

# Defining The Regulatory Till

## A RESPONSE TO CP4/2010

*This note sets out a response to the Commission for Aviation Regulation's consultation on whether to retain a "single-till" form of regulation at Dublin Airport. We conclude that single-till remains the appropriate form of regulation in general, but there are specific issues relating to the application of this regulation that need further review.*

CP4/2010 is an interesting and important discussion paper comparing the merits of single-till and dual-till regulation. The paper presents a number of arguments in favour of either method of regulation. We find ourselves in agreement with many of the points raised in the Commission's paper, and in disagreement on some important fundamental points.

While the paper is extremely useful, it presents the pros and cons of single- and dual-till regulation without setting out any principles that should guide the judgement as to which approach is more appropriate.

In this note we set out briefly the key principles which should guide the choice between the two options, and then proceed to discuss the questions raised by the Commission in light of these principles.

To set the context for this discussion, we are considering a system of *ex ante* price regulation for Dublin Airport, because it is recognised that the airport has significant market power with respect to the provision of aeronautical services. The purpose of the regulation is to establish a maximum level of aeronautical charges that, as far as possible:

- is consistent with what would happen if Dublin Airport were operating in a competitive market; and
- provides DAA with the same investment incentives that would be experienced by a competitive airport.

The regulation should induce the airport to provide the services its customers need, to the necessary quality and at a fair price. The airport should be able to earn a fair return for providing its customers with what they need, but should be penalised if it is inefficient or provides an inadequate standard of service. Similarly, the airport should not earn a return on investment that provides no benefit to its customers.

While CP4/2010 compares some differences between single-till and dual-till outcomes, it fails to answer whether single-till or dual-till principles are closer to this competitive outcome. However, price regulation is never the same as the competitive outcome. So as a secondary question, the Commission should ask

itself is whether the reality of single-till or dual-till regulation could lead to additional distortions that may be relevant in determining what form of regulation should be adopted.

### Summary of conclusions

Single-till regulation is clearly preferable to dual-till regulation. The advantages of single till regulation are as follows:

- Single till regulation most closely replicates the way in which a competitive airport would set its charges. Airports in a competitive environment set aeronautical charge according to single till principles, where economic profits from commercial and non-aeronautical are a direct by-product of the aeronautical activity.
- Single till regulation, if properly applied, sends efficient signals for the use of the airport in general and for investment in new airport facilities.
- Single till regulation is also most practical, because of the extent of common costs between the airport's aeronautical functions and its commercial ones, especially with respect to the use of terminal buildings.

The drawbacks with dual-till regulation are:

- Aeronautical charges are set above the competitive level. Although a monopoly airport would have an incentive to pass back a proportion of economic profits from related activities, charges would still be set above the welfare maximising level.
- The airport would generate excess profits from aeronautical activities (because it would retain some of the commercial profit that is a direct by-product of that activity). This would distort the airport's future investment decisions.
- Dual-till regulation, applied as well as it can be, does not lead to regulatory simplicity. Dual-till regulation would necessitate a significant exercise in cost allocation between commercial and aeronautical activities. The outcome of this process would almost inevitably be an arbitrary cost allocation between the different aspects of the airport business. Furthermore, it would significantly increase the opportunities for regulatory gaming.

Despite the superiority of single-till as a regulatory principle, there remain practical issues the application of single-till regulation in Dublin.

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- The scope of the single-till should be reviewed to include only commercial activities that are a by-product of the aeronautical services, or whose costs are substantially shared in common with those services.
- The Commission should review the way in which actual commercial revenues feed back into future price reviews to ensure the DAA has the appropriate incentives to manage its commercial activities efficiently.
- There is a risk under the existing system of airlines underwriting DAA's commercial developments. This can be corrected under single-till regulation by better benchmarking of terminal costs or using benchmarked levels of commercial revenues for the existing terminal space, in place of DAA's actual figures.

## Competitive aeronautical charges

As has been noted elsewhere, an airport operating in a competitive market will take into account non aeronautical income when setting aeronautical charges, provided there is a clear direction of causation from the aeronautical activity to the non-aeronautical income.

