

An analytical guide to support
Results Based Financing –
summary and highlights

**Prepared for ESMAP Knowledge
Exchange Forum with bilateral
agencies, Paris**

27th November 2012

The Guide is structured into four parts

The first part sets out the challenge and our approach; parts 2 to 4 give more detailed guidance

1. Introduction and outline of our approach

2. When are RBFs an option to be considered?
3. When are RBFs preferable to conventional approaches?
4. How might an RBF be designed?

The Guide seeks to fill a gap in the theoretical literature about RBF approaches

While focussing on energy access and energy efficiency, it may also be useful for other sectors

fundamental idea of RBF is making payments conditional rather than upfront

- the results upon which the payments depend (the ‘trigger’) are pre-agreed
- the results are verified by an independent party

increasingly widespread in healthcare, education and infrastructure

increasing interest in RBFs in energy, particularly (low-carbon) energy access and energy efficiency

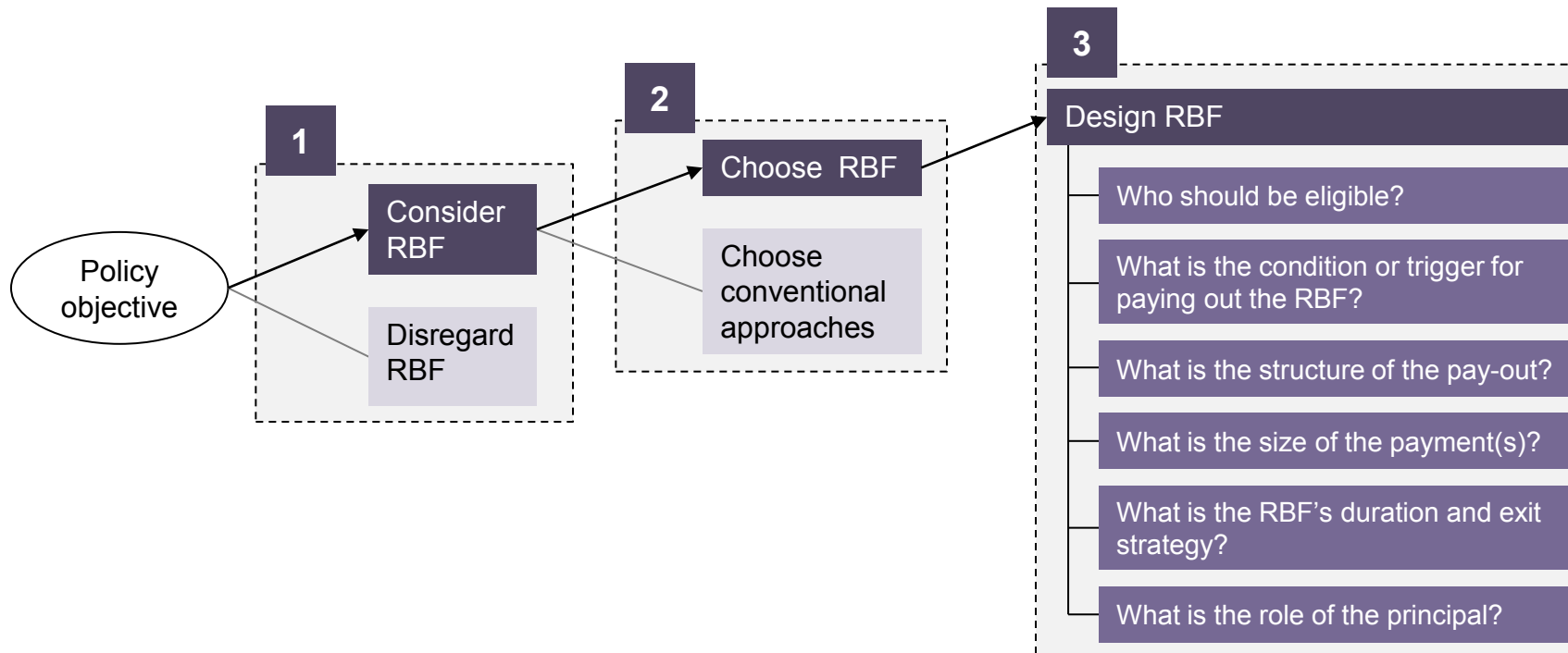
but less work, to date, on

- when to deploy RBF-type instruments at all, and
- when to deploy which type of RBF

The decision about whether and what form of RBF to use can be broken down to three decision points

These three decision points structure the Guide and this presentation

Figure 1. Starting with a certain policy objective, three decision points determine whether or not RBF is a suitable tool for achieving it and, if yes, which particular type of RBF should be used



