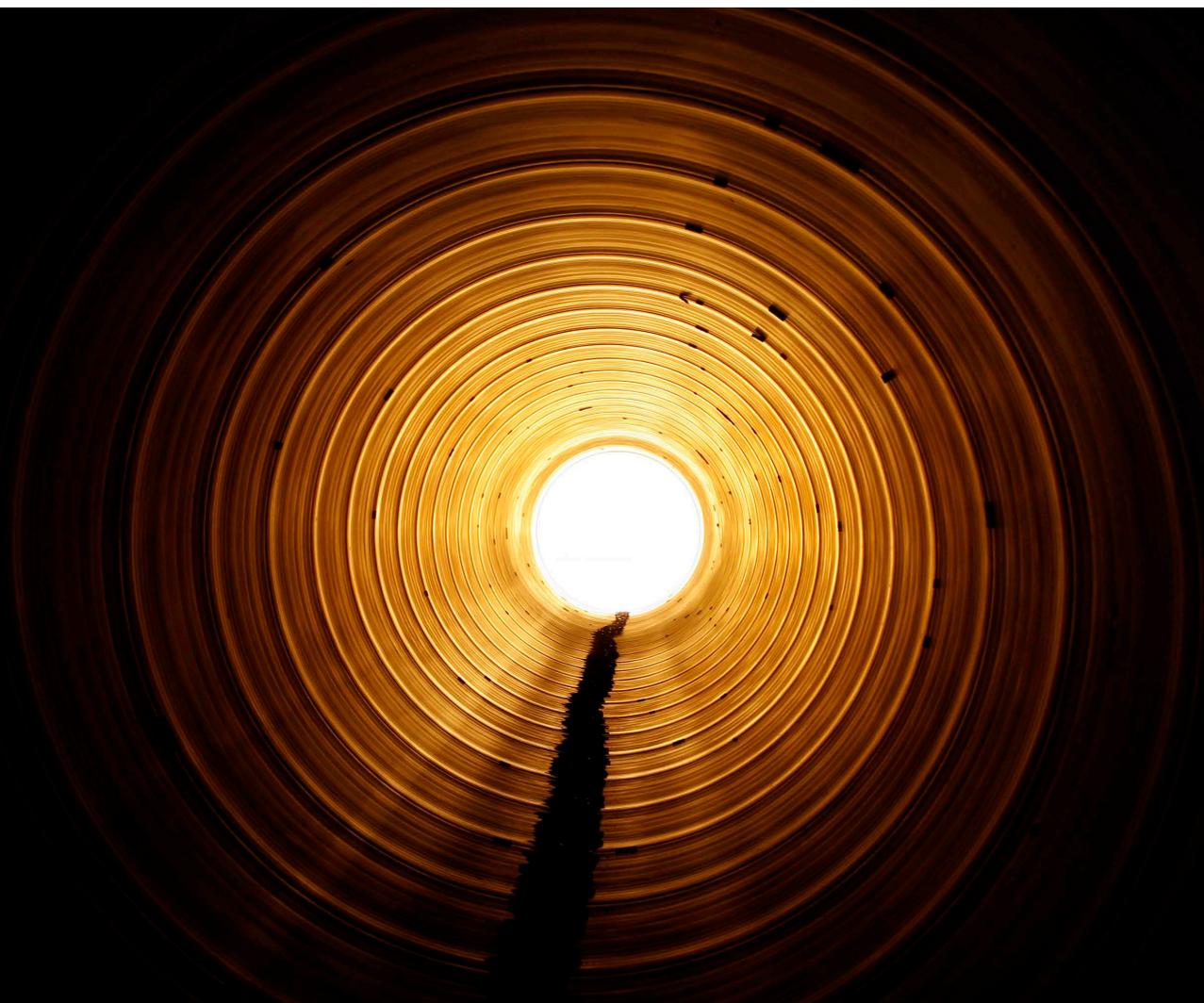




Mining and Energy

Countering fraud for a
competitive advantage 2018

Jim Gee and Professor Mark Button



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Introduction



Managing cost is an important discipline for any company but especially so in the mining sector as demand fluctuates and prices rise and fall. Operating an efficient, streamlined business and avoiding unnecessary cost is essential.

