



A Member of Crowe Horwath International

The Financial Cost of Fraud 2017

The latest data from around the world



Audit / Tax / Advisory

Smart decisions. Lasting value.



Foreword

Fraud's economic effects are clear — private companies are less financially healthy and stable, the quality of public services is reduced, individual citizens have less disposable income and charities are deprived of resources needed for charitable purposes. In every sector in every country, fraud has a serious and detrimental impact on the quality of life.

However, the last 15 to 20 years has seen the development of new tools to counter fraud. It used to be thought that the total cost of fraud could not be measured and therefore very hard to manage. That changed some time ago and this report documents the work that has taken place over the last 19 years, in many sectors and countries, to accurately measure the cost of fraud.

This report builds on research first undertaken and published in 2009, 2011, 2013 and 2015 considering just what the financial cost of fraud really is. It is the output of the collaboration between Crowe Clark Whitehill and the Centre for Counter Fraud Studies at University of Portsmouth (CCFS), Europe's premier fraud research centre.

Rapid changes have taken place in countering fraud over the last 15 to 20 years. The traditional approach was to hope that it wouldn't happen and then to react when it did (after losses had been incurred) with an investigation followed sometimes by litigation or a prosecution.

Litigation or a prosecution can still be important but in 2017, only taking a reactive approach is old fashioned thinking.

In the UK, from the late 1990s, the Department of Work and Pensions and the NHS started to accurately measure fraud (and error) losses.

The European Healthcare Fraud and Corruption Declaration of 2004, agreed by organisations from 28 countries, called for “the development of a European common standard of risk measurement, with annual statistically valid follow up exercises to measure progress in reducing losses to fraud and corruption throughout the EU¹.”

In the United States, the Improper Payments Information Act of 2002 provided that public agencies should publish a “statistically valid estimate” of the extent of fraud and error in their programmes and activities. This was reinforced by the Improper Payments Elimination and Recovery Act of 2010. As a result, most major US public sector agencies have been measuring and reporting losses for more than a decade.

Many more exercises to measure losses have taken place than would otherwise be the case, and this report documents what has been found over the period from 1997 to 2016. It also compares the cost of fraud between 2014 to 2016 against the period prior to the global recession of 2008 to 2009.

Of course, there are still some estimates published which are not reliable for the purpose of estimating the total cost of fraud. 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.

This report takes the debate much further forward. It shows that the financial cost of fraud and error can be accurately measured in the same way as other business costs. It demonstrates that this is not unnecessarily costly or difficult and most importantly, it shows what the financial cost is likely to be.

The volume of data, the total value of the expenditure concerned, the number of different types of expenditure and the different organisations and countries concerned, are impressive.

The evidence revealed in this report that these losses can be, and have been, reduced by up to 40% within 12 months, provides a real business opportunity. Private companies can gain a competitive advantage if the cost of fraud is reduced; public expenditure reductions can be less painful; and the charity sector can increase the resources it has available to deliver on important charitable purposes.

“It will take a brave Chief Executive or Director of Finance of any organisation to argue that the impact of fraud on their organisation is less than what this report finds to be the case – more than two thirds of the exercises that were reviewed showed losses of more than 3% of expenditure, with the 19 year average running at 5.85% and this figure rising by 28% since 2007”

Fraud is the last great unreduced business cost, and this report shows just how significant that cost is.

JIM GEE

Partner and Head of Forensic and Counter Fraud Services for Crowe Clark Whitehill LLP and Visiting Professor and Chair of the Centre for Counter Fraud Studies at University of Portsmouth.

