

2009

Demystifying toxic asset valuation

A guide for consultancy procurement professionals



About Source

Sourceforconsulting.com is owned by Source Information Services Ltd, an independent company, set up in 2007 and based in London. Our aim is to create a better consulting market for clients and consultants. We do this by providing a platform and a range of solutions for buying and selling consulting services that are founded on our core values of intelligence, transparency and efficiency.

Source was founded by Fiona Czerniawska and Joy Burnford. Fiona is one of the world's leading experts on the consulting industry. Her books include: The Intelligent Client and The Economist book, Business Consulting: A Guide to How it Works and How to Make it Work. Joy Burnford has held senior positions at the UK Management Consultancies Association since 2003 and has extensive experience of marketing consulting services.

www.sourceforconsulting.com

About our sponsor – Navigant

Navigant Consulting, Inc. (NYSE:NCI) is a specialised independent consulting firm providing professional services to assist clients in identifying practical solutions to the challenges of uncertainty, risk and distress. We focus on large industry sectors that are highly regulated and are undergoing significant change.

For over two decades, clients have counted on our dedicated professionals to provide objective consulting services designed to avoid or resolve business disputes, solve operational challenges, lower costs, reduce risk and increase efficiency. Navigant Consulting is an international consulting firm with nearly 2,000 professionals in cities across the United States, Canada, Europe, and Asia.

www.navigantconsulting.com

For further information about report sponsorship opportunities, please contact jodi.davies@sourceforconsulting.com

Source Information Services Ltd and its agents have used their best efforts in collecting the information published in this report. Source Information Services Ltd does not assume, and hereby disclaims any liability for any loss or damage caused by errors or omissions in this report, whether such errors or omissions result from negligence, accident or other causes.

Notice: No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electrical or mechanical, without the prior written permission of Source Information Services Ltd. This document is protected by copyright law. It is illegal to copy, fax or email any of the contents of this document - even for internal use - without permission.

Foreword by Navigant

Valuing toxic assets is one of the biggest challenges facing financial institutions today.

More than two years have passed since the collapse of two Bear Stearns hedge funds, the opening salvos of this financial crisis, and more than a year since Lehman Brothers failed. Yet only limited progress has been made by the financial service section in resolving valuation and related issues.

As this report shows, both of the conventional approaches to valuing assets – mark-to-market and mark-to-model – have serious drawbacks in the current environment. This is not just a question of the sheer complexity of the financial instruments involved. Valuation also depends on having a good understanding of the approaches being adopted elsewhere in the market and on being able to present an authoritative and well-defended argument for a particular valuation.

For all these reasons, financial institutions are increasingly turning to outside experts for help. At Navigant Consulting, we combine independence with a strong and exceptional track record in structured products valuation and analysis. Bringing valuation experts including economists, accountants and traders into one organisation, we have also played a crucial role in litigation, providing our clients with credible analysis in complex valuation cases. But the key to our success has been our flexibility and multidisciplinary approach, using the best of different skill sets to untangle some of the most complex problems in the financial services sector.

We are therefore delighted to be sponsoring a report which aims to demystify toxic asset valuation to procurement professionals and provide them with guidance about the types of consulting firms working in this field.



Gene Deetz

Managing Director, Navigant

Introduction

"Toxic asset" is the layperson's term for a financial asset which no one wishes to touch. It typically refers to an asset backed security referencing sub-prime mortgages, such as a collateralised debt obligation (CDO) or CDO's of CDO's (fondly known as CDO Squared). Toxic assets cannot therefore be readily converted into cash and the money used for other, better investments.

The term "toxic asset" entered our vocabulary in 2006, initially applied to quite specific types of mortgage products. However, the last two years have seen it take on a wider meaning, signalling a more substantial breakdown in conventional market dynamics. The underlying problem was that investment bankers bought loans, such as mortgages, from lenders, arranged them in pools and issued bonds based on the cash flows of the pools. This process of securitisation detached the credit of the loans from the credit of the originating lenders. "This meant that the latter lent money to anyone for any reason," says Leigh Skene at Lombard Street Research. "By 2007, the major requirement to get a loan was to have a pulse."

