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RETENTIONS IN THE CONSTRUCTION INDUSTRY

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Glossary

BIM	Building Information Modelling
BEIS	Department for Business, Energy and Industrial Strategy
CAD	Computer-aided design
CCA	Construction Contracts Act 2002 (New Zealand)
CLC	Construction Leadership Council
Certificate of making good defects	At the end of the defects liability period, the contract administrator will consider items on the schedule of defects, and decide if they have been rectified. If they have, the contract administrator will issue a ‘certificate of making good defects’. Once issued, this is the trigger to release the remainder of any retention money.
Defects liability period	(Also known as the rectification period) a period of time in which the contractor is contractually obliged to return to the construction site to remedy any remaining defects.
ICE	Institution of Civil Engineers
JCT	Joint Contracts Tribunal
LEIA	Lift and Escalator Industry Association
NEC	New Engineering Contract
NHBC	National House Building Council
PBA	Project Bank Account
PCR	Public Contracts Regulations
Practical completion	When all of the agreed works have been carried out. It can also be referred to as 'substantial completion' on some forms of contract. Upon reaching this point, half of the retention money is typically released.
SIC	Standard Industrial Classification
SME	Small and Medium Size Enterprises

Technical Glossary

Average	Usually denotes a number of different approaches to calculate the “central” value of a set of values; within this report the average refers to the mean only.
Mean	A calculated “central” value of a set of values; the average value across an identified group or sub-group calculated by adding up all values and dividing by the number of values.
Median	A calculated “central” value of a set of values; also known as the 50th percentile; the point within a distribution that cuts that distribution in half. 50% of people in that group are below this number and 50% are above it. In cases where the distribution is very uneven (i.e. for example because there are a number of outliers to one side, but not the other), the median can provide a better approximation for the ‘centre’ of the distribution compared to the average/mean.
25th percentile / 75% percentile	The 25th percentile is the point within a distribution, where 25% of values fall below and 75% fall above. The 75th percentile is the point within a distribution, where 75% of values are below and 25% are above.
Standard Deviation	A measure of the variation within a distribution of values; a quantity expressing by how much the values within a distribution differ from the mean of the distribution. Calculated by taking into account the difference of each value from the mean, as well as the number of values. If all values were the same, the standard deviation would be zero. The more different the values, the higher the standard deviation.
95% Confidence Interval / 95% CI	The 95% Confidence Interval provides an estimate of the average of the entire population (i.e. in case of the results from the contractors survey, all English construction businesses). As the population average can only be estimated given the average within the sample, a range is calculated (i.e. the confidence interval) in which the population average falls with 95% certainty. It is calculated

through the use of the standard errors of the sample[1]. The Confidence Interval is larger in smaller samples as well as in samples with a high variation of values.

If the Confidence Interval includes the number '0' within its range, this means that the average from the sample cannot be reliably used to predict the average in the general population, i.e. the variation in the sample data is too large to reliably predict the average within that group across England.

Statistical Tests

A statistical test looks at a particular result in the sample and makes inferences about that result in the general population. A statistical test can determine whether results found in the survey sample can be reliably generalised to the general population. The statistical tests take into account the variation within the groups to test whether the difference between groups is due to chance or whether this represents an actual difference between the groups.

The main tests used in this report are the Analysis of Variance (ANOVA) to compare averages of different groups, as well as Chi^2-tests to compare frequencies. In case of significant results, the test statistic (F or Chi^2) is listed in a footnote.

The alpha-value determines if a test is significant or not. The threshold is set at 0.05 for all tests. If the alpha value is smaller, then the test is significant, i.e. differences between the averages are not due to chance. If the value is between 0.05 and 0.10, then the test is deemed marginally significant. The ANOVA is significant, if the largest mean is significantly different from the smallest mean. The test does not provide information on the groups that lie in between. Therefore, for significant ANOVAs, the Tukey HSD post-hoc test was conducted to determine which groups significantly differ from one another.

A significant result means that the difference found in the survey is not due to chance and can be generalised to the

1 Equation for the 95% CI: Mean +/- (1.96*SE)

wider construction industry. A non-significant result means that either the difference found in the survey was due to chance or that the sample size was not large enough to detect a significant difference.

Definitions

This research focuses on the construction contracting industry, with the following SIC codes used to define the sector:

41 - Construction of buildings

42 - Civil engineering

43 - Specialised construction activities

When referring to construction firms by size, the following terms are used:

Large	More than 250 employees
Medium	50-249 employees
Small	10-49 employees
Micro	1-9 employees

When referring to construction firms by tier:

Main contractors with a direct commercial relationship with a client are classed as tier 1.

Sub-contractors and suppliers with a direct contract with the tier 1 main contractor are classed as tier 2.

Sub-contractors and suppliers working for sub-contractors are classed as tier 3.

Executive summary

Background to the research

A retention is a sum of money withheld from the payments of a construction sector project in order to mitigate the risk that such projects are not completed either at all, or to the required quality standard. Retentions are mainly used as a means of incentivising contractors and sub-contractors to return to correct defects during a specified period of time, as outlined in contract terms and conditions.

Ministers announced a review of the practice of retentions because of concerns that have been expressed about the practice by a number of firms in the construction sector supply chain. This review is being conducted alongside a review of the effectiveness of the 2011 changes to the 'Construction Act'[2], to be overseen by the Construction Leadership Council.

The Department for Business, Energy and Industrial Strategy (BEIS) is seeking to gather evidence about the practice of retentions, notably in relation to the costs, benefits and impacts for the construction sector and construction sector clients. Alongside this, BEIS aims to understand what alternatives to retentions exist, how these operate in practice, and the relative costs and benefits of these compared with retentions.

The views expressed and the interpretation of data in this report are those of the research respondents and Pye Tait Consulting and not necessarily of BEIS.

Aims and objectives

The main aim of this research is to provide a qualitative and, where possible, quantitative assessment of the costs and benefits of the contractual practice of holding retentions under construction contracts, and alternative mechanisms, in the construction sector in England.

This translates into the following objectives:

- establish a robust definition of a ‘retention’ in the construction sector;
- determine the extent to which retentions are used, as well as the rationale and legal position in relation to their use;
- assess the costs, benefits and other impacts (direct and indirect) of the use of retentions on the construction sector and (where possible) on the economy as a whole (i.e. micro and macro levels);

2 The Housing Grants, Construction and Regeneration Act 1996, also known as the ‘Construction Act’

- identify the alternatives to retentions and the rationale for these; and

- ascertain the costs and benefits (for the construction sector and economy as a whole where possible) of alternatives to retentions should these be implemented more widely across the construction sector.

Methodology

This research has used a mixed-methodology, combining secondary desk-based evidence with primary research with a sample of construction sector clients, main and sub-contractors, and stakeholders in the construction industry in England. Data have been triangulated and analysed from:

- three round table discussions (attended by 32 industry stakeholders in England including a mix of clients, main and sub-contractors and trade federations/professional bodies) **(primary qualitative data obtained in December 2015)**;

- in depth telephone interviews (50) with a mix of clients, main and sub-contractors in England **(primary qualitative data obtained between January-February 2016)**;

- a survey of 506 contractors in England **(primary quantitative data obtained between February-April 2016)**; and

- a survey of 419 clients in the construction sector in England **(primary quantitative data obtained between March-April 2016)**.

It should be noted that where the report refers to findings in relation to the last three years, that for contractors this means February-April 2013 to February-April 2016, and for clients this means March-April 2013 to March-April 2016.

There are a number of limitations that should be taken into consideration when reading the report, and some of the results from the client and contractor surveys need to be interpreted with caution. For example, the results for questions which asked for a quantitative value often had a large degree of variation. This limits how representative average values are likely to be of the construction sector generally, and often means that comparisons are not statistically robust. Such caveats are important and are highlighted in the report.

Key findings

Definition of a retention in the construction sector

A retention is a percentage of the value of a construction contract which is held by the client[3] as an assurance of project completion and as a safeguard against defects which may subsequently develop and which the contractor may fail to remedy. Retentions can be held first by the client employing the main contractor and this typically filters down into all sub-contracted work on the project throughout the supply chain. The retention is retained from payments made throughout the length of the contract.

For most projects prior to 1st October 2011, once the sub-contracted works were complete, the percentage of monies deducted as retention was split into two halves, with the 'first moiety (segment) of the retention' paid back to the sub-contractor (typically referred to as 'practical completion'). This was followed by the 'defects liability period' typically lasting 12 months, during which time any defects were identified and must be rectified. The 'second moiety of retention' was then paid upon the issue of the 'certificate of making good defects', post-inspection.

Legislative changes mean that construction contracts entered into after 1 October 2011 can no longer link the release of retention to an act or event occurring under another (i.e. the main) contract, and release of retention must be triggered by a specific act or event within a sub-contractor contract. This is intended to eliminate the risk in relation to factors outside of the sub-contractor's control.

Retentions are written into applicable construction contracts from the start of a project[4]. The percentage that is retained and the amount of time for which it is held can vary substantially between contracts, depending on the project type, value or sub-sector, or other factors specific to a particular client, or method of procurement.

The use of retentions in the construction sector

Although it is the most widely used form of surety against defects, the use of retentions is not universal across the construction sector as a whole.

The use of retentions does not feature in some standard contracts used in the industry. Retentions are not typically used at all in a small number of construction sub-sectors, for example the lift industry, which has developed its own specific guarantee, typically used instead of retentions by the vast majority of lift sector organisations.

Around three-quarters of contractors surveyed as part of this research had experience of retentions in the last three years, either with retentions held and/or holding retentions. These contractors with experience of retentions report that retentions are held on an

3 In this context a client could also be a main contractor or tier 2 sub-contractor holding a retention from a tier 3. Main contractors with a direct commercial relationship with a client are classed as tier 1. Sub-contractors and suppliers with a direct contract with the tier 1 main contractor are classed as tier 2. Sub-contractors and suppliers working for sub-contractors are classed as tier 3

4 Department for Business Innovation & Skills (2013), Supply chain analysis into the construction industry report for Construction 2025

average of 65% of all their current[5] contracts. This means that no retentions are held on 35% of their current contracts, on average, with risks mitigated through other means.

Participants in the client survey report a greater use of retentions compared with contractors; 85% of clients surveyed have used retentions on all or some of their contracts over the last three years. Clients with experience of holding retentions during the last three years say that retentions are used on an average of 84% of all their current construction contracts.

69% of respondents to the client survey with experience of holding retentions over the last three years say that there are certain types of project that do not typically attract retentions, suggesting that many construction sector clients make calculated decisions as to whether to hold retentions. Contracts of lower value and/or complexity, such as short-term repair and maintenance projects, are less likely to hold retentions compared with high value complex work. This reiterates that retentions are predominantly used to provide surety against defective work– lower risk work is less likely to hold retentions.

Average amount retained

According to survey data, the average amount of retention which is typically held from contractors by clients[6] equates to 4.8% of the contract value. Respondents to the client survey concur with an average retention of around 5% of contract value (4.9%).There is some variation in the range of the percentage of contract value that is typically held in retention among contractors and clients.

Survey data indicate that the majority of clients and contractors do at times vary the percentage value that is retained, with 38% of clients and 32% of contractors surveyed[7] reporting that they do not vary the retention percentage held, and use the same fixed percentage every time. Some clients and contractors surveyed indicate that the retention percentage and also the length of time over which they hold retentions can be influenced by factors such as the project value, length, type, and their relationship with the contractor or sub-contractor.

Qualitative evidence obtained from focus groups suggests the state of the economy can affect the amount of retention held – for example in a more buoyant economy with more work, sub-contractors might be more inclined to negotiate lower retention percentages than contractors would typically hold.

Impacts of retentions

Late and non-payment of retentions

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5 ‘Current’ refers to on-going construction contracts at the time the research was conducted

6 In this context a client could be a main contractor or tier 2 sub-contractor holding a retention from a tier 3

7 This was asked to those participants in the client and contractor survey with experience of holding retentions in the last three years

Delays in paying retention monies appear to be commonplace in the construction sector. Around 71% of contractors surveyed with experience of having retentions held in the last three years have experienced delays in receiving retention monies over the same period.[8]

Data from the contractor survey indicate that there is wide variation between the experiences of different contractors, with some experiencing no delays, while others experience delays of over a year. However, average delays at each tier of the supply chain are several months. The extent of this average delay is significantly longer for tier 2 and 3 contractors compared to tier 1 contractors.[9]

The contractor survey also provides evidence of frequent non-payment of retentions, with over half of participants reporting that they have experienced non-payment, be it partial or full, over the past three years. Again, there is wide variation between experiences of different contractors. However, overall results for the different tiers in the survey indicate that, on average, tier 1 contactors have less of an issue with non-payment of retention monies at either stage compared to the other two tiers.

There are several possible reasons for late or non-payment of retention monies, including disputes over defects, contractors becoming insolvent and contractors not asking for their retention money. However, there is some evidence from the qualitative interviews and workshops that tier 3 companies may be more inclined to write off retention monies, in some cases because the work was priced to offset the retention costs; in other cases tier 3 companies may be keen to maintain good relationships with their main contractor and will write off retention monies because they perceive that doing so will lead to the next contract.

It has not been possible to measure what proportion of the late or non-payment of retention monies is for *justified* reasons – for example because of defects[10]- or *unjustified* reasons, which could include non-payment because of a pending payment from another client or because a contractor retained monies for longer than specified in contract terms. It is challenging to measure the extent to which late (or non-) payment of retention monies is for justifiable reasons, because opinions as to what constitutes 'justifiable' or 'unjustifiable' can differ depending on the contractor or client perspective.

However, the survey data do show some evidence of particular types of unjustified late or non-payment. For example, that 10% of tier 2 and 3 contractors surveyed report that they have not received retention monies because retention monies were not released by the

8 In relation to the time for which retentions are actually held after practical completion, compared to the time for which they were intended to be held

9 Main contractors with a direct commercial relationship with a client are classed as tier 1. Sub-contractors and suppliers with a direct contract with the tier 1 main contractor are classed as tier 2. Sub-contractors and suppliers working for sub-contractors are classed as tier 3

10 Although data give an overall proportion of respondents who say payment of retentions was delayed because of defects, it is not possible to link incidence of defects directly to incidence of delayed payments and assume this was the reason for the delay

client so the main contractor declined to pay the sub-contractor.[11] This is unjustified as 2011 amendments to the 'Construction Act'[12] prevent any contract term which makes payment conditional on the performance of obligations under a superior contract. A number of tier 2 and 3 contractors participating in focus groups illustrated lack of understanding on the implications of the 2011 amendments for payment of retentions.

In addition, the qualitative evidence gathered suggests that *unjustified* late and non-payment of retentions appears to be a significant cause of issues associated with the practice of holding retentions within the construction sector.

Relationships throughout the supply chain

As stated above, qualitative evidence gathered through workshops and interviews indicates that some sub-contractors write the retention money off to maintain the working relationship with the main contractor.

Nearly all micro and small businesses participating in the qualitative evidence viewed retentions as a means of boosting the cash flow of main tier 1 contractors, or as a means of facilitating a discount on the overall cost, by not paying back some or all of the retention but this cannot be objectively proved one way or the other from the survey evidence.

Data from the contractor survey indicates that retention monies are used by 37% of tier 1 contractors that have experience of holding retentions[13] as working capital (such as labour costs), and by 29% as part of general expenditure. However, tier 1 contractors participating in the qualitative interviews do not agree that retentions *boost* their cash flow, as often they have retentions held against their work by their clients, which they argue offsets this. This can also not be objectively proved one way or the other from the survey evidence.

Survey data finds substantial variation in the experiences of contractors with retentions. However, the impact of retentions can be that of weakened working relationships between clients, main and sub-contractors. Some sub-contractors choose not to work for main contractors or clients where retentions are to be held. As such, a further impact for the sector as a whole is that this can limit the available pool of contractors, for those clients[14] that want to hold retentions.

Insolvency

Survey data show that the majority of those holding retentions (whether clients or contractors) do so in a main bank account. This suggests that for contractors there is no

11 This was asked to those sub-contractors with experience of not receiving retention money back in the last three years. It relates to the last three years, and could have occurred in one or more instances during that time

12 The Housing Grants, Construction and Regeneration Act 1996, also known as the 'Construction Act'

13Those surveyed with experience of holding retentions in the last three years

14 In this context a client could be a main contractor, or sub-contractor

protection from upstream[15] insolvencies, as retention monies held against their work are not typically ring-fenced, for example in a separate account.

Multiple contractors within the supply chain could be affected by insolvency of one large main contractor or client, because the client or main contractor could be involved in a high number of projects and construction contracts with sub-contractors at a given point in time.[16]

A significant proportion (44%) of contractors surveyed with experience of having retentions held from them in the last three years have experienced non-payment of retention monies as a result of upstream insolvencies over this same period. However, the retention monies unpaid as a result of upstream insolvencies occurred on only around 1% of all their contracts, over the last three years.

Most commonly cited impacts of retentions

When clients and contractors with experience of retentions in the last three years were asked to select from a list of potential impacts of the practice of holding retentions, the most frequently cited (shown in overall order of importance from the perspectives of clients and contractors[17]) are:[18]

- **<u>for contractors:</u> higher business overheads.** The qualitative research also indicates that where retentions are held against their contracts this can lead to higher business overheads, as a result of time incurred to pursue unpaid or late retention monies, and potentially higher borrowing fees or overdraft charges because of monies removed from cash flow;

- **<u>for contractors:</u> weakened relationships throughout the construction supply chain**. The qualitative research indicates that this can stem from tensions that can arise as a result of delayed or non-payment of retention monies, and by the perception further down the supply chain that retentions are used by main contractors to boost cash flow or act as a means of facilitating discounts;

15 Defining 'upstream' as above them in the supply chain. For example, if a tier 1 contractor commissioned work from a tier 2 contractor, then the tier 1 contractor would be said to be 'upstream' in the supply chain from the tier 2 contractor

16 As the client (including main contractor) for a project involving a high number of contractors and/ or as client (including main contractors) across multiple projects

17 i.e. similar impacts are experienced regardless of whether respondents have retentions held against their work, or whether they are holding retentions against work being undertaken for them

18 Survey data found substantial variation in the experiences of contractors with retentions over the last three years, indicating that impacts described are unlikely to be universal

- **<u>for main contractors:</u> weakened relationships with their clients**, which the qualitative research indicates can stem from delays in receiving retention monies;

- **<u>for clients:</u> costs of construction projects may be higher**. Evidence gathered from another part of the survey indicates that a proportion of contractors increase tender prices to offset the retention. Around 40% of respondents to the client survey with experience of retentions in the last three years think overall project costs are higher because of retentions, and 18% of contractors surveyed with experience of retentions in the last three years say they increase tender prices by an amount equal to or higher than the retention. This can also have an impact on the wider economy, as it may be a factor in reducing competitiveness of businesses as well as incurring higher costs for clients; and

- **<u>for contractors:</u> business growth may be constrained.** Qualitative research indicates that this may occur if contractors have less readily available working capital where monies are held in retention. It also has an impact for the economy as a whole if construction sector business growth is obstructed.

It should be noted that many participants in the workshops and in depth interviews, whether clients or contractors, say that retentions are just one aspect of wider issues experienced in relation to payment practices in the construction sector – particularly late payments.

Use of retentions and alternative mechanisms in other countries

The literature shows retentions are also used widely in a number of other countries, examples being USA, China, Australia and New Zealand. Qualitative evidence finds retentions are used in the rest of the UK as they are in England. There is evidence to show that other countries experience issues with the practice of holding retentions that are similar to those encountered in England, notably loss of retention monies as a result of insolvency, and delays in paying retention monies to contractors.

A number of steps are being taken in some other countries to regulate the way in which retentions are held. A variety of approaches are being used, suggesting that that there is no one simple answer for addressing the issues and each country may need to tailor its approach.

However a common theme that has emerged in a number of countries is to ensure the retention money is 'ring-fenced' in a separate account. For example in New South Wales, Australia, retention money held on projects worth over $20m must be held in a trust account with an authorised deposit taking institution.[19] Legislation introduced in 1997 in

19 As a result of the amended Building and Construction Industry Security of Payment Regulation 2008

Canada states that retentions must be held in a separate account.[20] In New Zealand retention money withheld under commercial construction contracts must be held on trust in the form of cash or other liquid assets readily converted into cash, unless a financial instrument is purchased.[21] There is also evidence of alternative approaches used in place of retentions; for example, the use of retention bonds,[22] which appears to take place predominantly in the USA.

Evaluations of these schemes have not yet been made available. However, as and when completed, evaluation reports could provide a useful source of evidence in the future.

Alternatives to retentions in England

This research considered a number of other mechanisms to assess the feasibility of using them as alternatives to retentions, or alternative approaches for implementing retentions. These other mechanisms were identified as potential alternatives from desk-based research. All respondents to the client and contractor surveys, with experience of retentions in the last three years, were asked to give their views on the following[23]:

- Project Bank Accounts (PBAs);
- Retention bonds;
- Performance bonds;
- Escrow stakeholder accounts;
- Parent company guarantees; and
- Retentions held in trust funds.

Amongst those with experience of holding retentions in the last three years, there is limited evidence of widespread use of alternative mechanisms to retentions in the construction sector in England. There is more evidence of their use in addition to, rather than as a genuine alternative to, retentions.

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20 New Builder's Lien Act, 1997

21 https://www.building.govt.nz/projects-and-consents/why-contracts-are-valuable/construction-contracts-act-2002/#jumpto-changes-relating-to-retention-money

22 A retention bond is an agreement between the client, contractor and a surety provider (third party acting as a guarantor between the two parties). A retention bond means that the client agrees not to hold a cash retention, and that the surety provider undertakes to pay the client up to the amount that would have been held in retention, should the contractor default in carrying out the works as agreed, or in remedying any defects

23 Additionally respondents (clients and contractors, via the survey, focus groups and depth interviews) made a number of other suggestions about other alternatives to retentions, which are also discussed in the research. These are: Insurance policies, warranties/ guarantees, retention deposit scheme, frameworks/partnership agreements

Evidence suggests that most of these alternative mechanisms would have suitability in certain circumstances to replace retentions, but only a few appear to have the potential to be suitable as a standalone sector-wide alternative to retentions. At present none of these alternative mechanisms are widely used in the construction sector, and this limited the ability for this research to gather evidence on their costs, benefits and effectiveness.

A retention deposit scheme and holding retentions in a trust account appear to be applicable to the whole of the sector, eliminate some of the critical issues associated with retentions (notably the risk of delayed or non-payment of retention monies) and provide surety against defects.

Whilst retention bonds also appear to be applicable to the whole of the sector, eliminate some of the critical issues associated with retentions (notably the risks of delayed or non-payment of retention monies, and the impacts of insolvency) and provide the surety against defects as retentions do, there is more evidence to suggest that the costs of retention bonds could be a barrier to their implementation sector-wide because costs may be higher for smaller contractors further down the supply chain.

Conclusions

- Evidence suggests that retention monies being lost due to contractor insolvency affects a large proportion of contractors who use retentions. Whilst the evidence indicates that the number of contracts affected is small, the value lost could still be significant.

- Evidence gathered through the contractor survey indicates that a proportion of construction customers may be making payment of the retention conditional on the performance of obligations under another contract. It is no longer possible to do this under the 2011 amendments to the 'Construction Act'[24] and this suggests that a proportion of the construction sector may not understand what these reforms mean for payment of retentions. This indicates that some contractors may still need to be informed about what the 2011 amendments to the 'Construction Act' mean for payment of retentions. Further research to specifically understand the scale of this issue in the construction sector could be valuable.

- It has not been possible to robustly estimate the extent to which late and non-payment of retentions has been unjustifiably withheld by contractors. However, the qualitative evidence suggested that unjustified late and non-payment of retention monies was a significant issue for some contractors. This is a possible area for future research but robust measurement is problematic because of the differences in opinion as to what constitutes 'unjustified' among clients, main and sub-contractors. Further evidence could be gathered from clients and contractors specifically on their views on the extent to which they think retentions have been unjustifiably or justifiably withheld. However, this would reflect views expressed by participants and it would be difficult to reach a robust conclusion due to difference of opinion.

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24 The Housing Grants, Construction and Regeneration Act 1996, also known as the 'Construction Act'

- As and when evaluations become available on the effectiveness of international measures targeted at resolving issues with the practice of retentions these should be reviewed to assess any lessons learned, and new evidence on their costs, benefits and effectiveness. This should specifically include New Zealand and Australia, where approaches are being taken to hold retention monies in trust accounts, and where the use of a retention deposit scheme is in place (New South Wales, Australia).

- There is a need to further investigate the suitability and feasibility of wide use of alternative mechanisms to retentions in the construction sector in England, in particular a retention deposit scheme and holding retentions in a trust account. Further research is needed to understand how they would operate in practice, if they were to be used more widely in the sector. For example, barriers to wider use and whether these may be overcome, how disputes would be dealt with, any adjudication process to resolve disputes, how payments would be triggered and the evidence for this, risks, and sector-wide applicability.

1 Introduction

1.1 Background context

The retention system has featured in the construction sector for over 100 years, whereby the majority of contracts have included provision for money to be held by the client[25] as a safeguard against defects which may subsequently develop, and which the contractor may fail to remedy. Retention is deducted first by the client employing the main contractor and this is typically mirrored in all subsidiary contracts throughout the supply chain.

Typically 5% of contract value is retained up to the point of practical completion of the work, at which point half of the retention is released. The remaining 2.5% is held during what is known as the defects liability period (for which the timescale varies, according to how it is defined on a contract-by-contract basis). Therefore the contractor/s have a financial incentive to remedy any defects that may arise during this time.

In theory, retention inspires efficiency and productivity for the construction project, so that the contractor and sub-contractors have their initial retention payment released on the basis that practical completion is achieved on a timely basis. The use of retentions also acts as an incentive for a defect-free project at the end of the defects liability period. The practice has been described as an asset to the main contractors in the construction sector, helping to finance other projects with accumulated retention monies and as such, they do not need to rely solely on banks for working capital[26].

However sub-contractors can experience a drain on cash flow, compounded by issues such as overdraft fees and limited access to finance, as well as incurring additional administrative time as a result of the practice of retentions[27].

Ministers announced a review of the practice of retentions because of concerns that have been expressed about the practice by a number of firms in the construction sector supply chain. This review is being conducted alongside a review of the effectiveness of the 2011 changes to the 'Construction Act'[28], to be overseen by the Construction Leadership Council.

The Department for Business, Energy and Industrial Strategy (BEIS) is seeking to gather evidence about the practice of retentions, notably in relation to the costs, benefits and impacts for the construction sector and construction sector clients. Alongside this, BEIS aims to understand what alternatives to retentions exist, how these operate in practice, and the relative costs and benefits of these compared with retentions.

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25 In this context a client could also be a main contractor

26 Raina, P., Tookey, J. (Accessed 09.11.15), The perceptions of retention as held by clients, contractors and sub-contractors

27 BIS (2013), Supply chain analysis into the UK construction sector

28 The Housing Grants, Construction and Regeneration Act 1996, also known as the 'Construction Act'

The views expressed and the interpretation of data in this report are those of the research respondents and Pye Tait Consulting and not necessarily of BEIS.

1.2 Research aim and objectives

The main aim of this research is to provide a qualitative and, where possible, quantitative assessment of the costs and benefits of the contractual practice of holding retentions under construction contracts, and alternative mechanisms, in the construction sector in England.

This translates into the following core objectives:

- Establish a robust definition of a 'retention' in the construction sector;
- Determine the extent to which retentions are used, as well as the rationale and legal position in relation to their use;
- Assess the costs, benefits and other impacts (direct and indirect) of the use of retentions on the construction sector and (where possible) on the economy as a whole (i.e. micro and macro levels);
- Identify the alternatives to retentions and the rationale for these; and
- Ascertain the costs and benefits (for the construction sector and economy where possible) of alternatives to retentions should these be implemented more widely across the construction sector.

1.3 Research methodology

Summary of methodology

A multi-tiered and multi-method approach combining primary and secondary data gathering and analysis was used to deliver the research objectives. This final report is based on the following data, gathered, analysed and triangulated for the purpose of this research:

- Desk-based research (73 secondary sources of evidence such as research reports, spanning published and unpublished data, fully interrogated and analysed) **(secondary data)**;
- Three round table discussions (attended by 32 industry stakeholders in England including a mix of clients, main and sub-contractors and trade federations/professional bodies) **(primary qualitative data obtained in December 2015)**;
- In depth telephone interviews (50) with a mix of clients, main and sub-contractors in England **(primary qualitative data obtained between January-February 2016)**;

- A survey of 506 contractors in England **(primary quantitative data obtained between February-April 2016)**; and

- A survey of 419 clients in the construction sector in England **(primary quantitative data obtained between March-April 2016)**.

Prior to analysis, all data were thoroughly cleaned. The methodology for this data cleaning process is outlined in **Appendix 2.**

Recruitment of participants for round table discussions and in-depth telephone interviews

A longlist of potential participants for round table discussions and in-depth telephone interviews was compiled by Pye Tait Consulting, and shared with BEIS for review, amendment and sign-off. Participants were identified from desk-based research and from searches of business intelligence database Mint UK.

Sampling for the survey - clients

It has not been possible to determine what constitutes a representative sample of construction sector clients using retentions in this context, as the proportions of clients by type using retentions is unclear. To identify a robust population and sample size, the starting point was to compile a list of construction sector clients by industries most likely to require construction work on a regular basis[29] (as determined through desk-based research). This indicated a sample of 342 to provide a confidence level of 95% with a 5% margin of error. A total of 419 clients responded to the survey, with 357 responding to the full survey (i.e. 357 had experience of retentions in the last three years and were therefore asked all the questions). Taking this figure (357), the research has achieved the desired sample size as this provides 95% confidence in the data (i.e. it is possible to be 95% confident that results would be the same had the whole population been surveyed), with a 4.91% margin for error[30].

The sample was selected at random and recruited from business intelligence database Mint UK, with a response rate of 14.4%.

Sampling for the survey – contractors

The population for the survey of contractors used SIC codes 41 (construction of buildings), 42 (civil engineering) and 43 (specialised construction activities) to identify the desired sample size. A total of 508 contractors responded to the survey, with 378 responding to

29 Spanning: central Government departments, non-ministerial departments, local authorities, housing associations and arm's length management organisations (ALMOs), registered providers, residential care homes, hotels, retailers, manufacturers, restaurants, universities, utilities companies, transport companies and sports/leisure

30 It should be noted the margin for error may go up or down, depending on the base number for individual questions. Where base numbers are low or where there is a lot of variance in the data this is flagged up in the text

the full survey (i.e. 378 had experience of retentions in the last three years and were therefore asked all of the questions). Taking this figure (378), the research has achieved the desired sample size as this provides 95% confidence in the data (i.e. it is possible to be 95% confident that results would be the same had the whole population been surveyed), with a 5.04% margin for error[31]. The response rate was 16.2%. The sample was selected at random and recruited from business intelligence database Mint UK.

More detail about survey respondents is provided in **Appendix 1.**

Limitations

The results from the client and contractors surveys need to be interpreted with caution, as the following limitations of the research should be taken into consideration when reading the report:

- The results for questions which asked for a quantitative value often had a large degree of variation. There were also often a small number of particularly high value responses that skewed the mean averages. This limits how representative average values are likely to be of the construction sector generally, and often means that comparisons are not statistically robust. Such caveats are important and are highlighted in the report.

- The survey asked construction sector clients and contractors to provide evidence about the practice of retentions relating to the last three years. During fieldwork it was apparent that respondents may have found it challenging to limit their answers to the last three years only and may have provided answers in respect of a longer or shorter time period.

- Construction sector clients and contractors were only eligible to participate in the full survey if they had experience of holding, or having retentions held against them, in the last three years. This resulted in a higher response rate from public sector clients in the time available to complete fieldwork, as public sector clients had more experience in the last three years of using retentions, compared with private sector clients. This also means that limited evidence has been gathered on the views and experiences of those without direct experience of holding retentions and/or having retentions held in the last three years.

- It has not been possible to determine what constitutes a representative sample of construction sector clients using retentions in this context, as the proportions of clients by type using retentions is unclear.

31 It should be noted the margin for error may go up or down, depending on the base number for individual questions. Where base numbers are low or where there is a lot of variance in the data this is flagged up in the text

- Limited numbers of respondents had direct experience of alternatives to retentions, making it difficult to draw definitive conclusions about the suitability of alternatives to be used instead of retentions across the whole of the construction sector.

- Not all survey participants were willing to provide responses to all questions that they were asked. This means that sample sizes can differ between questions asked to the same population.

- Respondents to the contractor survey were asked to describe their position in the supply chain along the three tiers and could indicate all that applied to their business. As a result, some businesses chose more than one tier. These businesses were removed from all analysis of averages that split the data by tier. They are, however, still represented in the overall statistics, as well as in all other analysis such as multiple-choice questions reported in this chapter. The businesses that were excluded from this particular analysis were fairly similar in relation to the proportion of business size they represent[32]. This is outlined in more detail in **Appendix 2.**

- Qualitative evidence has only been cited in the report where it is deemed robust i.e. where the majority of the respondents participating in focus groups and telephone interviews were in agreement. However, this reflects views expressed by participants and could often not be objectively proved one way or the other from the survey evidence.

32 The entire sample is made up of 51% micro, 28% small, 15% medium, and 6% large businesses. Of those excluded, 42% are micro, 36% are small, 17% are medium, and 5% are large businesses. A higher proportion of small businesses were excluded, as well as a lower proportion of micro businesses, with medium and large businesses represented in a similar way in both the overall, as well as the reduced sample.

2 The use of retentions in the construction sector

2.1 Definition of a retention in the construction sector

A retention is a percentage of the value of a construction contract which is held by the client[33] as an assurance of project completion and as a safeguard against defects which may subsequently develop and which the contractor may fail to remedy. Retentions can be held first by the client employing the main contractor and this typically filters down into all sub-contracted work on the project throughout the supply chain. The retention is retained from payments made throughout the length of the contract.

For most projects prior to 1st October 2011, once the sub-contracted works were complete, the percentage of monies deducted as retention was split into two halves, with the 'first moiety (segment) of the retention' paid back to the sub-contractor (typically referred to as 'practical completion'). This was followed by the 'defects liability period' typically lasting 12 months, during which time any defects were identified and must be rectified. The 'second moiety of retention' was then paid upon the issue of the 'certificate of making good defects', post-inspection.

Legislative changes mean that construction contracts entered into after 1 October 2011 can no longer link the release of retention to an act or event occurring under another (i.e. the main) contract, and release of retention must be triggered by a specific act or event within a sub-contractor contract. This is intended to eliminate the risk in relation to factors outside of the sub-contractor's control.

Retentions are written into applicable construction contracts from the start of a project[34]. The percentage that is retained and the amount of time for which it is held can vary substantially between contracts, depending on the project type, value or sub-sector, or other factors specific to a particular client, or method of procurement.

2.2 Origins of retentions

2.2.1 Original purpose of retentions

Retentions originated in the UK during the construction of the railway system in the 1840's[35]. This large-scale construction prompted high need for workers to meet growing demand of an expanding industry. This resulted in many new construction companies entering the market to capitalise on this opportunity. Many were unable to work to the

33 In this context a client could be a main contractor or tier 2 sub-contractor holding a retention from a tier 3

34 Department for Business Innovation & Skills (2013), Supply chain analysis into the construction industry report for Construction 2025

35 Bausman, D.C. (2004), Retainage practice in the construction industry. (The use of retentions in the UK subsequently acted as a catalyst for their use in the USA, where it became known as retainage)

required standard of performance, which led to a high number of insolvencies. As a result, railway companies would withhold a minimum of 20% of contractors' payments as a security to ensure completion costs, should the firm default[36]. Therefore the concept of retention in the 19th century was to ensure project completion.

From the mid-19th century this process evolved to become standard practice throughout the construction sector, and to incorporate not only an assurance of project completion but a protection against defects even after the project had been declared completed.

2.2.2 The current role of retentions in mitigating risk

The sector has made considerable progress since retentions were originally introduced, with better skills, training, products, relationships and working practices all contributing to substantially better quality outputs, and reduced risks.

However defects have not been eliminated from the sector, although over time the situation has improved. Data collected in 2015[37] show nearly three-quarters of clients interviewed rated impacts of defects at the handover point as 8 out of ten or higher (ten representing zero defects). This increased from 53% in 2001, indicating that quality is improving but that defects are still present in some cases.

Timeliness is another important consideration. Retentions can be a catalyst for greater efficiency and productivity for the construction project so that the contractor and sub-contractors can have the initial retention payment released, by achieving practical completion on time. Evidence indicates that timeliness also remains an issue for the construction sector. Clients surveyed in 2015 stated 40% of projects came in on time or better (for combined design and construction phases). This had declined from 45% in 2013-14. Taking just the construction phase into consideration, 48% of projects were delivered on programme or better, a fall from 57% in 2013-14[38].

A further consideration is that of the risk of insolvency. Retention money may cushion any financial blow that might come from failure to complete work if businesses lower down in the supply chain go into administration. In 2015, the construction sector had the highest number of new company insolvencies in England and Wales in comparison with other industries[39]. Furthermore the construction sector has featured in the five industry sectors with the highest number of new company insolvencies per year since at least 2010. This mirrors the 19th century purpose of retention as a financial mechanism to ensure project completion in the event that contractors went out of business.

It should be noted however, that whilst the total number of insolvencies is high in the construction sector in comparison with other industries, the rate of insolvencies per construction enterprise is not disproportionately high. Insolvency service data show that

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36 Specialist Engineering Contractor Group (2002), The use of retentions in the construction industry: a submission to the Trade and Industry Select Committee

37 Glenigan (2015), UK industry performance report: based on the UK construction industry Key Performance Indicators

38 ibid.

39 Insolvency Service (2016), Insolvency statistics April – June 2016 for England, Scotland and Wales

approximately 1.5% of UK construction enterprises became insolvent each year between 2010 and 2014, on a par with the average for the manufacturing industry[40].

There is also an issue around misaligned incentives[41] in the sector. Contracting systems used for many projects often create conflicting incentives. Misaligned incentives, for example if there are no penalties imposed for construction organisations that run over schedule, can result in breakdowns within the project. The use of fixed price contracts is a factor in the misalignment of objectives and adversarial relationships within the whole project team[42].

The Royal Institution of Chartered Surveyors (RICS) guidance notes describe retention as a form of security for the client and as a form of incentive to the contractor to complete the works[43]. It should be noted however that while some studies have found that incentivisation in construction work can underpin stronger collaboration between the client and contractor[44], other research has found that it was difficult to prove quantifiable improvement in performance when considering costs, time and quality, among other criteria[45].

The role of retention therefore is that the money acts as a form of guarantee of quality work during the project, and also for a period of time after the work is completed. Retention money is intended to act as an incentive for the contractor to eliminate any defects which may arise, and in a timely fashion[46]. This means that contractually, if defects are not corrected, then retention funds will be withheld from the responsible contractor or sub-contractor[47].

Therefore retention is a 'contractual mechanism'[48], and as the work progresses monies are not fully released until there is complete satisfaction that the conditions of the contract have been adhered to and that any defects which may have occurred have since been rectified[49].

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40 Calculation based on the Insolvency Service (2016), Insolvency statistics April – June 2016 for England, Scotland and Wales (data not available for Northern Ireland), and UK ONS Annual Business Survey data for the number of UK construction enterprises (Release Date 9 June 2016). Manufacturing industry defined by SIC group C

41 Incentivisation is the term used to align the motivations of the client with the supplier and vice-versa by and stimulating supplier's performance improvement in return for enhanced reward

42 Rose, T., & Manley, K. (2010), Client recommendations for financial incentives on construction projects. Engineering, Construction and Architectural Management,17(3), Pages 252 – 267

43 RICS Draft guidance note – retentions

44 Bubshait, A. (2003), Incentive/disincentive contracts and its effects on industrial projects

International Journal of Project Management, 21(1), 63-70. Meng, X. and Gallagher, B. (2012) found that performance relating to time, cost or quality, improved when construction projects were incentivised, compared with non-incentivised construction projects

45 Gruneberg, S., Hughes, W. and Ancell, D. (2007), Risk under performance-based contracting in the UK construction sector. Construction Management and Economics, 25(7), 691-9

46 House of Commons: Trade & Industry Committee (2002-2003), Retaining retentions

47 Hughes, Hillebrandt & Murdoch (1999), The impact of contract duration on the cost of cash retention

48 House of Commons: Business & Enterprise Committees (2008), Construction Matters

49 European Commission (2009), International Accounting Standard 11: Construction Contracts

Overall, this suggests that retentions are used as a multi-purpose 'insurance policy', with some clients and main contractors requiring all 'policy features', whereas others may only require certain aspects, depending on the type, complexity, cost and timescale of the work.

2.2.3 Cultural and structural factors associated with the on-going practice of holding retentions

The culture and structure of the sector plays a key role in the on-going use of the practice. Highly diverse and fragmented, the construction sector operates in silos driven by individual trades, with limited collaborative working. The majority of organisations are SMEs, many of which act as sub-contractors to a small number of larger construction firms (main contractors). Therefore, main contractors hold retentions against their sub-contractors in the supply chain – it is not just clients who hold retentions against construction contractors.

Contractors participating in depth interviews and focus groups state that the on-going use of retentions stems partly from a lack of trust which permeates all the way down the supply chain; and that paradoxically retentions drive a lack of trust, acting as a barrier to strong working relationships within the supply chain (impacts of retentions are discussed in more detail in chapter 4).

The disaggregated sector also means there are one-off relationships, particularly for very specialist sub-sectors where the nature of the work does not lend itself to establishing long-term, regular contracts. Clients and main contractors are more inclined to hold retentions in such circumstances, as a means of protecting against risk (discussed in more detail in section 3.7).

2.3 Legalities of holding retentions

The practice of holding retentions is a contractual arrangement between the relevant parties. Ten years ago retentions were required by the contract forms commonly in use, such as the Joint Contracts Tribunal (JCT), Institution of Civil Engineers (ICE) and/ or by standing order[50]. However standing orders, which previously required the use of certain contracts, have been changed to provide greater flexibility in procurement. Also standard contract forms do not require cash retentions – for example the new JCT Major Project Form contract has been drafted without retention provisions[51]. Other contracts also do not require retentions.

Standard definitions based on analysis of the Joint Contracts Tribunal (JCT) and New Engineering Contract (NEC) – appear to be based on two main purposes:

- safeguarding against insolvency of contractors (i.e. holding monies back should insolvency occur); and
- protection against the possibility of defects.

50 SEC Group (2014), Payment practices and pre-qualification in public sector construction
51 Cowie, M. (Accessed 09.11.15), Is there a future for retentions in the construction industry?

2.4 Key findings – use of retentions in the construction sector

- Retentions were first used in the construction sector in the 19th century, as a means to ensure the project would be completed, in case contractor(s) defaulted.

- Over time, the use of retentions became widely embedded within the culture of the sector as standard practice. The purpose of retentions remained predominantly the same as when they were first introduced – to mitigate the risk that projects would not be completed to a high quality standard, and in a timely fashion.

- While standards in the construction sector have clearly improved since the 19th century, the issues of defects and timeliness of project completion remain, making it necessary to have some kind of approach to mitigate these risks.

- In effect therefore, the retention is a form of 'insurance policy', used as an incentive or form of security by clients and/or main contractors, to offset the perceived project risks.

3 Scope and scale of retentions in the construction sector

3.1 Size and scope of the construction sector

In 2014, the construction contracting industry[52] contributed approximately £85 billion to the UK economy in value added, comprising over 270,600 businesses[53] and covering approximately 2.2 million jobs[54]. It had a sector turnover of approximately £216 billion[55].

This research focuses on the use of retentions in the construction sector in England. In 2014, the construction contracting sector in England contributed approximately £72 billion in value added, and had a sector turnover of approximately £188 billion[56].

3.2 Overview of key characteristics of the construction businesses that took part in the survey

Survey participants were asked to provide information on their business size, and also their position in the supply chain.

Of those contractors surveyed, just over half (258, 51%) are micro businesses, over a quarter are small businesses (140, 28%), 15% were medium sized (76) and 6% were large (29).

Contractors were asked to indicate their position in the supply chain as tier 1, tier 2 and tier 3, and could choose all that applied. 292 described themselves as tier 1, 268 as tier 2 and 85 described themselves as tier 3. As businesses could describe themselves as belonging to multiple tiers, some analysis was only conducted with those businesses that only belonged to one of the tiers. This left 171 businesses for tier 1, 136 businesses for tier 2 and 41 businesses for tier 3[57].

Business size and tier are not clearly associated in the sample as businesses from all four sizes were represented in all of the tiers, except for large businesses, where none described themselves as being tier 3.

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52 SIC 41-43

53 ONS Annual Business Survey (UK non-financial business economy 2015 provisional results). At the time of writing 2014 was the latest year data was available for England

54 ONS (2017) Labour Force Survey, 2014 results

55 ONS Annual Business Survey (UK non-financial business economy 2015 provisional results).

56 ONS Annual Business Survey (UK non-financial business economy: 2014 regional results). At the time of writing 2014 was the latest year data was available for England

57 The businesses that were excluded from this particular analysis were fairly similar in relation to the proportion of business size they represent. Of those excluded, 42% are micro businesses, 36% are small businesses, 17% are medium sized businesses and 5% are large businesses

3.3 Frequency of use of retentions

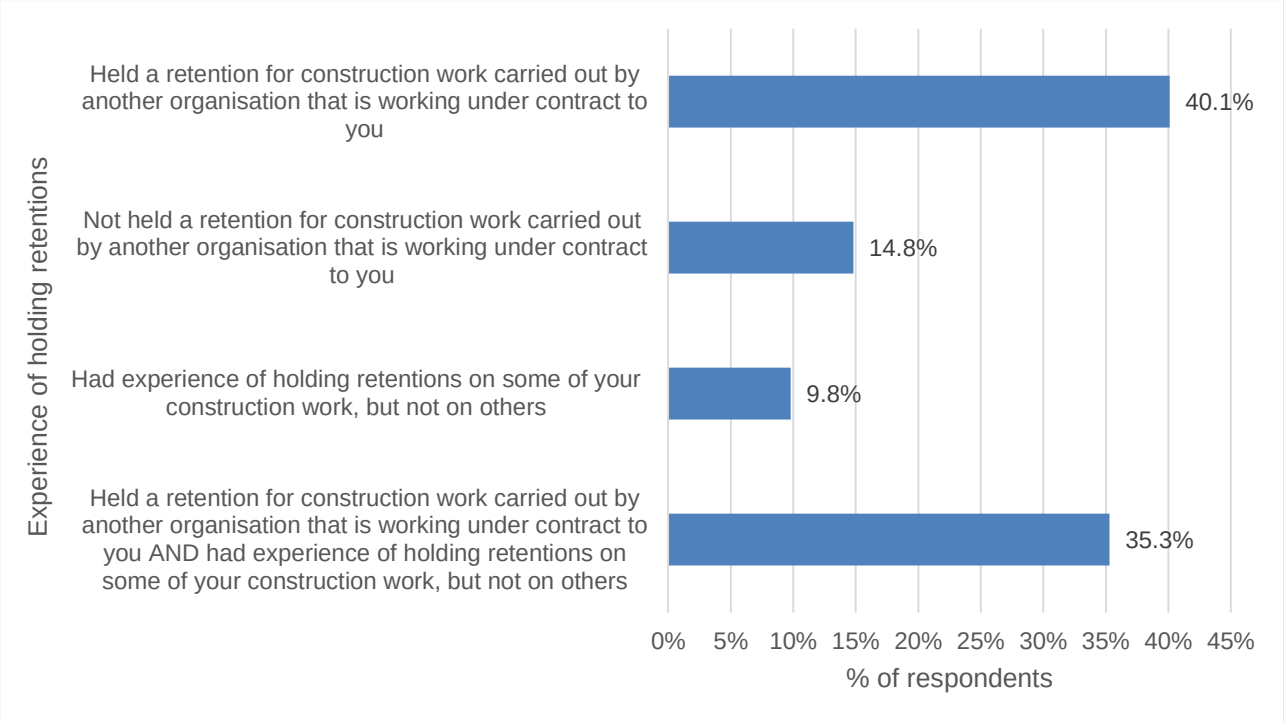
3.3.1 Extent of use of retentions across the whole of the construction sector (client views)

The majority of respondents to the client survey (85%) have had experience of holding retentions on some or all of their construction projects or from organisations under contract to them in the last three years. Around 40% of respondents to the client survey held retentions from organisations working under contract to them, and around 10% held retentions on some, but not all of their construction projects during this time. Around 35% of client respondents held retentions from organisations working under contract to them, as well as on some but not all of their construction sector projects[58]. Only 15% of clients had no experience of holding retentions in this time (Figure 1)[59]. This indicates the practice of holding retentions is widespread, although not universal.