¹ *European Healthcare Fraud and Corruption Declaration 2004*

Introduction

- 1.1. This report renews research first undertaken in 2009, 2011, 2013 and 2015, collating accurate, statistically valid information from around the world about the real financial cost of fraud and error. Once the extent of fraud losses is known then they can be treated like any other business cost – as something to be managed and minimised in the best interest of the financial health and stability of the organisation concerned. It becomes possible to go beyond reacting to unforeseen individual instances of fraud and to embed strategies to pre-empt and minimise fraud losses in business plans.
- 1.2. The report does not look at detected fraud or the individual cases which have come to light and been prosecuted in the report. This is because there is no crime which has a 100% detection rate, so adding together detected fraud significantly underestimates the problem. If detected fraud losses go up, does that mean that there is more fraud or that there has been better detection. Equally, if detected fraud losses fall, does that mean that there is less fraud or worse detection?
- 1.3. The report also does not rely on survey-based information where those involved are asked for their opinions about the level of fraud. These tend to vary significantly according to the perceived seriousness of the problem at the time by those surveyed. While such surveys sometimes represent a valid survey of opinion, that is very different from a valid estimate of losses.
- 1.4. Instead, this report considers and analyses 558 exercises which have been undertaken around the world during the last 19 years, to accurately measure the financial cost resulting from fraud and error.
- 1.5. That financial cost is surely the worst aspect of the problem. Yes, fraud is unethical, immoral and unlawful; yes, the individuals who are proven to have been involved should be punished; yes, the sums lost to fraud need to be traced and recovered. However, these are actions which take place after the fraud losses have happened – after the resources have been diverted from where they were intended and after the economic damage has occurred.
- 1.6. In almost every other area of business life, organisations know what their costs are – staffing costs, accommodation costs, utility costs, procurement costs and many others. For centuries, these costs have been assessed and reviewed and measures have been developed to reduce them and improve efficiency. This process now often delivers quite small additional improvements.
- 1.7. Fraud and error costs, on the other hand, have only had the same focus over the last 15 to 20 years. The common position has been that organisations have either denied that they had any fraud or planned only to react after fraud has taken place. Because of this, fraud is now one of the great unreduced business costs.
- 1.8. Now that the total cost of fraud can be measured, it can be managed and reduced using a methodology to do this accurately, which has been widely applied across many sectors and countries.
- 1.9. Because it is now possible to measure fraud and error losses, proper judgements can be taken about a proportionate level of investment to be made in reducing them. Re-measurement can then assess the financial benefits resulting from their reduction.
- 1.10. Making organisations more efficient and reducing costs is an ever-present task. Fraud is an unnecessary cost because much of it can be pre-empted. This report identifies what the financial cost of fraud and error has been found to be and the ‘size of the prize’ to be achieved from reducing that cost.
- 1.11. There is always more research to be done and any organisation should consider what its own fraud and error costs are likely to be. However, the volume of data which is already available from exercises covering total expenditure of over £13.27 trillion (sterling equivalent) points clearly to losses usually being found in the range of 3-10%, probably around the average of 5.85% and possibly much higher.
- 1.12. We will continue to monitor data as it becomes available and publish further reports as appropriate.

2. Overview

- 2.1. Our research has now reviewed 558 loss measurement exercises undertaken over the period from 1997 to 2016. The exercises took place across 40 different types of expenditure, in 48 organisations from 10 countries considering losses in expenditure with a total value of £13.27 trillion. The value of the expenditure examined has not been uprated to 2016 values. The losses referred to are a percentage loss of expenditure.
- 2.2. This report is based on extensive global research, building on previously established direct knowledge, to collate information about relevant exercises. The data was then analysed electronically. Exercises were collated from Europe, North America, Australasia and Africa. None were found in Asia.
- 2.3. Guesstimates, figures derived from detected fraud losses, and figures resulting from surveys of opinion have been excluded from the report. It has also excluded some loss measurement exercises where it is clear that they have not met the standards described below.
- 2.4. It has included exercises which:
 - have considered a statistically valid sample of income or expenditure
 - have sought and examined information indicating the presence of fraud, error or correctness in each case within that sample
 - have been completed and reported
 - have been externally validated
 - have a measurable level of statistical confidence
 - have a measurable level of accuracy.
- 2.5. A number of caveats have been outlined.
 - Some of the exercises have resulted in estimates of the fraud frequency rate and some of the percentage of expenditure lost to fraud. Some have measured both.
 - It is also the case that some exercises have separately identified and measured fraud and error, and some have not.
 - Sometimes, such exercises have been completed, the organisations concerned have, mistakenly in the view of the authors of this report, decided not to publish their results. Transparency about the scale of the problem is a key factor in its solution, because attention can be focused and a proportionate investment made to address the issue.
 - In some cases, those directly involved in countering fraud have decided, confidentially, to provide information about unpublished exercises for wider consideration. In those cases, while the overall figures have been included in the findings of this report, no specific reference has been made to the organisations concerned.
 - The authors are also aware of a very small number of other exercises which have been completed, but which have not been published and where nothing is known of the findings.
 - Finally, it is important to emphasise that this research will never be complete. More evidence becomes available each year. However, the preponderance of the evidence does point clearly in one direction, as is explained later.
 - While it is necessary to make these caveats clear, the importance of the evidence collated in this report should not be underestimated. It shows that losses to fraud and error represent a significant, damaging and, crucially, unnecessary business cost.