Source: Vivid Economics

A brief note on nomenclature

The Guide avoids the confusing nomenclature that has arisen around RBFs

many terms are used to refer to RBFs, e.g. output-based aid, advance market incentive, cash on delivery, payment by results

these are neither mutually exclusive nor collectively exhaustive

the guide largely avoids this nomenclature and focusses on the underlying structure and characteristics of interventions

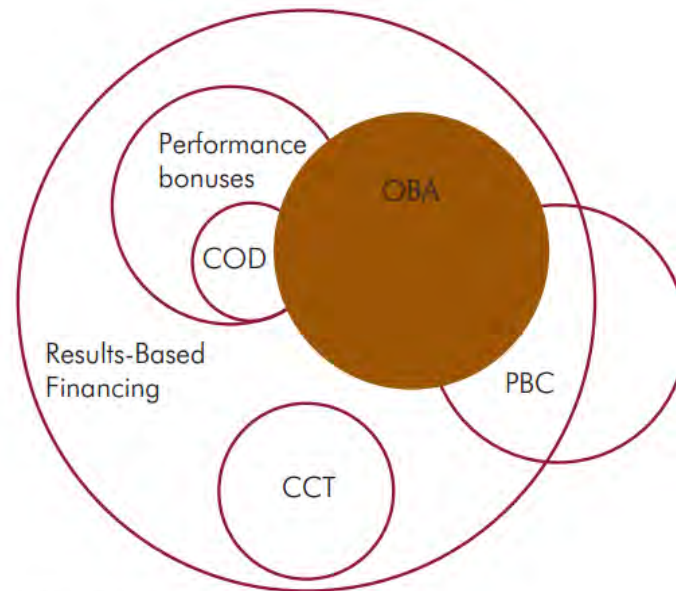
there are two key pieces of nomenclature that are used throughout the report:

- distinction between Results Based Financing (RBF) and Results Based Aid (RBA); RBA refers to conditional government-to-government transfers, RBF refers to conditional payments to service providers; the guide focusses on RBF
- we use ‘principal’ throughout to refer to the body that designs and administers the RBF scheme, and ‘agent(s)’ to refer to those who are expected to deliver the results

The nomenclature typically used to describe results-based approaches may not be particularly helpful

Some people use different terms to refer to the same intervention and the same term to refer to different interventions

Figure 2. There is a confusing array of terms used to describe results-based approaches



CCT = Conditional Cash Transfers;
COD = Cash on Delivery; OBA = Output-Based Aid;
PBC = Performance-Based Contracting (for example, for roads)

Source: Johannes, Mimmi and Mumssen (2010)

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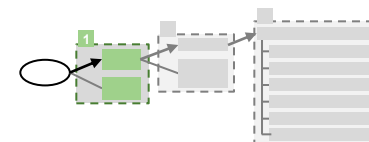
A market failure or social justification should be identified when intervening with an RBF

There are 5 broad categories of market failure and 2 further reasons for intervention

as a *starting* premise, markets can be expected to allocate resources efficiently; often this will not be the case in reality

three broad types of economic rationales for interventions in general, including for RBFs

- market failures:
 - externality(ies),
 - information asymmetry,
 - market power,
 - co-ordination failures,
 - public goods
- equity and social reasons: efficient market outcomes may be undesirable for distributional reasons;
- practical reasons: ‘textbook’ economic analysis usually assumes rule of law, clear property rights, and the availability of (at least some) capital; the (partial) absence of these may also justify intervention



When subsidies are appropriate, RBFs may be considered

Subsidies are appropriate to increase overall output or to realise social objectives

multiple policy instruments available to achieve a given policy objective:

- technology mandates, performance mandates, taxes, subsidies

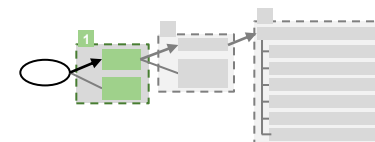
choice between subsidising/supporting ‘good’ action or imposing costs on/controlling ‘bad’ action;

- tax on kerosene and subsidy on clean energy can both create the same relative advantage for, say, solar home systems
- but tax lowers total output, both in the relevant market and in downstream markets

subsidies are preferred if promoting overall output in a market, or indeed creating a market, is desirable

- for social/ development reasons
- or to encourage learning-by-doing to bring down future costs

RBFs can be considered as an option whenever a subsidy is seen as appropriate



RBF approaches can also be used when a principal is procuring goods and services

The incentive structure of RBF may help reduce costs in procurement

as well as intervening in private markets, the public sector is an important buyer of many goods and services in its own right

