

birgit.galemann@financedev.eu Mobile: +49 (157) 522 09 157 Phone: +49 (6171) 582156 www.financedev.eu

## **Curriculum Vitae: Dr. Birgit Galemann**

<ol> <li>Family name:</li> <li>First name:</li> <li>Date of birth:</li> <li>Nationality:</li> <li>Civil status:</li> <li>Education:</li> </ol>	Galemann Birgit 13/09/1964 Germany Married	
Institution: Dates: Degree obtained: Dates: Degree obtained:	University of Notre Dame, Indiana, USA 1990–1994 PhD 1989–1990 Master of Science (Main subjects: Differential Geometry,	Topology)
Institution: Dates: Degree obtained:	Ruhr-Universität Bochum, Germany 1983–1989 Diplom-Mathematikerin. Grade: Sehr Gut (A) Major: Mathematics (Complex Analysis, Algebraic Geome Theory, Stochastic); Minor: Economics	try, Probability

## 7. Language Skills: (1=excellent, 5=basic)

	Reading	Speaking	Writing
German (native)	1	1	1
English	1	1	1
French	3	3	3
Indonesian	5	5	5

- 8. Other skills: MS Office incl. Visual Basic, MS Access
- 9. Present position: Independent Microfinance Consultant
- 10. Years within the firm: Since 2007

## 11. Key qualifications:

-	Financial Modelling	-	Liquidity, Market & Credit risk	—	Federations of Savings &
_	Strategic Planning		measurement & procedures		Loan Associations
_	Methodology & Prototype	-	Performance Measurement	_	Financial Literacy Training
	Development	-	Field Research	_	Modelling agricultural
_	Microfinance	_	Rural Development		cooperatives' business

## 12. Specific International Experience:

Country:	Dates:
Uganda	04/1994; 10/2005; 12/2006; 08/2007; 02/2008–03/2008;
	01/2010-3/2010; 05/2011; 09/2012; 01/2013-02/2013; 09/2013;
	10/2013; 01/2014-02/2014; 04/2014-05/2014; 06/2014-07/2014;
	01/2015-02/2015; 10/2015-11/2015; 04/2016; 06/2016-07/2016;
	10/2016-11/2016; 03/2017-04/2017; 10/2017-11/2017;
	06/2018-07/2018; 10/2018-11/2018; 03/2019-04/2019
Indonesia	05/2008-06/2008; 10/2008-11/2008; 01/2009-03/2009;
	05/2009-06/2009; 09/2009-09/2009; 01/2019
Nigeria	04/2015; 06/2015
Ukraine	11/2012-12/2012; 04/2013

13. Profession	nal Experience Record:
Date:	11/2019-today
Location:	Germany & Uganda from off-side
Client:	Catholic Workers Movement Uganda (CWM)
Assignment:	Weltnotwerk der KAB - International aid organization of CWM worldwide
Position:	Independent Consultant
Description:	<ul> <li>Enhancement of CWM Uganda's 3-level "Raiffeisen-SLA federation's" monitoring system on primary level through digital group ledgers running on members' own smartphones. The ledgers are provided with fully automated and complete audit functionalities as well as financial statements. This shall improve the punctual data delivery and strongly reduce financial and operational mistakes made in the fields</li> <li>On-line training of the digital ledgers trough webinars and homework reviews</li> <li>Development of an aggregation tool for all Digital-Ledgers of a region, allowing to efficiently supervise the SLAs on secondary level, and to evaluating their performance</li> </ul>

Date:	Since 10/2019		
	-> Three times per annum a 4-days compact course unit		
Location:	Germany, Witzenhausen		
Client:	Gesellschaft für Nachhaltige Entwicklung (GNE)		
Position:	Independent Consultant / Lecturer		
Description:	<ul> <li>Course unit for International Project Management: "Empowerment of communities through microfinance and hands-on tools"</li> </ul>		

