidolin and Allan Timmermann, International Asset Allocation under Skew and Kurtosis Preferences, Review of Financial Studies, 21(2), 889-935 (PR) (CO)

28 2008, Niels Haldrup, Peter Mølgaard and Claus Kastberg Nielsen, Sequential Versus Simultaneous Market Delineation: The Relevant Antitrust Market for Salmon, Journal of Competition Law and Economics, 4(3), doi:10.1093/joclec/nhn020, 893-913 (PR) (CO)

29 2008, Niels Haldrup and Andreu Sansó, A Note on the Vogelsang Test for Additive Outliers, Statistics and Probability Letters, 78, 296-300 (PR) (CO)

30 2008, Peter R. Hansen, Jeremy Large and Asger Lunde, Moving Average-Based Estimators of Integrated Variance, Econometric Reviews, 27(1), 79-111 (PR) (CO)

31 2008, Peter Reinhard Hansen, Reduced-Rank Regression: A Useful Determinant Identity, Journal of Statistical Planning and Inference, 138, 2688-2697 (PR)

32 2008, Changli He, Annastiina Silvennoinen and Timo Teräsvirta, Parameterizing unconditional skewness in models for financial time series, Journal of Financial Econometrics, 6, 208-230 (PR) (CO)

33 2008, David Hendry, Søren Johansen and Carlos Santos, Automatic selection of indicators in a fully saturated regression, Computational Statistics, 23, 317-335 and Erratum 337-339 (PR) (CO)

34 2008, Kevin D. Hoover, Søren Johansen and Katarina Juselius, Allowing the Data to Speak Freely: The Macroeconometrics of the Cointegrated Vector Autoregression, American Economic Review, Papers and Proceedings, 98, 251-55 (PR) (CO)

35 2008, Michael Jansson, Semiparametric Power Envelopes for Tests of the Unit Root Hypothesis, Econometrica, 76, 1103-1142 (PR)

36 2008, Søren Johansen and A.R. Swensen, Exact Rational Expectations, Cointegration, and Reduced Rank Regression, Journal of Statistical Planning and Inference, 138, 2738-2748 (PR) (CO)

37 2008, Søren Johansen, A Representation Theory for a Class of Vector Autoregressive Models for Fractional Processes, Econometric Theory, 24, 651-676 (PR)

38 2008, Silja Kinnebrock and Mark Podolskij, A note on the central limit theorem for bipower variation of general functions, Stochastic Processes and Their Applications, 118, 1056-1070 (PR) (CO)

39 2008, Dennis Kristensen, Estimation of Partial Differential Equations with Applications in Finance, Journal of Econometrics, 144, 392-408 (PR)

40 2008, Stig Vinther Møller, Consumption growth and time-varying expected stock returns, Finance Research Letters, 5, 129-136 (PR)

41 2008, Tomoaki Nakatani and Timo Teräsvirta, Positivity constraints on the conditional variances in the family of Conditional Correlation GARCH models, Finance Research Letters, 5, 88-95 (PR) (CO)

42 2008, M. Ø. Nielsen, A. Zussman and N. Zussman, Asset market perspectives on the Israeli-Palestinian conflict, Economica, 75, 84-115 (PR) (CO)

43 2008, Keld Rømer Rasmussen and Michael Sørensen, The vertical variation of particle speed and flux density in aeolian saltation: measurement and modeling, Journal of Geophysical Research, 113 (PR) (CO)

44 2008, Lars Stentoft, American Option Pricing using GARCH models and the Normal Inverse Gaussian Distribution, Journal of Financial Econometrics, 6(4), 540-582 (PR)

45 2008, Allan Timmermann, Elusive Return Predictability, International Journal of Forecasting, 24, 1-18 (PR)

I.2 Notes in refereed journals

1 2008, Allan Timmermann, Reply to discussants, International Journal of Forecasting, 24, 29-30 (PR)

I.3 Contributions to refereed books

1 2008, Torben G. Andersen, Realized Volatility, The New Palgrave Dictionary of Economics, 2nd Edition, Eds.: S.N. Durlauf and L.E. Blume, Palgrave Macmillan, 7, 24-33 (PR)

2 2008, Torben G. Andersen, Volatility Modeling, Encyclopedia of Quantitative Risk Analysis and Assessment, Wiley and Sons, 4 (PR)

3 2008, Barndorff-Nielsen, O.E., Kinnebrock, S. and Shephard, N., Measuring downside risk-realised semivariance, To appear in Festschrift to Robert Engle (PR) (CO)

4 2008, Barndorff-Nielsen, O.E. and Schmiegel, J., Time change, volatility and turbulence, In A. Sarychev, A. Shiryaev, M. Guerra and M.d.R. Grossinho (Eds.): Proceedings of the Workshop on Mathematical Control Theory and Finance, Lisbon 2007, Berlin Springer, 29-53 (PR) (CO)

5 2008, Changli He, Hans Malmsten and Timo Teräsvirta, Higher-order dependence in the general Power ARCH process and the role of the power parameter, Recent Advances in Linear Models and Related Areas, New York, 231-251 (PR) (CO)

6 2008 Søren Johansen, Reduced rank regression, The New Palgrave Dictionary of Economics, Second Edition, Eds. Steven N. Durlauf and Lawrence E. Blume, Palgrave Macmillan (PR)

7 2008, Bruce Lehmann and Allan Timmermann, Performance Management and Evaluation, Handbook of Financial Intermediation and Banking, 191-258 (PR) (CO)

8 2008, Svend Hylleberg, Seasonal Adjustment. New Palgrave Dictionary of Economics, 2nd edition, Palgrave Macmillan

I.4 Refereed books

1 2008, Torben G. Andersen, Tim Bollerslev and Francis X. Diebold, Parametric and Nonparametric Volatility Measurement, Handbook of Financial Econometrics (eds. Yacine Aït-Sahalia and Lars P. Hansen), Amsterdam: Elsevier Science B.V. (PR) (CO)

I.5 Editor of refereed books

I.6 Working papers published in working paper series, conference contributions and non-refereed books, notes and articles.

I.6.1 CREATES Research Papers 2008

1 2008, John A. Carlson, Christian M. Dahl and Carol L. Osler, Short-run Exchange-Rate Dynamics: Theory and Evidence (CREATES RP 2008-1)

2 2008, Peter Reinhard Hansen, Reduced-Rank Regression: A Useful Determinant Identity (CREATES RP 2008-2)

3 2008, Søren Johansen, Katarina Juselius, Roman Frydman and Michael Goldberg Testing hypotheses in an I(2) model with applications to the persistent long swings in the Dmk/$ rate (CREATES RP 2008-3)

4 2008, Olaf Posch, Explaining output volatility: The case of taxation (CREATES RP 2008-4)

5 2008, Annastiina Silvennoinen and Timo Teräsvirta, Modelling Multivariate Autoregressive Conditional Heteroskedasticity with the Double Smooth Transition Conditional Correlation GARCH Model (CREATES RP 2008-5)

6 2008, Annastiina Silvennoinen and Timo Teräsvirta, Multivariate GARCH models. To appear in T. G. Andersen, R. A. Davis, J.-P. Kreiss and T. Mikosch, eds. Handbook of Financial Time Series. New York: Springer (CREATES RP 2008-6)

7 2008, Changli He, Annastiina Silvennoinen and Timo Teräsvirta, Parameterizing unconditional skewness in models for financial time series (CREATES RP 2008-7)

8 2008, Cristina Amado and Timo Teräsvirta, Modelling Conditional and Unconditional Heteroskedasticity with Smoothly Time-Varying Structure (CREATES RP 2008-8)

9 2008, Søren Johansen and Bent Nielsen, An analysis of the indicator saturation estimator as a robust regression estimator (CREATES RP 2008-9)

10 2008, Peter Christoffersen, Kris Jacobs, Christian Dorion and Yintian Wang, Volatility Components, Affine Restrictions and Non-Normal Innovations (CREATES RP 2008-10)

11 2008, Peter Christoffersen, Kris Jacobs, Chayawat Ornthanalai and Yintian Wang, Option Valuation with Long-run and Short-run Volatility Components (CREATES RP 2008-11)

12 2008, Tom Engsted and Stig V. Møller, An iterated GMM procedure for estimating the Campbell-Cochrane habit formation model, with an application to Danish stock and bond returns (CREATES RP 2008-12)

13 2008, Lars Stentoft, Option Pricing using Realized Volatility (CREATES RP 2008-13)

14 2008, Jie Zhu, Pricing Volatility of Stock Returns with Volatile and Persistent Components (CREATES RP 2008-

15 2008, Jie Zhu, Testing for Expected Return and Market Price of Risk in Chinese A-B Share Market: A Geometric Brownian Motion and Multivariate GARCH Model Approach (CREATES RP 2008-15)

16 2008, Jie Zhu, FIEGARCH-M and and International Crises: A Cross-Country Analysis (CREATES RP 2008-16)

17 2008, Almut E. D. Veraart, Inference for the jump part of quadratic variation of Itô semimartingales (CREATES RP 2008-17)