3. Data from around the world

3.1. The 10 countries in which the authors are aware that fraud loss analysis exercises have taken place are:

- United Kingdom
- United States of America
- France
- Belgium
- The Netherlands
- Ireland
- Canada
- Australia
- New Zealand
- Zambia.

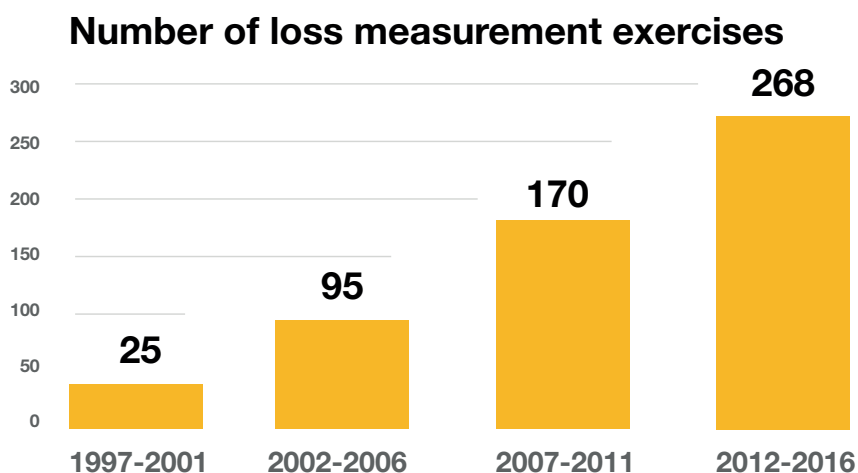
3.2. By value of income or expenditure measured, the US has undertaken the greatest amount of work in this area. This is a direct reflection of the Improper Payments Information Act of 2002 (IPIA), which requires designated major US public authorities to estimate the annual amount of payments made where fraud and error are present, and to report the estimates to the President and Congress with a progress report on actions to reduce them. The Improper Payments Elimination and Recovery Act of 2010 further strengthened this requirement.

3.3. The guidance relating to the original IPIA stated: “The estimates shall be based on the equivalent of a statistical random sample with a precision requiring a sample of sufficient size to yield an estimate with a 90% confidence interval of plus or minus 2.5%².” This remains the case, although many US agencies undertake work to the higher standard often found in the UK and Europe – 95% statistical confidence and +/- 1%.

3.4. In other countries, while there has not yet been any legal requirement, there is a growing understanding that the key to successful loss reduction is to understand the nature and scale of the problem. For example, in Europe, the European Healthcare Fraud and Corruption Declaration, agreed by organisations from 28 countries called for “the development of a European common standard of risk measurement, with annual statistically valid follow up exercises to measure progress in reducing losses to fraud and corruption throughout the EU³.”

3.5. In the UK, the government is on record as requiring this work to be undertaken. Indeed in late 2014, the government’s Cabinet Office Fraud Error and Debt Taskforce, with the agreement of Ministers, asked all government departments to undertake random sampling loss measurement exercises, and this work has proceeded rapidly since then. This is a major step forward to countering fraud in UK central government.

3.6. These developments are part of a consistent trend. Over the period considered by this report (1997 to 2016), the growth in the number of loss measurement exercises is marked with a tenfold increase in prevalence.



² Appendix C to Office of Management and Budget Circular A-123

³ European Healthcare Fraud and Corruption Declaration 2004

4. Types of income and expenditure and the nature of the figures

4.1. The types of income and expenditure where losses have been measured include:

- payroll
- procurement
- housing
- education
- social security
- healthcare
- insurance
- tax credits
- pensions
- agriculture
- construction
- compensation
- mining.