Even though prices of toxic assets have fallen dramatically, the demand for these assets has not picked up. This is contrary to classical economic theory which argues that prices in a free market adjust in line with demand and supply: thus, where supply exceeds demand, the price falls to a point where the number of buyers increases and absorbs the excess capacity.

Before the financial crisis, financial institutions had invested enormous sums of money in complex financial assets, the value of which was inflated because of the benign risk environment of the last decade. As defaults starting to creep in and worsening economic news made the headlines, the value of these assets started to fall. Financial institutions, with enormous holdings of these assets were unwilling to accept such low prices as it could cause losses sufficient to make them technically bankrupt. The result was a situation in which the assets sat – and in many cases continue to sit – on balance sheets.

With the market breaking down, governments across the world stepped in to provide ways in which these assets could be bought, at the expense of taxpayers, in order to resolve the paralysis of the entire financial system, but not before some institutions had to seek cover by merging with others and some, notably Lehman Brothers, went to the wall.

Government intervention has postponed, however, not resolved the issues. Despite the billions of dollars and pounds made available, toxic assets remain and continue to be a barrier to economic recovery. "The fundamental problem has remained untouched," concluded the Wall Street Journal in July 2009, "insufficient information to permit estimated prices that both buyers and sellers find credible."

The aim of this report is to provide guidance to procurement managers who are responsible for purchasing consulting services and who may find themselves buying in specialist services in this field:

1. The first part of the report looks at:
 - The different approaches to the valuation of toxic assets and the reasons why they have proved almost insuperably problematic in the current environment.
 - What the future may hold, both for financial institutions that succeed in dealing with these assets and those that fail to do so.
2. The second part examines:
 - Where financial institutions may find it helpful to have external assistance.
 - The approaches adopted by different consulting firms in this field.

Mark-to-market versus mark-to-model

"To meet the objective of a fair value measurement, an entity measures the fair value of financial instruments by considering all relevant market information that is available. When measuring fair value using a valuation technique, an entity maximises the use of relevant observable inputs and minimises the use of unobservable inputs" – Using judgement to measure the fair value of financial instruments when markets are no longer active, International Accounting Standards Board.

Mark-to-market

In a "normal" market, financial institutions would value their assets based on their commonly-traded value. "Most would follow the guidance of accounting standards," says Richard Mallett at the Chartered Institute of Management Accountants, "and use the price at which the assets could be sold in the market." Where a particular asset is not traded for some reason, financial institutions may look at the prices of similar securities and adjust in line with the risk profile of the security in question, project cash-flows out over the life of the asset in order to come to a putative price.

However, mark-to-market values have been difficult, often impossible, to calculate in the current environment for several reasons:

- "When a bank is holding its toxic assets such as sub-prime CDO's "for sale", per U.S. GAAP, they are expected to value them at the lower of cost or market price," explains Vikram Kapoor at Navigant. "They haven't had to worry until the point where the price in the market started to fall below the cost of acquiring the asset in the first place." Although we tend to date the financial crisis from the demise of Lehman's, a more accurate starting point would be the collapse of the two Bear Stearns hedge funds in June 2007. "This was the point at which the markets lost trading volume, rendering it almost impossible for banks to deduce a value they could use in their financial statements," says Kapoor. Mark-to-
- market valuations rely on "deep" markets where there is a sufficient volume of trading to generate a meaningful price discovery of a given asset. "But," says Mallett, "the market for toxic assets is very thin. There simply aren't enough transactions to form a reasonable judgement."
- Along with stimulating economies and unfreezing the flow of money and credit, recent quantitative easing by various central banks was also designed to help settle asset prices. "You can see some signs of life returning," says John Bowler from the Economist Intelligence Unit, "but a lot of these assets are still backed by residential or commercial property, and the unfortunate truth here is that those markets are still going down, so we're not going to see return to market in a meaningful way."
- Financial institutions are reluctant to sell at what they perceive to be distressed prices, not least because they would be forced to write-down assets still on their balance sheets. In this scenario, doing nothing may be a better short-term option than doing something. The situation is complicated by, among other things, the different regulations governing investment and commercial banks. The former have been required by law to mark-to-market because their business involves actively trading such assets; that means that their assets are worth a lot less than they would have been before the crisis. By contrast, commercial banks' assets are not viewed as trading assets and can therefore be looked at in terms of their final value, giving them an advantage over investment banks in the current environment. "The optimistic and pessimistic views on prices are still too far apart," says Ian Shipley at Oliver Wyman, "which means there's little incentive for an institution to sell a given asset. Although they know it may go bad in the future, they don't have to declare this at the moment."
- In some cases, the unwillingness to sell may be both rational and justified: "What you see at times like these is markets swinging from exuberance to depression," argues Bowler. "It is eminently possible and plausible that some of these assets are worth a lot more than they would fetch if they were sold today."