18 2008, Michael Sørensen, Parametric inference for discretely sampled stochastic differential equations (CREATES RP 2008-18)

19 2008, Anne Péguin-Feissolle, Birgit Strikholm and Timo Teräsvirta, Testing the Granger noncausality hypothesis in stationary nonlinear models of unknown functional form (CREATES RP 2008-19)

20 2008, Stefan Holst Bache, Christian M. Dahl and Johannes Tang Kristensen, Determinants of Birthweight Outcomes: Quantile Regressions Based on Panel Data (CREATES RP 2008-20)

21 2008, Ole E. Barndorff-Nielsen, José Manuel Corcuera, Mark Podolskij and Jeannette H.C. Woerner, Bipower variation for Gaussian processes with stationary increments (CREATES RP 2008-21)

22 2008, Mark Podolskij and Daniel Ziggel, A Range-Based Test for the Parametric Form of the Volatility in Diffusion Models (CREATES RP 2008-22)

23 2008, Silja Kinnebrock and Mark Podolskilj, An Econometric Analysis of Modulated Realised Covariance, Regression and Correlation in Noisy Diffusion Models (CREATES RP 2008-23)

24 2008, Matias D. Cattaneo, Richard K. Crump and Michael Jansson, Small Bandwidth Asymptotics for Density-Weighted Average Derivatives (CREATES RP 2008-24)

25 2008, Mark Podolskij and Mathias Vetter, Bipower-type estimation in a noisy diffusion setting (CREATES RP 2008-25)

26 2008, Martin Møller Andreasen, Ensuring the Validity of the Micro Foundation in DSGE Models (CREATES RP 2008-26)

27 2008, Tom Engsted and Thomas Q. Pedersen, Return predictability and intertemporal asset allocation: Evidence from a bias-adjusted VAR model (CREATES RP 2008-27)

28 2008, Frank S. Nielsen, Local polynomial Whittle estimation covering non-stationary fractional processes (CREATES RP 2008-28)

29 2008, Per Frederiksen, Frank S. Nielsen and Morten Ørregaard Nielsen, Local polynomial Whittle estimation of perturbed fractional processes (CREATES RP 2008-29)

30 2008, Mika Meitz and Pentti Saikkonen, Parameter estimation in nonlinear AR-GARCH models (CREATES RP 2008-30)

31 2008, Ingmar Nolte and Valeri Voev, Estimating High-Frequency Based (Co-) Variances: A Unified Approach (CREATES RP 2008-31)

32 2008, Martin Møller Andreasen, How to Maximize the Likelihood Function for a DSGE Model by (CREATES RP 2008-32)

33 2008, Martin Møller Andreasen, Non-linear DSGE Models, The Central Difference Kalman Filter, and The Mean Shifted Particle Filter (CREATES RP 2008-33)

34 2008, Mark Podolskij and Daniel Ziggel, New tests for jumps: a threshold-based approach (CREATES RP 2008-34)

35 2008, Per Frederiksen and Morten Ørregaard Nielsen, Bias-reduced estimation of long memory stochastic volatility (CREATES RP 2008-35)

36 2008, Morten Ørregaard Nielsen, A Powerful Test of the Autoregressive Unit Root Hypothesis Based on a Tuning Parameter Free Statistic (CREATES RP 2008-36)

37 2008, Dennis Kristensen, Uniform Convergence Rates of Kernel Estimators with Heterogenous, Dependent Data (CREATES RP 2008-37)

38 2008, Christian M. Dahl and Emma M. Iglesias, The limiting properties of the QMLE in a general class of asymmetric volatility models (CREATES RP 2008-38)

39 2008, Roxana Chiriac and Valeri Voev, Modelling and Forecasting Multivariate Realized Volatility (CREATES RP 2008-39)

40 2008, Stig Vinther Møller, Consumption growth and time-varying expected stock returns (CREATES RP 2008-40)

41 2008, Lars Stentoft, American Option Pricing using GARCH models and the Normal Inverse Gaussian distribution (CREATES RP 2008-41)

42 2008, Ole E. Barndorff-Nielsen, Silja Kinnebrock and Neil Shephard, Measuring downside risk — realised semivariance (CREATES RP 2008-42)

43 2008, Martin Møller Andreasen, Explaining Macroeconomic and Term Structure Dynamics Jointly in a Non-linear DSGE Model (CREATES RP 2008-43)

44 2008, Christian M. Dahl, Henrik Hansen and John Smidt, The cyclical component factor model (CREATES RP 2008-44)

45 2008, Christian M. Dahl and Yu Qin, The limiting behavior of the estimated parameters in a misspecified random field regression model (CREATES RP 2008-45)

46 2008, Bent Jesper Christensen, Christian M. Dahl and Emma M. Iglesias, Semiparametric Inference in a GARCH-in-Mean Model (CREATES RP 2008-46)

47 2008, Charlotte Christiansen, Mean Reversion in US and International Short Rates (CREATES RP 2008-47)

48 2008, Tim Bollerslev, George Tauchen and Hao Zhou, Expected Stock Returns and Variance Risk Premia (CREATES RP 2008-48)

49 2008, Tim Bollerslev, Glossary to ARCH (GARCH) (CREATES RP 2008-49)

50 2008, Giuseppe Cavaliere, Anders Rahbek and A.M. Robert Taylor, Testing for Co-integration in Vector Autoregressions with Non-Stationary Volatility (CREATES RP 2008-50)

51 2008, Bent Jesper Christensen and Michael Sørensen, Optimal inference in dynamic models with conditional moment restrictions (CREATES RP 2008-51)

52 2008, Katarzyna Lasak, Likelihood based testing for no fractional cointegration (CREATES RP 2008-52)

53 2008, Katarzyna Lasak, Maximum likelihood estimation of fractionally cointegrated systems (CREATES RP 2008-53)

54 2008, Andrew J. Patton and Allan Timmermann, The Resolution of Macroeconomic Uncertainty: Evidence from Survey Forecast (CREATES RP 2008-54)

55 2008, Carlos Capistrán and Allan Timmermann, Forecast Combination With Entry and Exit of Experts (CREATES RP 2008-55)

56 2008, Carlos Capistrán and Allan Timmermann, Disagreement and Biases in Inflation Expectations (CREATES RP 2008-56)

57 2008, Almut E. D. Veraart, Impact of time–inhomogeneous jumps and leverage type effects on returns and realised variances (CREATES RP 2008-57)

58 2008, Dennis Kristensen and Yongseok Shin, Estimation of Dynamic Models with Nonparametric Simulated Maximum Likelihood (CREATES RP 2008-58)

59 2008, Per Frederiksen and Frank S. Nielsen, Testing for long memory in potentially nonstationary perturbed fractional processes (CREATES RP 2008-59)

60 2008, Thomas Q. Pedersen, Intertemporal Asset Allocation with Habit Formation in Preferences: An Approximate Analytical Solution (CREATES RP 2008-60)

61 2008, Jean Jacod, Mark Podolskij and Mathias Vetter, Limit theorems for moving averages of discretized processes plus noise (CREATES RP 2008-61)

62 2008, Giuseppe Cavaliere, David I. Harvey, Stephen J. Leybourne and A.M. Robert Taylor, Testing for Unit Roots in the Presence of a Possible Break in Trend and Non-Stationary Volatility (CREATES RP 2008-62)

63 2008, Ole E. Barndorff-Nielsen, Peter Reinhard Hansen, Asger Lunde and Neil Shephard, Multivariate realised kernels: consistent positive semi-definite estimators of the covariation of equity prices with noise and non-synchronous trading (CREATES RP 2008-63)

I.6.2 Other working paper publications

1. 2008, P. Frederiksen and M. Ø. Nielsen, Fully Modified Narrow-Band Least Squares Estimation of Stationary Fractional Cointegration, QED Working Paper Number 1171.
2. 2008, S. Johansen and M. Ø. Nielsen, Likelihood inference for a nonstationary fractional autoregressive model, QED Working Paper Number 1172
3. 2008, T. G. Andersen, T. Bollerslev, P. Frederiksen, and M. Ø. Nielsen, Continuous-Time Models, Realized Volatilities, and Testable Distributional Implications for Daily Stock Returns, QED Working Paper Number 1173
4. 2008, M. Ø. Nielsen, Nonparametric Cointegration Analysis of Fractional Systems With Unknown Integration Orders, QED Working Paper Number 1174
5. 2008, M. Ø. Nielsen, A Powerful Tuning Parameter Free Test of the Autoregressive Unit Root Hypothesis, QED Working Paper Number 1175
6. 2008, T. Busch, B. J. Christensen, and M. Ø. Nielsen, The Role of Implied Volatility in Forecasting Future Realized Volatility and Jumps in Foreign Exchange, Stock, and Bond Markets, QED Working Paper Number 1181
7. 2008, M. Ø. Nielsen, A Powerful Test of the Autoregressive Unit Root Hypothesis Based on a Tuning Parameter Free Statistic, QED Working Paper Number 1185

