Improving communication with directors of firms in liquidation

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About this report

This report was commissioned by ASIC and produced by Queensland Behavioural Economics Group (QuBE). It sets out the results of research altering letters sent to directors of firms in involuntary liquidation to encourage them to comply with their legal obligations to report information to their liquidators.
QuBE – ASIC report

Improving communication with directors of firms in liquidation

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Executive summary

This paper explores ways to increase compliance of directors of companies in liquidation with their legal obligations. Under sections 475, 530A, 530B, and 590 of the Corporations Act 2001, it is the legal duty of a company director to cooperate with a nominated liquidator if the company is in liquidation. In particular, directors have to:

- report on the affairs of their company,
- grant access to and hand over company books,
- provide information regarding company property, and
- assist the liquidator in all further matters.

However, in a number of cases, directors are uncooperative and fail to comply with their legal obligations. ASIC helps liquidators communicate with directors by reminding directors of their legal obligations and prosecuting offenders.

The present research tests the possible effectiveness of ‘nudges’ in which carefully designed and sometimes subtle changes in communication and regulatory design can lead to substantially improved public policy benefit.¹ These techniques are increasingly being used by regulatory and policy bodies, such as the Behavioural Insights Team which was founded in the Prime Minister’s Cabinet Office in the United Kingdom.

The research approach uses techniques developed in behavioural economics, which places participants in a simulated environment in an experimental laboratory. This allows researchers full control over the factors affecting decision makers in a given situation. The laboratory experiment is usually a preliminary stage to a field experiment.

The advantage of laboratory experiments is that, with all things being equal, they provide findings of individual economic agents, which are difficult to obtain using conventional econometric techniques.² Empirical data always include a large variety of environmental factors and a disentanglement of those is difficult if not impossible. In a laboratory experiment, these factors can be controlled allowing research to identify causal relationships.³

An underlying assumption is that the results generated in the artificial environment of laboratory experiments can be generalised. That is, they can be considered valid in the broader environment. Many field experiments have confirmed laboratory results.⁴ In addition, laboratory experiments provide a cheap and quick method to test hypotheses.

⁴ Charness & Kuhn
This report outlines a pilot laboratory experiment that shows potentially effective ways of increasing compliance by directors of companies in involuntary liquidation by:

- changing the form of communication that ASIC uses, and
- changing the way ASIC offers assistance to these directors to help them comply with their obligations.

**Figure 1: Design overview**

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**Research findings**

The study shows that targeted nudges may positively affect compliance by directors who would like to comply but lack business management skills. Suggestions are also provided about how to nudge directors who are intentionally non-compliant into compliance.

In the laboratory experiments, participants engaged in a business simulation in which the company they operated was eventually placed in liquidation. Participants were asked to hand over all books and records of their business, with the intention of identifying recoverable company assets for the benefit of the creditors.

Participants were advised of a 20% chance the regulator will audit them and check if they have reported the correct values. If incorrect values were reported they received a ‘game’ penalty of $5000 on top of paying the full recovery amount. In reality this equates to a subtraction of around $1.67 or about 10% of the average payment from the money they received to participate in the research.

The laboratory study revealed a number of insights relevant to the design of any future field experiment:

1. Simple interventions such as reversing the order of the information provided in the letter sent by ASIC to directors can dramatically affect the recollection of information. Order reversal allows individuals to absorb relevant information more effectively.5

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This result, combined with the behavioural economic insight that cognitive ease can increase compliance, suggests that testing this result in a randomized controlled trial (RCT) will allow better evaluation of its potential to increase effectiveness of the communication with directors of companies in liquidation.

2. Behaviour observed during a business simulation demonstrated that 20% of the experimental participants elected to receive legal or accounting assistance and were subsequently 30% more likely to comply during the compliance process.

This result indicates that offering directors opportunities to receive assistance may increase compliance by ensuring that directors are more engaged with obligations. Such evidence can be used to guide the design and testing of an engagement strategy in further research.

3. The laboratory experiment confirmed an effect reported by both liquidators and the regulator that non-compliant directors fall into two categories:
   a. directors struggling with compliance as they are overwhelmed by the process of liquidation and lacking the necessary skills to run the financial side of a company; and
   b. directors that intentionally went into liquidation to withhold assets for private use.

4. The first group appear to be more likely to react to ‘nudge-like’ treatments and should be the focus of most interventions. The ‘nudge’ approach from behavioural economics is based on the idea of ‘libertarian paternalism’, i.e. guiding a decision maker to make better decisions without explicitly limiting his or her choices.

Based on compliance evidence in regards to deterrence, we recommend letters include ambiguous fine amounts which may result in greater compliance by both groups.

Recommendations

We recommend ASIC conduct a randomized controlled trial (RCT) to test the effectiveness of the proposed letter changes. This involves sending alternative styles of letter to directors in order to see which is most effective in lifting compliance rates. This type of controlled trial has been used extensively in overseas jurisdictions to test the effectiveness of compliance letters sent by tax offices.

RCTs compare the effects of different treatments, in this case different letters are sent to separate groups of directors of companies in liquidation. The allocation of directors to one of the groups is random. Comparing the rate of compliance between groups allows for identification of the causal effect, i.e. which characteristic of an intervention causes a change in behaviour, without the participants (directors) being aware of the experiment.

Letter redesign and field testing

We have identified five potential 'channels for intervention'. In all cases the letters would ensure that the legal obligations of directors are fully explained. The first (reverse order) was tested during in the research. The other four approaches are suggested for an RCT. This is elaborated, below. The four treatment letters are:

1. **Reverse order**: as tested in the laboratory;
2. **Social norms**: informing directors that compliance rates are usually high, according to our research greater than 75%;
3. **Engagement**: allowing directors to make active decisions that involve them in the process;
4. **Moral suasion**: appealing to the good intentions most directors are likely to have;
5. **Ambiguous punishment**: leaving the potential for punishment ambiguous which, given ASIC's low levels of fine, is likely to be perceived as more threatening. This is considered to be a possible effective treatment for intentionally non-compliant directors.