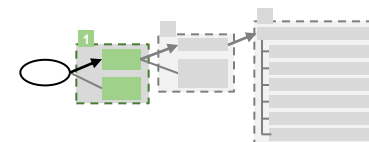
examples include

- goods directly required for the functioning of government, e.g. buildings, office equipment, and transport services
- the purchase of ‘public goods’ that the private sector will under-supply; e.g. infrastructure, policing, health services

in public sector procurement an RBF is unlikely to lead to a self-sustaining market

but an RBF may lower procurement costs, freeing up resources for alternative uses

it may also increase the efficiency of the agent, which may be of particular interest if the government is aiming to improve the performance of parastatals



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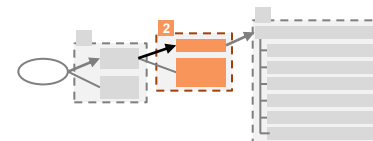
There are three necessary preconditions for introducing an RBF

Without these, an RBF is not feasible

first, it must be possible to monitor and verify results upon which RBF disbursement depends

second, principal and agent must have sufficient institutional capacity to, respectively, set up and respond to an RBF

third, because payments are only made after results have been delivered, measured and verified, the agent must have access to sufficient upfront finance



The choice between RBF and conventional approaches is primarily about risk allocation between agent(s) and the principal

But there are also a number of necessary preconditions that must be met for RBFs to work

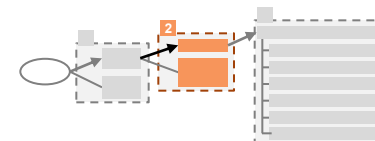
at heart, the choice between RBF and conventional approaches is about risk allocation

- under conventional approaches principals bear (most) project risk; if the project or programme fails, the principal does not recover his funds
- with an RBF, risks are (partly) shifted; the principal may recover committed funds if a project or programme fails
- **note:** under RBF the principal still bears ultimate delivery risk, including reputational risk

placing greater risk on agents has both an advantage and a disadvantage

- advantage: greater risk provides a stronger incentive, making the delivery of results more likely; it also reduces the need to monitor inputs
- disadvantage: higher rewards are required to compensate the agent for additional risk; this increases total project costs

the choice between RBFs and conventional instruments is (largely) about managing this trade-off to deliver the highest value for money

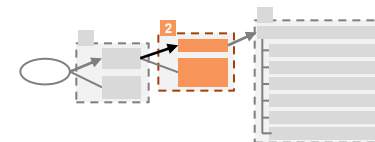


Increasing risk on agents is an unavoidable consequence of providing stronger incentives for performance

Figure 3. Stronger incentives and more risk for agents are two sides of the same coin



Source: Vivid Economics



Certain factors either reduce the cost of placing risk on the agent or increase the power/desirability of the additional incentive

Three factors strongly influence the balance: control over risks, line of sight, and delivery time

the context will determine:

- how much additional cost will be incurred by placing more risk on agents
- the ‘power’ of any additional incentive and the desirability of having a greater incentive for success

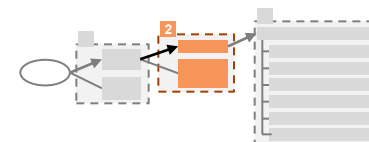
three factors appear particularly critical as they both reduce costs and increase benefits:

- the extent to which the agent can control the risks that are shifted onto them
- the ease with which both parties can observe the relevant results (‘clear line of sight’)
- the length of time that the agent needs to bridge with finance until he receives RBF payments

in addition, costs will be lower when:

- the cost base of the agent varies according to the quantum of results delivered
- the additional investment required to deliver the results does not entail a significant proportion of the agent’s (potential) resources

benefits will be higher if there are spillover benefits from project success



A number of non-risk factors also influence the choice

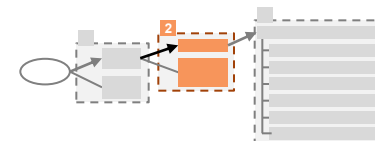
These factors do not directly affect risk trade-off but are still important

donor funding preferences

- some principals, e.g. national government, may prefer deferring liabilities into the future; for these, an RBF is more attractive because it delays payments
- other principals, e.g. bilateral aid agencies, may prefer to disburse funds more quickly, e.g. because there is considerable uncertainty over the medium- to long-term outlook of their budget; for these, an RBF is less attractive because it delays payments