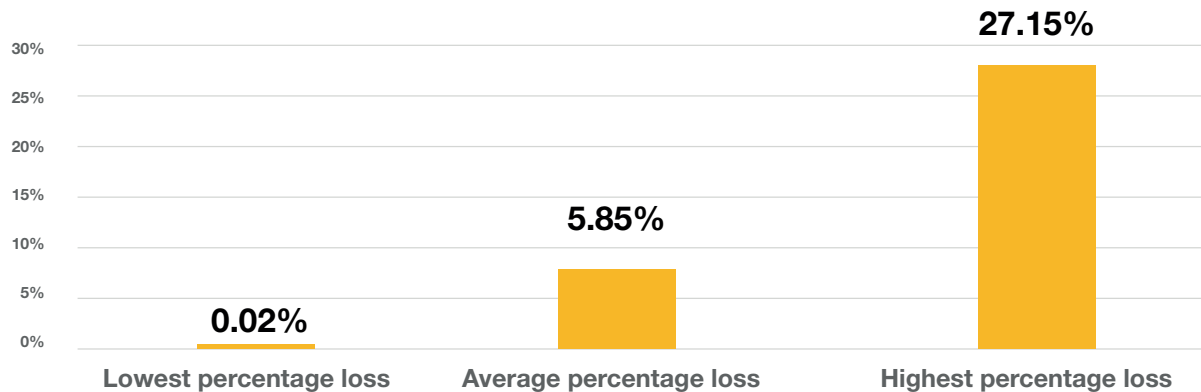
4.2. The key figures which have been produced concern the Percentage Loss Rate (PLR — i.e. the proportion of expenditure lost to fraud and error).

4.3. There is more research still to be done and it is intended that this report will be updated on a regular basis.

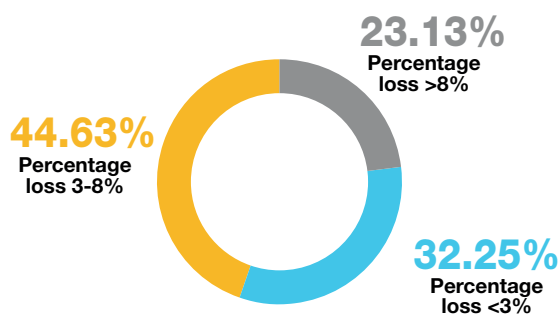


5. Fraud and error losses

The range of percentage losses



5.1. The range of percentage losses across all the exercises reviewed between 1997 and 2016 was found to be between 0.02% and 27.15%, with



average losses of 5.85% (68% of the exercises showed loss figures of more than 3%).

5.2. Since the start of the global recession in 2008, there has been an increase in average losses from 4.57% to 6.54% for the period 2014 to 2016 – an increase of 43%.

5.3. The reasons for these increases, whether over the last two years or over the longer period since 2007, seem to go beyond the economic cycle. Previous research has suggested some evidence that certain frauds increase during recessions and plateau or decrease slightly during periods of economic growth⁴.

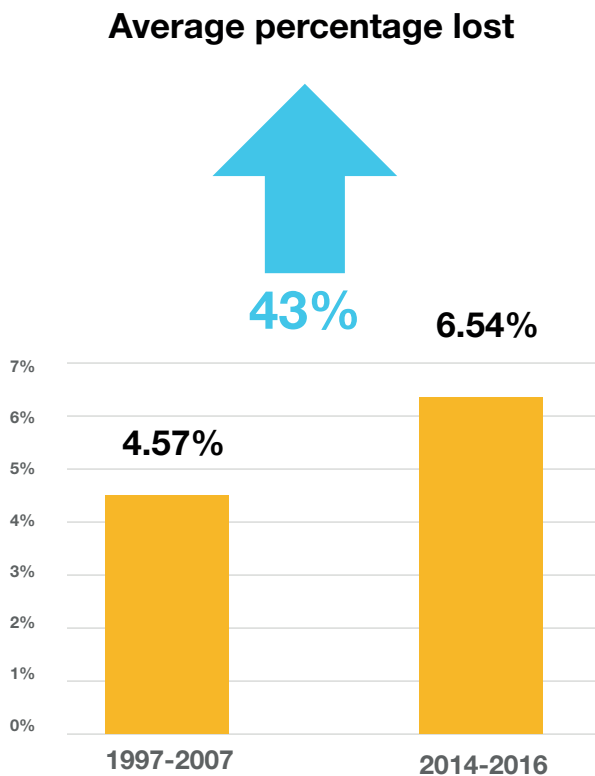
5.4. This does not explain why the cost of fraud has continued to increase since economies have returned to growth. Further research will be needed but it may be that longer term social and technological factors are an underlying cause of the growth of fraud, in addition to the effect of the economic cycle.