If the airport expects to generate economic profits  $P$  from each arriving or departing passenger<sup>1</sup>, then this has the effect of reducing its perceived marginal costs. In a competitive market, the airport will reduce its aeronautical charges by the full amount of  $P$  per passenger to reflect this. It has no choice but to do so, because if it does not fully pass on this benefit to customers then its rival airports can undercut it by doing so.

The most obvious examples of this effect would be the income the airport earns from retail activities to passengers, or from car parking. Both of these sources of income will be expected to rise proportionately with any increase in the throughput of passengers at the airport. These sources of income are therefore a direct by-product of serving more passengers.

This conclusion does not depend on any qualitative argument about whether the airport or the airline is “responsible” for generating these retail revenues. There is simply a direct causal link from aviation activity to increased revenues on the non-aeronautical side. More passengers will mean, other things being equal, more non-aeronautical revenues. The reverse causation cannot be supported: it cannot be argued that more air travel occurs at an airport *because* people are gathered together to shop or that an increase in shopping at the airport causes an increase in the number of people who fly.

Because of the direction of causation, the competitive airport will have no option but to factor its earnings from non-aeronautical services into its aeronautical charges. This does not deny the important role that the airport’s commercial arm plays in maximising non-aeronautical revenues, but that does not change the conclusion. If an airport in a competitive environment is lax in developing its retail services then a rival may be able to undercut it by generating higher non-aeronautical profits. Hence the competitive process should induce airports to maximise non-aeronautical rents<sup>2</sup>, which will then be factored into aeronautical charges. The airport retains the incentive to pursue this course of action because of the losses it would suffer if it did not. Furthermore, if the airport is able to

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<sup>1</sup> In this context economic profits (or rents) mean any profits expected to be generated over and above the return which a competitive

<sup>2</sup> For the time being here we are assuming that non-aeronautical services, such as retail, are conducted in an effectively competitive environment. Later we will touch on the issues that may arise if the airport has market power over some element of its non-aeronautical activities.

outperform its rivals with regard to non-aeronautical revenues, it would be able to retain the benefits of this outperformance. That is to say, the competitive airport will deduct from its aeronautical charges the amount that it expects an efficient airport rival to be able to generate, not the actual amount of its non-aeronautical profits.

Having described the process by which non-aeronautical profits may affect aeronautical charges, it is important to note that the presence of non-aeronautical activities does not guarantee that aeronautical charges will be lower than in the absence of those other activities. The key point is that the amount the competitive airport would factor into aeronautical charges is the economic rent generated by the relevant non-aeronautical services. Economic rent is the amount by which profits from that activity exceed the amount that a company would require to engage in that activity, typically the weighted average cost of capital for that activity. This is less than the accounting profit generated by the activity, and significantly less than the revenue it generates. Indeed it is perfectly possible that the non-aeronautical activity will not generate any level of economic rent. In which case, aeronautical charges will be unaffected by the presence of the non-aeronautical activities.

The fact that the airport can generate economic rents from commercial services does not require the airport to have market power over those services. The most common example would be *locational* rents generated by airport retail activities. With high fixed costs and relatively low running costs, airport retail outlets have the capacity to generate locational rents while charging the same retail prices as high street shops, simply because of the unusually high number of transactions the outlets can generate from passengers waiting to board flights. These locational rents are not the product of market power, but would be factored into aeronautical charges.

If economic rents are not anticipated from the related non-aeronautical activities, then there would be no consequential reduction in aeronautical charges. On the other hand, it should be clear that a competitive market will never lead to aeronautical charges being increased *above* the level that would have occurred if there were no non-aeronautical activities. Even if the airport anticipates an economic loss on the non-aeronautical activity it cannot recover this loss from passengers, because the airport could be undercut by a rival that simply did not engage in the non-aeronautical activities.

In conclusion, the competitive airport would pass through in full into lower aeronautical charges the expected *efficient* level of economic profits (such as locational rents on retail) from the non-aeronautical activities that are a direct by-product of its aeronautical activity. It would not pass through any economic losses on discretionary non-aeronautical activities, because competition would not permit this. Furthermore, the competitive process should lead airports to be profit-maximising on the non-aeronautical side as well as the aeronautical.