There are many costs that the sector has historically identified and taken into account. However, business best practice develops very quickly and it is now possible to reduce another business cost of equal impact and significance, which historically has rarely been accurately quantified by the sector – the cost of fraud.

20 years ago fraud was something that you hoped wouldn't happen but if it did, you responded after it had, when irrecoverable losses had often already been incurred. It was seen as a series of low volume, high value incidents which required further expense to investigate. That approach has been changing for some time. It is now recognised that the total cost of fraud can be accurately measured and that, because of this, it can be managed and minimised like any other cost.

Fraud can lead to less financially stable and healthy companies, and result in raw materials being more expensive than they should be. Its reduction and subsequent financial benefits can significantly improve profitability and value for money.

Crowe UK's new report provides an unprecedented insight into the benefits to the international mining sector of reducing the cost of fraud. In still-uncertain macro-economic times, revealed by the latest global research to represent on average 5.95% of expenditure, cutting the cost of fraud can massively boost profitability and financial health.

Developments over the last decade or so to accurately measure the cost of fraud like any other business cost, have allowed organisations from many different sectors, and across the world, to manage and minimise that cost. Crowe UK's Forensic Services team has worked with mining companies across the world to help them do this, and, as a result of that work, those companies are already benefitting.

The report outlines the results of research to review data from 110 of the world's international mining companies with total sales of more than \$US 965 billion. We have also examined the position affecting the 178 mining companies registered on the FTSE 100, FTSE 250, FTSE AIM 100, FTSE AIM All Share, FTSE UK 50, FTSE Small Cap, FTSE Fledgling listings where information was available for the last financial year. The effect of reducing fraud on companies' results is dramatic whatever the size of the company.

A book by the authors of this report – *Countering Fraud for Competitive Advantage*¹ – has been published. It expands on the themes in this report and explains what companies need to do to gain the competitive advantage.

What is clear is that fraud – the last great uncontrolled business cost – can now be measured, managed and minimised - both in the international mining sector and beyond.

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¹ Button, M. and Gee, J. 2013. *Countering Fraud for Competitive Advantage: The Professional Approach to Reducing the Last Great Hidden Cost*. ISBN: 978-1-119-99474-9 <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1119994748.html>

The size of the problem



If you don't understand the nature and scale of the problem how can you apply the right solution? Over the last decade or so it has become possible to accurately measure the nature and scale of fraud – and then to design an informed strategy to reduce it.

Fraud is a challenging problem. Its economic effects are clear. In every sector of every country, fraud has a pernicious impact. However, historically, fraud has been described as 'difficult to cost' and until relatively recently, it has not been possible to quantify these effects. Over the last 20 years the situation has changed.

'The Financial Cost of Fraud Report 2018' represents the latest, most extensive global research in this area. The report documents what has been found, across the world, over the twenty year period from 1997 to 2017. It also shows the impact of the recession on losses by comparing and contrasting data from 2008 to 2017 with the prior period. It focuses on presenting a credible, accurate and statistically valid picture, in a context where the quality of some information has historically been poor.

There are still some estimates published which are simply not reliable. Counting only those losses which are detected or prosecuted, or surveying those working in the area for their opinion, will never be accepted as a reliable indicator of the real economic cost of fraud.

Unless one imagines that all fraud can be detected – and research tends to indicate that, at best, organisations can only detect in the region of 1/30th of it – then a measure of fraud based on detected losses will always represent a serious underestimate. Bearing in mind that even the crime of murder doesn't have a 100% detection rate and that the essence of fraud is about concealment, it is unlikely ever to be the case that what is detected will represent the totality of the cost.

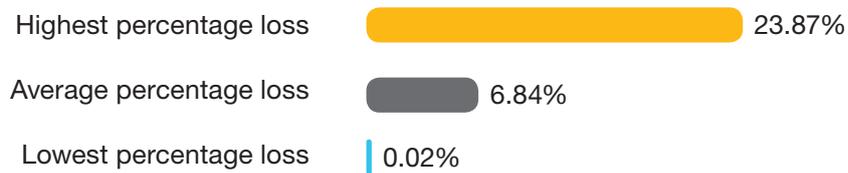
Surveys of opinion are also unreliable. Such surveys can represent a reliable reflection of the opinion of those surveyed (if the sample is representative) but, in the absence of an examination of actual items of expenditure, and the collation of evidence of correctness, error and fraud, they are not grounded in fact.