Date:	01/2019–02/2019
Location:	Indonesia, Semarang
Client	Lembaga Pendamping Usaha Buruh Tani dan Nelayan (LPUBTN)
Assignment:	GIZ/CIM & BUGI - Bildung und Gesundheit für Indonesien e.V.
Position:	Independent Consultant
Description:	<ul> <li>Presented the 3-level "Raiffeisen-Savings &amp; loan association federation" developed since 2013 with the Catholic Workers Movement Uganda</li> <li>Held workshops on its modules: the <i>Raiffeisen-SLA</i> method; basic business-financial planning; the internal audit, monitoring &amp; evaluation system for remote, continuous supervision and support of the anticipated R-SLAs</li> <li>Adjustment of methodology and training material for the new context</li> </ul>

Date:	03/2013–06/2019
	-> Per annum two four-weeks lasting on-site assignments in 2013-2015, short on-site
	visits in 2016-2019, continuous off-site monitoring throughout all years
Location:	Uganda & Germany
Client:	Catholic Workers Movement Uganda (CWM)
Assignment:	DGRV-German Cooperative and Raiffeisen Confederation
Position:	Independent Consultant
Description:	<ul> <li>Together with the partners establishment of a 3-level federation of savings- and loan associations (SLAs) within their country-wide operating social &amp; church association - as initiated in Aug12 and Jan13. The unique "Raiffeisen-SLA federation" is based on three pillars: A rigorous 3-level internal audit, monitoring &amp; evaluation system; a practical tool for business financial-planning; and linkage-banking.</li> <li>On-site workshops to strengthen the twelve diocesan support teams concerning time-, task-, voluntary team- and human resource management, implementation of the federation's procedures, and the operational &amp; financial self-sustainability plan</li> <li>Successful negotiations with Centenary Bank of a financial inclusion / linkage banking contract with the CW R-SLA federation</li> <li>Technical continuous off-site support of the country-wide program through i) continuous enhancements and automatization of the recording &amp; performance monitoring tool, ii) training in reviewing the tools' applications and with this the operational and financial performance of the SLAs on regional and national level</li> </ul>
Date:	10/2015–06/2019

Date:	10/2015-06/2019
	-> Per annum two five-weeks lasting on-site assignments in 2016-2019, continuous
	off-site monitoring throughout all years

Location:	Uganda & Germany
Client:	Uganda Co-operative Alliance (UCA)
Assignment:	DGRV-German Cooperative and Raiffeisen Confederation
Position:	Independent Consultant
Description:	<ul> <li>Developed a "Savings and Loan Portfolio Management Tool" (SLPMT) for rural financial cooperatives not owning a vendor banking software</li> <li>Tailored the "Business Financial-Planning Tool" designed in 2013 for i) manual or digital application to small projects (one average operating period), ii) advanced application for cash flow &amp; liquidity projections of larger business over several operating periods, including loan structuring if the business proves to be viable</li> <li>Held workshops for local facilitators, cooperatives' staff and members in financial business planning, making use of this hands-on tool as well as a new concept designed to develop individual and/or group business ideas</li> <li>Developed a "Produce &amp; Pay Planning and Management Tool" (PPPMT) for rural producer organizations (RPO) and their unions. The RPO model serves as input for the union model but it can also operate as a stand-alone program.</li> <li>Both models allow on institution as well as on farmer level to track and manage data regarding registration, the input-, produce-, and sales business, their respective commissions, and clients' debts, resulting in management reports for decision making</li> <li>Assisted UCA to establish an <i>Advisory Services Centre</i> offering UCA's members (financial and agricultural cooperatives) sustainable support through innovative course modules and hands-on tools for good governance, business financial-planning, savings &amp; loan portfolio management as well as planning and management of the flows of agricultural produce &amp; cash</li> <li>Held workshops to support UCA establishing a committed team of trainers</li> <li>Monitored and supported participants after each course when training in the field</li> <li>Technical continuous off-site support through i) enhancements of the tools based on users' feedback ii) checking on trainer's reviews of their clients' tool applications, iii) guiding the lead trainer in overseeing other team members</li> </ul>

