

CRISIS WASTED?

LEADING RISK MANAGERS on RISK CULTURE

FRANCES COWELL

MATTHEW LEVINS

WILEY

“I think we're too comfortable in our assumption that it has been mended. Rather, I think the conditions are setting us up for another very real crisis somewhere.”

Richard Meddings

“Arguments are even being made that banks should be allowed to regulate themselves. Imagine.”

Adrian Blundell-Wignall

“Look, being a ... risk compliance guy means you are sitting there and you are watching all the kids in the pool and you know somebody is doing something they shouldn't be doing in the pool but you don't know who the hell it is.”

Michael Hintze

“For me it was more about who's making money, and why is he is making money, and can he explain to me in an intuitive way how he is making it?”

John Breit

“But whether we really need a regulatory rulebook with more than 10,000 pages (Dodd-Frank), I wonder.”

Hugo Bänziger

“I don't know how many pages of forms would give you the information that you get from meeting somebody face to face and asking some pertinent questions.”

Paul Bostok

CRISIS WASTED?

Leading Risk Managers on Risk Culture

**Frances Cowell
Matthew Levins**

WILEY

This edition first published 2016
© 2016 John Wiley & Sons, Ltd

Registered office

John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex,
PO19 8SQ, United Kingdom

For details of our global editorial offices, for customer services and for information about how to apply for permission to reuse the copyright material in this book please see our website at www.wiley.com.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

Wiley publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit www.wiley.com.

Designations used by companies to distinguish their products are often claimed as trademarks. All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The publisher is not associated with any product or vendor mentioned in this book.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. It is sold on the understanding that the publisher is not engaged in rendering professional services and neither the publisher nor the author shall be liable for damages arising herefrom. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

Library of Congress Cataloging-in-Publication Data

Cowell, Frances, author.

Crisis wasted? : leading risk managers on risk culture / Frances Cowell,
Matthew Levins.

pages cm

Includes bibliographical references and index.

ISBN 978-1-119-11585-4 (cloth)

1. Financial services industry--Risk management. 2. Financial institutions--Risk management. 3. Financial risk. 4. Investment advisors. I. Levins, Matthew, author. II. Title.

HG173.C69 2016
332.1068'1dc23

2015025690

A catalogue record for this book is available from the British Library.

ISBN 978-1-119-11585-4 (hardback) ISBN 978-1-119-11587-8 (ebk)
ISBN 978-1-119-11586-1 (ebk) ISBN 978-1-119-11588-5 (obk)

Cover design: Wiley

Cover image: (c) andrey_l/Shutterstock

Frances dedicates the work to Josie.
Matthew dedicates the work to Sonia.

Contents

[Preface](#)

[Themes and questions](#)

[Research](#)

[Engaging the faculty of interviewees](#)

[Execution](#)

[Acknowledgements](#)

[Notes](#)

[About the Authors](#)

[1 Setting the Scene](#)

[Notes](#)

[2 Background](#)

[Behaviour](#)

[Modelling and measurement](#)

[Regulation](#)

[Notes](#)

[3 Sir Michael Hintze](#)

[Notes](#)

[4 John Breit](#)

[Notes](#)

[5 Bill Muysken](#)

[Notes](#)

[6 Hugo Bänziger](#)

[Notes](#)

[7 Carol Alexander](#)

[Notes](#)

8 Mark Lawrence

Notes

9 Paul Bostok

Notes

10 Todd Groome

Notes

11 Richard Meddings

Notes

12 Adrian Blundell-Wignall

Notes

13 Innovations

How to analyse risk appetite and risk tolerance

How to quantify risk appetite for an economy

Why models seem to fail

How to quantify illiquidity

Signals of market instability

Analysis of connectivity and contagion

Notes

14 Interpretation

Opportunity wasted?

Failure of regulation

What has been done so far and how useful is it?