fostering innovation and giving more responsibility to agents

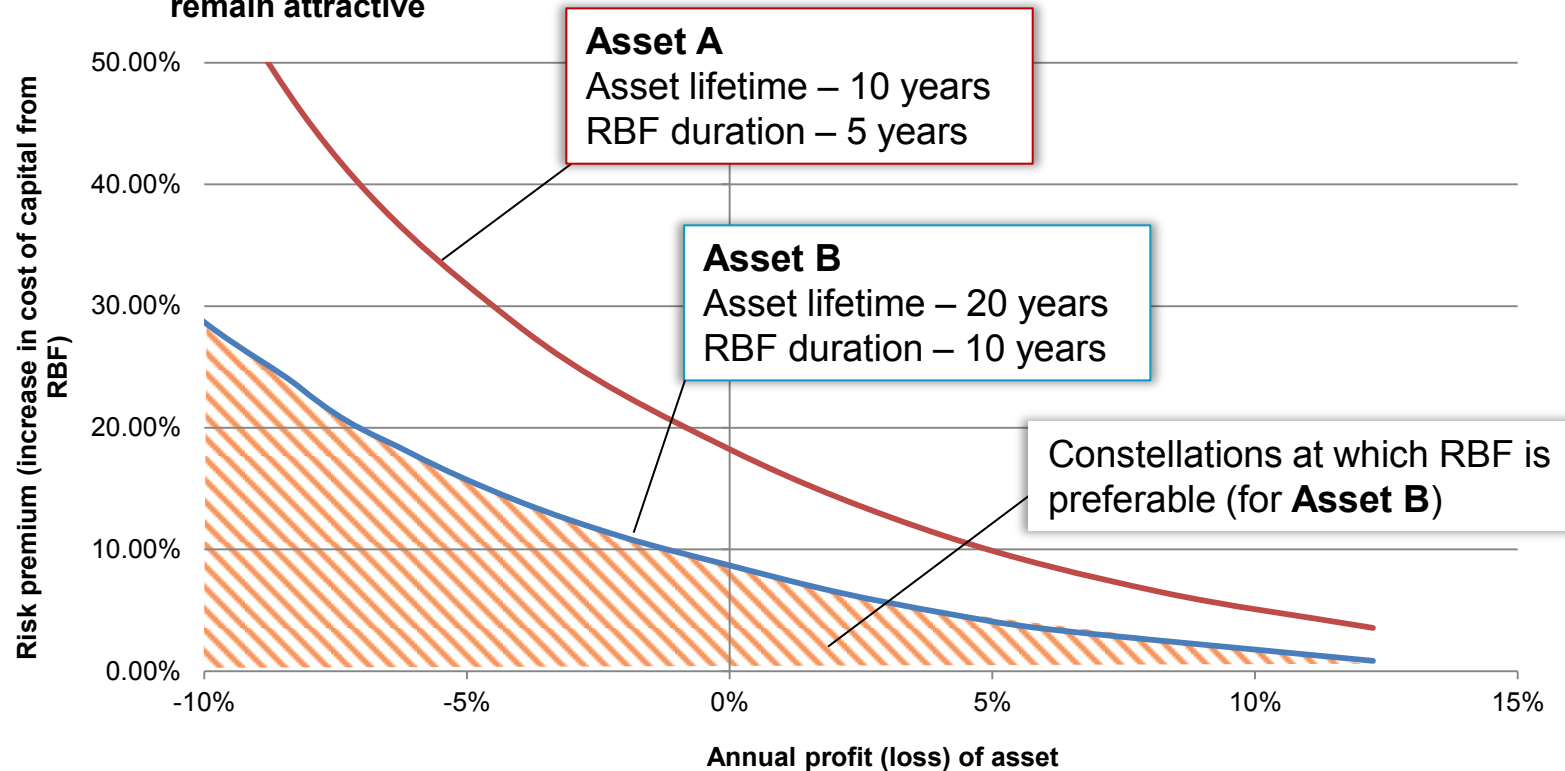
- by placing delivery risk onto agents, principals do not need to get involved with the choice of technology or process for delivering the relevant results
- this may increase innovation and country ownership



It is possible to quantify the trade-off between stronger incentives and higher projects costs

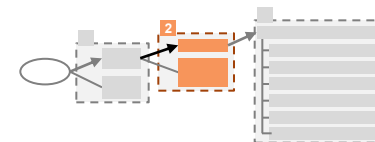
This is a highly stylised comparison, and it only provides broad guidance

Figure 4. The shorter the asset lifetime, the more RBF instruments can increase the cost of capital and still remain attractive



Source: Vivid Economics

Note: RBF payments/upfront finance are adjusted for each level of operating costs to render the asset break-even



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The design process for an RBF can be guided by six questions

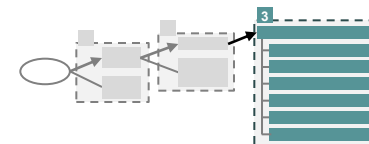
The six questions are explored in detail in the following slides

once the decision has been made to use an RBF, its particulars must be designed

this design process can be guided by six questions:

1. Who should be eligible for the RBF?
2. What should the 'trigger' be that releases payments?
3. What should the structure of the pay-out be?
4. How large should the payment be, and how should that size be determined?
5. Should the principal buy or support?
6. What should the exit strategy for the RBF be?

