Christopher Charles Meadowcroft

The Role of Lending in Corporate Banking

Empirical Evidence and Implications for value-based Loan Pricing and Bank Management

Schriftenreihe für Bankmanagement und Controlling
Band 7 herausgegeben von Michael Lister



Christopher Charles Meadowcroft
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Imprint

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Christopher Charles Meadowcroft

Editor's preface

In times of increasing costs of regulatory rules, decreasing interest margins and disruption caused by digitalization banks get more and more problems to make profits. Most experts say it could be useful to take more risk in treasury management, to lower the running costs as much as possible and, last but not least, to lend more corporate loans. But in times of uncertain markets it only seems to make sense lending more loans if you can fix the right price.

The corporate loan market is very competitive. If you invest there and try to let your volumes grow you will soon understand that there is no easy way to acquire new corporate clients. To do so often needs to give in lower interest rates and better conditions to your clients.

But there is a thesis that gets around since many years. It says that if you start a new relation to a new client with a corporate loan the client will be tied up to your bank. The reason for that is that it seems to be difficult for the corporate client to change the bank if the client once has taken loans. And if a bank can reach a higher level of customer loyalty the bank will be able to make more profits from that relationship in later years. This special idea of cross selling based on lending a corporate loan in the beginning is called "the anchor product hypothesis".

Until now the hypothesis has never been confirmed. Christopher Meadowcroft made use of a comprehensive data-set which gave him the chance to make a special research in kind of profound empirical analysis that has never been done before

Mr. Meadowcroft overall succeeded in a very good work on scientific content. He succeeded to analyze his exceptional sample with statistical accuracy, using the right methods and instruments. The found results are very useful for practical approaches. It is no new knowledge that banks should reduce prices today to reach higher contribution margins in the future. But using Mr. Meadowcrofts findings banks are first time able to calculate those lifetime contribution margins. The level of innovation is high with focus

VII

on methodology and very high with focus on the confirmation of the anchor product

hypothesis.

As the editor I am very proud that this dissertation of exceptional quality is published in

Steinbeis edition. I hope this book will reach a high level of attention in the world of

science as much as in financial institutes.