Watering down

The burden of rules

Paradoxical and counterproductive

Could go either way

Time to reflect on theoretical underpinnings

Tower of Babel

[Limits to regulation](#)

[Notes](#)

[A Risk Silos](#)

[Investment risk](#)

[Liquidity risk](#)

[Counterparty risk](#)

[Operations risk](#)

[Legal and compliance risk](#)

[Note](#)

[B The Mechanics of Selected Financial Products](#)

[Exchange-traded v over-the-counter transactions](#)

[Swaps](#)

[Securitisation and collateralisation](#)

[Asset-Backed Securities \(ABS\)](#)

[Structured Investment Vehicle \(SIV\)](#)

[Collateralised Debt Obligations \(CDO\) and
Collateralised Loan Obligations \(CLO\)](#)

[“Do it yourself” structured products](#)

[Options and option implied volatility](#)

[Volatility and variance swaps](#)

[Option replication](#)

[Gaussian Copulas](#)

[Notes](#)

[C Basel I, II and III - Risk Weightings](#)

[Note](#)

[Glossary of Terms](#)

[Glossary of People](#)

[Further Reading](#)

[Bibliography](#)

[Index](#)

[EULA](#)

List of Illustrations

[Chapter 11](#)

[**Figure 11.1** Asset Capacity of Banks](#)

[**Figure 11.2** The Squeeze on Credit Capacity](#)

Preface

In a Paris café in April 2013, the conversation turned to how the financial services industry was shaping up following the global financial crisis. We - Frances and Matthew - shared an uneasy intuition that some developments, especially in regulations - despite the best intentions to the contrary - could have the result of actually making the financial system more fragile. Risk management and governance failures, such as the 2012 London Whale, where JP Morgan incurred massive losses in CDS contracts, and similarly massive losses in 2008 at Société Générale caused by a rogue trader in stock index derivatives, continue to happen, suggesting that the professional risk management put in place by large, sophisticated organisations was not working as it should.

There was a sense that an opportunity was being wasted and the debate about what was needed to reinforce financial stability was somehow being hijacked by a combination of popular mis-information, political short-sightedness and special interests. But was this merely a perception stemming from our common perspective? What did others think?

From casual conversations, it was evident that many friends and colleagues shared our views, prompting questions about how widely they were shared outside our circles. In particular, what other factors were operating that we were perhaps unaware of? What extra insights could be had from the best informed market participants and observers?

Matthew proposed a formal exercise: to ask those who were most caught up in it as it all happened. The

transcripts of the conversations would result in a readable and substantial book to make available to decision-makers, in the financial services industry and elsewhere, insights from the inside point of view, thereby leading to a more constructive and informed debate and perhaps even influencing decisions in favour of sensible regulation that would reinforce stability not undermine it.

Both having been risk takers turned risk managers, in banking and investment management respectively, since the early 1980s, we had therefore lived through a number of financial crises. This experience allowed us to select and engage an interesting and impressive faculty of interviewees, and to pose good, pointy questions that would fuel debate.

We reasoned that, like us, our readers would want to know why some developments since the crisis have been so disappointing. Like us, they would like better to understand the sub-agendas that operate on decision-making in financial organisations, their regulators and supervisors; to leverage the perspectives and insights of insiders and to understand what is really going on.

Constructive debate necessarily entails a forward-looking orientation. That said, given that the aim is to mitigate the effects of a future financial crisis, reflection on past events is inevitable and can be instructive. But the past must be kept in perspective, since the conditions that prevailed then will not be repeated exactly in the future. To paraphrase the ubiquitous risk warnings in prospectuses, the past is not necessarily a guide to what will happen in the future. Learn from the past, but don't extrapolate from it.

Our first steps were to gather initial feedback and ideas – for practical execution as well as to crystallise our thinking about issues we should address and that would emerge

during our inquiry. In doing this, we were struck by the general enthusiasm for the project (only one person was not whole-heartedly supportive). This was of course due partly to its likely commercial appeal, but more important was that so many people saw it as a project that needed to happen. It seemed that even more people than we had imagined agreed that a new level of debate was called for.

Themes and questions

The next challenge was to decide how structured or otherwise the conversations should be. Certainly, readers would benefit from some comparability between the views of each interviewee, which suggests some structure; but interviews that are too constrained or structured would risk limiting the potential for unique insights. What people choose to talk about is as important as what they say.

This led to the idea of common themes, or threads, which would connect the conversations while allowing scope for each interviewee to address the issue closest to his or her heart. The themes were thus conceived as parameters rather than boundaries.

In developing the themes, we were keen to leap-frog arguments that are already well aired, such as conflicts inherent in the way many investment bankers are rewarded. But where we found that we could add a new perspective to an existing debate, we have done so, and so we include themes such as the complexity of models for valuation and risk, contradictions in regulatory regimes and possible unintended consequences.