Field experiment

Field experiments employ a real world setting to study the effectiveness of an intervention. In this case, we propose studying communication with non-compliant directors of companies that are in liquidation. A non-compliant director would be sent a letter, and would remain unaware that he or she is part of an experiment as participants are studied in their 'natural environment'.

We do not consider there to be adverse ethical considerations in this approach as all letters sent fully disclose all required legal information and so simply differ in style. This type of controlled trial has been used extensively in overseas jurisdictions to test the
Effectiveness of compliance letters sent by tax offices, for example in Switzerland, Britain and the Netherlands, as well as communication with unemployed in British employment centres.\textsuperscript{6}

The advantage of using field experiments is that it is possible to transform scientific findings into immediate practical knowledge.\textsuperscript{7} In Figure 2 we illustrate a randomized controlled trial or field experiment for the case of one control and two treatment groups.

The intervention would be assigned to directors/cases according to a random schedule which means that each director/case would have the same probability as any other of being assigned to either the intervention (treatments) or the control group which ensures that the differences in outcomes can be attributed to the intervention rather than to any characteristics of the particular cases or circumstances.

\textbf{Figure 2: Field experiment design}

The control group would receive the current unedited letter template. The treatment groups will receive one of the altered letters. Our research indicates that rolling out this experiment in the main offices of ASIC, i.e. Adelaide, Brisbane, Melbourne, Sydney, would allow us to send letters to about 750 directors of companies in liquidation. These are 50%...
of directors for which liquidators request support by ASIC, according to our interviews with ASIC staff and liquidators in Queensland. This would allow a randomized controlled trial with 3-4 letters.

Finally, given the evidence from the laboratory that those who request help are more likely to comply, ASIC may want to consider offering directors a better channel for communicating with ASIC. This is especially relevant for unintentionally non-compliant directors who find the liquidation process stressful and confusing.

**Measurement of compliance**

Each of the control and the treatment groups would be followed to assess their compliance. The number of cases that are passed from the prosecutor’s assistant to the prosecutor is one straightforward measure of compliance.

More variation and finer feedback on the level of compliance and effectiveness of the different measures, could be achieved by relying on the exact dates of entries made by liquidators on the ASIC database. These entries mark the dates a director gets back to the liquidator as well as when he/she provided the RATA or the books. During the liquidator interviews several liquidators indicated that they are willing to report to the researchers on other interactions with directors that may not be reported to ASIC, allowing for another dimension of compliance being captured in the field experiment.

In addition to the dates of full compliance, the rate of compliance would also be measured. The more detailed evidence on compliance includes whether and when directors have provided the report as to affairs (RATA), potentially with a statement of the liquidator assuring its completeness, the data and full access to the books and records, as well as the time it took to make contact. These measures will inform researchers and ASIC about the effectiveness of the different interventions.

**Letter design: Psychological barriers to overcome**

Designing the appropriate letter needs to take into consideration the psychology of the letter’s recipient. A number of psychological and cognitive processes can explain the channels through which communication may increase compliance.

In general, policy programs work better when designed to match people’s actual psychology. Changes in communication should attempt to overcome the following psychological barriers:

**Making decisions under stress**

Directors may have a (psychological) barrier to cooperating with the liquidators. We see this as a key ‘behavioural stress point’.

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Processing complex information

Behavioural economics/cognitive psychology literature has shown that people are not able to process complex information quickly and effortlessly. Thus, cognitive limitations or limited cognitive resources need to be taken into account. This problem is compounded by the emotionally draining nature of compulsory liquidations.

Making decisions in complex circumstances

There is strong evidence that when complexity of the task increases (which is the case for directors who go into liquidation), people are more likely to search for short-cuts by consulting trusted experts.9

Low trust relationships

Liquidators are not perceived as the preferred contact person/trusted third party (e.g., appointed by the creditors (QLD). There is therefore the risk that directors rely on financial or business advisors that may recommend being non-compliant, as the costs (punishment) of non-compliance are potentially lower than the consequences of cooperating with liquidators.

Poor financial literacy

A large proportion of liquidations are ordered against small businesses (65% less than 5 employees10). Many of those directors may not have sufficient financial literacy to handle the complex financial management task of liquidation. In addition, they may lack the motivation to handle financial or management decisions and tasks and this affects their behaviour during the liquidation process.

Recommended letter designs

The design of, and reasoning for, the different letters are described below.

Reverse order

Based on the results of the laboratory experiment, reordering the letter could be beneficial. Existing evidence from other environments indicates that rearranging the way things are displayed or shown can lead to substantial behavioural responses (Thaler and Sunstein 2008).

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**Reasons for this change**

Scarcity of attention and information overload has behavioural implications. Visual attention is more limited than we usually think.\(^{11}\) Therefore the accessibility of information becomes relevant.

For unintentionally non-compliant directors, liquidation is likely to be a stressful experience. As such, directors are experiencing cognitive overload.

To get more of the directors’ limited attention we recommend reversing the order of the letter, so that it first states the actions requested by ASIC and later states the rules and regulations as well as the consequences.

**Social norms/conditional cooperation/following the herd**

People are more willing to be compliant if others are also compliant (Frey and Torgler 2007). Thaler and Sunstein (2008) provide ample evidence that complying with a rule is easier to achieve if people perceive that compliance is the norm.

In this letter, it is possible to utilise the fact that a large number of directors of companies in liquidation actually comply with the law, taking both voluntary and involuntary liquidations into account. This letter would indicate that a large percentage of people are compliant (for example, ‘More than X% complies in full with their obligations’).

**Reasons for this change**

Any situation that is new to an individual requires the individual to make decisions for which no precedent exists. A natural psychological barrier leads people in such situations to procrastinate, taking a ‘wait and see’ approach.

