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How Scenario Aggregation Can Improve Risk Management

Balancing conflicting interests can make risk management a challenge for organizations. Damir Filipovic and Mathieu Cambou show how external views on risk scenarios can be combined, and then used to fine-tune internal risk models, providing a better perspective on risk.

By Damir Filipovic and Mathieu Cambou

When the global banking system almost unraveled in 2008, governments vowed to take new measures and strengthen the existing regulatory framework to help prevent a financial meltdown occurring in the future. Some of those measures involved better risk management, including—for example—the use of risk modelling to gauge the ability of financial firms, such as banks and insurers, to withstand losses arising from specific events and allow them to put in place adequate capital buffers accordingly. Yet, despite the best intentions of governments and regulators, this kind of risk management is only as effective as the risk modelling methodology it is based on.

It is essential, therefore, that these models are tested and their methodology challenged. For example, the risk models used are often concerned with circumstances at the extremes (the tail) of both potential losses and probability. Analyzing and understanding these extremes is difficult and any improvement in our ability to do so is welcome. Model Uncertainty and Scenario Aggregation, a paper by Damir Filipovic and Mathieu Cambou from the École Polytechnique Fédérale de Lausanne, offers an innovative take on this challenge.

“Imagine a scenario in which a fall of 30 percent in the S&P500 is combined with a major earthquake in California, while interest rates go up by 5 percent.”

Regulators demand a rigorous approach to risk management. Firms may be required to calculate capital solvency margins with 99.5 percent confidence, in other words factoring in the worst possible situation likely to occur in a 200-year period. Yet the ability of financial firms to adequately factor in the complexity of the potential risks they face is limited. Looking back into the past to help anticipate the future is problematic, for example. Historical records are unlikely to cover such an extensive period. Plus, even if the data was available, the world is changing: risk profiles and probabilities alter over time.

One approach that can help fine-tune risk models is scenario aggregation. Imagine a scenario in which a market risk, such as a fall of 30 percent or more in the S&P500, is combined with another risk, such as a major earthquake in California, while at the same time interest rates go up by 5 percent. Using the appropriate expertise, adopt a view on the probability of the events in this scenario occurring. Stack some scenarios up and compare the external view on these scenarios against a firm’s internal risk model view on these scenarios. Then adjust the internal model accordingly.

“This model blends the qualitative external aggregate scenario approach with the internal quantitative risk model and balances the differing incentives of the regulator and the firm.”

While this may seem a sensible approach, one obstacle to its success is the difficulty of blending the more qualitative external aggregate scenario approach with the internal quantitative risk model. Filipovic and Cambou, however, have created a methodology that allows them to do just that and, in addition, to satisfy a number of important criteria in the process.

One such criterion concerns the differing incentives of the regulator and the firm. While it is in the firm’s interest to remain solvent and to maintain adequate financial buffers against potential losses, it also wants to create value for its shareholders and where possible maximize profits. The regulator, however, is concerned with protecting a variety of stakeholders from potential losses and with managing systemic risk and preventing contagion. The regulator, then, is more likely to take a conservative view.

Filipovic and Cambou ensure that their method does not penalize models with additional capital requirements if a scenario aggregation exercise reveals that the existing internal risk model is already sufficiently conservative. The method also keeps any increases in the capital requirement to the minimum necessary to reflect any discrepancy between the external view and the results produced by the internal risk model.

For the authors' approach to be useful it must be relatively easy for firms to implement the method they propose. Internal risk models are highly complex: it can take days, for example, to run such a model and produce the appropriate capital requirement number. The external scenario aggregation is a simpler exercise. Filipovic and Cambou's method ensures that any modification of the internal model to account for the views on the scenarios is kept to a minimum. The method is also designed in a way that allows firms to implement it relatively easily with minimum disruption.

“A valuable addition to any firm’s risk management toolkit, it may well help us to avoid a future global financial crisis.”