I.7 PhD Theses

1 2008, Toke Lilhauge Hjortshøj, Essays on Empirical Corporate Finance - Managerial Incentives, Information Disclosure, and Bond Covenants

2 2008, Theis Lange, Asymptotic Theory in Financial Time Series Models with Conditional Heteroscedasticity (University of Copenhagen)

3 2008, David Skovmand, Libor Market Models - Theory and Applications

4 2008, Jie Zhu, Essays on Econometric Analysis of Price and Volatility Behavior in Asset Markets

I.8 Forthcoming articles in refereed journals and books

1 Manuel Ammann, David Skovmand and Michael Verhofen, Implied and Realized Volatility in the Cross-Section of Equity Options, International Journal of Theoretical and Applied Finance

2 A. Anand, C. Tanggaard and D. G. Weaver, Paying for Market Quality, Journal of Financial and Quantitative Analysis

3 Torben G. Andersen, Tim Bollerslev, Per Houmann Frederiksen and Morten Ørregaard Nielsen, Continuous-Time Models, Realized Volatilities and Testable Distributional Implications for Daily Stock Returns, Journal of Applied Econometrics

4 Torben G. Andersen, Tim Bollerslev and W. Huang, A Reduced Form Framework for Modeling and Forecasting Jumps and Volatility in Speculative Prices, Journal of Econometrics

5 Torben G. Andersen, Tim Bollerslev and F.X. Diebold, Parametric and Nonparametric Measurements of Volatility, Handbook of Financial Econometrics, North Holland

6 2009, Torben G. Andersen, R.A. Davis, J.-P. Kreiss and T. Mikosch, Handbook of Financial Time Series, Springer Verlag

7 Torben G. Andersen and Viktor Todorov, Realized Volatility and Multipower Variation, Encyclopedia of Quantitative Finance; Wiley and Sons

8 Torben G. Andersen and Luca Benzoni, Stochastic Volatility, Encyclopedia of Complexity and Systems Science; Springer Verlag

9 Torben G. Andersen, R.A. Davis, J.P. Kreiss and T. Mikosch, Introduction, Handbook of Financial Time Series; Springer Verlag

10 Torben G. Andersen and Neil Shephard, Stochastic Volatility: Origins and Overview, Handbook of Financial Time Series; Springer Verlag

11 Torben G. Andersen and Luca Benzoni, Realized Volatility, Handbook of Financial Time Series; Springer Verlag

12 Torben G. Andersen, Tim Bollerslev, Peter Christoffersen and Francis X. Diebold: Practical Methods for Financial Applications, Princeton University Press

13 Ole E. Barndorff-Nielsen, Peter R. Hansen, Asger Lunde and Neil Shephard, Subsampling Realized Kernels, Journal of Econometrics

14 Ole E. Barndorff-Nielsen, Peter R. Hansen, Asger Lunde and Neil Shephard, Realized Kernels in Practice: Trades and Quotes, Econometrics Journal

15 Ole E. Barndorff-Nielsen, J.M. Corcuera and Mark Podolskij, Power variation for Gaussian processes with stationary increments, Stochastic Processes and Their Applications

16 Jeremy Berkowitz, Peter F. Christoffersen and Denis Pelletier, Evaluating Value-at-Risk Models with Desk-Level Data, Management Science

17 Bo Martin Bibby, Martin Jacobsen and Michael Sørensen, Estimating functions for discretely sampled diffusion-type models, Ait-Sahalia, Y. and Hansen, L.P. (eds.): Handbook of Financial Econometrics, Elsevier, Amsterdam

18 Mogens Bladt and Michael Sørensen, Efficient estimation of transition rates between credit ratings from observations at discrete time points, Quantitative Finance

19 Kræn Blume, Mette Ejrnæs, Nielsen and Allan Würtz, Labour Market Transitions of Immigrants with Emphasis on Marginalization and Selv-Employment, Journal of Population Economics

20 Tim Bollerslev, George Tauchen and Hao Zhou, Expected Stock Returns and Variance Risk Premia, Review of Financial Studies

21 Tim Bollerslev, Uta Kretschmer, Christian Pigorsch and George Tauchen, A Discrete-Time Model for Daily S&P500 Returns and Realized Variations: Jumps and Leverage Effects, Journal of Econometrics

22 Tim Bollerslev, Glossary to ARCH (GARCH), Volatility and Time Series Econometrics, Essays in Honor of Robert F. Engle (eds. Tim Bollerslev, Jeffrey R. Russell and Mark W. Watson). Oxford: Oxford University Press

23 Thomas Busch, Testing the Martingale Restriction for Option Implied Densities, Review of Derivatives Research

24 Carlos Capistran and Allan Timmermann, Forecast Combination with Entry and Exit of Experts, Journal of Business and Economic Statistics

25 Carlos Capistran and Allan Timmermann, Disagreement and Biases in Inflation Expectations, Journal of Money, Credit and Banking

26 Luis Catao and Allan Timmermann, Volatility Regimes and Global Equity Returns, Volatility and Time Series Econometrics: Essays in Honor of Robert F. Engle

27 Giuseppe Cavaliere, Anders Rahbek and Robert Taylor, Testing for co-integration in vector autoregressions with non-stationary volatility, Journal of Econometrics

28 Bent Jesper Christensen and Nicholas M. Kiefer, Economic Modeling and Inference, Princeton University Press

29 Kim Christensen, Mark Podolskij and Mathias Vetter, Bias-correcting the realised range-based variance in the presence of market microstructure noise, Finance and Stochastics 13, pp 239-268

30 Charlotte Christiansen, Decomposing European Bond and Equity Volatility, International Journal of Finance and Economics

31 Charlotte Christiansen and Angelo Ranaldo, Extreme Coexceedances in New EU Member States' Stock Markets, Journal of Banking and Finance

32 Peter F. Christoffersen, Christian Dorion, Kris Jacobs and Yintian Wang, Volatility Components: Affine Restrictions and Non-Normal Innovations, Journal of Business and Economic Statistics

33 Christian M. Dahl and Emma M. Iglesias, Volatility spill-overs in commodity spot prices: New empirical results, Economic Modelling

34 Tom Engsted and Stig Vinther Møller, An Iterated GMM Procedure for Estimating the Campbell-Cochrane Habit Formation Model, with an Application to Danish Stock and Bond Returns, International Journal of Finance and Economics

35 R. Frydman, M. Goldberg, Søren Johansen and K. Juselius, Testing hypotheses in an I(2) model with applications to the persistent long swings in the Dmk/$ rate, Journal of Econometrics

36 Arnaud Gloter & Michael Sørensen, Estimation for stochastic differential equations with a small diffusion coefficient, Stochastic Processes and their Applications

37 Andrés González, Changli He and Timo Teräsvirta, Testing parameter constancy in stationary vector autoregressive models against continuous change, Econometric Reviews 28, 225-245

38 Clive W.J. Granger and Timo Teräsvirta, New Palgrave Dictionary of Economics, 2nd edition

39 Massimo Guidolin and Allan Timmermann, Forecasts of US Short-term Interest Rates: A Flexible Forecast Combination Approach, Journal of Econometrics

40 J. Jacod, Y. Li, P. Mykland, Mark Podolskij and M. Vetter, Microstructure noise in the continuous case: the pre-averaging approach, Stochastic Processes and Their Applications

41 Michael Jansson, Optimal Invariant Inference when the Number of Instruments is Large, Econometric Theory

42 Søren Johansen, Cointegration. Overview and Development, Handbook of Financial Time Series, Springer

43 Søren Johansen, Correlation, Regression, and Cointegration of Nonstationary Economic Time Series, Bulletin of the International Statistical Institute 2007, ISI

44 Søren Johansen and Morten Ørregaard Nielsen, Likelihood inference for a nonstationary fractional autoregressive mode, Journal of Econometrics

45 Søren Johansen, Some identification problems in the cointegrated vector autoregressive model, Journal of Econometrics

46 Søren Johansen and Bent Nielsen, An analysis of the indicator saturation estimator as a robust regression estimator, The Methodology and Practice of Econometrics: A Festschrift in Honour of David F. Hendry, Oxford University Press

47 2009, Søren Johansen, Representation of Cointegrated Autoregressive Processes with Application to Fractional Processes, Econometric Reviews, 28, pp 121-145

48 Chris Jones, Jens Perch Nielsen and Carsten Tanggaard, Local linear density estimation for filtered survival data, with bias correction, Statistics, 43, pp 167-186

49 S.J. Koopman, M. Mallee and Michel van der Wel, Analyzing the Term Structure of Interest Rates using the Dynamic Nelson-Siegel Model with Time-Varying Parameters, Journal of Business and Economic Statistics

50 Dennis Kristensen and Anders Rahbek, Asymptotics of the QMLE for Non-Linear ARCH Models, Journal of Time Series Analysis

51 Dennis Kristensen and Anders Rahbek, Likelihood-Based Inference in Nonlinear Error-Correction Models, Journal of Econometrics