By sharing information about the behaviour of others, this barrier can be broken as people tend to ‘follow the herd’, adopting what they perceive as normal behaviour. There is a significant body of evidence in the compliance literature that this approach increases the commitment to comply.\(^{12}\)

There are two key factors that trigger behaviour in line with the behaviour of others:\(^{13}\)

- Internal norm of wishing to conform (‘preferences to conform’).

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\(^{13}\) I Ayres, A Raseman, & A Shih, ‘Evidence from two large field experiments that peer comparison feedback can reduce residential energy use’, *Journal of Law, Economics, and Organization*, 29(5), 2013, pp. 992–1022.
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• Information function: The wisdom of the crowd acts as an ‘expert’ (‘If so many directors are fully compliant the uncertainty of the consequences when cooperating must not be that bad’).

Learning that others conform to certain rules also increases feelings of guilt when contemplating non-compliance. In a previous study, we have presented neuro-scientific evidence that guilt is positively correlated with compliance.\textsuperscript{14}

Engagement and helping hand

A letter could more strongly emphasise the help available from ASIC in filling out the requested information. There are various possibilities for the design, including:

• **Providing a check list containing the requested documents in the letter**, for example: completed Report as to Affairs with downloadable link, all books and records of the company, completed and signed Questionnaire for Directors, signed notification of your responsibilities as an officer of the company.

• **Ensuring any active assistance is visible** for example ‘If you have questions or if you need help please contact me on…’, ‘Call today so that we can sort things out’, ‘We will call you within the next two days’.

• **Offering choices**, for example, providing a tick a box function to indicate whether free government funded financial counselling is requested.\textsuperscript{15}

Reasons for this change

There is some evidence that giving people options increases compliance (independently from choice).\textsuperscript{16} Thus, giving a decision maker control leads to a greater compliance. This is also important as the process of liquidation can be experienced as a loss of control for directors. The existing literature has shown that small actions that increase the feeling of being in control.

In this letter directors would be encouraged to be involved, which is expected to build support for the process. Engagement has been found to enhance civic duty (Torgler 2007). It has also been found that the way people are treated by the authorities affects their evaluation of the process and their willingness to cooperate.\textsuperscript{17}

Moral suasion

This letter would be designed to appeal to a director's moral duty. The message in the letter would stress the importance of being compliant and introduce an element of (mutual)
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trust between the parties involved as well as emphasising the procedural fairness of the liquidation process. Thus, referring to terms associated with ‘trust’ and ‘moral duty’ may increase compliance.

**Reasons for this change**

Individuals like to see themselves as good people and members of society. When people see themselves as honest they also have the desire to be consistent with the image they have of themselves. Thus, it can be beneficial to remind people of their own desire and moral value to be honest.18

This communication promotes the ‘angel in the director’, indicating what appropriate behaviour in the specific situation looks like. Existing field experiment evidence regarding the influence of moral norms on compliance will provide guidance in the design of the letter.19

**Punishment uncertainty**

This letter would inform directors that severe financial punishment or even imprisonment can be expected when being non-compliant but without providing specific details. This is in contrast to the current form of the letter, which states the fine for non-compliance is $17,000.

**Reasons for this change**

There is experimental evidence that compliance is higher when there is punishment uncertainty.20 Punishments are usually experienced and expected to be larger than they are in reality. That is, an ambiguous penalty may be assumed to be more severe than is actually the case.

It is also known that losses (for example due to a punishment) are experienced more keenly than benefits. A non-specified penalty may therefore be seen as more expensive than a known and stated maximum punishment. Knowing that in the worst case a punishment is $17,000 may encourage directors into non-compliance as the loss is known and predictable. Leaving the level of punishment open may lead to a stronger deterrence mechanism that might enhance compliance.

An additional benefit of this letter is that while the previous letters are likely to affect the unintentionally non-compliant directors they are less likely to be able to influence those who are intentionally non-compliant. Punishment uncertainty may affect both groups.

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18 Behavioural Insights Team.
The regulatory issue

ASIC assists liquidators in securing compliance from directors of companies in liquidation. According to Australian insolvency statistics\(^{21}\) released in October 2013, ASIC registered 9,254 companies as insolvent in the financial year from July 2012 to June 2013 (for an overview see Table 1 in the Appendix A). In 65% of the cases the company had less than five employees. The most commonly nominated causes of failure were:

- poor strategic management of business (17%),
- inadequate cash flow or high cash use (17%),
- trading losses (13%),
- poor financial control including lack of records (12%),
- poor economic conditions (12%), and
- under capitalisation (8%).

Companies may face voluntary or involuntary liquidation. Directors of companies in voluntary liquidation choose a liquidator and generally comply with the liquidation process. Therefore, the focus of this study and the suggested interventions are directed at the second group of liquidations: those that are involuntary.

The process of involuntary liquidation begins when a creditor informs the court that the company is not able to settle outstanding debts. The local court approves the creditor’s request and issues an order for the company to be liquidated. A liquidator is then appointed by the court. In some states, particularly in Queensland, the main creditor nominates a liquidator. The appointment is a statutory obligation; the liquidator needs to consent unless a conflict of interest exists. An overview of the compliance process is provided in Figure 3.

The liquidator first draws his or her salary from the assets remaining. They may also receive additional compensation from the creditors in return for extra work such as tracking the director or assets. If the value of assets is below a certain value, the liquidator can apply to ASIC for limited funding. The frequency with which the liquidator approaches the director before contacting ASIC is at his or her own discretion. Effort and persistence therefore varies from case to case, depending on the perceived probability of success and remaining assets in the company.

In some cases the liquidator might be unsuccessful in their efforts to obtain books and records from the company, either due to outdated contact details or because the director is not willing to cooperate (see Figure 3). Our research focuses on this stage of the process,

namely when directors have not been compliant in the first round of interactions with a liquidator.