Finally, the impact on firms brought about by different scenarios will vary according to a number of factors. In the case of an insurance company, for example, (while the authors' research focuses on insurance it is equally applicable to banking and other corporate risk management situations) it may be influenced by the type of insurance the company underwrites, and by where those risks are located. Rather than assuming the potential impact on each firm will be identical, the approach presented in Model Uncertainty and Scenario Aggregation distinguishes between companies based on their particular vulnerability to specific external risks.

Taken together, these qualities make Filipovic and Cambou's method a valuable addition to any financial firm's robust risk management toolkit. When setting capital safeguards, the method allows regulators and firms a more precise view of the optimal balance between the interests of shareholders and of society as a whole. And, hopefully, if the approach is widely adopted, it may well help us to avoid a future global financial crisis.

About the Authors



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Damir Filipovic holds the Swissquote Chair in Quantitative Finance at the École Polytechnique Fédérale de Lausanne (EPFL) and an SFI Senior Chair. He also acts as head of SFI at EPFL. His research interests lie in quantitative finance and risk management. He holds a PhD in Mathematics from ETH Zurich and has been a faculty member of the University of Vienna, the University of Munich, and Princeton University. He also worked for the Swiss Federal Office of Private Insurance as co-developer of the Swiss Solvency Test.

Mathieu Cambou

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Keywords

Risk management

The modeling of financial and insurance risks for measurement and management purposes.

Scenario aggregation

The integration, into risk models, of external views regarding the likelihood that future scenarios will occur.

Risk model uncertainty

The risk that a risk model is not well specified or not well calibrated.

Swiss Solvency Test (SST)

A regulatory tool of the Swiss Financial Market Supervisory Authority, used to assess the strength of insurance companies in terms of their capital. The principles underlying the SST are equivalent to those set out in Solvency II (the corresponding project in the EU). The SST has been in force since 1 January 2011.

The full paper

<http://bit.ly/1WWoK3U>

“A valuable addition to any firm’s risk management toolkit, it may well help us to avoid a future global financial crisis.”



Have Pre-Crisis Levels of Risk Returned in US Structured Products?

Christopher L. Culp and J. Paul Forrester dispel several widely held beliefs about heightened risk in structured products but suggest that regulatory measures and regulatory uncertainty may threaten the very future of the US structured finance market.

By Christopher L. Culp and J. Paul Forrester

From 2011 through 2014, new issuance of US structured products backed by subprime auto loans or leveraged corporate loans grew by 55 percent and 716 percent, respectively. During this same period of time, various regulators and market commentators warned that the credit risks inherent in the collateral underlying related to US structured products has returned to—and, in some cases, exceeds—pre-crisis levels. Some observers contend, moreover, that the recent heightened demand for structured products is fueling a “credit bubble” akin to the subprime mortgage lending and house price “bubbles” that ended in the credit crisis that erupted in 2007.

“While evidence points to higher risks in collateral, analysis doesn’t indicate a commensurate increase in risks to investors.”

Culp and Forrester’s paper analyzes recent activity in these markets and activity and risks in the loan markets underlying auto asset-backed securities (ABS) and collateralized loan obligations (CLOs). While the empirical evidence presented points to higher risks in auto and leveraged loan collateral, the authors’ analysis does not indicate a commensurate increase in risks to investors in the structured products based on those loans. For a comparison, market activity and risk indicia in US insurance-linked securities (ILS) are reviewed, which—unlike auto ABS and CLOs—serve a pure risk transfer purpose and do not result in any significant extension of credit by investors to sponsors. The paper also considers the likely impacts of the Volcker Rule and the Credit Risk Retention Rule on US structured product markets, concluding that these regulations are likely to stifle market activity and discourage legitimate risk transfer.

“Robust investor interest in structured products is not merely irrational yield-chasing.”

Current data indicates robust investor interest in many structured products, and Culp and Forrester believe that post-crisis changes in the design and documentation of these products together with heightened investor awareness and better access to information suggest that such interest is not merely irrational yield-chasing. The authors also hold that, in the post-crisis world of structured products, the recent surge in new issuance of auto ABS, CLOs, or ILS is not a prima facie reason to be worried about these markets.