Mark-to-model

In the absence of a market against which to value assets, financial institutions have to fall back on other methods, primarily ones in which value is calculated based on computer modelling. "There are several ways to do this and the type of asset you hold will determine the method you use," explains Kapoor at Navigant. "For a residential mortgage-backed asset, the best approach is likely to be discounted cash-flow that takes into account, for example, the repayment terms, the future value of the property and the likelihood of default." Some of these components are readily available and built into tools already widely used in financial institutions, such as Intex, but other aspects, such as the distribution of losses across the lifetime of the security as a whole, are much harder to gauge. The result can be a lengthy process, involving roll rate models to time the projected defaults, prepayment models to determine the outstanding borrowing amounts and determination of suitable discount rates. This can get more complex especially where each of the multiple tranches of debt has to be analysed separately using statistical techniques such as the Monte Carlo or the Gaussian copula methods. "You can't rely on one source of information or one approach," continues Kapoor, "but need to understand the range of loss assumptions and derive an average from these, because your opinion matters less than what people are willing to pay for the asset, and their judgements will be formed by the range of research reports published either by rating agencies, investment banks or government regulatory bodies."

The mark-to-model approach is also not without its problems:

- The first is complexity. A CDO is a complex enough financial instrument in its own right but, "where it is made up from tranches of other CDOs - so-called 'CDO-squared' or 'CDO-cubed' - the number of underlying variables rises exponentially", says Richard Squire at Crossbridge, "each one of these variables can be difficult to price".
- Another issue is the familiar one of garbage in, garbage out. Such models are only as good as the analysis and assumptions on which their

calculations are based, as recent history shows. One of the reasons why many financial assets were overvalued in the first place is that their valuation relied on projecting into the future past macro-economic trends and, in particular, steeply rising asset prices since the millennium. "The models used took only exogenous (external) variables into account," says Skene. "They didn't take account of endogenous variables, especially liquidity risk, which was a big part of the total risk. All these assets were leveraged and leverage, by definition, increases liquidity risk, but that's not usually measured." The link to the real world was tenuous at best.

- As a result, despite the scientific appearance of a mark-to-model valuation, much depends on opinions, many of which can be hard to validate. "The actual valuation only gets you so far," continues Skene, "you need to be able to defend your valuation and be sure that it stands up to external scrutiny." An organisation cannot value its assets in isolation. "You have to look at how your model compares with others'," Dai Bedford at Capco points out. "Everyone is trying to converge on the same point. You hear rumours flying around the market that someone has come up with the 'right' model. There's no evidence that that's the case so far, but you can't afford to ignore them because they can affect market perceptions."
- Some of these problems could be resolved by a government or regulatory authority deciding on a single set of modelling principles, but there is so far no sign that this will happen. Each financial institution has a unique portfolio of assets and capital requirements so have a vested interest in coming up with a standard that favours them above their competitors. "In any murky situation, there's an opportunity to play the system," Bowler points out. "The different regulators have been grappling with this issue for some time," says Mallett at CIMA, "but the issue has become something of a political lightning rod, with some countries wanting to move quickly while others take a more considered approach."