Finally, if the competitive airport were to be engaged in additional activities, unrelated to the airport activity, then these would not be factored into its airport charges. For instance, if the airport owned a shopping centre at a different location then this should have no impact on competitive airport charges, however profitable that shopping centre might be.

### How does this differ for an airport with market power?

As the Commission points out, citing Starkie (2001), an airport with market power over aeronautical services would still have an incentive to take into account the relationship between airport charges and the demand for unregulated activities at the airport. Starkie observes that: “the economic characteristics of major airports provide a powerful incentive for the airport business not to act like the classical monopolist; not to exploit market power by restricting output and raising prices”.

But, unfortunately, this conclusion is wrong, as it is based on a false comparison. Starkie identifies that an airport with market power will set lower aeronautical charges if the airport expects to generate locational rents for its retail function as a by-product of the aeronautical activity. It is agreed that retail rents reduce aeronautical charges in an unregulated monopoly airport. But that does not mean that unregulated monopoly airport charges will resemble competitive airport charges. Starkie compares monopoly aeronautical charges with and without retail revenues and concludes that the former will be lower. But this is not the relevant comparison. The correct comparison is between the aeronautical charges set by an airport functioning in a competitive aeronautical market and those set by an airport with market power.

It is simple to show that for a profit maximising airport:

- The welfare maximising level of aeronautical charges should be reduced below aeronautical costs to the full extent of any locational rents expected to be generated by passengers on the retail side.
- If the airport has market power on the aeronautical side it will maximise profits by equating marginal cost with marginal revenue. This will mean full monopoly pricing of the aeronautical service, but reduced to an extent to reflect retail rents. But this reduction is not complete: if the airport is a monopolist on aeronautical services (and faces a linear demand function) it will return exactly half the non-aeronautical rents in lower aeronautical charges.
- Comparing the competitive and monopoly price, after allowing for non-aeronautical rents, shows that the gap between aeronautical charges under competition and unregulated monopoly *increases* as the level of non-aeronautical rents increases.

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The first conclusion is important. The *efficient* price for aeronautical services will net off any expected locational rents generated by retail as a by-product of the aeronautical function. As efficient aeronautical charges should reflect any locational rents that can be generated, it further follows that the correct benchmark against which to compare the behaviour of an airport with market power is the benchmark *including* an efficient level of retail rents. This comparison demonstrates that welfare losses caused by airport monopoly are greater in the presence of retail rents than in their absence.

## Additional arguments for single-till regulation

In the previous section we argued that competitive aeronautical prices will follow single-till principles. But there are other reasons in addition to pricing efficiency why single-till may be the most appropriate form of regulation.

Specifically, as CP4/2010 correctly identifies, many activities carried out at the airport have costs in common. Passenger terminals offer passenger transit services, but also support the airport's retail functions. Any allocation of costs between these two services presents the opportunity for regulatory gaming on the part of the regulated airport. To counter this, the Commission would have to invest a significant amount of time in analysing the cost allocation procedures and satisfying themselves that they are robust. But such a process is unlikely to be satisfactory under any circumstances. Economic theory shows that when services share common costs it is possible to place wide bounds (maxima and minima) on the share of costs that may be allocated to each service, but within these bounds any more precise allocation is arbitrary. It is often true to say that there is no "correct" cost allocation.

This problem occurs in airports, but is shared with other regulated network industries. To take the water industry as an example, the sale of water to residential customers in the UK is regulated in a similar way to airport charges at Dublin Airport. But the sale of water to large industrial customers is open to competition and the prices charged are not regulated. Nevertheless, this water is drawn from the same sources, treated in the same treatment works, and distributed to the customers through the same bulk distribution network. It is recognised that allocating the costs of these facilities between competitive and regulated services would be arbitrary and lead to regulatory gaming. As a consequence an approach is taken that is, to all intents and purposes, a form of "single-till" regulation: the regulator considers all costs in the round, and before setting regulated charges nets from these costs the revenues the utility is expected to generate from competitive sales over the coming regulatory period. Thereafter the water company retains the incentive to maximise profits from these competitive sales, because the regulated price cap is not recalculated to take into account the actual level of competitive sales: so the company keeps the benefits of any commercial gains until the price cap is next re-set.