In particular, regarding subprime auto ABS, the empirical evidence does not substantiate the widespread concerns that these products will be a repeat of subprime RMBS. Despite an expansion in subprime auto lending and various indications of higher risks for subprime auto lenders, auto ABS investors seem to be largely—albeit not entirely—insulated from those heightened risks.

“Unless considerable efforts are made by regulators to address the significant costs imposed on structured products, we fear for the prospects of these markets.”

Similarly, the leveraged loan collateral underlying CLOs has indeed experienced a discernible increase in risk in the last few years, especially with regard to the proportion of borrower-friendly loans syndicated. Nevertheless, the authors do not see any obvious indications that these heightened risks translate into higher potential losses for investors in CLO liabilities.

“While evidence points to higher risks in collateral, analysis doesn’t indicate a commensurate increase in risks to investors.”

The ILS market provides clear evidence that investor demand for structured products does not automatically imply fuel for the expansion of a credit bubble because ILS do not involve any extension of credit by investors to sponsors. The evidence indicates, moreover, that investors in ILS have become more diversified, better attuned to the risks underlying ILS, and more conscientious about ILS product design in recent post-crisis years.

By contrast, significant ongoing regulatory uncertainties pose real threats to the future of the US structured finance market. Unless considerable efforts are made by regulators to address the significant costs imposed on structured products (without any obvious benefits) by certain new and proposed regulations, Culp and Forrester continue to fear for the prospects of these markets.

About the Authors



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Christopher L. Culp is an Adjunct Professor at Swiss Finance Institute; a Research Fellow at the Johns Hopkins Institute for Applied Economics, Global Health and the Study of Business Enterprise; and a senior advisor at Compass Lexecon. He received his PhD in Finance from the University of Chicago's Booth School of Business. His research specializations include (re-)insurance, risk management, derivatives, and structured finance, and he has written four books and authored numerous articles on these topics.

J. Paul Forrester

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Keywords

Structured finance

The process of raising funds and managing risk through the issuance of structured products designed to satisfy the specific needs of the issuer or sponsor and/or the demands of target investors, almost always enabling issuers/sponsors to raise funds without exposing those investing in the structured products to the significant credit risks of the sponsor.

Asset-backed securities

Securities whose interest and principal payments are collateralized by the cash flows on an underlying pool of assets, such as auto or mortgage loans.

Collateralized loan obligations

A type of asset-backed security issued by a special purpose entity that issues multiple tranches of securities with differing levels of subordination, the cash flows of which are based on the performance of an underlying pool of bank loans.

Insurance-linked securities

Securities whose interest and/or principal payments are based on the sale of insurance/reinsurance (or the derivative equivalent) by the securities issuer to a sponsor, and whose cash flows depend on the premium received by the issuer for the sale of the insurance/reinsurance/derivative equivalent and potential payouts made by the issuer on any losses in the underlying insurance/reinsurance/derivative equivalent portfolio.

The full paper

<http://bit.ly/1LjXY8p>



Secondary Buyouts— Creating or Destroying Value for Investors?

In the past, private equity (PE) firms seeking to exit sold their portfolio companies to another company in the same industry or organized an IPO. Today, almost half of PE exits are secondary buyouts (SBOs). Do SBOs create or destroy value for investors?

By François Degeorge, Jens Martin, and Ludovic Phalippou

Twenty years ago, private equity (PE) firms seeking to exit sold their portfolio companies to another company in the same industry or organized an IPO. Nowadays, 40 percent of PE exits occur through secondary buyouts (SBOs), transactions in which a PE firm sells a portfolio company to another PE firm. The rise of SBOs has elicited concerns among PE investors (the limited partners with stakes in private equity funds): Does the rise of SBOs mean that PE firms have run out of investment ideas? Do SBOs create or destroy value for investors? In their forthcoming *Journal of Financial Economics* article “On Secondary Buyouts” François Degeorge (USI Lugano), Jens Martin (University of Amsterdam and former SFI PhD at USI Lugano), and Ludovic Phalippou (Oxford University) provide answers to these questions.

Investor concern #1: “SBOs? Just a financial version of pass the parcel.”

