



**Ministry for Regulation
Te Manatū Waeture**

Problem definition and options identification

A Resource

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Contents

Introduction	4
Link with the good-law making requirements	5
Key steps in assessing problem definition	7
Step 1: Is there a market failure?	7
Step 2: Is the market failure significant?	10
Some key steps in options identification	11
Step 1: Are there private solutions that address the problem?	11
Step 2: Are there 'lighter-touch' government interventions?	12
Step 3: Is there a risk of government failure?	12
Summary	14

Introduction

The specific focus of this document is on problem definition and options identification: the identified problem that government intervention is seeking to address and the options available to address it. It applies an economics lens to these topics, to reflect the microeconomic foundations of good regulatory practice. This document should therefore be seen as complementary to other disciplines that may also be relevant to an assessment of problem definition and options identification.

Many problems that warrant government intervention can be characterised as market failures. Economists define a market as a collection of buyers and sellers that voluntarily interact to exchange a particular product. In many situations, markets deliver socially desirable outcomes. However, some circumstances cause "market failure", meaning the market does not maximise the collective welfare of society. Correcting a market failure, such as through government intervention, can therefore be in the public interest. It can also be in the public interest to correct previous interventions that, even if well-intentioned, decrease society's welfare (known as government failure). Agencies can follow the step-by-step guide in Figure 1 to assess market failure and government failure. This document will explain this process in more detail.

Beyond addressing market failures, regulation may also be used, for example, to establish or clarify property rights, to enforce common law rights, to set standard units of measurement, for equity or distributive reasons, or to achieve broader social objectives. Such objectives are not explored in this note but warrant consideration as part of broader analysis of government intervention.

Link with the good-law making requirements

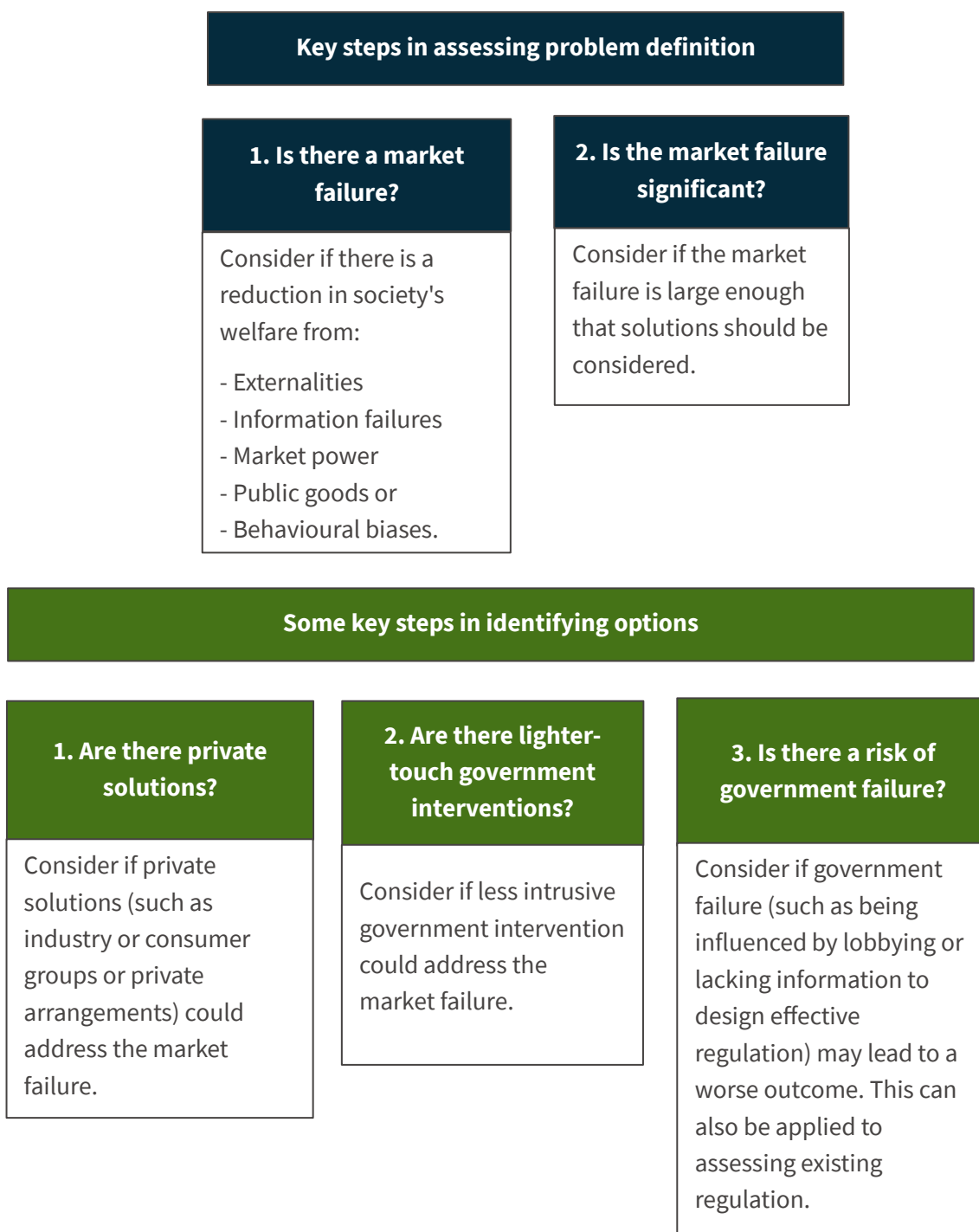
This document is intended to provide additional support to agencies to the Guidance issued under section 26 of the Regulatory Standards Act 2025 and Regulatory Analysis Summary guidance issues by the Ministry for Regulation. It will provide support in:

- Early policy development;
- When preparing a Regulatory Analysis Summary; and
- When preparing a Consistency Accountability Statement.

This document will be useful as agencies undertake impact analysis which is then summarised in a Regulatory Analysis Summary. In particular, it is relevant to *Section 1: Diagnosing the policy problem*, and *Section 2: Assessing options to address the policy problem* in the Regulatory Analysis Summary template.

The most relevant provisions of the Regulatory Standards Act for problem definition and options identification are those in 9(j), but other provisions may be relevant. Of particular relevance for problem definition are 9(j)(i) and 9(j)(iii), regarding the evaluation of the issue concerned and whether the public interest requires that the issue be addressed. For options identification, the related provisions are 9(j)(ii), regarding the effectiveness of existing legislation and common law, and 9(j)(iv), regarding options (including non-legislative options) to address the problem.

Figure 1: Step-by-step guide to assessing problem definition and options identification



Key steps in assessing problem definition

Step 1: Is there a market failure?

A market is a collection of buyers and sellers that voluntarily interact to exchange a particular product. Economists agree that, under certain conditions, markets are the most efficient means of allocating resources. 'Most efficient' here refers to economic efficiency, and means the collective welfare of society is maximised.¹ Put differently, markets yield outcomes that are in the public interest. The implication is that government intervention in markets should be approached with caution and supported by clear and robust evidence.

However, when certain conditions are not met, markets may not maximise welfare. The situations that cause these conditions not to be met are known as market failures. There can also be other factors that cause markets to not maximise welfare, such as government failure, which is discussed later.

Market failure: One of a set of situations that cause a market to result in economically inefficient outcomes, leading to a reduction in society's welfare.

Economists identify the following situations as market failures:

- **Externalities:** an externality is a cost or benefit resulting from one party's activities that falls on ('spills over' to) an uninvolved third party. This cost or benefit is not incorporated (or 'internalised') in the decision-making of the original party. As a result, activities with negative externalities (spillover costs) occur more than is socially optimal, and activities with positive externalities (spillover benefits) occur less than is socially optimal. Both lead to outcomes that fail to maximise social welfare. Examples of negative externalities include air and water pollution, noise pollution from neighbours, health effects of passive smoking, and traffic congestion. Examples of positive externalities include knowledge spillovers from research and development and herd immunity from vaccinations.
- **Information failures:** information failures occur when parties in a market do not have full or accurate information, including information asymmetries when one party to an exchange has better information than another. Information failures include asymmetries

¹ Welfare refers to more than just direct financial outcomes such as income. For example, it includes the value of health and safety, environmental quality, and cultural and social impacts.

in knowledge of product quality, an inability for a paying party to observe a paid party's performance ('principal-agent' problems), insufficient information to coordinate decision-making ('coordination failure'), and insufficient information to foresee all possible events (leading to 'incomplete contracts'). Information failures are also relevant to government intervention, in that government may not necessarily have sufficient information to design the optimal regulatory solution (discussed later in Step 5).