5.5. Such factors might include:

- greater individualisation (less adherence to collective moral and ethical 'norms')
- greater complexity of processes and systems (it becoming easier to disguise fraud amidst this complexity)
- more transactions being undertaken by computer and fewer face to face transactions (fraudsters feeling more distant from the victims of their dishonesty and are less concerned about any response)
- the increasing pace of change in business (with controls struggling to keep up).

5.6. The evidence demonstrates that organisations which have undertaken repeated exercises to measure losses in the same areas of expenditure, have reduced the losses over time. This suggests that organisations that know the extent of their fraud losses are better at reducing them.

⁴ Gill, M. (2011) *Fraud and Recessions: Views from Fraudsters and Fraud Managers*. *International Journal of Law, Crime and Justice*, 39, 204-214.



be, without some organisation-specific information about the strength of arrangements to protect it against fraud (its 'fraud resilience').

- 5.7. The global average loss rate for the entire period of the research (5.85%), when taken as a proportion of the global Gross Domestic Product (GDP) for 2016 (\$75.212 trillion or £60.76 trillion)⁵, equates to £3.55 trillion (\$4.39 trillion). This is a sum more than two-thirds greater than the UK's entire GDP and more than twice as much as the sum which Europe spent on healthcare in 2014⁶. Even reducing such losses by 40%, which individual organisations have achieved, would free up more than £1.4 trillion – a sum greater than the GDP of 181 countries.
- 5.8. In the UK, applying that global average loss rate to GDP⁷ would imply total losses of £125 billion each year. Reducing such losses by 40% would free up more than £50 billion each year. This sum is equivalent to more than the UK government spent on defence or education in 2016.
- 5.9. Based on the evidence, it is clear that fraud and error losses in any organisations should currently be expected to be at least 3%, probably almost 6% and possibly more than 10%. It would be wrong to go too much further in terms of predicting where in this range losses for an individual organisation will

- 5.10. Crowe Clark Whitehill and the Centre for Counter Fraud Studies (CCFS), in parallel research, have developed Europe's most comprehensive database of fraud resilience information, with data recorded concerning more than 1,200 organisations from almost every economic sector. By combining the data which underpins this report and organisation-specific information about fraud resilience, Crowe Clark Whitehill and CCFS are able to predict:

- the likely scale of losses
- the key improvements which would reduce them
- the related cost of making those improvements.

- 5.11. Crowe Clark Whitehill and CCFS can also accurately measure losses or train client organisations to do so. The practical experience of Crowe Clark Whitehill specialists, combined with the academic rigour of CCFS researchers, provides an unparalleled specialist resource.

You can use Crowe's Self-Assessment Fraud Resilience (SAFR) tool to find out more. Go to <https://www.croweclarkwhitehill.co.uk>

⁵ International Monetary Fund figures

⁶ World Health Organisation figures for 2014

⁷ International Monetary Fund figures estimate UK GDP for 2016 to be \$2.65 trillion or £2.14 trillion