One often heard concern among investors is that SBOs are just pass-the-parcel deals in which the main motivations for the buying PE fund are to spend capital and collect fees. This suspicion arises from a certain distinctive feature of private equity funds: they have a finite period in which to invest their capital, after which time general partners usually earn management fees only on the invested portion of the capital committed by investors. This feature generates a conflict of interest between a fund’s general partners and investors: if a fund has excess capital close to the end of the investment period, a general partner has an incentive to “burn money” by taking bad deals. SBOs are plausibly a preferred investment channel for a fund wishing to burn money: they are easier to source than other buyouts (the companies owned by private equity firms are publicly known) and less likely to be “lemons” (any company present in the portfolio of another PE firm is a priori up for sale.)

Using a large dataset of buyouts, Degeorge, Martin, and Phalippou find evidence of money-burning in SBOs, but only

in those carried out late in the investment period of the buying fund. Such SBOs underperform other buyouts, while at the same time exhibiting slightly higher risk. Net of fees, these late-period SBOs return USD 0.88 on average when an investment in the stock market index would have returned USD 1. Investors penalize funds that burn money in SBOs by voting with their feet, reducing their participation in the next fund raised by the same private equity firm. SBOs carried out early in the investment period perform as well as other buyout transactions and generate a positive NPV for investors, similar to other buyout transactions.

Investor concern #2: “How can a second PE owner add value relative to the first PE owner?”

A second often expressed concern about SBOs is what additional value, if any, the buyer can bring to the portfolio company compared to that brought by the first private equity owner. The authors uncover an important source of value creation in SBOs: the presence of complementary skill sets between the buyer and the seller. Based on the educational backgrounds and career paths of the general partners of PE funds the authors classify PE firms as finance-oriented or operations-oriented, and MBA-dominated or not MBA-dominated. Based on the geographical presence and strategies of PE firms they classify them as regional or global, and as “margin-growers” or “sales growers”. They find that SBO transactions between firms with complementary skill sets generate significantly higher returns for buyers than SBOs between firms with similar skills. Moreover, they find that the net-of-fees net present values of SBOs that took place between two complementary PE firms are large and positive. In contrast—and consistent with the aforementioned second concern, regarding SBOs and additional value—in the absence of complementary skill sets transactions between funds do not generate value for investors.

Investor concern #3: “When you own stakes in several PE funds, you can find yourself on both the buying and the selling side of an SBO. Isn’t that just a tax on investors?”

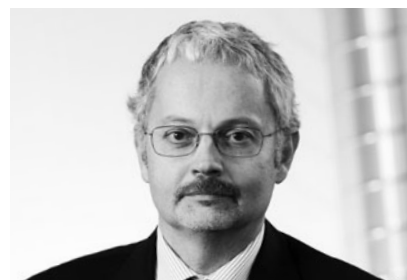
The third often expressed concern about SBOs relates to the situation known as “limited partner overlap”. Investors often have stakes in several private equity funds. As a result, investors can find themselves on both the buying side and the selling side of an SBO transaction. Consequently, they end up owning the same asset after the transaction, but have paid large transaction costs; some observers equate this situation with a tax on investors.

DeGeorge, Martin, and Phalippou show that this concern is largely unwarranted, at least if one takes as given two key features of PE funds: the fact that PE funds have a finite life, so that all investments need to be exited sooner or later, and the fact that general partners always invest the capital committed by investors. As a result, for every dollar invested in a fund, investors pay two rounds of transaction costs: one when the dollar is invested and another when it is divested. This accounting identity holds true regardless of the transactions undertaken by the general partner (SBOs with or without limited partner overlap, sale to a strategic buyer, or IPO).

To be sure, the fact that general partners never return capital to investors is unlikely to be value-maximizing for limited partners: it might well result from general partners’ incentives to burn money. The probable reason why limited partners are uneasy about SBOs with limited partner overlap is that two salient features of such deals expose general partners’ reluctance to return capital: the simultaneity of entry and exit costs, and the fact that the limited partner ends up owning the same asset after the SBO.