The figure below provides the 84 day time line of a typical liquidation process that proceeds to prosecution. Initially a liquidator sends a letter requesting information from a director (day 0). If the liquidator does not receive something they notify ASIC of non-compliance. After 2 days ASIC registers the request, and within five days ASIC attempts to contact the liquidator. By day 23 if there has still been no contact from the director they are re-contacted and if there is still no contact within 14 days (by day 57) ASIC decides whether to proceed with prosecution. A more detailed outline is provided in Appendix B.

**Figure 3: Typical timeline of the liquidation process**

In the research undertaken for this report, we take a closer look at the warning letter ASIC sends on day 7 to the director seeking they comply with their statutory obligations. The letter informs the director of the duty and obligations as a company director and the consequences of breaching these legal requirements.
Research methodology

The research consisted of two stages:

- interviews with liquidators, and
- a laboratory experiment.

The interviews with liquidators informed the analysis of the laboratory experiments, with initial findings outlined in this section.

**Interviews with liquidators**

Preliminary and exploratory findings were generated through interviews with three types of liquidators: a small, a medium, and a large firm (one of each was interviewed). The interviews complemented discussions with the Small Business, Compliance and Deterrence team of ASIC. The hypothesis emerging from the discussions was that non-compliant directors of companies in liquidation are typically of two types: unintentionally non-compliant directors and intentionally non-compliant directors.

**Unintentionally non-compliant directors**

Unintentionally non-compliant directors are characterised as individuals who started a business motivated by the delivery of a service or product, but may not have appropriate training or experience with running a business and may exhibit a poor grasp of financial literacy concepts.

A capable cook serves as a hypothetical example; he/she prefers working in the kitchen and may have difficulty carefully managing the finances of the business. Another example of this type of director is a sole trader who starts a company for tax reasons based on the advice of an accountant. Often, they are not made aware of their obligations for financial reporting.

The reasons for non-compliance can include being overwhelmed by the process of liquidation, and poorly equipped to comply with the procedure. This group struggles to follow the regulations. They have difficulties understanding the legal communication and documentation. They do not actively intend to be non-compliant, but may have difficulties in handling the process. This also makes them more vulnerable to following incorrect advice from ‘insolvency experts’.

**Intentionally non-compliant directors**

Intentionally non-compliant directors can be characterized as deliberately running a company into liquidation. This may be to achieve immediate private benefit, to move assets aside in order to start a new business, or for another reason. In these situations, liquidation is used to avoid paying back debt owed.
Liquidators are often in a good position to identify non-compliant directors that fall in this category. Collecting this information can help target the type of ‘nudge’ that is used if a director falls into this category.

In some of the liquidator interviews, the issue of increased penalties for non-compliance was raised. The implementation of such a policy is outside the scope of this study. However, we provide one suggested letter that incorporates compliance evidence on deterrence. This aims to explore whether communicating the cost of penalties in an ambiguous manner has an impact on compliance.

**Laboratory experiment**

Laboratory experiments are broadly used across the social sciences. They are a way of controlling key (economic) variables and keeping background conditions fixed so that the effect of manipulation can be isolated and checked. The method has achieved prominence as it is an important source of scientific data generated by controlled processes that can be replicated by other scientists.

Control over the decision environment makes it possible to test concrete hypotheses. The laboratory offers the opportunity to control decision environments in ways that are hard to duplicate in naturally occurring settings. Replication and control are key means of reducing errors in our knowledge of decision making processes. Laboratory experiments allow a better understanding of how people react to incentives, institutions, and information.

Participants are randomly assigned to groups with different treatment variations and decisions are rewarded. Incentivizing the choices in the experiment by allowing participants to retain their earnings (albeit small earnings) ensures the participants take their decisions seriously.

Laboratory experiments have helped to understand better the architecture of market designs and policy regulations. There are, of course, obvious limitations to laboratory studies. Whilst we have incentivized our experiments to present trade-offs akin to choices faced by actual decision makers, the scales are not comparable, and participants’ decisions in laboratory experiments are time-constrained. A further limitation lies in the sample under analysis: participants are usually university students.

The literature reports that these participant groups often show qualitatively similar behaviour to that of a more general population, but the strength of an effect is participant group and context specific. In general, there are very few reasons to believe that the

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cognitive processes of students are different from others. Thus, valuable insights can be obtained regarding the general decision process during laboratory experiments, and policy interventions can be designed based on these new insights.

We recommend policy prescriptions arising from the interventions are tested in their natural setting as a part of field experiment.

**Design**

The design of the experiment consists of two parts. The first part is a business simulation to obtain better understanding of how a participant would run a business and comply in a liquidation situation. Business simulations are commonly used in laboratory experiments because of their ability to increase participants' identification with the task; participants directly bear the financial consequences of their decisions.

In our experiment, participants play the role of a company director, who each year has to make managerial business decisions (a detailed description of the game can be found in the Appendix C). Regardless of the decisions the participant makes, the company is eventually forced into liquidation after failing to meet the interest payments. The strength of a participant's decisions influences how many 'years' (and therefore cycles of the game) a business remains viable. Liquidation can occur as early as a few years or after a number of decades.

At the point of liquidation, participants are informed the regulator requests all books and records. The participant also reports what they drew as a private salary. They are told that a salary of up to 30% is acceptable but anything above is not and will be recovered to compensate creditors. The participants have three minutes to fill out the form and submit it. Participants have a 20% chance of being audited and are aware of this audit probability. If they are audited and found to have reported wrong values, they are punished with a (relatively small) fine that reduces their private payoff.

**Sample Description**

The experiment was conducted in May and June 2014 using the experimental software CORAL (Schaffner 2013). We ran seven experimental sessions. Each session had up to 18 subjects and lasted approximately 45 minutes. Subjects were (mostly undergraduate) students from Queensland University of Technology, recruited via the ORSEE software. The sample comprises data from 107 students in total, but 5 subjects were excluded due to technical problems. The demographic structure is presented in the Appendix Table 2. Participants earned on average A$15.34, with a minimum of A$6 and a maximum of A$35.20.