It is now possible to do much better than this. The financial cost of fraud and error can be accurately measured in the same way as other business costs. This is not unnecessarily costly or difficult, and most important, an accurate, statistically valid figure can be provided for what the financial cost is estimated to be.

2. The size of the problem

The latest global research indicates that losses average 5.95% of expenditure². Twenty years of data derived from over 633 loss measurement exercises across 40 sectors (including in the Natural Resources sector) with a total value of £15.6 trillion, and in several different countries, underpins this figure (Figure 1).

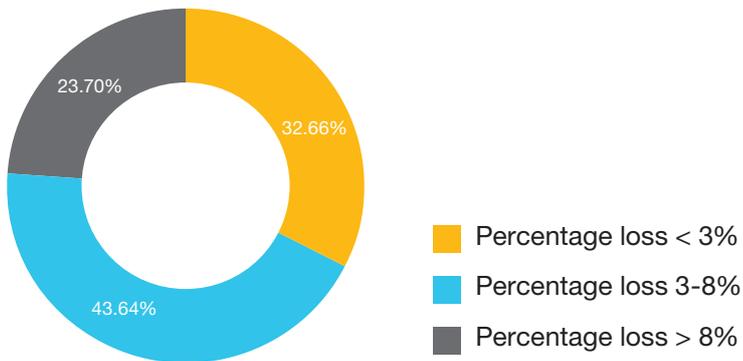
Figure 1: Financial cost of fraud and error – minimum, average and maximum



Just over 66% of accurate and statistically valid measurement exercises revealed losses of 3% or more (Figure 2).

Figure 2: Financial cost of fraud and error – percentage losses

Percentage of measurement exercises where losses were found to be at stated levels

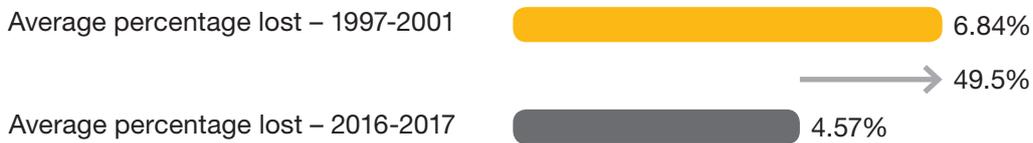


Losses are shown to have increased by 49.5% since the start of the recession in 2008 (Figure 3).

² The Financial Cost of Fraud Report 2018 – Jim Gee and Professor Mark Button – Centre for Counter Fraud Studies, University of Portsmouth



Figure 3: Financial cost of fraud and error – increase over time



The global average loss rate for the entire period of the research (5.95%), when taken as a proportion of the global Gross Domestic Product (GDP) for 2017 (\$75.278 trillion³ or £54.381 trillion), equates to £3.24 trillion (\$4.48 trillion), a sum more than three quarters greater than the UK's entire GDP.

So, research leaves little room for doubt that fraud represents a significant cost and that it can and has been measured in many different types of organisation. What you can measure you can manage. The next logical question concerns the extent of the competitive advantage to be gained from managing and minimising this cost in the international mining sector – and how quickly it can be realised.

³ International Monetary Fund figures

A photograph of two workers in hard hats and work jackets standing on an industrial platform. They are looking out over a vast, arid desert landscape under a clear sky. The platform has red railings and stairs. The text "How quickly can losses be reduced and by how much?" is overlaid on the image.

How quickly can losses be reduced and by how much?

3. How quickly can losses be reduced and by how much?

Organisations have been measuring and reducing other types of business cost for decades – usually with progressively smaller reductions as time has gone by – and many are now doing this in respect of the cost of fraud. It used to be possible to hear those leading sizeable companies comment that ‘there is no fraud in my organisation’, however, these assertions have vanished as the true scale of fraud has emerged. The release of the UK Governments crime statistics for 2017, showing that 45% of all crime in the UK concerns fraud or cyber related crimes (4.74 million out of 10.6 million) further underlines the significance of the problem.

The Financial Cost of Fraud Report 2018 refers to examples where losses have been reduced. Where losses have been measured, and the organisations concerned have accurate information about their nature and extent, they have been substantially reduced.