With either method, the critical issue is transparency, particularly of inputs. The less "black-boxed" the process is, the more comfortable buyers and sellers are
– Pawan Malik at Navigant Consulting

What is toxic? You only really find out when it kills you. Everything else is an estimate
– Simon Hall, ea Consulting Group

Evaluating the strategic options

The challenge of toxic assets does not end with their valuation. Once an organisation has decided what it thinks they are worth, it then has to decide what to do with them.

While the United State's Toxic Asset Relief Programme (TARP) and its equivalent in other countries hold out the possibility to financial institutions of being able to offload at least some of their toxic assets, not everyone wants to take advantage of this option. As Navigant's Kapoor explains, "Some of the policies laid out make it prohibitively expensive and the resultant write-downs involved may wipe out shareholder equity. You not only have to consider what a given security is worth but whether you can sell it to the government or to a third party for a fair price."

Much here depends on the institution's capital position. "The overall question is one of capital optimisation," says Squire, "and is much broader than the toxic assets. The institution should be asking how it could use capital more effectively and should develop a strategy to do so." "An institution's future strategy also depends on how far down the road they are of writing-down their toxic assets," adds Bowler. "The weaker ones may be forced to get rid of them, even at firesale prices, in order to improve their capital adequacy ratios, but the stronger ones will tend to keep them because the value of the asset may improve over time and they are not under pressure to sell them immediately."

"The management of toxic debt has introduced a new competitive game into running a financial institution," says Simon Hall at ea Consulting Group. "Small variations in the effectiveness with which an institution does this will be magnified into massive gains and losses to its bottom line. It is the equivalent of playing a giant game of poker in which you have to decide whether you fold (write off the debt), check (hold it in the belief it will come back to life over time) or bet (invest in order to turn the debt around)."

It may make sense to sell the assets, even at a low price, but this requires considerable capital and many institutions do not have sufficient even to countenance this course of action. Failing this, institutions can choose to run down their business until they understand what their options are, whether they need to re-capitalise or merge. Once an organisation knows what its options are, they have a story to tell banks or other investors who may be willing to help. However, not everyone can do this: banks, for example, because they are under pressure to keep lending activity as high as possible would find it particularly hard. That leaves financial institutions effectively caught between a rock and a hard place. If they cannot sell their assets or run their business down prior to restructuring, then they have to bite the bullet and deal with the toxic assets on their balance sheets, almost certainly realising massive further losses in the process. "The whole situation has foundered on this and there is no obvious solution," believes Skene. The United States has tried to solve the problem by suspending the rule that forces financial institutions to mark-to-market, creating huge accounting gains as institutions mark-to-model but that move is unlikely to be replicated in the UK and, in any case, simply defers the bad news. Already there is evidence of this: second quarter results from US banks were much worse than first quarter ones. "The real solution is to identify the debt and get rid of it, then move forward with a clean strategy," argues Bedford, "if the value of your balance sheet is going up and down, you can only lose in the long-run, but this seems politically impossible."

The need to carry out balance sheet reviews is running ahead of banks' ability to do it. In an ideal world, they'd be doing this constantly but in practice it tends to be done after the fact, in response to regulation

– Richard Squire, Crossbridge

The outlook for the future?

Both the mark-to-market and mark-to-model approaches to valuation, and the strategic options that arise from them, depend on macro-economic certainty and market stability.

Early signs in the United States that the precipitous decline in house prices has slowed make valuation "less impossible", in the words of John Bowler, but it is still questionable whether such improvements can be sustained. Residential mortgage foreclosures, commercial defaults and the difficulty of refinancing the huge volume of junk bonds and loans still around will require the recapitalisation of financial institutions. This, in turn, will almost inevitably throw up more debt problems, creating deflationary pressures at a time when governments are trying to inflate asset prices to a point where they can carry this level of debt. Thus far, the money injected into the world economy by quantitative easing has largely ended up in bank reserves rather than people's pockets, disguising the full extent of the problem. "Genuine price recovery comes from fundamental changes in the economy," Ian Shipley points out, "not from short-term intervention or changes in regulation." "There needs to be closure," agrees Bowler, "and governments are bending over backwards to transfer the risk of losses from the banks to the taxpayer via TARP and its equivalents. But, while some banks are finding they can raise equity capital in a way that seemed unthinkable six months ago, many others are still sitting on toxic assets. The boil hasn't been comprehensively lanced yet."