52 Robinson Kruse, A new unit root test against ESTAR based on a class of modified statistics, Statistical Papers

53 Theis Lange and Anders Rahbek, Regime Switching Models: A Survey, Handbook of Financial Time Series, Springer verlag, editors: T. Mikosch, T. G. Andersen, R. Davies and J.-P. Kress

54 Stig V. Møller, Habit persistence: Explaining cross-sectional variation in returns and time-varying expected returns, Journal of Empirical Finance

55 Tomoaki Nakatani and Timo Teräsvirta,Testing for volatility interactions in the Constant Conditional Correlation GARCH model, Econometrics Journal, 14 N/A

56 Morten Ø. Nielsen, A powerful test of the autoregressive unit root hypothesis based on a tuning parameter free statistic, Econometric Theory

57 Andrew Patton and Allan Timmermann, Generalized Forecast Errors, A Change of Measure, and Forecast Optimality; Volatility and Time Series Econometrics, Essays in Honor of Robert F. Engle

58 Hashem Pesaran and Allan Timmermann, Testing Dependence Among Serially Correlated Multi-category Variables, Journal of American Statistical Association

59 Mark Podolskij and M. Vetter: Estimation of volatility functionals in the simultaneous presence of noise and jumps, Bernoulli

60 Annastiina Silvennoinen and Timo Teräsvirta, Multivariate GARCH models, Handbook of Financial Time Series.

61 Michael Sørensen, Parametric inference for discretely sampled stochastic differential equations, Andersen, T.G., Davis, R.A., Kreiss, J.-P. and Mikosch, T. (eds.): Handbook of Financial Time Series, Springer

62 Timo Teräsvirta, Introduction to univariate GARCH models, Handbook of Financial Time Series

63 Timo Teräsvirta, Threshold models, New Palgrave Dictionary of Economics, 2nd edition

64 Timo Teräsvirta, Autoregressive conditional heteroskedasticity, Encyclopedia of Quantitative Finance

65 Almut E. D. Veraart, Inference for the jump part of quadratic variation of Itô semimartingales, Econometric Theory

66 Almut E. D. Veraart and Matthias Winkel, Time change, Encyclopedia of Quantitative Finance

67 Jie Zhu, Testing for expected return and market price of risk in Chinese A-B share markets: The GBM and multivariate GARCH model approach, Mathematics and Computers in Simulation

Total number of publications in reported year	Peer reviewed	Non-peer reviewed
divided into;		
Number of journal articles	46	
Number of conference series		
Number of monographs		
Number of book chapters	8	
Others		

I.9 List of journals considered to be the most prestigious within CREATES' research field (ordered alphabetically)

General Econometrics:

Econometrica
Econometric Reviews
Econometric Theory
Econometrics Journal
Journal of Applied Econometrics
Journal of American Statistical Association
Journal of Business and Economic Statistics
Journal of Econometrics
Oxford Bulletin of Economics and Statistics
Review of Economics and Statistics

Financial Econometrics:

Journal of Banking and Finance
Journal of Empirical Finance
Journal of Finance
Journal of Financial and Quantitative Analysis
Journal of Financial Ecnometrics
Journal of Financial Economics
Journal of International Money and Finance
Journal of Monetary Economics
Journal of Money Credit and Banking
Review of Financial Studies

Statistics/Stochastics:

Annals of Statistics
Bernoulli
Journal of Royal Statistical Society Series B
Stochastic Processes and its Applications
Journal of Time Series Analysis
Scandinavian Journal of Statistics
Finance and Stochastics
Mathematical Finance

In the January 2009 RePEc ranking CREATES has been listed as number 8 (out of 1089 institutions) within the field of "Econometrics"; and as number 3 (out of 851 Institutions) within the field of "Time Series Econometrics".

Link "Econometrics"

Link "Time Series Econometrics"

Appendix J: Publications Summary 2007 and 2008

J.1 Articles in refereed journals

1 2008, Jason Abrevaya and Christian M. Dahl , The effects of birth inputs on birthweight: evidence from quantile estimation on panel data, Journal of Business and Economic Statistics, 26(4), 379-397 (PR) (CO)

2 2008, Ole E. Barndorff-Nielsen, Peter R. Hansen, Asger Lunde and Neil Shephard, Designing Realized Kernels in to Measure the Ex-Post Variation of Equity Prices in the Presence of Noise, Econometrica, 76(6), 1481–1536 (PR) (CO)

3 2008, O.E. Barndorff-Nielsen and V. Pérez-Abreu, Matrix subordinators and related Upsilon transformations, Theory of Probability and its Applications, 52, 1-23 (PR) (CO)

4 2008, O.E. Barndorff-Nielsen and J. Schmiegel, A stochastic differential equation framework for the timewise dynamics of turbulent velocities, Theory of Probability and its Applications, 52, 372-388 (PR) (CO)

5 2008, O.E. Barndorff-Nielsen and F. Hubalek, Probability measures, Lévy measures, and analyticity in time, Bernoulli, 14, 764-790 (PR) (CO)

6 2008, O.E. Barndorff-Nielsen, J. Rosinski and S. Thorbjørnsen, General upsilon transformations, ALEA, 4, 131-165 (PR) (CO)

7 2008, O.E. Barndorff-Nielsen and M. Maejima, Semigroups of Upsilon transformations, Stochastic Processes and their Applications, 118, 2334-2343 (PR) (CO)

8 2008, F. Bec, Anders Rahbek and Neil Shephard, The ACR Model: A Dynamic Mixture Autoregression, Oxford Bulletin of Economics and Statistics, 70, 583-618 (PR) (CO)

9 2008, F. Bec, M. Ben-Salem and Anders Rahbek, Nonlinear Adjustment towards the Purchasing Power Parity Relation: A Multivariate Approach, Economics Bulletin, 6, 1-6 (PR) (CO)

10 2008, Eric Bentzen, Peter R. Hansen, Asger Lunde and Allan A. Zebedee, The Greenspan Years: An Analysis of the Magnitude and speed of the Equity Market Response to FOMC Announcements, Financial Markets and Portfolio Management, 22, 3-20 (PR) (CO)

11 2008, Tim Bollerslev, Tzuo Hann Law and George Tauchen, Risk, Jumps, and Diversification, Journal of Econometrics, 144(1), 234-256 (PR) (CO)

12 2008, Isabel Casas, Estimation of stochastic volatility with LRD, Mathematics and Computers in Simulation, 78, 335-340 (PR)

13 2008, Isabel Casas and Jiti Gao, Econometric estimation in long-range dependent volatility models: Theory and practice, Journal of Econometrics, 147, 72-83 (PR) (CO)

14 2008, Isabel Casas and Jiti Gao, Specification Testing in Discretized Diffusion Models: Theory and Practice, Journal of Econometrics, 147, 131-140 (PR) (CO)

15 2008, Charlotte Christiansen, Juanna Schrøter Joensen and Jesper Rangvid, Are Economists More Likely to Hold Stocks?, Review of Finance, 12(3), 465-496 (PR) (CO)

16 2008, Charlotte Christiansen, Level-ARCH Short Rate Models with Regime Switching: Bivariate Modeling of US and European Short Rates, International Review of Financial Analysis, 17(5), 925-948 (PR)

17 2008, Peter F. Christoffersen, Kris Jacobs, Chay Ornthanalai and Yintian Wang, Option Valuation with Long-run and Short-run Volatility Components, Journal of Financial Economics, 90, 272–297 (PR) (CO)

18 2008, Christian M. Dahl, Henrik Hansen and John Smidt, The cyclical component factor model, International Journal of Forecasting, 24(4), 119-127 (PR) (CO)

19 2008, H. Dette and Mark Podolskij, Testing the parametric form of the volatility in continuous time diffusion models - an empirical process approach, Journal of Econometrics, 143, 56-73 (PR) (CO)

20 2008, Graham Elliott, Ivana Komunjer and Allan Timmermann, Biases in Macroeconomic Forecasts: Irrationality or Asymmetric Loss?, Journal of European Economic Association, 6, 122-157 (PR) (CO)

21 2008, Graham Elliott and Allan Timmermann, Economic Forecasting, Journal of Economic Literature, 46(1), 3-56 (PR) (CO)

22 2008, Julie Lyng Forman and Michael Sørensen, The Pearson diffusions: A class of statistically tractable diffusion processes, Scandinavian Journal of Statistics, 35, 438-465 (PR) (CO)

23 2008, P. Frederiksen and M. Ø. Nielsen, Bias-reduced estimation of long-memory stochastic volatility, Journal of Financial Econometrics, 6, 496-512 (PR) (CO)

24 2008, P. H. Frederiksen and M. Ø. Nielsen, Finite sample accuracy and choice of sampling frequency in integrated volatility estimation, Journal of Empirical Finance, 15, 265-286 (PR) (CO)

25 2008, Andrés González and Timo Teräsvirta, Modelling autoregressive processes with a shifting mean, Studies in Nonlinear Dynamics and Econometrics, 12(1), Article 1 (PR) (CO)