58 It should be noted that the survey questionnaire asked client respondents to select ONE of the following options: '*Held a retention for construction work carried out by another organisation that is working under contract to you'; 'Not held a retention for construction work carried out by another organisation that is working under contract to you'; or 'Had experience of holding retentions on some of your construction work, but not on others'*. Some respondents interpreted the first option to mean retentions held from individual *organisations*, and the third option to relate to retentions held in respect of construction sector *projects.* On that basis and given respondents were being asked about work that spanned the last three years at the time of fieldwork, some respondents indicated two responses: *held retentions on construction work carried out by another organisation working under contract to you in the last three years* AND *had experience of holding retentions on some of your construction work, but not on others* – as shown in Figure 1

59 These clients spanned a range of sectors, however the majority of those with no experience of holding retentions were smaller in respect of organisation size, in comparison with those that do hold retentions

Figure 1: Frequency of use of retentions (client views)



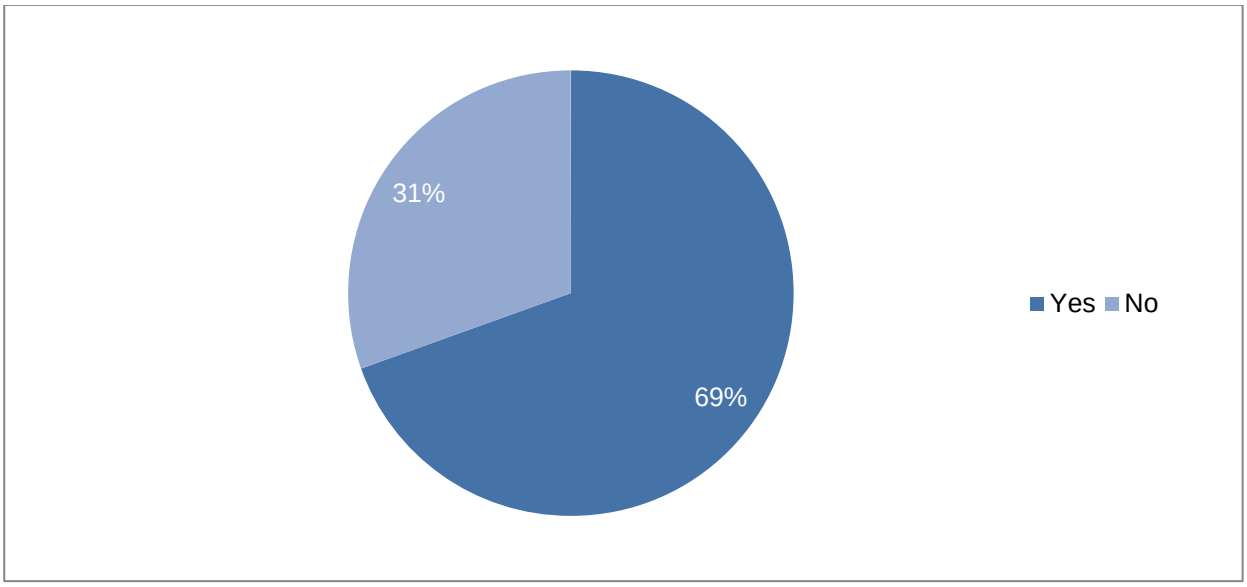
419 respondents

The client survey also asked respondents to provide information on whether they are based in the private or public sector, with the intention of exploring whether the practice of holding retentions differs between the two groups. However, it has not been possible to draw clear conclusions from the results, as it has not been possible to control for other factors that are likely to influence use of retentions in the sample (for example, contract values where data were limited). For this reason analysis comparing use of retentions between public and private sector clients has not been presented.

3.3.2 Factors clients take into consideration when considering whether to hold retentions

Evidence from the contractor survey as well as the qualitative data indicates that retentions are predominantly used as a form of insurance policy. This is further illustrated by the fact that 69% of client respondents with experience of holding retentions in the last three years say that there are certain types of project that do not typically attract retentions (Figure 2). This suggests that the client's decision whether to hold a retention is influenced by the type of project, or other factors such as, for example, their relationship with the construction contractor or project value.

Figure 2: Whether there are any types of project that do not hold retentions (client views)



352 respondents

Survey data show that the main differentiator as to whether clients hold retentions is the project value, with the type of contract a close second. Contracts with a lower value generally do not require retentions. The concept of 'lower value' is a subjective one and is extremely varied – retentions are not held under £1,000, under £20,000, under £25,000, under £50,000, under £60,000 and under £100,000 depending on the respondent. The most commonly mentioned dividing line by value is £100,000.

The type of project is also relevant for the clients considering whether to hold a retention. Construction works that are described as 'minor', which can mean they are not particularly complex and as such require minimal project management, are less likely to hold retentions. For example, short term repair and maintenance work is less likely to hold retentions. The extent of project risk together with knowledge of - or a relationship with - the contractor also influences the decision whether to hold retentions. This is supported by survey data about the ways in which the type of contract influences the amount retained and length of time for which the retention is held (discussed in more detail in section 3.7 below).

Qualitative evidence indicates that contracts procured under procurement frameworks or similar partnership working arrangements typically should not require retentions. This is because of the extensive due diligence on contractors prior to the delivery of the contract (to actually be accepted on to the framework), typically including financial standing, track record in delivering high quality of work, and project management and quality assurance practices. This takes time and therefore incurs cost, for clients administering the framework and contractors investing time to gather and submit evidence to be accepted on to the framework. This also acts as a means of helping to establish longer-term relationships between clients and contractors – which survey data show is a factor in

reducing the need for retentions, and is an important incentive to deliver high quality work and thus maintain those relationships.

However, it appears that procurement frameworks used fairly extensively in the public sector, are no guarantee that retentions are not held. This is evident from survey data indicating on average around 77% of current public sector contracts hold retentions, among clients surveyed with experience of holding retentions in the last three years.[60] Qualitative evidence suggests that retentions are still used even where frameworks are in place, because the practice is firmly engrained in the culture of the sector, and that some clients can view retentions as a "*security blanket".* In practice, qualitative feedback from interviews and focus groups deem this to be excessive in mitigating project risks.

3.3.3 Extent of use of retentions across the whole of the construction sector (contractor views)

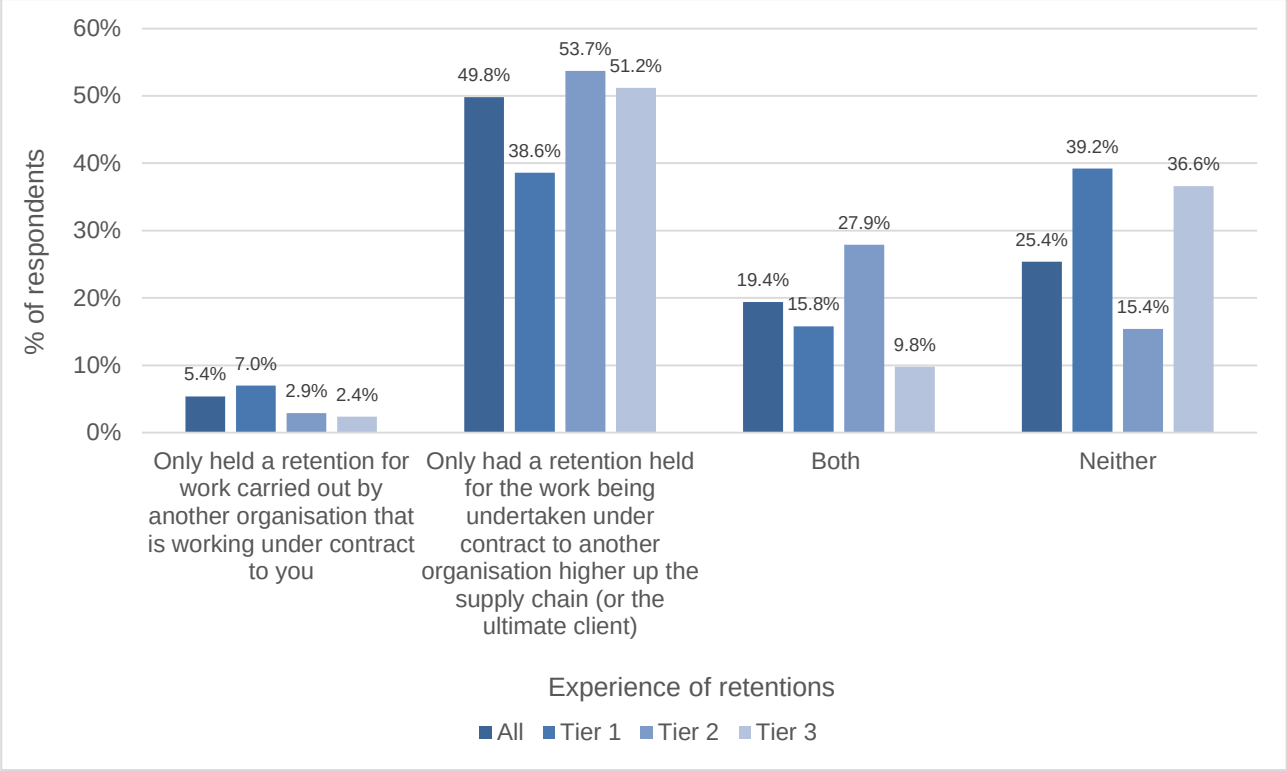
Evidence from the contractor[61] survey also shows the practice of retentions is commonplace, but is not universal across the whole of the construction sector.

Half of all contractor respondents have had a retention held against work they were undertaking in the last three years. Nearly a fifth of contractor respondents (19%) have had a retention held, and have held retentions against work carried out for them by a sub-contractor. Around 5% of contractor respondents have *only* held retentions, rather than having had retentions held against their own work (Figure 3).

Around a quarter of contractor respondents had not experienced retentions at all in the last three years, and therefore did not proceed any further with the survey. Approximately 80% of these respondents who did not proceed with the survey[62] say they choose not to work with retentions and would rather walk away from business that has a retention attached. These respondents previously accepted contracts with retentions, but no longer do. There were no clear trends by sector; this decision appears to be down to personal choice of the business owner.

60 It should be noted that it is not possible to determine whether this sample of public sector clients is representative of all public sector clients. This result should, therefore, be treated with caution.
61 This included main and sub-contractors
62 I.e. around 20% of all respondents

Figure 3: Frequency of use of retentions (contractor views)



Base 504 respondents[63]

3.4 Average number of contracts with retentions from survey data

3.4.1 Current contracts where retentions are held (contractor views)

On average, contractors responding to the full survey with experience of retentions in the last three years say retentions are held on 65% of their current[64] contracts[65]. Almost a third of these (33%) stated that retentions are held on all of their contracts, while 14% of contractors with experience of retentions do not have any contracts with retentions held against them currently.

There is some variation in the average percentage of contracts with retentions depending on business size, with micro-businesses having statistically significantly fewer contracts

63 Respondents were able to select more than one response

64 Contractors were asked about current i.e. on-going construction contracts, as well as retentions still held on completed contracts. This section refers to current contracts only, where retentions are being held from these contracts

65 Contractors were asked to provide the overall number of all construction contracts, and then the number of these that had a retention held against them. These numbers were used to calculate the overall average of contracts with a retention

with retentions held compared to medium sized businesses[66] - 59% of contracts compared to 74%. None of the other pairwise comparisons were statistically significant.

Likewise, there is also some variation between contractors by tier. However, this difference is only marginally statistically significant between tier 1 businesses and tier 2 businesses - 59% of contracts compared to 71%.[67].

This suggests that for some contractors responding to the survey – notably medium-sized organisations - retentions are effectively 'the norm', whereas they can be used less frequently for others, depending on the nature of the contract. This may stem partly from the differences in use of retentions between sub-sectors.

Arguably there is no one 'construction sector', but a range of specialist sub sectors, many of which are very different from one another. It may be expected therefore that retentions operate in a slightly different way in each of these sub-sectors.

In the construction utilities sector, for example those working on sewers, and water treatment plants, alternative approaches are more commonly used, rather than cash retentions - typically bonds. Change was led by the sub-sector as a whole which grouped together to remove cash retentions and instead only accept contracts that stipulate the use of a retention bond[68].

Those involved with the construction of highways do not appear to experience retentions on a par with the typical industry standard, although other safeguards and penalties are built in to contracts[69].

The lift industry has also come together to offer an alternative to retentions. Instead there is a dedicated sector guarantee, underwritten by insurance. This guarantee is described in **Appendix 5.**

It appears that where specific sub-sectors have elected to work together to offer alternatives to retentions, that this is predominantly spearheaded by trade federations and associations, working closely with their members to bring about change.

There are examples of client-driven change, resulting in a zero retentions policy. A number of tier 2 contractors interviewed say they are aware of a zero retention stance adopted by clients. Analysis of the feedback provided by clients who have not held retentions in the past three years shows that the majority of these are in the private sector. They say this is predominantly driven by a desire for more collaborative working with the supply chain, underpinned by longer-term relationships.

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66 ANOVA: F = 3.51; alpha = .018; Tukey HSD post-hoc test for pairwise comparisons

67 ANOVA: F = 3.151; alpha = .045; Tukey HSD post-hoc test for pairwise comparisons

68 Primary evidence obtained through telephone depth interviews. See chapter 5 for an explanation of retention bonds

69 ibid.

3.4.2 Current contracts where retentions are held (client views)

Clients responding to the survey with experience of holding retentions in the last three years, say on average, retentions are used on 78% of all their current[70] contracts. It has not been possible to determine what a representative sample of construction sector clients would be for the purpose of this study, as the proportions of clients by type using retentions is unclear. Equally, therefore, it is not possible to weight the data to try and make sure that the results are representative of construction sector clients across the sector as a whole.

3.5 Current purpose of retentions

The main purpose of retentions is to manage and mitigate supply chain risk, which can present in various forms. Ultimately, mitigation of these risks is intended to ensure projects are completed to a high quality standard within the specified timescale.

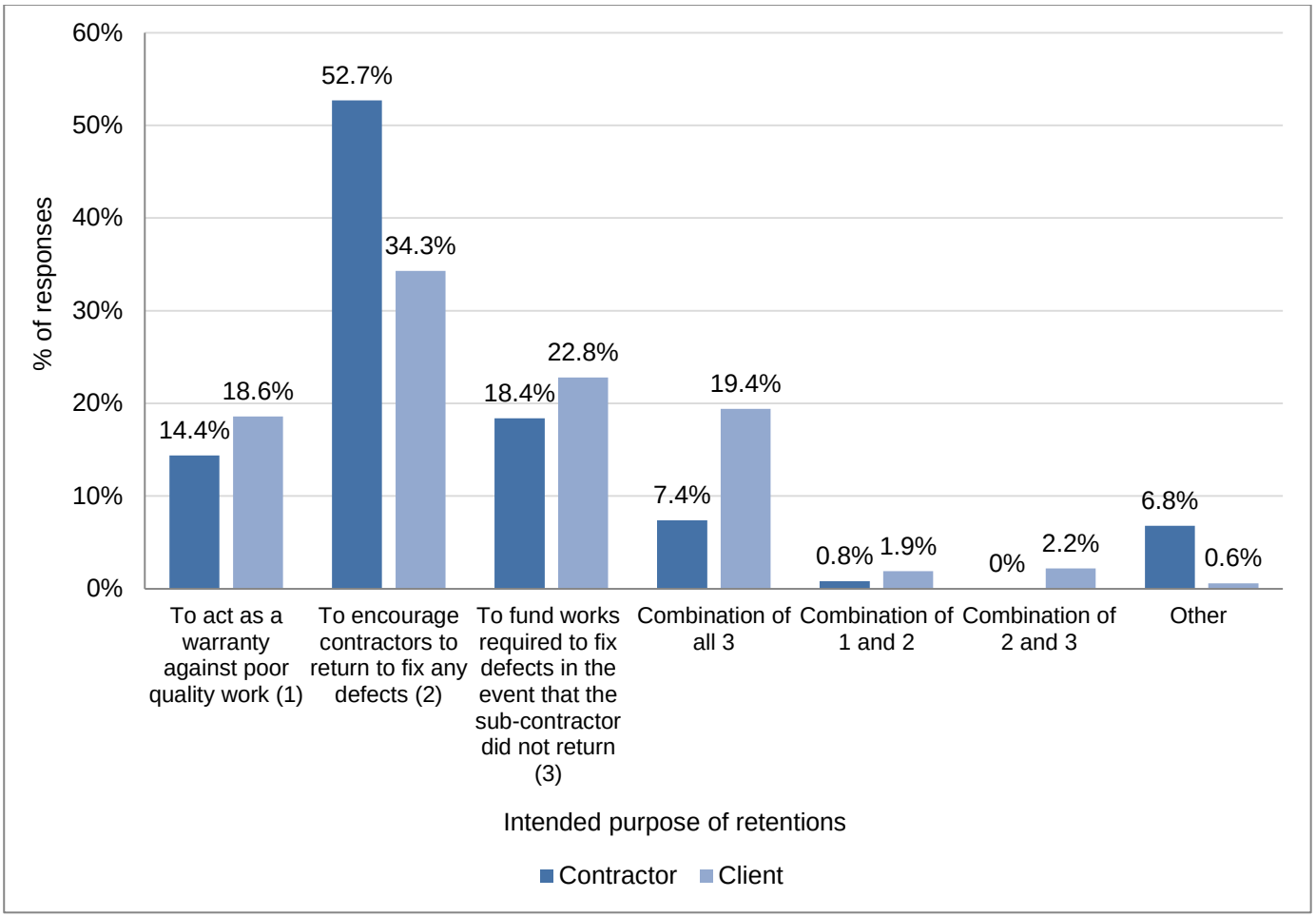
Participants in the client and contractor surveys with experience of retentions in the last three years were asked to give their views on the purpose of retentions. Just over half (53%) of the contractors surveyed believe the intended purpose of retentions is to encourage sub-contractors to return in order to correct any defects that have arisen within the work (Figure 4).

Client respondents did not hold a majority view about the core purpose. Just over a third of clients (34%) say the primary role of retentions is to encourage contractors to return to correct defects. However around 18% consider retentions provide a warranty against poor quality outputs, and 23% believe retentions are primarily to pay for the costs of remedying defects when contractors do not return to fix them (Figure 4).

This suggests that clients are more likely to view retentions as a means of mitigating against multiple risks throughout the supply chain, whereas contractors appear to be focusing on managing the next tier down. Therefore the core risk to the main contractor seems to be dealing with the impacts should a sub-contractor not return to correct any defects that arise – notably the costs incurred of either fixing the problems themselves, or of re-tendering the work to a different sub-contractor. Around 7% of contractors and around 19% of clients surveyed say retentions are intended to fulfil all three of these purposes.

70 Clients were asked about current i.e. on-going constructions contracts, as well as retentions still held on completed contracts. This refers to current contracts only, where retentions are being held in relation to these contracts

Figure 4: Contractor and client views about the intended purpose of retentions (all respondents)



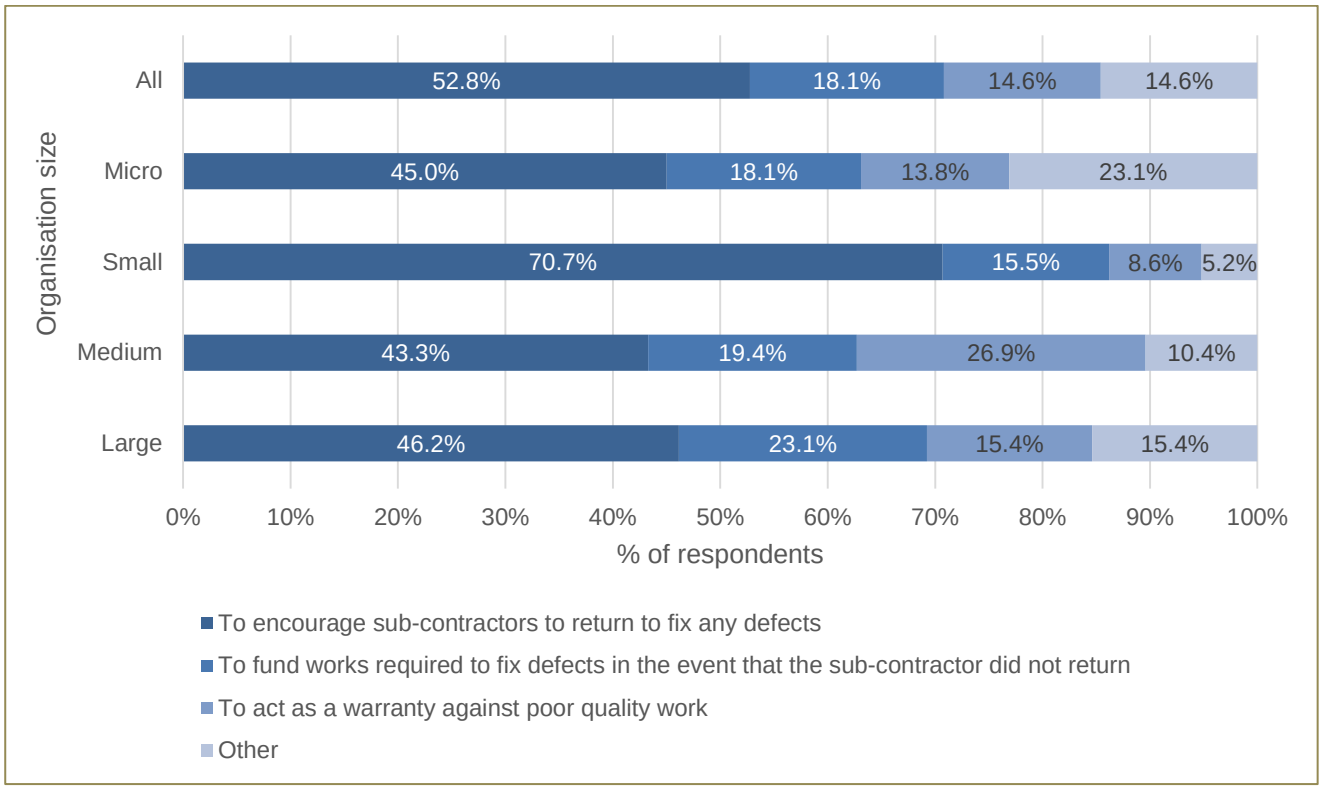
Base number of respondents 373 (contractors); 355 (clients)[71]

There are similarities in the opinion of the intended purpose of retentions by contractor organisation size, with all groups most commonly citing 'to encourage sub-contractors to return to fix any defects'. However there are also differences, with micro businesses (contractors) surveyed more inclined to say that retentions are intended as a means of boosting the cash flow of main tier 1 contractors, or as a means of facilitating a discount on the overall cost, by not paying back some or all of the retention. Nearly a quarter of micro businesses responding to the survey cite this to be the primary purpose of retentions (Figure 5 – 'other' response). Main contractors participating in qualitative research say they are aware of these views held further down the supply chain. Some tier 1 contractors participating in depth telephone interviews acknowledge that the practice offers benefits in the form of additional cash flow but emphasise that retentions do not boost their own cash flow as concurrently the client is holding a retention against them[72].

71 Respondents were able to select more than one response
72 It is not possible to understand this in more detail without access to tier 1 contractor accounts

Qualitative evidence as well as survey data show some contractors may increase tender prices where a retention will be held. This absorption of the cost of retention actually undermines the purpose of retention[73].

Figure 5: Contractor views about the intended purpose of retentions (respondents by organisation size)



Base 369 respondents[74]

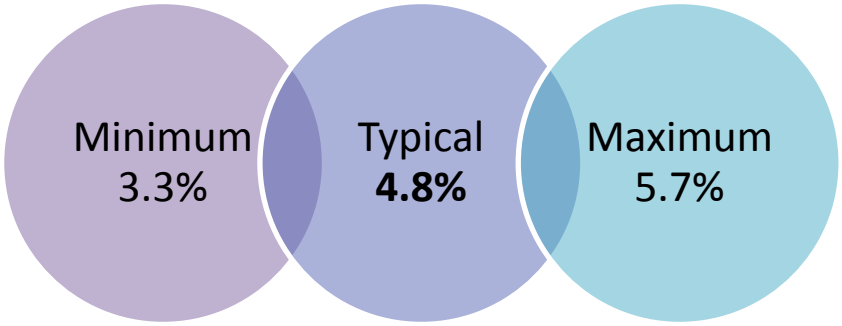
3.6 Minimum, typical and maximum amount retained – survey data

3.6.1 Amount that is typically retained – contractor views

Contractors participating in the survey with experience of retentions held over the past three years were asked to provide details of the retention percentage 'typically' held on current contracts, and the minimum and maximum percentages held against their current contracts[75]. These responses were then used to calculate the average 'typical' retention, the average minimum retention, and the average maximum retention percentages (Figure 6).

73 House Of Commons (2002, Accessed 09.11.15), Trade & Industry Second Report
74 Respondents were able to select more than one response. 371 respondents answered this question but 2 did not indicate organisation size
75 i.e. effectively the retention percentage that is most commonly held against them in the last three years

Figure 6: Minimum, typical and maximum % of contract value that is retained from contractors on average (contractor views)



Survey data from contractors show that the typical amount of retention held from contractors equates to 5% of contract value according to 78% of respondents. The second most common rate was cited as 3% by 11.1% of respondents. 2% of contractors surveyed cited a typical retention of 4% of contract value. The other 8% of respondents cited rates smaller, as well as larger than those most commonly cited: 3% cited rates below 3% and another 3% cited rates above 5%, with the highest typical retention rate mentioned being 35%. This results in an average typical retention rate of 4.8% overall.

It should be emphasised that incidences of having held retentions against them substantially higher than the average are isolated – for example just one respondent typically has retentions held against them to the value of 35%, and a further one respondent typically has retentions held against them of 17%.

So while the vast majority of contractor respondents experience retention percentages of 5%, there are some instances where retentions are lower, and few where retention percentages are higher than that.

Some variation in the amount retained is also seen when considering the survey data for minimum retention percentages held. The most common minimum retention rate which contractor respondents currently experience is 3% (54.4% of respondents), while 5% is the second most common rate cited (25.7%) followed by 2% (10.1%). Another 8% of respondents experience rates below 3% while 1% of respondents reported minimum rates of more than 5%. Therefore, the average is 3.3% of the minimum retention rate held against contractors at the time of the survey.

As to the maximum retention rate held against contractors surveyed, the vast majority (82.9%) report this to be 5% of contract value, with another 5.6% reporting a maximum retention rate of 3% and 4.1% of contractor respondents reporting a retention rate of 10%. Another 3% of contractors surveyed report a maximum retention percentage of less than 3%, 2% of contractors report values above 5% and below 10%, while another 2% of contractors report maximum rates above 10%. This results in an average maximum retention rate of 5.7%.

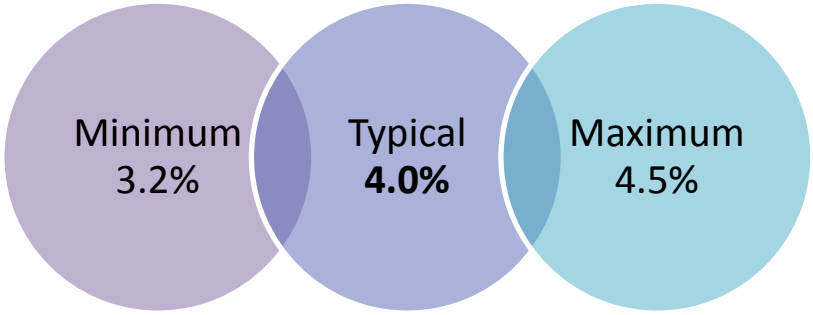
Contractors surveyed with experience of holding retentions over the past three years were also asked to provide details of the retention percentage that they ‘typically’ hold on current contracts, as well as the minimum and maximum percentage they hold on their

current contracts[76]. These responses were then used to calculate the average 'typical' retention, the average minimum retention, and the average maximum retention percentages.

The typical retention held by contractors is, with an average of 4%, slightly lower than the figure reported by contractors as being held against them. The majority (60.5%) typically hold retentions of 5%, while almost a quarter (24.6%) most commonly hold a retention of 3%. Some contractors surveyed typically do not hold retentions at all (7.9%).(Figure 7).

The minimum retention held is most commonly 3% (54.9% of contractor respondents), while almost a quarter (24.8%) hold 5% at minimum and 11.5% not holding any retention at all. The highest retention held by the majority of contractor respondents (72.6%) is 5%, while 15.9% hold a retention of 3% as the highest rate. Again, some contractors (7.1%) don't seem to hold retentions at all and 2.7% held retentions higher than 5%.

Figure 7: Minimum, typical and maximum % of contract value that is retained by contractors on average (contractor views)

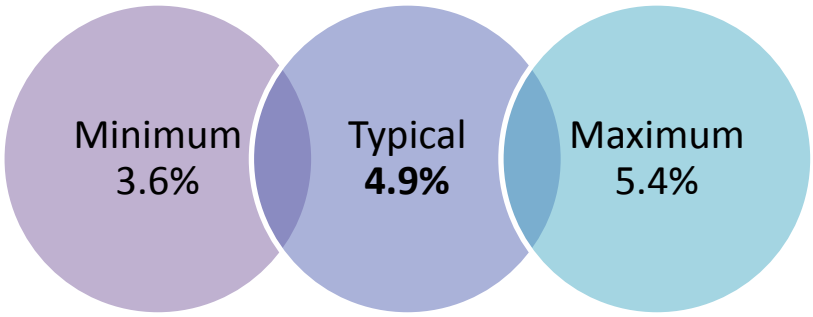


3.6.2 Amount that is typically retained – client views

Participants in the client survey with experience of holding retentions over the past three years were asked to provide details of the retention percentage that they 'typically' hold on current contracts, and the minimum and maximum percentages they hold on their current contracts[77]. These responses were then used to calculate the average 'typical' retention, the average minimum retention, and the average maximum retention percentages (Figure 8).

Figure 8: Minimum, typical and maximum % of contract value that is retained on average (client views)

76 i.e. effectively the retention percentage that they most commonly hold or have held in the last three years
77 i.e. effectively the retention percentage that they most commonly hold or have held in the last three years



Whilst 71% of client respondents typically retain 5% of contract value, there are some differences showing that this is not the norm across the whole sector. Just over a fifth of client respondents (21%) typically hold a retention of 3%, while nearly 5% of client respondents hold 10% of the contract value in retention. This results in an average typical retention rate of 4.9% overall.

As with contractors, there is some variation in the range of minimum value held in retention among clients. Just over half of all client respondents (55%) hold a minimum 3% of contract value in retention, and just over a quarter (26%) hold a minimum of 5%. Around 8% of client respondents say they hold a minimum retention of 2%.

While 78% of client respondents say they hold a maximum of 5% of contract value in retention, there is evidence showing that higher amounts are held. 7% of client respondents hold a maximum of 10% of contract value in retention. Around 11% of client respondents say they hold a maximum of 3% of contract value in retention.

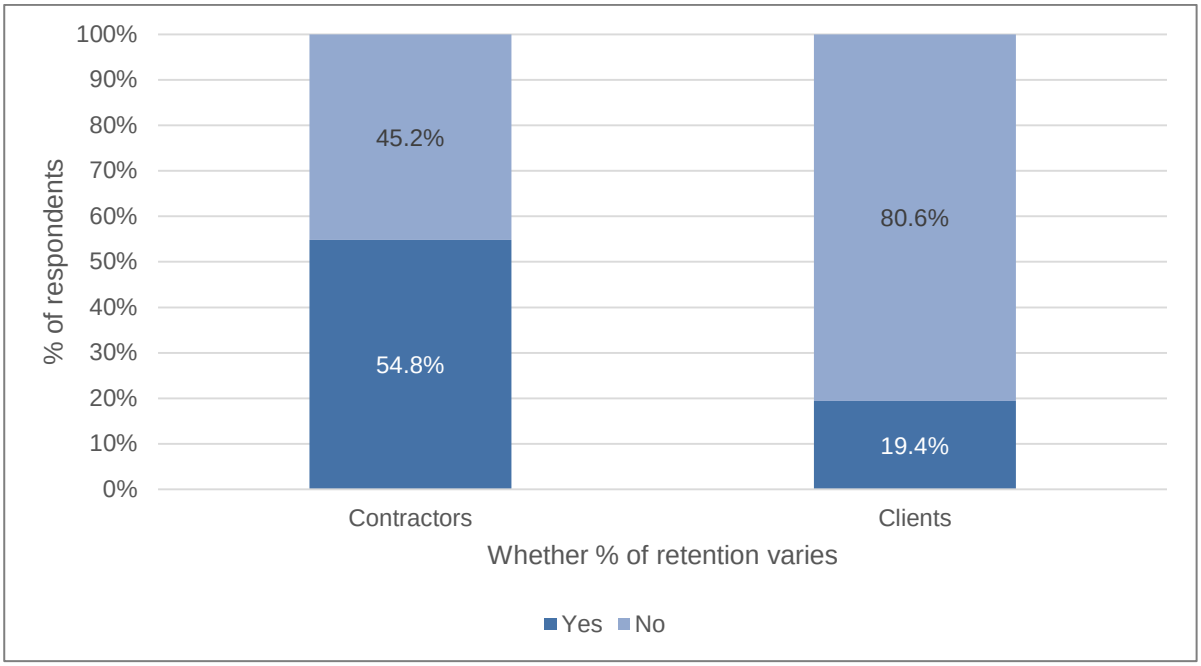
3.7 Factors that influence the amount of retention and length of time for which it is held

3.7.1 Extent to which the amount of retention and length of time for which it is held varies – survey data

Over half (55%) of main contractors surveyed who held retentions from sub-contractors at the time fieldwork was conducted say that the percentage value held in relation to these contracts, varies, depending on the contract. By contrast around 20% of clients say that the percentage value being held from contractors at the time fieldwork was conducted, varies (Figure 9).

This tallies with data in section 3.6, which shows variation in the range of typical retentions held, notably with respect to the minimum retention held.

Figure 9: Does the percentage value of retention held vary from contract to contract? (*refers to on-going contracts at the time fieldwork was conducted*) (contractor and client views)

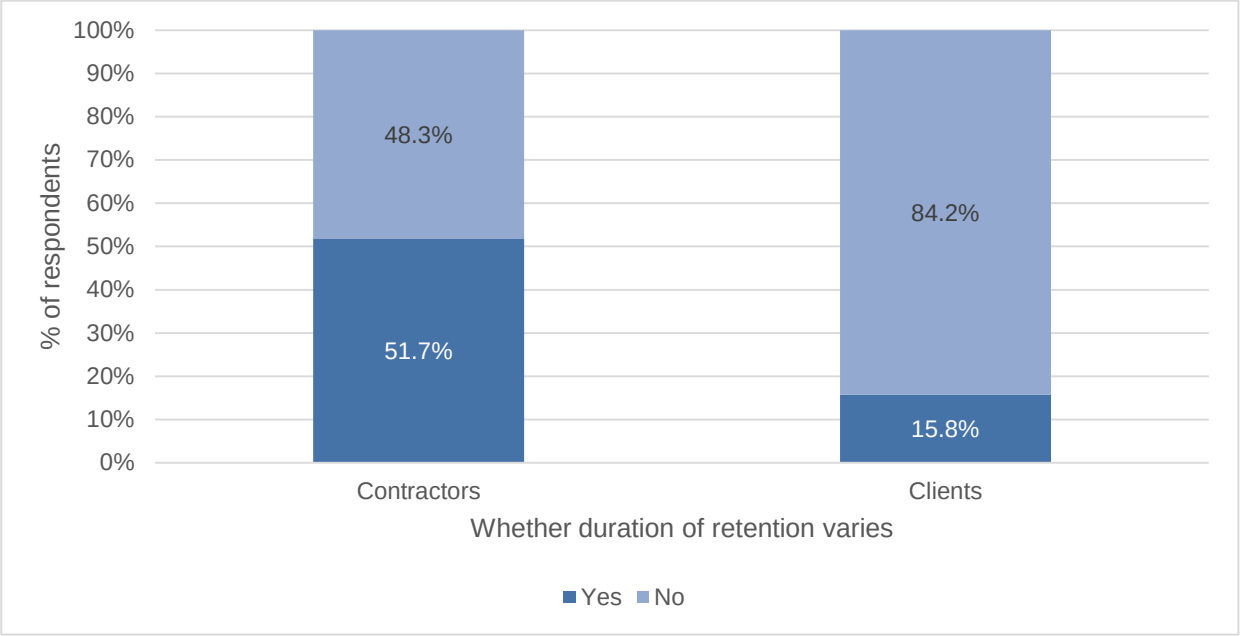


Base number of respondents: 124 (contractors); 345 (clients)

Around 48% of main contractors surveyed say that the length of time for which they held retentions from sub-contractors at the time fieldwork was conducted, varies from contract to contract. By comparison, around 16% of client respondents say the same (Figure 10). This suggests that main contractors were more likely to vary their retention terms used with sub-contractors, whereas clients may have been more likely to use standard terms and conditions, particularly if they are commissioning the same type of work each time – at the time fieldwork was conducted.

Qualitative evidence finds examples of tier 1 contractors varying the contractual terms and conditions for holding retentions across multiple projects with the same sub-contractor. This ties in with the concept of retentions as an insurance policy, as inevitably policy features, benefits and clauses vary from product to product, to suit the need.

Figure 10: Does the length of time for which retentions are held vary from contract to contract? (*refers to on-going contracts at the time fieldwork was conducted*) (contractor and client views)



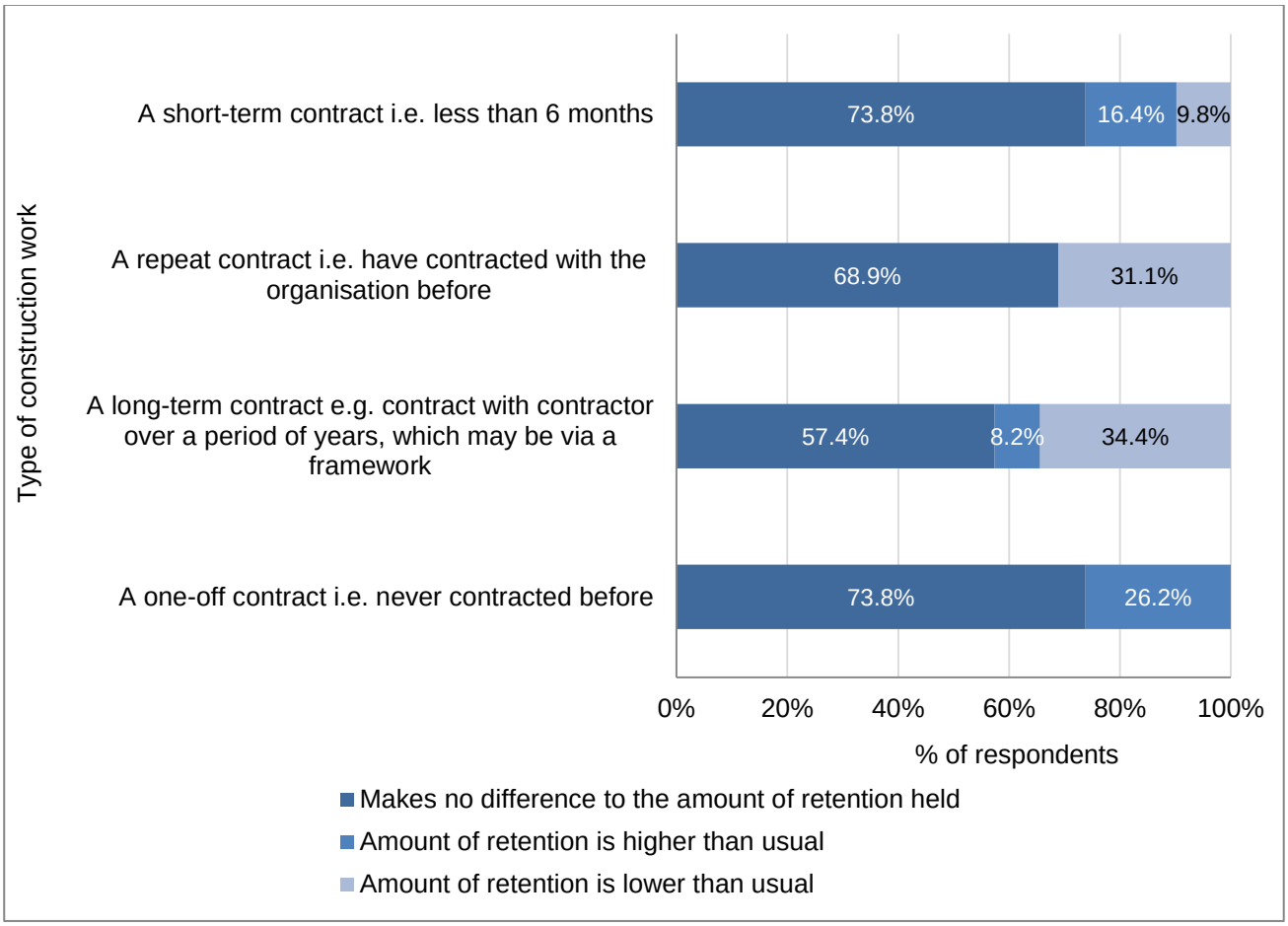
Base number of respondents 116 (contractors); 341 (clients)

3.7.2 Factors influencing the percentage value typically retained by clients

Participants in the client survey, who reported that they vary the retention rate held between their current contracts (Figure 9), were then asked how this varies, depending on whether it is a long or short term contract and their relationship with the contractor (Figure 11). Of these clients, 31% reported that the amount of retention is lower than usual if the work is a repeat contract[78], compared to 26% who said the amount retained is higher if it is a one-off contract[79]. 34% reduced and 8% increased the amount of retention held for long-term contracts[80], compared to 16% who increased and around 10% that decreased the retention percentage for short-term contracts.[81]

78 i.e. they have contracted with the organisation before
79 i.e. they have never contracted with the supplier before
80 For example, a contract with supplier over a period of years, which may be via a framework
81 i.e. less than 6 months

Figure 11: How the type of contract affects the amount of retention held on current contracts (client views)

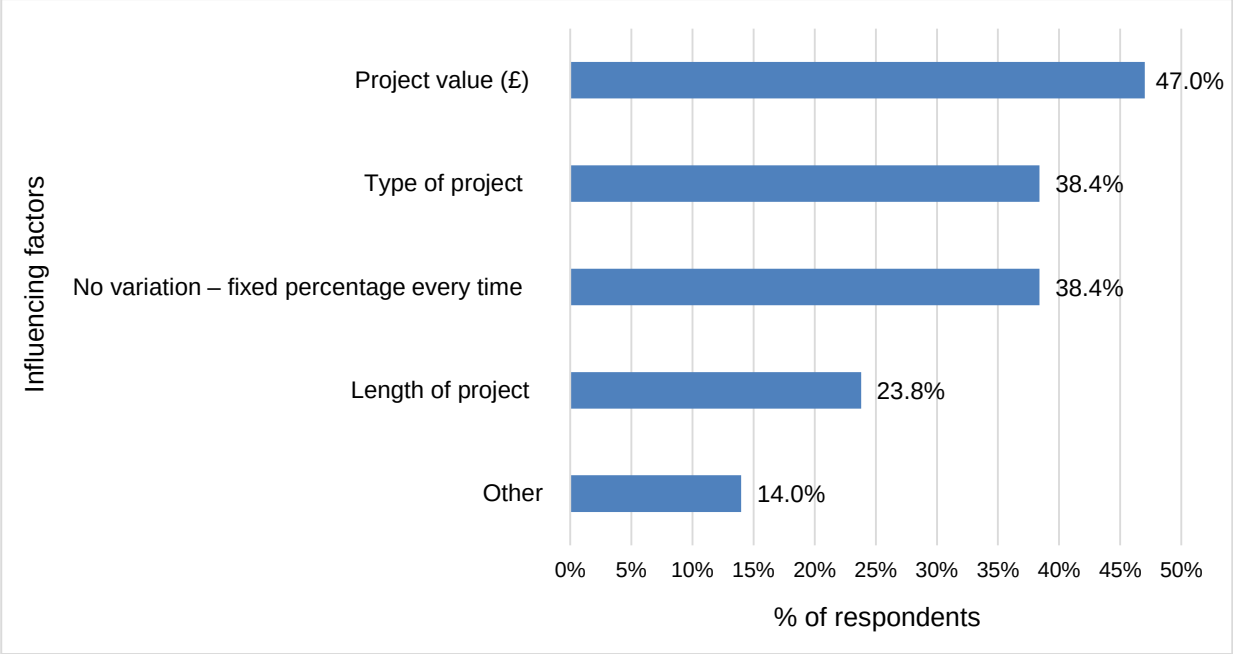


61 respondents

All clients participating in the client survey with experience of holding retentions in the last three years were also asked whether project type, length or value influenced the retention percentage held, or whether they fixed the retention percentage every time. They could select more than one response.

Nearly half (47%) of all client respondents say the project value influences the amount of retention that is held. Qualitative evidence suggests that projects of a relatively low value might only attract a small retention perhaps of 1 or 2% (or no retention at all). The type of project is also taken into consideration by 38% of client respondents. Qualitative evidence also finds that, for example ‘standard’ repair and maintenance projects are less likely to hold high retentions compared with one-off, larger and potentially more complex work, or where there is a complex mix of a range of trades. The length of the project is a consideration for nearly a quarter of clients responding to the survey (Figure 12).

Figure 12: Factors that influence the amount of retention typically held (client views)



354 respondents[82]

Qualitative evidence indicates that clients take into account the complexity of the work and therefore the degree of risk involved, when setting the retention percentage held. In particular, clients interviewed say they are more inclined to hold a retention, or a higher retention than usual, for 'specialist' work – i.e. where they have limited knowledge and therefore are less able to assess quality. The sub-sector can dictate the amount of retention in some cases, with specialist work more likely to require higher retentions, especially if there is no existing relationship between client and contractor.

3.7.3 Factors influencing the percentage value typically retained by contractors

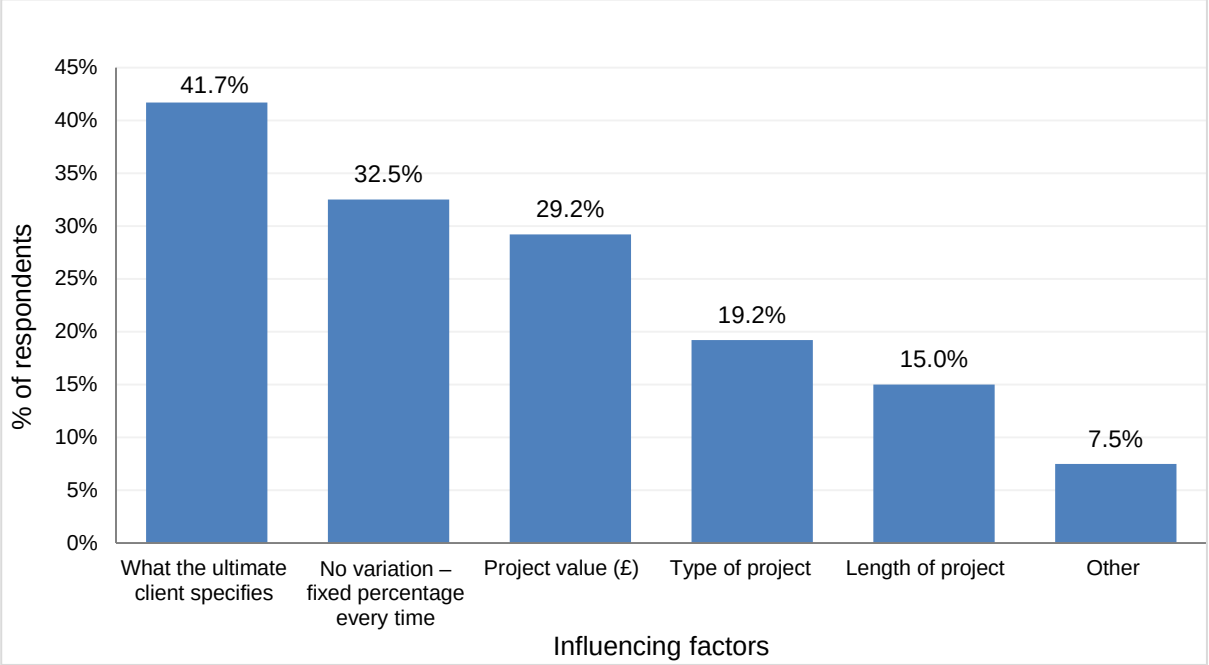
All contractors with experience of holding retentions in the last three years were also asked whether project type, length or what the ultimate client specifies influences the retention percentage held, or whether they use the same fixed retention percentage every time. They could select more than one response.

Approximately 42% of these contractors report that the retention rate is influenced by what the ultimate client specifies (Figure 13). Around a third say there is a fixed retention percentage value for all contracts, with no variation. Nearly 29% of contractors surveyed say that project value is a factor when determining the value of the retention[83]. The type and length of contract are less influential for respondents by comparison to the other factors stated.

82 Respondents were able to select more than one response

Qualitative evidence obtained from focus groups suggests the state of the economy could also be one factor affecting the amount of retention held – for example in a more buoyant economy with more work available sub-contractors may be more inclined to negotiate a lower retention percentage.

Figure 13: Factors that influence the percentage of contract value retained (contractor views)



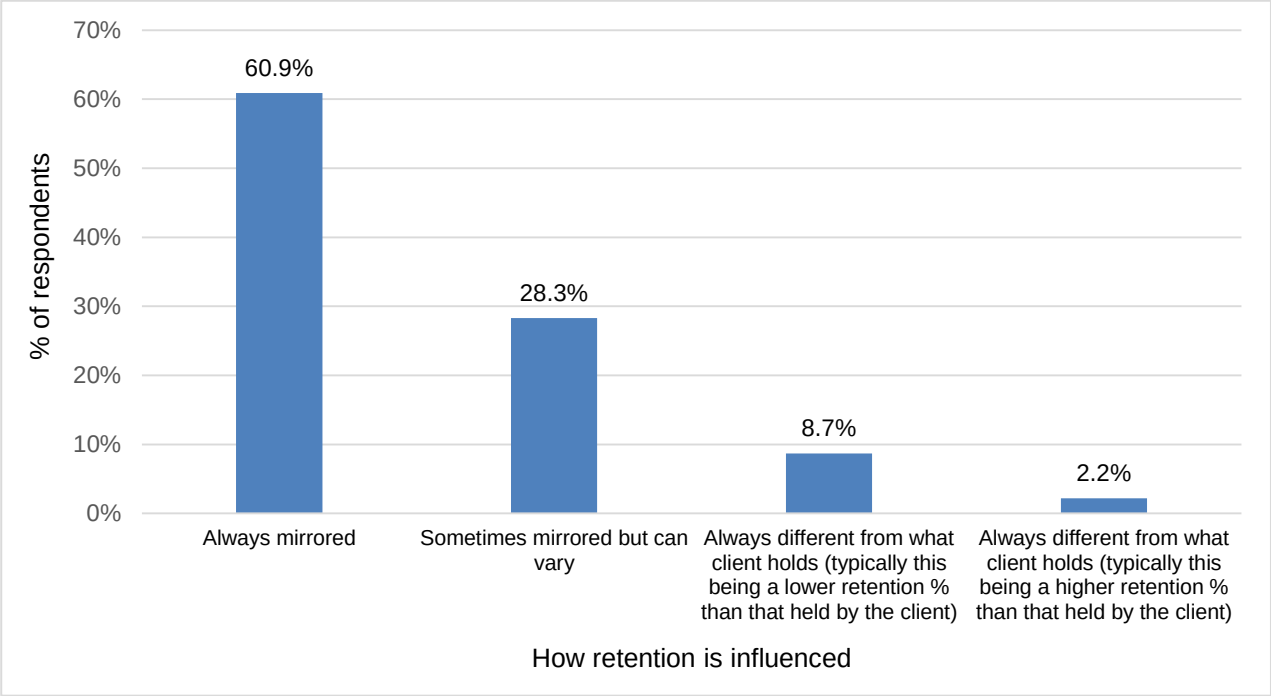
Base 120 respondents[84]

The amount that the client chooses to retain can influence the amount retained further down the supply chain. Participants in the contractor survey with experience of holding retentions in the last three years were asked how the retention percentage that they apply to sub-contracted work is influenced by the retention percentage that the client or main contractor holds from them. Of those that provided a response to this question, 61% report that they always mirror the retention percentage value that has been retained from them, with a further 28% saying that they sometimes mirror the percentage value retained from them but can vary.[85] Around 11% say they always set a different retention percentage, of which 2% of respondents say the retention is typically higher than the percentage held against them by the client (Figure 14).