Overall, “On Secondary Buyouts” paints a nuanced picture of the phenomenon and suggests that not all SBOs are created equal: SBOs between PE funds with complementary skills generate value for investors; others do not. SBOs carried out under the pressure to burn money destroy value for investors; others do not. SBOs with limited partner overlap do not generate extra transaction costs for investors, but only under the assumption that each dollar committed will be spent—an assumption that, while true in practice, is unlikely to be value-maximizing for investors.

About the Authors



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François DeGeorge is Professor of Finance at the University of Lugano and holds an SFI Senior Chair. He was awarded his PhD by Harvard University and is a former Fulbright scholar. His research tackles several topics in corporate finance, including initial public offerings and earnings management. He teaches executive education courses on corporate finance for wealth managers.

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Keywords

Private equity

Investors and funds that invest directly in private companies, often in the form of buyouts with high leverage.

Buyouts

The purchase of a controlling interest in a company’s stock by a private equity firm, often with high leverage.

Secondary buyouts

The purchase of a controlling interest in a company’s stock by a private equity firm, specifically when that interest is bought from another private equity firm.

Performance

The return earned by an investor on an investment, often compared with the return that the investor would have earned by making a different investment with a similar risk.

The full paper

<http://bit.ly/1Nx88mP>

Investor concern #2

“How can a
second PE owner
add value
relative to the
first
PE owner?”



Do Margin Regulation Measures Limit Excessive Leverage?

In the aftermath of the latest financial crisis, top-level calls were being made for margin regulation measures to limit excessive leverage on financial markets. Have such measures been effective in the past, and how should they be designed to have the desired impacts on the markets?

By Felix Kübler, Karl Schmedders, and Johannes Brumm

Following the US stock-market bubble of 1927–29 the Federal Reserve Board (FRB) was granted the power to set initial margin requirements for margin trading—that is to say, investors building a leveraged position in securities using loans that are collateralized by the securities that are purchased. The margin requirement dictates how much investors can borrow against these securities. The FRB established Regulation T to set minimum margin requirements for such partially loan-financed transactions of exchange-traded securities.

“The vast majority of a sizeable empirical literature does not find substantial evidence that regulating margin requirements in stock markets had an economically significant impact on market volatility.”

Eighty years later, as margins and haircuts, with a possible countercyclical add-on, are again being recommended at the highest levels of policy-making, the question whether Regulation T was or was not an effective policy tool is more pertinent than ever. An effective response to current calls for the regulation of margin requirements needs a better understanding of the economic mechanism underlying margin regulation. With this as their goal, four authors including SFI’s Felix Kübler and Karl Schmedders have revisited Regulation T, providing a model-based explanation for the inconclusive findings regarding its effectiveness, and exploring how the successful regulation of margin requirements may be designed.

The authors’ model considers two broad classes of financial assets that can be used as collateral for short-term loans. For the first class of assets the margin requirement is exogenously regulated by a regulator while the requirement for the second asset class is chosen endogenously by market participants. As—in this model economy—the ability of investors to borrow

against collateral leads to a large increase in market volatility as compared to markets in which such borrowing is prohibited, it is natural to think that regulating margin requirements will have a stabilizing effect on financial markets.

However, in line with the empirical Regulation T-related evidence on margin regulation in US stock markets that the paper reviews, the authors show that if investors have access to another (unregulated) class of collateralizable assets to take up leverage, changes in the regulation of one class of assets may have only small effects on those assets’ return volatility. In fact, regulatory changes in the regulated market have much stronger effects on the return volatility of the unregulated class of assets because investors become much more active in the unregulated market.

“Raising the margin requirement for one asset class may barely affect its volatility if investors have access to another, unregulated class of collateralizable assets.”

While one may regard Regulation T as a regulatory fossil, margin requirements and haircuts remain popular regulatory policy tools on modern financial markets. Low margin requirements or haircuts are believed to have contributed to the buildup of leverage in repo and securities lending markets, as well as derivative markets, before the most recent financial crisis, thus contributing to the onset of the crisis and creating new dangers for financial stability. Naturally the question arises how regulation of margins and haircuts should be designed to have the desired impacts on financial markets. To answer this question, the research paper examines a slightly adjusted form of margin regulation: countercyclical margin requirements. With constant margins, the same minimum margin requirements apply over the whole business cycle. For countercyclical margin regulation, the regulator has the power to impose additional margins in boom times.