26 2008, Massimo Guidolin and Allan Timmermann, Size and Value Anomalies under Regime Shifts, Journal of Financial Econometrics, 6, 1-48 (PR) (CO)

27 2008, Massimo Guidolin and Allan Timmermann, International Asset Allocation under Skew and Kurtosis Preferences, Review of Financial Studies, 21(2), 889-935 (PR) (CO)

28 2008, Niels Haldrup, Peter Mølgaard and Claus Kastberg Nielsen, Sequential Versus Simultaneous Market Delineation: The Relevant Antitrust Market for Salmon, Journal of Competition Law and Economics, 4(3), doi:10.1093/joclec/nhn020, 893-913 (PR) (CO)

29 2008, Niels Haldrup and Andreu Sansó, A Note on the Vogelsang Test for Additive Outliers, Statistics and Probability Letters, 78, 296-300 (PR) (CO)

30 2008, Peter R. Hansen, Jeremy Large and Asger Lunde, Moving Average-Based Estimators of Integrated Variance, Econometric Reviews, 27(1), 79-111 (PR) (CO)

31 2008, Peter Reinhard Hansen, Reduced-Rank Regression: A Useful Determinant Identity, Journal of Statistical Planning and Inference, 138, 2688-2697 (PR)

32 2008, Changli He, Annastiina Silvennoinen and Timo Teräsvirta, Parameterizing unconditional skewness in models for financial time series, Journal of Financial Econometrics, 6, 208-230 (PR) (CO)

33 2008, David Hendry, Søren Johansen and Carlos Santos, Automatic selection of indicators in a fully saturated regression, Computational Statistics, 23, 317-335 and Erratum 337-339 (PR) (CO)

34 2008, Kevin D. Hoover, Søren Johansen and Katarina Juselius, Allowing the Data to Speak Freely: The Macroeconometrics of the Cointegrated Vector Autoregression, American Economic Review, Papers and Proceedings, 98, 251-55 (PR) (CO)

35 2008, Michael Jansson, Semiparametric Power Envelopes for Tests of the Unit Root Hypothesis, Econometrica, 76, 1103-1142 (PR)

36 2008, Søren Johansen and A.R. Swensen, Exact Rational Expectations, Cointegration, and Reduced Rank Regression, Journal of Statistical Planning and Inference, 138, 2738-2748 (PR) (CO)

37 2008, Søren Johansen, A Representation Theory for a Class of Vector Autoregressive Models for Fractional Processes, Econometric Theory, 24, 651-676 (PR)

38 2008, Silja Kinnebrock and Mark Podolskij, A note on the central limit theorem for bipower variation of general functions, Stochastic Processes and Their Applications, 118, 1056-1070 (PR) (CO)

39 2008, Dennis Kristensen, Estimation of Partial Differential Equations with Applications in Finance, Journal of Econometrics, 144, 392-408 (PR)

40 2008, Stig Vinther Møller, Consumption growth and time-varying expected stock returns, Finance Research Letters, 5, 129-136 (PR)

41 2008, Tomoaki Nakatani and Timo Teräsvirta, Positivity constraints on the conditional variances in the family of Conditional Correlation GARCH models, Finance Research Letters, 5, 88-95 (PR) (CO)

42 2008, M. Ø. Nielsen, A. Zussman and N. Zussman, Asset market perspectives on the Israeli-Palestinian conflict, Economica, 75, 84-115 (PR) (CO)

43 2008, Keld Rømer Rasmussen and Michael Sørensen, The vertical variation of particle speed and flux density in aeolian saltation: measurement and modeling, Journal of Geophysical Research, 113 (PR) (CO)

44 2008, Lars Stentoft, American Option Pricing using GARCH models and the Normal Inverse Gaussian Distribution, Journal of Financial Econometrics, 6(4), 540-582 (PR)

45 2008, Allan Timmermann, Elusive Return Predictability, International Journal of Forecasting, 24, 1-18 (PR)

46 2007, Torben G. Andersen, Tim Bollerslev, Francis X. Diebold and Clara Vega, Real-Time Price Discovery in Stock, Bond and Foreign Exchange Markets, Journal of International Economics, 73, 251-277 (PR) (CO)

47 2007, Torben G. Andersen, Tim Bollerslev and Francis X. Diebold, No-Arbitrage Semi-Martingale Restrictions for Continuous-Time Volatility Models Subject to Leverage Effects, Jumps and i.d.d. Noise: Theory and Testable Distributional Implications, Journal of Econometrics, 137, 125-180 (PR) (CO)

48 2007, Torben G. Andersen, Tim Bollerslev and Dobrislav Dobrev, Roughing it Up: Disentangling Continuous and Jump Components in Measuring, Modeling and Forecasting Asset Return Volatility, Review of Economics and Statistics, 89, 701-720 (PR) (CO)

49 2007, Ole Barndorff-Nielsen and R. Steizer, Positive-definite matrix processes of finite variation, Probability and Mathematical Statistics, 27, 3-43 (PR) (CO)

50 2007, Tim Bollerslev, Lin Peng and Wei Xiong, Investor Attention and Time-Varying Comovements, Europan Financial Management, 13, 394-422 (PR) (CO)

51 2007, Charlotte Christiansen, Juanna Joensen and Helena Skyt Nielsen, The Risk-Return Trade-Off in Human Capital Investment, Labour Economics, 14, 971-896 (PR) (CO)

52 2007, Charlotte Christiansen, Volatility-Spillover Effects in European Bond Markets, European Financial Management, 13, 923-948 (PR)

53 2007, Charlotte Christiansen and Angelo Ranaldo, Realized Bond-Stock Correlation: Macroeconomic Announcement Effects, Journal of Futures Markets, 27, 439-469 (PR) (CO)

54 2007, Peter Christoffersen, Francis Diebold, Roberto Mariano, Anthony Tay and Tse Yiu, Direction-of-Change Forecasts Based on Conditional Variance, Skewness and Kurtosis Dynamics: International Evidence, Journal of Financial Forecasting, 1, 1-22 (PR) (CO)

55 2007, Tom Engsted and Carsten Tanggaard, The Comovement of US and German Bond Markets, International Review of Financial Analysis, 16, 172-182 (PR) (CO)

56 2007, Michael Jansson, Victor Chernozhukov and Christian Hansen, Inference Approaches for Instrumental Variable Quantile Regression, Economics Letters, 95, 272-277 (PR) (CO)

57 2007, Richard Blundell, Xiaohong Chen and Dennis Kristensen, Semi-Nonparametric IV Estimation of Shape-invariant Engel Curves, Econometrica, 75, 1613-1669 (PR) (CO)

58 2007, Celso Brunetti and Peter Lildholdt, Time Series Modelling of Daily Log-Price Ranges for CHF/USD and USD/GBP, Journal of Derivatives, 15, 39-59 (PR) (CO)

59 2007, Morten Ø. Nielsen and Katsumi Shimotsu, Determining the cointegration rank in nonstationary fractional systems by the exact local Whittle approach, Journal of Econometrics, 141, 574-596 (PR) (CO)

60 2007, Bent Jesper Christensen and Morten Ø. Nielsen, The effect of long memory in volatility on stock market fluctuations, Review of Economics and Statistics, 89, 684-700 (PR) (CO)

61 2007, Morten Ø. Nielsen, Local Whittle analysis of stationary fractional cointegration and the implied-realized volatility relation, Journal of Business & Economic Statistics, 25, 427-446 (PR)

62 2007, Niels Haldrup, Svend Hylleberg, Gabriel Pons, Andreu Sanso, Common Periodic Correlation Features and the Interaction of Stocks and Flows in Daily Airport Data, Journal of Business and Economic Statistics, 25, 21-32. (PR) (CO)

63 2007, Niels Haldrup and Morten Ø. Nielsen, Estimation of fractional integration in the presence of data noise, Computational Statistics and Data Analysis, 51, 3100-3114 (PR) (CO)

64 2007, Kristian Stegenborg Larsen and Michael Sørensen, Diffusion models for exchange rates in a target zone, Mathematical Finance, 17, 285-306 (PR) (CO)

65 2007, David C. Porter, Carsten Tanggaard, Daniel G. Weaver and Wei Yu, Dispersed Trading and the Prevention of Market Failure: The Case of the Copenhagen Stock Exchange, European Financial Management, 14 (PR) (CO)

66 2007, Peter Løchte Jørgensen and David Skovmand, The Valuation of Callable Bonds with Floored CMS-spread Coupons, Wilmott Magazine, 32 (PR) (CO)

67 2007, Bruno Eklund and Timo Teräsvirta, Testing constancy of the error covariance matrix in vector models, Journal of Econometrics, 140, 753-780 (PR) (CO)

68 2007, Andrew Patton and Allan Timmermann, Testing Forecast Optimally Under Unknown Loss, Journal of American Statistical Association, 102, 1172-1184 (PR) (CO)