Date:	04/2015–07/2015
Location:	Nigeria (two on-site plus off-site assignments)
Client:	REGMIFA
Assignment:	Business and Finance Consulting (BFC)
Position:	Independent Consultant
Description:	<ul> <li>As part of consultancy services in Financial and Risk Management for the Nigerian MFI Grooming Centre presentations on the "Risk &amp; Liquidity Management Tool" and its embedded Asset Liability Management process developed over the past five years</li> <li>Hands-on workshops for the training department, branch representatives and GC's finance department on the tool's inherent risk management concepts</li> </ul>

Date:	10/2013–05/2014		
Location:	Uganda (three on-site plus off-site assignments)		
Client:	REGMIFA		
Assignment:	Business and Finance Consulting		
Position:	Independent Consultant		
Description:	<ul> <li>As part of consultancy services in Financial and Risk Management, implementation of the "Risk &amp; Liquidity Management Tool", developed over the last four years, at the Ugandan MDI PRIDE through hands-on workshops for all 30 branches, and the MDI's liquidity-, finance- and risk management departments using their live data</li> </ul>		

Date:	04/2013
Location:	Ukraine, Ternopil & Kiev
Assignment:	DGRV / GIZ
Position:	Independent Consultant
Description:	- Rolling out the Liquidity Management Tool, applied in Nov12 to the Ukrainian Central
	Credit Institution, to its member credit union Samopomich in Ternopil

Date:	01/2013-02/2013
Location:	Uganda & Germany (Five-weeks lasting on-site work, off-site monitoring afterwards)
Client:	Catholic Workers Movement Uganda (CWM)

Assignment:	DGRV-German Cooperative and Raiffeisen Confederation
Position:	Independent Consultant
Description:	<ul> <li>Training of voluntary trainers and internal auditors to establish and monitor a network of CW-SLAs throughout this country-wide movement</li> <li>Development of a business financial-planning tool to be applied by the SLA members when requesting a loan</li> <li>Teaching the basics of unit -costing and -profit estimations with this hands-on tool</li> <li>Monitoring of participants in 8 out of 12 dioceses when training their first groups</li> </ul>

Date:	11/2012–12/2012
Location:	Ukraine, Kiev
Assignment:	GIZ / DGRV-German Cooperative and Raiffeisen Confederation
Position:	Independent Consultant
Description:	<ul> <li>Presentation of the "Risk &amp; Liquidity Management Tool" developed over the last 3 years to the management of the Ukrainian United Credit Union association (UOKS)</li> <li>Application of the tool to this central institution</li> </ul>
Date:	08/2012-10/2012 (on- and off-site work)
Location:	Idanda & Germany

Date:	08/2012-10/2012 (on- and off-site work)
Location:	Uganda & Germany
Client:	Catholic Workers Movement Uganda (CWM)
Assignment:	DGRV-German Cooperative and Raiffeisen Confederation
Position:	Independent Consultant
Description:	<ul> <li>Extensive workshop with CWM national and diocesan leaders on Savings and Loan Associations (SLA) to be established with internal trainers within the movement</li> <li>Prototype development of a recording &amp; performance monitoring tool for the SLAs</li> </ul>

Date:	01/2012–07/2012
Location:	Germany, Frankfurt
Company:	DekaBank - Central asset manager for the Sparkassen-Finanzgruppe
Position:	Independent Consultant
Description:	<ul> <li>Responsible for the technical analysis of business processes as well as the design of technical concepts in the context of the ongoing development of a Data-Warehouse that will provide management with a stable basis for decision making</li> </ul>