“Raising the margin requirement for one asset class may barely affect its volatility if investors have access to another, unregulated class of collateralizable assets.”

“A very strong dampening effect on all assets’ return volatilities can be achieved by countercyclical regulation of all markets.”

The authors demonstrate, in the context of their model, that countercyclical margin regulation of all asset classes in the economy has a very strong dampening effect on asset return volatility. In such a setting, agents are prohibited from excessively leveraging in unregulated markets, thereby lowering asset price volatility in all financial markets. Thus, as the authors argue, if measures currently being proposed allow regulators to set countercyclical margins, a quantitatively significant reduction in volatility can be achieved. Margin regulation has a much stronger impact on asset return volatility if all financial assets in the economy are regulated. In such an economy, countercyclical regulation that imposes sufficiently large macroprudential add-ons on margin levels in high-growth states can lead to significant reductions in asset return volatility. The authors’ paper was referred in recent speeches on policy implications made by European Central Bank Vice-President Vítor Constâncio.

“While our model is designed for the analysis of stock market margin regulation, we believe that our theoretical findings may also be relevant for the current debate on the regulation of margin requirements in repo and securities lending markets. Moreover, our findings also suggest that such a framework should have a broad scope to maximize the quantitative impact on financial markets.”

The full paper

<http://bit.ly/1LRV2tX>

About the Authors



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Felix Kübler is Professor of Finance at the University of Zurich and holds an SFI Senior Chair. He obtained his PhD in Economics from Yale University. His research interest lies in theoretical financial economics and computational methods.



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Johannes Brumm

University of Zurich.

Keywords

Collateral constraints

Express that the amount of collateral a borrower must offer a lender in order to secure a loan restricts the borrower’s economic activities.

Margin requirements

Denotes the percentage of the value of marginable securities that an investor must pay for with his or her own funds.

Regulation T

Established by the US Federal Reserve Board to set initial (and maintenance) margin requirements for partially loan-financed transactions of stocks.

General equilibrium

Describes an idealized situation in which prices of goods and services are such that supply equals demand in all markets.



What Affects Children's Outcomes: Dwelling Characteristics or Home Ownership?

Governments rightly use policy as an instrument to target factors they believe influence the educational outcomes of children and young adults. But, when it comes to where families actually live, where should such policies focus: on the often cited positive influence of home ownership, or on other factors entirely?

By Martin Hoesli, Steven C. Bourassa, and Donald R. Haurin

Many factors influence children's and young adults' educational outcomes. These include parental input of time and resources, school and neighborhood quality, and aspects of the family residence. This study focuses on the family residence for two reasons. First, the role of housing in children's development has been studied less than other inputs. Second, there is an ongoing debate about whether home ownership has a positive influence on children's and young adults' outcomes. Multiple studies have argued that home ownership has a significant and relatively large positive impact. But these studies have been criticized, the primary argument being that they omit relevant variables and thus that their results are biased. One of the variables omitted from most of these studies is any indicator of crowding, such as persons per room. Another criticism is that there is little research that attempts to study the relationship between housing and child outcomes in other countries than the US.

“Understanding which housing characteristics impact educational attainment is critical for determining which policy will be the most effective.”

Using a Swiss data set, three authors—including SFI's Martin Hoesli—address both of these shortcomings. The home ownership rate in Switzerland is much lower than in the US and both tenants and homeowners remain in the same property for relatively long periods of time, changing domicile relatively rarely. This similarity suggests there will be fewer influential factors for children's outcomes omitted from this Swiss data set than would be omitted from a comparable US data set, for example.

The focus on Switzerland is also interesting in that the Swiss educational system places a significant emphasis on apprenticeships and other vocational training programs. Of adults aged 20 in 2006–07, 69 percent had completed such vocational

training, whereas only 20 percent had completed secondary education (gymnasium). While secondary education is, of course, the entry route to tertiary education, some apprenticeships can also lead to relatively high status employment.