One of the best examples comes from the Natural Resources sector and concerns a major mining company (see right).

The speed of reduction of losses will vary from organisation to organisation, but it is not unreasonable to assert that losses can be reduced by 40% over a two year period – this is what the data shows.

Crowe UK’s Forensic Services Team have undertaken work for natural resources companies in Central and South East Asia, East and West Africa, Australia, Canada and the United States.

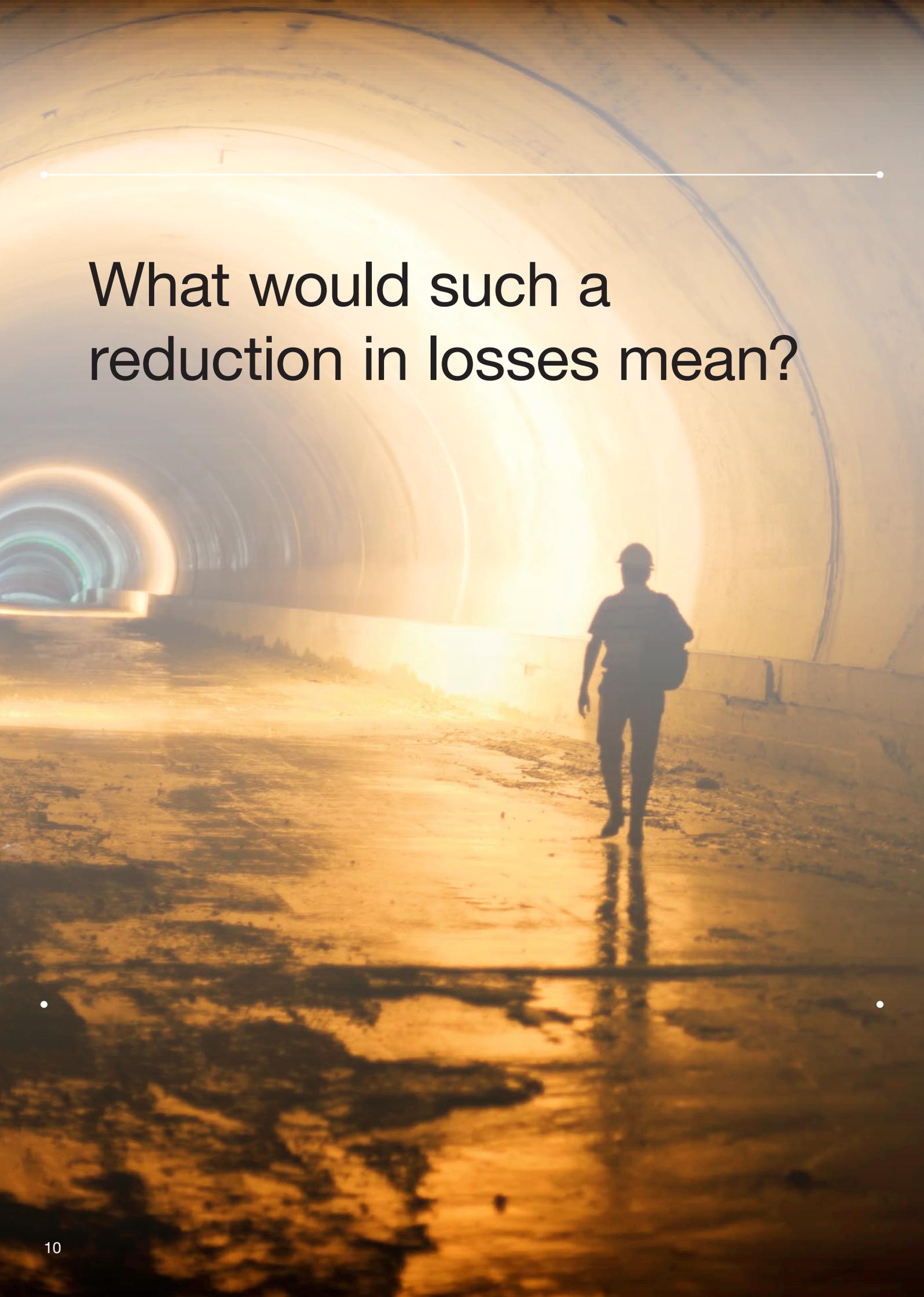
Case study

A major mining company

The company concerned operates 12 major mines around the world, extracting gold, copper and related minerals. Crowe’s Forensic and Counter Fraud Services team were engaged over several years to undertake a variety of work to make sure one of the company’s mines was properly protected against fraud. As part of this work they were asked to measure the total cost of fraud (detected and undetected) across US\$ 800 million of procurement expenditure each year.