Date:	05/2011
Location:	Uganda, Masaka, Jinja and Fort Portal
Client:	SACCO MAMIDECOT, Association of MFI Uganda (AMFIU), Mountains of the Moon University
	(MMU)
Position:	Independent Consultant
Description:	<ul> <li>Applied the Liquidity Management Tool developed in 2010 together with the management team at the SACCO MAMIDECOT</li> <li>Presented the concepts and applications of the tool at AMFIU's annual conference.</li> <li>Held an interactive lecture about practical liquidity risk management for the bachelor students in Banking and Development Finance at MMU</li> </ul>

Date:	04/2011
Location:	Indonesia (off-site work)
Client:	Bank of Indonesia
Assignment:	GIZ—Promotion of Small Financial Institutions (ProFI)
Position:	Independent Consultant
Description:	<ul> <li>Developed additional training material on the Loan Pricing and Portfolio Planning Tool "SIAP-Simulasi BPR" - developed in the previous projects for the People's Credit Banks (BPR) - tailoring the documents to the specific needs of BI supervisors when using the tool from their point of view.</li> </ul>

Date:	11/2010–12/2010
Location:	Indonesia (off-site work)
Client:	Bank of Indonesia
Assignment:	GTZ—Promotion of Small Financial Institutions (ProFI)
Position:	Independent Consultant

Description:	<ul> <li>Established version 2.0 of the Loan Pricing and Portfolio Planning Tool "SIAP-Simulasi BPR" to adjust it to the central's bank, BI, new microfinance accounting standard. Following my recommendation from 2008, BI had enhanced the accounting with risk and cost based loan product classes applicable across the country / worldwide.</li> <li>Designed specification how the enhanced data can be used by BI to derive on BPR and regional level competitiveness and outreach indicators with the goal to create for supervisors, investors and clients transparency of the entire BPR-Industry measuring levels and trends in the BPR-Market (interest, funding rates) as well as concerning the BPR's social performance.</li> </ul>
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Date:	04/2010–06/2010
Location:	Germany, Oberursel
Company:	Business & Finance Consulting, Zürich, Switzerland
Position:	Independent Consultant
Description:	<ul> <li>Developed a quantitative management tool for dynamically forecasting liquidity over the next twelve months</li> <li>The developed management tool with its two components (branch/head office &amp; consolidated levels) will enable branch managers and the treasurer to measure and manage liquidity levels in a "business-as usual" environment as well as during a liquidity crisis</li> </ul>

Date:	01/2010-03/2010
Location:	Uganda, Fort Portal
Company:	Mountains of the Moon University
Position:	Independent Consultant
Description:	<ul> <li>Supported the development of a bachelor degree in "Banking and Development Finance"</li> <li>Developed the outline of course framework, syllabus for specialized courses, researched for an electronic library, established linkages with the local finance community to provide internships and to increase the practical relevance of the program, coached lecturers</li> </ul>

Date:	09/2009–09/2009
Location:	Indonesia, Jakarta and Malang
Company:	Bank of Indonesia
Assignment:	GTZ—Promotion of Small Financial Institutions (ProFI)
Position:	Independent Consultant
Description:	<ul> <li>Trained the trainers on delivering courses across Indonesia on operational efficiency and risk management concepts and application of the loan pricing and portfolio planning tool developed earlier for the People's Credit Banks in Indonesia (Bank Perkreditan Rakyat - BPR)</li> </ul>

Date:	05/2009–06/2009
Location:	Indonesia, Jakarta and Yogyakarta
Company:	Bank of Indonesia
Assignment:	GTZ—Promotion of Small Financial Institutions (ProFI)
Position:	Independent Consultant
Description:	<ul> <li>Conducted workshops on operational efficiency and risk management concepts and application of the loan pricing and portfolio planning tool with 10 further pilot banks (BPR) in West Sumatra as well as representatives of the 8 departments of the central bank involved in micro banking</li> <li>Compared current and projected efficiency and outreach indicator levels between first seven pilot BPRs (Mar09) and against, suggested benchmark targets</li> <li>Developed version 1.0 of the tool based on users' feedback of the first pilot BPRs</li> </ul>