- **Market power:** market power is when a business can raise prices (or lower quality) above competitive levels without being constrained by competition from its rivals. Market power can lead to an inefficiently low quantity being traded in the market, where some units are not produced even though their value to consumers would be greater than the cost of producing them. It can also reduce the incentives on businesses to innovate and seek efficiency gains and quality improvements. All of this can result in a reduction in society's welfare.
- **Public goods:** economists use the term 'public good' to describe a good with two specific features: it is 'non-rival', meaning use of the good does not reduce its availability to others, and 'non-excludable', meaning consumers cannot be prevented from using it. Examples include public parks, street lighting, biosecurity, and national defence. These properties mean people have an incentive to free ride on the payments of others, such that the market will provide less of a public good than is socially optimal. This can provide a rationale for government provision of the good. Some goods, while not pure public goods because they are either rival or excludable, raise similar issues. An example is a common pool resource (such as fisheries) which is non-excludable but rival due to resource limits. This can lead to the 'tragedy of the commons', where the resource is over-used and can become depleted.
- **Behavioural biases:** the standard theory of economically efficient markets assumes people maximise their individual welfare, which is referred to as 'rational' behaviour. However, economic research shows people are often subject to behavioural biases, where they do not behave fully rationally. Examples include where people overvalue the present relative to the future, such as by not saving enough or harming their future health, where their decision-making is simplified in the face of complexity, or where they disproportionately choose the status quo or default option. In this way, people impose costs on themselves (known as 'internalities') that lower society's welfare. Behavioural biases are also relevant to government intervention, where cognitive biases of politicians or civil servants may influence the design of regulation (discussed later in Step 5).

Having discussed what *is* a market failure, it is worth also considering what is *not* a market failure. Even if market outcomes are 'wrong' according to a particular person's preferences or values, this does not necessarily indicate a market failure. For example, some people claim the provision of intensified housing such as 'shoe-box' apartments is evidence of a market failure. In itself, it is not. Although people who make such claims may not want to live in such apartments,

it is likely many other people would choose less space to pay a lower price. If they did not, it would not be worthwhile for developers to build such apartments.

High prices do not necessarily indicate a market failure. Some goods and services are expensive to produce. If firms could not charge high prices for them, they would not supply them at all. Price spikes in response to natural disasters or supply shocks are also not evidence of a market failure. If anything, they suggest the market is working well, because the high prices ration demand when supplies are limited (albeit government may intervene for other reasons in the case of natural disasters).

The first step in evaluating problem definition is to identify any market failures. That is, what (if any) of the above situations are likely to be occurring in any market(s) of relevance to the policy problem. Market failures can occur in existing markets, either because the market is unregulated or because current regulation does not address the market failure. If new regulation is being proposed, consideration should be given to whether it is addressing a genuine market failure. If regulation is being changed or removed, consideration should be given to what market failure it was intended to address (if any).

There should be good evidence for any identified market failure. Evidence of existing market failures may come from views expressed by market participants or empirical data. Examples of evidence include environmental damage (arising from externalities), consumer concerns (arising from information failures), and evidence of competition problems (reflecting market power). Market failures observed in similar markets overseas can also provide evidence. Empirical evidence can be supported by theoretical arguments, drawing on relevant economics literature.

The concept of risk, such as health and safety risk, often arises when considering market failure. Risk arises in a number of ways, and society uses various approaches to manage it. Regulation is just one approach. Risk can often be framed as a market failure, such as in terms of information failures (people have inadequate information to assess risks), externalities (the broader social costs of harm may not be fully borne by an individual undertaking a risky action), market power (e.g., risks may arise because of a power imbalance between employer and employee), public goods (e.g., health risks may not be fully reflected in market transactions because health care has public good characteristics), or behavioural biases (through biases in risk beliefs). More generally, risk may arise because of 'missing markets', where no such market mechanism exists to adequately allow market participants to appropriately manage risk.

It is not always obvious whether a problem in a market is evidence of a market failure, the unintentional result of regulation, or both. For example, market power may be caused by regulation that makes it hard for new businesses to enter and win market share. It is therefore important to identify the root cause of a problem, and the role existing regulation might play in creating it. The latter point is discussed in more detail in Step 5.

Step 2: Is the market failure significant?

Market failures are ubiquitous. For example, externalities are everywhere, from the noise fellow passengers make on public transport, to the close proximity of residential neighbours, all of which can impose spillover costs on third parties. Information problems are also plentiful. For instance, consumers can never truly have perfect information on a product's pros and cons prior to purchase. And nearly all firms have some degree of market power and ability to influence prices.

However, many market failures are too immaterial to warrant a corrective response. **Step 2 therefore involves considering the materiality of any potential market failure: is the effect on the welfare of society large enough that solutions should be considered?**

An assessment of materiality will be somewhat subjective. However, rigour and transparency can be increased by drawing on the information used in Step 1, such as evidence from market participants, empirical data, overseas markets, or economics literature.

Some key steps in options identification

Note the following steps are not a comprehensive guide to options identification. Rather they are a series of important questions which should be asked instead of proceeding directly to considering regulatory options.

Step 1: Are there private solutions that address the problem?