84 Respondents could select more than one response

85 Percentages may not be consistent with those in the previous paragraph as a different sample responded to this question

Figure 14: How the retention percentage held from sub-contractors is influenced by the retention percentage held by the main client (contractor views)

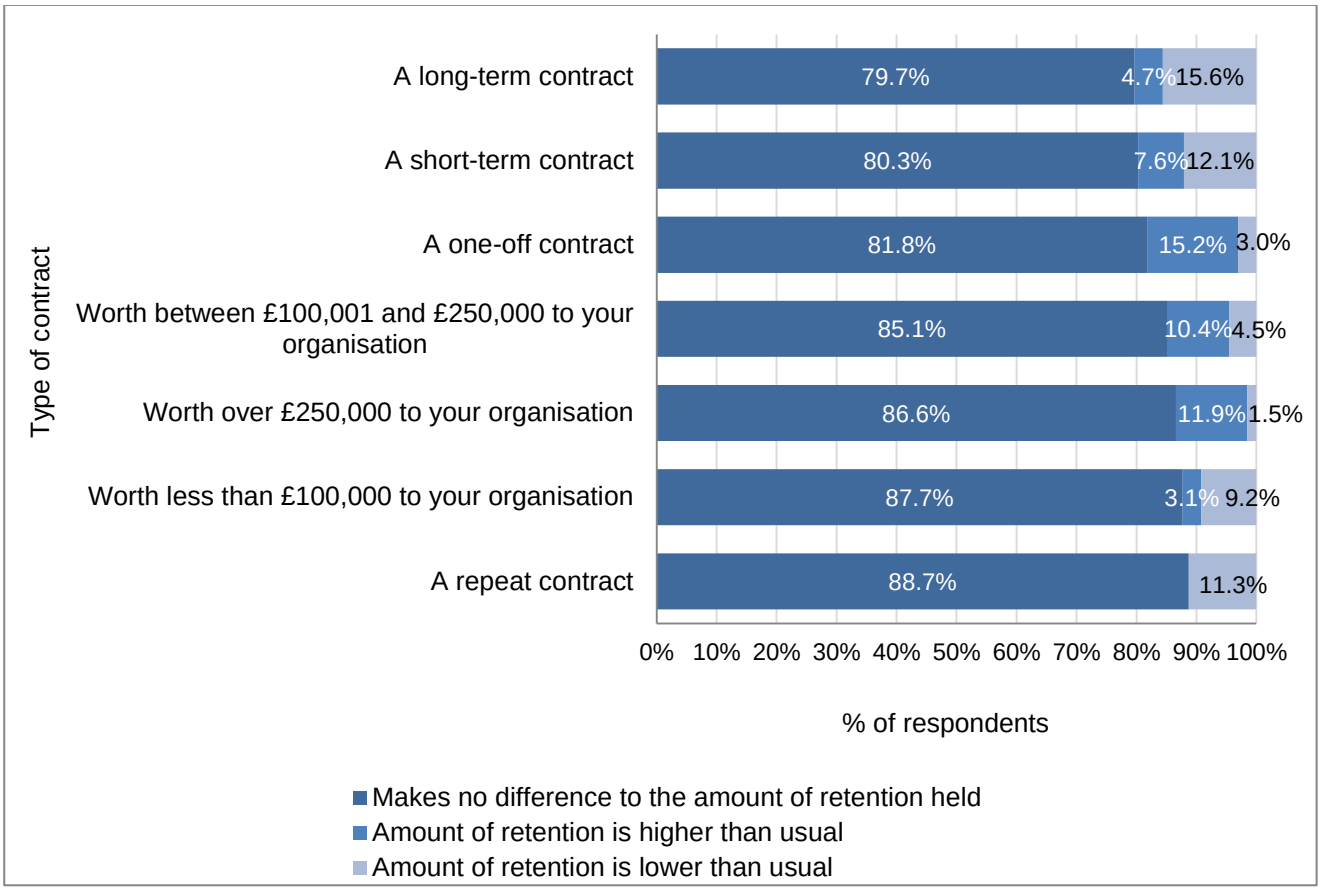


Base 92 respondents

For a proportion of the contractors surveyed that report varying the retention percentage they hold from sub-contractors on their current contracts (Figure 9), there appear to be differences in the amount which is retained, depending on the type of contract, project value and/or relationship with the client.

For example 15% say that the retention is higher than usual for one-off contracts, whereas no contractor respondents say it is typically higher for repeat contracts. Around 8% say the typical retention is higher for short-term contracts, compared with approximately 5% of contractor respondents who say the same in respect of long-term contracts (Figure 15).

Figure 15: How the type of contract affects the amount of retention which is held on current contracts (contractor views)



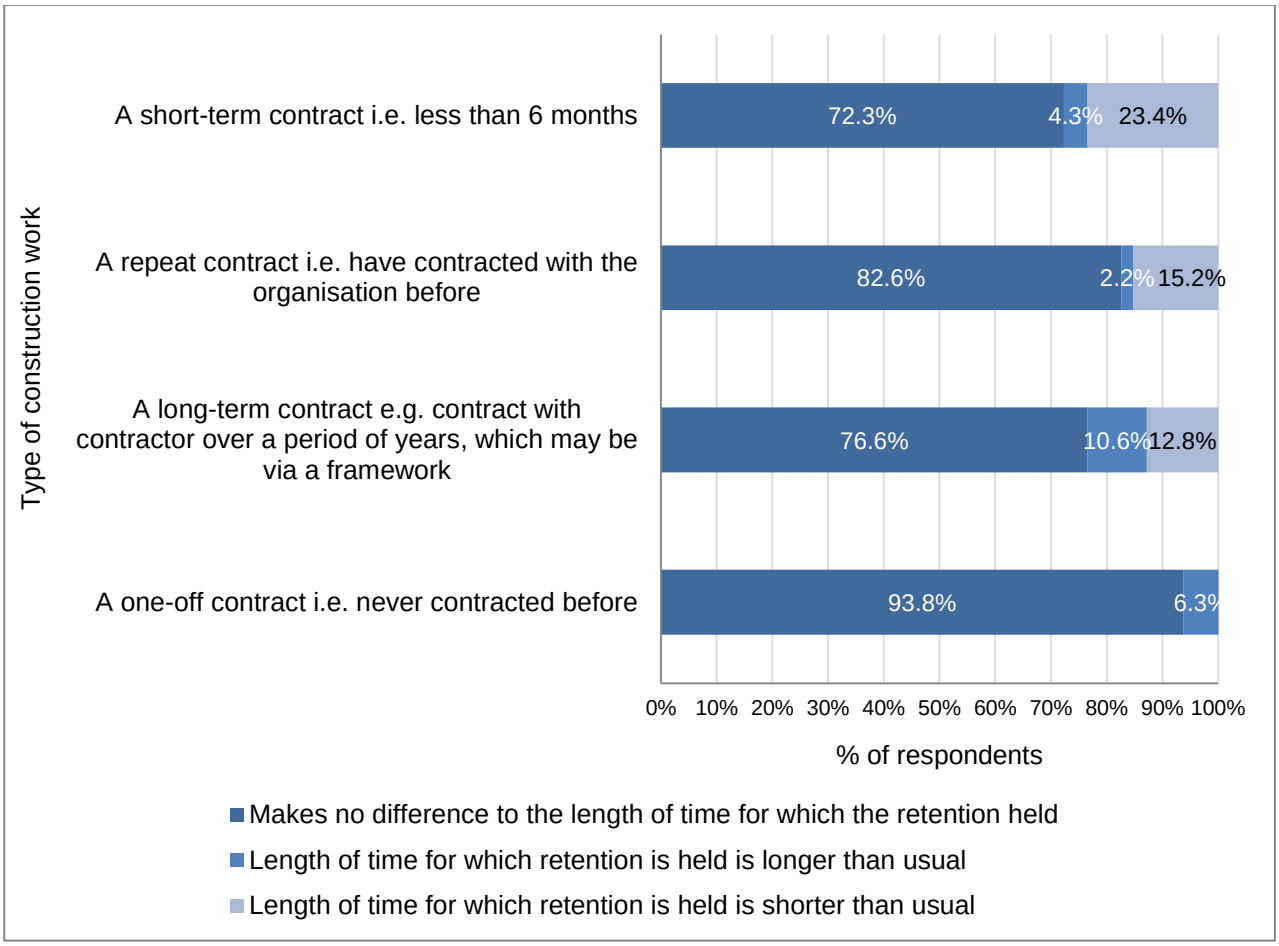
Base 67 respondents

3.7.4 Factors influencing the length of time retentions held by clients

Participants in the client survey who reported that they vary the length of time for which they hold retentions between their current contracts (Figure 10), were then asked how this varies, depending on whether it is a long or short term contract and their relationship with the contractor.

This indicates that the length of time (as stipulated in contracts) for which clients hold retentions does not appear to change significantly, regardless of the type of contract, for the majority of clients. Around 94% of clients responding to this survey question say there is no difference to length of time for which the retention is held for one-off contracts where there is no pre-existing relationship with the contractor. The length of time for which retentions are held on short-term projects is shorter for around 23% of client respondents to this question (Figure 16).

Figure 16: How the type of contract affects the length of time for which retentions are held from contractors on current contracts (client views)



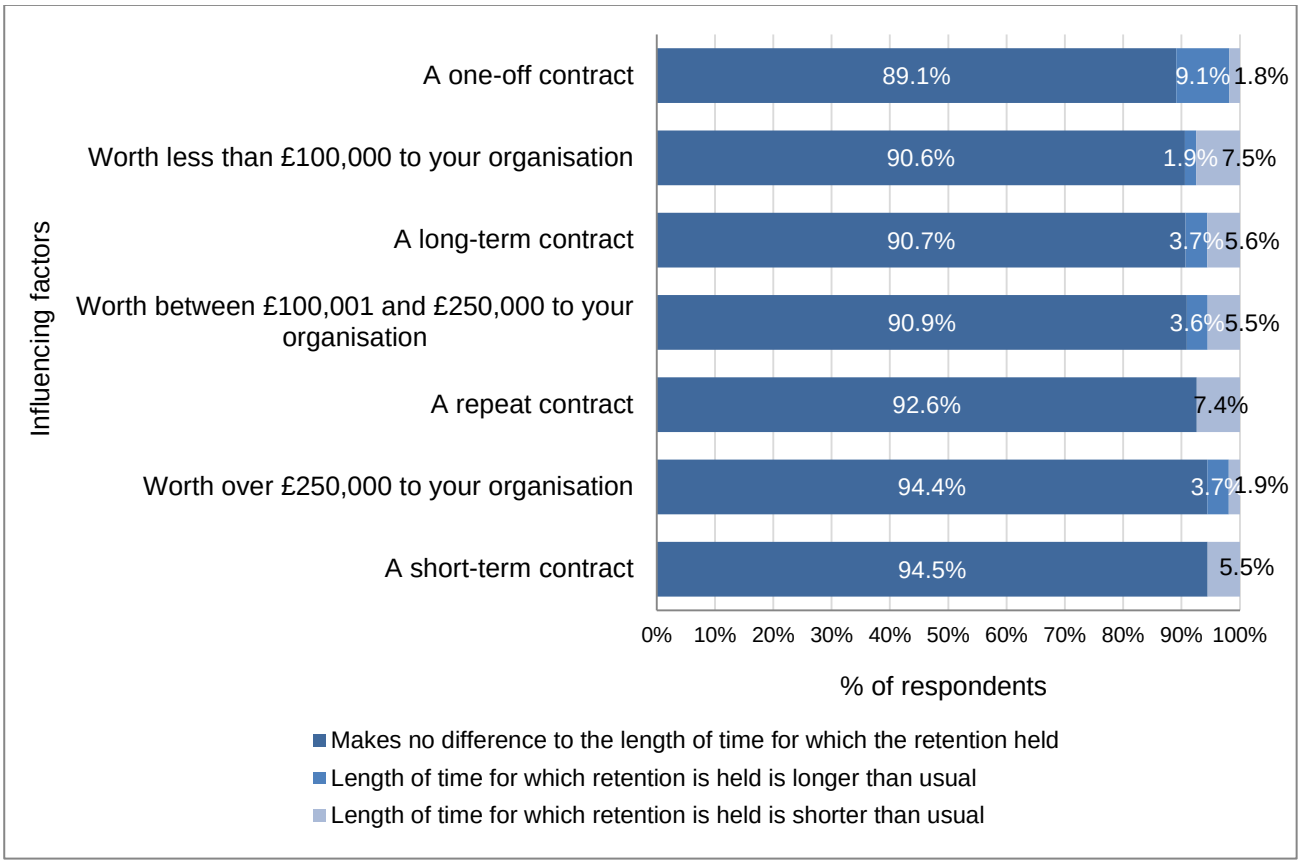
48 respondents

3.7.5 Factors influencing the length of time retentions are held by contractors

Participants in the contractor survey who reported that they vary the length of time for which they hold retentions between their current contracts (Figure 10), were then asked how this varies, depending on whether it is a long or short term contract, their relationship with the contractor, and project value.

Around 90% of these contractors say that contract type and value make no difference to the length of time for which retentions are held from sub-contractors (as stipulated in contracts). However, around 9% say the length of time is longer than usual if the work is a one-off contract, but none say the same in respect of repeat contracts (Figure 17).

Figure 17: Factors that influence the length of time over which retentions are held from sub-contractors on current contracts (contractor views)



Base 55 respondents

3.8 Ways in which retentions are used in mitigating risks

Contractors and clients surveyed with experience of retentions in the last three years were asked about the ways in which they had used retentions – and could select more than one response.

Over half of the contractors (53%) responding to this survey question state the intended purpose of retentions is to encourage contractors to return to correct defects. Survey data show that retentions have been used for this purpose in around 8% of all their contracts (i.e. including those without retentions) during the last three years (Figure 18)[86].

Qualitative evidence finds the majority of sub-contractors say that the retention itself does not act as an impetus to return to attend to any defects – instead they say their own

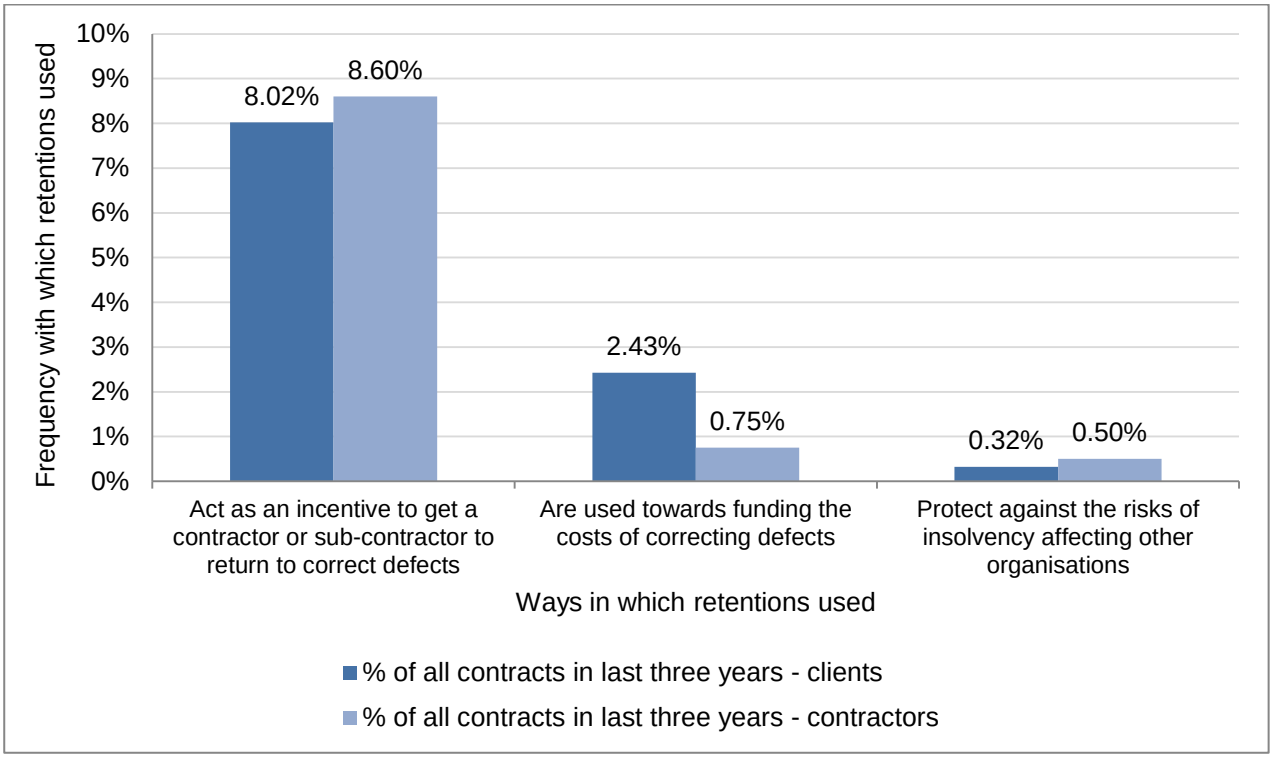
86 Data in Figure 18 were calculated by dividing the number of times contractors/clients used the retention money for each of those purposes over the past three years by the overall number of contracts of the past three years

professional reputation and commitment to quality, in addition to the desire to maintain good working relationships with the main contractor, are what compels them to do this.

Clients and contractors surveyed rarely use retention monies towards the costs of remedying any defects where the contractor fails to return to do so. Data gathered from contractor survey participants has been used to estimate that retentions have been used in this way in less than 1% of all their contracts[87] in the last three years.

Similarly, data gathered from client survey participants have been used to estimate that retentions have been used towards the costs of remedying any defects in around 2% of all their contracts[88] in the last three years (Figure 18).

Figure 18: Ways in which retentions have been used in mitigating risks (client and contractor views)



Base number of respondents 56 (contractors); 195 (clients)

Feedback from focus groups and interviews suggests the amount held in retention is not always enough – particularly for higher value contracts – to either act as an incentive for contractors to return to remedy defects, or to fund the cost of corrective works. Clients and contractors who have used retention monies to fund repair of defects were asked to rate whether the amount of retention is sufficient to cover the risks associated with defects, using a 1-10 scale (where 1 is not at all sufficient and 10 is fully sufficient). Contractors gave an average rating of 5.7. Clients who used retention money to fund repairs of defects

87 Including those with and without retentions
88 Including those with and without retentions

(occurring in 2.4% of all contracts in the last three years i.e. including those without retentions) gave a higher average rating by comparison, of 7.

3.9 How retentions are held

Those respondents to the client and contractor surveys with experience of holding retentions in the last three years were asked to provide details on how they hold retentions.

The majority (87%) of clients responding to this question hold the full retention in their main bank account. Less than 5% hold the full retention in a separate, ring-fenced account purely for this purpose.

Survey data show that in the vast majority of cases retention monies are held in full in the same place; only three client respondents report that they split the money – for example 50% in a main bank account and 50% in trust.

Around 8% of client respondents say they hold the retention in another form. These varied, but the main examples include: holding in reserves; holding in a capital fund; or allocated to another department budget (predominantly among local authorities).

There is a similar picture among contractors, with 89% of respondents to this survey question holding the full retention in their main bank account. The remaining 11% hold retentions in a range of ways, most typically spreading the overall amount across different bank accounts and budgets. No contractor surveyed holds any money in trust, but there are a small number of examples (2% of contractors surveyed) where retention bonds[89] are used.

Whilst there is an option in standard contract forms to ring-fence retention money, by putting it in a trust account or a separate bank account, the majority of respondents participating in focus groups and depth interviews say that this does not happen, as backed up by the survey data.

3.10 Limitations of retentions as perceived by respondents

Qualitative evidence questioned the applicability and suitability of retentions for the construction sector as a whole. Tier 2 contractors perceive that the practice is less directly relevant in certain sub-sectors, such as demolition, arguing it is not possible to "*demolish the building again*". However clients and contractors interviewed broadly agree that there is a need for some form of mechanism to mitigate risk, so if retentions are not held, then the risk is offset through other means – or the level of risk is not sufficient to warrant retentions.

From the perspective of contractors interviewed in particular, the practice of holding retentions appears to be more effective if it is less likely there will be expensive problems

89 See chapter 5 for an explanation of retention bonds

to fix, thereby it is more likely the amount retained will be sufficient to fix the problem. Contractors interviewed therefore hold the view that the more complex the trade, perhaps the greater the need is for a retention. Yet they acknowledge that this still does not fully work in practice, as it can be the specialist/complex trades that would cost more money to fix, for example thatching. In such cases a 5% retention would not be sufficient.

A critical issue is the way in which the retention is released, and the timing of this. Qualitative evidence from tier 1 contractors indicates they think that returning 50% upon practical completion and the remainder at the end of the defects liability period leaves little available to deal with latent defects, which may not be discovered until towards the end of the defect period. Furthermore this also means that in the early or mid-point of the defect liability period, there is less direct motivation to return in a timely fashion to address defects.

Survey data indicate that retentions have more fitness of purpose where the relationship between client[90] and contractor is less well, or not at all, established. However, qualitative evidence points out that retentions become lower in amount and potentially ineffective as they filter down the supply chain.

3.11 Trends in the use of retentions

Amendments to the Construction Act in 2011 mean that it is no longer possible to make payment conditional on the performance of obligations under another contract. The intention is to provide greater clarity about when a payment is due. Previously it had been possible to rely on the issue of a certificate under a superior contract as the trigger for payment. The issue of that certificate may not have been visible to businesses in the supply chain, so it would have been unclear that the retention was due for release.

According to a small number of sub-contractors who participated in focus groups, this change can create an incentive for main contractors to extend the defects liability period to mitigate the risk by opting for a longer holding period, in the absence of being able to rely on the certificate.

A small number of contractors who took part in depth telephone interviews have speculated that less retention money is being written off among sub-contractors than used to be the case[91], because of better computing and accounting systems and improved IT skills generally in the sector. It is not possible to verify this as there is no baseline data with which to compare the survey evidence.

Clients who had not held retentions in the last three years were asked if they had formerly held retentions, and if so, why they stopped the practice. Around three-quarters had previously held retentions. One of the reasons for ceasing to hold retentions appears to be the understanding that retentions are not as beneficial as they perhaps should be. This is also linked with a move towards procurement frameworks and partnership working

90 In this context a client could also be a main contractor or tier 2 sub-contractor holding a retention from a tier 3

91 Discussed in more detail in section 4.2.2

arrangements. A number of public sector clients explicitly referenced 2009 as the turning point due to the introduction of procurement frameworks as described in section 3.3.2 – although qualitative evidence states that many clients continue to use retentions in addition to frameworks.

However, it should be noted that around 68% of clients responding to this question said that they had not held retentions because they had not had large enough projects in the past few years, and that they would be likely to use retentions if and when they got such work in the future. This suggests that clients do attach value to the practice of retentions, even if they may not have used them recently because (smaller) projects did not warrant their use.

It is not possible to determine whether the use of retentions has declined in recent years, as baseline data is not readily available for the purpose of comparison.

3.12 Average values of retentions held

The survey of contractors asked respondents to indicate the value of retentions that is being held from them on current, as well as on completed contracts. Likewise, clients were asked what retention they hold from contractors on current, as well as on completed contracts. The tables in this section present a number of key results, including the mean[92], the median[93], the standard deviation[94], as well as the 95% confidence interval around each mean[95].

Average values of retentions being held from contractors

Table 1 looks at average retention values from the perspective of contractors who have had retentions held from them in the last three years. These data show that that there is a very wide range of experiences among contractor respondents about the amount of retentions held.

For example, on average, contractors have £824,500 held in retention from them on current contracts although this varies widely between respondents, as is evidenced through a very high standard deviation of £3,892,800[96]. This data are highly skewed

92 The mean represents the average value of all respondents of that particular group or sub-group

93 The median represents the 50th percentile of the group, meaning that 50% of respondents fall below, as well as above that value

94 The standard deviation is a measure of the variation within a distribution of values; a quantity expressing by how much the values within a distribution differ from the mean of the distribution. Calculated by taking into account the difference of each value from the mean, as well as the number of values. If all values were the same, the standard deviation would be zero. The more different the values, the higher the standard deviation

95 The 95% confidence interval provides an estimate of where the mean is likely to fall across all businesses of that category across England. In cases where the confidence interval includes zero, the results from the survey are not sufficiently robust to be generalisable to the wider construction industry. Those cases are highlighted in italics and red font

96 This only includes contractor respondents who currently have retentions held from them (n=231)

towards the top end, as only 13% of respondents have retentions held from them that are higher than the average. The median, in this case £35,000, is a good statistical measure for central tendency when data are highly skewed.[97]

Table 1: Average values of retentions being held from contractors (on current and completed contracts, contractor views)[98]

	Retention on current contracts	Retention per current contract	Retention on completed contracts	Retention per completed contract	Retention on completed contracts[99] (last three years only)
Mean	£824,500	£62,800	£222,000	£22,500	£27,500
Median	£35,000	£5,000	£50,000	£4,000	£19,000
SD	£3,892,800	£357,900	£767,600	£104,300	£37,300
95% CI	£322,500 - £1,326,500	£16,100 - £109,500	£116,800 - £327,000	£8,200 - £36,800	£21,200 - £33,900

This broad range is partially due to the variation within the whole sample, as this encompasses contractors of all sizes and tiers. Therefore, the data used to produce the average retentions values presented in Table 1 have been broken down and analysed further by organisation size as well as by tier. These results are presented in Appendix 3. This analysis shows that, even after results have been broken down by tier or by business size there is still very wide variation in average retention values within these sub-groups.

97 The 25th percentile lies at £10,000, meaning that 25% of respondents have retentions held from them equal to or below this, while 10% of respondents have retentions held from them on current contracts below £2,000. Meanwhile, the 75th percentile lies at £230,000, meaning that a quarter of respondents experience retentions equal to or higher than this. The top 10% of respondents have retentions held against them above the £1,000,000 mark. The 95% CI for the average across English construction businesses for retentions currently held is between £322,500 and £1,326,500

98 SD = standard deviation, 95% CI = 95% confidence interval; sample sizes: current contracts = 231 contractors; per current contract = 226 contractors; completed contracts = 205 contractors; per completed contract = 203; completed contracts (last three years only) = 133

99 This question was asked in relation to retentions due at the end of the defects liability period over the past three years that were outstanding today

Client perspectives on retentions being held from contractors (current and competed contracts)

Clients were also asked about retentions being held from contractors on current, as well as on completed contracts and an overview of the average results is presented in Table 2.

As clients only deal with tier 1 contractors, the average retentions they currently hold overall, as well as per contract, are much larger compared to the averages of the contractors. Client data are also highly skewed, as can be seen by the difference between the mean and the median, meaning that a few clients hold far higher retentions compared to most, particularly when it comes to retentions being held on completed contracts overall, as well as per completed contract. Again, these data show that that there is a very wide range of experiences among client respondents about the amount of retentions they hold.

Table 2: Value of retentions held by clients (on current and completed contracts, client views)[100]

	Retention on current contracts	Retention per current contract	Retention on completed contracts	Retention per completed contract	Retention on completed contracts[101] (last three years only)
Mean	£1,013,700	£135,800	£3,306,500	£458,200	£100,000
Median	£165,000	£25,000	£70,000	£20,000	£28,500
SD	£4,214,300	£502,600	£24,689,300	£2,596,500	£232,100
95% CI	£460,600 - £1,566,900	£68,700 - £202,800	*-£473,300 - £7,226,300*	£52,100 - £864,400	£35,000 - £164,900

3.13 Value of retentions held in the construction sector as a whole

In 2002, a report into retentions published by the Trade and Industry Committee multiplied sector Gross Value Added (GVA) by an average retention percentage of 5% to estimate that retentions accounted for £3.25bn per annum based on an annual output in the UK

100 SD = standard deviation, 95% CI = 95% confidence interval; sample sizes: current contracts = 223 clients; current per contract = 216; completed contracts = 158; completed per contract = 157; completed (three years only) = 49

101 This question was asked in relation to retentions due at the end of the defects liability period over the past three years that were outstanding today

construction sector of £65bn at the time the report was written[102]. This report flags difficulties with estimating the total amount held in retentions in a given year. For example, there will be outstanding retention monies from previous years, to be added to this figure, and there would furthermore be some reduction in the resulting figure, reflecting the amount of retention recovered in the relevant year. In other words, it is challenging to define a specific figure, because retentions are being paid to contractors while concurrently being withheld.

Retentions are a proportion of contract value, therefore we view sector turnover as a more appropriate basis for estimating the total amount held in retentions over the course of a given year[103]. Multiplying construction sector turnover by 4.85%[104] would produce an illustrative estimate for the total amount held in retentions over the course of a given year, if all construction contracts had retentions held on them.

However, it is known from survey data that this is likely to be an overestimate as retentions are not held by all construction customers or on all construction contracts.

Around a quarter of contractors surveyed as part of this research have not had any experience of retentions in the last three years, and of the three-quarters of contractors with experience of retentions, contractors say retentions are not held on an average of 35% of all their current contracts. A high level estimate of the total amount held in retentions should take these two factors into account, but this would require certain assumptions to translate these results on the incidence of retentions to their overall value.

There are also a number of other challenges associated with estimating the amount held in retentions per annum using the survey data gathered:

- Figures on the proportion of contractors with experience of retentions, and the proportion of contracts with retentions held are snapshots of the last three years and the averages may go up or down.

- As per the Trade and Industry Committee (2002) estimate, it should be noted that there would also be outstanding retention monies from previous years, to be added to an estimate based on sector turnover, and that there would furthermore be some reduction in the resulting figure, reflecting the amount of retention recovered in the relevant year.

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102 House of Commons Trade and Industry Committee (2002), The use of retentions in the UK construction industry, second report of session 2002-03

103 i.e. this is not an estimate for the total amount held in retentions at a given time.

104 The average of the two figures for client/contractor typical retention percentage held across those surveyed.

3.13 Key findings – scope and scale of retentions

- The practice of holding retentions is commonplace, but not universal across the whole of the construction sector. Clients surveyed with experience of retentions in the last three years say retentions are held on average on 78% of their current (on-going) construction contracts. Survey data show that contractors with experience of retentions in the last three years say retentions are held on average on 65% of their current (on-going) contracts.

- Half of all contractors surveyed had retentions held against their work in the past three years. A further 19% had held a retention from a contractor further down the supply chain, as well as having retentions held from them in relation to their own work.

- The evidence shows that retentions are commonly perceived to be a means to mitigate risk: a form of 'insurance policy' to encourage contractors and sub-contractors to return to remedy any defects and thus ensure projects are completed to a high quality standard, and within the agreed timescale. Survey data indicate that, amongst those with experience of retentions in the last three years, retentions have been used as an incentive to encourage contractors to return to remedy defects in approximately 8% of all their contracts[105] in the past three years.

- However, nearly all small and micro businesses participating in the qualitative research perceive that retentions are used as a means to boost cash flow within tier 1 contractor organisations. The majority of clients and contractors surveyed who have held retentions in the past three years do not segregate the monies into a separate account, but retain the funds within their main bank account. This means that retention monies owed (at a future date) to contractors and sub-contractors can be used in other ways. Some tier 1 businesses interviewed acknowledge that retention monies can contribute to their cash flow, but should not be described as a 'boost', given that clients are typically holding retention monies against their work, which they say offsets this.

- The decision among some clients whether to hold retentions and the value to be retained appears to be based on assessment of risk, reiterating the main purpose of retentions i.e. to act as a form of 'insurance policy' to mitigate risk. Around a third of clients surveyed[106] say they reduce the percentage of contract value that is retained for long-term projects, where the contractor relationship will be maintained over a period of years. Around 31% also reduce the percentage of contract value retained where work is being undertaken by a contractor with

105 Both those with and without retentions held

106 Those with who report varying the percentage of contract values that they hold on their current contracts, and answered the relevant survey question

whom they have an established relationship. Projects that are less complex, and of lower value - and therefore low risk - are less likely to hold retentions.

- Among contractors, the decision whether to hold retentions and the value retained can be influenced by the client. For example, when asked how the retention percentage that they apply to sub-contractors is influenced by the retention held from them, 61% of contractors surveyed say they mirror the retention held by the client.

- According to survey data, the average amount of retention which is typically held from contractors by clients[107] equates to 4.8% of the contract value. Respondents to the client survey concur with an average retention of around 5% of contract value (4.9%).There is some variation in the range of the percentage of contract value that is typically held in retention among contractors and clients, but much higher percentages appear to be rare.

- Data show that there is a very wide range of experiences among contractor and client respondents about the average amount of retentions held. This is the case, even after results have been broken down by tier or by business size.

- Retentions are a proportion of contract value and sector turnover can, therefore, be used as a basis for estimating the total amount held in retentions over the course of a given year in the sector. A high level estimate for the total amount held in retentions should take into account the survey data which demonstrate that retentions are not held by all construction customers or on all construction contracts, but this would require certain assumptions to translate these results on the incidence of retentions to their overall value.

107 In this context a client could be a main contractor or tier 2 sub-contractor holding a retention from a tier 3

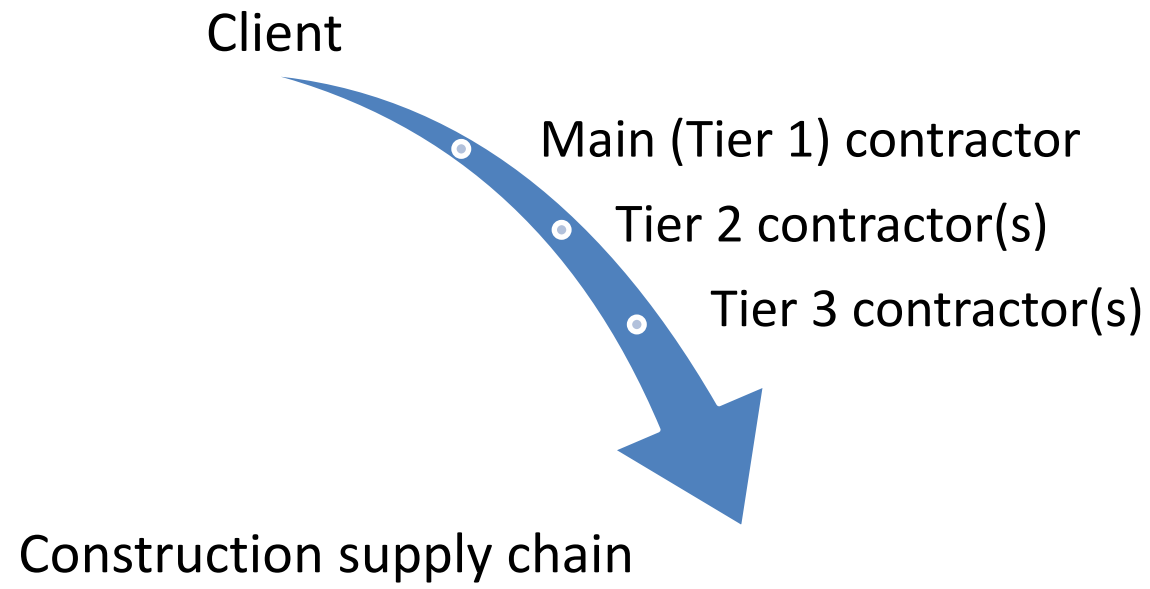
4 Impacts of retentions

4.1 The impact of retentions throughout the construction supply chain

The practice of holding retentions typically cascades down through the construction supply chain, starting from the client through to tier 3 contractors (Figure 19). To understand the range of impacts of retentions, each layer of the supply chain[108] is discussed separately in the following sections 4.2 – 4.4, before the impacts at sector-wide and national economy level are considered in section 4.5.

Contractor respondents in the survey were asked to describe their position in the supply chain along the three tiers and could indicate all that applied to their business. As a result, some businesses chose more than one tier. These businesses were removed from all analysis of averages that split the data by tier. They are, however, still represented in the overall statistics, as well as in all other analysis such as multiple-choice questions reported in this chapter.

Figure 19: The construction supply chain surveyed for the purpose of this research



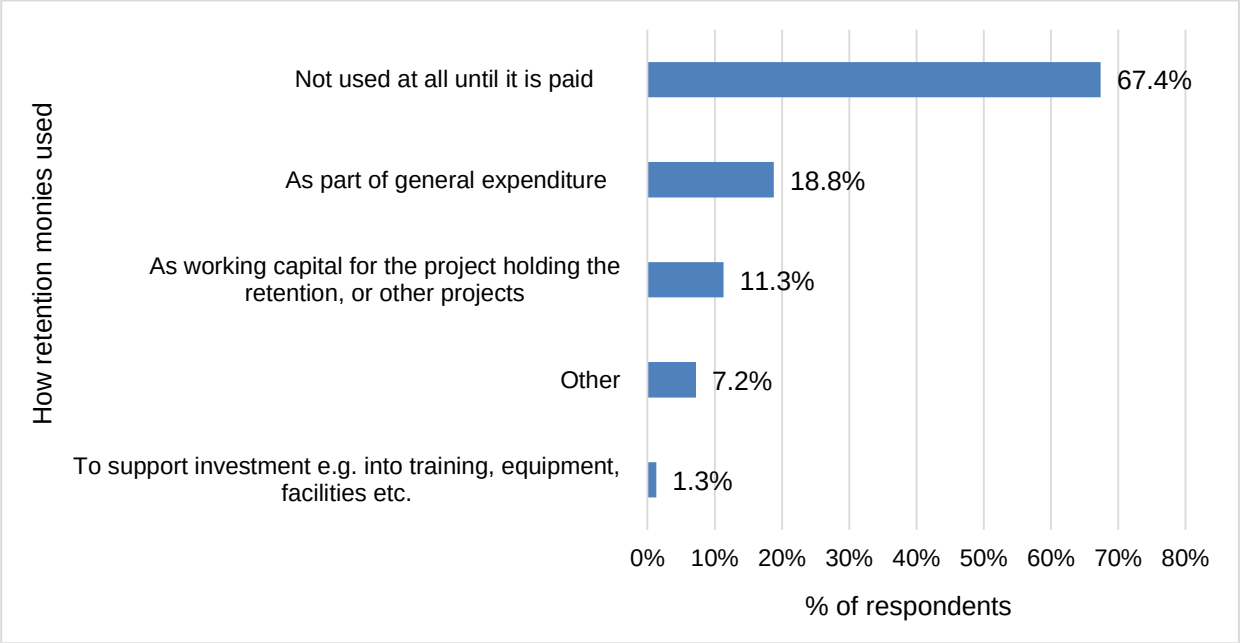
108 The scope of this research focused on clients and tiers 1, 2 and 3 of the supply chain

4.2 Impacts for clients

4.2.1 How clients surveyed use retentions

Participants in the client survey with experience of holding retentions in the last three years were asked how their organisation makes use of retention monies. Just over two-thirds of client respondents make no use of retention monies they hold; 19% use retentions as part of their general expenditure; and 11% say they use retentions as working capital to fund either the project against which the retention is held, or for other projects (Figure 20)[109].

Figure 20: How clients make use of retentions – survey data



Base 323 respondents[110]

Qualitative evidence obtained through telephone interviews states the use of retention monies can reduce the need for those holding retentions to obtain finance to fund projects and raise working capital.

4.2.2 Impact on tender prices

Participants in the client survey, with experience of retentions in the last three years, were asked to what extent they think retentions affect the overall cost of construction projects, compared with those that do not have retentions.

Around 40% of these clients think that retentions make the cost of construction projects a little higher, compared with work that does not attract retentions, and 3% think retentions make project costs a lot higher. Less than 1% think that retentions contribute to lower overall costs. Over half (56%) consider retentions make no difference to costs at all.

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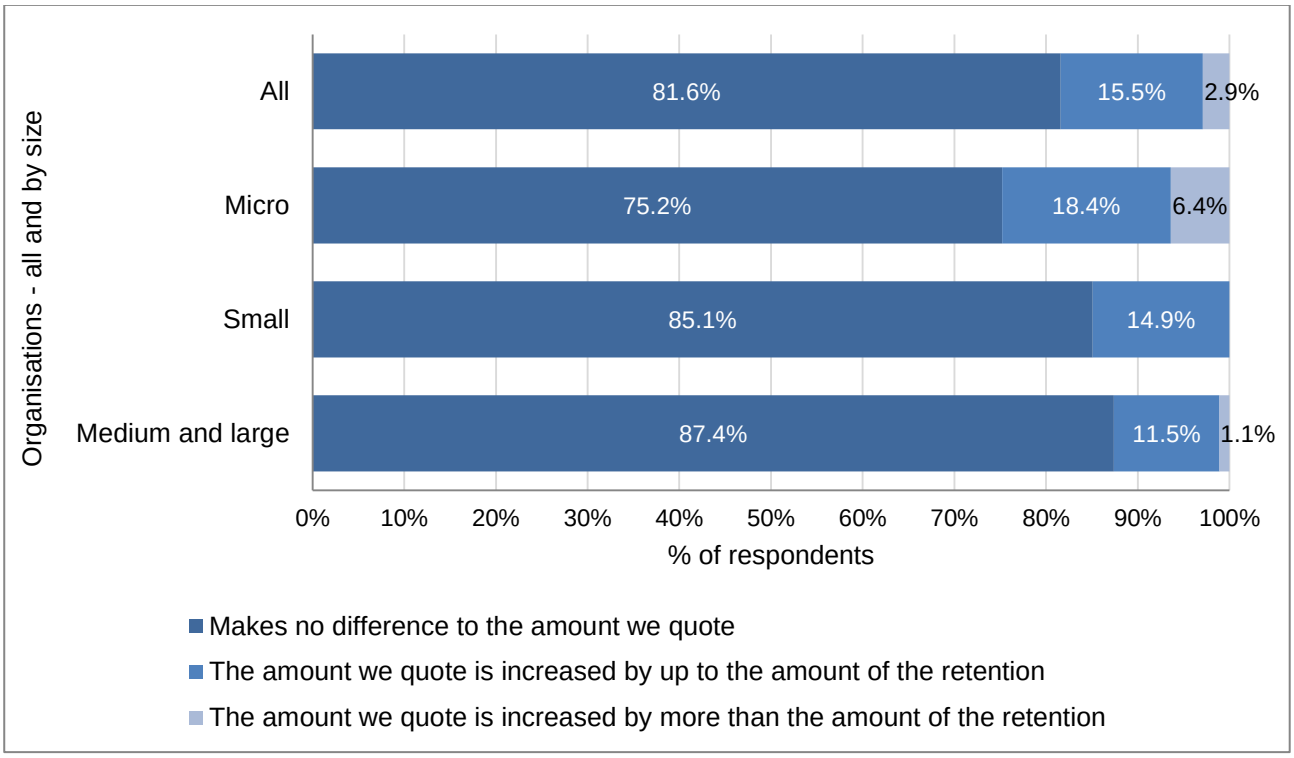
109 Respondents could select more than one response
110 Respondents could select more than one response

Of the clients surveyed with no experience of retentions in the last three years (i.e. did not participate in the full survey), around 7% of those believe they are offered a better price, compared with prices charged for work where retentions are held.

Qualitative evidence suggests not all sub-contractors ask for their retention money back; some write this off but may increase the overall tender price to offset this. This is supported by the contractor survey data. Participants in the contractor survey, with experience of retentions in the last three years, were asked to what extent a retention affects the overall price that they quote for their work as part of tenders. Approximately 16% of those responding to this survey question say the amount they quote is increased by the amount of the retention (Figure 21).

Among the small number of contractors responding to this survey question who increase their costs by more than the amount of the retention (3%), the increase is most commonly 3% of the contract value, over and above the amount of the retention.

Figure 21: How retentions affect tender prices (contractor views) – survey data



Base 344 respondents

Feedback from the qualitative evidence suggests that certain trades will not accept retentions. Main contractors may elect to increase the cost to the client to help mitigate their risks of engaging with a sub-contractor with no cash retention in the contract terms.

Qualitative evidence also finds opinions are divided among clients as to the overall benefit of retentions. Some strongly support the practice and say that it is essential, while others are more inclined to favour a framework/partnership approach. Some such frameworks or partnership approaches (discussed also in section 3.3.2), according to the qualitative

evidence, do not require retentions. Many of the clients looking at alternatives to retentions refer to the increasing use of procurement frameworks and/or NEC and JCT contracts, which do not prescribe the use of retentions.

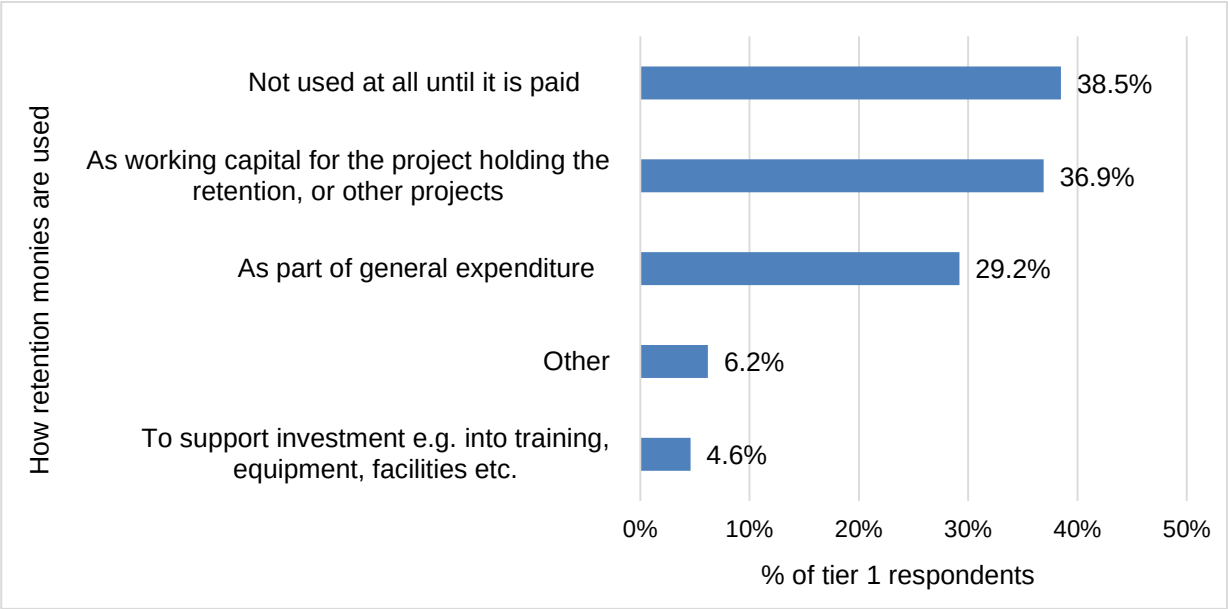
4.3 Impacts for tier 1 contractors

4.3.1 How tier 1 contractors surveyed use retentions

Participants in the contractor survey with experience of holding retentions in the last three years were asked to provide details of how they use retention monies held from sub-contractors. Around 37% of tier 1 contractor respondents use retention monies as working capital, while 29% use retentions as part of their general expenditure. Nearly 40% say they make no use of retention monies (Figure 22)[111].

This is much lower than the proportion of clients that report they make no use of retention monies (67.4%). This indicates that contractors are more likely to use retention monies to help with their cash flow.

Figure 22: How tier 1 contractors use retentions – survey data



65 respondents[112]

Nearly all sub-contractors participating in focus groups and depth telephone interviews consider the current retention regime is beneficial for tier 1 contractors in the construction sector, as it acts as positive cash flow on their balance sheets. Sub-contractors say that because of this, main contractors are less reliant on loans for working capital, and they can finance other projects with the accumulated retention money.

111 Respondents could select more than one response
112 Respondents could select more than one response

As previously stated in section 3.5, tier 1 contractors participating in depth interviews acknowledge that retention money is part of their general cash flow. However, whilst they acknowledge this money "*helps*", they do not consider that it actually *boosts* cash flow, as they in turn have retentions held by their clients further up the supply chain, which they say offsets this[113].

4.3.2 Administrative time in relation to retentions

Some tier 1 contractors interviewed say that dealing with retentions, for instance in respect to agreeing contractual terms and conditions, or communications up and down the supply chain (for example about payment), can be time-consuming. However they also say that dealing with payment practices in the sector generally is time-consuming. In other words, they suggest retentions are only one element when dealing with payment across various contracts, and do not substantially incur more administrative time compared with other types of payment issues.

The client and contractor surveys included questions on the costs and time involved in setting up and administering payments in the construction sector generally and in relation to retentions but this has been excluded from the report. It became apparent when analysing the data that it is unclear from the wording of these questions what costs and time respondents should factor into their responses. Responses to these questions could, therefore, not be robustly interpreted and compared.

4.3.3 Delays in payment of retention monies

Retentions between the client and main contractor are usually subject to a two-staged approach to releasing the money. Upon project completion at the point when the certificate of practical completion is issued, half of the retention is typically paid. This stage of 'practical' or 'substantial completion' is identified in the construction industry as the point at which all work is finalised with any defects that may remain deemed trivial. The remainder of the retention is then held until the defects liability period concludes.