Lots of “brainstorming” and plenty of war stories later, about 20 somewhat inter-connected themes emerged. These in turn boiled down to three macro themes: behaviour, models and regulation.

Within each theme, the challenge in framing the questions was to be specific enough to give the interviewees something to get their teeth into, but open enough to be relevant to more general issues.

Behaviour, the first theme, covers organisations and the people who work in them – what is increasingly referred to as organisations' risk culture: how it regards risk. A good indication of an organisation's attitude to risk is the status it accords risk management. This seemed to us a good place to start our questions too. Our experience of working in different organisations told us that this is about more than the organisational hierarchy, it is also about the relationship between the risk manager and risk takers – at all levels of the organisation, from the dealer and the risk analyst to the CEO and the CRO. For example, how equal are they in the event of a dispute? How equal *can they be*? What mix of personalities works best? What organisational structure works best? Which day-to-day practices work best?

The next bloc of questions is about how well equipped the risk manager is. How much has the organisation invested in the tools, and the skills needed to deploy them effectively, both to measure and report risk, and also to manage it? Aware that many readers are unfamiliar with how risk models work, we have done our best to present these questions in a way that does not demand any technical knowledge. (Technical explanations, for those interested, can be found in the appendices.) We have therefore aimed for questions that steer clear of the arcane details of risk measurement and focus instead on what their users think of them. How useful are the risk reports that inform supervisors, regulators and investors? The world is complex, should the models be too? Should everyone use the same one, or does this lead to herding that exacerbates systemic risk?

The last and most extensive theme concerns regulations. What is likely to work and what is not likely to work? Why? What might be the unintended consequences? Might there be a better way of doing it?

Another challenge was to avoid imposing our views on the interviews. This is easier said than done, since we draw heavily on our own experience to formulate questions. We therefore were at pains to couch questions in as even handed a way as possible, to avoid leading the witnesses. Nevertheless, we acknowledge that the very choice of questions can affect the course of conversations. Even so, as each conversation developed, our views are sometimes, unavoidably, drawn out.

Research

Reading around our themes and talking with friendly experts was an adventure in itself. It uncovered a number of rich veins of research, including valuable early and ongoing work on the theory of regulation, original approaches to understanding and estimating risk appetite and of calibrating market instability, as well as very thoughtful pieces on the pros and cons of analytical versus behavioural ways of managing risk: detailed VaR reports versus an hour in the pub with some traders.

Perhaps the most rewarding was that we learned about a number of innovations that promise to address some tricky problems that came up during our conversations. Because these innovations are concrete evidence that some good has indeed come from the crisis, they seem valuable enough to merit their own chapter. They are a stimulating challenge to the book's title.

For a selection of other books and articles that stood out, interested readers are directed to the Further Reading

section.

Engaging the faculty of interviewees

Clearly the interviewees are selected to achieve the right complement of perspectives, without regard for the views that they might hold. They span banking, investment banking and investment management, which together can be thought of as capital formation, capital transfer and capital warehousing. Or, put another way, risk formation, risk transfer and risk warehousing. We regard the three functions as inseparable and co-dependent in a capitalist system in the same way that respiration and photosynthesis are mutually dependent in a world of carbon-based life forms. The views from academia, regulators and supervisors complement practitioners' perspectives.

Cliché it may be, but modern capital markets do operate within a single, global ecosystem. So we sought geographical diversification – though in reality the debate is dominated by North America and Europe, since that is where, for the most part, the crisis happened.

In an important sense, engaging faculty members was the easiest part of the project. Our invitations almost all met with enthusiastic acceptance, including two participants to whom we were unknown before the interviews and to whom we had no formal introduction – cold emails, in effect. This we received as an endorsement: people really believed that the project was needed; we were genuinely flattered that people of such calibre were so supportive! Nevertheless, two were obliged to decline to be interviewed. Unfortunately they were from the same geographical and professional group, which is therefore less represented than we would have liked it to be. Otherwise, the faculty of interviewees is a good illustrative sample of the financial industry.