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Findings

Business simulation
We first identified 'directors' with above and below average management skills before matching them with their compliance behaviour. In the simulation, directors that withdrew more than the total profit showed significantly lower levels of compliance later on.

The game ensured that all companies faced diminishing consumer demand after a certain time, at which point yearly profit became negative. To identify management skills, directors were tasked with operating the company for as long as possible by making profits.

Results
Overall, we observed substantial differences in the length of time that participants were able to make profits. The average duration was 21.5 years, the lowest being 2 years, and the maximum 30 years. An overview of the distribution is presented in the Appendix Figure 12. Variation was also found in the overall profit generated (see Appendix Figure 13). Profits can also be considered as a proxy measure for the participants’ management abilities.

To simulate the liquidation process we developed a compliance task. The compliance task registered how much the director drew as private salary from the yearly profit. We defined the appropriate compensation percentage as 30%. After bankruptcy, the director was asked to report their salary history, and also how much the salary deviated each year from that benchmark. The sum of these reported differences was taken away from the director’s private account in order to compensate the creditors.

The majority of participants were 'compliant'. In years with a positive profit the majority drew a profit while negative profit usually resulted in negative withdrawal. A tenth (9.3%) of the subjects drew more salary than the profit they earned over the entire business time. These subjects are the intentional non-compliant directors, while everyone else considered unintentionally non-compliant.

To examine whether external assistance would help respondents with honest reporting we offered respondents the possibility of paying an accountant to look into the history of past salaries when determining the salaries they would report. This simplified the task of calculating the difference between the drawn salary and the acceptable salary in each year, and therefore reduced the effort required for compliance.

The hypothetical 'use' of accountants was found to be effective in ensuring honest reporting. Around one quarter (23%) of directors were willing to pay the small fee to see the full history of their past drawn salaries. As can be seen in Figure 4, these directors were more likely to report the true salary values compared with the other directors (significant effect, p<0.01, z=5.931). The probability of non-compliance (deviation from the norm) was only 28% compared to 44% for the other directors.
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If we look at the size of the deviations (Figure 5) we observe dramatic differences between the two director types ($p<0.01$). For the directors who were willing to pay the accountant to retrieve the information, an average of only $154.12 was missing through the reporting process. In contrast, directors who did not ask for help reported on average an amount almost 20 times greater ($2998.46$).

This result suggests that directors who took the initiative to get professional help and were willing to pay for it, were also more likely and willing to be compliant and honest.

In addition, we also observe a substantially greater amount of missing money to be paid back to the creditors ($p<0.01$) for those directors who took more money out of the business than was generated in profits (Figure 5).

**Figure 4: Probability of non-compliance**

**Figure 5: Non-compliances due to deviations from the norm**
Memory task

In the second part of the experiment we examined the effect of changes to the standard warning letter from ASIC. We randomly allocated participants into either a control that received the standard letter or a treatment group (‘reverse’ treatment), see Appendix Figure 13. In the reverse treatment we restructured the letter in such a way that information on who the director needs to contact and the time frame within which contact must be made are both provided before informing them of the legal consequences of not doing so. Despite the structure the letters did not differ in length or wording. The original letter is provided in Appendix E while the newly structured letter is provided in Appendix F.

Participants were given five minutes to read the letter and memorize important facts. The design targeted the verbatim memory of the readers. It was important for this exercise that the reader remembered detailed information given in the letter, rather than just generally understanding the message of the letter (referred to as ‘memory for gist’).30

To test the difference in memory for the different structures we allowed participants a reading time of five minutes before asking for information using a multiple choice format.31 Students were asked to:

- recall the company’s name,
- the liquidators’ name,
- the time to act,
- the maximum penalty for non-compliance, and
- the name of the institution that had sent the letter.

Results

The results indicate that reversing the information leads to greater recall and that a simple restructuring of the letter can make it easier for the readers to absorb the important information. This small change in structure produced the following results:

- A significant increase of 12% in correct answers (see Figure 6, Wilcoxon rank-sum test: p=0.07, z=-1.81).
- A reduced reading time (198.42 seconds instead of 212.96) which indicates there was a more efficient layering of information, or that respondents felt more confident about the content, although the difference is not statistically significant (Wilcoxon rank-sum test: p=0.426, z=0.796).

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31 Two questions were in free form: 1) The name of the company in liquidation: a participant that is able to freely recall the name identified himself more with the company. 2) The time that is given to act: It is harder for a reader to freely remember that information.
• A better recall of the deadline for action, and of the name of the company in liquidation, but again the difference is not statistically significant (Wilcoxon rank-sum test: p=0.55, z=-0.60 and p=0.19, z=0.19).

• A better recall of the liquidator’s name (see Figure 6, Wilcoxon rank-sum test: p=0.12, z=-1.55).

**Figure 6: Correct answers in the memory task**

![Correct Answers](image)

![Liquidator](image)

**Implications of the laboratory experiments**

The following conclusions can be drawn from the laboratory experiments:

1) The business simulation provides evidence that there are different types of directors (intentional and non-intentional non-compliant directors). The non-representativeness of the participant population should be noted, but existing research shows that such results are likely to carry over at least qualitatively.

2) The results indicate the importance of involving directors in the liquidation process. Directors who took up the offer of paid help from a hypothetical accountant on average demonstrated higher compliance rates. This confirms findings from the literature on tax compliance indicating the importance of non-enforcement techniques to enhance compliance.32

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3) The memory task shows strong evidence for the potential effectiveness of restructuring the letter ASIC sends to directors of companies in liquidation. In particular those directors who are simply overwhelmed by the process (unintentionally non-compliant directors) might profit from a restructure of the letter, and it could positively influence compliance.

4) Laboratory experiments for the purpose of letter design have limited potential for extrapolation. However, the observed effects of such small changes suggest that there are benefits in looking more closely at additional letters in a field experiment.