Where significant market failures exist, regulation is not the only solution. An option to address the problem may be to do nothing, and allow private solutions, including those using private contracts and established common law, to emerge to help guide the market back towards the efficient outcome. For example, warranties, online reviews, and consumer groups can lessen asymmetric information about product quality. Businesses can invest in developing brands, nationwide chains, or franchising to signal quality and reduce the effects of information failures. Private negotiations between affected individuals can address externality problems. Industry groups can help resolve market failures through self-regulatory mechanisms, such as voluntary certification and industry standards to indicate business quality. Market failures can also be addressed through social norms or may naturally resolve over time through the competitive interaction of industry players.

It is important to evaluate the option of doing nothing, and carefully consider what might happen if the private market is left to resolve the situation on its own without government intervention. Private solutions can be preferable to regulation, because they avoid the compliance costs and distortions to incentives that arise from regulation. They also avoid the costs of establishing and monitoring a regulatory regime, and can be more flexible and adaptable to changing circumstances.

As part of the options identification, Step 1 therefore involves assessing whether private solutions could address the market failure absent government intervention. This involves gathering evidence on whether any existing market solutions address the problem, or could better address it if improved. Any private solutions that have emerged in similar markets overseas should be considered, as should potential solutions identified in academic research. Sometimes regulation ‘crowds out’ private solutions, preventing them developing, so the assessment should look for any evidence that existing regulation has done this. It is also important to consider if regulation can facilitate private solutions, such as through clarifying property rights or lowering transaction costs to better enable market participants to resolve externality or information problems.

Step 2: Are there ‘lighter-touch’ government interventions?

Government interventions to address market failures range on a spectrum, from lighter-touch (more indirect) solutions that can impose less cost on regulated parties and allow greater flexibility in their responses, through to more intrusive, direct requirements. Examples of lighter-touch interventions can include taxes or subsidies, tradable rights schemes, mechanisms to enable the provision of information, and tools to alter the attractiveness of people’s choices to address behavioural biases (known as ‘nudges’). Guidance is also an alternative to more prescriptive regulatory requirements. Compared with indirect regulatory approaches such as price signals, direct mandates can provide weaker incentives for behavioural change, and be a less cost-effective way, or simply a less effective way, of addressing market failure.

As part of the options identification, Step 2 involves considering if a lighter-touch regulatory solution could address the market failure. This recognises that regulation imposes costs and should be proportionate to the problem it addresses. Evidence from step 2 of problem definition on the materiality of the market failure problem can inform this analysis. Academic research and overseas practices can provide insight into potential lighter-touch regulatory tools.

Step 3: Is there a risk of government failure?

While governments are generally well-intentioned in addressing market failures to increase society’s welfare, their incentives and information mean they can fail to achieve this or create unintended consequences. As a result, government intervention may inadvertently create a larger reduction in society’s welfare than results from the market failure. It is important to avoid the ‘nirvana fallacy’, when an imperfect market outcome is compared with a nirvana in which regulation perfectly addresses the market failures.

Like market participants, elected politicians and government bureaucrats are humans with their own incentives. They may be seeking re-election or to expand an agency’s influence or budget, or being influenced by lobbying to put the interests of specific parties above those of society (that is, they may be subject to ‘regulatory capture’). Public pressure to be seen to be addressing an issue or agency incentives to expand their role can create a risk of ‘regulatory creep’, where the scope and depth of regulation grow over time. Furthermore, governments may not have sufficient information to determine the optimal response to a market failure, because that information is dispersed across society and constantly changing.

All these effects are examples of government failure, which skew outcomes away from those that are welfare-maximising.

Any proposed regulation should also be assessed as to whether it creates a risk of government failure.

Accordingly, step 3 involves assessing the evidence that proposed regulation could lead to lower welfare for society due to government failure. Evidence can come from academic research assessing if the regulation has a high risk of government failure. Another consideration

is whether well-organised interest groups exist that can (or do) effectively lobby to alter regulation. The extent of information government officials require to design effective regulation also matters. If information requirements are high relative to information availability, government failure is more likely. As with market failure, the size of the problem matters. A government failure that is immaterial or unlikely is of low concern.

Assessing whether there is evidence of government failure in existing regulation

Another approach – which is more relevant to the problem definition stage – is to assess whether existing regulation is leading to a welfare loss from government failure, and therefore whether changes to regulation may be relevant. This can involve considering whether problems are arising because of the behaviour of those in government (as opposed to market participants). This would also involve assessing the evidence as to whether existing regulation is leading to lower welfare for society due to government failure, drawing from academic research.

Summary

The above steps use the concepts of market failure and government failure to assist in problem definition and options identification. The approach can be summarised as first asking ‘is there a material problem that cannot be solved by market behaviour?’, then considering the appropriate solution to address that problem. Applying this approach gives a rigorous, evidence-based approach to analysing proposed new regulation, which mitigates the risk of poor regulation.



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