The first loss measurement exercise identified what the cost was, as well as the main process and systems weaknesses which were allowing losses to occur. Action was then taken to put things right and a further loss measurement exercise was commissioned to track progress. This showed that losses had been reduced by over 50% with \$US 20 million a year saved. The ratio between the savings and the cost of the work was over 100 to 1.



A person wearing a hard hat and carrying a bag is walking away from the camera towards a bright light at the end of a tunnel. The tunnel walls are curved and the floor is wet, reflecting the light. The overall atmosphere is warm and hopeful.

What would such a
reduction in losses mean?

This section of the report reviews data from mining companies to demonstrate the extent of the savings available.

In the commercial sector, fraud has a significant effect on profitability. A summary of 93 FTSE listed mining companies for 2016 - 2017 shows that they had total annual revenues of £673 billion. The profits of the profitable companies totalled £50.1 billion.

The losses to fraud (applying the global average loss rate (5.95%), derived from where losses have been accurately measured, would imply that losses for the loss-making companies totalled £3.5 billion.

What would a reduction in the cost of fraud (as achieved elsewhere – see above - by up to 51%) mean in financial terms? The profitability of the sector would be boosted by £16.1 billion.

The beneficial effects to the mining sector are impressive. The 34 companies which made profits would boost their profitability by an average of 56.2%. Of the 60 companies which made losses, they would reduce their losses by an average of over 7.6%.

The competitive advantage to be derived from the measurement and reduction of the cost of fraud could not be clearer. By ensuring that resources are not diverted from where it is intended they be applied, there are real competitive and financial advantages to be reaped.

We now have the tools to accurately measure fraud as a business cost, and to focus our skills and resources on reducing that cost. Rapid reductions have been shown to be possible and there are very significant financial benefits which can be delivered. As with any new way

of doing things, the question initially is 'Why would we do that?' – it is now becoming 'Why wouldn't we do that?'

This report highlights why and how companies operating in the mining sector can start to manage their fraud costs, just as they routinely manage other costs. The statistics revealed indicate that this sector has much to gain from the approach. In such a highly competitive market any opportunity to reduce costs must be an attractive proposition.

As with other significant developments in business, the new approach is simply a result of looking at a problem in a different way, and then developing the related methodologies. The barriers to progress are often in the mind, not in reality. If you consider fraud just to be a crime, then you police it; if you think of it as a business cost like any other, then you manage and reduce it. The new approach has now been tested in organisations from across the world and has delivered proven results. And, as ever, now that this has happened, those who follow next will reap the greatest competitive advantage.

A first step may be to have a Crowe Fraud Resilience Review which draws on data from the two largest databases in the world concerning fraud losses and fraud resilience, to rate and rank organisations and to provide an indicative figure for the financial cost of fraud. The UK Government first commissioned the development of this methodology.

How much does fraud cost
your business and how
resilient to fraud is it?



Fraud is a problem that undermines the stability and financial health of mining companies from across the world. It is not a victimless crime, but one which undermines their profitability and capacity for a beneficial impact locally.

The cost of the Fraud Cost and Resilience Review service varies according to the nature, size and complexity of the company concerned. However, it is designed to be a cost-effective response to fraud which provides information and evidence to allow further decisions to be made.

Global research shows that fraud costs organisations an average of 5.95% of expenditure but also that this figure varies considerably according to how resilient to fraud they are.

Crowe U.K. LLP and the Centre for Counter Fraud Studies (CCFS) at University of Portsmouth have jointly undertaken the most extensive and most comprehensive research yet in this area and now have the world's largest databases concerning measured fraud losses and fraud resilience.

One affects the other - the more resilient to fraud that a company is the lower its losses will be. By increasing levels of fraud resilience losses have been cut by up to 40% within 12 months.