we explore ways of answering each question in the following slides



The question of eligibility turns on a trade-off between economic efficiency and other policy goals

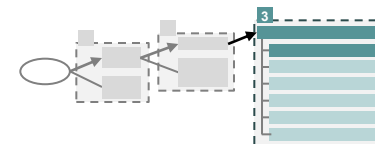
The presumption should be against restricting the list of possible agents for an RBF

economic theory suggests that excluding potential agents/recipients reduces welfare

- if the RBF is directed at suppliers, then restricting potential suppliers may exclude some low cost/high quality suppliers
- **note:** unlike with conventional instruments, excluding firms that appear under-qualified is not necessary with a well-structured RBF: if a firm turns out to be unable to deliver the output, then no funds will be disbursed to that firm

however, there may be social or other policy reasons that are best achieved by restricting eligibility

- when there are concerns over product quality and other factors mean that RBF payment should not be withheld until these have been disproven
- redressing social/ regional imbalances, via a geographic restriction of eligibility



An RBF's conditionality, or 'trigger', determines what the agent must do or deliver in order to receive the payment

The choice of 'trigger' is not simple, but can be structured into a decision tree

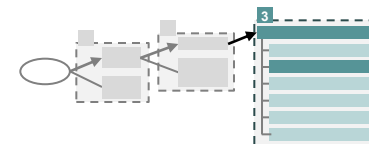
there are three broad options for an RBF's 'trigger'

- payment can be linked to investment or the provision of capacity (placing investment risk on the agent), or
- payment can be linked to delivery of output or the operation of an asset following investment (placing both investment and operational risk on the agent), or
- payment can be linked to the delivery of output/operation of an asset with investment costs addressed elsewhere

the optimal location for the RBF's 'trigger' is determined by two criteria

- first, the 'trigger' should correspond as closely as possible to the desired outcome
- second, the 'trigger' should maximise the incentive/costs trade-off involved in risk transfer (which was analysed in the second step)

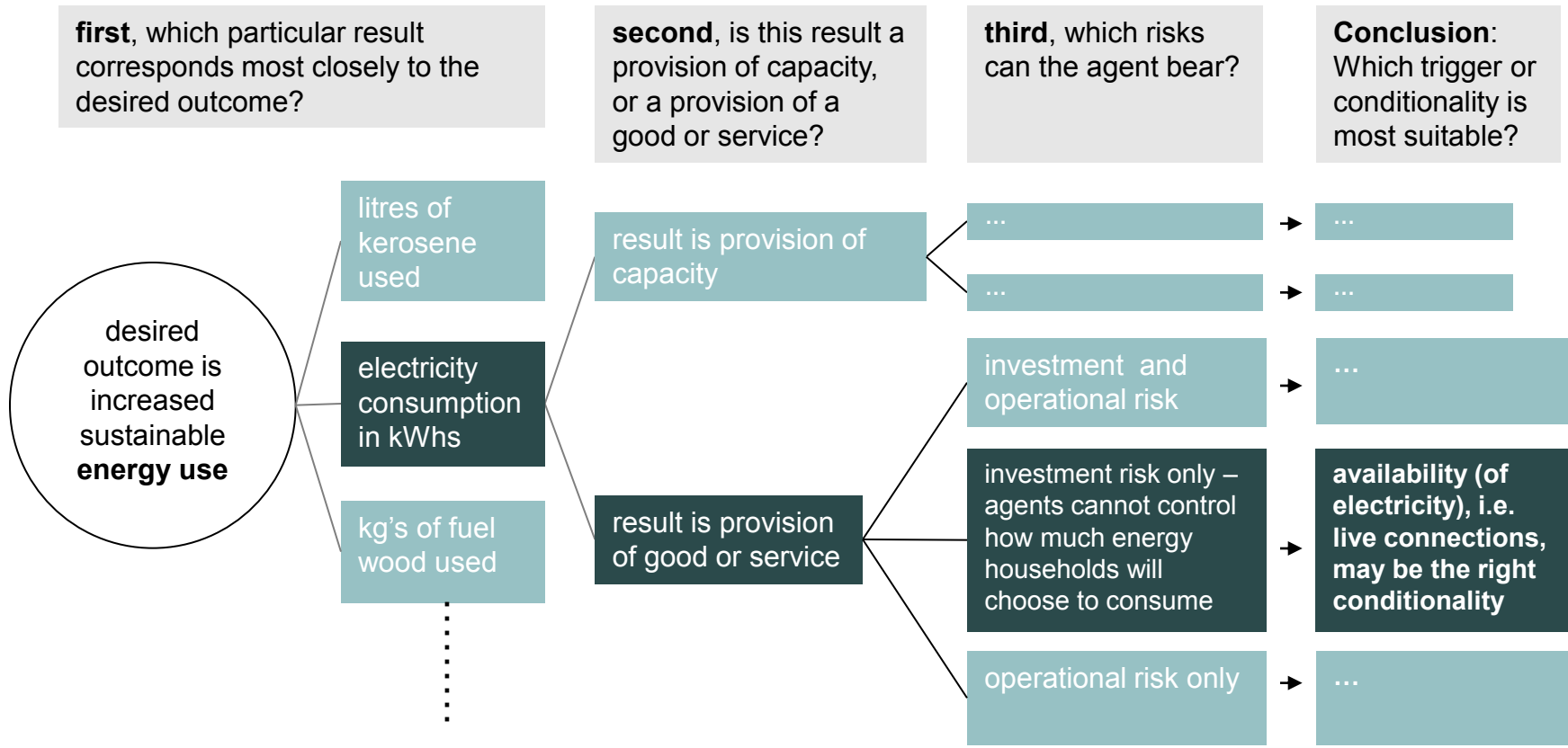
the three options and the two criteria can be used to construct a decision tree; an example of the decision tree is shown on the next slide