69 2007, Andrew Patton and Allan Timmermann, Properties of Optimal Forecasts under Asymmetric Loss and Nonlinearity, Journal of Econometrics, 140, 884-918 (PR) (CO)

70 2007, Massimo Giudolin and Allan Timmermann, Properties of Equilibrium Asset Prices under Alternative Learning Schemes, Journal of Economic Dynamics & Control, 31, 161-217 (PR) (CO)

71 2007, Massimo Giudolin and Allan Timmermann, Asset Allocation under Multivariate Regime Switching, Journal of Economic Dynamics and Control, 33, 3503-3544 (PR) (CO)

72 2007, Hashem Pesaran, Davide Pettenuzzo and Allan Timmermann, Learning, Structural Instability and Present Value Calculations, Econometric Reviews, 26, 253-288 (PR) (CO)

73 2007, Hashem Pesaran and Allan Timmermann, Selection of Estimation Window in the Presence of Breaks, Journal of Econometrics, 137, 134-161 (PR) (CO)

74 2007, Asger Lunde and Valeri Voev, Integrated covariance estimation using high-frequency data in the presence of noise, Journal of Financial Econometrics, 5, 68-104 (PR) (CO)

75 2007, Heino Bohn Nielsen and Anders Rahbek, Likelihood Ratio Testing for Cointegration Ranks in I(2) Models, Econometric Theory, 23, 615-637

76 2007, Kim Christensen and Mark Podolskij, Realised range-based estimation of integrated variance, Journal of Econometrics, 141, 323-349 (PR) (CO)

J.2 Notes in refereed journals

1 2008, Allan Timmermann, Reply to discussants, International Journal of Forecasting, 24, 29-30 (PR)

2 2007, Søren Johansen, Torben Schmith and Peter Thejll, A Semi-Empirical Approach to Projecting Future Sea-Level Rise, Science, 317 (PR) (CO)

3 2007, Søren Tolver Jensen and Anders Rahbek, A Note on the Law of Large Numbers for Functions of Geometrically Ergodic Time Series, Econometric Theory, 23, 761-767 (PR) (CO)

4 2007, David Skovmand and Michael Verhofen, Review of: D. Brigo & F. Mercurio: Interest Rate Models - Theory and Practice, Journal of Financial Markets and Portfolio Management, 21 (PR) (CO)

J.3 Contributions to refereed books

1 2008, Torben G. Andersen, Realized Volatility, The New Palgrave Dictionary of Economics, 2nd Edition, Eds.: S.N. Durlauf and L.E. Blume, Palgrave Macmillan, 7, 24-33 (PR)

2 2008, Torben G. Andersen, Volatility Modeling, Encyclopedia of Quantitative Risk Analysis and Assessment, Wiley and Sons, 4 (PR)

3 2008, Barndorff-Nielsen, O.E., Kinnebrock, S. and Shephard, N., Measuring downside risk-realised semivariance, To appear in Festschrift to Robert Engle (PR) (CO)

4 2008, Barndorff-Nielsen, O.E. and Schmiegel, J., Time change, volatility and turbulence, In A. Sarychev, A. Shiryaev, M. Guerra and M.d.R. Grossinho (Eds.): Proceedings of the Workshop on Mathematical Control Theory and Finance, Lisbon 2007, Berlin Springer, 29-53 (PR) (CO)

5 2008, Changli He, Hans Malmsten and Timo Teräsvirta, Higher-order dependence in the general Power ARCH process and the role of the power parameter, Recent Advances in Linear Models and Related Areas, New York, 231-251 (PR) (CO)

6 2008 Søren Johansen, Reduced rank regression, The New Palgrave Dictionary of Economics, Second Edition, Eds. Steven N. Durlauf and Lawrence E. Blume, Palgrave Macmillan (PR)

7 2008, Bruce Lehmann and Allan Timmermann, Performance Management and Evaluation, Handbook of Financial Intermediation and Banking, 191-258 (PR) (CO)

8 2008, Svend Hylleberg, Seasonal Adjustment. New Palgrave Dictionary of Economics, 2nd edition, Palgrave

9 2007, Torben G. Andersen with Oleg Bondarenko, Construction and Interpretation of Model-Free Implied Volatility, in Israel Nelken (ed.), Volatility as an Asset Class, Risk Books, London, pp. 141-181 (PR) (CO)

10 2007, Torben G. Andersen, Tim Bollerslev, Francis X. Diebold and Paul Labys, Great Realizations, in Jon Danielsson (ed.), The Value-at-Risk References, Risk Publications, London, pp. 119-130 (reprinted from Risk, 13, 105-108, 2000).

J.4 Refereed books

1 2008, Torben G. Andersen, Tim Bollerslev and Francis X. Diebold, Parametric and Nonparametric Volatility Measurement, Handbook of Financial Econometrics (eds. Yacine Aït-Sahalia and Lars P. Hansen), Amsterdam: Elsevier Science B.V. (PR) (CO)

2 2007, Clive W.J. Granger and Timo Teräsvirta, Modellling nonlinear economic relationships (Chinese edition), Shanghai University of Finance & Economics Press (PR) (CO)

J.5 Editor of refereed books

J.6 Working papers published in working paper series, conference contributions and non-refereed books, notes and articles

J.6.1 CREATES Research Papers

1 2008, John A. Carlson, Christian M. Dahl and Carol L. Osler, Short-run Exchange-Rate Dynamics: Theory and Evidence (CREATES RP 2008-1)

2 2008, Peter Reinhard Hansen, Reduced-Rank Regression: A Useful Determinant Identity (CREATES RP 2008-2)

3 2008, Søren Johansen, Katarina Juselius, Roman Frydman and Michael Goldberg Testing hypotheses in an I(2) model with applications to the persistent long swings in the Dmk/$ rate (CREATES RP 2008-3)

4 2008, Olaf Posch, Explaining output volatility: The case of taxation (CREATES RP 2008-4)

5 2008, Annastiina Silvennoinen and Timo Teräsvirta, Modelling Multivariate Autoregressive Conditional Heteroskedasticity with the Double Smooth Transition Conditional Correlation GARCH Model (CREATES RP 2008-5)

6 2008, Annastiina Silvennoinen and Timo Teräsvirta, Multivariate GARCH models. To appear in T. G. Andersen, R. A. Davis, J.-P. Kreiss and T. Mikosch, eds. Handbook of Financial Time Series. New York: Springer (CREATES RP 2008-6)

7 2008, Changli He, Annastiina Silvennoinen and Timo Teräsvirta, Parameterizing unconditional skewness in models for financial time series (CREATES RP 2008-7)

8 2008, Cristina Amado and Timo Teräsvirta, Modelling Conditional and Unconditional Heteroskedasticity with Smoothly Time-Varying Structure (CREATES RP 2008-8)

9 2008, Søren Johansen and Bent Nielsen, An analysis of the indicator saturation estimator as a robust regression estimator (CREATES RP 2008-9)

10 2008, Peter Christoffersen, Kris Jacobs, Christian Dorion and Yintian Wang, Volatility Components, Affine Restrictions and Non-Normal Innovations (CREATES RP 2008-10)

11 2008, Peter Christoffersen, Kris Jacobs, Chayawat Ornthanalai and Yintian Wang, Option Valuation with Long-run and Short-run Volatility Components (CREATES RP 2008-11)

12 2008, Tom Engsted and Stig V. Møller, An iterated GMM procedure for estimating the Campbell-Cochrane habit formation model, with an application to Danish stock and bond returns (CREATES RP 2008-12)

13 2008, Lars Stentoft, Option Pricing using Realized Volatility (CREATES RP 2008-13)

14 2008, Jie Zhu, Pricing Volatility of Stock Returns with Volatile and Persistent Components (CREATES RP 2008-14)

15 2008, Jie Zhu, Testing for Expected Return and Market Price of Risk in Chinese A-B Share Market: A Geometric Brownian Motion and Multivariate GARCH Model Approach (CREATES RP 2008-15)

16 2008, Jie Zhu, FIEGARCH-M and and International Crises: A Cross-Country Analysis (CREATES RP 2008-16)

17 2008, Almut E. D. Veraart, Inference for the jump part of quadratic variation of Itô semimartingales (CREATES RP 2008-17)

18 2008, Michael Sørensen, Parametric inference for discretely sampled stochastic differential equations (CREATES RP 2008-18)

19 2008, Anne Péguin-Feissolle, Birgit Strikholm and Timo Teräsvirta, Testing the Granger noncausality hypothesis in stationary nonlinear models of unknown functional form (CREATES RP 2008-19)

20 2008, Stefan Holst Bache, Christian M. Dahl and Johannes Tang Kristensen, Determinants of Birthweight Outcomes: Quantile Regressions Based on Panel Data (CREATES RP 2008-20)

21 2008, Ole E. Barndorff-Nielsen, José Manuel Corcuera, Mark Podolskij and Jeannette H.C. Woerner, Bipower variation for Gaussian processes with stationary increments (CREATES RP 2008-21)