Any defects which may occur or are noted during this period are added to what is referred to as a 'snagging list' or 'punch list'. The 'snagging list' or 'punch list' should be presented to the main contractor at the end of this period who has a responsibility to rectify them at their own expense. Only once these stages have been completed will the retention be eligible for release to the main contractor[114].

The actual retention period therefore varies depending on the contract type, and length of the work. The defects liability period is specified in the contract that is signed between client/contractor, or main contractor/sub-contractor.

Survey data show that tier 1 contractors have quite consistent views on the intended retention period after completion: according to 68.5% of respondents, retentions are

113 It is not possible to understand this in more detail, and verify this objectively, without access to tier 1 contractor accounts

114 Hughes, Hillebrandt & Murdoch (1999) The impact of contract duration on the cost of cash retention

intended to be held from tier 1 contractors after practical completion for 12 months (according to contractual terms and conditions). Another 18.5% of contractor respondents noted that retentions were to be held for 6 months. The average across all tier 1 respondents is 11.1 months, with a standard deviation of 4.7 months. The minimum noted is 1 month and the maximum is 30 months.

In practice, tier 1 contractors surveyed have more varied experiences with the time it takes for retention monies to be paid. On average, retentions are held from them for 13.8 months, with a standard deviation of 7.8 months. While the most common retention period after completion in practice is 12 months, reported by 35.2% of tier 1 contractors, it can typically vary between 2 and 48 months. While the second most common retention period is below average at 6 months (14.3% of respondents), other common retention periods are 18 and 24 months (cited by 9.9% and 8.8%, respectively).

This means that there is an average delay of almost 3 months in practice compared to intended timeframes (using average figures) for tier 1 contractors. What this also shows is that while the majority of tier 1 contractors are in agreement on how long retentions should be held, in practice, contractors' experiences vary, with some receiving retentions earlier than expected and others having to wait for longer periods of time. It should be noted that such delays may be because payment is withheld while defects are remedied, or if a dispute over alleged defects arises.

4.3.4 Impacts of holding retentions from sub-contractors

Contractor respondents to the survey were asked to select from a list to indicate which, if any, impacts they had experienced as a result of holding retentions from sub-contractors, and of having retentions held from them (by clients) in the past three years. Respondents were able to select more than one option. This provides an indication of the frequency with which respondents have experienced the various impacts, in the last three years.

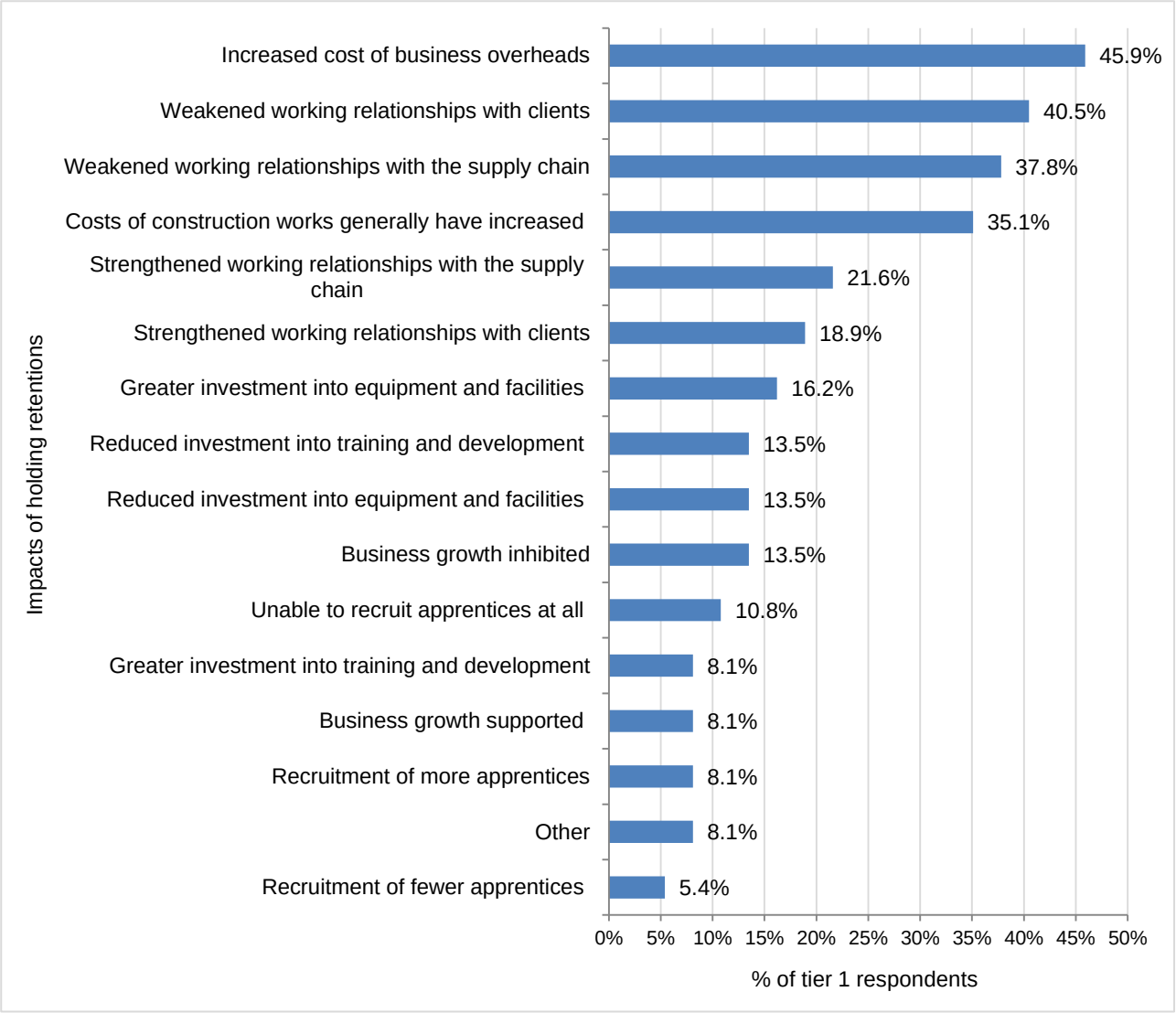
Tier 1 contractors responding to this survey question identify a higher proportion of negative impacts compared with positive impacts, as a result of holding retentions from sub-contractors further down the supply chain. Higher business overheads affect 46% of tier 1 contractors surveyed[115] as a result of holding retentions from sub-contractors further down the supply chain. Around 35% say that the costs of construction works generally are higher because of holding retentions from sub-contractors (Figure 23)[116].

Around 41% of tier 1 contractors responding to this survey question say working relationships with their clients are weakened as a result of holding retentions from sub-contractors, compared with 19% who think this strengthens these relationships. Around 38% point to weakened relationships with the supply chain as a result of holding retentions from sub-contractors, compared with just over a fifth who believe relationships are strengthened as a result (Figure 23)[117].

115 Those responding to this survey question
116 Respondents could select more than one response
117 Respondents could select more than one response

Qualitative evidence also points to a lack of trust within the main contractor and sub-contractor relationship, due in part to the culture of the sector generally, but also because of the practice of holding retentions. Qualitative evidence obtained from interviews with clients and contractors suggests that retentions continue to be used nonetheless because the practice is embedded in the culture of the sector as the most commonly used mechanism for mitigating risk.

Figure 23: Impacts of holding retentions from sub-contractors (perspectives of tier 1 contractors)



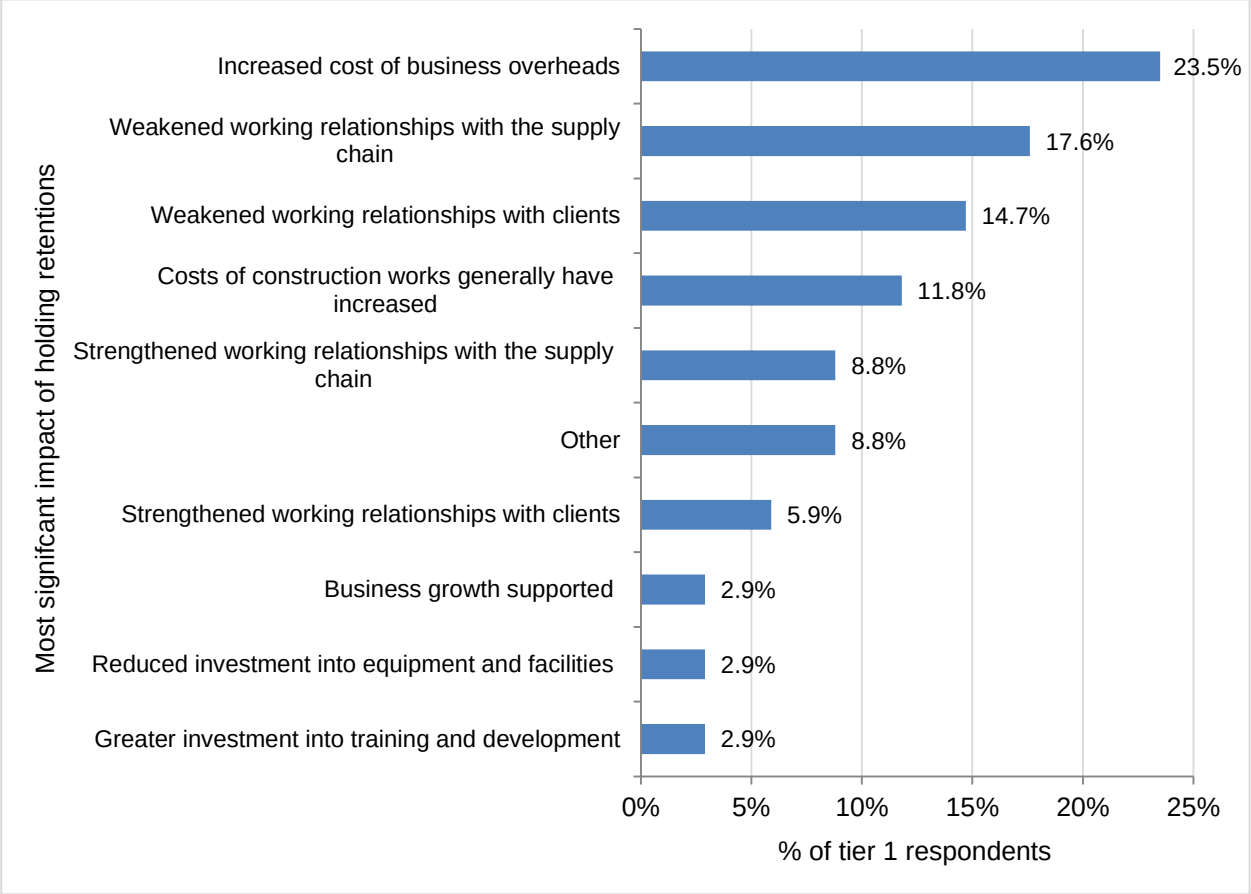
37 respondents[118]

Tier 1 contractors surveyed were also asked to say which of the impacts was the most significant. This provides an indication of which impacts tier 1 contractors think are most

118 Respondents could select more than one response

important. Nearly a quarter of tier 1 contractors responding to this question say the most significant impact of holding retentions from sub-contractors is higher business overheads (Figure 24).

Figure 24: Most significant impact of holding retentions from sub-contractors (perspectives of tier 1 contractors)



34 respondents

4.3.5 Impacts for tier 1 contractors of having retentions held

In terms of impacts for tier 1 contractors of having retentions held from them (by their clients), approximately 46% of tier 1 contractors responding to this survey question say that an impact is higher business overheads. Around 39% say that costs of construction works generally have increased. This reflects data from another part of the contractor survey which indicates that around 18% of contractors increase tender prices by up to, or more than, the cost of the retention, and suggests that retentions are a factor in increasing construction project prices.

In respect to impacts on working relationships, 36% of tier 1 contractors responding to this survey question say their client relationships are weakened, and 30% say their relationships with the supply chain are weakened as a result of having retentions held (Figure 25)[119].

Figure 25: Impacts of having retentions held (perspectives of tier 1 contractors)

143 respondents[120]

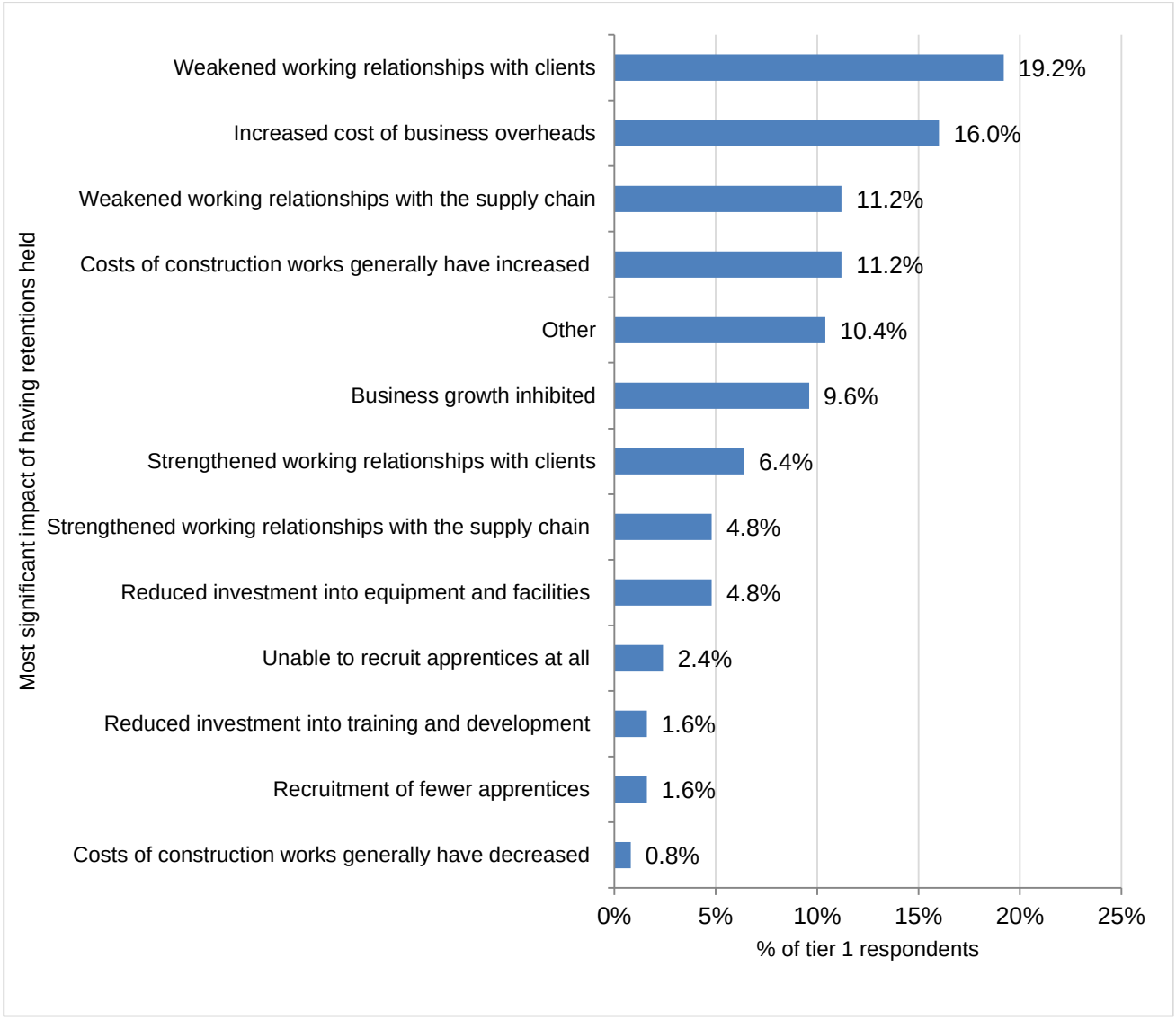
119 Respondents could select more than one response
120 Respondents could select more than one response

Subsequently contractors were asked to identify the one most significant impact of having retentions held, in the past three years, to provide in indication of which of these impacts they think are the most important.

Survey evidence states that the *most* significant impact of having retentions held - cited by nearly a fifth of tier 1 contractors - is that of weakened working relationships with clients. A further 16% of tier 1 contractors say that higher business overheads is the most significant impact (Figure 26).

This suggests that the practice of retentions does, in some cases, undermine working relationships – yet it is clear from survey evidence that strong working relationships can be a factor in offsetting the need for holding a retention at all, or in holding a lower percentage value in retention.

Figure 26: Most significant impact of having retentions held (perspectives of tier 1 contractors)



124 respondents

4.4 Impacts for tier 2 and 3 contractors of having retentions held

4.4.1 Administrative time in relation to retentions

Qualitative feedback from workshops and interviews suggests that retentions can add time, cost and increase the use of resources at the outset of a project for tier 2 and 3 contractors. A lack of uniformity from contract to contract means tier 2 and 3 contractors perceive it takes more time to negotiate contract terms in respect of retentions. This means in practice that additional administrative time is incurred to a) review proposed contractual terms and conditions; b) respond to these for example with requested changes; and c) negotiations that arise from this. This is likely to be extremely varied depending on the organisation and type of project, which means it is not possible to estimate the scale of these costs.

Qualitative evidence also cites administrative time that is spent pursuing retention monies as an impact. The qualitative feedback from focus groups indicates that tier 2 companies may be more likely to be paid their retention monies, even if it takes time to pursue the payment and even where small amounts are involved. By comparison tier 3 organisations may be more inclined to write the money off. Qualitative evidence obtained through focus groups suggests this is because tier 2 companies are unwilling to lose retention monies even if this incurs senior level time to pursue payment, particularly as over time, small amounts add up to become more significant and because margins are typically low.

4.4.2 Delays in receiving retention monies

Survey data indicate delays in receiving retention monies are typically longer for sub-contractors than main tier 1 contractors.

The majority of tier 2 contractors surveyed say the intended length of time over which retentions are to be held after practical completion, according to the contract, is 12 months (73.6% of tier 2 respondents). A further 13.6% of tier 2 contractor respondents noted the intended retention period to be 24 months. The average across all respondents within tier 2 is 13.7 months, with a standard deviation of 4.6 months and overall responses varied between 6 and 24 months.

In practice, survey data show retentions are held after practical completion for 20.5 months on average (with a standard deviation of 9 months), with the most common timeframes being 24, 18 and 12 months (for 24.5%, 20% and 17.3% of tier 2 respondents, respectively). The shortest timeframe experienced was 4 months, while the longest was 60 months. This means that tier 2 contractors experience delays in payment of almost 7 months (using average figures) compared to intended timeframes, which is around 4 months more than the delays experienced by tier 1 contractors. Again, while most tier 2 contractors are in agreement about the intended timeframe, their experiences with delays are much more varied, with some receiving retentions usually on time and others having to wait for substantial periods of time.

The majority (76%) of tier 3 contractors surveyed agree with tier 1 and tier 2 contractors that the intended length of time over which retentions are to be held after practical

completion, according to contract, is 12 months. The average across tier 3 contractors is 13.2 months, with a standard deviation of 4.6 months and a range between 6 and 24 months.

In practice survey data show retentions are held after practical completion for on average 22.6 months and vary between 12 and 60 months, with a standard deviation of 10.9 months. The most common timeframe experienced is 24 months, with 36% of tier 3 respondents reporting this, and another 12% each reporting retentions held for 12 months and 18 months. Tier 3 contractors who responded to the survey therefore experience the longest delays of all with over 9 months wait on average compared to the intended timeframe. The experiences of tier 3 contractors with delays in receiving retentions varies again considerably between them, with some experiencing no delays, while others report waiting 1.5 years and longer.

To clarify whether the differences in the length of time contractors of the three tiers wait to receive their retentions back are reliable, the averages of the three tiers were compared using a statistical test. The test confirmed that tier 2 and tier 3 contractors wait significantly longer to receive their retentions after practical completion compared to tier 1 contractors. The difference between tier 2 and tier 3 contractors is not significantly different[121].

The typical length of time over which retentions are held can vary according to sub-sector and trade. For example in house-building, trades involved in laying the foundations at the start have to wait longer for the end of the defects period than the decorators who provide a service at the end of the project. A demolition sub-contractor could finish their job 12 months before practical completion, and therefore be a year behind in the defects liability period. This is perhaps unsurprising given the main role of retentions is to act as a form of insurance policy for the project as a whole, rather than its component parts – but this does not necessarily align with the way the construction sector works, i.e. typically in silos. This could also be as a result of delayed or non-payment of retention monies (including where monies were not requested or pursued), meaning a higher amount is owed to tier 2 and 3 contractors in respect of completed work.

As with tier 1 contractors, some or all of these delays may be as a result of defects encountered, or disputes over defects that arise. Survey data show that 34% of tier 1 contractors say disputes relating to defects need to be considered and resolved upon practical completion. Approximately 29% of tier 1 contractors surveyed say disputes relating to defects arose within the defects liability period, thus causing the later release of retention monies (Figure 29)[122].

It should be emphasised that it has not been possible to measure what proportion of the delayed payment of retention monies is for *justified* reasons – for example because of defects[123]- or *unjustified* reasons, which could include late-payment because of a pending payment from another client or because a contractor retained monies for longer than

121 ANOVA; F = 18.185; alpha = .000; followed by Tukey HSD post-hoc test for pairwise comparisons

122 Respondents could select more than one response

123 Although data gives an overall proportion of respondents who say payment of retentions was delayed because of defects, it is not possible to link incidence of defects directly to incidence of delayed payments and assume this was the reason for the delay

specified in contract terms. It is challenging to measure the extent to which late (or non-) payment of retention monies is for justifiable reasons, because opinions as to what constitutes ‘justifiable’ or ‘unjustifiable’ can differ depending on the contractor or client perspective.

One example of this is the way in which retentions clauses can be interpreted within contract documentation. For example, practical completion has a clear definition in the likes of JCT contract templates. However in practice, tier 2 and 3 respondents say that tier 1 contractors and clients may choose to interpret the achievement of practical completion in different ways, which is not always explicitly stated in individual contracts. For instance in some cases, contractors and/or clients may interpret the contract to mean that retention money is not yet due where not all defects have been resolved, and this can refer to all defects project-wide, not just the small number for which one sub-contractor is responsible. Therefore in such cases some sub-contractors are compelled to wait longer for the release of their money. Sub-contractors in such circumstances consider delays in payment of retention monies to be unjustified, whereas main contractors and/or clients would consider the delay to be justified.

The retention repayment conditions must be defined in the contract, as a result of changes to the Construction Act in 2011. Qualitative evidence indicates that this means in practice retentions are held for a longer time frame by comparison to the years prior to 2011, so that tier 1 contractors can be sure there is sufficient time to ascertain that defects have been resolved on a project-wide basis. However it should be noted that a number of tier 3 respondents believe that there is nothing in statute or contract to compel the main contractor or client to inform their contractor that practical completion has actually been achieved, which should trigger the release of half the retention. This was the legislative position prior to the amends to the Construction Act in 2011 but this is no longer the case. This suggests that not all contractors further down the supply chain are fully aware of, and have a clear understanding of, the changes. A number of tier 2 and 3 contractors participating in focus groups also say there is nothing in statute which compels clients and main contractors to advise when the certificate of making good defects has been provided. This is an incorrect perception, as there are provisions within the 2011 Construction Act amendments to address this. Again this emphasises the difficulties in understanding whether the proportion of delays in payment of retention monies are justified or unjustified.

4.4.3 Non-payment of retention monies

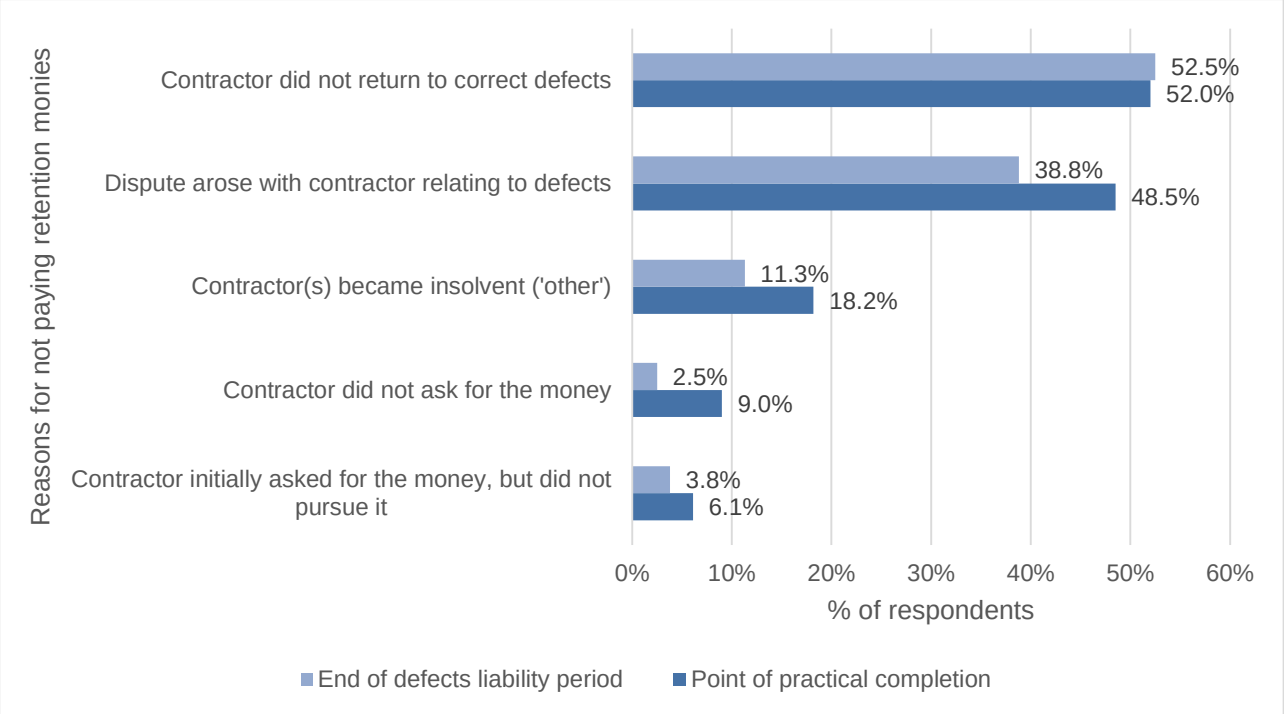
Participants in the client survey with experience of not releasing the retention money that they were due to pay, in one or more instances over the last three years, were asked to provide details on their reasons for non-payment.

Over half of clients responding to this survey question say they did not repay retention monies because the contractor did not return to correct defects. Approximately 48% of those that did not repay retention monies at the point of practical completion did so because of a dispute relating to defects. Around 18% say they did not pay retention

monies at the point of practical completion because of downstream insolvencies[124] (Figure 27).

124 Respondents were not specifically asked whether insolvency was a factor; this question had an ‘other reason’ option and all those that selected ‘other’ stated the reason was because of downstream insolvencies

Figure 27: Reasons why retention monies were not repaid by clients (client views)



101 respondents[125]

Participants in the contractor survey with experience of not releasing the retention money that they were due to pay, in the last three years, were also asked to provide details on their reasons for non-payment. The most common reason for not repaying retentions wholly or partially according to tier 1 contractors surveyed is that sub-contractors did not return to correct defects (Figure 28). In other words, the non- or delayed payment of retentions would in their (tier 1 contractors) view be justified according to the terms of the contract.

Survey data show that, from the perspective of tier 1 contractors, sub-contractors further down the supply chain do not always ask for their retention monies. Around 33% of tier 1 respondents responding to this survey question say sub-contractors did not ask for the retention at the point of practical completion, and 19% say sub-contractors did not ask for the retention monies after the end of the defects liability period (Figure 28[126]).

Survey data indicate that, for the majority of clients and contractors holding retentions, there is not an automated system to trigger the release of retentions and the procedure has to be manually authorised and paid, so asking for the retention may be the 'trigger' for payment. Contractors and clients with experience of holding retentions in the last three

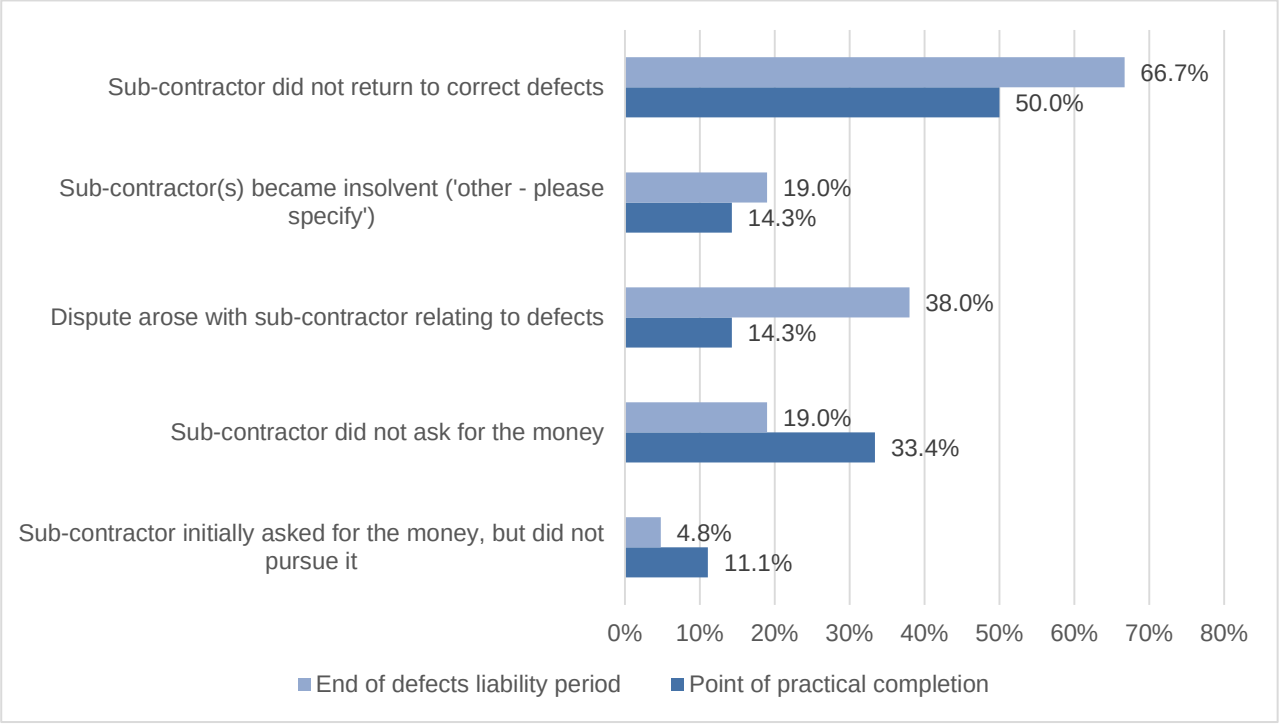
125 Respondents could select more than one response

126 Data are not available for tier 2 and tier 3 contractors because only a small proportion of these respondent groups have experience of holding retentions and therefore base numbers are too small to warrant inclusion

years were asked to provide details on how retention monies are released and of these a small proportion - around 12% of clients and 14% of tier 1 contractors - say that there is an automated or digitised payment system to trigger the release of retentions.

Qualitative evidence suggests that where sub-contractors do not ask for the retention, they elect to write the money off on the assumption that they will not receive it even if they ask for it. Some tier 1 contractors attribute this to a lack of awareness among sub-contractors about what they are owed and when it is due.

Figure 28: Reasons why retention monies were not repaid by tier 1 contractors (tier 1 contractor views)



27 respondents[127]

Tier 2 and tier 3 contractors participating in the contractor survey with experience of non-payment of retentions in the last three years were also asked to provide details on the reasons why they had not been paid (Figure 29).

This found that a very small proportion of these sub-contractors (3%) say they do not ask for the money at all, but that around a quarter say that they have initially asked for the money, but chosen not to pursue the claim[128]. This may link to survey data showing that around 15% of contractors increase tender prices by the amount of the retention which therefore suggests that in some cases, there may never have been an intention to request the money.

127 Respondents could select more than one response
128 This relates to the last three years – therefore could be in one or more instances during this time

Survey evidence shows that 21% of sub-contractors responding to this survey question say they are pursuing retention monies but that main contractors have not released the money. For 10% of sub-contractors surveyed, a reason cited is that retention monies were not yet released by the client to the main contractor, and for this reason, the main contractor had not paid the retention to the sub-contractor (Figure 29)[129].

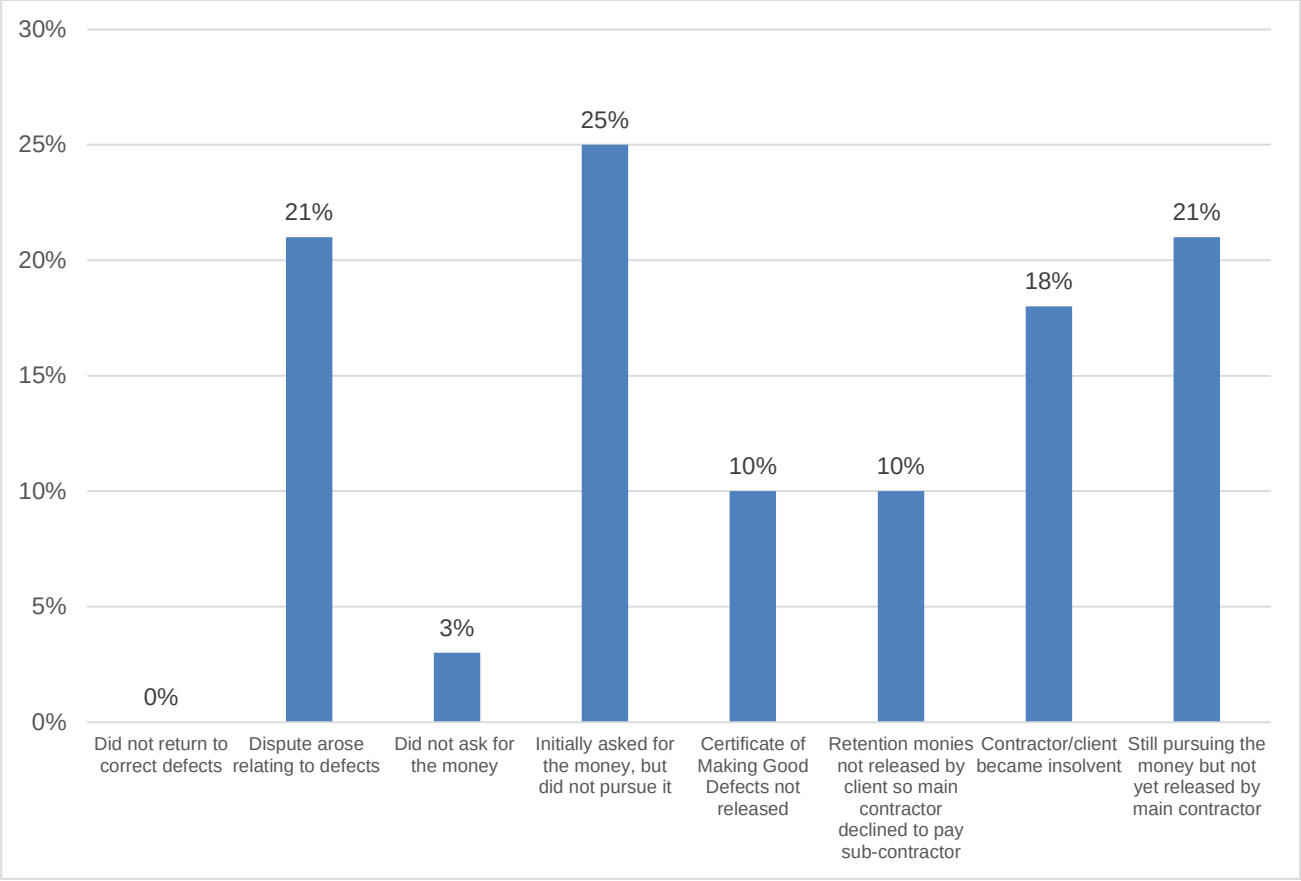
Around 21% of sub-contractors cite disputes relating to defects as a reason that retention monies have not been paid[130]. However, it is not clear from this data whether the reasons for the disputes, and withholding the retentions were justified. This is a slightly lower figure than the proportion of contractors who didn't repay outstanding retention monies due to disputes arising relating to defects either at practical completion or at the end of the defects liability period. This will partially reflect the fact that clients and main contractors are likely to be involved in a higher number of construction contracts over the same period, so more likely to experience defects in one or more instance over the same period.

Survey data also shows that 10% of tier 2 and 3 contractors responding to this survey question say that they have not received retention monies from a main contractor, in one or more instance in the last three years, because the Certificate of Making Good Defects has not been received. As stated in section 4.4.2, a number of tier 2 and 3 contractors participating in focus groups also say that there is nothing in statute which compels clients and main contractors to advise when the certificate of making good defects has been provided. This is an incorrect perception, as there are provisions within the 2011 Construction Act amendments to address this. This suggests not all contractors have a clear understanding of the legislation.

129 As there is a relatively low base number for this question no attempt has been made to separate data by the point of practical completion and the end of the defects liability period

130 This relates to the last three years – therefore could be in one or more instances during this time

Figure 29: Reasons why retention monies were not paid to sub-contractors (Tier 2 and tier 3 contractor views)



127 respondents[131]

Qualitative feedback cites the following main reasons for not paying retentions back:

- sub-contractors ask for their retention monies but do not pursue the claim, and eventually write it off;
- "*deals are brokered*" whereby not all the money is released, in order that the relationship is maintained to move on to the next contract; and
- it is alleged (among some tier 2 and 3 contractors) that main contractors or clients hold on to the money for as long as possible for their own benefit and/or to ensure maximum protection against defects.

Qualitative evidence suggests that sub-contractors may be reluctant to ask for or pursue their retention from a tier 1 company from whom they will need to obtain more work in the future. In other cases they may compromise on the amount owed, in order to receive some

131 Respondents could select more than one response. The four options on the left were listed as options in the questionnaire. The remaining four options were coded from the 'other – please specify' option

of the money rather than wait for it all. The decision to compromise in this way is strongly associated with a desire to maintain a good working relationship with their client (i.e. the main contractor), and avoid the risk of compromising opportunities for future work.

4.4.4 Other impacts for tier 2 and 3 contractors

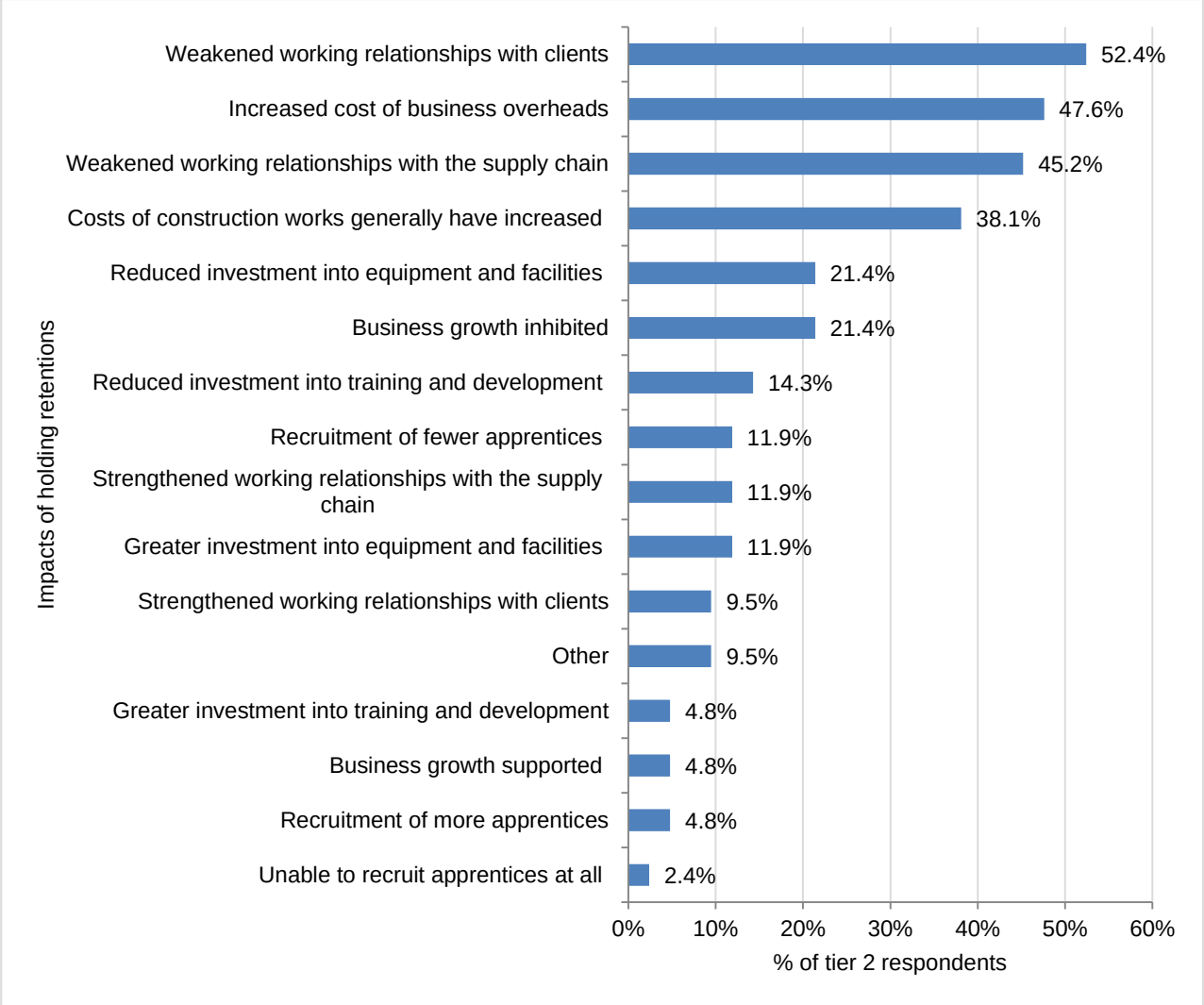
Tier 2 and 3 respondents to the contractor survey were also asked to select from a list to indicate which, if any, impacts they had experienced as a result of having retentions held from them, in the past three years[132]. Respondents were able to select more than one option. The results provide an indication of the frequency with which tier 2 and 3 contractors have experienced the various impacts, in the last three years.

Subsequently they were asked to identify the one most significant impact of holding retentions experienced in the past three years, to provide an indication of which of these impacts they think are the most important.

Over half of tier 2 respondents holding retentions from their sub-contractors (52%) say an impact of doing so is weaker working relationships with their clients (i.e. main contractors) and 48% say an impact of retentions is higher business overheads. Around 45% of tier 2 respondents also report weakened working relationships with the supply chain (Figure 30).

132 This was only asked of those contractors with experience of having retentions held from them in the last three years

Figure 30: Impacts of having retentions held (perspectives of tier 2 contractors)



172 respondents[133]

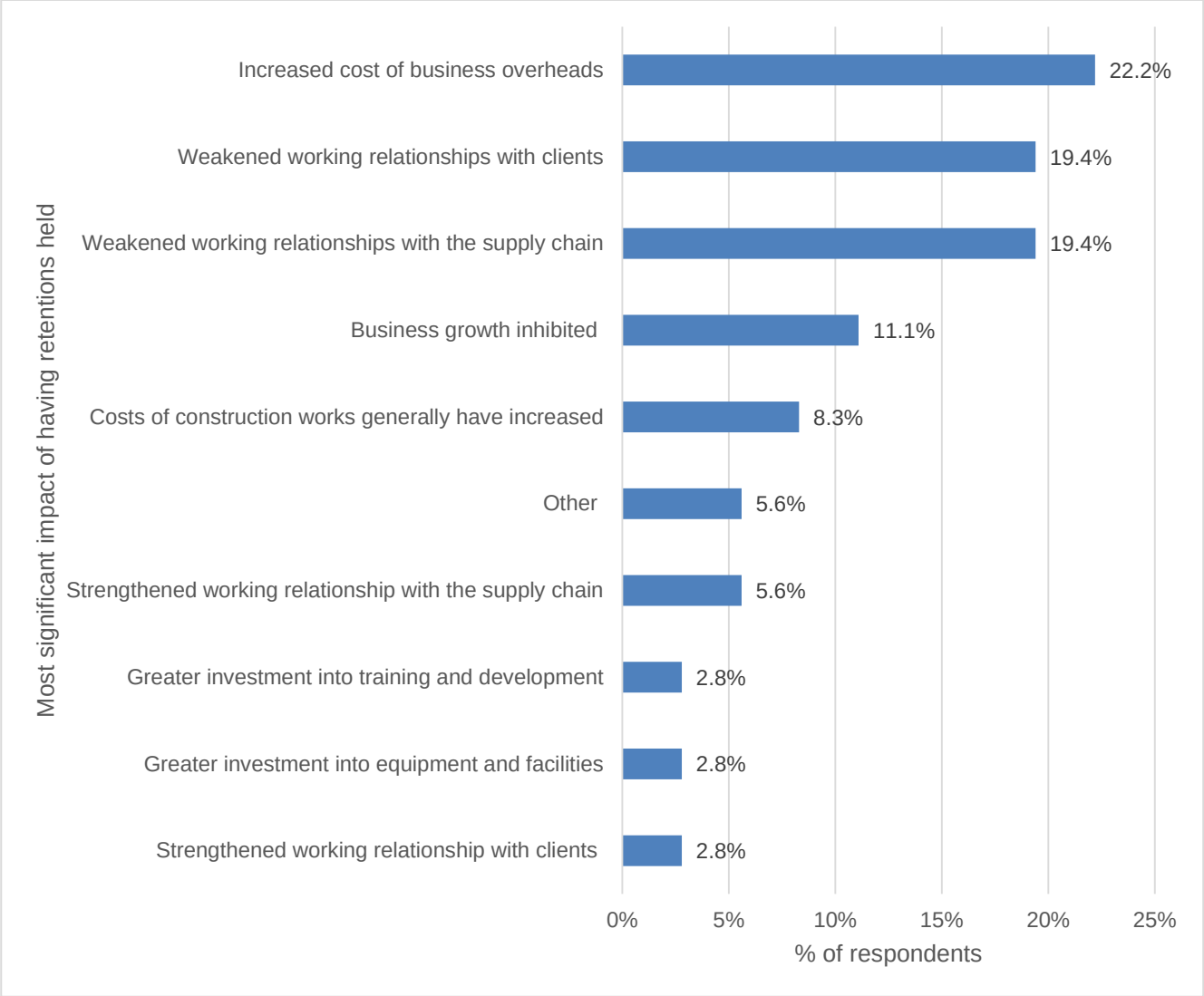
Qualitative evidence cites a "*lack of trust*" within the supply chain as a result of retentions, saying that retentions can be a factor in undermining the ability to forge strong working relationships. Survey data find strong working relationships can help offset the need to have retentions. Some respondents say the impact on working relationships can be exacerbated by the way in which retentions can be administered, with time and effort required in some cases to obtain monies owed.

In respect to having retentions held against their own work, again the most frequently cited most significant impacts for tier 2 companies mirror those experienced in tier 1 organisations. Around 22% of tier 2 companies responding to this survey question say that the most significant impact of having retentions held are higher business overheads, and 19% say the practice weakens working relationships with the supply chain (Figure 31).

133 Respondents could select more than one response

Around 19% say that weakened relationships with their clients is the most significant impact of having retentions held against them.

Figure 31: Most significant impacts of having retentions held (perspectives of tier 2 contractors)



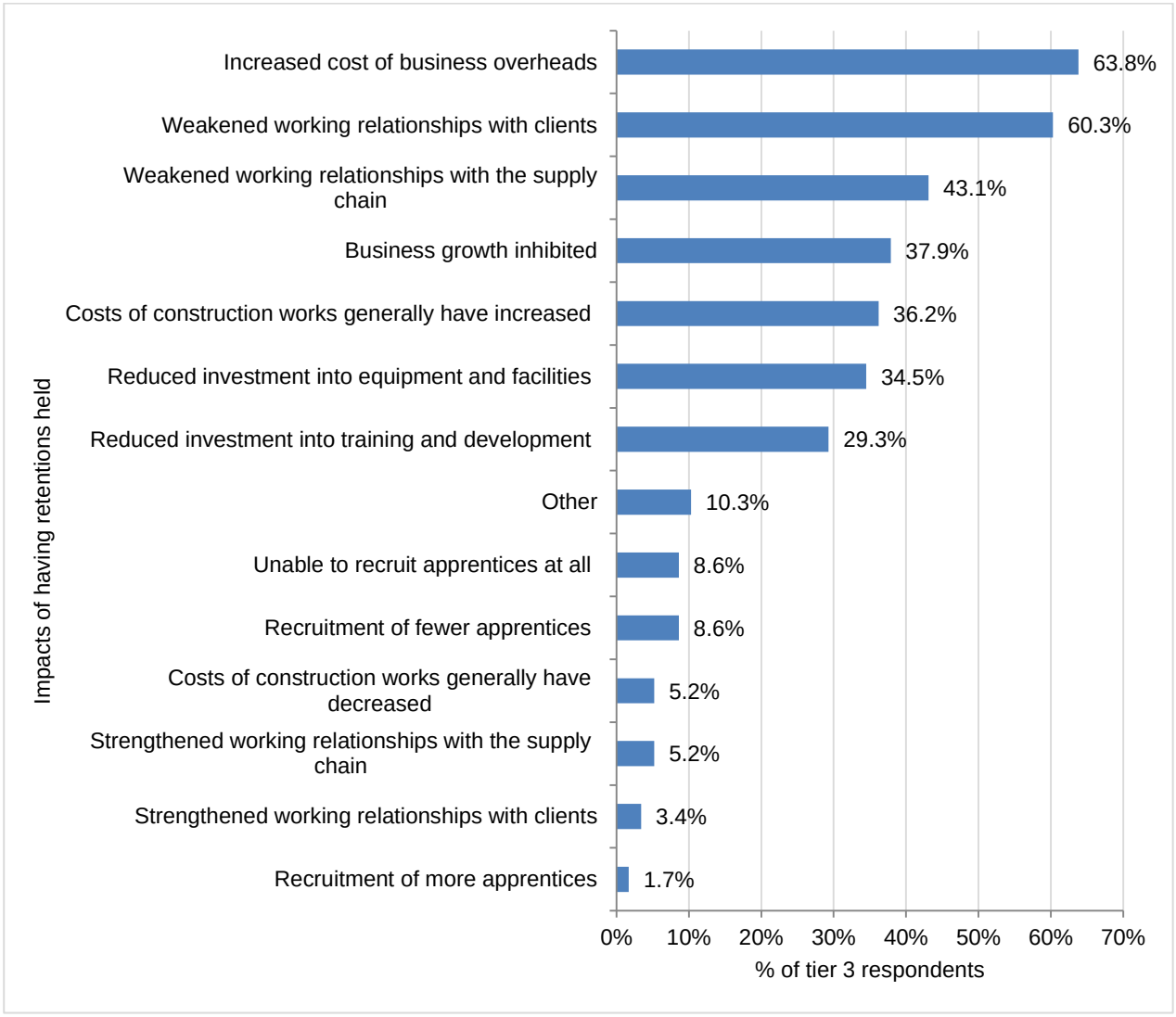
36 respondents

The impact of higher business overheads is cited by the largest proportion of tier 3 respondents (64%) (Figure 32). Approximately 60% of tier 3 respondents say an impact is weaker working relationships with their clients (clients in this context including main or tier 2 contractors), and 43% say it weakens working relationships with the supply chain[134]. Just over a quarter of tier 3 companies responding to this question, which is the highest

134 Respondents could select more than one response

proportion of respondents answering the question, say higher business overheads is the most significant impact of having retentions held.