Indeed, some aspects of the financial services industry are structured in such a way as to make the chance of resolving the issue cleanly and completely in the foreseeable future a remote one. "The industry desperately needs price discovery," argues Dai Bedford, "but the market isn't designed to do this. Investment banks create products that

conceal price: once the price is known, margins fall. Furthermore, what happens if a small number of very large banks try to set the price at a level which is to their advantage? Their competitors will be forced onto the defensive and will have to decide whether or not to accept a price that's not of their choosing. There are some very smart people in some banks who think that it's possible to do this, to make money out of the current situation."

Of course this also raises the question of how to avoid similar debacles in the future. "This will involve more than improving valuation models and asset strategy, although these are pre-requisites," argues Richard Squire at Crossbridge. "It will also require organisations to think more broadly about their risk management processes going forward. They could, for example, set exposure limits and allocate capital so that they factor in both improved valuations and – at least as importantly – previously neglected risk categories such as liquidity and systemic risk. However, doing this will depend on investment in technology and, especially, better quality data."

Toxic asset management is a new and very complex strategic game where the winners will seize the initiative while the losers will take a passive approach, thus missing strategic opportunities
– Simon Hall, ea Consulting Group

We can't go back to 'normal' banking. People understand market risk – they've been managing it for years. What they don't understand is counterparty risk, the risk tied up in the CDO or its underlying insurance. But that doesn't mean you can unpick things and go back to simpler products. Whether we like it or not, complex instruments such as these are the foundations of globalisation
– Dai Bedford, Capco

Using consultants to help value toxic assets

The complexity and sensitivity of toxic asset valuation has led to a sharp increase in the number of organisations looking for help from external experts. There are several motivations behind this:

- **Independent opinion:** With valuations potentially subject to costly challenge, clients need external people to both value their assets and present the valuation methods. “The view of a third party can be critical,” says Navigant’s Pawan Malik, “not least because some institutions have found themselves facing litigation, perhaps over the value of a CDO sold by a big bank to a smaller one, a trend that will only increase in the future, as more of these assets are valued.” “There’s also the issue that internal people may be tempted to value the assets in a way that helps their careers,” says Ian Shipley. “Their bonuses may depend on their value, so they can hardly be objective. For the same reason, external people also tend to be better at triage, working out which assets are the most toxic and focusing on these.”
- **Expert and available resources:** Even at the zenith of the market, structured finance desks in most financial institutions were quite small, perhaps half a dozen people. These were the people who thought up the asset and sold it at the best price they could get, but, as the markets crashed, these were also among the people who lost their jobs, leaving their employers in some cases without what has become vital expertise. “Even the chief financial officer of these institutions will not have the expertise to value these assets,” continues Malik. “The devil is really in the detail.”
- **Market intelligence:** In an environment in which people’s perceptions matter as much as hard facts, external consultants are likely to have a broader experience of the approaches being used and where consensus may be emerging.

- **Focus:** Financial institutions are grappling with a wide array of strategic challenges at the moment. While the value of their balance sheet goes right to the heart of their business, day-to-day operational issues may be diverting their attention onto other, more immediate concerns. A dedicated team from an external consulting firm is not pulled in so many different directions but can concentrate on the matter in hand.

The type of services required depends on the position of the financial institution (whether it is trying to unwind its business or grow it), the availability of in-house expertise, and the motivation behind the valuation. “If an institution is looking to buy or sell toxic assets, its motivation in asking us to value them will be different, as will its perception of success,” says Malik. “A client might tell us they want to acquire a particular institution, and ask us not only to value its assets but also help develop a strategy for mitigating the risks involved. Success here depends on our being able to price the assets correctly, so that the bank can make the correct bid for the business. Where a client is looking to sell a set of assets, they clearly want an independent valuation but also a range of prices likely to be available in the market.”