Execution

Conducting the interviews was always going to be the fun bit of this project, but it was much more fun than either of us anticipated. We were genuinely delighted by how generous our faculty were with their time and the frankness with which they expressed themselves. Their initial enthusiasm did not wane throughout the interviews – if anything, the opposite is true, and we hope this is conveyed in the transcripts you are about to read.

A number of things stand out from the interviews themselves. The first is that nearly all our faculty attribute the success of their careers to close contact with very thoughtful (and often now famous) people. Many had the good fortune to be mentored or otherwise supported by thought leaders in economic and investment theory. But in pondering this luck we remind ourselves of the old adage that one makes one's own luck. If luck was involved, then it was, in each case, at least matched by talent, discipline and hard work. Working with our faculty was correspondingly stimulating and enjoyable.

Another thing that stands out is both the divergence and the commonality of views expressed in the interviews. We sought debate and we got it! It was tempting at times to raise an argument that had been put forward by a previous interviewee, but this impulse had to be contained in the interests of giving approximately equal air time to each point of view, and of not favouring subsequent interviewees over earlier ones. This is more important than it might seem: due to the practicalities of travel schedules, an unfortunate side-effect would have been that it would have favoured some continents over others, and any bias so introduced might therefore have been systematic.

Some observers of the book's gestation wondered aloud about the “tricky” task of deciding in what order interviews should appear: first, last and in the middle. Anyone who has organised, addressed or merely attended a conference or seminar knows how sensitive this can be. Exercising a mix of impartiality and judgement, we took the view that each interviewee, or at least most, would give more emphasis to some themes than to others, and that this would implicitly determine where in the book their interview should sit, once the themes' order in the book had been decided.

For the order of the themes themselves, it seemed logical to apply the order in which questions had been arranged, beginning with behavioural themes, such as the relationship of risk management to the rest of the organisation, followed by what we need to understand about risk tools and risk reports, and what it all means for regulation and policy and how we approach the possibility (or certainty, depending on your point of view) of another financial meltdown. Risk culture features both at the start, with the place of risk management within individual organisations; and at the end, with regulators' increasing interest in risk culture within organisations.

It turned out that each interviewee did tend to favour some themes over others, which is serendipitous, as it means that we were able to avoid that delicate decision and let participants place themselves.

To complete the book, we needed to decide how much and what kind of material we, as “authors”, should add. We believe that readers are perfectly capable of deriving their own inferences and conclusions from each interview, so we butted out, keeping our contribution to each interview chapter to a bare minimum. At the same time, each question and each answer derived from a narrative, or specific risk management issue, to which many, if not most,

readers would not be privy. The Background chapter aims to provide a sort of primer on the themes, and the issues concerned, so that readers from any background can engage in and follow the conversations with a minimum of footnotes. Some of the background material supposes familiarity with some technical detail that, if included in the text, most readers would find an arcane disruption to the narrative, but cannot be left out entirely. We compromise by giving an intuitive explanation in the appendices.

Setting the Scene opens the book with a reminder of what set off the wave of regulation and reform of financial organisations, and why a new level of informed debate is now needed. Our other contributions are the Innovations chapter and Further Reading section already mentioned, and a final, Interpretation chapter, in which we bring the various themes together and suggest some conclusions.

In *Crisis Wasted?*, we believe we have succeeded in our aim of drawing out informed opinions. Readers will agree with some of the views expressed and disagree with others. We invite you to express your view on www.riskculture.today. We look forward to hearing from you.

Acknowledgements

The genesis of this book is due to a combination of the global financial crisis of 2007–08 and two collections of conversations with interesting people: *The Super Analysts*¹ by Andrew Leeming, an erstwhile colleague, and Arjo Klamer's *Conversations with Economists*.²

As we developed our ideas and worked out the practicalities of preparing and writing the book, we were cheered on by nearly everyone we spoke to. We are particularly grateful to a number of friends and colleagues, past and present, for their encouragement and support.

Apart from giving us the idea for the book, Andrew also gave very generously of his time, encouraging us to benefit from his experience, helping us to avoid plenty of pitfalls and make the most of our resources. Our faculty of interviewees don't know it, but they have Andrew to thank too: he cut the questions that we asked them to think about before the interview down from 20 to five pages!