APPENDIX A: Insolvencies in Australia

Table 1, below, shows the Australian insolvency statistics by region for July 1, 2012 to June 30, 2013. A total of 9,524 insolvencies occurred in this period, with the largest number (3,962) occurring in New South Wales.

Table 1: Insolvencies in Australia, 2012–2013

<table>
<thead>
<tr>
<th>Region</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Capital Territory</td>
<td>102</td>
</tr>
<tr>
<td>New South Wales</td>
<td>3,962</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>33</td>
</tr>
<tr>
<td>Queensland</td>
<td>2,046</td>
</tr>
<tr>
<td>South Australia</td>
<td>359</td>
</tr>
<tr>
<td>Tasmania</td>
<td>90</td>
</tr>
<tr>
<td>Victoria</td>
<td>2,129</td>
</tr>
<tr>
<td>Western Australia</td>
<td>532</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9,524</strong></td>
</tr>
</tbody>
</table>

Source: Australian insolvency statistics

APPENDIX B: Detailed timeline of liquidation process

To begin the liquidation process the liquidator sends out the first letter to the company director, reminding him of his legal obligations according to the Corporation Act, 2001, including the requirements to:

1) Submit a report as to the affairs of the company (Section 475)
2) Assist the liquidator (Section 530 A)
3) Hand over the books and records (Section 530 B)
4) Provide information to the liquidator (Section 690).

A breach of these requirements can be punished with a maximum penalty of up to $17,000 or imprisonment of 2 years. In practice the fine usually comes to around $3,500.

The letter informs the director of the contact details of the appointed liquidator, asks him for a meeting and requests the books and records of the company. Obtaining the financial records allows the liquidator to identify existing assets and start with the liquidation. For all forms of communication, diary notes of the communication are made.

If the liquidator is unsuccessful in obtaining the books and records, or at least is unable to contact the director, she submits a request for assistance to ASIC. To submit the request for assistance the liquidator needs to document her work and the effort already invested in trying to reach the director to inform him about the insolvency of his company and to obtain the necessary information to wind up the company.

ASIC registers the request from the liquidator into a database within 48 hours of receipt. The prosecution assistant performs an initial search to ascertain whether there are any other ASIC investigations and does a search to confirm the residential address of the defendant. In this context, ASIC has a broad remit and can obtain information from Centrelink, ATO, or can even ask for details regarding car registration from transport departments. A request can also be lodged to retrieve telephone contact details, criminal history, and travel movements. Furthermore, all previous correspondence between the liquidator and the director is gathered and reviewed.

Within 7 days of registering the complaint, ASIC sends the defendant a warning letter seeking compliance with statutory obligations within 14 days. The director has 7 days to contact the appointed liquidator as enforcement usually takes place after 14 days. The liquidator is informed that a warning letter has been issued, although the warning letter itself is not sent to the liquidator. The liquidator is expected to inform ASIC about any submission received by the director.
21 days after registration: Director of the company is contacted on the day to confirm the receipt of the warning letter and explore avenues for compliance. The legal proceedings (should there be further failure to meet statutory obligations) are communicated.

Within 56 days after registration of the complaint, the prosecutor needs to decide whether the director is to be prosecuted or not, based on the evidence and circumstances of the case.
APPENDIX C: Outline of laboratory experiment

The laboratory experiment followed a simplified version of Webley’s business simulation game. Students were informed they were to run a company producing a product for which they were the only seller on the market. In each round/year they had to decide how many units of the products they wanted to produce and what price these units would be offered on the market. For every year but the first, the market demand varied.

The subjects were also informed that the venture was financed with a loan with interest to be paid ‘annually’. To earn money in the experiment the participants could pay themselves an ‘annual salary’. The total salary set aside would be a payment for participating in the experiment.

The ‘company’ became bankrupt when the ‘director’ failed to maintain the loan’s interest payments and was no longer able to draw a salary. The demand for the product was set to decrease over time, so all participants eventually faced a crisis in which they were no longer able to sell their products.

Instructions

At the beginning of the experiment, participants received the following instructions:

‘For the following you will take part in a business simulation game. You are running a company that is producing a new product. You are the only seller on the market. You will have to decide how many units to produce each year and you will have to set the price you want to sell at. Your product has a shelf life of one year; you are not able to store unsold goods longer than this period. To start your venture you are given a loan of lab$ 100 000, for which you will have to pay interest of 5% each year. In order to set up your production you needed to spend lab$ 80 000; which leaves you with 20 000 in cash holdings to run operations.

Demand for your product can vary over time, but at this moment of time market research suggests an optimal production level of 100 units and a price of lab$ 200 per unit.

Your objective is to keep the business operating, while generating an income (salary) for yourself. This salary is equal to the amount you will get paid for your performance in the experiment (lab$ 3 000 = 1 AUD).

Furthermore you will be able to adjust your salary each year. However you must maintain interest payments each year. If your fail to do so your company goes bankrupt. At which stage you will be no longer able to draw a salary.’

Annual outcomes

Screenshots of experiment’s ‘production decisions’ and ‘annual outcomes’ are provided below. These screens were shown to all experiment participating in the experiment to help them decide what financial decisions to make for the following ‘year’. Each screen shot contained information on:

- current financial assets (debt and cash holdings);
- production last year (units produced, sold, and price previous year);
- expected costs (interest and production).

Experiment participants were then given a cost per unit from which they were required to input their choice of units to purchase and their sale price.

Figure 7: Screenshot of production decision, year 6

![Production decision - Year 6](image)

Participants were then shown the outcome of that year's production, shown in Figure 8, below. The screenshot included:

- financial assets (current debt, previous and current cash holdings);
- production this year (units produced, sold & their price);
- outcome (revenue, interest and production cost, from which 'gain' was calculated).
From the information provided in the outcome screen, participants were asked to make a decision about the income they would pay themselves. Eventually participants generated a loss (shown in ‘Year 24’ screenshot).