Many banks are still at an early stage in capital management. At the time the credit crunch hit, they were still in the first year of bedding down the changes wrought by Basel II. They’d put in place basic compliance but hadn’t integrated it into their management processes

– Richard Squire, Crossbridge

Toxic asset valuation consulting

Valuation consulting work tends to sit between conventional regulatory-driven consulting and more general work undertaken on behalf of a finance director. Within this context, it typically falls into four areas: the actual process of valuation; providing an expert opinion on valuations already made; providing management information and changing reporting procedures; and formulating strategies for dealing with the financial assets that have been valued (Figure 1).



Figure 1: The different categories of toxic asset valuation consulting

The range of services involved inevitably means that different types of consulting firms have at least a toe in this market. The Big Four accounting firms bring their reporting and financial consulting experience, whereas niche financial services regulatory consultancies tend to bring more specialist input. Strategy firms will see the asset strategy within the context of an organisation's overall business direction; modelling firms will focus on the pure analytics involved. Academics may be able to provide expert opinions in some specific areas but rarely have an understanding of the wider business context. "Valuation consulting requires an unusually broad range of deep skills," says Capco's Bedford. "Along with the theory and modelling tools you need excellent accounting skills and a knowledge of domestic and international markets. You can't buy a bad-bank-in-a-box service: it doesn't exist."

Choosing between these different options and approaches will depend on an organisation's position and its objectives, but some common factors should be considered:

- Independence: Valuations need to be made, and be seen to be made, on a wholly objective basis. Without this, they are unlikely to stand up to external scrutiny. If your focus is on putting forward experts whose opinions other people will take at face value, it will be important to ensure that the supplier you use has no vested interest in a particular decision.
- Because valuations are not simply made, but have to be defended and accepted by buyers and sellers, having access to market information and awareness of any emerging consensus around the value of, say, a specific financial instrument can be crucial. You should therefore look at, not just a firm's background in this field, but also the range of information resources it can tap into. Boutique consultancies in structured finance may have a wealth of expertise, but limited information resources.

- Moreover, because very few of these complex assets have a purely domestic footprint, a firm carrying out the valuation process will need access to information from other markets, either through its own internal channels or via third parties.
- Reputation is hugely important. "You have to be well-known and respected in this market, because there's a lot at stake," says Malik. "It all boils down to the fact that a client has, and is seen to have, done all it could on behalf of its shareholders, so using a firm that has a strong track record in this space is crucial."
- It is hard to develop a meaningful strategy in this area without a deep understanding of the nature, value and risks involved in the actual assets. Using a general strategy firm to do so may therefore not give you the depth and detail required. You cannot develop your asset strategy in the same way that you would develop a strategy for another part of your business.

Contributors

Firm	Contributor	Email
Capco	Dai Bedford	dai.bedford@capco.com
Chartered Institute of Management Accounting	Richard Mallett	richard.mallett@cimaglobal.com
Crossbridge	Richard Squire	richard.Squire@Crossbridge.co.uk
ea Consulting Group	Simon Hall	simon.hall@eacg.co.uk
Economist Intelligence Unit	John Bowler	johnbowler@eiu.com
Lombard Street Research	Leigh Skene	leigh@lskene.plus.com
Navigant Consulting	Gene Deetz	gene.deetz@chicagopartners.com
Navigant Consulting	Pawan Malik	pawan.malik@navigant-capital.com
Navigant Consulting	Vikram Kapoor	vikram.kapoor@chicagopartners.com
Oliver Wyman	Ian Shipley	ian.shipley@oliverwyman.com

Source Information Services Ltd
26 Aldebert Terrace • London • SW8 1BJ
Tel: 0845 293 0993
Email: info@sourceforconsulting.com
www.sourceforconsulting.com