The same rationale applies to the retail function in airport terminals. There are significant common costs between this function and the (regulated) passenger handling function. Even if the arguments above about efficiency of pricing were not accepted, it would remain the case that the use of single-till regulation significantly simplifies the process of regulation, avoiding the need to monitor the arbitrary boundary between regulated and unregulated costs.

## Implications for regulation

The important conclusion from the above is as follows: **efficient aeronautical charges are those based on single-till principles**. An airport with market power, regulated according to a dual-till, will price inefficiently, because it will retain some proportion of any economic rents generated from non-aeronautical activities. This will lead to higher aeronautical charges, lower level of traffic and a welfare loss compared to the competitive outcome. In the sections below we use the framework developed above to respond to the specific pros and cons of single-till and dual-till regulation set out in CP4/2010. These responses provide more detail; on why single-till pricing is economically efficient and dual-till pricing inefficient.

The economic efficiency of single-till is supplemented by the argument that significant common costs between aeronautical and non-aeronautical services make the allocation of costs between competitive and regulated activities essentially arbitrary. Basing regulation on cost allocations would be labour intensive for the regulator and would create a significant risk of regulatory gaming.

However, the fact that competitive airport pricing follows single-till principles does not mean that single-till regulation is straightforward, or that single-till regulation necessarily has the same incentive properties for pricing and investment as a competitive market.

## Issues raised by single-till regulation

Although the single-till may represent the “ideal” when it comes to setting aeronautical charges, the application of single-till regulation raises a number of important issues, which include:

- the scope of the single-till – what is included and what is not;
- differences in the incentives between single-till regulation and competitive single-till pricing; and
- the practical difficulties of implementing single-till, particularly relating to cost under-recovery on the commercial side.

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### The scope of the single-till

As should be clear from the earlier discussion, the single-till should not cover *all* activities simply because they belong to the airport or its owners. There is a clear rationale for deciding what should or should not be included in the single-till:

- All regulated activities: this includes all the activities for which charges are made, listed at 4.34 of CP4/2010.
- All non-regulated activities which are clearly a by-product of the aeronautical function of the airport. A by-product is a service which can be expected to increase in value as the number of passengers passing through the airport increases.
- Any service provided by the airport whose costs are substantially shared in common with any of the services covered by the first two bullets.

On the basis of this hierarchy, it would seem that the present scope of the single-till, as set out in section 4 of CP4/2010 is correct. We would also agree that, according to the principles set out here, Dublin Airport City should be excluded from the single-till. However, as a case in point, if Dublin Airport City is to be excluded from the single-till it is incumbent on the Commission to ensure a strict cost separation between that and DAA's airport operations. In particular, the Commission must ensure that any DAA management time, consultancy costs, etc., incurred in respect of Dublin Airport City are excluded from the single-till.

### Incentive properties of the single-till

While we strongly support the retention of the single-till, we recognise that the incentive properties of any specific regulatory scheme will not be identical to those of a competitive market.

An airport operating in a competitive environment will reflect commercial rents in its aeronautical charges if these rents are a by-product of the aeronautical activity. But it will not simply pass through its *actual* commercial rents. Rather it will seek to pass through a fair level, based on the equivalent rents that its rival airports can generate. This will mean there will be a lag between the generation of any specific profits and passing these back in lower aeronautical charges. Moreover if the airport is exceptionally good at generating commercial rents it will retain the benefit of its exceptional performance, only passing back the level its rivals can achieve.

By contrast single-till regulation tends to pass back the actual commercial rents earned by the airport, but with a lag built into the regulatory system. The regulator makes allowance in the next regulatory period for expected rents, which will be influenced heavily by the actual performance of the airport in the previous period. After price limits have been set, the airport still has the incentive to

maximise commercial rents and will retain the benefit of any increase up to the point price limits are re-set.

The Commission should consider whether the way in it carries out this assessment gives the airport the correct incentives to develop commercial sources of income. This is the same problem the Commission faces in considering how long it should allow the airport to retain the benefit of any efficiency improvements. It should also consider the balance of information used between DAA's actual performance and benchmarks from a range of other airports, to inform the level of commercial revenues assumed in its determination.