“In the US, policy makers have argued that home ownership should be subsidized, as research has stated that home ownership improves children's and young adults' outcomes.”

Which, if any, characteristics of a dwelling affect children's and young adults' outcomes is important for public policy. Many countries have policies that affect whether a household rents or owns its home. Such policies also affect choice of dwelling size and quality. These policies include social (public) housing programs and incentives to become a homeowner. Policies embedded in the tax system decide whether property taxes are levied, whether homeowners' mortgage interest and property tax payments are deductible from income taxes, and whether the imputed rent on owned dwellings is subject to income taxation. In the US, policy makers have argued that home ownership should be subsidized relative to renting. Among the justifications offered for such support of home ownership is research that argues home ownership improves children's and young adults' outcomes. Housing policies often include minimum dwelling quality requirements and sometimes include maximum density limits. Understanding which housing characteristics impact children's and young adults' educational attainment is critical for determining which housing policy will be the most effective in this regard.

Also of interest are the effects of housing characteristics across the distribution of household economic and social statuses. For example, it has been argued that households receiving less state support benefit more from improvements in housing. The authors test whether the outcomes for immigrant children

of parents with a low level of education are more sensitive to housing conditions. These households may have relatively low regular income and thus may be less able to purchase goods that enhance their children's outcomes.

“The only housing factor affecting children’s educational attainment is the number of household members per room.”

The study focuses on children aged 15 to 19, who are potentially enrolled in or have completed secondary school or vocational training programs, and young adults aged 20 to 24, who are potentially studying at or are graduates of a university or other tertiary institution. Housing conditions are characterized in three ways: whether the parents rent or own the dwelling, the type of dwelling (house or apartment), and a measure of crowding (occupants per room).

“A 1 percent reduction in crowding results in a 0.9 percent increase in the probability of a child being enrolled in or a graduate of secondary school.”

The results for the 15 to 19 age group indicate that the only housing factor affecting children's educational attainment is the number of household members per room (the dwelling could be either rented or owned). A 1 percent reduction in density results in a 0.9 percent increase in the probability of a child being enrolled in or a graduate of secondary school. For the 20 to 24 age group, none of the housing variables is significant, although density presumably has an indirect effect. In contrast to the findings in the US literature, the indicator for parental home ownership is not statistically significant for either age group.

The policy implications of these results are important; subsidies for housing are common in many countries. This study further refines the measurement of the relationship between housing conditions and children's and young adults' educational outcomes. The results suggest that if the goal is to increase these groups' educational attainment, such subsidies should target reducing overcrowding rather than increasing home ownership.

About the Authors



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Martin Hoesli is Professor of Real Estate Investments at the Universities of Geneva and Aberdeen and an SFI faculty member. He is the author of six books and over 100 scholarly articles in the real estate field. He is a Fellow of the Royal Institution of Chartered Surveyors and of the Weimer School of Advanced Studies in Real Estate and Land Economics. He is a past president of the European Real Estate Society, president elect of the International Real Estate Society, and a board member of the Swiss Financial Analyst Association. He serves on the editorial board of several international real estate journals. His research interests lie in real estate investments and housing economics.

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Keywords

Child outcomes

Level of education reached by a child

Crowding

Number of people per room

Home ownership

When a household owns their dwelling

Education attainment

Level of education reached by a child

The full paper

<http://bit.ly/1Q783Dx>

“Understanding which housing characteristics impact educational attainment is critical for determining which policy will be the most effective.”



Is the New Regulation for Global Systemically Important Banks Effective in Limiting “Too Big to Fail”?

Following the recent financial crisis, G20 leaders called for new regulation of global systemically important banks. How effective are the reforms in limiting the costs and risks of “too big to fail”?

By Steven Ongena, Sebastian C. Moenninghoff, and Axel Wieandt

In response to the most recent financial crisis, G20 leaders tasked international regulatory bodies with developing new regulatory measures to reduce the costs and risks of “too big to fail” (TBTF). The resulting new regulation consists of enhanced supervision, additional loss absorbency in the form of capital surcharges, and the establishment of resolution regimes specifically for banks that would pose high risks to the financial system if they were to fail. In this context, the concept of the “global systemically important bank”, or G-SIB, has emerged, characterizing those banks that are subject to the new additional regulation and ultimately resulting in an official list now of 30 global banks deemed too systemically relevant to fail.