Date:	01/2009–03/2009
Location:	Indonesia, Jakarta and Padang
Company:	Bank of Indonesia
Assignment:	GTZ-Promotion of Small Financial Institutions (ProFI)
Position:	Independent Consultant

Description:	—	Enhancing the prototype model for loan pricing and portfolio planning established
-		earlier into a "user-friendly" tool in order to pilot test it with seven first rural banks
		(BPRs) in an interactive 3 days' workshop: Participants applied the simulation model
		directly to their internal data enhanced via a standardized loan classification

Date:	10/2008–11/2008
Location:	Indonesia, Islands: Sumatra, Java and Lombok
Company:	Bank of Indonesia
Assignment:	GTZ—Promotion of Small Financial Institutions (ProFI)
Position:	Independent Consultant
Description:	<ul> <li>Follow up on the earlier study in 2008 regarding efficiency, outreach and loan pricing for the Rural Banks (BPR):</li> <li>Developed and tested on-site a prototype model for loan pricing and portfolio planning in selected BPRs in three regions; together with the management teams assessed all possible combinations of actions which improved efficiency and productivity indicators by changing / projecting the respective parameter values of the simulation model. The findings allowed participating BPRs to gain a better inside of the income, costs and risks of their portfolio</li> </ul>

Date:	09/2008
Location:	Sichuan, China (off-site work)
Company:	Frankfurt School of Finance & Management, International Advisory Services
Assignment:	Microfinance Initiative for Asia (MIFA) in China
Position:	Independent Consultant
Description:	<ul> <li>Performed financial modelling for the establishment of the business plan for Renshou Village and Township Bank Pilot in Sichuan, China</li> </ul>

Date:	05/2008–06/2008
Location:	Indonesia, Islands: Sumatra, Java and Lombok
Company:	Bank of Indonesia
Assignment:	GTZ—Promotion of Small Financial Institutions (ProFi)
Position:	Independent Consultant
Description:	<ul> <li>Assessed the operational efficiency, outreach and loan pricing of the People's Credit Banks in Indonesia (Bank Perkreditan Rakyat - BPR): Data acquisition via i) on-site interviews across the country, ii) questionnaires for 50 additional BPRs</li> <li>Presented for representatives of local supervisory teams of Bank of Indonesia, the development bank of West Sumatra and the department for rural bank research, development and regulations of Bank of Indonesia</li> <li>Recommended ways to make the rural bank supervisory system more transparent, and set benchmarks for the BPR market as well as risk based supervision</li> </ul>

Date:	02/2008–03/2008
Location:	Uganda, Fort Portal
Company:	Microfinance Institution HOFOKAM
Position:	Independent Consultant
Description:	<ul> <li>Enhanced and linked the performance and strategic planning models developed for the institution in 2007</li> <li>Applied models to February and March data and analysed the results</li> <li>Trained loan officers, supervisors and managers to use the models independently</li> </ul>

Date:	11/2007
Location:	Frankfurt, Germany
Company:	Frankfurt School of Finance & Management, International Advisory Services
Assignment:	European Fund for South East Europe (EFSE)
Position:	Independent Consultant
Description:	- Developed a market driven pricing model prototype for loans provided by EFSE

Date:	09/2007
Location:	Frankfurt, Germany
Assignment:	European Fund for South East Europe (EFSE)

Company:	Frankfurt School of Finance & Management, International Advisory Services
Description:	<ul> <li>Developed methodology to measure structured risk within the given risk management structures of the fund</li> </ul>
	<ul> <li>Reviewed risk ratios of the fund against different types of structuring</li> </ul>