Andrew, together with John Beggs, Ron Bewley, Jillian Broadbent, Craig Davis, Mike Katz, Mark Lawrence, Rodney Maddock, Kevin Nixon and Peter Warne, all helped crystallise our thinking about the themes and questions, and directed us to useful background material. Ophelia Cowell came up with some helpful suggestions about how to prepare and present our questions to the interviewees. Mark Kritzman treated us to a very stimulating and absorbing hour and a half on topical innovations that have occurred as direct responses to the financial crisis. Gerald Ashley contributed an interesting and very informative conversation about the nature of systemic complexity and how to model it.

Andrew, Angela Campbell, Mike Katz, Mark Lawrence, Jason MacQueen, Rosemary Thorne and Peter Warne suggested and helped arrange contact with our faculty.

Eugenie White, Tom Wheelwright, Malcolm McIvor, Heather Loewenthal and Alberto Arabia all read the work in progress and gave generous, enthusiastic and constructive feedback.

Sonia and Brigitte Levins took on the critical task of transcribing the interviews from their audio format.

Sonia and Alberto held our respective hands.

Thomas Hyrkiel and Werner Coetzee of Wiley made us feel very special throughout the project with their enthusiasm, responsiveness and support. Jeremy Chia, also of Wiley, has been a constructive and very responsive editor.

Most of all, the people who gave their time and not a trivial amount of thought and effort, first to make themselves available to be interviewed and then to help with the hard work of editing the raw transcripts into a form that people will enjoy reading.

We owe a big thank you to each of them. Thank you!

Notes

- [1](#) Leeming, A., *The Super Analysts - Conversations with The World's Leading Stock Market Investors and Analysts* (Singapore, Wiley, 2000).
- [2](#) Klamer, A., *Conversations with Economists* (Maryland, Rowman & Littlefield, 1988).

About the Authors

Frances Cowell is a specialist investment risk consultant working with R-Squared Risk Management in Paris and London. She is a founding director of the London Quant Group, a not-for-profit that provides a forum for discussion of practical issues in quantitative investment techniques for the investment management industry. She previously worked as an investment manager at NatWest Investment Management in Australia, having helped pioneer risk-controlled trading in the nascent market for financial derivatives in Australia. Following her move to London, she was Head of Investment Risk at Morley Fund Management (now Aviva Investors) and CRO for CCLA Fund Management.

Matthew Levins is a risk consultant with a practice that spans banks in China, Asia and Australia. Previously, he directed trading, broking, capital market and risk practices in Australia, working for leading firms such as the Commonwealth Bank of Australia and Bankers Trust Australia. In the early 1980s, he took a leading role in the nascent market for financial derivatives in Australia. This entailed developing and refining robust decision rules to support underwriting and trading in fixed income swaps and options, as well as equity, soft commodity and foreign exchange options. He effectively helped pioneer much of the work that informs current hedging and risk control in modern banking.

1

Setting the Scene

Between 12 and 21 December 2006 the data for asset-backed securities index futures (ABX 2006-1 AAA spread) showed a small but significant departure from its normal daily pattern of price fluctuations. This coincided with rumours that a trading division of a major US investment bank had expertly quit its collateralised debt obligation (CDO) portfolio. Over the ensuing months, analyst reports began to circulate that led some banks to delve into their loan portfolios to see if they had exposures to these securities. What sparked this activity? The US housing prices had begun to trend down, many “low start” loans were approaching anniversaries when their interest payments would “step up”. In February 2007, HSBC recognised the problem in its New York branch with a \$10.5 billion charge. Market makers reacted by forcing a 350% increase in volatility.

Hitherto, the originating banks had bundled up these higher interest loans and securitised them. The resulting pools of securitised debt were re-packaged into CDOs, where equity and debt investors could participate in a preferred tranche and trade off a levered return against reduced exposure to losses on default relative to the overall pool of loans. New products were dreamt up, such as funds that borrowed to lever further the promised returns that would rid the originating investment banks of the inventories of higher risk equity tranches that were accumulating in their books.

Underpinning the market were assumptions about average rates of default that these loans would see. The US

government had encouraged products like low-start loans as a means of providing home finance to borrowers who had until then been excluded from home ownership. With little credit history to draw on, analysts had to strike an educated guess as to the likely number of defaults. From the beginning of rapid growth in “no-document” loans in 2004, it took until early 2007, when low interest payment inducements were due to expire, for the divergent trend of high defaults to emerge.