### Practical issues, including under-recovery of commercial revenues

In the discussion above we have talked about economic *profits* from commercial activities being offset against aeronautical costs. In practice single-till regulation does not work in this way. Instead commercial *revenues* are netted off against total costs to arrive at a residual that makes up the aeronautical charge.

This very much simplifies the process of cost analysis, because it is not necessary to allocate costs between regulated and non-regulated activities. But the problem it creates is that it is quite possible that the commercial costs allowed could exceed the associated revenues: that is aeronautical charges could be set higher than cost, subsidizing an implicit loss on commercial activities.

This loss could arise because of a forecast shortfall in revenues, could be a timing issue relating to when the costs of commercial activities are incurred and when the revenues are anticipated to materialise or be due to excessive investment in commercial space by the airport operator.

As we have explained above, allowing aeronautical charges to subsidise commercial activities is inconsistent with competitive airport pricing.

We return to this point below. In our view this issue can be addressed by good regulatory design. The solution to this problem is not dual-till regulation, which sets prices at the wrong level systematically and involves a range of new regulatory difficulties.

## Comments on the merits of dual-till raised in CP4/2010

In this section we respond to the specific points raised in section 3 of CP4/2010, relating to the merits of dual-till regulation.

### Dual-till leads to more efficient airports

The argument put here for including non-aeronautical rents in aeronautical charges is not one of fairness or justice. The argument is simply that *if* these rents are a by-product of the demand for air travel then they form a component part of the net cost of providing that service and should be reflected in its price.

Para 3.23 refers to a “distortion to investment decisions” that could result from including non-aeronautical returns in the regulatory till. This statement seems to repeat the common misunderstanding that, because single-till-based charges are discounted relative to the direct costs of aeronautical services, this is economically inefficient. But this is incorrect. If rents from non-aeronautical services<sup>3</sup> are generated as a by-product of aeronautical activity this reduces the effective marginal cost of aeronautical services to the airport operator. It is appropriate, indeed efficient, for the airport to take this into account in setting prices, which will be lower than they would be if there were no non-aeronautical rents.

Furthermore, the airport operator *will* take into account these sources of rents in evaluating investment to expand aeronautical services, so the decision to invest will also be efficient. On the contrary, the distortion arises if non-aeronautical rents are excluded from the regulatory till. In this case the regulated airport will set profit maximising charges in excess of effective marginal cost. As a consequence demand will be somewhat lower than the efficient level. But the airport will earn some level of monopoly profits from aeronautical investment (because of the partial retention of non-aeronautical rents) which could distort the airport’s future investment decisions.

We note the reference to one paper that suggests that dual-till airports may be more productive than single-till airports. This is an interesting observation, but we would advise against drawing a conclusion from a single study. As noted above single-till regulation cannot fully replicate efficient pricing. The observation in the paper may reflect deficiencies in the regulatory schemes being applied rather the merits of single-till in principle.

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<sup>3</sup> Note that these rents do not derive from market power in non-aeronautical services, but rather from locational other value created by the aeronautical activity. So these non-aeronautical rents do not entail any welfare loss on the part of customers, who pay competitive prices for these services.

## Dual-till means airlines do not have to underwrite non-aeronautical activities

We believe that this is the single biggest drawback with the current single-till regime. Unlike competitive pricing, it is possible that aeronautical charges could be set too high under single-till regulation, either because there is a shortfall in projected revenues or because the airport operator over-invests in retail capacity and uses the regulatory till to insure it against possible losses.

In our view, this observation does not justify the abandonment of single-till because dual-till is guaranteed, by its incentives described above, to deliver an excessive level of charges.

The problem lies in the way in which single-till has been applied, not in the principle of single-till *per se*. It would seem to us that an appropriate process of benchmarking terminal opex and capex, utilisation rates for commercial retail space and forecasts of incremental commercial revenues, could substantially mitigate the risks of the airport operator over-investing to speculate on future non-aeronautical revenues. If it chooses, the Commission has the power to substitute its benchmarked view of efficient retail operating costs and efficient capital costs relating to retail space in place of DAA's actual costs, given the projected retail revenues. Alternatively, given the difficulty of cost allocation, the Commission could assume an efficient level of retail revenues from the allocated retail space, based on comparable benchmarks with other airports.