Date:	04/1994; 10/2005; 12/2006; 08/2007
Location:	Uganda, Fort Portal
Company:	Microfinance Institution HOFOKAM
Position:	Independent Consultant
Description:	<ul> <li>10/2005 ; 12/2006 ; 08/2007</li> <li>Developed a strategic planning model for the institution to optimise the operational efficiency across all of its branches and loan products (village bank, solidarity, etc.)</li> <li>Trained credit officers' supervisors in cash flow analysis and on how to optimize the efforts of their team members when visiting their village bank clients</li> </ul>
	<ul> <li>Visited village bank clients to check validity of training concepts</li> <li>Developed a prototype for a performance model for loan officers</li> <li>04/1994 and later visits:</li> </ul>
	<ul> <li>Performed field studies in the rural West of Uganda to investigate existing activities in micro finance such as credit unions, revolving funds, women's saving clubs, etc.</li> <li>Pursued efforts in the counties Fort Portal, Hoima and Kasese to establish and develop micro finance programs</li> </ul>

Date:	09/2005–06/2007
Location:	Frankfurt
Assignment:	Deutsche Bank AG, Risk & Capital Management / Risk Analytics and Instruments
Position:	Director, Head of Derivatives Exposure Methodology
Description:	<ul> <li>Responsible for the development of Deutsche Bank's global derivatives credit risk engine measuring counterpart risk exposure (PFE) and feeding the regulatory capital calculations according to Basel 2</li> </ul>

Date:	12/2002–08/2005
Location:	London
Company:	Deutsche Bank AG
Division	Credit Risk Management/Exposure Management
Position:	Vice President & Director (promoted Feb 04), Head of Derivatives Exposure Methodology
Description:	<ul> <li>Responsible for achieving consistency in the existing and development of new tactical approaches to measure credit risk of live derivatives transactions (pre-deal) across the four locations in the exposure management department: New York, Singapore, London and Frankfurt</li> <li>Topics included: development of excel based pre-deal checking tools for commodity derivatives; immunization trades; quanto swaps with embedded caps and floors; complete revamp of the way counterparty portfolios are monitored in the exposure management information system</li> <li>Became a point of reference for all questions arising across the regions regarding the way credit risk of derivatives transactions were measured</li> </ul>

Date:	09/2001–11/2002
Location:	London
Company:	Deutsche Bank AG
Division	Credit Risk Management/Exposure Management
Position:	Vice President/Team Head, Exposure Management Analyst Team
Description:	<ul> <li>Supervised the European exposure management analyst team based in Frankfurt and London in daily task to 1) quantify the credit risk in live trades before their possible execution by sales and trading departments, 2) analyse and monitor the risk in existing counterparty portfolios;</li> <li>Trained credit officers regarding understanding of risk in derivative transactions and market behaviour</li> </ul>

Date:	09/2000-08/2001
Location:	Frankfurt
Company:	Deutsche Bank AG
Position:	Vice President within Credit Risk Management / Exposure Management
Description:	<ul> <li>Performed credit risk calculation for live trade requests on a wide range of structured derivative transactions across all product areas, e.g. interest rates, foreign exchange, equities, credit, commodities</li> <li>Developed spreadsheet based pre-deal evaluation tools for structured products (e.g. swaps with embedded IR and / or FX-options)</li> <li>Trained junior analysts/graduate trainees</li> </ul>

Date:	05/1998–08/2000
Location:	Frankfurt
Company:	Deutsche Bank AG,
Position:	Analyst within Risk Management / Risk Methods and Instruments
Description:	<ul> <li>Responsible for one of the models (KMV) used at that time to calculate the economic capital for the bank, i.e. the way its parameters are set and applied to the various types of customers and products, group wide coordination of the respective issues</li> <li>Conducted Risk Adjusted Return on Capital (RARoC) related projects with respect to the retail and private bank</li> <li>Calibrated counterparty default risk probabilities as well as recovery rates for retail clients (programming language: SAS)</li> <li>Analysed the business of the retail and private bank with regard to all of their products bearing credit risk</li> <li>Defined and oversaw projects for two direct reports and one IT person</li> </ul>