Possibly dismissed as “too soon to call”, the “low-doc” CDO machine continued to revolve at a breakneck pace. Documentation processes for these instruments, and indeed many other credit derivative contracts, fell way behind. The NY Fed called several round table meetings to gauge the depth of the problem and set an agreed remediation path. Yet new tickets¹ continued, seemingly unabated, to be written.

Re-engineering the higher expected default frequency into securitisation and CDO models showed that these structures were over-promising returns. Higher frequency of defaults, like peeling away the layers of an onion, meant for CDO structures not only that regular interest payments to the investors were jeopardised, but that the expected loss of all capital increased. Curiously to some, the valuation effect was often most damaging in the so-called “super senior” tranches, rated “AAA”.

By mid-2007, the approaching savage repricing had yet to occur but the market place seemed to have reached saturation, and the new issues market showed signs of imminent closure. Some structured credit funds managed by the US investment house Bear Stearns imploded. As if to preserve capital, banks began to enforce tighter underwriting standards across their businesses. There was little they could do for loans already “baked into their

book”, so the emphasis turned to re-financings and holdings of traded securities.

This hardening of underwriting standards saw hitherto high-quality securitisations or revolving finance facilities supported by even low-risk assets, such as portfolios of shopping centres, falter (and borrowers forced to liquidation). Banks also withdrew their support for loan notes issued by securitised vehicles.

Little did they at first realise, but to get the securitised assets off their balance sheets in the first place, the banks were required to provide a standby line of liquidity that would purchase the loan notes should a market buyer not be found. These requirements were, for the most part, an unplanned call on their balance sheets. Liquidity started to become scarcer.

Organisations such as Northern Rock, whose liability management was reliant on an “open” securitisation market, fell to a run by its retail depositors. A Canadian money market fund broke the buck. A CDO fund had to close. Around this time, with sponsorship by the Fed, Bank of America purchased Countrywide, a major West Coast provider of “low doc” loans. Credit markets generally began to sell off in an orderly way, while most other markets adjusted, with a lag, to tightening credit spreads. It was not until the northern winter before equity markets began to reverse their positive trend.

The manufacturers of CDOs to varying degrees financed their warehouses and production lines using repurchase agreements² (repos). Again, these contracts took assets and liabilities off balance sheet. But, as with the standby lines in securitisation structures, to maintain contracts off balance sheet the borrower was obliged to top up collateral as its value deteriorated. Liquidity tightened further. Parcels of CDOs were being sold off as repos struggled to

be rolled over or renewed. The increased supply of paper for sale saw lower and lower prices register, while waning confidence in the value of CDOs aggravated the liquidity effect. Liquidity became unobtainable for some borrowers.

The pressure to liquidate a difficult-to-value balance sheet became too much for Bear Stearns. In February 2008, it was sold to JP Morgan after the NY Fed established a company to buy \$30 billion worth of assets at just 7% of their price immediately before trading in Bear Stearns stock was suspended.

CDOs continued to lose value. Statutory profits and reporting fell hostage to the accounting classification for warehoused stock. With each reporting period, waves of securities became categorised “level 3”, automatically requiring greater capital to be assigned to them. As it reeled from these effects, it became increasingly obvious that the banking system in the US was systemically undercapitalised. The Fed and US Treasury stepped in to restore order, but it was not until the decision to allow Lehman Brothers to file for bankruptcy that it became clear that the regulators had overestimated the effectiveness of their regulations.

In 2008 Comptroller Dugan reflected that while “investors should never rely exclusively on credit ratings in making investment decisions, the plain fact is that triple A credit ratings are a powerful green light for conservative investors all over the world”.³ And so it had been that in the preceding period re-packaging of these securities had not only spread throughout the US banks and money market funds, but to US agencies and beyond its shores to the balance sheets of financial institutions in other countries.

Write-downs and illiquidity combined to take down banks that had aggressively made loans to property developers.

Icelandic banks failed, with the assets of the three banks taken over by its supervisor equal to more than 11 times the country's GDP – an early indication of the effective limits of financial globalisation. German Landesbanks in time announced their losses and needed to be re-capitalised. In the UK, banks were crippled, partly due to write-downs to goodwill and loan impairment on the balance sheets of recently purchased Dutch banking assets. And so it played out across most of the northern hemisphere and parts of Asia.