6. Conclusion and recommendations

- 6.1. This is the fifth report in an area where, for too long, the accurate measurement of losses was considered either impossible or too difficult. It no longer is. In many areas loss measurement has become routine. Losses to fraud and error can now be treated as a business cost like any other, to be measured, managed and minimised.
- 6.2. It is also the case that work to measure losses is highly cost-effective. Efforts to reduce losses are helped by greater knowledge about the scale of the problem. The data shows that organisations which re-measure the same area of expenditure have consistently lower loss rates.
- 6.3. Where losses have been measured, and the organisations concerned have accurate information about their nature and extent, there are examples, especially in the UK and US, where losses have been substantially reduced. The best examples over the 19 year period covered by this report include those below.
- A major mining company which reduced losses across its procurement expenditure by over 51% over a two year period⁸.
 - The UK's National Health Service (the second largest organisation in the world) between 1999 and 2006 where losses were reduced by up to 60%, and by up to 40% over a shorter period⁹.
 - The U.S. Department of Education, which reduced its losses across a \$12 billion grant programme by 35% between 2001 and 2005¹⁰.
 - The U.S. Department of Agriculture, which reduced its losses across a \$12 billion programme by 28% between 2002 and 2004¹¹.
 - The UK's Department of Work and Pensions, which successfully reduced its losses in Income Support and Job Seekers Allowance by 50% between 1997/98 and 2005/06¹².
 - The U.S. Department for Veterans Affairs which successfully reduced its losses across a \$4 billion programme by more than 46% in 2010 and 2011¹³.
 - The U.S. Department of Agriculture (again) successfully reduced its losses across an \$8 billion programme by more than 22%¹³.
 - The UK's Department of Work and Pensions (again) achieved a significant reduction of more than 24% in losses in respect of Job Seekers Allowance¹⁴.
- 6.4. Even during the two years after the start of the recession in 2008, when losses generally were increasing rapidly, two of the organisations included in our research reported very significant reductions in their losses – one by 33% and the other by 19% – within a single year in each case.
- 6.5. Three things are clear:
- losses to fraud and error can be measured and cost effectively
 - on the basis of the evidence it is likely that losses in any organisation and any area of expenditure will be at least 3%, probably near to 6% and possibly more than 10%
 - losses can be significantly reduced when accurate information about their nature and extent is available.

In the current economic climate, not to consider the financial benefits of making relatively painless reductions in losses to fraud and error is unwise.

⁸ This was a confidential project undertaken by one of the authors of this report

⁹ UK NHS Counter Fraud and Security Management Service, 1999 – 2006 Performance Statistics

¹⁰ U.S. Department of Education Performance and Accountability Reports 2001 – 2005

¹¹ U.S. Department of Agriculture Performance and Accountability Reports 2002 – 2004

¹² UK Department of Work and Pensions – Fraud and Error in the Benefit System April 2005 to March 2006

¹³ Department for Veterans Affairs – Performance and Accountability Report 2012

¹⁴ Department of Agriculture – Performance and Accountability Report 2011

¹⁵ Department of Work and Pensions – Fraud and Error in the Benefit System – 2011/2012 Estimates (Revised Edition)



ABOUT THE AUTHORS

Jim Gee is a Partner and Head of Forensic and Counter Fraud Services at Crowe Clark Whitehill 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, Jim 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 39 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 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 Associate of Chief Police Officers (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 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 and 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 CLARK WHITEHILL

Crowe Clark Whitehill LLP is a leading UK audit, tax and advisory firm. We are trusted by thousands of clients for our head for figures, our specialist advice, and our readiness to provide our clients with added value.

Our head office, in the City of London, is the centre of our eight-office network that offers national coverage. As part of the wider Crowe Horwath International, we work with organisations in more than 100 countries worldwide.

Our aim is to become long-term trusted advisors to the organisations and individuals with whom we work. Everything about us: our structure, our training, our people, and our personal and professional success criteria, is driven by this goal.

We help our clients to make smart business decisions today that, in turn, create lasting value for tomorrow.

For more on Crowe Clark Whitehill visit:
www.croweclarkwhitehill.co.uk

ABOUT THE 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 10 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 about CCFS visit: www.port.ac.uk/centre-for-counter-fraud-studies



A Member of Crowe Horwath International

Start the conversation

Jim Gee

Partner and Head of Forensic
and Counter Fraud Services

jim.gee@crowecw.co.uk

+44 (0)20 7842 7239



@crowecw

www.croweclarkwhitehill.co.uk

Crowe Clark Whitehill LLP is a member of Crowe Horwath International, a Swiss Verein (Crowe Horwath). Each member firm of Crowe Horwath is a separate and independent legal entity. Crowe Clark Whitehill LLP and its affiliates are not responsible or liable for any acts or omissions of Crowe Horwath or any other member of Crowe Horwath and specifically disclaim any and all responsibility or liability for acts or omissions of Crowe Horwath or any other Crowe Horwath member. © 2017 Crowe Clark Whitehill LLP | 0008. This material is for informational purposes only and should not be construed as financial or legal advice. Crowe Clark Whitehill LLP is registered to carry on audit work in the UK by the Institute of Chartered Accountants in England and Wales and is authorised and regulated by the Financial Conduct Authority.