Prof. Dr. Michael Lister

Berlin / Münster, 2021

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Abbreviations

AC Ancillary Costs

AIC Akaike Information Criterion

AIRB Advanced Internal Ratings Based

AP Ancillary Profit

APT Arbitrage Pricing Theory

AR Ancillary Revenues

AT1 Additional Tier 1

BCBS Basel Committee on Banking Supervision

BIC Bayesian Information Criterion

CAPM Capital Asset Pricing Model

CCF Credit Conversion Factor

CCP Central Counterparty

CCR Counterparty Credit Risk

CE Certainty Equivalent

CET1 Common Equity Tier 1

CFROI Cash Flow Return On Investment

CLV Customer Lifetime Value

COC Cost Of Capital

CV Continuation Value

CVA Cash Value Added

DCE Dynamic Customer Equity

DCF Discounted Cash Flow

DCM Debt Capital Markets

DDM Dividend Discount Model

DTA Deferred Tax Asset

EAD Exposure At Default

EBITDA Earnings Before Interest Taxes Depreciations and Amortisations

EBV Economic Book Value

ECA Export Credit Agency

ECM Equity Capital Markets

eFCF Eternal Free Cash Flow

EL Expected Loss

EP Economic Profit

EV Enterprise Value

EVA Economic Value Added

FCF Free Cash Flow

FE Fixed Effects

FX Foreign Currency

GCF Gross Cash Flow

GDP Gross Domestic Product

GI Gross Investment

GLM Generalized Linear Model

HQLA High Quality Liquid Assets

IC Invested Capital

ICM Income Capitalisation Model

IPO Initial Public Offering

IPRE Income Producing Real Estate

IRB Internal Ratings Based

IRR Internal Rate Of Return

KPI Key Performance Indicator

L/C Letter of Credit

LCR Liquidity Coverage Ratio

LGD Loss Given Default

LR Leverage Ratio

LRE Leverage Ratio Exposure

LTV Loan To Value

M&A Mergers & Acquisitions

MFTP Matched Funds Transfer Pricing

MIS Management Information System

MU Monetary Unit

MV Market Value

MVA Market Value Added

NOPAT Net Operating Profit After Taxes

NOPLAT Net Operating Profit Less Adjusted Taxes

NPV Net Present Value

NSFR Net Stable Funding Ratio

OPEX Operating Expenses

OPM Option Pricing Model

P&L Profit & Loss

PD Probability Of Default

PFE Potential Future Exposure

PTI Pre Tax Income

RAC Risk Aversion Coefficient

RAPM Risk Adjusted Performance Measure

RAROC Risk-Adjusted Return on Capital

RCF Revolving Credit Facility

RE Random Effects

RIO Return On Investment

ROA Return On Assets

ROE Return On Equity

ROIC Return On Invested Capital

RORAC Return on Risk Adjusted Capital

RV Residual Value

RWA Risk Weighted Assets

SA Standard Approach

SCE Static Customer Equity

SFT Securities Financing Transaction

SIFI Systemically Important Financial Institution

SME Small and Medium Sized Enterprise

SSE Explained Sum of Squares

SSR Residual Sum of Squares

SST Total Sum of Squares

SV Shareholder Value

SV Salvage Value

SVA Shareholder Value Added

T2 Tier 2

TIP Total Investor Performance

UL Unexpected Loss

VaR Value at Risk

WACC Weighted Average Cost of Capital

Abstract

Corporate banking is often associated with lending. While the lending business does constitute a major part of the revenues of corporate banks, increased capital requirements as part of recent regulation combined with often saturated markets and associated pressure on margins continue to challenge the profitability of corporate lending for banks. Under the paradigm of value-based management, firms should price products such that they increase or at least conserve the value of the firm (which includes covering the cost of capital). From a bank's perspective this is especially vital for capital intensive lines of business such as corporate lending. From a stand-alone perspective, loans should only be granted if they can be priced to meet all associated direct costs (including the cost of capital). However, it can occasionally be observed that banks offer loans at rates which do not cover all costs. A reason for this is the fact that the loan is commonly construed to be an anchor product in corporate banking which enables the realisation of cross-selling. So far, neither the often stipulated positive effect of lending on cross-selling (the positive anchor product hypothesis of lending in corporate banking) has been empirically examined, nor has a framework for establishing minimum loan prices considering crossselling been developed in academic literature. This dissertation aims to fill this gap by addressing the following two research objectives:

- 1. Testing the positive anchor product hypothesis of lending in corporate banking
- Developing a framework for establishing minimum loan prices in consideration of implied cross-selling

The dissertation is structured in three main parts. The first part outlines the fundamentals of value-based management with a special emphasis on its applications in bank management and customer relationship evaluation. Further, the theories underlining the existence of corporate banking relationships are discussed and recent empirical studies are presented. In addition, different forms of corporate lending, as well as the cost-based approach to loan pricing are introduced. A formulation of the central hypothesis concludes the first part.

The second part is dedicated to the empirical examination of the positive anchor product hypothesis of lending in corporate banking. The hypothesis is tested using a total of 16 different econometric procedures (linear regression, logit regression, cross-sectional as well as cross-sectional-time-series regression). The results largelly support the hypothesis.

The third part aims at developing a framework for establishing minimum loan prices considering the effects of implied cross-selling. The framework is illustrated with two practical examples where implied cross-selling is derived with a scenario-based approach, as well as with a regression-based approach. A discussion of the implications and limitations of the results of this work as well as an outlook and proposals for future research conclude this dissertation.

Introduction

A) Corporate banking as a relevant research field

Corporate banking is a discipline that dates back to the very origins of banking itself. Records from around 1800 B.C. provide evidence of basic lending activities taking place and being officially governed in Babylonia, where merchants would grant grain loans to farmers and traders who would redeem the loans through the proceeds of their business activities. As economic systems, trade flows and technology evolved over time, so did the practice of banking. But to this day, corporate banking remains an integral part of the economic and financial system.

From an academic standpoint, research in the field of corporate banking has focused on a broad spectrum of specific questions in recent decades. While theoretical economic research has largely focused on explaining the preconditions for the existence of corporate banking relationships,² empirical research has attempted to understand the duration of corporate banking relationships³ as well as the evolution of such relationships over time⁴. Within the research field of bank management, recent literature has touched on topics such as identifying value-drivers within corporate banking,⁵ optimizing business processes and steering principles,⁶ understanding corporate client behaviour with respect to their interaction with banks⁷ or the quantification of up-selling potential in corporate banking.⁸

¹ K. V. Nagarajan, 2011: 111

Steven A. Sharpe, 1990; Raghuram G. Rajan, 1992; Ernst-Ludwig von Thadden, 1995

³ Steven Ongena and David C. Smith, 2001

⁴ Luísa A. Farinha and João A. C. Santos, 2002; Vasso Ioannidou and Steven Ongena, 2010; Radhakrishnan Gopalan, Gregory F. Udell and Vijay Yerramilli, 2011

⁵ Marc-R Strauss, 2006

⁶ Giacomo (Ed.) de Laurentis, 2005; Christoph J. Börner, 2005

Nico Peters, 2014

⁸ André Hasken, 2013

Corporate banking is often associated with lending. While the lending business does generally constitute a major part of the revenues of corporate banks, increased capital requirements combined with often saturated markets continue to challenge the profitability of corporate lending for banks. Under the paradigm of value-based management, firms should price products such that they increase or at least conserve the value of the firm (which includes covering the cost of capital). From a bank's perspective this is especially vital for capital intensive lines of business such as corporate lending. At the same time, the impact which lending has on the overall possibility to generate value in corporate banking should be understood. In this work, the hypothesis that lending serves as an anchor product which facilitates cross-selling is empirically examined. In addition, possible implications for value-based loan pricing are discussed.

Christopher Charles Meadowcroft studied Management & Economics at the University of Zurich. He earned his doctoral degree at the Steinbeis University in 2018. He has more than 15 years of experience in the banking industry.