This approach could give DAA a powerful incentive only to invest in retail space as it is needed and to manage that retail space effectively once it is in place.

It seems to us within the ability of the Commission to devise such a methodology before the next price review. We would be happy to lend our assistance in thinking through a workable scheme.

We do not consider that dual-till regulation is an appropriate response to this problem, because of its inherent bias towards an excessive level of aeronautical charges. Furthermore, we suspect that dual-till regulation would not prevent the DAA from seeking to underwrite excessive retail development from regulated revenues. With T2 as a case in point, the problem with dual-till regulation would be to allocate unused space between aeronautical and non-aeronautical functions. If T2 contains too much space at present, the DAA would have an incentive to argue for as much as possible of this space to be treated as aeronautical. This would have the effect of placing the capital costs within the regulated till. The problem for the Commission would be: how to identify the retail-related costs of a terminal when the space is not yet being used for retail and has multiple possible future uses? It seems simpler to remain within the single-till framework, avoid the cost allocation problem altogether, but allow total costs commensurate with projected passenger numbers (rather than actual costs) or include assumed

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commercial revenues commensurate with the space available (rather than actual retail revenues).

We note that the problem of the costs of excessive retail space in T2 was raised by Aer Lingus at the 2010 appeal procedure. At that time the appeal panel considered that the Commission had effectively dealt with this risk by unitising the capital costs of T2 over future passenger numbers. We are not convinced that unitisation is sufficient to deal with this issue. If those costs include an excessive allowance for empty retail space and insufficient incremental retail revenues then the unitised cost will embody a loss to the DAA which would be recovered from aeronautical charges, albeit spread over an extended period.. This does not appear to be an efficient pricing solution.

This answer also covers the point the Commission raises about the incentive to “gold plate” non-aeronautical investments. This seems to be essentially the same point.

### Dual-till encourages competition in the airport's commercial activities

We do not agree that dual-till brings benefits with regard to competition for commercial activities. But the situation is complicated and there are a number of factors involved.

First, the Commission should be aware that even in a competitive airport market, airlines and the airport have some degree of common interest in maximising commercial profits. As described above the airport needs to maximise these profits to remain competitive. Equally the airlines want to maximise these rents because this implies lower aeronautical charges.

Under both competition and single-till regulation the feed through from these rents to aeronautical charges is not direct. In both cases the airport retains the benefit of any increased rents in the short run. But the airlines gain in the longer term, either because either competition or regulation (depending on the case) forces the airport to pass these benefits back to its customers in the medium term. Competition and single-till regulation *may* differ in their precise dynamic because of the timing over which benefits are passed back to customers, but this is not a problem unique to commercial rents under single-till regulation. This is a problem that affects efficiency incentives in general under price cap regulation: how fast can the benefits of efficiency be returned to customers and still give the regulated company the incentive to pursue these efficiencies?

It should be noted that airlines benefit from commercial profits increasing, not commercial *revenues*, that means airlines do not have an interest in commercial revenues increasing at any cost; only if the increase in revenues generates profits. Furthermore, under any system the interests of airlines and airports are not entirely aligned with respect to commercial revenues. It is generally considered that commercial revenues increase with passenger terminal dwell times as well as

passenger numbers. But airlines do not generally have an interest in increasing terminal dwell times, because this may deter passengers from travelling and create operational inefficiency for the airline.

To argue, as the Commission does, that dual-till regulation alleviates these “problems” or increases the competitive pressure on commercial activities seems to be missing the point. Under either system the airport has the incentive to maximise commercial rents. And under dual-till regulation airlines would *still* have an interest in these rents, albeit reduced, because of the incentives on the monopolist to return a proportion of retail rents to its aeronautical customers.

Finally, the scenario painted by the Commission is of the airport restricting competition for certain commercial activities in order to maximise rents. This would suggest the airport had some degree market power over these services. In which case, removing them from the scope of regulation would seem to be an inappropriate response.