**Figure 8: Screenshot of outcome, year 6**

**Outcome - Year 6**

<table>
<thead>
<tr>
<th>Financial Assets:</th>
<th>Outcome:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your current debt: $100000</td>
<td>Revenue this year: $20000</td>
</tr>
<tr>
<td>Your previous cash holdings: $42800</td>
<td>Interest cost this year: $-5000</td>
</tr>
<tr>
<td>Your current cash holdings: $47800</td>
<td>Production cost this year: $-10000</td>
</tr>
<tr>
<td>Gain this year: $5000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production this year:</th>
<th>Personal income decision for this year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units produced this year: 100 units</td>
<td>Current level of wealth: $0</td>
</tr>
<tr>
<td>Units sold this year: 100 units</td>
<td>Your salary this year: $0</td>
</tr>
<tr>
<td>Price this year: $200</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 9: Screenshot of outcome, year 24**

**Outcome - Year 24**

<table>
<thead>
<tr>
<th>Financial Assets:</th>
<th>Outcome:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your current debt: $100000</td>
<td>Revenue this year: $0</td>
</tr>
<tr>
<td>Your previous cash holdings: $3600</td>
<td>Interest cost this year: $-5000</td>
</tr>
<tr>
<td>Your current cash holdings: $-5000</td>
<td>Production cost this year: $-3600</td>
</tr>
<tr>
<td>Loss this year: $-8600</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Production this year:</th>
<th>Personal income decision for this year:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units produced this year: 36 units</td>
<td>Current level of wealth: $0</td>
</tr>
<tr>
<td>Units sold this year: 0 units</td>
<td>Your salary this year: $0</td>
</tr>
<tr>
<td>Price this year: $200</td>
<td></td>
</tr>
</tbody>
</table>
Generating a loss

When participants business generated a loss, they received the following message:

‘Due to insufficient funds you have failed to make the interest payment last year. Therefore, your company has been forced into liquidation (bankruptcy). The regulator has asked you to hand over all books and records of your business, with the intention of identifying recoverable company assets for the benefit of the creditors. As such you have been asked to report the percentage profit you have chosen as your yearly salary (your private payoff). The liquidators have determined that a personal salary of 30% would be considered acceptable; if you report that your salary has exceeded the 30% benchmark the liquidators will recover the difference from your accounts to compensate creditors. For any salary reported lower than the 30% benchmark, no recovery actions will be taken.

However, there is a 20% chance that the regulator will audit your report and check if you have reported the correct values.

If you are audited and found to have reported the wrong values, you can expect a penalty of lab$ 5000 on top of paying the full recovery amount.

Following these guidelines, please report what amount the regulating institution needs to take out of your account and transfer to the creditors.

You are required to fill out the following document within the next 3 minutes.

You can either fill in the values from memory, or you pay your accountant to look them up for $300 each. In a second step you have to calculate and state the difference between your salary and the acceptable salary in each year. At the bottom of the table you report how much money needs to be transferred in consequence from your private account to the creditors.’
Improving communication with directors of firms in liquidation

Figure 10: Screenshot of business generating a loss

Your business generated a loss

Please complete the following form within 3 minutes.

You can either fill in the values from memory, or you pay your accountant to look them up for $300 each. In a second step you have to calculate and state the difference between your salary and the acceptable salary in each year.

Request for further information

Participants were offered the option to call an expert for assistance, this is shown in Figure 11, below. If they chose to do so they were given the option to:

- Receive an explanation of the consequences of not filling in the form;
- Have the correct differences calculated for them;
- Let the expert know they were working hard to complete the form in time.

Legal information provided to participants included:

- By the Corporations Act 2001 you are legally required to submit the information about the company's affairs to the regulator.
- There is a 20% chance that the regulator will audit your report and check if you have reported the correct values.
- If you are audited and found to have reported the wrong values, you can expect a penalty of lab$ 5000 on top of paying the full recovery amount.
Figure 11: Screenshot of selecting from three options

- Can you explain to me what the consequences of non filing in the form are?
- Can you help me calculate the correct differences?
- I just called to let you know that I am working hard to complete the form in time.
APPENDIX D: Results of laboratory experiment

A total of 109 students participated in the laboratory experiment. Over half (56%) were female; most (79%) were undergraduate students studying business / economics / finance / law (70%), see: Table 2.

Table 2: Demographics

<table>
<thead>
<tr>
<th>Demographics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>59</td>
<td>55.66</td>
</tr>
<tr>
<td>Business/Economics/Finance/Law</td>
<td>74</td>
<td>69.75</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>84</td>
<td>79.25</td>
</tr>
<tr>
<td>Born in Australia</td>
<td>30</td>
<td>29.41</td>
</tr>
</tbody>
</table>

Average sd

| Age       | 24.94 | 4 |

Figure 12, below, shows the average business years with positive profit (in light blue) in comparison to the total duration of operation (in dark blue).

Figure 12: Histogram of profits

The profits ranged from -$24,210 to maximum $96,366, Figure 13. The average sum of profit was $31,324, with a mean of just over $26,000 and a standard deviation of 23,481.
Figure 13: Box plot of profits
APPENDIX E: Memory task

Memory task: Original warning letter

Australian Security and Investment Commission
28th May 2014
Alwyn Russell
PHOENIX Pty Ltd
23 Cavendish Street
Coorparoo QLD 4151

Dear Alwyn Russell,

Our records show that you are the director of PHOENIX Pty Ltd (In Liquidation), which is in liquidation. As you know Richard Wykes from Wykes Corporate Advisory was appointed as the liquidator of PHOENIX Pty Ltd (In Liquidation).

ASIC draws your attention to sections 475, 530A, 530B and 590 of the Corporations Act 2001 (the Act).

Briefly, section 475 of the Act requires you to submit a report as to the affairs of PHOENIX Pty Ltd (In Liquidation) to the liquidator. The maximum penalty for a breach of section 475 of the Act is $4,250 or imprisonment for 6 months, or both.