Figure 32: Impacts of having retentions held (perspectives of tier 3 companies)



58 respondents[135]

135 Respondents could select more than one response

4.5 Impacts of the practice of retentions on the construction sector as a whole and on the wider economy

4.5.1 Economic constraints for construction sector businesses

Cash flow and working capital

Survey data (as described in sections 4.3 and 4.4) indicate that for some contractors and sub-contractors, having retentions held from them can contribute to economic constraints on individual company growth and investment. This can result in higher project prices and, in turn, in some cases, less competitive businesses.

Qualitative evidence from focus groups and interviews provides more detail about the financial impact for construction sector businesses with retentions held from them, as retention monies held can add aged debt to balance sheets, in turn affecting the capacity to borrow (or incurring higher interest rates) and/or prompting the need for an overdraft. These factors can contribute to weaker balance sheets in the longer-term. Costs may be passed on to clients to help offset higher overheads.

Qualitative feedback further emphasises the impact of retentions on cash flow and working capital. According to typical contractual clauses, there is nothing to prevent the holder of the retention from using the money for their own purposes.

Figure 4 showing the frequency of use of retentions among contractors (section 3.3.3) indicates that:

- 5.3% of contractors may have received cash flow benefits from holding retentions, in the last three years[136], as they have held retentions but have not had them held from them. This proportion is highest for tier 1s and declining down the supply chain;

- 50% of contractors may have had their cash flow affected, in the last three years, by having retentions held, whilst not holding retentions themselves. This is true of the highest proportion of all tiers. However, true of a higher proportion of tier 2 and 3 contractors, suggesting they may be more likely to have cash flow affected as a result of retentions;and

- for those who both held retentions and had a retention held, impact on cash flow in unclear. As could probably be expected, given their position in the supply chain, a greater proportion of tier 2s fall into this category (24%). 16.5% of tier 3s fall into this category, reflecting the fact that there can be further tiers of sub-contractors below them in the supply chain.

The survey evidence shows that 12.3% of all contractor respondents with experience of having retentions held from them in the last three years needed to raise additional working capital on at least one of their contracts as a result of the practice of retentions in the past

136 if (as the majority of survey respondents do) they held retentions in their main bank accounts

three years. This affected micro organisations in particular, with 16.5% having to raise additional capital, while small, medium and large businesses need to do this less often (8.7%, 10.2% and 9.5%, respectively).

Survey data show that across those that reported that they needed to raise additional working capital, the average amount of additional working capital that needed to be raised per contractor as a result of having retentions held from them over the last three years is £56,600, with a median of £20,000 and a standard deviation of £99,600. The lowest 25% needed to raise less than £10,000 over the past three years due to retentions, while the top 25% needed to raise more than £50,000. The 95% CI for the average amount of working capital needed is £23,600 to £89,600 for all English construction businesses.

Declined work and impact on tender prices

Evidence from the interviews and round table discussions found that money in retentions can restrict contractors with retentions held from them from undertaking other jobs, because of the impact on cash flow and lack of working capital. Refusal to accept retentions, or reluctance to accept them subject to certain terms and conditions, can also be a factor in limiting the amount and type of work for which contractors bid.

Survey data indicate that 21% of all contractors with experience of retentions declined work in the past three years because a retention would be held. Across these contractors that declined work in one or more instance, the average value of work declined per respondent over the past three years is £2,773,200 with the median being £250,000. Again, the standard deviation was large at £12,665,800 as answers differed between £600 for the lowest amount and £100,000,000 for the highest[137]. Each piece of work declined was worth an average of £346,000.

The majority of organisations surveyed that decline work for this reason are micro and small businesses (45% and 31% of those that declined work, respectively). Only 7% of those that declined work were large businesses, although it was one of the large businesses that declined the highest value of work (worth £100,000,000).

The majority of large tier 1 contractors participating in the qualitative research consider their relationships with their supply chain are strong, and they do not believe that prices charged are any higher because of retentions. Survey evidence indicates around 15% of contractors across all tiers of the supply chain increase their tender prices by an amount equivalent to the cost of the retention. This figure rises to 18% among micro businesses; 9 out of the 10 businesses who noted that they increase their price by more than the amount of the retention are micro businesses. Therefore retentions appear to play a part in increasing overall costs of construction sector projects, although it is clear that the majority of all contractor respondents do not increase their prices as a result of retentions.

137 average value of work declined per business size: micro (28 contractors) = £360,000; small (20 contractors) = £879,000; medium (11 contractors) = 3,960,000; large (4 contractors) = £25,876,000

4.5.2 Retention monies wholly or partly unpaid

Evidence from the survey shows that a proportion of retention monies across the sector as a whole is not paid back at all, or not paid back in full to contractors and sub-contractors (Table 3).

Participants in the contractor survey with experience of having retentions held from them in the last three years were asked to provide estimates for the total number of contracts where retention money had not been repaid to them over the last three years (whether wholly or partially, and at both practical completion and at the end of the defects liability period). They were also asked to estimate their total number of construction contracts over the last three years.

Estimates for the percentage of non-payment of contracts were then calculated for each individual respondent based on the number of overall contracts (both those with and without retentions held[138]) they had over the past three years. The percentages were then averaged. This means that, when calculating the average values presented in Table 3, only those contractors were taken into account that provided both their number of contracts over the last 3 years and details on the number of contracts where retentions were unpaid.

As noted in the limitations section, during fieldwork it was apparent that respondents may have found it challenging to limit their answers to the last three years only and may have provided answers in respect of a longer or shorter time period. These results, therefore, need to be interpreted with caution.

Non-payment of retention monies by tier

Table 3: Average percentage of contracts where retention monies are wholly or partly unpaid at practical completion and at the end of the defects liability period, past three years (contractor respondents with experience of having retentions held by tier) (contractor survey data)[139]

138 As data on the number of contracts with retentions held was not available it was not possible to produce an estimate of non-payment as a proportion of contracts with retentions held

139 To avoid double-counting and to satisfy the conditions of the statistical tests conducted, only those businesses are included that operate on one tier only and that provided data on both the number of contracts held over the past three years and the statement in question; sample sizes: Non-payment in full at practical completion: tier 1 contractors = 34, tier 2 contractors = 59, tier 3 contractors = 17; non-payment at all at practical completion: tier 1 contractors = 31, tier 2 contractors = 52, tier 3 contractors = 18; non-payment after defects liability period: tier 1 contractors = 31, tier 2 contractors = 60, tier 3 contractors = 19; non-payment at all after defects liability period: tier 1 contractors = 34, tier 2 contractors = 61, tier 3 contractors = 19. Overall, 68 contractors with data on this were excluded from the analysis as they were associated with more than one tier. Of those excluded, 25 were micro businesses, 25 were small businesses, 13 were medium sized businesses and 5 were large businesses. This reduces the sample size however statistical testing was conducted to ascertain the significance of results, as described

	Tier 1 (% of contracts in past 3 years)	Tier 2 (% of contracts in past 3 years)	Tier 3 (% of contracts in past 3 years)
Not received back in full – at practical completion	10.6%	37.2%	35.4%
Not received back at all – at practical completion	4%	16%	20.6%
Not received back in full – after defects liability period	8.4%	23.5%	24.3%
Not received back at all – after defects liability period	5%	10.8%	13.1%

Results for the different tiers in the survey indicate that tier 1 contactors have less of an issue with non-payment of retention monies at either stage compared to the other two tiers. Statistical tests were conducted to compare contractors of the three tiers. Tier 1 contractors experience significantly less partly unpaid retentions at practical completion compared to both tier 2 and tier 3 contractors, while tier 2 and tier 3 contractor results are not statistically different from one another[140]. A similar pattern emerges for non-payments of the complete sum at practical completion, with a marginally significant overall test and a significant difference post-hoc between tier 1 contractors and tier 3 contractors[141].

Differences between the three tiers are also evident in the survey for partly unpaid retentions after the defects liability period, with a marginally significant test, giving an indication that tier 1 and tier 3 contractors again are likely to have different experiences, with tier 3 contractors experiencing higher levels of partial non-payment at the end of the defects liability period[142]. In contrast to those findings, there were no significant differences between the tiers for non-payment of the total sum after the defects liability period[143], although differences were descriptively similar to the other three questions. However, they cannot at this point be considered robust.

Survey data show that it is more likely that retentions are not repaid either fully or partially at tier 2 and 3 of the supply chain. For example, survey data show that tier 2 contractors have four times the number of incidences of non-payment of retentions upon practical completion, in part or in full, compared to tier 1 contractors.

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140 ANOVA: F = 5.59, alpha =.005, Tukey HSD for pairwise comparisons

141 F = 2.97 alpha = .056, Tukey HSD for pairwise comparisons, no significant differences between tier 2 and either tier 1 or tier 3 contractors

142 F = 2.75 alpha = .069, Tukey HSD for pairwise comparisons

143 F = 1.52 alpha > .05, Tukey HSD for pairwise comparisons

Not only do tier 2 and 3 contractors have more incidences of non-payment of retention monies than tier 1 contractors, descriptively a higher proportion of tier 2 and 3 respondents is affected by this compared to tier 1 contractors: the majority of tier 1 contractors have not experienced any non-payment, be it partial or full at either stage over the past three years (at least 52.5% of contractors with experience of having retentions held in the last three years[144] across the four categories). On the other hand, the majority of tier 2 contractors surveyed with experience of having retentions held in the last three years[145] have had issues with non-payment in some form (at least 57.4%, across the four categories) and tier 3 contractors are even more familiar with non-payment over the past three years, with 65% of tier 3 contractors surveyed with experience of having retentions held in the last three years affected in some way. It should be noted, however, that tests have not been conducted to confirm whether these differences are statistically significant.

Qualitative evidence states that tier 3 companies are less likely to pursue their retention monies, which may partly be because of concerns about affecting the working relationship with their client (i.e. the main or tier 2 contractor).

There are multiple reasons for late or non-payment of retention monies, including disputes over defects, contractors becoming insolvent and contractors not asking for their retention money.

Contractors responding to the survey were asked to provide an estimate of the amount of retention monies owed to them over the last three years that had not been paid after the end of the defects liability period. On average across all respondents who experienced at least one incidence of this, £27,500 worth of retentions monies was outstanding at the time of the survey, with a median of £19,000 and a standard deviation of £373,000.

Micro businesses experienced unpaid retentions lower than average, at £14,200 (standard deviation of £14,600) and a median withheld retention of £8,000.

Small businesses had unpaid retentions similar to the overall average of £27,700 (standard deviation of £22,600) and a median of £21,800.

Contractors from medium sized businesses had retentions outstanding of on average of £46,500 (standard deviation of £63,600) and a median value of £22,000.

Large businesses experienced unpaid retentions of on average £34,500 (standard deviation of £46,500) and a median similar to the small and medium sized businesses of £20,000.

The survey data also gave an indication of how many contractors within each size category were affected by non-payment of retention monies over the past three years. This was calculated by dividing the number of contractors with such an experience by the total number of contractors surveyed with experience of retentions in the last three years (i.e.

144 Either experience of holding retentions or experience of having retentions held from them
145 Either experience of holding retentions or experience of having retentions held from them

independent of whether they had any experience of retentions being held or holding retentions). Descriptively, micro businesses were the least affected, with only 18.2% of all respondents reporting outstanding retentions over the past three years. Small, medium and large businesses were affected in a similar way, with 34.3%, 38.2%, and 31.0% reporting at least one such incident. It should be noted, however, that tests have not been conducted to confirm whether these differences are statistically significant.

4.5.3 Impact on relationships throughout the construction sector supply chain

As previously stated in sections 4.3 and 4.4, a high proportion of contractors responding to the survey across all tiers 1-3, say that an impact of the practice of retentions is weakened working relationships with clients and with the supply chain. However, it should be noted that one of the reasons that retentions became a part of the construction sector culture is a perceived lack of trust in respect to contractors' and sub-contractors' ability to perform work to a specified standard, in a timely fashion.

Survey data show a small proportion of contractors say they have experienced benefits as a result of the practice of retentions, either holding them or having them held against their organisation. However, these contractors are in the minority compared with those experiencing negative impacts.

4.5.4 Legal costs associated with pursuit of retention monies

Participants in the contractor survey were asked to provide details of approximately how many times they have gone to court/adjudication to obtain outstanding retention monies in the last three years. This found that 14.1% of respondents to this survey question had taken legal action in one or more instance in the last three years.

Those 34 contractors surveyed who have taken legal action provided their estimated costs for this, which equate to an average cost per contractor of £16,300[146] with a relatively high standard deviation of £23,000.[147] The 95% CI for the average cost per contractor is between £8,500 and £24,000, meaning that the likely average cost per contractor across all businesses in the construction sector in England lies within this range.

The cost per case for these contractors is £8,500[148], on average, with the median being £4,600 and a standard deviation of £17,100.[149] The 95% CI for the average cost per case

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146 This average is based on 34 respondents who have gone to court in the past three years due to outstanding retention monies. This has not been scaled up to estimate legal costs for the sector as a whole, which would not be robust, given the very small number of respondents who have taken legal action. Due to the small number of respondents in the survey with experience of legal action this figure was not broken down by size or tier, as results would not be reliable. Looking at the respondents with experience of having gone to court, most were tier 2 businesses; broken down by size, businesses were predominantly of small and medium size, with no large businesses that responded to our survey having had experience of going to court due to outstanding retentions

147 While the lowest 25% had costs of less than £2,500, the highest 25% had costs of over £20,000 and the median was at £7,500

148 This average is based on 34 respondents who have gone to court in the past three years due to outstanding retention monies. This has not been scaled up to estimate legal costs for the sector as a whole, which would not be robust, given the very small number of respondents who have taken legal

is between £2,700 and £14,200, meaning that the average cost across contractors in the UK lies within this range.

Across the three tiers, contractors from tier 2 had the most experience of legal action, with 17 of the 34 respondents belonging to that tier. On average, contractors from this tier had costs per case of £12,000, with a median of £5,000. The 95% CI for this group of contractors is between £870 and £23,200. This very large interval shows that results are not very robust due to the small number of contractors and should be taken as indicative only.

Looking at the impact of the size of construction businesses on legal costs, 15 small, as well as eleven medium sized businesses had the most experience of having gone to court over outstanding retentions. The average cost per case for the small business contractors was slightly below average at £6,900, with a median of £5,000. The 95% CI is between £3,200 and £10,700, which means that the average legal cost for small businesses is likely to be within this bracket.

While the average for the eleven medium sized businesses was larger than the overall average at £13,800 and a median of £5,000, businesses of this size category differed much more between them, with a standard deviation of £28,900. This resulted in a 95% CI of -£3,300 and £30,800. As the confidence interval includes zero, results are unreliable and cannot be used to robustly predict the average cost of legal action for businesses of this size.

Qualitative evidence from focus groups states that legal costs can often be too prohibitive to make it worthwhile continuing to chase retention money. The fees for an adjudicator can be between £200 and £400 per hour[150], however adjudicators for complex cases may charge more. The fee is agreed with the parties involved[151].

Qualitative evidence from interviews further suggests a highly complex system for claiming back retained money. The contracts can be very ambiguous and the legalities of adjudicators add to the confusion. Depending on the amount to be claimed, and given the relatively high cost of the adjudicator fees, contractors say it may not be worth making the attempt. Therefore there are only a very small number of court cases that relate directly to retentions (for a summary of these see Appendix 6).

4.5.5 Links between retentions and insolvencies in the construction sector

One of the objectives of this research was to consider the links between retention payments and insolvency. Specifically, the frequency with which insolvencies occur under construction contracts, the value of retention monies unpaid as a result of insolvency, and

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action. Due to the small number of respondents in the survey with experience of legal action this figure was only broken down by the most commonly represented tier and size and results should be taken as indicative only

149 While the lowest 25% had costs of less than £850 per case, the top 25% had costs of £10,000 or more, with the respondent with the highest cost paying £100,000 for one case

150 http://constructionblog.practicallaw.com/the-reasonableness-of-the-adjudicators-fee/

151 http://www.cedr.com/solve/constructadjud/

whether there is a case to treat retention money in a different way from other payments in the case of insolvency. This stemmed from concerns flagged within parts of the construction sector around retention money being unpaid due to upstream insolvencies.

In 2014, the number of new company insolvencies in the construction sector in England, Wales and Scotland was 3,091[152]. This equates to approximately 1.5% of all UK construction enterprises[153]. Therefore, although the total number of insolvencies is highest in construction compared with other industries, the proportion of companies becoming insolvent is not particularly high compared with other sectors.

Survey data show that in the past three years 44% of contractors surveyed who have had retentions held from them in the last three years have experienced non-receipt of retention monies due to upstream insolvencies over this period.[154] On average, those contractors experienced upstream insolvencies 4.2 times each, resulting in upstream insolvencies on 1.1% of all their contracts[155] over the past three years. The average amount lost per contractor (i.e. across all their contracts) due to upstream insolvencies equates to £79,900. The average amount lost per contract being £27,300 and the median being far lower at £4,000 per contract[156]. The 95% CI for the average lost per incidence is £6,900 to £47,700 and due to this broad interval, average results have to be treated with caution.

Of the tier 1 contractors surveyed who had retentions held from them in the past three years[157], 28% experienced non-receipt of retention monies due to upstream insolvencies. On average, these contractors experienced non-payment due to upstream insolvencies 2.5 times and lost on average of £179,700 each (i.e. across all their contracts) over the past three years, with the average amount unpaid per contract being £63,200. The median of the money lost per contract is £5,400 and the lowest 25% lost less than £2,000 whereas the highest 20% lost upwards of £25,000.

Of the tier 2 contractors, the majority (51%) of those who had retentions held against them over the past three years experienced at least one instance of upstream insolvency and

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152 The Insolvency Service (2016), Insolvency statistics April - June 2016

153 Calculation based on the Insolvency Service (2016), Insolvency statistics April – June 2016 for England, Scotland and Wales (data not available for Northern Ireland), and UK ONS Annual Business Survey data for the number of UK construction enterprises (Release Date 9 June 2016)

154 The survey questions asked “Approximately how many times in the past three years have you experienced non-payment of retention monies owed to you due to insolvency of another organisation”. It is assumed here that this non-payment is due to upstream insolvency. It is unclear whether non-payment is due to insolvency of the client or upstream contractor holding their retention (i.e. direct upstream insolvency), or non-payment due to another organisation going insolvent

155 i.e. all contracts, including both those with and without retentions held. This 1% figure was calculated by comparing the total number of contracts where upstream insolvencies were experienced with the overall number of contracts of the past three years across all contractors with experience of having retentions held from them in the past three years

156 To put this into context, the average amount of retention on current contracts across all contractor respondents is £62,800, so the amount lost per contract is slightly below that

157 As with other analysis of respondents by tier, only those contractors are included that classified themselves as exclusively tier 1, 2 or 3, so these statistics are based on fewer number of respondents compared to the total. In this case, 152 respondents contributed to the overall average and there were 26 tier 1 respondents, 57 tier 2 respondents, and 16 tier 3 respondents that met all of the relevant conditions (i.e. experience of retention being held from them in the past three years, as well as experience of upstream insolvency)

lost monies retained because of it. On average, these tier 2 contractors lost £25,900 across 4.6 instances over those three years. Per contract, they lost an average of £7,800, with the median being £4,000. The lowest 25% lost below £1,500 per incidence, while the top 25% lost more than £10,000.

The majority (64%) of tier 3 contractors who had retentions held against them over the past three years experienced upstream insolvency, and those that did had on average 3.8 instances over the three years. On average, these tier 3 contractors lost £24,600 overall and £6,600 per incidence, with the median lost per instance being £2,700. The lowest 25% of these tier 3 contractors lost less than £1,000 while those in the top 25% lost more than £5,000 per incidence of upstream insolvency.

A statistical test could not confirm that the differences in the average retention lost per incidence of insolvency between the tiers is significant due to the low sample size as well as the high variation within the sub groups. Therefore, results are only indicative.

It should be taken into consideration that multiple contractors within the supply chain could be affected by insolvency of one large main contractor or client. This is because the client or main contractor could be involved in a high number of construction projects or contracts at a given point in time[158]. Risk is thus passed down through the supply chain within the sector[159].

The survey asked respondents about experience with downstream insolvencies and the inability to pay back retention because of it.[160] However, only 18% of contractors who held retentions in the past three years had experience with downstream insolvency and non-payment of retention monies in consequence, so results are only indicative and are not broken down by tier. Those that did experience this reported on average 5.8 instances over the past three years and, on average, kept retentions per incidence of £83,900 and a median per instance of £10,000 (with a standard deviation per instance of £196,400). Given the low numbers who could respond to this question, the 95% CI is very broad and between £8,800 and £401,000.

Approximately 12% of clients surveyed with experience of holding retentions in the past three years had not paid monies back due to downstream insolvencies and for most of these clients (62%) this only happened once. The average amount unpaid by clients due to downstream insolvencies over the three years is £64,800 with a median of £18,300 and

158 As the client (including main contractor) for a project involving a high number of contractors and/ or as client (including main contractors) across multiple projects

159 BIS (2013), Supply chain analysis into the construction sector: a report for the Construction Industrial Strategy

160 The survey question asked “Approximately how many times in the past three years have you not paid retention monies due to insolvency elsewhere in the supply chain?”, it has been assumed here that this relates to downstream insolvency

a standard deviation of £132,000. The average unpaid per incidence of insolvency is £54,500, with a median of £10,000 and a standard deviation of £130,200[161].

This research has also investigated whether there is evidence to suggest that the practice of retentions and their frequent non- or late payment causes insolvencies in the sector.

Qualitative evidence obtained from focus groups and interviews suggests that late or non-receipt of retention payments may be one element contributing to business decline that can then lead to insolvency. However, official documentation which records reasons for insolvency[162] is high level and cannot be used to evidence this. It is therefore difficult to make direct links between the practice of retentions and resulting insolvency.

Survey evidence shows that retentions are commonly paid late (which qualitative evidence indicates can be a part of wider issues associated with payment practices in the sector). This increases the risk that the client or main contractor may become insolvent before the retention payment is paid, as retention monies are held for a longer period of time. Survey data show that across all tiers of contractors, the majority (74%) agree that the typical length of time for which retentions are intended to be held after practical completion is 12 months, the average being 12.5 months with a standard deviation of 4.9 months and a range between 0 and 36 months. However in practice, the average length of time for which retentions are held is 18 months, with a bigger standard deviation of 9.2 months. This means that the average delay experienced is 5.5 months (using average figures).

Qualitative feedback also pointed out that when economic market conditions are poor, holding retentions for longer than specified in the contract can make the difference between a contractor's success or failure.

A summary of court cases involving retentions and insolvency is included at Appendix 7.

4.6 How would monies be used if not held in retention?

Contractors surveyed, with experience of having retentions held from them in the last three years, were asked to indicate from a list of options how they would use monies if not held from them in retentions. Respondents were able to select multiple options. It should be noted that responses are speculative and there is no guarantee that money would actually be spent in this way.

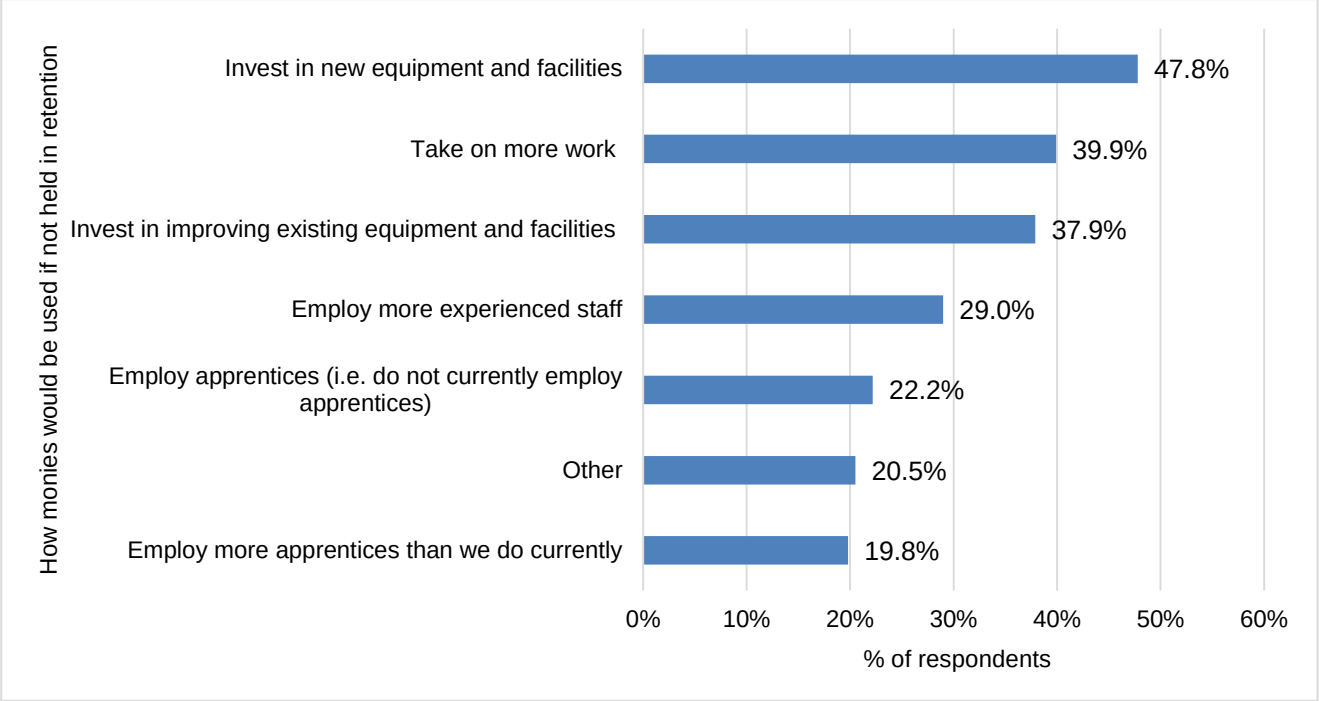
Approximately 48% of contractors responding to this survey question say they would invest in new equipment and facilities if they did not have retentions held from them, whilst around 40% of contractors would take on more work. Approximately 38% say they would invest in improving their existing infrastructure or fixed assets. Employment of more experienced staff is cited by 29% of respondents. Approximately 22% of respondents say

161 Due to the high variability in the data, as evidenced by the large standard deviation, caution needs to be taken when generalising findings to client contractors across the UK. A high standard deviation means that the average across all businesses might be considerably different from the average found in the sample

162 For example court cases and Insolvency Service data

they would use retention monies to either take on more apprentices, or start employing them for the first time (Figure 33)[163].

Figure 33: How money would be used if not held in retention (contractor views)



Base 293 respondents[164]

Focus group participants summarised their views of the potential impacts (listed below in priority order of importance) on the construction sector if retentions were to be eliminated, noting that in turn this would bring about a positive effect for the economy as a whole:

- more apprenticeships could be funded;
- increased investment could be made into training and development of existing staff;
- increased investment could be made into training and development of apprentices;
- more tenders could be submitted, for a more diverse portfolio of work; and
- increased investment could be made into facilities and equipment, including upgrading or buying new types of plant and materials.

163 Respondents were able to select more than one response
164 Respondents could select more than one response

4.7 Payment practices in the construction sector

Qualitative evidence from focus groups and interviews indicates that a disproportionate amount of administrative costs and time may be spent pursuing retention payments, compared with standard invoices owed. It also suggests that tier 2 companies elect to spend more time ensuring they receive the retention monies back, whereas by comparison some tier 3 organisations may be more inclined to write some or part of the retention monies off.

Although not directly within the scope of this research, it should be noted that evidence obtained from the in-depth interviews and workshops also pointed to perceived problems with payment practices being time consuming and complex generally in the construction sector – indicating that retentions are just one aspect of what may be a more significant general issue. Removing retentions from the equation would therefore be unlikely to remove all payment administration issues.

Research undertaken in 2015 found that UK construction firms were waiting on average, over 15 weeks (105 days) to receive payment, and that furthermore delays have increased by over 20% since 2008[165]. Within the fragmented construction sector comprising 99.97% of SMEs[166], late payment can have a significant impact[167].

Successive Governments have taken steps to try to tackle the issue of late payments. The Housing Grants, Construction and Regeneration Act 1996 (the Construction Act) sets out a number of provisions aiming to address delays in payment. Part 8 of the Local Democracy, Economic Development and Construction Act 2009 made a number of changes to the payment and adjudication provisions of the Construction Act to deliver improvements. The Post Implementation Review is yet to be undertaken.

Construction 2025[168] makes a clear commitment to address issues in relation to payment practices and access to finance, noting in particular the immediate impacts of late or uncertain payment, as well as the longer-term 'domino' effect as payments are in turn delayed to sub-contractors, to their suppliers, and so on. A number of initiatives have subsequently been introduced, notably the Construction Supply Chain Payment Charter in 2014[169]. The charter saw major contractors, clients and the Government commit to paying their suppliers within 30 days, from 2018. The charter currently has 25 signatories. The deal, organised with the Construction Leadership Council (CLC), initially committed contractors and clients to paying their suppliers within 60 days. From June 2015 this was reduced to 45 days and from January 2018, to 30 days[170]. Other commitments made in the charter include not withholding cash retentions, not delaying or withholding payment, and making payments electronically. It is not clear (as yet) how effective the charter is.

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165 Asset Based Finance Association (2015), Late payment: an analysis by sector

166 BEIS Business Population Estimates for the UK and Regions (2015). SMEs are defined here as businesses with less than 250 employees

167 Textura Europe (2016), The business case for digital payment

168 HM Government (2013), Construction 2025

169 http://www.promptpaymentcode.org.uk/cscpc.htm

170https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/306906/construction-supply-chain-payment-charter.pdf

Under Regulation 113 of the Public Contract Regulations (PCRs) 2015, UK Government and non-devolved public sector bodies must include 30-day payment terms in new public sector contracts; pay valid and undisputed invoices in 30 days; and require that this payment term be passed down the supply chain. Additionally under the PCRs, all public sector buyers must publish annually on their payment performance including the amount of interest paid to suppliers due to late payment. In March 2017, it became a requirement to publish the total amount of interest that the public sector buyer was liable to pay, i.e. whether paid or not, whether statutory or otherwise, due to a breach of the Regulations.

4.8 Key findings – impacts of retentions for the construction sector

- Survey data show there are five main impacts of the practice of holding retentions throughout the construction sector supply chain, notably: higher business overheads; administrative time incurred as a result of dealing with retentions (for instance time spent obtaining payments); costs of construction sector works are deemed generally higher; and weakened relationships with a) clients; and b) the rest of the supply chain.

- Around 40% of respondents to the client survey with experience of retentions in the last three years think overall project costs are higher because of retentions, and 18% of contractors surveyed with experience of retentions in the last three years say they increase tender prices by an amount equal to or higher than the retention.

- Despite these issues the practice of holding retentions is strongly engrained in the sector, underpinned by a need to have some form of 'insurance policy' to mitigate project risks in relation to timely completion to a high quality standard. In addition to providing a form of security for clients, and incentives to contractors to complete the work on time and free of defects, retentions also offer some advantages to clients and main contractors given that retention monies are not usually ring-fenced in separate accounts and therefore can be used within the business, for instance as part of working capital.

- Survey evidence finds delays in paying retention monies are commonplace in the construction sector. Around 71% of contractors surveyed with experience of having retentions held in the last three years have experienced delays in receiving retention over the same period.

- The extent of the delay is more pronounced for sub-contractors (i.e. tier 1 and 2 contractors) compared to main contractors, in relation to the average time period over which retentions are actually held, compared with how long they are intended to be held, after practical completion. Survey data show tier 1 contractors experiencing on average delays of nearly 3 months, compared with delays of almost 7 months for tier 2 contractors, and delays of just over 9 months for tier 3 contractors. This difference is only statistically significant between sub-contractors and main tier 1 contractors.

- Not all retention monies are fully paid. Survey evidence suggests it is more likely that retentions are not repaid either fully or partially at tiers 2 and 3 of the supply chain. Survey data find tier 2 contractors did not receive retentions back in full upon practical completion in 37% of all tier 2 contracts, while tier 3 contractors did not receive

retentions back in full upon practical completion in 35% of all tier 3 contracts. In relation to the latter, this may partly be because tier 3 contractors are more inclined to write the monies off rather than request/pursue them; qualitative evidence finds tier 3 companies may be more inclined to write off retention monies. in some cases because the work was priced to offset the retention costs; in other cases tier 3 companies are keen to maintain good relationships with their main contractor and will write off retention monies because they perceive it will lead to the next contract.

- It should be emphasised that is not clear from survey evidence the extent to which delayed and non-payment of retention monies is for *justified* reasons – for example because of defects that should have been rectified[171] – or the extent to which they are paid late for *unjustified* reasons. It is challenging to measure the extent to which delayed (or non) payment of retention monies is for justifiable reasons, because opinions as to what constitutes 'justifiable' or 'unjustifiable' can differ depending on the contractor or client perspective.

- Survey data indicate that the majority of clients and main contractors do not have an automated system to release the money, making a request for payment the trigger.

- The risk of non-payment of retention monies as a result of upstream insolvencies is increased because of the length of time for which the retention is held (i.e. typically paid back late or can be held for a long period of time during the defects liability period even if no delay in paying the retention).

- Around 44% of contractors surveyed with experience of having retentions held from them in the last three years had experienced non-payment of retentions[172], due to upstream insolvencies over this period which suggests there could be a case for ring-fencing the retention in some way. It should be taken into consideration however that evidence from the survey shows retention monies have been unpaid as a result of upstream insolvencies on around 1% of all their contracts (i.e. including those with and without retentions held). Multiple contractors within the supply chain could be affected by insolvency of one large main contractor or client. This is because one client or main contractor could be involved in a high number of construction contracts at a given point in time. There is no strong evidence to suggest that holding retentions is a direct cause of insolvencies, although they may be a contributory factor particularly in a difficult economic climate.

- Participants in the client survey were asked to provide details of approximately how many times they have gone to court/adjudication to obtain outstanding retention monies, in the last three years. This found that 14.1% of respondents to this survey question had taken legal action in one or more instance in the last three years. Those small number of contractors surveyed who have taken legal action provided their

171 Although data give an overall proportion of respondents who say payment of retentions was delayed because of defects, it is not possible to link incidence of defects directly to incidence of delayed payments and assume this was the reason for the delay

172 This was over the last three years and could have been experienced one or more times during that timeframe

estimated costs for this, which equate to an average cost per contractor of £16,000. However, wide variation in the average amount of money held in retention per contract and high variation in average legal costs mean that it is challenging to draw a clear conclusion from the data on whether legal costs are high relative to the amounts held in retentions. Qualitative evidence from the interviews and workshops indicates that sub-contractors are unlikely to take legal action because costs can be prohibitively high and/or they are keen to preserve a strong working relationship with main contractors.

- Impacts of holding retentions for the economy as a whole include: constraints on individual company growth and investment, which can result in higher project prices and, in turn, less competitive businesses. As retention monies held can add aged debt to balance sheets, this in turn can affect the capacity of contractors with retentions held against them to borrow (or incur higher interest rates) and/or prompt the need for an overdraft. These factors can contribute to weaker balance sheets in the longer-term. Survey data also finds there can be a risk that costs are passed on to clients to help offset higher overheads.

- Although not directly within the scope of this research, it should be noted that evidence obtained from the in-depth interviews and workshops also pointed to perceived problems with payment practices being time consuming and complex generally in the construction sector – indicating that retentions are just one aspect of what may be a more significant general issue. A number of respondents say that payment practices in the sector more generally can be time-consuming and complex, and that removing retentions from the equation would therefore be unlikely to remove all payment administration issues.

5 Alternatives to retentions

5.1 Overview of other mechanisms which may be alternatives to retentions

This research has considered a number of other mechanisms to assess the extent to which they could be used as alternatives to retentions. These were identified from desk-based research as being potential alternatives – thus were subject to further investigation through this study. All respondents participating in the full survey were asked to give their views[173] on the following:

- Project Bank Accounts (PBAs);
- Retention bonds;
- Performance bonds;
- Escrow stakeholder accounts;
- Parent company guarantees; and
- Retentions held in trust funds.

These six mechanisms are discussed individually in more detail in sections 5.2 – 5.7, in respect to how they work, estimated costs and their suitability as a sector-wide alternative to retentions.

When assessing the suitability of alternatives as a sector-wide alternative to retentions, four main criteria are used:

- Whether the alternative measure would be applicable across all sub-sectors in the construction sector;
- Whether the alternative measure would achieve the same main purpose of retentions i.e. as a form of 'insurance policy' to ensure surety against defects and project completion;
- Whether costs of the alternative are likely to be lower than those associated with the practice of retentions; and
- Potential of the alternative measure to mitigate or eliminate potential issues associated with retentions, notably: unjustified late or non-payment, lack of

173 NB all respondents with experience of retentions in the last three years were asked to comment on these potential alternatives to retentions, but for the most part, few respondents had direct experience of alternatives, which should be taken into account when considering the findings

protection against upstream insolvencies and weakened working relationships through the supply chain.

Additionally respondents (clients and contractors, via the survey, focus groups and depth interviews) made a number of suggestions about other alternatives to retentions. These mechanisms, with further evidence about how they might work in practice obtained via desk-based research, are discussed in section 5.8. Where possible, an assessment has been made about the suitability of these other suggestions as sector-wide alternatives to retentions, but it should be noted that these options were not included in the survey and as such, there is less evidence available about them with which to make an informed judgement.

How retentions and alternatives to them are used in other countries is discussed in section 5.9. Assessment of the appropriateness of approaches taken in other countries, and potential viability for England, has been taken into consideration when identifying possible alternatives to retentions for further investigation.

5.2 Project Bank Accounts (PBAs)

5.2.1 How PBAs work

Project Bank Accounts (PBAs) were introduced by the UK Government in 2007, and since then have been primarily used for public sector contracts worth more than £5bn.

A PBA is a ring-fenced bank account, set up solely to act as a channel for payment on construction projects to ensure that contractors, sub-contractors and key members of the supply chain are paid on the contractually agreed dates. In a typical project, a PBA is set up in the joint names of the client and main contractor. The account is then operated in accordance with an agreement made between these parties. Adequate funds must be maintained in the account to cover work in progress and other project commitments. Payments are made directly from the account to the contractor, key sub-contractors and key suppliers in accordance with the payment arrangements agreed by those members of the project team who are party to the PBA[174].

5.2.2 Costs of using PBAs

The literature suggests that use of a PBA can help fairer and prompt payment practices, as everyone in the supply chain is paid from the same account, therefore - on paper - there should be no delay in payment further down the line. Furthermore the process is transparent and is intended to reduce administrative costs, thus bringing about project cost savings generally. Research conducted in 2012 suggested that the wider adoption of

174 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62118/A-guide-to-Project-Bank-Accounts-in-construction-for-government-clients-July-2012.pdf

PBAs across the sector could achieve 2.5% in savings of the costs of construction projects[175].

However the small number of tier 1 contractors interviewed that had experience of PBAs conclude that costs associated with PBA terms can increase the overall cost of delivering many of their projects. Tier 1 contractors interviewed that have used PBAs say they incur a range of separate costs which include:

- set up costs to establish the account;
- administrative and contracting costs and time to reach agreement on how it will be used and referenced in the contract;
- investment into accounting and finance systems required to operate the PBA – for example a typical organisation is likely to have one payment method for each sub-contractor or supplier, requiring one payment run to a single bank account. If a contractor was required to manage a combination of PBAs and main bank accounts, this would add a great deal of time and cost[176]; and
- investment into training for embedding a PBA for members of the finance team as a minimum, and likely also some commercial and contracting employees. This training would need to take place all the way down the supply chain, so the more tiers involved, the higher these costs could be.

Furthermore the small number of tier 1 companies interviewed with experience of PBAs have found that sub-contractors are unwilling to accept PBAs because of the perceived administrative burden. As any new sub-contractors are appointed by a main contractor after the PBA has been established and terms of agreement reached, it must be formally documented if any such new sub-contractor is to be an additional party to the PBA. This is typically achieved through an 'additional party deed', which, according to qualitative evidence, is relatively straightforward to obtain but still incurs administrative time and legal costs.

Similarly formal contractual documentation is required if a party needs to leave the PBA before the project has been completed, again requiring administrative time and legal costs.

Where PBAs are to be used, clients with experience of using them say it is essential to clearly set out the position on interest payable on the amounts held in the account – notably to determine which parties (if any, as accrued interest can also be used towards bank or other charges) benefit from the interest.

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175 Fenwick Elliott, 'Project Bank Accounts- the way forward?', Insight (Issue 13), 2012, [Accessed 26.01.2016] http://www.fenwickelliott.com/files/insight_issue_13.pdf

176 One tier 1 contractor estimates it would require a six-figure sum to update the finance system, and questions whether all organisations particularly those further down the supply chain would be in a position to embed more complex accounting processes and systems

5.2.3 Suitability of PBAs as an alternative to retentions

The survey asked all participants with experience of retentions in the last three years about their use of PBAs either as an alternative to, or in addition to, retentions. Evidence from the survey shows PBAs are in very limited use in the construction sector at present. Clients report using PBAs in addition to retentions in less than 0.3% of contracts, and there is virtually zero use of PBAs as an alternative to retentions (0.01% of client contracts), over the past three years. Contractors surveyed suggest a similar picture, with PBAs used as an addition to retentions on only 1% of contracts, and as an alternative to retentions, in less than 0.3% of contracts, in the same timeframe.

Qualitative evidence suggests the use of PBAs on the whole appears to be limited to large-scale public sector contracts. In theory these could be undertaken in any sub-sector of the construction sector, but in practice are likely only to be used for sizeable construction works commissioned by the Department of Health, schools and the like, typically (but not always) limited to public sector contracts. This is because contracts need to be sufficiently large to be able to invest in the range of set up and operating costs for PBAs and make this a viable option throughout the work. However evidence from a small number of tier 1 contractors with experience of PBAs also suggests that they are not suitable for large contracts with multiple sites, as multiple PBAs would need to be set up, incurring substantial administrative time and cost.

Contractors and clients surveyed were asked to rate the effectiveness of PBAs as a surety against defects (using a scale of 1-10, with 10 being the most effective), Clients surveyed gave an average rating of 6.3. Clients give retentions a slightly higher average rating of 7.3 by comparison. Contractors are less inclined to rate PBAs as an effective surety against defects, with an average rating of 3.3 (contractors rate retentions as 4.3 by comparison). It should be noted that all respondents participating in the full survey were asked this question but as stated above, few respondents have personal experience of the use of PBAs, which should be taken into account when considering these data.

The small number of tier 1 contractors interviewed with experience of PBAs say administrative costs and time, notably of setting up multiple accounts and payment processes across a large number of sites, as a result of using PBAs can add, rather than save project costs. Four out of the eighteen contractors with experience of using PBAs say they increase the tender price by around 3% to offset the costs of the PBA. The small sample size needs to be taken into account when considering these findings, and it should be noted that evidence from the literature points to scope for cost savings as a result of using PBAs[177].

A critical incentive for some contractors in the construction sector to perform effectively to a high quality standard and to the agreed timescale, is the need to maintain strong working relationships with clients and main contractors, although for others there are few opportunities to build such relationships where the nature of the work is predominantly one-off contracts. Retentions are perceived as a factor in weakening relationships with

177 Fenwick Elliott, 'Project Bank Accounts- the way forward?', Insight (Issue 13), 2012, [Accessed 26.01.2016] http://www.fenwickelliott.com/files/insight_issue_13.pdf

clients and through the supply chain, however the available evidence suggests PBAs do not appear to be a viable alternative means of providing a surety whilst maintaining good working relationships. This is because the majority of tier 2 and 3 contractors participating in focus groups also say that PBAs would not eliminate payment disputes, or the risk of late payment, as the PBA typically is used between the client and tier 1 contractor. It should be noted that only a small number of these tier 2 and 3 contractors had direct experience of PBAs.

Assessing the suitability of PBAs as a sector-wide alternative to retentions should take into consideration the small numbers of respondents with experience of PBAs. The available evidence suggests:

- as contracts need to be of a sufficiently large size to have enough funds for investment into set up and operating costs for PBAs, they may not be applicable across the whole of the sector;

- the main purpose of a PBA is to encourage fairer and more transparent/prompt payment practices rather than as a surety against defects per se. Sub-contractors would still have their own separate contracts with terms and conditions including any provision for retentions - if defects arose there would still be a need to rectify those before payments could be made. Thus PBAs as a standalone mechanism do not appear to directly fulfil the main purpose of retentions i.e. as a form of ‘insurance policy’ to ensure project completion;

- it is unclear whether the costs associated with PBAs would be lower than those associated with retentions. Research from 2012 suggests the wider use of PBAs sector-wide could achieve 2.5% in savings for projects. However the limited number of contractors with experience of PBAs interviewed for this research say PBAs incur a range of costs such as set up, administration and investment into finance systems which can in face increase the overall costs of project delivery. The very limited evidence from the survey of those with experience of PBAs indicates tender prices are increased to offset the costs of PBAs;

- PBAs have the potential to bring about fairer and more transparent payment practices, notably in relation to the risk of unjustified late or non-payment, as the terms are intended to ensure contractors are paid on time. However the available evidence suggests they do not eliminate the risk of payment disputes which can contribute to weaker working relationships throughout the supply chain. Having a PBA in place is not sufficient to protect against the impacts of downstream insolvency, although in the case of upstream insolvency there should be funds available in the PBA to pay sub-contractors what they are owed.

Assessment of all the available evidence does not suggest, therefore, that PBAs would be a suitable sector-wide alternative to the practice of retentions.

5.3 Retention bonds

5.3.1 How retention bonds work

A retention bond is an agreement between the client, contractor and a surety provider (third party acting as a guarantor between the two parties). A retention bond means that the client agrees not to hold a cash retention, and that the surety provider undertakes to pay the client up to the amount that would have been held in retention, should the contractor default in carrying out the works as agreed, or in remedying any defects[178].

A retention bond can be an on demand bond, or a default (or conditional) bond. An on demand bond means the contractor's bank acts as the surety provider, and is obligated to pay where the contractor does not perform the work as stated in the contract, without the client needing to sue the contractor and prove breach of contract. However payment under a default bond can only be made once the client has established that the contractor is in breach of contract. It is unclear whether the contractor is obligated to provide the funds for the bank to pay for the claim, or whether this is included within the costs of the bond.

A retention bond can be procured at the start of the work, or can be procured partway through as a means to release retention monies[179].

5.3.2 Costs of retention bonds

Evidence from the literature and from interviews with contractors and specialist insurers suggests that costs of a retention bond range from 1-10% of the bond value (typically 5% of contract value)[180]. This is subject to a minimum charge of around £750 irrespective of who pays for the bond[181]. This cost may be borne by the contractor rather than the client, is non-refundable and the actual cost is largely dependent on the financial standing of the contractor[182]. The value of the bond typically reduces at the point of practical completion, in the same way that half the retention is paid back at that point. Qualitative evidence obtained from insurers suggests that in practice, this usually means large FTSE 100 construction sector businesses pay the lower percentages of around 1-2% (given their strong financial standing), whereas conversely smaller contractors are required to pay the highest percentages. Therefore upfront costs to finance the bond can be higher further down the supply chain.

Indirectly, clients and main contractors would incur 'costs' where retention (and other) bonds were used, depending on who paid for the bond, as this would remove the opportunity to use retention monies for example for working capital or as part of general

178 PLC Construction, 'A quick guide to construction bonds', sourced from building.co.uk, http://www.building.co.uk/a-quick-guide-to-construction-bonds/5039758.article [Accessed 26.01.2016]
179 Fair Payment Campaign – Using a retention bond sourced from http://www.fairpaymentcampaign.co.uk/docs/Using_A_Retention_Bond.pdf
180 Ibid
181 Ibid
182 Fair Payment Campaign – Using a retention bond sourced from http://www.fairpaymentcampaign.co.uk/docs/Using_A_Retention_Bond.pdf

expenditure. As so few respondents have experience of using retention bonds, it is not clear whether the client or the contractor typically pays for the bond, or whether costs are shared.

5.3.3 Suitability of retention bonds as an alternative mechanism for implementing retentions

Sub-contractors further down the supply chain interviewed consider one of the main advantages of using retention bonds instead of retentions is that they remove the risk of late or non-payment of cash retentions. This is because no cash is withheld so the contractor does not need to seek payment.

Companies engaged in the construction of utilities notably water and sewage pipes, have for the past two decades typically used retention bonds instead of cash retentions. Retention bonds have also been issued in the steel, glazing and lift sectors for a number of years. Qualitative evidence from interviews suggests this stems from a shared stance to stop using cash retentions adopted by trade federations in these sub-sectors.