A photograph of an industrial facility, likely a refinery or chemical plant, at sunset. The sky is a mix of orange, yellow, and blue. In the foreground, there are large, white, cylindrical storage tanks. In the middle ground, there are several tall smokestacks emitting dark smoke. The facility is illuminated with warm lights, and the entire scene is reflected in a body of water in the foreground. A white horizontal line with dots at each end is positioned above the text.

How we can help:
combining specialist
experience with
academic rigour

Crowe and the CCFS represent a unique combination of specialist hands on experience, academic knowledge and rigour, and mining sector expertise. Together we offer a confidential Fraud Resilience Review service which rates and benchmarks companies against both best practice and their peers.

This service reviews counter fraud arrangements against 29 measures of resilience and 170 different criteria derived from the best professional standards. We have delivered this service to mining companies in Africa and Asia.

The review covers:

The extent to which an organisation understands the nature and cost of fraud to it as a business problem

The extent to which it has an effective strategy in place which is tailored to address this problem

The extent to which organisations maintain a counter fraud structure which can implement this strategy successfully

The extent to which the structure efficiently undertakes a range of pre-emptive and reactive action

The extent to which results are properly measured, identified and delivered

We can provide the answers

We let the data speak for itself to identify weaknesses in counter fraud arrangements. Our work results in the provision of a clear and concise Report detailing our findings with recommendations for improvements based on a wealth of experience drawn from more than 40 countries around the world.

To find out more, please contact:

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About the authors



Jim Gee

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Crowe UK

Jim Gee is a Partner and National Head of Forensic Services at Crowe UK LLP. He is also Visiting Professor at the University of Portsmouth and Chair of the Centre for Counter Fraud Studies, Europe's leading centre for research into fraud and related issues, and Chair of the UK Fraud Costs Measurement Committee, a cross-sector body which, each year, develops and publishes the UK Annual Fraud Indicator.

During more than 25 years as a counter fraud specialist, he has advised Ministers, Parliamentary Select Committees and the Attorney-General, as well as national and multi-national companies, major public sector organisations and some of the most prominent charities. To date he has worked with clients from 41 countries. He specialises in helping organisations to reduce the cost and incidence of fraud through strengthening the resilience to fraud of relevant processes and systems.



Professor Mark Button

Director of the Centre for Counter Fraud Studies
University of Portsmouth

Professor Mark Button is Director of the Centre for Counter Fraud Studies at the Institute of Criminal Justice Studies, University of Portsmouth. Mark has written extensively on counter fraud and private policing issues, publishing many articles, chapters and completing eight books with one forthcoming.

Some of his most significant research projects include leading the research on behalf of the National Fraud Authority and ACPO on fraud victims; the Nuffield Foundation on alternatives to criminal prosecution, the Department for International Development on fraud measurement, Acromas (AA and Saga) on 'Cash-for-Crash fraudsters', the Midlands Fraud Forum and Eversheds on 'Sanctioning Fraudsters'.

Mark has also acted as a consultant for the United Nations Office on Drugs and Crime and on Civilian Private Security Services. Mark also holds the position of Head of Secretariat of the Counter Fraud Professional Accreditation Board. He is a former director of the Security Institute. Before joining the University of Portsmouth he was a Research Assistant to the Rt. Hon. Bruce George MP specialising in policing, security and home affairs issues. Mark completed his undergraduate studies at the University of Exeter, his Masters at the University of Warwick and his Doctorate at the London School of Economics.

About Crowe and the Centre for Counter Fraud Studies

Crowe's Forensic and Counter Fraud Services

Crowe's Forensic and Counter Fraud Services are designed to help clients whatever the problem, wherever the place. We help clients to react to an adverse event or to better protect themselves against such events in the future. We have delivered such services across most continents, and in some of the most difficult countries in which to operate.

We offer a full range of forensic services including:

- counter fraud services which focus on measuring, managing and minimising fraud as a business cost
- expert investigation and litigation support
- Expert witness and valuation services
- professional counter fraud training
- professional mentoring
- business intelligence services – undertaking due diligence work across the world

- advice on combating bribery and corruption
- advanced data analytics.

Our aim is to deliver significant financial benefits for clients which far exceed our fees.