Section 530A of the Act requires you to assist the liquidator. Schedule 3 provides a maximum penalty of $8,500 or imprisonment for 1 year, or both if you do not assist the liquidator, when requested.

Section 530B of the Act deals with the rights of a liquidator to obtain the company’s books from you. By hindering or obstructing the liquidator to obtain possession of the books you may be liable to a maximum penalty of $8,500 or imprisonment for 1 year, or both.

Section 590 of the Act prescribes specific offences by directors of companies in liquidation for not providing information to the Liquidator about company property. If you breach subsection 590(1) of the Act you may be liable to a maximum penalty of $17,000 or imprisonment for 2 years, or both.

The liquidator's contact details are:

Richard Wykes
Wykes Corporate Advisory
Level 5, 53 Clarence Street
Brisbane QLD 4000
Phone: 07 3841 6700

ASIC requires you to contact the liquidator within 7 days from the date of this letter.

ASIC may commence legal action against you, under any or all of the above sections, without further notice, if you fail to contact the liquidator within 7 days from the date of this letter, or if you fail to cooperate to the extent of your legal obligations as a director of a company in liquidation.

You may be liable to prosecution, under the above sections, if you fail to cooperate with the liquidator to the extent of your obligations as a director of a company in liquidation.

In addition, ASIC has the power to disqualify a person from managing a corporation under certain circumstances. The failure of a director of a company in liquidation to assist the company's liquidator may be taken into account by ASIC in deciding whether a person should be disqualified from managing a corporation.

Please find enclosed copies of ASIC's Information Sheets entitled “Providing assistance to external administrator: books, records & RATA” and “What books and records should my company keep?” which you may find useful.

If you feel you have legitimate reasons for failing to meet the requirements of the Act you should immediately raise these with the liquidator. If you have concerns about your legal obligations you should immediately consult your lawyer and inform the liquidator of your actions.

If you have any questions in relation to this letter please contact me on 07 3843 0257.

Yours sincerely,

James Hutchins
Small Business Compliance and Deterrence
Improving communication with directors of firms in liquidation

Memory task: Warning letter reverse

Australian Security and Investment Commission
28th May 2014
Alwyn Russell
PHOENIX Pty Ltd
23 Cavendish Street
Coorparoo QLD 4151

Dear Alwyn Russell,

Our records show that you are the director of PHOENIX Pty Ltd (In Liquidation), which is in liquidation. As you know Richard Wykes from Wykes Corporate Advisory was appointed as the liquidator of PHOENIX Pty Ltd (In Liquidation).

ASIC requires you to contact the liquidator within 7 days from the date of this letter.

The liquidator’s contact details are:

Richard Wykes
Wykes Corporate Advisory
Level 5, 53 Clarence Street
Brisbane QLD 4000
Phone: 07 3841 6700

ASIC may commence legal action against you, under any or all of the following sections, without further notice, if you fail to contact the liquidator within 7 days from the date of this letter, or if you fail to cooperate to the extent of your legal obligations as a director of a company in liquidation.

You may be liable to prosecution, under the following sections, if you fail to cooperate with the liquidator to the extent of your obligations as a director of a company in liquidation.

ASIC draws your attention to sections 475, 530A, 530B and 590 of the Corporations Act 2001 (the Act).

Briefly, section 475 of the Act requires you to submit a report as to the affairs of PHOENIX Pty Ltd (In Liquidation) to the liquidator. The maximum penalty for a breach of section 475 of the Act is $4,250 or imprisonment for 6 months, or both.

Section 530A of the Act requires you to assist the liquidator. Schedule 3 provides a maximum penalty of $8,500 or imprisonment for 1 year, or both if you do not assist the liquidator, when requested.

Section 530B of the Act deals with the rights of a liquidator to obtain the company’s books from you. By hindering or obstructing the liquidator to obtain possession of the books you may be liable to a maximum penalty of $8,500 or imprisonment for 1 year, or both.

Section 590 of the Act prescribes specific offences by directors of companies in liquidation for not providing information to the Liquidator about company property. If you breach subsection 590(1) of the Act you may be liable to a maximum penalty of $17,000 or imprisonment for 2 years, or both.

In addition, ASIC has the power to disqualify a person from managing a corporation under certain circumstances. The failure of a director of a company in liquidation to assist the company’s liquidator may be taken into account by ASIC in deciding whether a person should be disqualified from managing a corporation.

Please find enclosed copies of ASIC’s Information Sheets entitled “Providing assistance to external administrator: books, records & RATA” and “What books and records should my company keep?”, which you may find useful.

If you feel you have legitimate reasons for failing to meet the requirements of the Act you should immediately raise these with the liquidator. If you have concerns about your legal obligations you should immediately consult your lawyer and inform the liquidator of your actions.

If you have any questions in relation to this letter please contact me on 07 3843 0257.

Yours sincerely

James Hutchins
Small Business Compliance and Deterrence
Memory task: Questions

Please enter the name of the company in liquidation. -----------------

What is the name of the liquidator?

a. ‘Alwyn Russell’

b. ‘Richard Albarran’

c. ‘Gavin Charles Morton’

d. ‘Justin Smith’

e. ‘Richard Wykes’

Please enter how many days the director of the company has time to get in contact with the liquidator. -----------------

What is the maximum penalty you may be liable to for not providing information to the liquidator?

a. ‘$4,250 or imprisonment for 6 months’

b. ‘$8,500 or imprisonment for 1 year’

c. ‘$8,500 and imprisonment for 1 year’

d. ‘$17,000 and imprisonment for 2 years’

e. ‘$50,000 or imprisonment for 2 years’

By which institution was the letter sent?

a. ‘Australian Financial Security Authority’

b. ‘Australian Restructuring Insolvency and Turnaround Association’

c. ‘Australian Security and Investment Commission’

d. ‘Business Council for Australia’

e. ‘Insolvency Trustee Service Australia’