Survey data indicate that clients rate retention bonds more highly than contractors do, when considering their effectiveness in providing a surety against defects. Using a scale of 1-10[183], clients surveyed with experience of retentions in the last three years give an average rating of 6.6 to retention bonds, compared with an average rating of 3.8 given by contractors surveyed with experience of retentions in the last three years. These clients and contractors both rate retentions more highly by comparison (average rating for retentions 7.3 from clients, and 4.3 from contractors). Qualitative evidence from focus groups and interviews suggests that clients and main contractors are less likely to accept retention bonds, as the preference is for holding cash retentions. This is backed up by survey data showing very limited use of retention bonds by comparison with cash retentions.

Qualitative evidence obtained from focus groups states that retention bonds would be suitable to be rolled out across the whole of the construction sector. Survey evidence does not strongly support this; in respect to the suitability of retention bonds as a sector-wide alternative to retentions, clients give an average rating of 4.5 and contractors, an average rating of 3.8[184]. This suggests that clients and contractors have some reservations about the use of retention bonds on a sector-wide basis but it should be taken into consideration that of all the respondents asked this question[185], relatively small numbers (23 clients and 45 contractors) had experience of retention bonds in the last three years.

According to survey data which asked this question of respondents with experience of retentions in the last three years, retention bonds are rarely used. Clients surveyed with experience of retentions in the last three years have used retention bonds in addition to retentions in around 2% of all contracts, and in less than 0.2% of contracts as an

183 Where 1 is not at all effective, and 10 is extremely effective
184 Using a 1-10 scale, where 1 is not at all suitable, and 10 is extremely suitable
185 i.e. all with experience of retentions in the last three years

alternative to retentions, in the past three years. Contractors surveyed with experience of retentions in the last three years report similarly limited use over the past three years (0.8% of all contracts in addition to retentions and in 1% of contracts as an alternative to retentions).

Qualitative feedback from interviews with specialist insurers and tier 1 and 2 contractors states there are three main barriers to the wider adoption of retention bonds. Firstly, that the cost to procure a bond is higher for smaller contractors, which could be a factor in making SMEs less competitive, for example there is the risk that they increase tender prices to offset the cost of financing the bond. Secondly, that the process of claiming via the bond is perceived (among tier 1 contractors and clients) as time-consuming and difficult, by comparison with taking a cash retention. Finally, that main contractors and clients are less willing to accept retention bonds by comparison with cash retentions, as the latter provides cash that can be used as working capital or for other purposes, whereas the retention bond does not.

As stated in section 5.2.3, many contractors who are in a position to build longer-term client relationships, are strongly incentivised to perform effectively, on time and in a cost-efficient manner, by the need to maintain strong working relationships with their clients and throughout the supply chain. As qualitative evidence shows retention bonds are not readily accepted by the majority of clients[186] and main contractors, there could be an impact for working relationships for any contractors who strongly advocate the use of retention bonds. There is a risk that clients and main contractors elect to work with organisations in the supply chain who accept cash retentions, rather than with those who want retention bonds to be used.

A further incentive is the need to generate profit and to reduce operating costs where possible, throughout the supply chain. As cost is incurred to obtain a bond, tier 1 contractors interviewed emphasise that the overall price that the client or main contractor pays is likely to be higher. This is supported by survey data which indicate that around half of all contractors with experience of retention bonds[187] say this makes no difference to the tender price quoted, but just under half say this will increase the price. Only 2% of those who had used retention bonds say the tender price is lower as a result. The amount of the increase for retention bonds equates on average to 11% of the overall price[188]. By comparison, the small number of contractors[189] who say they increase their prices by more than the amount of the retention, most commonly do so by 3% over and above the amount of the retention held[190].

186 With the exception of the construction utilities sub-sector
187 Base number: 45
188 Please note due to the low base number, data should be viewed with caution and treated as indicative only
189 Low base number (10) who say they increase their tender prices by more than the amount of the retention, therefore data should be viewed with caution and treated as indicative only
190 It should be noted the survey only asked respondents to indicate the amount of the increase where they increased prices by more than the amount of the retention

Qualitative evidence from clients and tier 1 contractors interviewed make the point that contractors have to fund retention bonds, and that these upfront costs are still contributing to taking money out of cash flow and therefore from the sector as a whole. One specialist insurer interviewed for this research states that if retention bonds were in widespread use across the sector, then the price of procuring them would fall, but there is no additional evidence to support this at the time of writing. Furthermore the money cannot be used by the client or main contractor within the sector for other purposes such as working capital.

There are a number of other issues associated with the use of retention bonds more widely across the sector, summarised as follows[191]:

- there is no guarantee that a retention bond will provide financial protection in the event of insolvency, as this in itself is not a breach of a building contract. The terms of the bond would need to explicitly cover this event using clear and unambiguous definitions;

- retention bonds have an expiry date – for example at practical completion – after which point no claim can be made, which may undermine their use in projects that run beyond expected end dates and in relation to defects that subsequently emerge. While this can be an advantage (in that it is clear when the contractor has fulfilled their obligations[192]), it can also mean defects are discovered after the bond is no longer in place. One way to overcome this is to set a longer timescale i.e. a later expiry date, but clients and contractors would need to engage in negotiations to set a mutually agreeable date. Furthermore terminology used in the contract about the terms of the bond would need to explicitly state that the expiration date does not apply to claims already raised by the client to the holder of the bond, prior to that date;

- the value of bonds also appears to vary, depending on whether they are on demand, or default. Insurers interviewed for this research say retention bonds are rarely used in the construction sector, partly because main contractors tend to prefer using cash retentions, and partly because of perceived difficulties associated with making a claim. For example where a bond is non-conditional (a default bond) then the onus is on the client/main contractor to prove breach of contract before the money can be paid;

- a study conducted in 1998 stated that "*retention bonds must be on demand otherwise they are useless*"[193], as there is no onus on the client/main contractor to prove breach of contract. However case law shows that there are risks associated with on demand bonds, where the primary obligation is

191 Evidence drawn from depth interviews and desk-based research

192 Fair Payment Campaign – Using a retention bond sourced from http://www.fairpaymentcampaign.co.uk/docs/Using_A_Retention_Bond.pdf

193 Hughes, Hillebrandt, and Murdoch (1998), Financial Protection in the UK Building Industry: Bonds, retentions and guarantees

drafted in a way which in theory enables the client to make a demand without due cause.

In the case of Edward Owen Engineering versus Barclays Bank International Ltd, the client requested a performance bond of 10% of the contract price, which was provided by the contractor's bank, Barclays. As the bond documentation stated that the sum was to be payable "*on demand without proof or conditions*", even though there was no default or evidence of any breach of contract, the client made a demand for, and received payment from the bank. The court held that the bank was within its rights to pay as the terms of the bond had been fulfilled. This strongly highlights the importance of accurate and clear wording, linked to explicit terms and conditions, particularly in the case of on demand bonds. This example also shows that, in the absence of such explicit wording, there is scope for clients to demand the bond sum even where there has been no breach of contract, thus taking unfair advantage;

- feedback from specialist insurers and construction law solicitors interviewed for this research makes the point that bonds are not in frequent use in the sector (supported by survey data as stated above) and in light of this, it may be more likely that contractors are unaware of these risks in respect of documentation wording. Furthermore these interviews suggest that disputes over bonds in relation to interpretation of the contract could result in large scale legal costs for the contractor if the court finds in favour of the client;

- however qualitative evidence gathered indicates that contractors may be unlikely to pursue retention monies through the courts or adjudication, partly because of the costs of doing so, and partly because they do not wish to damage the relationship with the main contractor and/or client. Therefore if bonds were to be rolled out more widely across the sector, there would be a need to educate contractors of the risks of ambiguity in contract wording, as they may be averse to challenging a claim through the legal system.

When assessing the suitability of retention bonds as an alternative to retentions:

- the evidence gathered suggests that retention bonds could possibly be suitable for implementation sector-wide. However, if they were to be used more widely across the construction sector, the evidence points towards the need for, as a minimum, clear contract wording in respect of the nature of the obligation, the timespan, the maximum sum payable, circumstances that amount to a default and how disputes are to be resolved. With the exception of some American states, bonds are not used particularly widely in other countries and therefore there is limited evidence to draw upon from the international desk research to understand whether they would be suitable to be implemented more widely in England;

- retention bonds, like retentions, are designed to achieve the same main purpose of retentions i.e. as a form of 'insurance policy' to act as a surety

against defects and ensure project completion. They have an expiry date so would not be effective if defects were discovered after this point;

- no money is withheld, therefore there is no impact on the cash flow of the contractor, however the costs of financing the bond, unlike retentions, are non-refundable, and as such are removed from cash flow. Qualitative evidence suggests that where retention monies are unjustifiably paid late or not paid, that costs incurred could be higher than those incurred to procure a retention bond. However, this cannot be objectively proved one way or the other from the survey evidence. Furthermore it also appears that costs of retention bonds could be higher for tier 3 and some tier 2 contractors i.e. costs could increase further down the supply chain. Survey evidence indicates that tender prices may be increased to offset the cost of the bond.

- As no cash is retained this eliminates the risk of issue of unjustified late or non-payment. There is protection against insolvency only if contract wording explicitly makes provision for this. The claims process if required could potentially be lengthy which would have an impact for contractors/sub-contractors. Qualitative evidence indicates that retention bonds are not readily accepted by most clients and main contractors who prefer to use cash retentions. As such there could be an impact on and potential weakening of working relationships for contractors who push for the use of retention bonds instead of cash retentions.

In summary, it is possible that the costs associated with retention bonds - for contractors/sub-contractors procuring bonds as well as for main contractors/clients who may be quoted higher fees to offset the bond costs – may act as a barrier to their implementation sector-wide. Perhaps more importantly, the available evidence suggests that costs may be higher for smaller contractors further down the supply chain. For this reason this research concludes that retention bonds could be investigated as a second port of call, but that other alternatives warrant further investigation as a first step, as explained in chapter 6.

5.4 Performance bonds

5.4.1 How performance bonds work

A performance bond is used as a means of insuring a client against the risk of a contractor failing to fulfil contractual obligations to the client, although they can also be required from other parties. A performance bond is designed to ensure compensation is provided if a contractor does not fulfil their obligations – so a third party (usually a bank or insurer) undertakes to pay a sum of money to the client (who could be a main contractor) if this happens. Like retention bonds, a performance bond can be an on demand bond, or a

default bond[194]. However unlike retention bonds, the value of the performance bond does not reduce at the point of practical completion.

Like retentions, the main purpose of a performance bond is to help ensure high quality work as well providing a sum of money which can be used towards the cost of resolving any defects or funding work that needs to be completed by other contractors.

Qualitative evidence suggests the main advantage is that it is a straightforward process to obtain a performance bond which can also help with due diligence when selecting sub-contractors. This is because having a performance bond is viewed as evidence of strong financial standing among sub-contractors who are easily able to obtain a performance bond. Conversely if there are difficulties obtaining a performance bond, this is considered a potential risk.

5.4.2 Costs of performance bonds

Costs are incurred by contractors or clients procuring performance bonds, depending on who pays for them. As with retention bonds, it is not clear whether the client or contractor typically pays for performance bonds (or whether costs are shared), as so few respondents have experience of using them.

Evidence obtained from specialist insurers indicates the cost to the party or parties procuring the bond is between 1-10% of the performance bond value (typically 10% of the contract value). It is not clear from the evidence why this is double the amount typically held in retention. Like with retention bonds, this means smaller contractors are usually obliged to pay the highest percentages in comparison with large construction firms, because the latter can provide stronger evidence of a stable financial position. This does not suggest that small and micro businesses are on an unstable financial footing, but from the perspective of an insurer they present the greater risk, by comparison with large construction companies. The small number of contractors participating in focus groups who have experience of performance bonds say this can be restrictive for organisations with small profit margins (which can be typical of some small and micro businesses in the sector).

5.4.3 Suitability of performance bonds as an alternative to retentions

Survey data indicate that performance bonds are used more widely in the construction sector in comparison with retention bonds, but this tends to be in addition to, rather than as an alternative, to cash retentions. Survey data find clients with experience of retentions in the last three years have used performance bonds on an average of around 6% of all contracts as an addition to retentions, compared with using them instead of retentions in less than 1% of contracts in the past three years. Over the same timeframe contractors surveyed with experience of retentions in the last three years have used performance

194 As described above, an on demand bond means the bank is obligated to pay where the contractor does not perform the work as stated in the contract, without the client needing to sue the contractor and prove breach of contract. However payment under a default bond can only be made once the client has established that the contractor is in breach of contract

bonds in addition to retentions on an average of 3% of contracts, and like clients, have used them in less than 1% of contracts as an alternative to cash retentions.

Qualitative evidence from interviews reveals the main advantage of performance bonds is in the event of downstream insolvency, when the bond money can be used to procure a replacement contractor or contractors, and complete the work. Thus a performance bond is more likely to be used in addition to a retention as a way of further mitigating risks to project completion. According to clients interviewed for this research, performance bonds are, on paper, suitable for all sub-sectors within the construction industry, but are more likely to be requested for large-scale complex projects.

All clients and contractors with experience of retentions in the last three years were asked to comment on the effectiveness of performance bonds as a surety against defects, and on their suitability as a sector-wide alternative to retentions. Survey data show these clients give an average rating of the effectiveness of performance bonds as a standalone mechanism to provide surety against defects of 5.8[195]. Client respondents rate performance bonds more highly than contractors, who, using the same 1-10 scale, give an average rating of 3.8. By comparison the average ratings for retentions are 7.3 (clients) and 4.3 (contractors). As explained above, qualitative evidence indicates performance bonds are not typically viewed as the sole means of providing security. This is further supported by survey evidence whereby respondents with experience of retentions in the last three years were asked to rate the suitability of performance bonds to be rolled out across the whole of the construction sector as an alternative to retentions. These clients give an average rating of 4.5 and contractors an average rating of 3.5[196].

The incentive for contractors to generate profit and keep operating costs to a minimum where possible, is not directly addressed through the use of performance bonds. Feedback from tier 1 contractors and clients interviewed reveals that, as with retention bonds, the overall price that sub-contractors charge is likely to be higher if a performance bond is requested. Around 44% of participants in the contractor survey with experience of performance bonds[197] say they typically increase their tender prices where a performance bond is requested[198]. On average, the amount of the increase is 8% of contract value (based on a relatively small sample size which should be taken into consideration).

Furthermore performance bonds incur a higher cost in comparison with retention bonds (at a fee between 1-10% of a performance bond value usually equating to 10% of contract value, versus a fee between 1-10% of a retention bond value, typically equating to 5% of contract value).

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195 Using a 1-10 scale, where 1 is not at all effective, and 10 is extremely effective

196 Using a 1-10 scale, where 1 is not at all suitable, and 10 is extremely suitable

197 Base number: 116

198 This question was only asked to those with experience of retentions in the last three years, and those with experience of performance bonds

Other issues associated with the use of performance bonds as an alternative to retentions[199] are similar to those identified for retention bonds. Notably, that upfront costs are incurred to fund the performance bond which takes money out of cash flow, and means this money cannot be used by the client or main contractor within the sector for other purposes such as working capital.

As with retention bonds, where a performance bond is non-conditional (a default bond) then the onus is on the client/main contractor to prove breach of contract before the money can be paid, whereas claims can be made against on demand bonds without requiring this proof. In practice, unless bond documentation explicitly states the terms and conditions of making a claim, there is a risk that the client and/or main contractor who requested the bond, could make an erroneous claim even where there is no breach of contract.

This could prompt legal action, but, as shown in survey data, this is rare on the part of the contractor because of the costs of this, and because of the risk of damaging their client relationship. Therefore contractors could be left out of pocket in the event of an invalid claim against a performance bond. This highlights that it is essential to educate contractors about the importance of precise wording.

Overall, the available evidence shows:

- performance bonds appear to be suitable for all sub-sectors;
- they offer surety that the project will be completed if the contractor does not meet the contractual obligations, but it is less clear whether the performance bond could take effect in the event of minor defects;
- costs incurred to procure the performance bond are typically higher in comparison with retention bonds (at a fee between 1-10% of a performance bond value usually equating to 10% of contract value, versus a fee between 1-10% of a retention bond value, typically equating to 5% of contract value). Smaller contractors are likely to have to pay the highest percentages, because from an insurer's perspective, they could pose the greatest risk;
- there is value in using performance bonds, notably for their capacity to protect clients (including main contractors) against the risk of downstream contractor insolvency, when the bond money can be used to procure a replacement contractor or contractors, and complete the work. There is no evidence to suggest they would eliminate the risk of unjustified late or non-payment practices. However, they seem an unlikely mechanism to be used as a standalone option to replace retentions sector-wide because they may incur high costs in comparison with retentions.

199 Evidence drawn from qualitative interviews and desk-based research

In summary, it is likely the costs of performance bonds would be too prohibitive for SMEs, preventing performance bonds from being a viable sector-wide alternative to retentions.

5.5 Escrow stakeholder accounts

5.5.1 How escrow stakeholder accounts work

An escrow account ring-fences an element of a client's[200] money in a place where the contractor can see and use the money as security for interim payments. Usually, the client deposits an agreed sum (typically equivalent of 2 or 3 months' projected interim payments) in an independent deposit account held by a third party (normally a solicitor's client account), who holds the money in an interest-bearing account as stakeholder for both parties. An escrow account can be in joint names of the client and contractor, or can be in the name of a solicitor operating the account as an agent on their behalf.

The amount held in the escrow account can vary over time, for example to reflect a point of time where costs are higher, or where costs may reduce towards the end of the work.

In the event of non-payment of an interim certificate by the client, the contractor may then require the third party to release the unpaid amount from the escrow account in payment of the money owed to the contractor. If such a release from the escrow account is made, then the client will be under an obligation to pay that amount back into the escrow account within a set number of days. A failure to do so will entitle the contractor to suspend or terminate its employment under the building contract.

It should be noted that the use of escrow accounts is not typically to provide assurance that defects will be rectified in a timely fashion, or to guarantee project completion. As such it is not clear how they could be used in a similar way to retentions.

5.5.2 Costs of escrow stakeholder accounts

Costs to set up an escrow account are predominantly the legal fees of drafting contract documentation and any bank fees incurred. There are also on-going costs of administering the account. There has been very limited use of escrow accounts among clients and contractors interviewed for this research, and as such, it is not possible to provide an estimate of typical costs.

In addition to the initial costs, further legal fees may be incurred if amendments need to be made to the terms of the escrow arrangements, which may include changes to the length of the building contract, or other variations of the work to be delivered, for example. Any such changes could require a new contract amendment to be drafted.

5.5.3 Suitability of escrow stakeholder accounts as an alternative to retentions

Escrow accounts appear to be more widely used in new home building, where banks may use an escrow account to release funds upon approval of each successive building phase.

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200 A client can also be a main contractor in this context

The main advantage of this is that it helps the building company to work within the agreed budget. According to tier 1 contractors interviewed, the main users of escrow accounts tend to be developers. Survey data show very limited use of escrow accounts across the sector as a whole. Clients and contractors surveyed with experience of retentions in the last three years have used escrow accounts in less than 0.3% of all contracts, either as an alternative to, or in addition to cash retentions, in the last three years.

Escrow accounts appear to be suitable for use across all construction sub-sectors, according to qualitative evidence obtained from interviews, but are more likely to be used in larger contracts where the cost and time incurred to set them up would be more justifiable, compared with shorter and less complex projects. This suggests their use could be limited to certain types of project and clients, particularly the latter who appear to bear most of the costs. Clients are unable to use the money deposited in the escrow account for other purposes, such as working capital, as they would be able to with a cash retention.

Four of the eleven contractors with experience of using escrow accounts say their use means their tender prices are higher, however for the remaining seven it makes no difference to the fees charged.

Qualitative evidence from focus groups found that escrow accounts are not generally viewed as a form of security against defects, and that a more important purpose is to provide a form of security in the event of insolvency (of the client and/or main contractor, depending on how the account is set up). However this relies upon the position of the contractor as outlined in the account documentation – for example if monies held in an escrow account are subject to a trust then on paper, the contractor is entitled to payment from that account. However if there is no trust established in law the contractor is deemed to be an unsecured creditor and may not, therefore, be able to recover their monies owed.

All clients and contractors with experience of retentions in the last three years were asked to comment on the effectiveness of escrow stakeholder accounts as a surety against defects. The results show a clear difference between client and contractor views of the effectiveness of escrow accounts in providing a surety against defects. Using a scale of 1-10[201], these contractors give an average rating of 2.9, compared with an average rating from clients of 7.2. It should be taken into account that all respondents responding to the full survey[202] were asked this question, but very few clients or contractors had direct experience of escrow accounts. Qualitative evidence obtained from contractors in focus groups says the main purpose of escrow accounts is to ring-fence the money rather than act as a surety against defects, and that this mechanism in itself does not directly affect the contractor's incentive to deliver high quality work. This is supported by survey data – clients and contractors with experience of retentions in the last three years were asked to rate the suitability of escrow accounts as an alternative to retentions across the whole of the construction sector. These clients give an average rating of 3.3, and contractors an average rating of 2.9[203].

201 Where 1 is not at all effective, and 10 is extremely effective
202 i.e. with experience of retentions in the last three years
203 Using a 1-10 scale, where 1 is not at all suitable, and 10 is extremely suitable

Considering all the available evidence (which is particularly limited in the case of escrow accounts):

- there is insufficient evidence to determine whether escrow accounts would be suitable sector-wide as an alternative to retentions. However a very small number of respondents with experience of escrow accounts say they would be best suited to larger projects which have the funds and time to set them up. There is no evidence to suggest how they could work for the purpose of holding retentions, or how this may be achieved;

- their primary purpose is not to provide surety against defects, they are most commonly used among house-builders and developers as a means to fund each successive phase of a building project;

- It has not been possible to gain any data on likely costs of escrow accounts due to their very limited use among survey respondents. The literature finds that the main costs are for set up, legal and banking fees;

- escrow accounts do provide protection against upstream insolvencies, but there is insufficient evidence to determine whether their use has an impact on working relationships in the supply chain, and risks of potential unjustified non- or late payment practices.

In summary this suggests escrow accounts are unlikely to be a viable alternative to cash retentions across the whole of the construction sector, primarily because it is not their main purpose to provide surety against defects.

5.6 Parent company guarantees

5.6.1 How parent company guarantees work

A parent company guarantee offers a form of security that may be required by clients to protect them in the event of default on a contract by a contractor, which could include where defects are not remedied. It is controlled by a parent company (or holding company) that controls another subsidiary company. A default may be as a result of insolvency of the contractor. The guarantee is given by the parent company to the client, and in the event that the contractor defaults on their obligations, the parent company is required to remedy the breach, meeting all the contractor's obligations under the contract (and/or covering loss and expense incurred by the client). This has the benefit of a continuing obligation to complete the project, and liability for latent defects, usually for up to 12 years following completion.

Usually financial checks on the parent company providing the guarantee are undertaken. This may be a less straightforward process if the parent company is registered overseas rather than in England.

5.6.2 Costs of parent company guarantees

Parent company guarantees should be provided without cost to the client. Contractors interviewed for this research who have provided such a guarantee, say this is usually in

the form of a deed signed by the parent and subsidiary companies. Therefore as a rule, there is no need to instruct legal professionals to draft the document, making this overall a low cost option for contractors (incurring only administrative time) and a no cost option for clients.

Where parent companies are registered overseas, this could mean there are different requirements for the execution of the deed of guarantee, which would vary depending on the country. In some cases this may require legal expertise to draft the guarantee, which would incur additional costs for the contractor.

5.6.3 Suitability of parent company guarantees as an alternative to retentions

Contractor and clients participating in depth interviews find parent company guarantees to be largely fit for purpose to cover liability for defects that may arise, given the parent company is obliged to either remedy issues themselves, or cover the cost of another contractor to do so. There is thus a clear incentive for contractors to return to remedy defects where they arise. However they also say that risk is not eliminated entirely, as the extent of protection is dependent on the financial standing of the parent company.

Parent company guarantees appear effective in respect of the incentives of strong working relationships and generating profit, for contractors, as they incur only minimal costs and should be readily available upon request. Survey data suggest parent company guarantees are unlikely to result in higher tender prices, with over 80% of contractors surveyed with experience of parent company guarantees[204] saying this makes no difference to the amount quoted[205]. There may not be an explicitly stated financial cap or time limit in respect of the liability of the parent company (unless established within the building contract), which offers more benefit to the client and/or main contractor.

Qualitative evidence obtained through focus groups and interviews reveals there are two main drawbacks of using a parent company guarantee in place of retentions in the construction sector. Firstly, not all contractors have a parent company and therefore would not be able to provide the guarantee, and secondly, there is no security if the parent company goes into administration. It is also the case that where the main contractor is the parent company, the main contractor is not protected, it is only the client that is protected in these circumstances. Furthermore it is necessary to clearly define the liability of the parent company in the event of the subsidiary company's insolvency, as in law this is not always deemed to be a breach of the building contract. If this wording is not explicit, then the client and/or main contractor may not be able to hold the parent company liable.

Any amendments to the building contract once the work is underway may need to be reflected in the guarantee; otherwise the parent company may not be held liable for these changes.

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204 Base number: 52

205 This survey question was only asked to those with experience of retentions in the last three years, and experience of parent company guarantees

Survey data show that parent company guarantees are more likely to be used in addition to retentions, rather than instead of them. Clients surveyed with experience of retentions in the last three years have requested parent company guarantees in addition to retentions in around 4% of all contracts over the past three years, and contractors have provided them in just over 2% of all contracts in the same timeframe. By comparison, clients and contractors surveyed (with experience of retentions in the last three years) have used parent company guarantees as an alternative to retentions in less than 1% of all contracts in the past three years.

All clients and contractors with experience of retentions in the last three years were asked to comment on the effectiveness of parent company guarantees as a surety against defects, and on their suitability as a sector-wide alternative to retentions. As already seen in respect of other alternative mechanisms, retentions are rated more highly than parent company guarantees in respect to their effectiveness in providing a surety against defects. Clients surveyed with experience of retentions in the last three years give an average rating of 5.3 in relation to the effectiveness of parent company guarantees, compared with an average rating of 7.3 for retentions[206].

Participants in the client survey with experience of holding retentions in the last three years see some merit in embedding parent company guarantees sector-wide in place of retentions, giving an average rating of 5.3 as to their suitability to be used in this way (compared with an average rating from contractors of 3.1)[207].

The available evidence suggests:

- parent company guarantees cannot be used across every sub-sector, because not all contractors have a parent company;

- the primary role of the parent company guarantee is to provide assurance that the parent company will ensure completion of the work, should the subsidiary not deliver its obligations. However qualitative evidence states they are more likely to be used as one element of the overall risk mitigation/due diligence process when sub-contracting, rather than as a standalone surety against defects and as assurance of project completion;

- they are low or no cost options, unless the parent company is registered overseas which may incur a small charge;

- there is no evidence to suggest that the use of parent company guarantees would eliminate the risk of unjustified late or non-payment. They do not assure protection against downstream insolvency if the parent company as well as the subsidiary company becomes insolvent. There is no protection against upstream insolvency. There is no evidence to suggest parent

206 Using a 1-10 scale, where 1 is not at all effective, and 10 is extremely effective
207 Using a 1-10 scale, where 1 is not at all suitable, and 10 is extremely suitable

company guarantees have a negative impact on working relationships throughout the supply chain.

In summary, it is not likely that parent company guarantees could be a standalone alternative to retentions, primarily as they cannot be used sector-wide, because many organisations do not have a parent company.

5.7 Retentions held in trust funds/accounts

5.7.1 How retentions held in trust funds/accounts work

A retention held in a trust fund (or account) is a relocation of funds that would have otherwise been withheld by the client or employer in their books, to a separate account. The client and/or main contractor is required to set up a separate account and deposit sufficient money to cover the costs of what is owed at the conclusion of the contract. The retention money is therefore ring-fenced and clearly distinguished from the outset of the project. Money is held separately and, where contract documentation makes this clear, is protected in the event of insolvency.

5.7.2 Costs of retentions held in trust funds/accounts

There are two main costs associated with of retentions held in trust – financing the money to be held in the account from the outset of the project (which otherwise could be used by the client or main contractor in their business), and the cost of administering the account. These costs are borne by the client or main contractor i.e. the organisation that sets up the trust account.

5.7.3 Suitability of retentions held in trust funds/accounts as an alternative mechanism for implementing retentions

Contractors interviewed do not consider retentions held in trust fund to be an alternative to retention per se; instead this is viewed as an alternative means of implementing them, and furthermore one which offers greater protection in the event of insolvency. The incentive to return to remedy defects is in effect the same as if a cash retention was held in a main bank account. Monies held in trust cannot be used by the client or main contractor, which may limit the incidence of late repayment.

Survey evidence shows virtually no use at all of retentions held in trust funds/accounts in contracts over the past three years (less than 0.1% of contracts amongst those respondents with experience of retentions in the last three years), although clients consider that holding retention monies in trust is largely effective in providing a surety against defects, i.e. that contractors will return to remedy any issues. Using a scale of 1-10[208], participants in the client survey with experience of retentions in the last three years give an average rating of 7.1 in respect of the effectiveness of retentions held in trust accounts. By comparison contractors give an average rating of 2.8 – but it should be noted

208 Where 1 is not at all effective, and 10 is extremely effective

that this rating is based on virtually zero experience of having retentions held in trust due to a very small sample size of respondents with experience of this.

Qualitative evidence obtained from focus groups says this approach is not widely used for a number of reasons: firstly it means clients and contractors bear the set up costs and cannot use the money for other purposes such as working capital – therefore cash retentions are more appealing. Secondly holding the retention in a trust fund/account does not eliminate the risk of an increase to tender prices, as there is still no guarantee that the money will be paid back at the time it is owed, and as such, contractors may increase the price to offset this risk – i.e. there is no guarantee that this approach will improve relationships throughout the supply chain.

All clients and contractors will experience of retentions in the last three years were asked to comment on the effectiveness of retentions held in trust as a surety against defects, and on their suitability as a sector-wide alternative to retentions. Neither clients nor contractors consider retentions held in trust to be suitable as an alternative to cash retentions, with clients giving an average rating of 2.9 and contractors, 2.7[209]. However it should be taken into account that these ratings are given on the basis of virtually no actual experience of having retentions held in trust due to a very small sample size of respondents with experience of this.

Assessing the suitability of retentions held in trust finds:

- the available evidence indicates retentions held in trust could be applicable to all sub-sectors;

- as the essential premise of the retention remains the same as a typical cash retention, retentions held in trust offer the same surety against defects and assurance of project completion;

- the limited evidence suggests costs are incurred to set up and manage the account, but it is unclear how much these costs would typically be;

- qualitative evidence gathered indicates that a number of negative impacts of retentions on the supply chain are due to unjustified late or non-payment of retention monies, but 'ring-fencing' the money means there is no incentive to hold it for any longer than necessary/contractually required, as the organisation holding the retention would not be able to do anything with the money;

- qualitative evidence finds that an important factor to take into consideration is that retentions held in trust can offer greater protection against insolvency, as the money is 'ring-fenced'. A number of other countries have already adopted a mechanism which ring-fences retention money in some way such as in a trust account; and

209 Using a scale of 1-10, where 1 is not at all suitable, and 10 is extremely suitable

- retention monies cannot be used for another purpose by the client or contractor holding the retention such as to fund working capital.

Although evidence is limited, there is sufficient information to suggest this option as a potential alternative means of implementing cash retentions that would work across the construction sector. Retentions held in trust only ring-fence the retention money in the event of insolvency if the contractual documentation clearly makes provision for this. To give the contractor priority over other creditors, the money must be held in a separate account – thus incurring set up and on-going administrative costs for the client or main contractor. The extent of these costs and the impacts as a result would need to be investigated further to understand them fully and thus enable an informed assessment of the suitability of retentions held in trust.

5.8 Other options and suitability as alternatives to retention in the construction sector

5.8.1 A cultural shift

The view of some clients and contractors is that the practice of retentions contributes to a general sense of mistrust cascading down the supply chain; the other side of the argument suggests that there is already an adversarial culture in the sector which prompts the demand for retentions. Many contractors state the importance of maintaining their reputations, but even with evidence of a solid track record, culturally speaking, predominantly there is still a lack of trust. Therefore there is a general consensus among respondents participating in focus groups that the construction sector appears a long way from accepting from contractors that "*my word is my bond*".

Qualitative evidence suggests that one way of establishing and maintaining longer-term, quality working relationships is via greater use of procurement frameworks (as described in section 3.3.2). Many such frameworks in the construction sector do not advocate the use of retentions, in favour of a clearly defined partnership approach to collaborative working. Furthermore they require extensive due diligence prior to the delivery of the contract (to actually be accepted on to the framework), typically including financial standing, track record in delivering high quality of work, and project management and quality assurance practices. This takes time and therefore cost, for clients administering the framework and contractors investing time to gather and submit evidence to be accepted on to the framework. This also acts as a means of helping to establish longer-term relationships between clients and contractors – which survey data show is a factor in reducing the need for retentions, and is an important incentive to deliver high quality work and thus maintain those relationships.

However qualitative evidence from focus groups also acknowledges it is not always possible to form and maintain long-term trusted supplier relationships. There are numerous one-off projects and clients, which means it is not possible to develop such relationships. Contractors who work in this way are unlikely to invest in the time required to become accepted on to frameworks, suggesting that they could help to reduce the need for retentions in some cases, but at present, they do not appear to be a viable alternative to retentions sector-wide.

5.8.2 Insurance

Contractor's own insurance policies

Qualitative evidence obtained via focus groups and interviews with tier 2 contractors indicates that their own insurance[210] policies would apply in the cases of more expensive latent defects that arose in higher value projects. They say this renders the need for retentions redundant. For example the contractor could make a claim on their own insurance for costs incurred in remedying defects occurring through no fault of their own – for example if one of their sub-contractors caused a defect. The advantage of using existing insurance policies is that this does not incur any additional costs for contractors, as policies are in place on an on-going basis. However, none of the contractors suggesting this as an option say that this has been accepted in place of retentions, to date. This is because in their experience clients and main contractors prefer to use cash retentions which they consider is a more appropriate 'insurance policy' in this context. Furthermore use of insurance policies in this way would only be an option for main contractors, not for clients who would not have policies of this nature.

The use of existing company insurance policies offers no protection against the impacts of downstream insolvency. If a contractor went into administration, unless there was explicit cover in the policy, the insurance would be invalid. Therefore there would be no surety available to the client or main contractor if the contractor went into administration before the work was completed to a defect-free standard.

Other types of insurance policies

Qualitative evidence suggests the use of a dedicated latent defects insurance policy could be an option to provide a surety against defects for a longer period of time (for example 5-10 years post practical completion). This would cover the costs of remedying defects (as defined in the policy) that may arise during that timeframe[211]. It is not clear whether the client or contractor would be responsible for procuring the policy, but for the majority of construction-specific insurance policies in England and in other countries, it is the contractor who takes out the policy. Clients and contractors who suggested this type of insurance as an option were unable to estimate the costs of this. This option would only be applicable for buildings where defects are likely to arise over a longer length of time such as up to 10 years following the completion of the work, to make it viable to take out the policy. It does not therefore appear that a latent defect insurance policy would be applicable sector-wide.

Project-specific insurance policies (owned by the client) had been trialled by one respondent who took part in a telephone interview[212] with experience of working in Europe. Project-specific policies vary according to the needs of the project, so exact specifications are not universal. Such policies are intended to protect against the risks of non-completion of the work, and against issues such as defects arising. This puts the onus on the client to

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210 Respondents were referring to professional indemnity insurance and public liability insurance i.e. that they typically take out as a matter of course

211 RICS, Draft guidance note – construction security and performance documents

212 This individual was unable to estimate the costs of the policy

select the best qualified supply chain, but there are administrative costs and time incurred in setting them up and paying for them on a project-by-project basis. The use of project-specific insurance may be limited to large-scale and potentially complex projects, subject to greater risk, where clients and/or main contractors may be more inclined to use insurance as another forms of protection to mitigate against that risk. Furthermore they do not offer the same incentive as retentions, for contractors to return to remedy any defects. Given the range of projects by size, complexity and strength of supplier relationship, it does not seem that project-specific insurance policies could apply sector-wide as an alternative to retentions.

Other types of insurance policies used in other countries

Construction all-risks (CAR)

There are examples of other types of insurance policies used in other countries which have some similarities with the main purpose of retentions i.e. to mitigate against the risk of non-completion of the work. The most commonly used is the 'construction all-risks' (CAR) insurance. This is used in European countries including Belgium, Germany, Hungary, Italy and Sweden[213]. It can also be used in England, although none of the respondents interviewed suggested the CAR insurance as a viable alternative to retentions.

CAR policies are typically required within the terms of individual contracts, rather than specified within legislation. From the secondary evidence it appears they cover against damage to the works, including theft, rather than defects that a contractor is responsible for remedying. On this basis CAR policies do not seem to be a viable alternative to cash retentions.

Decennial liability insurance

Decennial liability insurance is used in a number of Middle Eastern countries, including Qatar, Iraq, Kuwait and the United Arab Emirates. This is a stringent form of liability which is imposed on construction contractors and design professionals, such as architects, for the total or partial collapse of works, or the discovery of latent structural defects which put the safety of the building at risk. This liability is in place for a period of ten years after the works have been completed. In some countries this requirement is stipulated within individual contracts rather than in legislation, but some form of decennial liability insurance cover is mandatory in many other countries including Denmark, Finland, Hungary, Algeria, Spain and Tunisia. In France the French Insurance Code makes it mandatory for all builders to take out a ten-year decennial insurance policy[214]. As a rule there is no need to prove that the contractor or designer was at fault.

It is not clear from the literature, the extent to which decennial insurance is used, where it is not mandatory to do so. The typical cost of a policy of this nature to a contractor is also

213 http://www.dlapiperrealworld.com/law/index.html?t=construction&s=forms-of-contract-procurement-methods&q=insurances

214 http://www.dr-hoek.de/EN/beitrag.asp?t=Decennal-liability-under-FIDIC

unclear. Nor is it clear from the literature whether decennial insurance offers any form of protection against the impacts of upstream or downstream insolvency. Decennial insurance appears to deal with serious construction issues rather than defects that could be described as minor, by comparison, as cash retentions do. This suggests there is not the same level of incentive for contractors to return to remedy 'minor' defects. Furthermore as the onus is firmly on the contractor to take out the policy, with no need to prove fault, this type of insurance may be considered detrimental to the construction sector supply chain in England. Therefore decennial liability insurance does not appear to be a viable alternative to cash retentions on a sector-wide basis.

5.8.3 Guarantees and warranties

Guarantees

Many contractors participating in interviews and focus groups referred to their trade associations, most of which audit their members for financial stability and quality assurance, as evidence that they will complete work to a high quality standard including resolution of any defects – thus providing a form of 'guarantee' to offset the requirement for a retention.

Other guarantees in use in the construction industry include the insurance-backed approach used in the lift sector (described in more detail in Appendix 5). There are also a range of product guarantees which in some cases, such as the insurance backed guarantees for loft insulation, last longer than the typical defects liability period (25 years in this case).

An insurance-backed guarantee, provides a strong incentive for contractors to return to remedy defects if, for example, there was a risk of losing professional body or trade federation membership, or accreditation of some form, by not doing so. However, it seems an unlikely standalone alternative to retentions for the whole of the sector; not all contractors are affiliated with trade federations or professional bodies, for example.

The insurance-backed guarantee works well in the lift sector, but one of its critical success factors is the size of the sub-sector. Individual contractor insurance premiums are relatively low, as the shared liability is spread across fewer than 130 companies who participate (at the time fieldwork took place). Other sub-sectors, for instance housing, would not be able to establish a similar scheme with the same level of costs per contractor; in all likelihood these would be much higher and therefore could be cost-prohibitive for smaller businesses.

Product guarantees offer some security for the owner/user of the product, such as the homeowner, and as such, for the organisation who constructed the home. However they do not act as a strong incentive to remedy defects, other than any construction work specifically relating to the installation of such products – the guarantee does not relate to the home, but to one or more of the products installed within it.

This suggests guarantees may form a part of the bigger due diligence picture, but are unlikely to be a standalone alternative to retentions in the construction sector.

Warranties

Another potential alternative to retentions is a collateral warranty. This requires all parties responsible for the design and/or construction of a project, to make a binding promise to an interested third party beneficiary, to undertake the work in accordance with what is specified in the contract. On paper they appear suitable for all sub-sectors.

There are times when interested third parties – for example the future owner of a property being built – are obliged to take out a warranty, such as a condition of securing a mortgage or other funding. Qualitative feedback obtained from specialist insurers in the construction sector says collateral warranties are usually only required in the event of such obligations. Legal costs could be incurred if the warranty needs to be an annex of the main contract, thus requiring drafting or re-drafting if circumstances change during the lifespan of the project.

Most collateral warranties have a time limit for making a claim against the warrantor, which is usually either six or twelve years.

It is not clear that collateral warranties would act as a strong incentive to contractors to return to fix defects, as clients or main contractors would need to pursue a claim for breach of contract if this was the case. Survey data reveal general reluctance in the sector to incur legal costs either through adjudication or by going through the courts, and this suggests there could be similar reluctance to make a claim against the warranty. Feedback from the focus groups and interviews states a stronger incentive to remedy defects is the desire and need to maintain good working relationships with clients and the supply chain. Collateral warranties may be more likely to be used in addition to, rather than as a replacement, for retentions.

5.8.4 Retention deposit scheme

Primary research has reviewed the existing tenancy deposit scheme, which has clear parallels with retentions whereby a sum of money is retained from a tenant/contractor until the expiration of a set time period. Monies are paid back subject to the terms of the tenancy agreement being met, and the scheme is overseen by the Independent Housing Ombudsman. The 2004 ‘Housing Act’ made it mandatory to register deposits.

There are two types of tenancy deposit scheme: custodial and insured. Custodial schemes are free of charge to use. An amount equivalent to the deposit is transferred to the scheme where is it held for the duration of the tenancy. It is released at the end of the tenancy according to the agreement of the parties involved. If there is a dispute then the scheme is able to provide dispute resolution.

Insured schemes allow the deposit to be held in the bank account of the landlord or letting agent for the duration of the tenancy. If there is a dispute at the end of the tenancy, the disputed amount must be transferred to the scheme, at which point it is only released upon agreement of the parties or following dispute resolution.

In theory, the opportunity for retentions would be to register the contract with a retention deposit scheme; the responsibility for this is likely to be with the client. Following registration with the scheme, retention monies would be paid over to the scheme where it would be held in trust. It is not clear what the process would be for releasing the retention

because at present such a scheme does not exist, and discussion of such a scheme in this report is purely theoretical. However tier 1 contractors interviewed say this approach would not cater for disputes over defects, which would have to be dealt with via the existing adjudication process. This could become complicated given multiple layers of sub-contractors in the supply chain and the fact that, rather than being a lump sum, the retention 'pot' is built up over a period of months via deductions from monthly payments which could add complexity and costs. On this basis, tier 1 and tier 2 contractors interviewed consider that if such a scheme were to be introduced, it would need to be mandatory, as it would not be sufficient to rely on a voluntary option.

A scheme of this nature appears suitable for all sub-sectors. It would offer a clear incentive for contractors to perform work to a high quality standard, including remedying any defects in a timely fashion. It would also ring-fence monies in the event of insolvency of the client or main contractor. However, this would not offer specific protection if the sub-contractor became insolvent – although retention monies held could be used to cover some of the costs arising from this, such as employing other contractors to complete the works. In addition to these costs, the main disadvantage for clients and main contractors would be that retention monies could not be used in other ways in their businesses, such as funding working capital. However if there is no clear value in holding on to the retention, this may reduce risks of unjustified late and non-payment. Administrative costs would be incurred to set up and manage a scheme of this nature – the likely costs and the impacts of these warrants further investigation.

This suggests that a retention deposit scheme warrants further investigation in terms of its suitability as a sector-wide alternative to implementing retentions. In particular further research would need to consider how disputes would be dealt with, the costs of setting up and managing such a scheme, who would be responsible for bearing the cost, and how such a scheme could be managed independently. It would need to assess whether an insured or custodial scheme (or an approach incorporating elements of both) would be the most suitable. Further investigation would also need to consider whether agreement is needed from both parties in respect to the delivery of outputs triggering the release of the retention monies, and whether the client or contractor would be responsible for approving this. Other aspects that require further consideration are around the stages of payment, and whether a two-stage approach to releasing the money would be deployed; and how adjudication might work (and be funded/managed) in cases where there were disagreements.

5.8.5 Use of existing legislation as protection

An alternative mechanism to retention needs to have the same intended purpose as retentions - to assure the client or main contractor that any work completed for them will be high quality, and that any defects that may arise in a certain period post construction will be corrected.

There are already a number of laws which protect consumers within and outside of the construction industry from being denied a satisfactory end product. The Consumer Rights Act, introduced in October 2015, contains a protective clause against defects from building and construction works:

- *"The trader should either redo the element of the service which is inadequate or perform the whole service again at no extra cost to you, within a reasonable time and without causing you significant inconvenience;*

- *or, in circumstances where the repeat performance is impossible or can't be done within a reasonable time or without causing significant inconvenience, you can claim a price reduction. Depending on how severe the failings are this could be up to 100% of the cost"*[215]

However, this legislation is used to protect individual consumers and could not be used in a business-to-business setting. As such it is not an alternative to retentions that could be embedded sector-wide.

5.9 Use of retentions and alternative mechanisms in other countries

Retentions seem to be commonplace in the construction sector on a global basis, however their scale and mechanics greatly vary. In countries including New Zealand, Canada, Germany, China, Qatar, Australia and the USA the similarity of whole supply chain retentions is evident, and the definition of retention remains the same. Qualitative evidence finds that retentions are also used in the rest of the UK as they are in England.

It is clear that in a number of countries, issues are experienced with the practice of holding retentions, as they are in England (discussed in more detail in Appendix 4). Notably, it is acknowledged that the practice of retentions presents a risk to the supply chain of negative impacts, such as losing the money in the event of insolvency, and of the knock-on effects of late payment of the retention. Steps have therefore been taken in a number of countries to ring-fence retention monies, for instance in separate accounts or on trust. Alternatively the use of payment or performance bonds is required in place of retentions. However, this is usually only for state-funded work which exceeds a certain value, rather than for the construction sector as a whole.

There is also evidence of actions taken to change the way in which retentions are administered, to mitigate the risk of any negative impacts on the supply chain. For example in China, retentions are protected by a bank guarantee[216]. Legislation[217] introduced in 1997 in Canada states that retentions must be held in a separate account. In New South Wales, Australia, retention money held on projects worth over $20m must be held in a trust account with an authorised deposit taking institution[218].

The policy stance in New Zealand has recently changed, and now states that, from 31 March 2017 retention money withheld under commercial construction contracts must be held on trust in the form of cash or other liquid assets readily converted into cash, unless a

215 http://www.which.co.uk/consumer-rights/regulation/consumer-rights-act#link-12
216 It is not clear from the literature whether this is required by statute, or within individual contracts
217 New Builder's Lien Act, 1997
218 As a result of the amended Building and Construction Industry Security of Payment Regulation 2008

financial instrument is purchased. There are strict requirements on the financial instruments to ensure repayment of retention money.[219]

As these measures have only recently been implemented in New Zealand, no evidence is yet available on their effectiveness. It should also be noted that circumstances and contexts in which retentions are used, greatly vary from country to country. Therefore, there is no guarantee that a policy or other form of intervention that is fit for purpose in one country, would translate readily to England in the same way.

There is also evidence of alternative approaches used in place of retentions; notably the use of bonds, which appears to take place predominantly in the USA. Construction contracts valued over $150,000 issued by the Federal Government must be backed by performance and payment bonds[220]. Payment protection must be in place for state-funded contracts worth between $30,000 and $150,000, which varies depending on the type of work. State-specific legislation[221] also requires that state-funded construction projects have performance and payment bonds, resulting in over 25,000 types of surety bonds in the USA. It is unclear from the literature whether the use of surety bonds acts as a more effective form of 'insurance policy' to mitigate the risks of defects and project delays.

There is also evidence of construction-specific insurance policies, including construction all-risks (CAR) insurance and decennial liability insurance. This is used in European countries including Belgium, Germany, Hungary, Italy and Sweden[222]. It can also be used in England, although none of the respondents interviewed suggested the CAR insurance as a viable alternative to retentions. These mechanisms are discussed in more detail in section 5.8.2. CAR policies typically provide cover against damage and theft, rather than defects per se. The main purpose of decennial liability insurance is to impose liability on the contractor and designer of a building for a specified period of time post-build completion, to cover costs of re-building if the works collapse fully or partially. The policy also insures against structural defects that arise which endanger the safety or security of the building. Where such policies are required (either in the contract or by legislation), it is the responsibility of the contractor to take out and pay for the cover. These policies appear to deal with serious construction issues rather than defects that could be described as minor, by comparison, as cash retentions do.

A common theme that has emerged in a number of countries is to ensure the retention money is 'ring-fenced' in a separate account. However, there is also evidence of alternative approaches used in place of retentions; for example, the use of bonds, which appears to take place predominantly in the USA. This indicates that while there are ways in which other countries are mitigating project risks without using retentions or by applying certain conditions to their use, there does not appear to be one obvious standard

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219 https://www.building.govt.nz/projects-and-consents/why-contracts-are-valuable/construction-contracts-act-2002/

220 Federation Acquisition Regulation (FAR) Part 28), stemming from legislation introduced by The Miller Act in 1932. For a description of how payment (retention) and performance bonds work, see sections 5.3.1 and 5.4.1

221 Many states in the US have adapted the Miller Act for use at state level; these individual acts are known as "Little Miller Acts"

222 http://www.dlapiperrealworld.com/law/index.html?t=construction&s=forms-of-contract-procurement-methods&q=insurances

approach. Therefore there does not seem to be one standard approach to the use of retentions that could be applied in England. This is partly because the effectiveness of approaches used in other countries is unclear at this stage, and partly because different circumstances in the English construction sector may not ‘fit’ with these approaches implemented abroad so caution must be used when drawing lessons from what other countries are doing.

Evaluations of these schemes have not yet been made available. However, as and when completed, evaluation reports could provide a useful source of evidence in the future.

More detail about the practice of retentions in other countries is included in Appendix 4.