From initial insouciance about the prospect of Lehman Brothers filing for Chapter 11 following its death spiral of the preceding months, the act itself led to something of an avalanche throughout the US – investors in money market funds that held now worthless Lehman Brothers debt were unable to redeem shares for their \$1 face value. A run on money market funds ensued, clogging the repo market that broker dealers depended on, and obliging the US Treasury to step in to guarantee money market funds. The global insurer AIG also needed volumes of support, as it had been the dominant provider of credit derivatives through its London branch.

Money market funds sought to liquidate assets to meet redemptions and fund the additional collateral now needed to secure financing. At the same time, the margins required in the repo market continued to increase, and it became impossible to use some assets as collateral for loans. Organisations that could, called funds from their foreign affiliates in order to meet the obligations of their US operations. US affiliates, mostly branches, of foreign banks were under even greater liquidity pressure than were local banks, partly because their access to deposits from US citizens and residents was limited. This forced them to raise funds from outside the US, further contributing to

international contagion of the liquidity squeeze, with the effect felt most acutely in London.

As valuation of financial assets became more an art than a science, asset markets such as equities were sold down around the world, as agents sought to raise liquidity wherever they could. Major exchanges generally behaved well, but the continued downtrend was further fuelled by investors withdrawing commitments to managed money, leading to the closure of many funds.

Part of the problem in funding liquidity was that some assets pledged as security had been re-hypothecated by holders of the collateral. When collateral was recalled, often the specific paper was unavailable, obliging investors to sell other assets to meet their own margin calls and redemptions.

One consequence of the turmoil was that collateral requirements could not be calculated in the usual way. This is because margins and collateral requirements are calculated using statistical processes that draw on recent asset price return history. The turbulence now prevailing meant that these processes broke down, particularly for non-traded and over-the-counter instruments. Futures exchanges and prime brokers were thus obliged, in effect, to guess the amount of collateral required. This meant that “Chinese walls”, intended to avoid conflicts of interests within organisations, were tested, as prime brokers set collateral levels at capitulation points for “clients” who were in some cases part of the same organisation.

Shortly after the failure of Lehman Brothers the system became unmanageable in private hands. Governments, advised by their regulators, stepped in.

All will remember the steps taken by governments to traverse the crisis with the Troubled Asset Relief Program,

and ultimately quantitative easing by the Fed in the US, the recapitalisation of British banks with public money, the decision of the Irish government to guarantee all bank deposits (which later led to its call for help from the European Union) and the need for the Swiss authorities to save UBS.

After throwing a TARP-o-line over impaired assets and entities and providing extraordinary amounts of public support, regulators set about digesting the outcomes. The “live laboratory test” of failure presented them with many avenues to follow as they set about re-calibrating regulation and supervisory procedures.

Notes

[1](#) Transactions.

[2](#) An arrangement whereby a bond is sold with a contract to repurchase it at a given date and price in the future. In effect, short-term borrowing.

[3](#) Comptroller Dugan Outlines Steps In Response to Losses by Banks and Investors Holding Tranches of Securities Considered Safe, 27 February 2008, Press Release 2008-22.

2 Background

I think we're too comfortable in our assumption that it has been mended. Rather, I think the conditions are setting us up for another very real crisis somewhere.

Richard Meddings

Spurred on by bank failures and government rescues in the northern hemisphere, regulators at the global and sovereign state level have embarked upon a decade's work to overhaul the governance of financial institutions. The scope of this enterprise has been immense following the prodigal global financial crisis and its aftermath. Banking regulation has seen new capital measures proposed, new risks identified with derivatives and collateral markets, more conservative balance sheet treatments for “special investment vehicles”, efforts to align remuneration with outcomes, and renewed emphasis on the role and culture necessary to support risk activities. Efforts have also entailed forcing products onto exchanges in the name of transparency, but little appears to have been done to invite more cautious trading. Regulators and organisations are, however, focusing on behaviour, culture and risk appetite.

In periods of moderate market stress, complementary risk appetites of different organisations reinforce the relative resilience of the system because of the co-existence of long versus short risk horizons and risk appetites that range from very low to very high. For example, long-term investors are able to stand in as buyers of even the most distressed assets that would add to liquidity pressures for short-term investors. But resilience can, in extreme circumstances, give way to contagion, whereby failure in