Three authors, including SFI’s Steven Ongena, examine the ultimate net effectiveness—from a policy perspective—of the current G-SIB regulation. Their study weighs the regulation’s impact on G-SIBs against the strengthening of their TBTF designation due to the likely unintended consequences of the new regulation, which (almost unavoidably) designates individual banks as G-SIBs, thereby reinforcing existing TBTF perceptions in the market.

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The authors analyze the stock price reactions for the 300 largest banks from 52 countries across 12 relevant regulatory

announcement and designation events throughout the development phase of the new regulation from 2008 to 2011. They find that the new regulation negatively affects the value of the newly regulated banks.

To the extent that the observed future costs of the new regulation represent a reduction in implicit government guarantees, the results confirm the effectiveness of the announced reform proposals to limit TBTF. However, at the same time the official designation of banks as G-SIBs has a partly offsetting impact, suggesting that investors did not believe that governments would allow those banks to fail.

“The study’s results also confirm the importance of government ownership for the value of the G-SIB label. G-SIBs with higher government ownership react less positively to designation announcements compared to G-SIBs with low government ownership or no degree of government ownership at all.”

A cross-sectional analysis of the valuation effects with respect to, for example, government ownership of banks supports the view that the positive reaction to these designations can be attributed to a perception of TBTF. Generally, government ownership could imply existing government guarantees and thus lower the value resulting from an additional designation of a government-owned bank as a G-SIB. This phenomenon, referred to as “too public to fail”, implies that banks owned by governments are more likely to be bailed out should failure occur than are banks without any degree of government ownership. The study’s results also confirm the importance of

government ownership for the value of the G-SIB label. G-SIBs with higher government ownership react less positively to designation announcements compared to G-SIBs with low government ownership or no degree of government ownership at all.

The degree of systemic relevance as expressed by the required level of capital surcharge appears to have a dampening effect on returns, indicating that the additional costs of relatively higher capital requirements for more systemically significant G-SIBs compared to less systemically significant G-SIBs could have a muting effect on the designation event stock return, consistent with the TBTF hypothesis.

In contrast, the sovereign rating of the home countries of G-SIBs does not imply a clear relationship between home country rating and the value of G-SIB designation. In part, this may be due to the fact that supranational bank bailouts—as exemplified by rescue measures employed by the ESM and EFSF—may have been anticipated by markets and thus offset the importance of home country ratings.

In evaluating the new G-SIB regulation from a policy perspective, the results confirm the effectiveness of the announced reform proposals to limit TBTF to the extent that the observed future costs of the new regulation represent a reduction in implicit government guarantees. However, even though the individual components of the regulation have been effective, revealing the identities of G-SIBs eliminated ambiguity regarding the presence of government guarantees, and thereby may have run counter to the regulators' intent to contain the effects of TBTF. This illustrates the potentially unintended consequences of the new regulation. At the same time, the authors demonstrate that TBTF effects stem not only from government announcements or bank rescue measures, but can also be created by a regulation specifically designed to mitigate the costs and risks of TBTF—a somewhat paradoxical aspect of the new regulatory proposals.

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The study's findings bring into focus the importance of credible resolution regimes, as this may be the right conceptual tool for undoing the effects we observe as a result of designating banks as G-SIBs. The more recent proposal for total loss absorbing capacity (TLAC) made by the Financial Stability Board, and European banking supervision's concept of a minimum requirement for own funds and eligible liabilities (MREL), are significant steps in this direction.

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Keywords

Too big to fail

A bank is too big to fail (TBTF) when the government cannot let it fail since such failure may jeopardize the functioning of the entire financial system.

Global systemically important bank

A bank is a global systemically important bank (G-SIB) when—in terms of the entire global financial system—it is TBTF.

Bank regulation

Regulation that affects banks.

Unintended consequences

Unforeseen outcomes of any given action.

The full paper

<http://bit.ly/1MBu89S>

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