Date:	02/1996–04/1998
Location:	New York
Company:	Deutsche Bank New York
Position:	Associate / Assistant Vice President within Market Risk Management
Description:	<ul> <li>Responsible for the risk measurement of the equity arbitrage and corporate bond trading portfolios</li> <li>Developed appropriate Value at Risk based risk systems and implemented them in MS Excel (programming language: VBA); and Access</li> </ul>

Date:	12/1995–01/1996
Location:	Frankfurt
Company:	Deutsche Bank AG
Position:	Member of Risk Controlling Corporate Centre
Description:	- Tested a new trade booking system (Summit) for interest rate derivatives

Date:	11/1994–11/1995
Location:	Frankfurt, Mannheim, New York
Company:	Deutsche Bank AG
Position:	Trainee

Date:	07/1994–08/1994
Location:	Essen, Germany
Company	Cooperative-Bank ESSEN EG
Assignment:	Internship at a branch and the head office
Position:	Trainee

Date:	10/1989–07/1993
Location:	Indiana, USA
Company	University of Notre Dame
Position:	Graduate Assistant, Mathematics

Date:	11/1985–07/1988
Location:	Germany
Company	Ruhr University Bochum

Position:Student Assistant, Mathematics14. Studies and Publications:

Creating transparency of the BPR-industry through industry-wide measurable indicators for competitiveness and outreach, GTZ-ProFI.12/2010

Operational Efficiency, Outreach and Loan Pricing of Bank Perkreditan Rakyat (BPR) - 2, GTZ-ProFI, Working Paper Series WP.05/2008, 12/2008

Operational Efficiency, Outreach and Loan Pricing of Bank Perkreditan Rakyat (BPR) - 1, GTZ-ProFI, Working Paper Series WP.02/2008, 06/2008

"Multifactor stress testing functionality for repurchase trades, in particular structured debt products on ABS/MBS". Deutsche Bank, Risk Analytics & Instruments, Internal Document. 2006

"Credit Risk Measurement for Global Repo: Bilateral and tri-party repurchase transactions on fixed income securities and equities". Deutsche Bank, Risk Analytics & Instruments, Internal Document. 2006

"Credit Risk Measurement for Structured Equity Finance: Hybrid portfolio swaps". Deutsche Bank, Risk Analytics & Instruments, Internal Document. 2006

"Simulation of equity prices". Deutsche Bank, Risk Analytics & Instruments, Internal Document. 2006

"Architectural concept for consistent simulation of all financial variables across all business areas". Deutsche Bank, Risk Analytics & Instruments, Internal Document. 2005

"Credit Risk Measurement of Stripped Convertible Asset Swaps". Deutsche Bank, Exposure Management, Internal Document. 2005

"Credit Risk Measurement of Prime Brokerage trades on convertible bonds". Deutsche Bank, Exposure Management, Internal Document. 2005

"Credit Risk Measurement for Stock Loan Borrowing". Deutsche Bank, Exposure Management, Internal Document. 2004

"Credit Risk Measurement for Bank Debt Lending". Deutsche Bank, Exposure Management, Internal Document. 2004

"Effective monitoring of counterparty portfolios in the Exposure Information System". Deutsche Bank, Exposure Management, Internal Document. 2003

"Credit Risk Overwrite Functionality for trades unprocessed in Risk Engine". Deutsche Bank, Exposure Management, Internal Document. 2003

"Simulation of commodity prices". Deutsche Bank, Exposure Management, Internal Document. 2001

"Documentation of the pre-aggregation of Deutsche Bank's counterparty exposures used in its Economic Capital calculations". Deutsche Bank, Risk Methods & Instruments, Internal Document.2000

"Linear actions of the classical compact groups and tautness". Ph.D. thesis 1993 submitted to University of Notre Dame, USA. 1993

"Bounded regions in C2 with holomorphic S1-actions". Diploma thesis 1988 submitted to Ruhr-Universität Bochum, Germany. 1988