5.10 Key findings – Alternatives to retentions

- There are a wide range of mechanisms which could potentially be used in place of retentions in the construction sector, including some which currently exist, and others which could be developed specifically to be an alternative mechanism to implementing retentions.

- This research considered a number of other mechanisms to assess the feasibility of using them as alternatives to retentions, or alternative approaches for implementing retentions. All respondents to the client and contractor surveys, with experience of retentions in the last three years, were asked to give their views on the following[223]: Project Bank Accounts, Retention bonds, Performance bonds, Escrow stakeholder accounts, Parent company guarantees; and Retentions held in trust funds.

- Amongst those with experience of holding retentions in the last three years, there is limited evidence of widespread use of these alternative mechanisms to retentions in the construction sector in England. There is more evidence of their use in addition to, rather than as a genuine alternative to, retentions. This limited the ability of the contractor and client surveys to gather evidence on the costs, benefits and effectiveness of these alternative mechanisms.

- Retentions are also used widely in a number of other countries, examples being USA, China and New Zealand. There is evidence to show that these countries experience similar issues as in England with the practice of holding retentions, notably loss of retention monies as a result of insolvency, and delays in paying retention monies to contractors. A number of steps have been or are being taken in other countries to regulate the way in which retentions are held.

- A range of approaches are being used in a number of other countries to change the way retentions are held, rather than one universal solution, which suggests each country may need to tailor its approach and that there is no one simple answer for addressing the issues. Furthermore at present it is unclear whether such approaches are effective in mitigating the risks to the supply chain of delayed or non-payment, or whether they could be adopted in the same way in England. Evaluations of these schemes have not yet been made available. However, as and when completed, evaluation reports could provide a useful source of evidence in the future.

- A summary of the main advantages and disadvantages of potential alternative mechanisms, compared with cash retentions, is presented in Table 4. The main drawbacks of a number these mechanisms are the additional administrative costs and time that may be incurred to implement these, and the fact that for some, this would remove the cash currently held in retentions out of circulation in the construction sector.

223 Additionally respondents (clients and contractors, via the survey, focus groups and depth interviews) made a number of other suggestions about other alternatives to retentions, which are also discussed in the research. These are: Insurance policies, warranties/ guarantees, retention deposit scheme, frameworks/partnership agreements

- In summary, evidence gathered by this research suggests that most of the alternative mechanisms would have suitability in certain circumstances to replace retentions, but only a few appear to have the potential to be suitable as a standalone sector-wide alternative to retentions.

- The potential alternatives that warrant further investigation are those which appear to be applicable to the whole of the sector, eliminate some of the critical issues associated with retentions (notably the risks of unjustified delayed or non-payment of retention monies, and the impacts of insolvency) and provide the surety against defects as retentions do.

- These are:

  Retentions held in trust; and

  A retention deposit scheme.

- Whilst retention bonds also appear to be applicable to the whole of the sector, eliminate some of the critical issues associated with retentions (notably the risks of delayed or non-payment of retention monies, and the impacts of insolvency) and provide the surety against defects as retentions do, there is a larger body of evidence (compared with that available about other alternatives) which indicates costs of retention bonds could be a barrier to their implementation and suitability sector-wide. In particular this is because the evidence indicates that costs of retention bonds may be higher for smaller contractors further down the supply chain.

- There is a need to further investigate the suitability and feasibility of wide use of alternative mechanisms to retentions in the construction sector in England, in particular a retention deposit scheme and holding retentions in a trust account. Further research is needed to understand how these would operate in practice and their costs and benefits, if they were to be used more widely in the sector, For example, barriers to wider use and whether these may be overcome, how disputes would be dealt with, any adjudication process to resolve disputes, how payments would be triggered and the evidence for this, risks, and sector-wide applicability.

Table 4: Summary of advantages and disadvantages of the use of retentions, alternatives to retentions, and alternative mechanisms for implementing retentions for the construction sector and wider economy

Mechanism	Advantages	Disadvantages
Cash retention	No upfront costs – retention monies withheld and paid to contractor upon completion of work, should not incur any additional costs Offers surety against defects – incentive for contractors to complete work to a high quality standard/remedy any defects and in a timely fashion, in order to release retention monies Retention monies can be used by a client or main contractor, for example to fund working capital, which can reduce the need for borrowing Retention monies can be used to offset any costs incurred in the event of contractor/sub-contractor insolvency	Incentive for the client or main contractor to hold on the retention monies rather than release them on time, because it can be used to fund working capital or as part of general expenditure Commonly paid late, thus incurring administrative and financial costs, because of time spent in pursuing payment and monies removed from cash flow during this time Money is removed from cash flow which can reduce contractor/sub-contractor working capital and potentially incur further costs such as borrowing from a bank or overdraft fees The need to pursue payment can have a negative impact on relationships throughout the supply chain Does not offer any protection to the contractor/sub-contractor if the client or main contractor becomes insolvent, as there is no requirement to ring-fence retention monies Evidence from the survey suggests tender prices are increased by 40% of contractors to offset the costs of retentions, so overall costs of

Mechanism	Advantages	Disadvantages
		some construction works could be higher
Project Bank Accounts (PBAs)	Ring-fences money in a separate account with the objective of helping to ensure fairer payment practices Aims to provide greater transparency in payment practices Gives protection against upstream insolvencies as in theory monies to pay contractors/sub-contractors should be ring-fenced in the PBA	Administrative costs and time to establish, can incur high upfront costs to set up as well as on-going administrative costs Less suitable for large projects with multiple sites where multiple accounts would be required Clients/main contractors may still ask for cash retentions in addition to PBAs Does not eliminate the risk of late payments or the risk of payment disputes No explicit provision to offer surety against defects; a proportion of monies not withheld for this purpose unless cash retentions used alongside PBAs The very limited evidence from the survey suggests tender prices are increased to offset the costs of PBAs, so overall costs of construction works could be higher
Retention bonds	No cash is retained separately therefore there is no issue in respect of late payment of retention funds Offers surety against defects as clear incentive	Upfront costs of 1-10% of bond value (typically 5% of contract value) incurred to set up the bond. Costs to finance the bond may be higher for SMEs

Mechanism	Advantages	Disadvantages
	for the contractor to complete works to high quality standard and in a timely fashion, rather than risk the bond money being called into use. Where a bond is called, it is likely to substantially affect future costs of retention bonds for the contractor, or even prevent one from being issued at all No money is withheld, benefitting contractor/sub-contractor cash flow of those that would otherwise had retentions held from them Qualitative evidence, predominantly obtained from tier 2 contractors states retention bonds are preferable to cash retentions even though the bond removes money from cash flow which is non-refundable. This is because retention monies are not always paid back (wholly or partially) and losses of retention money could be higher than costs of retention bonds Offers protection to clients and main contractors in the event of contractor/sub-contractor insolvency[224]	Takes money out of cash flow which is non-refundable Money is removed from cash flow which can reduce contractor/sub-contractor working capital and potentially incur further costs such as borrowing from a bank or overdraft fees No retention money is withheld, thus it cannot be used for another purpose by the client/main contractor such as to fund working capital Tender prices may be increased to offset the costs of the retention bond, making overall costs of construction works higher
Performance bonds	No cash is retained separately therefore there is no issue in respect of late payment of	Upfront costs incurred to set up the bond (typically 1-10% of bond value (typically

224 To protect the client or main contractor against insolvency of the sub-contractor there would need to be explicit provision within the bond agreement

Mechanism	Advantages	Disadvantages
	retention funds Offers surety against defects as clear incentive for contractor to complete works to high quality standard/remedy any defects and in a timely fashion, rather than risk the bond money being called into use. Where a bond is called, it is likely to substantially affect future costs of retention bonds for the contractor/sub-contractor, or even prevent one from being issued at all No money is withheld, benefitting contractor/sub-contractor cash flow of those that would otherwise had retentions held from them Offers protection to clients and main contractors in the event of contractor/sub-contractor insolvency[225]	equating to 10% of contract value). Costs to finance the bond may be higher for SMEs Takes money out of cash flow which is non-refundable Money is removed from cash flow which can reduce contractor/sub-contractor working capital and potentially incur further costs such as borrowing from a bank or overdraft fees No retention money is withheld, thus it cannot be used for another purpose by the client/main contractor such as to fund working capital Tender prices may be increased to offset the costs of the performance bond, making overall costs of construction works higher
Escrow accounts	Money is ring-fenced and protected in case of insolvency of the client or main contractor Helps work to be completed in the agreed budget	Incurs upfront legal and banking fees to establish the account, and on-going administrative costs Not designed as a means of offering security

225 To protect the client or main contractor against insolvency of the sub-contractor there would need to be explicit provision within the bond agreement

Mechanism	Advantages	Disadvantages
		against defects Retention money cannot be used for another purpose by the client/main contractor such as to fund working capital Clients/main contractors may not see this as offering sufficient insurance against defects and still ask for the use of other mechanisms (e.g. cash retentions) in addition.
Parent company guarantee	Low or zero upfront costs, typically issued in the form of a written agreement, so does not remove money from cash flow Unlikely to result in an increase to tender prices as no costs incurred Offers some security against defects as the parent company is obliged to remedy any issues in the event that the contractor defaults – a clear incentive to complete work to a high quality standard No money is withheld, benefitting contractor/sub-contractor cash flow of those that would otherwise had retentions held from them	Does not guarantee surety against defects for client/main contractor if the parent company becomes insolvent Not all contractors have a parent company, notably SMEs, limiting their widespread use in the construction sector Where the parent company is the main contractor, this offers no protection to the main contractor, only to the client No retention money is withheld, thus it cannot be used for another purpose by the client/main contractor such as to fund working capital Clients/main contractors may not see this as offering sufficient insurance against defects and still ask for the use of other mechanisms (e.g. cash retentions) in addition.

Mechanism	Advantages	Disadvantages
Retentions held in trust	Retention money is ring-fenced and protected in case of insolvency of the client/main contractor – but only if there is explicit provision for this within the contractual documentation Retention monies can be used to offset any costs incurred in the event of contractor/sub-contractor insolvency No client/main contractor incentive to hold on to the retention monies (i.e. unjustified late payment) as the money cannot be used for any other purpose Offers surety against defects – incentive for contractors to complete work to a high quality standard/remedy any defects and in a timely fashion, in order to release retention monies	For retention monies to be protected in the event of client/main contractor insolvency, it must be held in a separate account which incurs administration costs and time to set up and maintain Retention monies cannot be used for another purpose by the client/ contractor holding the retention such as to fund working capital Money is removed from cash flow – this can reduce contractor/sub-contractor working capital and potentially incur further costs such as borrowing from a bank or overdraft fees
Contractor/sub-contractor insurance policy (e.g. professional indemnity)	No additional costs incurred as contractors have policies in place as a matter of course, so does not remove money from cash flow No money is withheld, benefitting contractor/sub-contractor cash flow of those that would otherwise had retentions held from them	No protection for the client/main contractor in the event of contractor/sub-contractor insolvency unless there is explicit provision for this within the policy Time-consuming and potentially onerous to make claims which could cause delays in remedying any defects Only applicable where defects occur through no fault of the contractor/sub-contractor

Mechanism	Advantages	Disadvantages
		No retention money is withheld, thus cannot be used for another purpose by the client/main contractor such as to fund working capital. Clients/main contractors may not see this as offering sufficient insurance against defects and still ask for the use of other mechanisms (e.g. cash retentions) in addition. Not an option for clients
Construction all-risks (CAR) or decennial liability insurance policy	No money is withheld, benefitting contractor/sub-contractor cash flow Decennial liability insurance offers the client/main contractor ten-year security against defects that cause the building to fully or partially collapse, or cause a threat to the safety or security of the building	The contractor/sub-contractor incurs costs in taking out the policy No money is withheld, thus it cannot be used for another purpose such as to fund working capital CAR policies provide cover against the likes of damage and theft rather than defects per se, and therefore will not act as an incentive for contractors/sub-contractors to return to remedy defects No onus on the client or main contractor to prove the contractor/sub-contractor is at fault, in the case of decennial liability insurance Decennial liability insurance claims can be made where the building has fully or partially collapsed, or where defects threaten the safety or security of the building, hence there is no

Mechanism	Advantages	Disadvantages
		strong incentive to contractors/sub-contractors to return to remedy more minor defects Clients/main contractors may not see this as offering sufficient insurance against defects and still ask for the use of other mechanisms (e.g. cash retentions) in addition.
Warranties/guarantees	Offers surety against defects – an incentive for contractors to complete work to a high quality standard/remedy any defects and in a timely fashion Offers better protection against latent defects as in some cases the guarantee/warranty lasts longer than the typical defects liability period No money is withheld, benefitting contractor/sub-contractor cash flow of those that would otherwise had retentions held from them	Upfront costs required in some cases, such as an insurance-backed guarantee or legal costs of drafting a collateral warranty Not applicable to all sub-sectors of the construction industry No retention money is withheld, thus it cannot be used for another purpose by the client/main contractor such as to fund working capital Clients/main contractors may not see this as offering sufficient insurance against defects and still ask for the use of other mechanisms (e.g. cash retentions) in addition. Does not offer protection to the client/main contractor in the event of contractor/sub-contractor insolvency
Retention deposit scheme (does not currently exist but is	Offers surety against defects – an incentive for contractors to complete work to a high quality standard/remedy any defects and in a timely	Money is removed from cash flow – this can reduce contractor/sub-contractor working capital and potentially incur further costs such

Mechanism	Advantages	Disadvantages
discussed in theory)	fashion to release retention monies Potential for automated release of payment[226], eliminating risk of delays in receiving retention monies back No client/main contractor incentive to hold on to the retention monies (i.e. unjustified late payment) as the money cannot be used for any other purpose Retention money is ring-fenced and protected in case of insolvency of client/main contractor Retention monies can be used to offset any costs incurred in the event of contractor/sub-contractor insolvency	as borrowing from a bank or overdraft fees Incurs non-refundable administrative costs as a third party is required to manage the scheme – tender prices may be increased to offset these costs, making the overall costs of construction works higher Such a scheme could become complex further down the supply chain, and any areas of ambiguity could result in disputes, potentially damaging relationships within the supply chain No clear process envisaged to resolve disputes – it may require some form of arbitration which will incur time and cost Money cannot be used for another purpose by the client/main contractor such as to fund working capital
Framework/partnership agreement	Establishes financial standing and processes for remedying defects without the need to hold cash retentions – so money is not removed from cash flow Offers surety against defects – incentive for contractors to complete work to a high quality	Can be a time-consuming and complex process for companies to complete multiple Pre-Qualification Questionnaires (PQQs), the typical precursor to gaining a place on a framework, given the vast number of frameworks that exist in the sector, which

226 Although unclear how this would work in practice i.e. what triggers the release and who agrees to this/what happens in the event of disputes

Mechanism	Advantages	Disadvantages
	standard/remedy any defects and in a timely fashion to maintain the agreement/framework status No money is withheld, benefitting contractor/sub-contractor cash flow of those that would otherwise had retentions held from them	incurs cost and time No money is withheld, thus it cannot be used for another purpose by the client/main contractor such as to fund working capital Clients/main contractors may not see this as offering sufficient insurance against defects and still ask for the use of other mechanisms (e.g. cash retentions) in addition. Does not offer protection in the event of contractor/sub-contractor insolvency unless specific provision made for this in the agreement

6 Key conclusions

- Evidence suggests that retention monies being lost due to contractor insolvency affects a large proportion of contractors who use retentions. Whilst the evidence indicates that the number of contracts affected is small, the value lost could still be significant.

- Evidence gathered through the contractor survey indicates that a proportion of construction customers may be making payment of the retention conditional on the performance of obligations under another contract. It is no longer possible to do this under the 2011 amendments to the 'Construction Act'[227] and this suggests that a proportion of the construction sector may not understand what these reforms mean for payment of retentions. This indicates that some contractors may still need to be informed about what the 2011 amendments to the 'Construction Act' mean for payment of retentions. Further research to specifically understand the scale of this issue in the construction sector could be valuable.

- It has not been possible to robustly estimate the extent to which late and non-payment of retentions has been unjustifiably withheld by contractors. However, the qualitative evidence suggested that unjustified late and non-payment of retention monies was a significant issue for some contractors. This is a possible area for future research but robust measurement is problematic because of the differences in opinion as to what constitutes 'unjustified' among clients, main and sub-contractors. Further evidence could be gathered from clients and contractors specifically on their views on the extent to which they think retentions have been unjustifiably or justifiably withheld. However, this would reflect views expressed by participants and it would be difficult to reach a robust conclusion due to difference of opinion.

- As and when evaluations become available on the effectiveness of international measures targeted at resolving issues with the practice of retentions these should be reviewed to assess any lessons learned, and new evidence on their costs, benefits and effectiveness. This should specifically include New Zealand and Australia, where approaches are being taken to hold retention monies in trust accounts, and where the use of a retention deposit scheme is in place (New South Wales, Australia).

- There is a need to further investigate the suitability and feasibility of wide use of alternative mechanisms to retentions in the construction sector in England, in particular a retention deposit scheme and holding retentions in a trust account. Further research is needed to understand how they would operate in practice, if they were to be used more widely in the sector. For example, barriers to wider use and whether these may be overcome, how disputes would be dealt with, any adjudication process to resolve disputes, how payments would be triggered and the evidence for this, risks, and sector-wide applicability.

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227 The Housing Grants, Construction and Regeneration Act 1996, also known as the 'Construction Act'

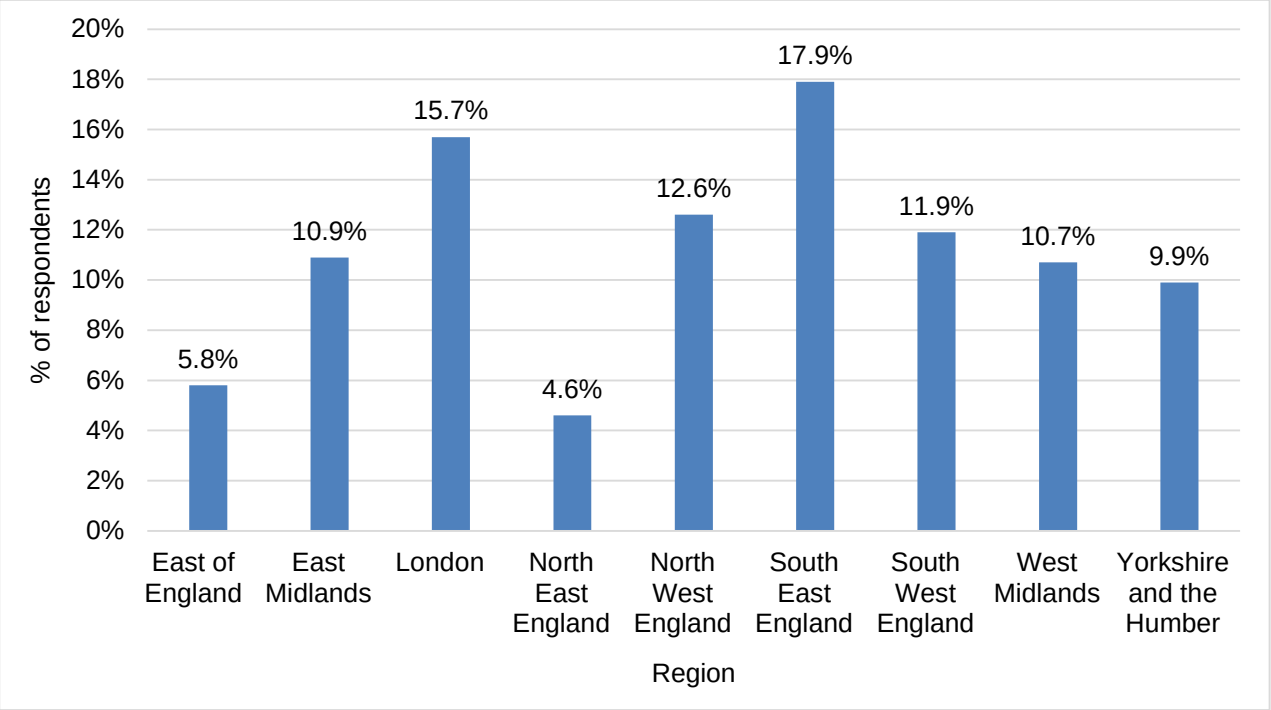
Appendix 1: Respondent profile

The following charts provide more detail about the respondents to the quantitative surveys of contractors and clients in the construction sector.

As previously stated, it is not possible to accurately determine the full population of construction sector clients, as they can feasibly span every type of sector and organisation size. A cross-section of client responses were achieved by region (Figure 34). For the purpose of obtaining detailed evidence for the survey, medium and large organisations were the main target respondent groups (Figure 35), simply because it would be less likely that small and micro businesses would commission work requiring retentions. Figure 36 shows clients surveyed by sector.

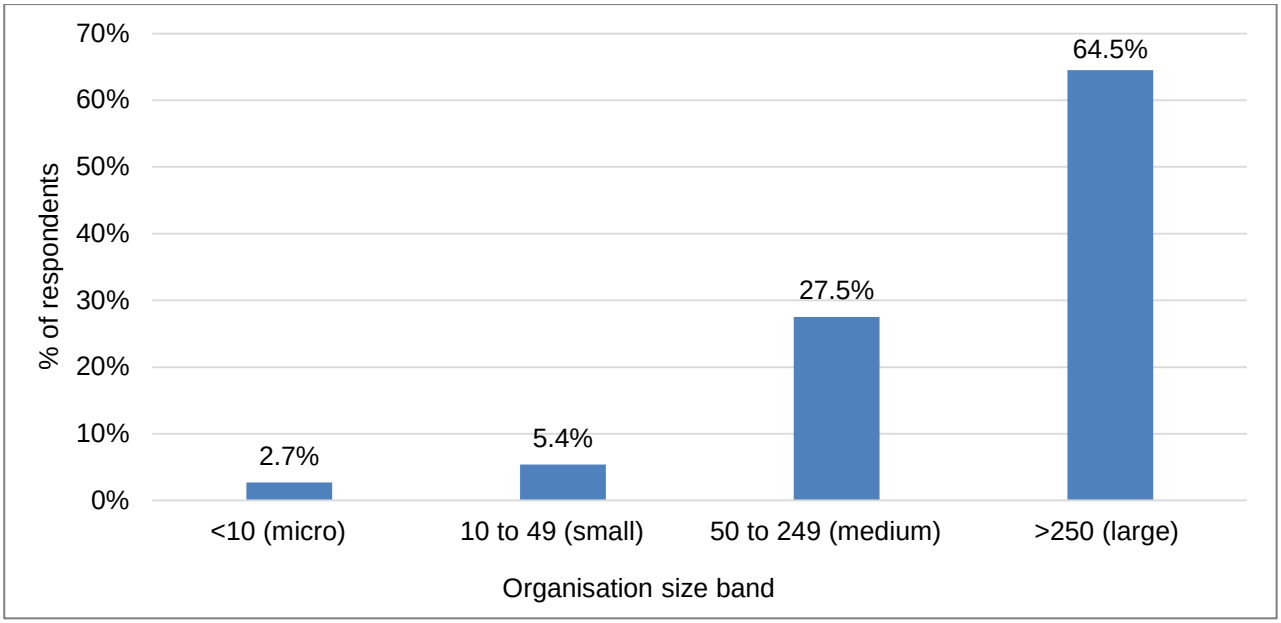
419 clients in the construction sector in England responded to the survey but not all provided details on their region, organisation size or whether they are in the public or private sector. For this reason, the graphs in this section have a base number below 419 - the difference is the number of respondents who did not answer the relevant survey question.

Figure 34: Clients surveyed (region)



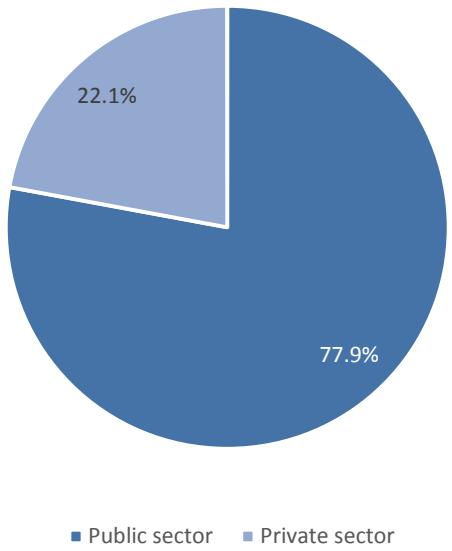
Base 419 respondents

Figure 35: Clients surveyed (organisation size)



Base 408 respondents

Figure 36: Clients surveyed (sector)[228]



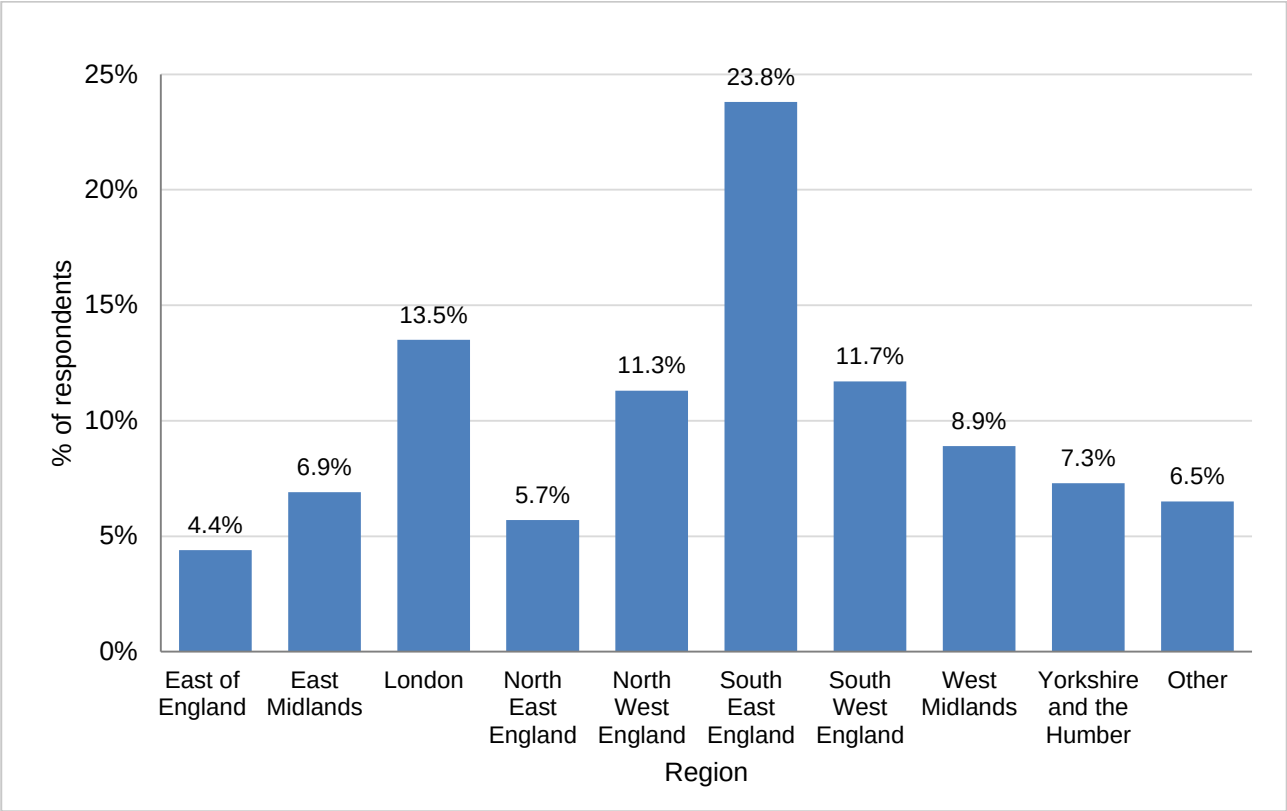
Base 412 respondents

228 As explained earlier in the report, there is a higher proportion of public sector client respondents, as when conducting fieldwork it was found that fewer private sector clients had experience of retentions, and therefore could not complete the survey

Based on the population of construction sector businesses in England[229], a broadly representative sample has been achieved by region (Figure 37), with the exception of the East of England, where survey numbers are slightly lower than reflected in the population. To offset this, more qualitative evidence was collected from contractors in the East of England region.

508 construction contractors in England responded to the survey but not all provided details on their region, organisation size, or position in the supply chain. For this reason, the graphs in this section have a base number below 508 - the difference is the number of respondents who did not answer the relevant survey question.

Figure 37: Contractors surveyed (region)

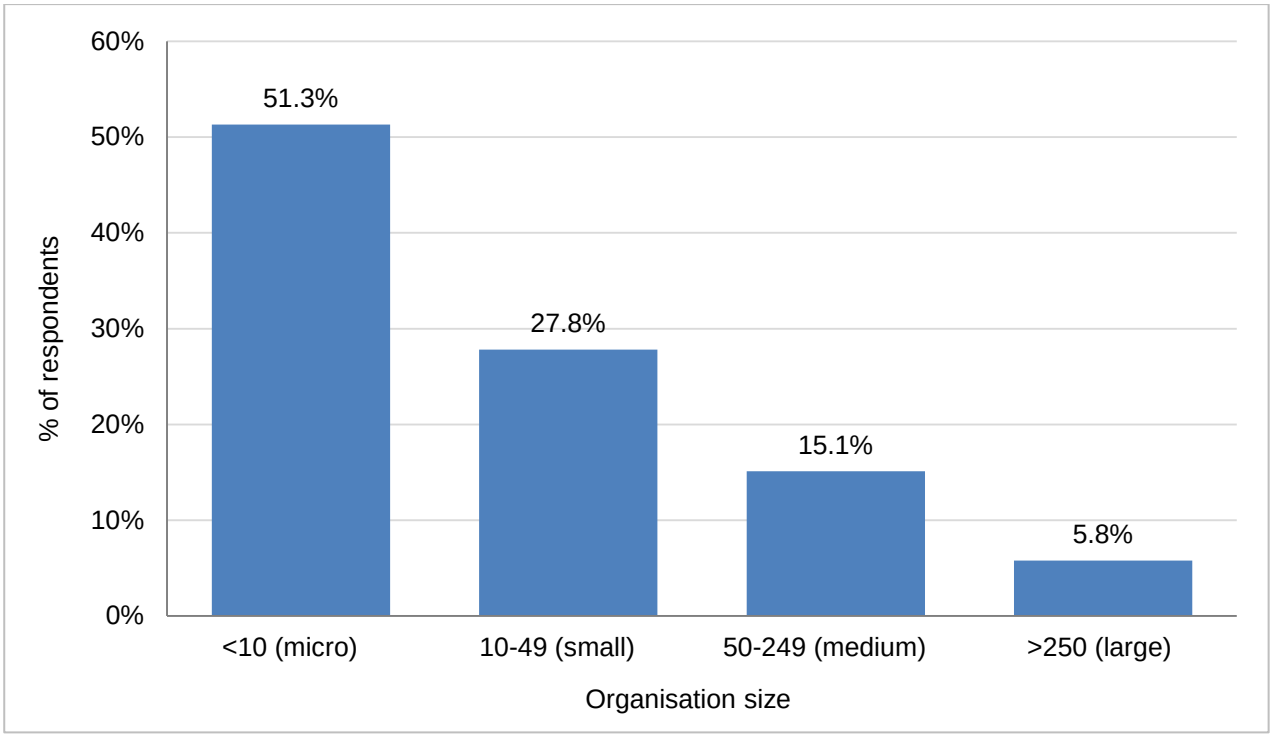


Base 495 respondents

The construction sector in England comprises well over 90% micro businesses[230]. However given the subject matter of the survey and qualitative evidence which indicated that micro businesses working predominantly for domestic customers would be unlikely to have any experience of retentions, it was decided to over-sample small, medium and large businesses (Figure 38) who would be more likely to be able to provide detailed data about the practice of retentions. Figure 39 shows respondents by their position in the construction sector supply chain.

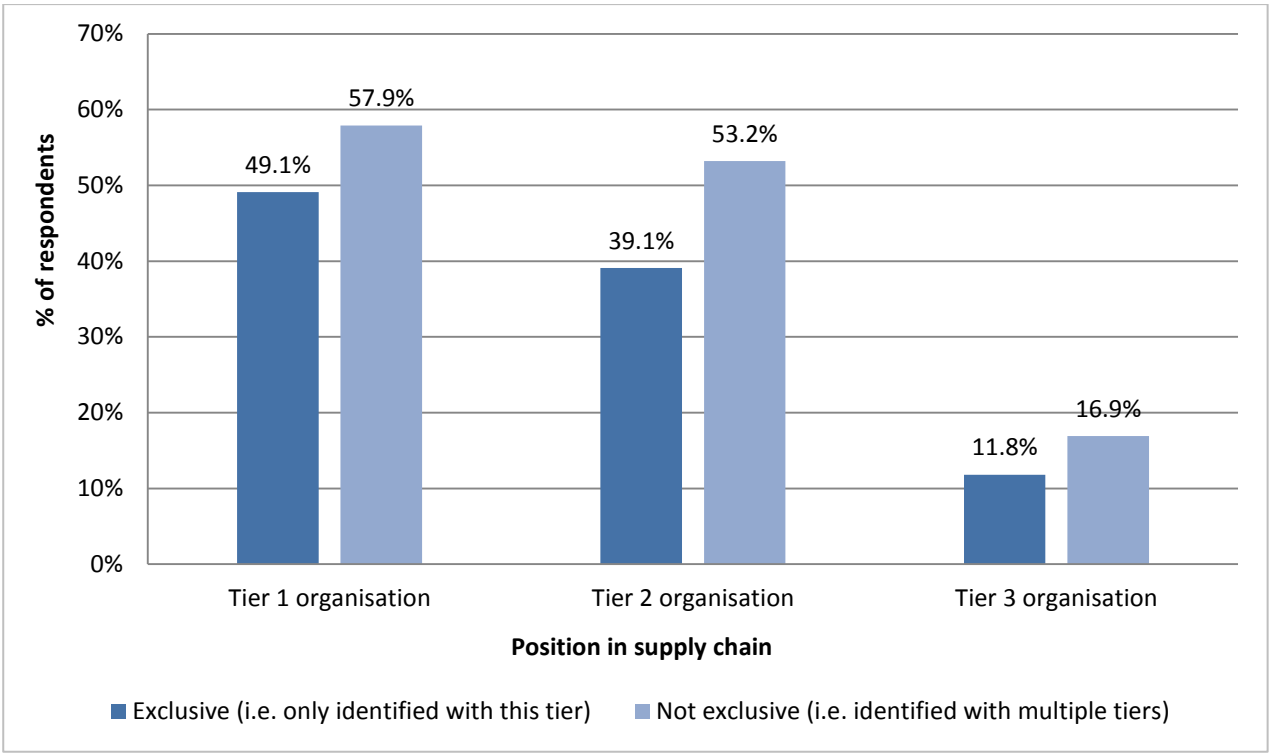
229 Office for National Statistics (ONS) (2015), UK business: activity, size and location
230 Office for National Statistics (ONS) (2015), UK business: activity, size and location

Figure 38: Contractors surveyed (size)



Base 503 respondents

Figure 39: Contractors surveyed (position in supply chain)



Base: 335 (exclusive); 477 (not exclusive)[231]

231 An additional 13 respondents identified as 'other' (exclusive) and 27 respondents identified as 'other' (not exclusive). These have been excluded from the graph and are not factored into the percentages presented above

Appendix 2: Detailed Data Adjustments Methodology

Data cleaning methodology

Prior to analysis, all data were thoroughly cleaned according to these main criteria:

1. A number of questions asked respondents to provide numbers that were in some cases of considerable size. To exclude the possibility of error on the side of the respondent and the interviewer, all data, particularly outliers, were checked for plausibility in and of its own, as well as in relation to answers to other questions. For example comparing responses to a question asking for the combined value of all current construction sector contracts, with the combined value of retentions on all those current contracts (as clearly the second should not exceed the value of the first). Other checks included looking at value of current contracts against total organisation turnover. The relevant data points thus identified were deemed inaccurate and were removed from the data set for that particular variable. Data from that respondent were kept for all other variables.

   Some outliers proved following investigation to be plausible and were retained to be included in analysis – for example particularly high values for current and completed contracts were checked against the organisation type, size and turnover to establish plausibility.

   While some data points that were thus removed would have skewed the results considerably, no more than 10 data points were removed for each of the variables where this was deemed necessary, therefore the impact on the overall analysis was minimal.

2. The same procedure was followed for composite variables that were calculated from the original variables in the data set, for example proportions of contracts etc. Values exceeding 100% (i.e. impossible and therefore inaccurate) were removed from the data set and were not included in analysis. No more than 10 data points were removed for each of those composite variables, therefore the impact on the overall analysis was minimal.

Composite variables were computed by calculating the composite per respondent and then computing the average across respondents. This meant that respondents were automatically excluded from analysis that only provided answers to one of the two variables in question, leading to a smaller sample size on those composite variables compared to the original variables.

Adjustments for tiered data analysis

Contractor respondents in the survey were asked to describe their position in the supply chain along the three tiers and could indicate all that applied to their business. As a result, some businesses chose more than one tier and 292 described themselves as tier 1, 268

as tier 2 and 85 described themselves as tier 3. As businesses could describe themselves as belonging to multiple tiers, these businesses were removed from all analysis of averages that split the data by tier. This left 171 businesses for tier 1, 136 businesses for tier 2 and 41 businesses for tier 3.

The businesses that were excluded from this particular analysis were fairly similar in relation to the proportion of business size they represent. The entire sample comprises 51% micro, 28% small, 15% medium, and 6% large businesses. Of those excluded, 42% are micro, 36% are small, 17% are medium, and 5% are large businesses. The impact of this is that a slightly higher proportion of small businesses were excluded, and a slightly lower proportion of micro businesses were excluded. However medium and large businesses are represented in a similar way in both the overall, as well as the reduced sample. Statistical testing was conducted where relevant to ascertain that results were still robust regardless of the reduced sample size where applicable.

All tiers are still represented in the overall statistics, as well as in all other analysis such as multiple-choice questions reported in this chapter.

Appendix 3: Average value of retentions held by tier and firm size

The survey of contractors asked respondents to indicate the value of retentions that is being held from them on current, as well as on completed contracts. Likewise, clients were asked what retention they hold from contractors on current, as well as on completed contracts.

Table 1 in Section 3.12 presents a number of key results, including the mean[232], the median[233], the standard deviation[234], as well as the 95% confidence interval around each mean[235].

This shows that that there is a very wide range of experiences among contractor respondents about the amount of retentions held. The range is due to the variation within the whole sample, as this encompasses contractors of all sizes and tiers. Therefore, the data used to produce the average retentions values presented in Table 1 was broken down and analysed further by size as well as by tier. The results from this are presented in this appendix..

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232 The mean represents the average value of all respondents of that particular group or sub-group.

233 The median represents the 50th percentile of the group, meaning that 50% of respondents fall below, as well as above that value

234 The standard deviation is a measure of the variation within a distribution of values; a quantity expressing by how much the values within a distribution differ from the mean of the distribution. Calculated by taking into account the difference of each value from the mean, as well as the number of values. If all values were the same, the standard deviation would be zero. The more different the values, the higher the standard deviation

235 The 95% confidence interval provides an estimate of where the mean is likely to fall across all businesses of that category across England. In cases where the confidence interval includes zero, the results from the survey are not sufficiently robust to be generalisable to the wider construction industry. Those cases are highlighted in italics and red font

Average values of retentions being held from contractors – by size and tier (current contracts)

Table 5: Average values of retentions being held from contractors on current contracts per contract by tier (contractor views)[236]

	Retention per current contract (overall)	Tier 1	Tier 2	Tier 3
Mean	£62,800	£150,500	£61,900	£6,500
Median	£5,000	£6,500	£7,800	£3,300
SD	£357,900	£702,400	£179,300	£8,600
95% CI	£16,100 - £109,500	*-£38,600 - £339,600*	£21,600 - £102,200	£2,600 - £10,300

Table 5 shows average values of retentions being held from contractors on current contracts per contract by tier (contractor views). This shows that descriptively tier 1 contractor have higher retentions held from them on average per contract compared to tier 2 and 3 contractors. However, tests show that this difference is not statistically significant[237].

The relatively broad 95% CI of tier 1 and 2 contractors indicates that even within these groups, retentions differ widely and as the 95% CI for tier 1 contractors includes zero, the average of that group is not a reliable estimate for tier 1 contractors across England.

236 SD = standard deviation, 95% CI = 95% confidence interval; tier 1 = 53 contractors, tier 2 = 76 contractors, tier 3 = 19 contractors

237 ANOVA: F < 1

Table 6: Average values of retentions being held from contractors on current contracts per contract by business size (contractor views)[238]

	Retention per current contract (overall)	Micro businesses	Small businesses	Medium businesses	Large businesses
Mean	£62,800	£20,800	£14,700	£60,600	£531,700
Median	£5,000	£2,800	£4,200	£25,000	£77,300
SD	£357,900	£90,400	£22,600	£108,500	£1,258,200
95% CI	£16,100 - £109,500	£1,100 - £40,500	£9,900 - £19,600	£29,200 - £91,900	*-£84,800 - £1,148,200*

Table 6 shows average values of retentions being held from contractors on current contracts per contract by business size (contractor views). This shows that descriptively average retentions held on current contracts differ by business size in the survey, particularly between smaller, medium and large contractors. However, a statistical test was conducted to compare the group averages and contractors from large businesses have significantly higher retentions values per contract compared to all other groups[239]. There are no significant differences between the other three groups, meaning that although their averages differ in the survey, they are not robust enough to generalise to construction businesses in general.

The 95% CI are a bit narrower compared to the ones for tiers, indicating that the groups are more homogenous, particularly the small contractors.

Average values of retentions being held from contractors – by business size and tier (completed contracts)

Contractors were also asked to estimate the value of retentions on **completed** contracts against which retentions are still held. On average, contractors have £222,000 held in retention from them on completed projects although this varies substantially between respondents, as is evidenced through a high standard deviation of £767,600[240]. The data, also, are highly skewed towards the top end, as only 17% of respondents have retentions held from them that are higher than the average. The median lies at £50,000, meaning that 50% of respondents are below, as well as above this value.[241]

238 SD = standard deviation, 95% CI = 95% confidence interval; micro businesses = 81 contractors, small businesses = 83 contractors, medium businesses = 46 contractors; large businesses = 16 contractors

239 ANOVA: F = 11.417, alpha = .000; Tukey HSD post-hoc test for pairwise comparisons

240 This only includes contractor respondents who have retentions held against them on completed contracts (n=205)

241 The 25th percentile lies at £10,000, meaning that 25% of respondents have retentions held from them equal to or below this and the 75th percentile lies at £179,000, meaning that a quarter of respondents experience retentions equal to or higher than this. The lowest retention held after

Again, this reveals substantial variation in the experience of contractors of having retentions held on completed contracts. As discussed in section 4.4.2, it is unclear from survey data why large amounts may still be being held in relation to completed contracts. Some instances may be because of defects, or disputes in connection with defects (i.e. justifiable reasons), but some may be for unjustifiable reasons.

Again, the total amount in retentions held on completed contracts were broken down by number of completed contracts (Table 1) to determine retention per completed contract. The 95% CI was much narrower at £8,200 - £36,800, indicating that this estimate is more reliable compared to the overall retentions on completed contracts. To analyse the retention per completed contract even further, results were split by tier (Table 7), as well as by business size (Table 8).

Table 7: Average values of retentions being held from contractors on completed contracts per contract by tier (contractor views)[242]

	Retention per completed contract	Tier 1	Tier 2	Tier 3
Mean	£22,500	£68,400	£13,300	£2,900
Median	£4,000	£7,100	£4,500	£2,400
SD	£104,300	£238,000	£35,800	£3,100
95% CI	£8,200 - £36,800	*-£10,500 - £147,200*	£5,300 - £21,300	£1,600 - £4,200

As with the value of retentions on current contracts, average retentions on completed contracts (per contract) differ between the three tiers in the survey, with higher retentions being held from tier 1 contractors compared to tier 2 and 3 contractors. However, tier 1 contractors have a high variation within their group, as can be seen by the very large 95% CI, meaning that results from tier 1 contractors are less reliable compared to the averages of tier 2 and 3 contractors. A statistical test was conducted to compare the averages across the tiers and the test was marginally significant overall[243] and indicated a marginally significant difference between tiers 2 and 3. Differences between the other tiers were not significant.

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completion is £50 for one contractor, whereas the highest experienced by a contractor of this survey is £7,000,000. The 95% CI for the average retention held on completed contracts against contractors across England is between £116,800 and £327,000.

242 SD = standard deviation, 95% CI = 95% confidence interval; tier 1 = 35 contractors, tier 2 = 77 contractors, tier 3 = 21 contractors

243 ANOVA: F = 2.776, alpha = .066

Table 8: Average values of retentions being held from contractors on completed contracts per contract by business size (contractor views)[244]

	Retention per completed contract	Micro businesses	Small businesses	Medium businesses	Large businesses
Mean	£22,500	£25,600	£11,200	£34,500	£31,000
Median	£4,000	£2,300	£4,000	£8,300	£21,500
SD	£104,300	£161,700	£22,200	£75,400	£31,200
95% CI	£16,100 - £109,500	*-£11,200 - £62,400*	£6,100 - £16,300	£12,200 - £56,800	£13,300 - £48,600

In contrast to results by tier, there were no clear differences in average retentions per completed contract between the four business sizes and a statistical test confirmed that the four groups were not significantly different from one another[245].

244 SD = standard deviation, 95% CI = 95% confidence interval; micro businesses = 74 contractors, small businesses = 73 contractors, medium businesses = 44 contractors; large businesses = 12 contractors

245 ANOVA: F<1

Retentions held on completed contracts by size and tier for the last 3 years only

Table 9: Average values of retentions being held from contractors on completed contracts over the last three years by tier (contractor views)[246]

	Retention on completed contracts[247] (last three years only)	Tier 1	Tier 2	Tier 3
Mean	£27,500	£39,600	£28,800	£21,500
Median	£19,000	£20,000	£20,000	£17,500
SD	£37,300	£69,800	£32,900	£21,500
95% CI	£21,200 - £33,900	£6,500 - £72,800	£20,100 - £37,500	£10,200 - £32,800

Contractors across the three tiers have fairly similar average retentions owed to them, with tier 1 businesses having the highest average retention owed and tier 3 businesses the lowest, although the three 95% CI are fairly broad particularly for tier 1 businesses. A statistical test was conducted and found no significant difference between the averages of the three tiers[248].

246 SD = standard deviation, 95% CI = 95% confidence interval; tier 1 = 17 contractors, tier 2 = 55 contractors, tier 3 = 14 contractors

247 This question was asked in relation to retentions due at the end of the defects liability period over the past three years that were outstanding today

248 ANOVA: $F < 1$

Table 10: Average values of retentions being held from contractors on completed contracts over the last three years by size (contractor views)[249]

	Retention on completed contracts[250] (last three years only)	Micro businesses	Small businesses	Medium businesses	Large businesses
Mean	£27,500	£14,200	£27,700	£46,500	£34,500
Median	£19,000	£8,000	£21,800	£22,000	£20,000
SD	£37,300	£14,600	£22,600	£63,600	£46,500
95% CI	£21,200 - £33,900	£10,000 - £18,400	£21,300 - £34,100	£23,400 - £69,700	£4,000 - £64,900

Contractors of medium sized businesses have higher retentions owed to them on average compared to particularly micro businesses and results from micro and small businesses seem particularly reliable as evidenced by their narrow 95% CI. The statistical test conducted to compare the averages of the four groups was significant[251]: micro businesses have significantly lower retentions held from them on completed contracts over the past three years on average compared to medium sized businesses and that difference can be seen as reliable; the other comparisons were not significant.

Summary of findings in relation to retentions held from contractors

In summary, results by size suggest some notable results particularly when comparing large businesses to the three smaller sub-groups. While large businesses do have significantly higher retentions held from them per current contract, they have similar amounts owing to them per completed contract, compared to the smaller businesses. Additionally, they do not seem to have as much retention owing to them proportionally over the past three years overall compared to contractors of the three other size categories when taking into account the much higher retentions usually held from them. Results by tier show few differences between the three tiers.

Results also suggest that businesses have a wide degree of different experiences when it comes to retentions being held from them, especially within large and tier 1 businesses. This means that even though results were broken down by tier and size, results for these

249 SD = standard deviation, 95% CI = 95% confidence interval; micro businesses = 47 contractors, small businesses = 48 contractors, medium businesses = 29 contractors; large businesses = 9 contractors

250 This question was asked in relation to retentions due at the end of the defects liability period over the past three years that were outstanding today

251 F = 5.036; alpha = .002

two sub-groups in particular are not very robust when taken on their own, although some significant differences were found despite such large variations.

Appendix 4: Use of retentions internationally

This research has also looked at mechanisms used in other countries to provide surety against defects, focusing on the practice of retentions but also upon any alternatives to retentions where used, and how these work in practice. The study did not attempt to restrict the selection of countries, and the key findings below refer to the examples identified within the literature.

USA

The retention percentage is typically higher in the USA than in England.[252] Subject to state statutory requirements, the average retention level is around 10%.[253] However the practice is slightly different, as it can be the case in American construction contracts for the contracting party to release 50% of the retention funds once the project is halfway to completion.[254] There is no evidence in the literature to explain how this is monitored or determined, and the complexities surrounding the mere release of the certificate of practical completion in England suggests that the determining of what is the half-way point of a project may be far from straightforward.