### Dual-till implies more efficient use of slot constrained airports

We do not think dual-till regulation necessarily implies more efficient use of slots than single-till regulation.

Dual-till regulation probably implies higher aeronautical charges at all times, but it is not clear that this is a “more efficient” outcome. As we have already highlighted, aeronautical charges based on dual-till would be excessive, because of the failure properly to pass back in aeronautical charges the value of any non-aeronautical rents generated as a by-product of the aeronautical activity. If charges are excessive overall there is an associated welfare loss, which is undesirable.

As regards what happens during periods of congestion, if airport charges themselves do not rise to choke off demand, then other forms of rationing are used to do so. This is true under single-till or dual-till regulation. The result of this process is that slots in short supply acquire an economic value. By using a slot at a constrained time the airline incurs an opportunity cost equal to the aeronautical charge *plus* the value it could get from relinquishing the slot. If the aeronautical charge were a little higher, as it might be under dual-till regulation, it is not clear the overall opportunity cost of the constrained slot would change, as that is determined by the demand for use of the slots at the constrained time. What would happen is the value of the slot itself would decline somewhat, reflecting the higher level of airport charge.

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### Dual-till reduces the scope of the airport's business that the regulator has to scrutinise

We think that dual-till regulation would not necessarily reduce the scope of the business that the Commission has to examine.

Under dual-till regulation the Commission would not need to forecast non-regulated revenues. But in place of this small benefit, the Commission would now be faced by an intensive exercise of cost allocation between aeronautical and non-aeronautical activities. It would have to identify the elements of capital expenditure and operating expenditure in terminals that relate to commercial activities and those that relate to aeronautical activities. It would have to do the same exercise for the RAB and for all allowed depreciation. As the Commission admits, such an exercise is extremely difficult and the answers are essentially arbitrary.

It would, in addition, introduce a whole new area of potential regulatory gaming, in the presentation of the boundary between the aeronautical and non-aeronautical activities.

Policing this boundary would require the Commission to consider all aspects of the airport's business, to ensure that cost allocations were as robust as possible and that no gaming was going on. Hence we do not think that dual-till reduces the scope of the business that the regulator has to scrutinise.

### Dual-till makes it easier to estimate the cost of capital

We are not convinced that dual-till regulation makes estimating the cost of capital easier. Moreover, even if this were the case, it would seem to be one element of simplification at the expense of a host of additional complications.

It is not obvious that it would be easier to measure the airport's cost of capital. The scope of the activities covered by the cost of capital would be reduced, but where non-commercial activities are a by-product of the aeronautical function then is it actually more appropriate to consider the cost of capital of an artificial construct that is divorced from the reality of the airport's operations?

Furthermore, in terms of benchmarks for comparison, the Commission would be restricted to airports regulated under a dual-till system. Whereas under a single-till regime the Commission could use all unregulated airports functioning in competitive markets. Benchmarking against the former would seem to be much more restrictive, as well as somewhat circular.

In addition, as we have already made clear in our response to the previous point, our view is that to perform dual-till regulation properly involves significantly more oversight and more problems in other areas, particularly relating to cost allocation. This suggests it would be misguided to change the system of regulation over one element of the regime.

## Dual-till creates more stable airport charges

We have noted in the past that the way the Commission applies price cap regulation means that prices fluctuate up and down with passenger numbers without regard to any changes in the long run incremental cost of processing passengers. We accept that netting off expected commercial revenues can have a similar effect, with the deductions being reduced during a recession if commercial revenues are forecast to fall. But neither of these need be the outcome of regulation under either dual-till or single-till. The Commission should consider *long run* regulation that smooths the effects of the cycle and recovers costs when the passenger numbers justify.

The same applies to commercial revenues. We have already noted that a competitive airport nets off an efficient level of commercial revenues not its actual commercial revenues. It will retain the value of any exceptional efficiency but it will not be able to recover losses that could have been avoided without the commercial activities. Some cyclical variation is likely in these circumstances, but it is probable that the airport would take a long run view of pricing. We see no reason why the Commission could not also take a long run view of efficient commercial revenues which smooths out any extreme cyclical variations but ensures the airport can earn a fair return over the long run.

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