22 2008, Mark Podolskij and Daniel Ziggel, A Range-Based Test for the Parametric Form of the Volatility in Diffusion Models (CREATES RP 2008-22)

23 2008, Silja Kinnebrock and Mark Podolskilj, An Econometric Analysis of Modulated Realised Covariance, Regression and Correlation in Noisy Diffusion Models (CREATES RP 2008-23)

24 2008, Matias D. Cattaneo, Richard K. Crump and Michael Jansson, Small Bandwidth Asymptotics for Density-Weighted Average Derivatives (CREATES RP 2008-24)

25 2008, Mark Podolskij and Mathias Vetter, Bipower-type estimation in a noisy diffusion setting (CREATES RP 2008-25)

26 2008, Martin Møller Andreasen, Ensuring the Validity of the Micro Foundation in DSGE Models (CREATES RP 2008-26)

27 2008, Tom Engsted and Thomas Q. Pedersen, Return predictability and intertemporal asset allocation: Evidence from a bias-adjusted VAR model (CREATES RP 2008-27)

28 2008, Frank S. Nielsen, Local polynomial Whittle estimation covering non-stationary fractional processes (CREATES RP 2008-28)

29 2008, Per Frederiksen, Frank S. Nielsen and Morten Ørregaard Nielsen, Local polynomial Whittle estimation of perturbed fractional processes (CREATES RP 2008-29)

30 2008, Mika Meitz and Pentti Saikkonen, Parameter estimation in nonlinear AR-GARCH models (CREATES RP 2008-30)

31 2008, Ingmar Nolte and Valeri Voev, Estimating High-Frequency Based (Co-) Variances: A Unified Approach (CREATES RP 2008-31)

32 2008, Martin Møller Andreasen, How to Maximize the Likelihood Function for a DSGE Model by (CREATES RP 2008-32)

33 2008, Martin Møller Andreasen, Non-linear DSGE Models, The Central Difference Kalman Filter, and The Mean Shifted Particle Filter (CREATES RP 2008-33)

34 2008, Mark Podolskij and Daniel Ziggel, New tests for jumps: a threshold-based approach (CREATES RP 2008-34)

35 2008, Per Frederiksen and Morten Ørregaard Nielsen, Bias-reduced estimation of long memory stochastic volatility (CREATES RP 2008-35)

36 2008, Morten Ørregaard Nielsen, A Powerful Test of the Autoregressive Unit Root Hypothesis Based on a Tuning Parameter Free Statistic (CREATES RP 2008-36)

37 2008, Dennis Kristensen, Uniform Convergence Rates of Kernel Estimators with Heterogenous, Dependent Data (CREATES RP 2008-37)

38 2008, Christian M. Dahl and Emma M. Iglesias, The limiting properties of the QMLE in a general class of asymmetric volatility models (CREATES RP 2008-38)

39 2008, Roxana Chiriac and Valeri Voev, Modelling and Forecasting Multivariate Realized Volatility (CREATES RP 2008-39)

40 2008, Stig Vinther Møller, Consumption growth and time-varying expected stock returns (CREATES RP 2008-40)

41 2008, Lars Stentoft, American Option Pricing using GARCH models and the Normal Inverse Gaussian distribution (CREATES RP 2008-41)

42 2008, Ole E. Barndorff-Nielsen, Silja Kinnebrock and Neil Shephard, Measuring downside risk — realised semivariance (CREATES RP 2008-42)

43 2008, Martin Møller Andreasen, Explaining Macroeconomic and Term Structure Dynamics Jointly in a Non-linear DSGE Model (CREATES RP 2008-43)

44 2008, Christian M. Dahl, Henrik Hansen and John Smidt, The cyclical component factor model (CREATES RP 2008-44)

45 2008, Christian M. Dahl and Yu Qin, The limiting behavior of the estimated parameters in a misspecified random field regression model (CREATES RP 2008-45)

46 2008, Bent Jesper Christensen, Christian M. Dahl and Emma M. Iglesias, Semiparametric Inference in a GARCH-in-Mean Model (CREATES RP 2008-46)

47 2008, Charlotte Christiansen, Mean Reversion in US and International Short Rates (CREATES RP 2008-47)

48 2008, Tim Bollerslev, George Tauchen and Hao Zhou, Expected Stock Returns and Variance Risk Premia (CREATES RP 2008-48)

49 2008, Tim Bollerslev, Glossary to ARCH (GARCH) (CREATES RP 2008-49)

50 2008, Giuseppe Cavaliere, Anders Rahbek and A.M. Robert Taylor, Testing for Co-integration in Vector Autoregressions with Non-Stationary Volatility (CREATES RP 2008-50)

51 2008, Bent Jesper Christensen and Michael Sørensen, Optimal inference in dynamic models with conditional moment restrictions (CREATES RP 2008-51)

52 2008, Katarzyna Lasak, Likelihood based testing for no fractional cointegration (CREATES RP 2008-52)

53 2008, Katarzyna Lasak, Maximum likelihood estimation of fractionally cointegrated systems (CREATES RP 2008-53)

54 2008, Andrew J. Patton and Allan Timmermann, The Resolution of Macroeconomic Uncertainty: Evidence from Survey Forecast (CREATES RP 2008-54)

55 2008, Carlos Capistrán and Allan Timmermann, Forecast Combination With Entry and Exit of Experts (CREATES RP 2008-55)

56 2008, Carlos Capistrán and Allan Timmermann, Disagreement and Biases in Inflation Expectations (CREATES RP 2008-56)

57 2008, Almut E. D. Veraart, Impact of time–inhomogeneous jumps and leverage type effects on returns and realised variances (CREATES RP 2008-57)

58 2008, Dennis Kristensen and Yongseok Shin, Estimation of Dynamic Models with Nonparametric Simulated Maximum Likelihood (CREATES RP 2008-58)

59 2008, Per Frederiksen and Frank S. Nielsen, Testing for long memory in potentially nonstationary perturbed fractional processes (CREATES RP 2008-59)

60 2008, Thomas Q. Pedersen, Intertemporal Asset Allocation with Habit Formation in Preferences: An Approximate Analytical Solution (CREATES RP 2008-60)

61 2008, Jean Jacod, Mark Podolskij and Mathias Vetter, Limit theorems for moving averages of discretized processes plus noise (CREATES RP 2008-61)

62 2008, Giuseppe Cavaliere, David I. Harvey, Stephen J. Leybourne and A.M. Robert Taylor, Testing for Unit Roots in the Presence of a Possible Break in Trend and Non-Stationary Volatility (CREATES RP 2008-62)

63 2008, Ole E. Barndorff-Nielsen, Peter Reinhard Hansen, Asger Lunde and Neil Shephard, Multivariate realised kernels: consistent positive semi-definite estimators of the covariation of equity prices with noise and non-synchronous trading (CREATES RP 2008-63)

64 2007, Dennis Kristensen, Nonparametric Estimation and Misspecification Testing of Diffusion Models (CREATES RP 2007-1)

65 2007, Dennis Kristensen, Nonparametric Filtering of the Realised Spot Volatility: A Kernel-based Approach (CREATES RP 2007-2)

66 2007, Bent Jesper Christensen and Morten Ø. Nielsen, The effect of long memory in volatility on stock market fluctuations (CREATES RP 2007-3)

67 2007, Amber Anand, Carsten Tanggaard and Daniel G. Weaver, Paying for Market Quality (CO) (CREATES RP 2007-4)

68 2007, Charlotte Christiansen, Level-ARCH Short Rate Models with Regime Switching: Bivariate Modeling of US and European Short Rates (CREATES RP 2007-5)

69 2007, Charlotte Christiansen, Decomposing European Bond and Equity Volatility (CREATES RP 2007-6)

70 2007, Stig V. Møller, Habit Persistence: Explaining Cross Sectional Variation in Returns and Time-Varying Expected Returns (CREATES RP 2007-7)

71 2007, Charlotte Christiansen, Juanna S. Schröter and Jesper Rangvid, Are Economists More Likely to Hold Stocks? (CREATES RP 2007-8)

72 2007, Thomas Busch, Bent Jesper Christensen and Morten Ø. Nielsen, The Role of Implied Volatility in Forecasting Future Realized Volatility and Jumps in Foreign Exchange, Stock and Bond Markets (CREATES RP 2007-9)

73 2007, Bent Jesper Christensen, Morten Ø. Nielsen and Jie Zhu, Long memory in stock market volatility and the volatility-in-mean effect: the FIEGARCH-M model (CREATES RP 2007-10)

74 2007, Mathias C. Cattaneo, Richard K. Crump and Michael Jansson, Optimal Inference for Instrumental Variable Regression with non-Gaussian Errors (CO) (CREATES RP 2007-11)

75 2007, Michael Jansson, Semiparametric Power Envelopes for Tests of the Unit Root Hypothesis (CREATES RP 2007-12)

76 2007, Jens Perch Nielsen, Carsten Tanggaard and M.C. Jones, Local Linear Density Estimation for Filtered Survivial Data with Bias Correction (CO) (CREATES RP 2007-13)