The literature shows that issues have been associated with the practice of holding retentions in the USA; notably that projects with retentions increase prices and reduce competition.[255]

Numerous steps have been taken by a range of states in the USA, to either limit or regulate the use of retentions. For example some states have abolished the use of retentions in public contracts.[256] Interest is required to be paid on funds retained in some states[257], and there is also evidence of ring-fencing the retention money, most commonly in an escrow account, to protect against insolvency.[258] Some American states specify that retention monies cannot be held longer than 12 months.[259]

In certain states, contractors who can provide a letter of credit do not have to have retentions held; this was first adopted in Oklahoma.[260] In Illinois, legislation has been passed to allow the retention to be held in a separate, ring-fenced account, where it not

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252 Bausman, D. C. (2004), Retainage Practice In The Construction Industry
253 American Institute of Architects (2007) Guide For Supplementary Conditions
254 ibid.
255 Mendes, D. (2003), “Retainage: An Idea Whose Time Has Come and Gone”, The NAWIC Image, Sept/Oct 2003
256 Raina, P., Tookey, J. (Accessed 09.11.15) The Perceptions Of Retention As Held By Clients Contractors And Sub-contractors
257 Bausman, D. C. (2004), Retainage Practice In The Construction Industry
258 Stockenberg, R. and Limbaugh, J. (2002), “Fifty-State Review of Retainage Laws”, The Construction Lawyer, v22, No. 2, Spring 2002
259 ibid.
260 Downs, P. (2002), Big Owners Liken Retainage Reform to Terrorism

only is protected in the event of upstream insolvencies, it can also accumulate interest which is accrued by the contractor.[261] Similar legislation was subsequently passed in New Mexico, where it is also held that the release of retentions should be done so upon completion of each 'separately ascertainable item of the schedule of values upon substantial completion of that portion of the work'.[262]

There is also evidence of greater use of bonds in the USA, compared with England. The Miller Act of 1932 states that all construction contracts issued by the Federal Government must be backed by performance and payment bonds, where the value exceeds $150,000 (according to Federation Acquisition Regulation (FAR) Part 28). The Miller Act also requires FAR to set up payment protection for contracts worth between $30,000 and $150,000, which can vary depending on the type of work.

There is also state-specific legislation ('Little Miller Acts') which requires performance bonds and payment bonds on state-funded projects. This has resulted in over 25,000 types of surety bonds in existence in the USA. The cost for the bond is determined by underwriters based on risk, and ranges from 1-15% of the bond value.

Canada

In Canada, the concept of a retention is referred to as a 'holdback'. Holdback is the same contractual mechanism as a retention, in that a proportion of payment is withheld from the contractor until the customer is satisfied with the completed works.[263] For example, the state of Ontario employs both a basic and a finishing holdback. The basic holdback is 10% of the total project cost, and is released after 45 days from substantial completion of a project. The finishing holdback is 10% of the value of work still left to be completed after substantial completion of the project, and is released only after 45 days from (total) completion of the project.

In Canada the New Builder's Lien Act (1997) introduced provisions regarding the use of retentions, which now have to be held in a separate account, which is jointly administered by client and contractor.[264]

New Zealand

In a report into the use of retentions in New Zealand, the Government states that "the use of retentions to fund working capital can mask and reward poor performance and poor financial management practices".[265]

In the wake of the Mainzeal collapse, one of the leading New Zealand property and construction companies who went into liquidation in 2013, due to sub-contractor's

261 Downs, P. (2002), Big Owners Liken Retainage Reform to Terrorism
262 ibid.
263 Business Dictionary (Accessed 21.12.15) What Is Holdback? Definition And Meaning
264 Niewenburg, R. A. (Accessed 21.12.15) Holdback Account
265 Legislative solutions to issues relating to the use of retentions in the construction market, Office of the Minister for Building and Construction, New Zealand Government

retentions being unsecured debts in Mainzeal's liquidation, amendments were seen as necessary to protect payment of retentions to sub-contractors and head contractors. Thus, on 11th March 2015, New Zealand's Minister for Building and Housing proposed the Construction Contracts Act Amendment Bill. The supplementary order paper proposed a new subpart 2A to the Construction Contracts Act 2002 (CCA), to provide that a party to a commercial construction contract that holds retention money must hold it on trust for the benefit of the party from whom it is deducted. Initial proposals only applied to retentions from sub-contractors; however, the amendments now apply to all retention monies, including those retained by the principal from the head contractor.[266]

The policy stance in New Zealand now states that, from 31 March 2017 retention money withheld under commercial construction contracts must be held on trust in the form of cash or other liquid assets readily converted into cash, unless a financial instrument is purchased. There are strict requirements on the financial instruments to ensure repayment of retention money.[267]

Australia

In 2014 the Government of New South Wales proposed a regulation to establish retention money trust accounts. The logic behind this proposal was to protect the sub-contractors' funds from being taken advantage of by main contractors who have previously used retentions as a form of working capital.[268] In New South Wales retention money held by main contractors for projects valued over $20m must now be held in a trust account with an authorised deposit taking institution (ADI). This is required under the amended Building and Construction Industry Security of Payment Regulation 2008. A head contractor must keep retention money separate in an account with an ADI. The name and description of the account must include the head contractor's name and the words "Trust Account".[269] As this change is relatively recent it is not yet clear how effectively it is working in practice.

China

In China, retentions are defined as an amount of money withheld (as specified in the contract for construction works between employers and contractors) from construction payments to ensure repair by contractors within the defects liability period of any defect in the construction works.[270] Defects are defined as 'situations and instances where the works quality deviates from or fails to comply with mandatory standards, design documents or the provisions of the construction contract'. The defects liability period, or

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267 https://www.building.govt.nz/projects-and-consents/why-contracts-are-valuable/construction-contracts-act-2002/

268 Holman Fenwick Willian (2014), Building & Construction Industry Security of Payment Regulation Amendment

269 http://www.fairtrading.nsw.gov.au/ftw/Tradespeople/Building_industry_essentials/Security_of_payment/Retention_money.page

270 Howlett, A. (2005) Provisional measures concerning retention money for construction works in China, Jones Day

warranty period as it is often known, ranges from 6 months to 24 months. This will be specified by the employer and contractor within the construction contract.[271]

Therefore retentions in China operate in a similar way to those in England. However unlike in England, and according to the terms and conditions of the Agricultural Bank of China, a retention money guarantee, which is also referred to as a retention money security, is issued upon the request of the contractor to the client. If payments due are not made, then the Agricultural Bank of China will refund the retention money as specified within the guarantee, thus acting as a surety. This amount is 5%-10% of the contract value.[272]

Qatar

Within Qatari construction contracts retentions are used in much the same way as in England; as a form of 'insurance policy' to mitigate against risk, and retention levels are set at 30% of the total construction sum.[273] This reflects the need to protect against the risk that comes from engaging foreign companies set up in Qatar with limited liability. Retentions are typically mirrored throughout the supply chain. Upon handover of the building projects it is standard practice in Qatar to release half of the retention money. The remaining sum is then released when the maintenance period has been signed off.[274]

Germany

In contrast with England, German construction projects are viewed as belonging to the contractor until full payment has been made by the client of the whole value of the contract. The total value of labour on uncompleted projects 'appears in the assets of the contractor'. This imitates German law which permits contractors to withhold possession of projects in the eventuality of payment default by the client. Any payments made prior to the project's completion are regarded as pre-payments, which can be compared to advanced trade credits.[275]

Conclusions

- The practice of holding retentions is used in a number of other countries for broadly the same purpose as that in England; as a form of 'insurance policy' to mitigate project risks such as failure to complete the works.

- Issues are associated with the practice that also have similarities with negative impacts reported by contractors surveyed for this research – for example late payment of retention monies, monies not ring-fenced and thus not protected in the event of insolvency, and playing a role in increasing project costs.

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271 ibid.
272 Agricultural Bank of China (Accessed 18.11.15) Bank Guarantees
273 Eversheds International (Accessed 18.11.15), Construction Week Qatar: R is for Retention
274 ibid.
275 Department of Business Innovation and Skills (2013), Trade Credit In UK Construction Industry Analysis

- On that basis, a number of other countries have taken, or are in the process of taking steps to change the way in which retentions are used, or in some cases, to restrict their use entirely. Whilst there is no one standard approach used across all nations, there is one clear common theme across a number of countries in the form of commitment to ring-fencing retention monies in some way – for example in trust or through another form of separate account.

Appendix 5: Lift and Escalator Industry Association's (LEIA) Contract Guarantee

This study reviewed alternatives to the practice of retention. One such alternative is the Lift and Escalator Industry Association's (LEIA's) guarantee which is used instead of cash retentions. This is briefly summarised below.

The LEIA contract guarantee is a two-part conditional guarantee that replaces the system of retention for work performed by members of the LEIA on modernisation work, repairs, maintenance or new installations in lift or escalator work performed in the UK and in the Isle of Man. It is underwritten by the EC Insurance Company Limited.

The guarantee was first introduced in 2000. Although an uphill struggle for acceptance to begin with, clients and contractors now *"just accept that there is zero cash retention in the lift sector".*[276]

There is an overarching contract value limit of £2m (as works in this sector rarely exceed this limit) and the guarantee is not applicable for contracts that are priced above this. The full scheme premium is calculated primarily based on projected turnover for new work on an annual basis. The full liability cover for the year is then split between members on a proportional basis depending on the volume of projected turnover. There is a cap in place which means the annual premium never exceeds £16,000 for any one member.

Each individual scheme member receives their own certificate, which guarantees that:

- promised work will be delivered;
- relevant standards will be complied with; and
- any money incurred under insurance will be repaid.

As many certificates as needed can be issued for members to give to their clients. Each individual has their own contract value limit set, depending on the value of their work.

The first part of the LEIA contract guarantee is applicable to the period before practical completion of a particular project. This protects against any additional cost that might be needed to complete the work promised by the member in case they are in breach of their contract and fail to complete their work (due to insolvency or failure to comply with relevant standards). This part is not applicable where the specified reason was caused by the

276 Primary evidence obtained through telephone depth interviews

client’s failure to pay the member for their work. Claims have to be made within 30 days of the breach or termination of the member’s employment under their contract.

The second part of the contract period is aimed at defects liability. It is intended to protect against the cost of rectifying the member’s work if it fails to comply with the industry standards defined in the guarantee. This guarantee period is 12 months from practical completion.

To be eligible to claim this, the client needs to have given the contracting member of the LEIA a reasonable opportunity to rectify any alleged failure by the member to comply with the Relevant Standards.

Where a valid claim exists the LEIA will usually settle it by paying for the incomplete or defective aspects of the installation to be completed or rectified at no further expense to the client. In over 15 years of operation, the scheme has had less than 10 claims. Often issues can be resolved prior to making actual claims. If a company is still in operation and has had a claim upheld against it, this company has to repay the costs into a central fund which is always in place available to pay for claims. This acts as a very strong impetus to ensure high quality work.

The LEIA acknowledges that the mechanics of their particular scheme may not be applicable in other sub-sectors – notably because of the relatively small number of members participating (118 at the time of writing) and the typical contract values, which make the annual premium highly attractive by comparison with the cumulative amount of cash retentions.

Appendix 6: Summaries of court cases pertaining specifically to retentions

As this study assessed the extent to which legal action has been taken in respect to the practice of retentions, desk-based research was undertaken to identify relevant court cases. Only a small number of cases appear to have gone to court – these are briefly summarised below.

It should be noted that the courts can enforce retention clauses by granting a mandatory injunction to compel the trust account to be set up where the employer/client fails or refuses to do so.

Wates Construction v Frantham Property [Court of Appeal][277]

The sub-clause requiring retention money to be set aside on request had been deleted from the standard form but the court decided that because the retention was held in a fiduciary capacity it should still order the retention to be set aside. The only way in which the interest of the beneficiaries in the retention fund could be safeguarded and preserved is if that fund is placed in a separate account and is not used for the purpose of the employer's business.

AMW Plumbing and Heating v Zoom Developments Ltd (2008)[278]

This case referred to three builds to complete plumbing work on. Only two were built therefore AMW Plumbing could not complete the plumbing work on the third build. Zoom held the retention due to practical completion not being met. Both AMW & Zoom agreed that they entered a 'construction contract' in terms of the Housing Grants, Construction & Regeneration Act 1996. The Court stated the work was done satisfactorily and employment was not suspended therefore the purpose of retention was misused and the reason for withholding retention money was unjustified. This case shows that retention money was held unfairly as practical completion was out of AMW Plumbing's hands.

277 Wates Construction (London) Ltd v Frantham Property (1991), 53, BLR 23 - Essays, UK. (November 2013). Ensuring Employers Retention Monies Are Protected Contract Law Essay. Retrieved from http://www.lawteacher.net/free-law-essays/contract-law/ensuring-employers-retention-monies-are-protected-contract-law-essay.php?cref=1

278 AMW Plumbing and Heating v Zoom Developments Ltd CA324/09 (2008), available from http://www.adjudication.co.uk/archive/view/case/1191/amw_plumbing_&_heating_ltd_v_zoom_developments_ltd_ca324/09, [Accessed on 8th March 2016]

Harrington v Tyroddy (2011)[279]

An adjudicator became involved in this case as there were no terms in the sub-contract for release of retention payment. The agreement was apparently an "on account" basis, therefore the amount of retention monies due was unknown as there had been no final account. The adjudicator was to decide whether the £66,628.50 including the retention monies was due to be paid to Tyroddy. The outcome was dependent on the adjudicator deciding within or out of his jurisdiction. "*By ruling on his jurisdiction in such a way that he has denied himself the opportunity to consider the merits of the exercise which Harrington had asked him to determine, he has committed a breach of natural justice*". This made his decision to pay Tyroddy unenforceable. "*The judge decided that there was nothing in the sub-contract, either express or implied, which made repayment of the retention conditional on a final accounting process being undertaken and completed*".

Wiltshier v Barnes (1998)[280]

This case suggested ambiguous wording in the contracts favours contractors over sub-contractors ("*The sub-contractor has a right to the gross sum and the paying contractor has a discretionary right, which he may or may not choose to exercise, to retain a part of that gross sum. The sum retained is the sub-contractor's money"*). The work was divided into three phases. The terms of payment provided for payment for each phase separately with retention money to be retained from each payment. Phase 1 was completed in July, 1994 and Phases 2 and 3 were completed on 2 August, 1995. The main contract was completed on 27 October, 1995. A certificate of making good of defects under the main contract was issued on 16 June, 1997. The first instalment of retention money has been paid and there is now no dispute about it. The second instalment, for phases 2 and 3 was not paid and was in dispute. The interpretation of the contract was unclear, therefore although the arbitrator agreed to release the payment, the award was refused.

Pitchmastic v Birse (2000)[281]

Pitchmastic was sub-contracted to do roofing works for Birse on a project for Tesco. The contract was for 13 weeks to complete on 9 September 1997 but it did not complete until 21 March 1998. The terms of the sub-contract stated that the retention money was to be released to the sub-contractor upon the issue of a certificate of making good of defects of the main contract. In this case, the making good of defects certificate was never issued. Pitchmastic could only obtain their retention money should they be able to show that Birse prevented the certificate from being issued. The court needed to decide whether Pitchmastic was entitled to the retention without the certificate and ruled against them, unless they could show that Birse had *"prevented the issue"* of the certificate. Pitchmastic claimed for £141,990.12, was refused the retention of £33,551.66, but it received £108,338.46 for other payments due.

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279 High Court of Justice Technology and Construction Court, PC Harrington Contractors Limited v Tyroddy Construction Limited (2011), EWHC 813 (TCC), Case number HT-11-81

280 Ballast Wiltshier Plc v Thomas Barnes & Sons [1998] ABC.L.R. 07/29

281 Pitchmastic v Birse No1 [2000], 19981 TCC 159Q

Appendix 7: Summaries of court cases involving retentions and insolvency

As this research has assessed linkages between the practice of retentions and insolvency, desk-based research examined the extent and type of court cases associated with this. Only a small number of cases appear to have been taken to court; brief summaries of each of these cases are included below.

Buoygues v Dahl-Jensen[282]

Buoygues (main contractor) sub-contracted Dahl-Jensen, but terminated the employment, as they were not satisfied with the work. Dahl-Jensen claimed for work carried out that was not in the sub-contract and also for breach of sub-contract.

Although the adjudicator agreed a pay out, it was dismissed due to the Insolvency Act and Buoygues' counter claim. Buoygues counter-claimed for refund of over-paid sub-contracting work, delays and costs of termination of Dahl-Jensen's contract. The adjudicator worked payment out including retentions (£208,000) which was not yet due.

Buoygues argued retentions were not suggested in the claim, therefore was out of jurisdiction. However, the judge reported that the mistake made was within jurisdiction regarding money owed and therefore did stand.

However, Dahl-Jensen was insolvent and in liquidation, which meant under the Insolvency Act that Buoygues would only be able to claim back a fraction of any money believed owed to him after paying out the agreed £208,000 to the liquidator. The appeal was therefore dismissed but cost £20,000.

Rayack v Lampeter[283]

In this case, the contractor applied to the court on the basis that the JCT contract imposed a clear obligation to set aside the retention into a separate account and the purpose of this was to protect the contractor in the event of the employer's insolvency in which the contractor would otherwise rank only as an unsecured creditor. The judge agreed, saying that the contractor would be protected if the employer carried out his obligation to set aside the retention as a separate trust fund. The judge said that, "*The contractor must be*

282 Bouygues (UK) Limited v Dahl-Jensen (UK) Limited, [2000] EWCA Civ 507, July 31, 2000

283 Rayack Construction v Lampeter Meat (1979) [12 BLR 30], UK Essays. November 2013. Ensuring Employers Retention Monies Are Protected Contract Law Essay. [online]. Available from: http://www.lawteacher.net/free-law-essays/contract-law/ensuring-employers-retention-monies-are-protected-contract-law-essay.php?cref=1 [Accessed 10th March 2016]

exposed to some degree of risk jeopardy if that is not done. It would in my judgment be wrong that he should continue to be exposed to this risk until the trial of the action". This was not a definitive, unequivocal statement that retention monies, if not set aside into a separate trust fund, would categorically fall into the assets of the insolvent employer. However this case is often taken as authority for the proposition that the retention monies must be set aside into a separate fund before the trust is effective.

PC Harrington Contractors Ltd v Systech International Ltd (2012)[284]

This case covered the issue of whether a contractor should still pay the fees to an adjudicator, if their decision was unenforceable. The judge ruled that the adjudicator was still entitled to his fees and Harrington appealed. The Court of Appeal overturned the High Court's ruling and decided that the adjudicator should not be entitled to fees. The Scheme for Construction Contracts Regulations 1998 and the adjudicator's terms of appointment do not suggest that the adjudicator needs to be paid in instalments. Additionally the regulations suggest that Parliament did not anticipate an adjudicator to be paid where his obligations were not met. In PC Harrington Contractors Ltd v Systech International (2012), "*The Court of Appeal suggested adjudicators could amend their standard terms to ensure they are paid whatever the quality of their decisions. It remains to be seen whether this will happen. It is questionable whether such a term would be enforceable under section 3 of the Unfair Contract Terms Act 1977, let alone commercially acceptable."*

284 Court of Appeal (Civil Division) on appeal from The High Court of Justice, Queen's Bench Division, Technology and Construction Court, Mr Justice Akenhead, 1qt31203/Qt31207, PC Harrington Contractors LTD v Systech International LTD (2012), EWCA Civ 1371, Case No: A1/2011/3025, Available from http://www.bailii.org/ew/cases/EWCA/Civ/2012/1371.html

Appendix 8: Questionnaires

Contractor survey

Part 1: About you and your organisation

1. Your name:

2. Your job title:

3. Organisation:

4. Telephone number:

5. Email address:

6. In which one of the following locations is your main/head office based:

	East of England
	East Midlands
	London
	North East England
	North West England
	South East England
	South West England
	West Midlands
	Yorkshire and the Humber
	Northern Ireland
	Scotland
	Wales

7. How many direct employees (i.e. excluding sub-contractors) does your business have?

	<10 (micro)
	10-49 (small)
	50-249 (medium)
	>250 (large)

8. Can you please tell us your approximate annual turnover? This information is confidential and will only be used to help us understand the value of retentions as a proportion of turnover in the sector as a whole.

9. Which of the following describe your position(s) in the supply chain? [select all that apply]:

	Tier 1 organisation: Designers and contractors that have a direct contract with the ultimate client;
	Tier 2 organisation: Designers, contractors and suppliers with a sub-contract with the Tier 1 contractor
	Tier 3 organisation: Designers, contractors and suppliers with a sub-contract with a Tier 2 sub-contractor
	Other

If Other – please specify: _____

10. Over the past three years, has your organisation [select all that apply]:

	Held a retention for work carried out by another organisation that is working under contract to you	Go to Q11
	Had a retention held for the work being undertaken under contract to another organisation higher up the supply chain (or the ultimate client)	Go to Q11
	Neither held a retention from a sub-contractor or had a retention held for work you undertook	Go to Q87

Part 2: Experience of retentions

11. Which of the following do you believe to be the intended purpose of retentions as part of construction contracts? [select all that apply]

	To act as a warranty against poor quality work
	To encourage sub-contractors to return to fix any defects
	To fund works required to fix defects in the event that the sub-contractor did not return.
	Other

If Other – please specify: _____

12. What is the total number of your current construction contracts?

13. What is the approximate combined value (£) of your current construction contracts?

14. Of your total current construction contracts, how many have retentions held against them i.e. a client or main contractor is holding a retention against you?

15. What is the estimated value of the full retentions (i.e. including the 50% up to practical completion as well as the 50% at the end of the defects liability period) (£) held against your current contracts?

16. Approximately what percentage of your current contracts with retentions are for work undertaken in a) the public sector and b) the private sector (if zero please enter '0')

Public sector	%
Private sector	%

17. Please provide the following information relating to retentions currently held from your organisation i.e. a client or main contractor is holding a retention against you (insert a whole number between 0 and 100)

Typical retention % (i.e. share of total contract value) held at any one time?	%
Minimum retention % held against current contracts	%
Maximum retention % held against current contracts	%

[If Q10 = option 1 ask Qs 18-26]
[If Q10 = option 2 go to Q27]

18. Does the percentage of the retention or the duration of the retention that you hold vary between construction contracts?

	Q18a. % of retention	Q18b. Duration of retention
Yes		
No		

19. [If Yes to Q18a] Can you please tell us how the amount of retention that you hold varies, depending on whether the work is: [select one only]

	Makes no difference to the amount of retention held	Amount of retention is **higher** than usual	Amount of retention is **lower** than usual
A one-off contract i.e. never contracted with the supplier before			
A long-term contract e.g. contract with supplier over a period of years, which may be via a framework			
A repeat contract i.e. have contracted with the supplier before			
A short-term contract i.e. less than 6 months			
Worth less than £100,000 to your organisation			
Worth between £100,001 and £250,000 to your organisation			
Worth over £250,000 to your organisation			

20. [If Yes to Q18b] Can you please tell us how the length of time for which you hold a retention varies, depending on whether the work is a: [select one only]

	Makes no difference to the amount of retention held	Amount of retention is **higher** than usual	Amount of retention is **lower** than usual
A one-off contract i.e. never contracted with the supplier before			
A long-term contract e.g. contract with supplier over a period of years, which may be via a framework			
A repeat contract i.e. have contracted with the supplier before			
A short-term contract i.e. less than 6 months			
Worth less than £100,000 to your organisation			
Worth between £100,001 and £250,000 to your organisation			
Worth over £250,000 to your organisation			

21. What is the total number of your current construction projects for which work is being carried out by other organisation(s) under sub-contract to your organisation?

22. What is the approximate combined total value (£) of work subcontracted to other organisations?

23. On how many of these contracts with other organisations do you hold retentions?

24. What is the estimated value of retentions (£) held on work subcontracted to other organisations?

25. [If Q10= option 1] How many additional contracts are there, that have now been "completed", for which your organisation sub-contracted some or all of the work, and against which you still hold retentions?

26. [If Q25>0] What is the estimated value of retentions (£) held on these "completed" sub-contracted projects?

27. [If Q10 = option 2] How many additional contracts have you undertaken, for which your organisation's contracted work has been "completed" as per the terms of your contract, against which retentions are still held?

28. [If Q27 >0] What is the estimated value of retentions (£) held on these "completed" contracts?

If Q10 = option 1 - ask Qs 29-34]
[If Q10 = option 2 - go to Q35]

29. Please provide the following information relating to the percentage of retentions you are holding back from staged payments for current contracts (insert a whole number between 0 and 100):

Typical retention % you hold back from staged payments on current contracts	%
Minimum retention % you hold back from staged payments on current contracts	%
Maximum retention % you hold from staged payments on current contracts	%

30. Please provide the following information relating to the percentage of retentions you have held back on completed contracts, i.e. you continue to hold the retention against the proportion of the work undertaken by a sub-contractor, even if the wider project is still on-going (insert a whole number between 0 and 100):

Typical retention % held back from staged payments on completed contracts	%
Minimum retention % held back from staged payments on completed contracts	%
Maximum retention % held back from staged payments on completed contracts	%

31. Which of the following factors influence the retention % of the overall contract value? [select all that apply]

	Type of project
	Length of project
	Project value (£)
	What the ultimate client specifies
	No variation – fixed percentage every time
	Other

If Other – please specify: _____

32. How is the retention percentage that you apply to sub-contracted work influenced by the retention % that the client or main contractor holds on you? Is this: [select one only, thinking about a typical project]

	Always mirrored, i.e. we set the same retention % as the client or main contractor holds on us
	Sometimes mirrored but can vary
	Always different, i.e. we typically hold a higher retention % than the client or main contractor holds on us
	Always different, we typically hold a lower retention % than the client or main contractor holds on us

33. What percentage of retention monies do you hold in each of the following (please ensure the total adds up to 100%):

In our main bank account	%
In a separate bank account	%
In trust	%
Other	%

If Other – please specify: _____

34. How does your organisation use retention monies? [select all that apply]

	As working capital for the project holding the retention, or other projects
	As part of general expenditure
	To support investment e.g. into training, equipment, facilities etc.
	Not used at all until it is paid
	Other

If Other – please specify: _____

35. If Q10 = option 2] Based on what is written in the contract, over how many MONTHS are retentions typically intended to be held after completion of your organisation's work i.e. the defects liability period? Please provide a whole number for the typical number of months:

36. If Q10 = option 2] In practice, over how many MONTHS would you say retentions are actually held after completion of your organisation's work i.e after the end of the defects liability period? Please provide a whole number for the typical number of months:

Part 3: Costs and time involved in payment practices generally and in relation to retentions

37. If Q10 = option 1] Approximately how much does it cost your organisation to set up and administer payments in general (i.e. not just retentions) for a typical contract, including staff costs, IT, external fees and training etc.

38. If Q10 = option 1] Approximately how much time, in hours, is spent in setting up and administering payments in general (i.e. not just retentions), for a typical contract?

Senior level time (Director or equivalent level and above)	
Other time	

39. If Q10 = option 1] Approximately how much does it cost your organisation to set up and administer a typical contract with a retention held against it, including staff costs, IT, external fees and training etc?

40. If Q10 = option 1] Approximately how much time, in hours, is spent in setting up and administering payments for a typical contract with a retention held against it?

Senior level time (Director or equivalent level and above)	
Other time	

Part 4: Payment of retentions

41. Over the past three years, approximately how many construction contracts has your organisation undertaken?

If Q10 = option 1 ask Qs 42-46
If Q10 = option 2 go to Q47

42. [If Q10 = option 1] Over the past three years, of your projects that had retentions, in approximately how many instances did you not pay the money back:

In full - after practical completion	
At all - after practical completion	
In full - after the end of the defects liability period	
At all - after the end of the defects liability period	

43. [If Q42a>0 or Q42b>0] What is the approximate value of retention monies your organisation has held over the past three years that was not paid back by the original intended return date - at the point of practical completion - and has still not been paid back today, for any reason?

44. [If Q42a>0 or Q42b>0] What are the reasons for not having paid back these retention monies at the point of practical completion? [select all that apply]

	Sub-contractor did not return to correct defects
	Dispute arose with sub-contractor relating to defects
	Sub-contractor did not ask for the money
	Sub-contractor initially asked for the money, but did not pursue it
	Other

If Other – please specify: _____

45. [If Q42c>0 or Q42d>0] What is the approximate value of retention monies your organisation has held over the past three years that was not paid back by the original intended return date – at the end of the defects liability period and has still not been paid back today, for any reason?

46. [If Q42c>0 or Q42d>0] What are the reasons for not having paid back these retention monies at the end of the defects liability period? [select all that apply]

	Sub-contractor did not return to correct defects
	Dispute arose with sub-contractor relating to defects
	Sub-contractor did not ask for the money
	Sub-contractor initially asked for the money, but did not pursue it
	Other

If Other – please specify: _____

47. [If Q10 = option 2] Over the past three years, and of your projects that had retentions, approximately how many times did you not receive the retention money back:

In full - after practical completion	
At all - after practical completion	
In full - after the end of the defects liability period	
At all - after the end of the defects liability period	

48. [If Q47a>0 or Q47b>0] What is the approximate value of retention monies held over the past three years that has not been paid back to you by the due date at practical completion AND remains outstanding today?

49. [If Q47a>0 or Q47b>0] What are the reasons for these outstanding retention monies not having been paid back to your organisation? [select all that apply]

	We did not return to correct defects
	Dispute arose relating to defects
	We did not ask for the money
	We initially asked for the money, but did not pursue it
	Other

If Other – please specify: _____

50. [If Q47c>0 or Q47d>0] What is the approximate value of retention monies held over the past three years that has not been paid back to you by the due date at the end of the defects liability period AND remains outstanding today?

51. [If Q47c>0 or Q47d>0] What are the reasons for these outstanding retention monies not having been paid back to your organisation? [select all that apply]

	We did not return to correct defects
	Dispute arose relating to defects
	We did not ask for the money
	We initially asked for the money, but did not pursue it
	Other

If Other – please specify: _____

52. [If Q10 = option 1] How are retention monies released? [select all that apply]

	Automated/digitised payment system
	Sub-contractor asks for it
	When the sub-contractor resolves their own defects
	When all defects across whole project are resolved

53. [If Q10 = option 2] Approximately how much time, in hours, is spent obtaining payments in general (i.e. not just retentions), for a typical contract? Please indicate the amount of time by level of seniority:

Senior level time (Director or equivalent level and above)	
Other time	

54. [If Q10 = option 2] Approximately how much time, in hours, is spent obtaining payment of retentions for a typical contract? Please indicate the amount of time by level of seniority:

Senior level time (Director or equivalent level and above)	
Other time	

Part 5: Use and impact of retentions

55. [If Q10 = option 2] To what extent does a retention affect the overall price you quote for your work as part of tenders? [select one only]

	Makes no difference to the amount we quote
	The amount we quote is increased by the amount of the retention
	The amount we quote is increased by more than the amount of the retention

56. [If Q55 = option 3] By what percentage over and above the amount of the retention do you typically increase the price for your quoted work? For example, if the retention is £10,000 and you charge an extra £15,000, the answer would be 50%. (Please therefore enter a number between 1 and 100)

%

57. [If Q10 = option 2] Over the past three years, approximately how many times have you declined work only because of issues associated with a retention? (If zero, please enter '0')

58. [If Q57>0] What is the estimated value (£) of this declined work over the past three years?

£

59. [If Q10 = option 2] For approximately how many contracts over the last three years have you needed to raise additional working capital because there is a retention attached?

60. [If Q59>0] What is the estimated cost (£) of this additional working capital over the past three years?

£

61. [If Q10 = option 1] Over the past three years approximately how many times have you needed to use retention money to:

Act as an incentive to get a sub-contractor to return to correct defects	
Be used towards funding the costs of correcting defects	
Protect against the risks of insolvency affecting other organisations	

62. [If Q61b>0] Using a scale of 1-10, where 1 is not at all, and 10 is completely, to what extent was the amount of the retention sufficient to cover the risk associated with the defects?

About legal action: we would like to understand the extent to which retentions are subject to legal action in the sector

63. [If Q10 = option 2] Over the past three years, approximately how many times have you gone to court/adjudication to obtain outstanding retention monies?

64. [If Q63>0] What is the approximate legal/adjudication costs (£) associated with these cases over the past three years?

£

About insolvency of other organisations: we would like to try and understand the extent and type of any links between insolvency and retentions

65. [If Q10 = option 2] Approximately how many times in the past three years have you experienced non-payment of retention monies owed to you due to insolvency of another organisation:

66. [If Q65>0] Approximately what value (£) of retention money did you not receive due to insolvency of another organisation in the past three years?

67. [If Q10 = option 1] Approximately how many times in the past three years have you not paid retention monies due to insolvency elsewhere in the supply chain?

68. [If Q67>0] Approximately what value (£) of retention money did you not pay due to insolvency elsewhere in the supply chain?

69. [If Q10 = option 1] Over the last three years, has your organisation experienced any of the following impacts as a result of holding retentions against work you subcontracted out to other organisations? [select all that apply]

	Greater investment into training and development
	Reduced investment into training and development
	Costs of construction works generally have increased
	Costs of construction works generally have decreased
	Business growth inhibited
	Business growth supported
	Increased cost of business overheads
	Reduced cost of business overheads
	Recruitment of more apprentices
	Recruitment of fewer apprentices
	Unable to recruit apprentices at all
	Greater investment into equipment and facilities
	Reduced investment into equipment and facilities
	Strengthened working relationships with clients
	Weakened working relationships with clients
	Strengthened working relationships with the supply chain
	Weakened working relationships with the supply chain
	Other

If Other – please specify: _____

70. [If Q10 = option 1] Please indicate which ONE of these impacts experienced by your organisation over the last three years, was the most significant? [select one only]

	Greater investment into training and development
	Reduced investment into training and development
	Costs of construction works generally have increased
	Costs of construction works generally have decreased
	Business growth inhibited
	Business growth supported
	Increased cost of business overheads
	Reduced cost of business overheads
	Recruitment of more apprentices
	Recruitment of fewer apprentices
	Unable to recruit apprentices at all
	Greater investment into equipment and facilities
	Reduced investment into equipment and facilities
	Strengthened working relationships with clients
	Weakened working relationships with clients
	Strengthened working relationships with the supply chain
	Weakened working relationships with the supply chain
	Other

71. [If Q10 = option 2] Over the last three years, has your organisation experienced any of the following impacts as a result of having retentions held against your contracts? [select all that apply]

	Greater investment into training and development
	Reduced investment into training and development
	Costs of construction works generally have increased
	Costs of construction works generally have decreased
	Business growth inhibited
	Business growth supported
	Increased cost of business overheads
	Reduced cost of business overheads
	Recruitment of more apprentices
	Recruitment of fewer apprentices
	Unable to recruit apprentices at all
	Greater investment into equipment and facilities
	Reduced investment into equipment and facilities
	Strengthened working relationships with clients
	Weakened working relationships with clients
	Strengthened working relationships with the supply chain
	Weakened working relationships with the supply chain
	Other

If Other – please specify: _____

72. [If Q10 = option 2] Please indicate which ONE of these impacts experienced by your organisation over the last three years, was the most significant? [select one only]

	Greater investment into training and development
	Reduced investment into training and development
	Costs of construction works generally have increased
	Costs of construction works generally have decreased
	Business growth inhibited
	Business growth supported
	Increased cost of business overheads
	Reduced cost of business overheads
	Recruitment of more apprentices
	Recruitment of fewer apprentices
	Unable to recruit apprentices at all
	Greater investment into equipment and facilities
	Reduced investment into equipment and facilities
	Strengthened working relationships with clients
	Weakened working relationships with clients
	Strengthened working relationships with the supply chain
	Weakened working relationships with the supply chain
	Other

73. [If Q10 = option 2] If, in the future, retentions were not held against your organisation, how would your organisation use this money? [select all that apply]

	Take on more work
	Employ more experienced staff
	Employ apprentices (i.e. do not currently employ apprentices)
	Employ more apprentices than we do currently
	Invest in new equipment and facilities
	Invest in improving existing equipment and facilities
	Other

If Other – please specify: _____

Part 6: Alternatives to retentions

74. [If Q10 = option 1] On approximately how many contracts have you used each of the following practices in addition to retentions over the past three years?

Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

75. [If Q10 = option 1] On approximately how many contracts have you used each of the following practices as alternatives to retentions over the past three years?

Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

76. [If Q10 = option 2] On approximately how many contracts have you been asked by a main contractor to use the following practices in addition to retentions over the past three years?

Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

77. [If Q10 = option 2] On approximately how many contracts have you been asked by a main contractor to use each of the following practices as alternatives to retentions over the past three years?

Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

78. Approximately what percentage of your current contracts for which these additional/alternative practices are in place, are for work undertaken in a) the public sector and b) the private sector (if zero please enter '0')

[Only appears if amount given for this option in Q74/75 or Q76/77] Project Bank Account

Public sector	%
Private sector	%

[Only appears if amount given for this option in Q74/75 or Q76/77] Retention bond

Public sector	%
Private sector	%

[Only appears if amount given for this option in Q74/75 or Q76/77] Performance bond

Public sector	%
Private sector	%

[Only appears if amount given for this option in Q74/75 or Q76/77] Escrow account

Public sector	%
Private sector	%

[Only appears if amount given for this option in Q74/75 or Q76/77] Parent company guarantee

Public sector	%
Private sector	%

[Only appears if amount given for this option in Q74/75 or Q76/77] Trust account

Public sector	%
Private sector	%

79. Approximately how much does it cost your organisation to set up and administer each of the additional/alternative practices that you selected above [only those selected will appear], thinking firstly just about one-off costs?

Project Bank Account	£
Retention bond	£
Performance bond	£
Escrow account	£
Parent company guarantee	£
Trust account	£

80. Approximately how much does it cost your organisation to set up and administer each of the additional/alternative practices that you selected above [only those selected will appear], thinking now about on-going costs, including staff costs, IT, external fees and training etc.?

Project Bank Account	£
Retention bond	£
Performance bond	£
Escrow account	£
Parent company guarantee	£
Trust account	£

81. Approximately what proportion of the costs associated with these additional/alternative practices to retentions are borne by your organisation, the sub-contractor, the client or another party? (Ensure percentages add up to 100%):

[Only appears if amount given for this option in Q79 OR Q80] Project Bank Account

Our organisation	%
Sub-contractor	%
Client	%
Other	%

If Other – please specify: _____

[Only appears if amount given for this option in Q79 OR Q80] Retention bond

Our organisation	%
Sub-contractor	%
Client	%
Other	%

If Other – please specify: _____

[Only appears if amount given for this option in Q79 OR Q80] Performance bond

Our organisation	%
Sub-contractor	%
Client	%
Other	%

If Other – please specify: _____

[Only appears if amount given for this option in Q79 OR Q80] Escrow account

Our organisation	%
Sub-contractor	%
Client	%
Other	%

If Other – please specify: _____

[Only appears if amount given for this option in Q79 OR Q80] Parent company guarantee

Our organisation	%
Sub-contractor	%
Client	%
Other	%

If Other – please specify: _____

[Only appears if amount given for this option in Q79 OR Q80] Trust account

Our organisation	%
Sub-contractor	%
Client	%
Other	%

If Other – please specify: _____

82. Using a scale of 1-10, where 1 is 'not at all effective', and 10 is 'extremely effective', please rate the effectiveness of each of the following in terms of acting as a surety against defects:

Retentions	
Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

83. Thinking specifically about the additional/alternative practices to retentions that you have experienced, how do these affect the overall price you quote for your work as part of tenders? [select one only]

	Makes no difference to the amount we quote	The amount we quote is higher than projects that do not have these	The amount we quote is lower than projects that do not have these
Project Bank Account			
Retention bond			
Performance bond			
Escrow account			
Parent company guarantee			
Trust account			

84. [If Q83 = option 2 – only those ticked will appear here] By what percentage over and above the amount of the retention do you typically increase the price for your quoted work? For example, if the retention is £10,000 and you charge an extra £15,000, the answer would be 50%. (Please therefore enter a number between 1 and 100)

Project Bank Account	%
Retention bond	%
Performance bond	%
Escrow account	%
Parent company guarantee	%
Trust account	%

85. On a scale from 1 'not at all' to 10 'completely', how suitable do you think each of these practices are, in respect of being rolled out to the construction sector as a whole?

Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

86. Do you have any final comments about the practice of retentions?

87. Please can you tell us your organisation's main activity (e.g. plastering)?

If Q9 = options 1 or 2, go to end – close
If Q9 = option 3 go to Q88

88. Please can you tell us why you do not either hold a retention on sub-contractors or have had a retention held against you?

Client survey

Part 1: About you and your organisation

1. Your name:

2. Your job title:

3. Organisation:

4. Telephone number:

5. Email address:

6. In which one of the following locations is your main/head office based:

	East of England
	East Midlands
	London
	North East England
	North West England
	South East England
	South West England
	West Midlands
	Yorkshire and the Humber
	Northern Ireland
	Scotland
	Wales

7. How many direct employees does your organisation have?

	<10 (micro)
	10-49 (small)
	50-249 (medium)
	>250 (large)

8. Which of the following is the main activity of your organisation? [select one only]

Central Government	
Non-Ministerial Department	
Local Authority	
Arms Length Management Organisation (ALMO)	
Commercial e.g. office development	
Private housebuilder	
Financial services	
Housing Association	
Healthcare	
Hospitality	
Manufacturing	
Rail	
Retail	
Sports and leisure	
University	
Utilities	
Other	

If Other – please specify: _____

9. In which sector do you predominantly operate?

Public sector	
Private sector	

10. Over the past three years, has your organisation: [select one only]

	Held a retention for construction work carried out by another organisation that is working under contract to you	Go to Q11
	Not held a retention for construction work carried out by another organisation that is working under contract to you	Go to Q56
	Had experience of holding retentions on some of your construction work, but not on others	Go to Q11

Part 2: Experience of retentions

11. Which of the following do you believe to be the intended purpose of retentions as part of construction contracts? [select all that apply]

	To act as a warranty against poor quality work
	To encourage contractors to return to fix any defects
	To fund works required to fix defects in the event that the contractor did not return
	Other

If Other – please specify: _____

12. What is the total number of your current construction contracts?

13. What is the approximate combined value (£) of your current construction contracts?

14. Of your total current construction contracts, how many have retentions held on them?

15. What is the estimated value of the full retentions (i.e. including the 50% up to practical completion as well as the 50% at the end of the defects liability period) (£) held on your current contracts?

16. Please provide the following information relating to the percentage of retentions you hold back from staged payments for current contracts (insert a whole number between 0 and 100):

Typical retention % you hold back from staged payments on current contracts	%
Minimum retention % you hold back from staged payments on current contracts	%
Maximum retention % you hold from staged payments on current contracts	%

17. Does the percentage of the retention or the duration of the retention vary between construction contracts, depending on the strength of your relationship with your contractor - for example whether it is a one-off contract or a repeat or long-term contract?

	Q17a. % of retention	Q17b. Duration of retention
Yes		
No		

18. [If Yes to Q17a] Can you please tell us how the amount of retention you hold varies, depending on whether the work is: [select one only]

	Makes no difference to the amount of retention held	Amount of retention is **higher** than usual	Amount of retention is **lower** than usual
A one-off contract i.e. never contracted before			
A long-term contract e.g. contract with contractor over a period of years, which may be via a framework			
A repeat contract i.e. have contracted with the organisation before			
A short-term contract i.e. less than 6 months			

19. [If Yes to Q17b] Can you please tell us how the length of time for which you hold a retention varies, depending on whether the work is: [select one only]

	Makes no difference to the length of time for which the retention held	Length of time for which retention is held is **longer** than usual	Length of time for which retention is held is **shorter** than usual
A one-off contract i.e. never contracted before			
A long-term contract e.g. contract over a period of years, which may be via a framework			
A repeat contract i.e. have contracted with before			
A short-term contract i.e. less than 6 months			

20. Which of the following factors influence the retention % of the overall contract value? [select all that apply]

	Type of project
	Length of project
	Project value (£)
	No variation – fixed percentage every time
	Other

If Other – please specify: _____

21. On how many of your completed construction sector contracts are you still holding retentions?

22. [If Q21>0] What is the estimated value of retentions (£) held on these completed contracts?

23. What percentage of retention monies do you hold in each of the following (please ensure the total adds up to 100%):

In our main bank account	%
In a separate bank account purely for the retention	%
In trust	%
Other	%

If Other – please specify: _____

24. How does your organisation use retention monies? [select all that apply]

	As working capital for the project holding the retention, or other projects
	As part of general expenditure
	To support investment e.g. into training, equipment, facilities etc.
	Not used at all until it is paid
	Other

If Other – please specify: _____

25. Based on what is written in the contract, over how many MONTHS are retentions typically intended to be held after completion of the contract i.e. the defects liability period? Please provide a whole number for the typical number of months:

26. In practice, over how many MONTHS would you say retentions are actually held after completion of the contract i.e after the end of the defects liability period? Please provide a whole number for the typical number of months:

Part 3: Costs and time involved in payment practices generally and in relation to retentions

27. Approximately how much does it cost your organisation to set up and administer payments in general (i.e. not just retentions) for a typical contract, including staff costs, IT, external fees and training etc.

28. Approximately how much time, in hours, is spent in setting up and administering payments in general (i.e. not just retentions), for a typical contract?

Senior level time (Director or equivalent level and above)	
Other time	

29. Approximately how much does it cost your organisation to set up and administer a typical contract with a retention held against it, including staff costs, IT, external fees and training etc.?

30. Approximately how much time, in hours, is spent in setting up and administering payments for a typical contract with a retention held against it?

Senior level time (Director or equivalent level and above)	
Other time	

Part 4: Payment of retentions

31. Over the past three years, approximately how many construction contracts has your organisation commissioned?

32. Over the past three years, of your construction sector projects that had retentions held, in approximately how many instances did you not pay the money back:

In full - after practical completion i.e. the 2.5% contractually owed at this stage	
At all - after practical completion i.e. the 2.5% contractually owed at this stage	
In full - after the end of the defects liability period	
At all - after the end of the defects liability period	

33. [If Q32a>0 or Q32b>0] What is the approximate value of retention monies your organisation has held over the past three years that was not paid back by the original intended return date - at the point of practical completion - and has still not been paid back today, for any reason?

34. [If Q32a>0 or Q32b>0] What are the reasons for not having paid back these retention monies at the point of practical completion? [select all that apply]

	Contractor did not return to correct defects
	Dispute arose with contractor relating to defects
	Contractor did not ask for the money
	Contractor initially asked for the money, but did not pursue it
	Other

If Other – please specify: _____

35. [If Q32c>0 or Q32d>0] What is the approximate value of retention monies your organisation has held over the past three years that was not paid back by the original intended return date – at the end of the defects liability period and has still not been paid back today, for any reason?

36. [If Q32c>0 or Q32d>0] What are the reasons for not having paid back these retention monies at the end of the defects liability period? [select all that apply]

	Contractor did not return to correct defects
	Dispute arose with contractor relating to defects
	Contractor did not ask for the money
	Contractor initially asked for the money, but did not pursue it
	Other

If Other – please specify: _____

37. How are retention monies released? [select all that apply]

	Automated/digitised payment system
	At the point when the contractor requests the retention money owed to them
	When the contractor resolves all defects
	Other

If Other – please specify: _____

38. Over the past three years approximately how many times have you needed to use retention money to [select all that apply]:

Act as an incentive to get a contractor to return to correct defects	
Be used towards funding the costs of correcting defects	
Protect against the risks of insolvency	

39. [If Q38b>0] Using a scale of 1-10, where 1 is not at all, and 10 is completely, to what extent was the amount of the retention sufficient to cover the risk associated with the defects?

40. To what extent do you think retentions affect the overall cost of construction projects, compared with those that do not have retentions? [select one only]

Make them a lot higher	
Make them a little higher	
Does not affect costs one way or the other	
Makes them a little lower	
Makes them a lot lower	

Part 5: Use and impact of retentions

41. Over the past three years, approximately how many times have you been involved in a court/adjudication in connection with the practice of retentions?

42. [If Q41>0] What is the approximate legal/adjudication costs (£) associated with these cases over the past three years?

£

43. Approximately how many times in the past three years have you not paid retention monies due to insolvency of your contractor(s)?

44. [If Q43>0] Approximately what value (£) of retention money did you not pay due to insolvency of your contractor(s) over the last three years?

£

45. [If Q43>0] Using a scale of 1-10, where 1 is not at all, and 10 is completely, to what extent was the amount of the retention you did not pay due to insolvency, sufficient to cover the costs of another contractor to complete the work?

46. [If Q43>0] Can you please estimate the approximate cost (£) of re-tendering to get other contractor(s) to undertake work not completed due to insolvency of your contractor(s) over the last three years?

Part 6: Alternatives to retentions

47. On approximately how many construction contracts have you used each of the following practices in addition to retentions over the past three years?

Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

48. On approximately how many construction contracts have you used each of the following practices as alternatives to retentions over the past three years?

Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

49. Approximately how much does it cost your organisation for each of the additional/alternative practices that you selected above, thinking firstly just about one-off costs?

Project Bank Account	£
Retention bond	£
Performance bond	£
Escrow account	£
Parent company guarantee	£
Trust account	£

50. Approximately how much does it cost your organisation to set up and administer each of the additional/alternative practices that you selected above thinking now about on-going costs, including staff costs, IT, external fees and training etc.?

Project Bank Account	£
Retention bond	£
Performance bond	£
Escrow account	£
Parent company guarantee	£
Trust account	£

51. Using a scale of 1-10, where 1 is 'not at all effective', and 10 is 'extremely effective', please rate the effectiveness of each of the following in terms of acting as a surety against defects:

Retentions	
Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

52. Thinking specifically about the additional/alternative practices to retentions that you have experienced, how do these affect the overall price you pay for your construction work compared to projects using retentions (only)?

	Makes no difference to the amount we pay	The amount we pay is **higher** than construction works that do not have these	The amount we pay is **lower** than construction works that do not have these
Project Bank Account			
Retention bond			
Performance bond			
Escrow account			
Parent company guarantee			
Trust account			

53. On a scale from 1 ‘not at all’ to 10 ‘completely’, how suitable do you think each of these practices are, in respect of being rolled out to the construction sector as a whole in order to act as a surety against defects (and protection against insolvency) as an alternative to retentions?

Project Bank Account	
Retention bond	
Performance bond	
Escrow account	
Parent company guarantee	
Trust account	

Part 7: Differences between projects with and without retentions

54. Are there any types of construction project for which your organisation would not typically hold a retention?

Yes		Go to Q55
No		Go to Q58

55. Please can you explain any differences you experience between projects that do have retentions, and those that do not?

Go to Q58

56. Has your organisation held retentions for construction contracts in the past i.e. more than three years ago?

Yes		Go to Q57
No		Thank and close

57. Please can you tell us why your organisation no longer holds retentions on construction contracts?

58. Do you have any final comments about the practice of retentions?

Appendix 9: Bibliography

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