An applied example of this decision framework shows that targeting ‘live connections’ may be suitable for energy access

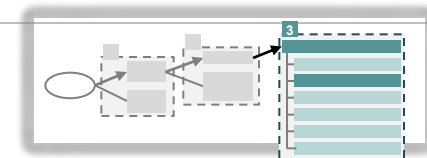
The decision tree below is a simplified and illustrative example of how to apply this method

Figure 5. Going through the three questions identified earlier shows that ‘live connections’ may be a suitable conditionality for the policy goal of energy access



Note: The highlighted decision path is illustrative; different paths will result from different desired outcomes and circumstances

Source: Vivid Economics



The principal also needs to decide what happens when the trigger is met – the structure of the pay-out

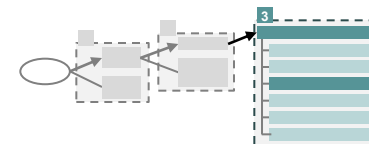
This can be broken down into three issues

this payment can be designed in a number of different ways:

- it can be a large proportion of the total support provided, or a small proportion
- it can be linked to a market variable (e.g. its size could be tied to energy prices, or the payment could vary to guarantee a minimum price), or independent of market variables
- there are different options for linking the pay-out to markets

optimal choices across these three issues depend on a variety of issues

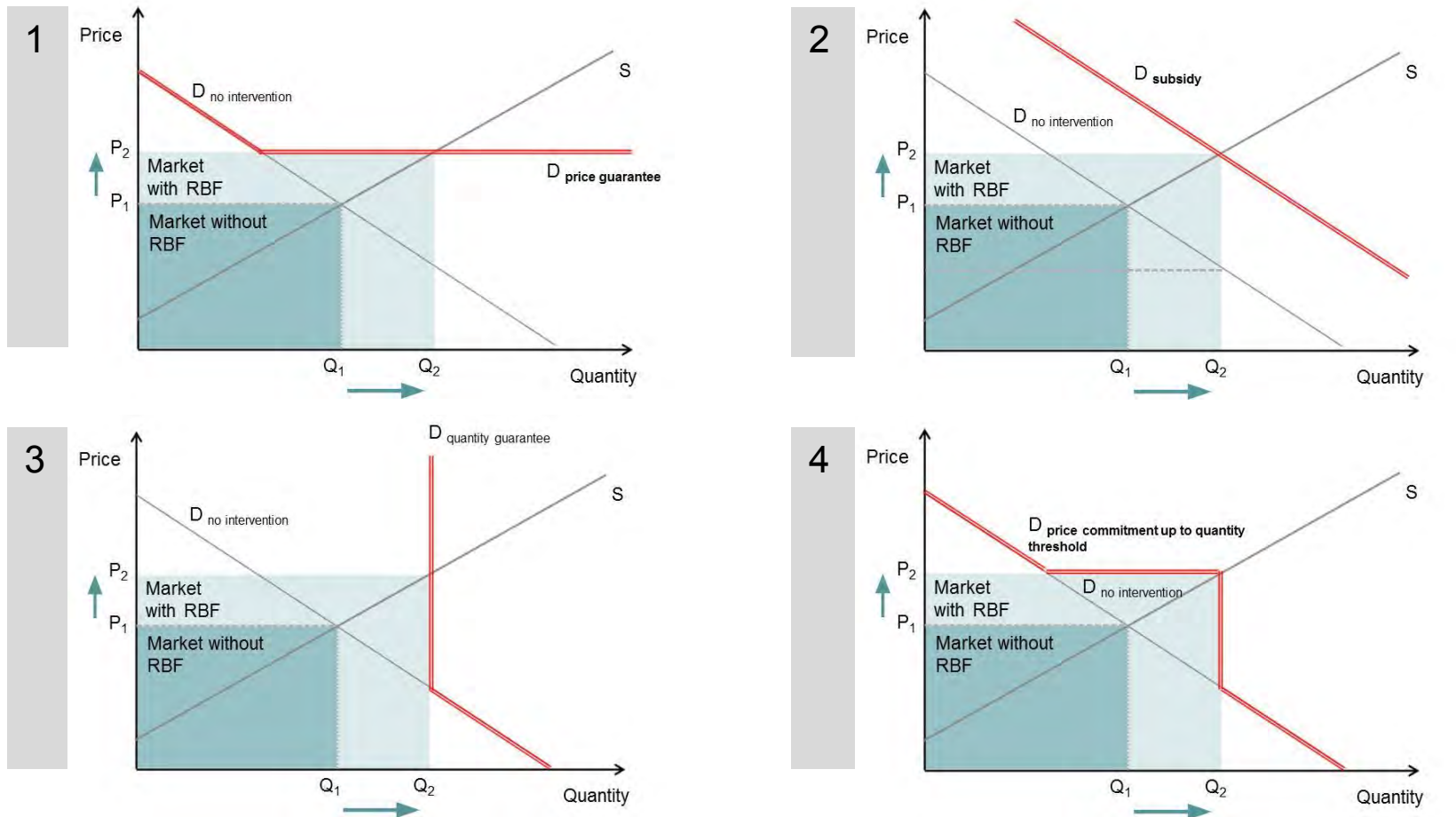
- no need to make *all* payment results-based to generate stronger incentives so if agents are capital constrained, more support should be provided upfront and less tied to results
- not always possible to link payment to market variables, if it is possible then it becomes a question of whether agent should bear market risks
- if one chooses to create a link to market variables, then can provide unit subsidy, price support, quantity commitment
 - fixing prices preferable for agents when demand is uncertain
 - fixing quantities is preferable when costs are uncertain