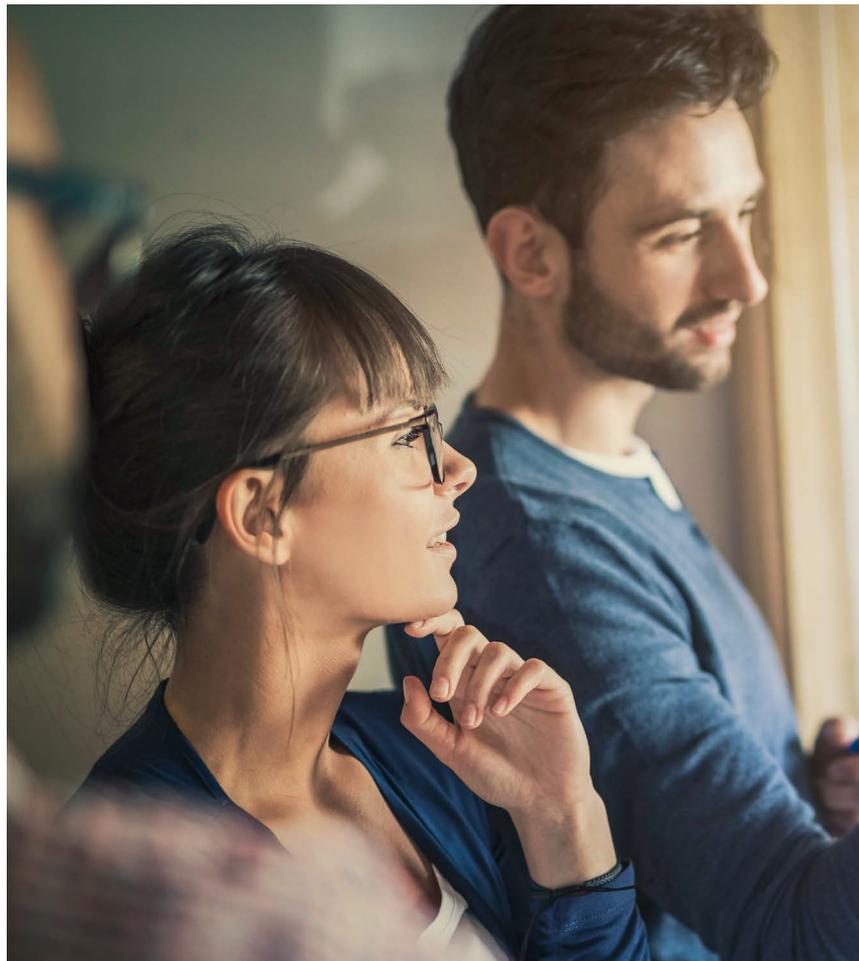
Crowe's Forensic Services team are specialists with a high-level national and international track record built up over many years. We have advised clients of all different types and sizes, including governments, major national and international companies and high profile charities. Our staff hold professional qualifications and have many years practical experience.

We adopt a business approach to fraud and forensic issues – aiming to make sure your organisation is as financially healthy and stable as possible – and that it stays that way!

For more on Crowe UK
visit: www.crowe.co.uk

Centre for Counter Fraud Studies

The Centre for Counter Fraud Studies (CCFS) is one of the specialist research centres of the Institute of Criminal Justice Studies, formed in 2009 to accommodate the growing interest in counter fraud that has occurred within the Institute over the last ten years. The Centre aims to collate and present the widest possible range of information regarding fraud and the solutions applied to it, and to undertake and publish further research where needed. Additionally, the Centre's Fraud and Corruption Hub gathers the latest thinking, publications, news and research in one central resource for counter fraud professionals.



For more on CCFS visits:
www.port.ac.uk/centre-for-counter-fraud-studies



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Start the conversation

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About Us

Crowe UK is a national audit, tax, advisory and risk firm with global reach and local expertise. We are an independent member of Crowe Global, the eighth largest accounting network in the world. With exceptional knowledge of the business environment, our professionals share one commitment, to deliver excellence.

We are trusted by thousands of clients for our specialist advice, our ability to make smart decisions and our readiness to provide lasting value. Our broad technical expertise and deep market knowledge means we are well placed to offer insight and pragmatic advice to all the organisations and individuals with whom we work. Close working relationships are at the heart of our effective service delivery.

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