77 2007, Torben G. Andersen, Tim Bollerslev and Xin Huang, A Reduced Form Framework for Modeling and Forecasting Jumps and Volatility in Speculative Prices; Under Second Round Review Journal of Econometrics (CO) (CREATES RP 2007-14)

78 2007, Viktor Todorov and Tim Bollerslev, Jumps and Beats: A New Framework for Disentangling and Estimating Systematic Risks (CO) (CREATES RP 2007-15)

79 2007, Tim Bollerslev, Michael Gibson and Hao Zhou, Dynamic Estimation of Volatility Risk Premia and Investor Risk Aversion from Option-Implied and Realized Volatilities (CO) (CREATES RP 2007-16)

80 2007, Tim Bollerslev and Hao Zhou, Expected Stock Returns and Variance Risk Premia (CO) (CREATES RP 2007-17)

81 2007, Torben G. Andersen, Tim Bollerslev and Francis X. Diebold, Roughing It Up: Including Jump Components in the Measurement, Modeling and Forecasting of Return Volatility (CO) (CREATES RP 2007-18)

82 2007, Tim Bollerslev, Tzuo Hann Law and George Tauchen, Risks, Jumps, and Diversification (CREATES RP 2007-19)

83 2007, Torben G. Andersen, Tim Bollerslev, Francis X. Diebold and Clara Vega, Real-Time Price Discovery in Global Stock, Bond and Foreign Exchange Markets (CO) (CREATES RP 2007-20)

84 2007, Torben G. Andersen, Tim Bollerslev, Per H. Frederiksen and Morten Ø. Nielsen, Continuous-Time Models, Realized Volatilities and Testable Distributional Implications for Daily Stock Returns; Working Paper, Department of Finance, Kellogg School, Northwestern University; Second Round Review, Journal of Applied Econometrics (CO) (CREATES RP 2007-21)

85 2007, Tim Bollerslev, Uta Kretschmer, Christian Pigorsch and George Tauchen, A Discrete-Time Model for Daily S&P Returns and Realized Variations: Jumps and Leverage Effects (CREATES RP 2007-22)

86 2007, Olaf Posch, Structural Estimation of Jump-Diffusion Processes in Macroeconomics (CREATES RP 2007-23)

87 2007, Torben G. Andersen and Oleg Bondarenko, Construction and Interpretation of Model-Free Implied Volatility (CO) (CREATES RP 2007-24)

88 2007, Torben G. Andersen and Luca Benzoni, Do Bonds Span Volatility Risk in the U.S. Treasury Market? A Specification Test for Affine Term Structure Models; under revision for Journal of Finance (CO) (CREATES RP 2007-25)

89 2007, Mark Podolskij and Daniel Ziggel, A Range-Based Test for the Parametric Form of the Volatility in Diffusion Models (CO) (CREATES RP 2007-26)

90 2007, Mark Podolskij and Mathias Vetter, Estimation of Volatility Functionals in the Simultaneous Presence of Microstructure Noise and Jump (CO) (CREATES RP 2007-27)

91 2007, Julie Lyng Forman and Michael Sørensen, The Pearson Diffusions: A Class of Statistically Tractable Diffusion Processes (CO) (CREATES RP 2007-28)

92 2007, Niels Haldrup, Frank S. Nielsen and Morten Ø. Nielsen, A Vector Autoregressive Model for Electricity Prices Subject to Long Memory and Regime Switching (CREATES RP 2007-29)

93 2007, Bent Jesper Christensen, Thomas Elgaard Jensen and Rune Mølgaard, Market Power in Power Markets: Evidence from Forward Prices Electricity (CO) (CREATES RP 2007-30)

94 2007, Tom Engsted, Stuart Hyde and Stig Vinter Møller, Habit Formation, Surplus Consumption and Return Predictability: International Evidence (CO) (CREATES RP 2007-31)

95 2007, Søren Johansen, Some identification problems in the cointegrated vector autoregressive model (CREATES RP 2007-32)

96 2007, Søren Johansen and Morten Ø. Nielsen Likelihood inference for a nonstationary fractional autoregressive model (CREATES RP 2007-33)

97 2007, Charlotte Christiansen and Angelo Ranaldo, Extreme Coexceedances in New EU Member States' Stock Markets (CREATES RP 2007-34)

98 2007, Søren Johansen, Correlation, Regression, and Cointegration of Nonstationary Economic Time Series (CREATES RP 2007-35)

99 2007, David F. Henry, Søren Johansen and Carlos Santos, Selecting a Regression Saturated by Indicators (CO) (CREATES RP 2007-36)

100 2007, Peter Christoffersen, Kris Jacobs and Karim Mimouni, Models for S&P 500 Dynamics: Evidence from Realized Volatility, Daily Returns, and Option Prices (CREATES RP 2007-37)

101 2007, Dennis Kristensen and Anders Rahbek, Likelihood-Based Inference in Nonlinear Error-Correction Models (CREATES RP 2007-38)

102 2007, Peter Christoffersen, Kris Jacobs and Gregory Vainberg, Forward-Looking Betas (CREATES RP 2007-39)

103 2007, Søren Johansen and Anders Rygh Swensen, Exact Rational Expectations, Cointegration, and Reduced Rank Regression (CREATES RP 2007-41)

104 2007, Ole Barndorff-Nielsen, José Manuel Corcuera and Mark Podolskij, Power Variation for Gaussian Processes with Stationary Increments (CO) (CREATES RP 2007-42)

105 2007, Jean Jacod, Yingying Li, Per A. Mykland, Mark Podolskij and Mathias Vetter, Microstructure Noise in the Continuous Case: The Pre-Averaging Approach - JLMPV-9 (CO) (CREATES RP 2007-43)

106 2007, Michael Sørensen, Efficient Estimation for Ergodic Diffusions Sampled at High Frequency (CREATES RP 2007-46)

J.6.2 Other working paper publications

1 2008, P. Frederiksen and M. Ø. Nielsen, Fully Modified Narrow-Band Least Squares Estimation of Stationary Fractional Cointegration, QED Working Paper Number 1171.

2 2008, S. Johansen and M. Ø. Nielsen, Likelihood inference for a nonstationary fractional autoregressive model, QED Working Paper Number 1172

3 2008, T. G. Andersen, T. Bollerslev, P. Frederiksen, and M. Ø. Nielsen, Continuous-Time Models, Realized Volatilities, and Testable Distributional Implications for Daily Stock Returns, QED Working Paper Number 1173

4 2008, M. Ø. Nielsen, Nonparametric Cointegration Analysis of Fractional Systems With Unknown Integration Orders, QED Working Paper Number 1174

5 2008, M. Ø. Nielsen, A Powerful Tuning Parameter Free Test of the Autoregressive Unit Root Hypothesis, QED Working Paper Number 1175

6 2008, T. Busch, B. J. Christensen, and M. Ø. Nielsen, The Role of Implied Volatility in Forecasting Future Realized Volatility and Jumps in Foreign Exchange, Stock, and Bond Markets, QED Working Paper Number 1181

7 2008, M. Ø. Nielsen, A Powerful Test of the Autoregressive Unit Root Hypothesis Based on a Tuning Parameter Free Statistic, QED Working Paper Number 1185

8 2007, Mark Podolskij, Non-parametric estimation of the volatility path in the presence of noise (Oberwolfach reports, 7/2007)

9 2007, Mark Podolskij, Inference for diffusion processes in the simultaneous presence of noise and jumps (Oberwolfach reports, 7/2007)

10 2007, Mark Podolskij and Daniel Ziggel, Bootstrapping bipower variation (Technical report)

11 2007, Tomoaki Nakatani and Timo Teräsvirta, Testing for Volatility Interactions in the Constant Conditional Correlation GARCH Model(SSE/EFI Working Paper Series in Economics and Finance #649)

12 2007, Timo Teräsvirta and Zhenfang Zhao, Stylized Facts of Return Series, Robust Estimates, and Three Popular Models of Volatility (SSE/EFI Working Paper Series in Economics and Finance #662)

13 2007, Anne Péguin-Feissolle, Birgit Strikholm and Timo Teräsvirta, Testing the Granger noncausality hypothesis in stationary nonlinear models of unknown functional form (CO) (SSE/EFI Working Paper Series in Economics and Finance #672)

14 2007, Tomoaki Nakatani and Timo Teräsvirta, Positivity Constraints on the Conditional Variances in the Family of Conditional Correlation GARCH Models (CO) (SSE/EFI Working Paper Series in Economics and Finance #675)

J.7 PhD Theses

1 2008, Toke Lilhauge Hjortshøj, Essays on Empirical Corporate Finance - Managerial Incentives, Information Disclosure, and Bond Covenants

2 2008, Theis Lange, Asymptotic Theory in Financial Time Series Models with Conditional Heteroscedasticity (University of Copenhagen)

3 2008, David Skovmand, Libor Market Models - Theory and Applications

4 2008, Jie Zhu, Essays on Econometric Analysis of Price and Volatility Behavior in Asset Markets