If linked to market, then RBF instruments can be used to create any shape and form of demand that the principal desires

This slide shows four examples, but other forms are also possible

Figure 6. An RBF can achieve the same market impact with (1) minimum price guarantee, (2) a per unit subsidy, (3) a quantity guarantee, and (4) a minimum quantity with a price cap



The size of the RBF's payment should be large enough to secure delivery, but small enough to avoid windfall profits

There are two main tools available to determine the right level of RBF

there are two basic options for determining the payment level of an RBF

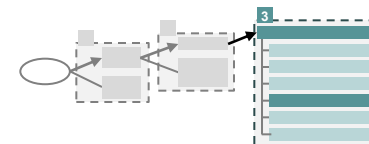
- administrative approaches
- auctions

auctions can help overcome information asymmetries

- the principal may not know production costs
- principal may hence overpay (reducing cost efficiency and the total quantity of output secured) or underpay (risking no or too little delivery)

auctions only work in certain circumstances

- principal has rights that can be auctioned
- competition 'for' the market preferred to competition 'in' the market i.e. principal is a better judge of success than market forces
- sufficient principal institutional capacity
- sufficient number of bidders



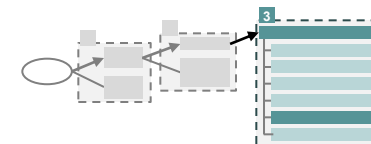
Whether the principal should purchase or support depends on property rights, transaction costs, and fiscal costs

Four considerations shape this decision

a principal can directly purchase the relevant output, or it can provide incentives to market participants

the choice between supporting and purchasing turns on four considerations:

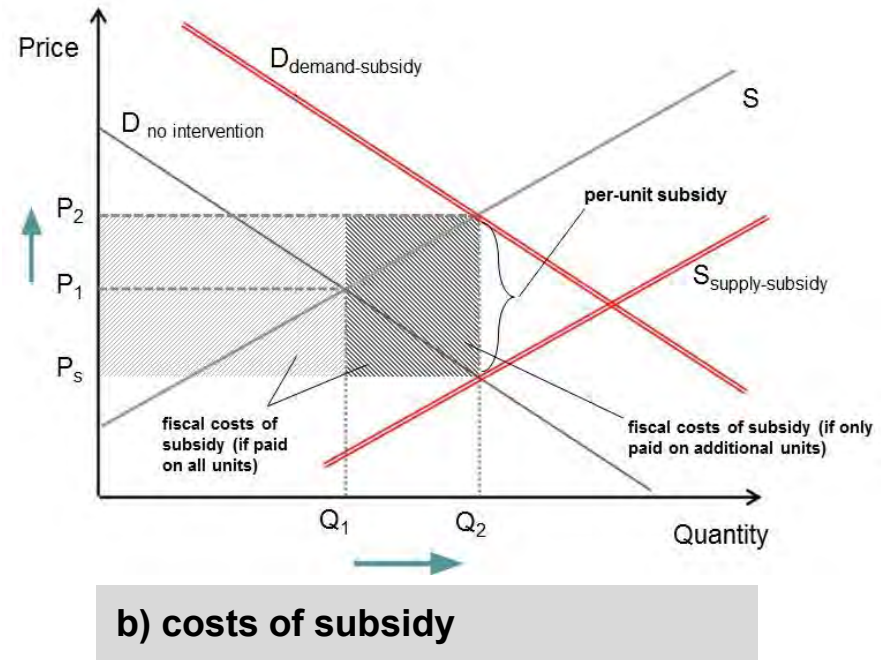
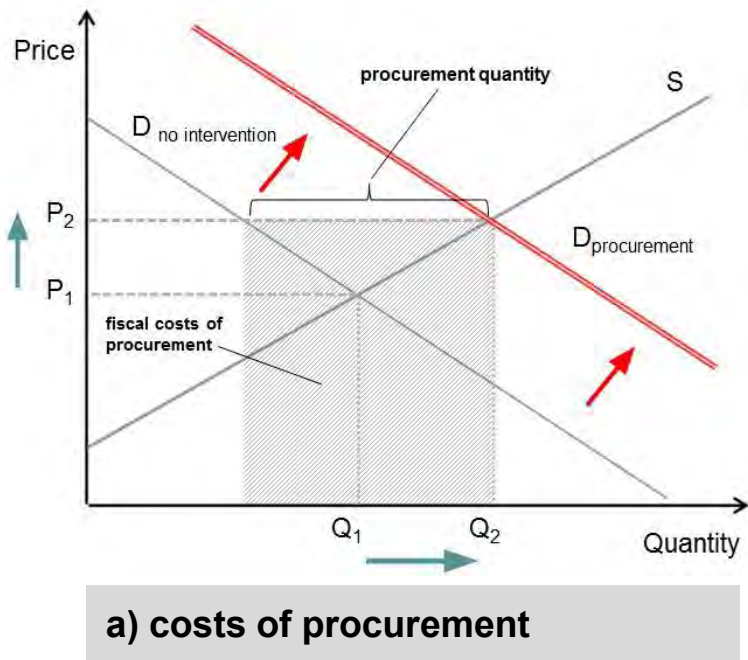
- **property rights**: if there are good reasons for the principal to own the good, then direct procurement is preferred
- **risk mitigation**: quantity setting instruments will often require procurement
- **transaction costs**: if direct procurement lowers transaction costs, it may be preferable; e.g. a government commitment to purchase 10,000 cooking stoves may be more ‘bankable’ for private producers than issuing 10,000 vouchers
- **fiscal costs**: both procurement and support can achieve the same market expansion, but fiscal costs may differ greatly – see chart on next slide;
 - in general, direct procurement is cheaper if price-discrimination is possible; or if supply is responsive to changes in prices while demand is unresponsive
 - a subsidy is cheaper if it can be restricted to additional units; or if demand is responsive to changes in price, while supply is unresponsive



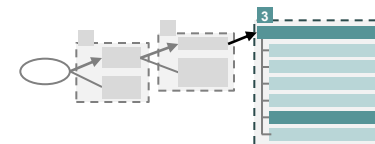
Procurement and subsidies can achieve the same market impact, but market price and fiscal costs will differ

Procurement is preferred when supply is responsive, subsidies when demand is responsive

Figure 7. The fiscal costs of procurement differ from those of a subsidy when both deliver the same quantity



Source: Vivid Economics



A public, phased exit strategy can enhance the sustainability of an RBF

Checkpoints can be used to manage below-expectation development

exit strategy depends on motive behind RBF

for procurement RBF, natural exit strategy is to end RBF when desired quantity reached

— however, phased reduction in procurement preferable to sudden end

for non-procurement RBF, exit strategy can be tied to market development

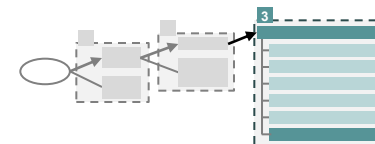
— a market reaches self-sustainability as suppliers are able to provide goods at prices that consumers are willing and able to pay

— phasing out of RBF can be tied to gap between consumer and supplier prices; as gap shrinks, RBF becomes progressively smaller

— fixed checkpoints provide incentives for suppliers to cut costs; otherwise link between gap and RBF can be perverse incentive to keep costs high

example of a checkpoint: ‘reach a certain cost reduction by a certain date’

— if principal outlines consequences of missed checkpoint, agents can better prepare



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Company Profile

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