

## Chapter 4

# **The Financial Equilibrium of Universal Service Providers in a Liberalized Postal Market\***

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### **1. INTRODUCTION**

In their paper on liberalization and universal service, Crew and Kleindorfer introduced the concept of a “graveyard spiral” (Crew and Kleindorfer, 2000). Under certain circumstances, liberalization of the postal market could lead, despite successive price increases, to an undermining of the financial equilibrium of a universal service provider (USP). The financial position of the USP could become so adverse that the universal service obligation (USO) would need to be significantly compromised, entry restricted or a subsidy provided. In trying to determine the likelihood of such an outcome, Crew and Kleindorfer conclude their paper by stating that “The sixty four billion dollar question is how big a USO and how much entry? The current state of knowledge is inadequate in answering it”.

It is clear that if little entry occurs then a graveyard spiral will not arise. This is the central case developed in Cohen et al (2004, 2005) for the USA. Cohen et al (2004) in their benchmark case estimate that less than 20% of mail is contestable and, unless entrants are assumed to be very much more efficient than USPS, most of the contestable traffic would remain with USPS if delivery were open to competition. Furthermore, limited entry and the implied low level of financial return would make it difficult for entrants to

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attract funding from capital markets. Earlier work by the USPS suggested that the risk of entry would be higher (Kolin and Smith, 1999). Cohen et al (2004) also examine cases where much more entry is assumed to occur and here find that price increases, in some cases very large ones, would provide sufficient revenue to allow USPS to maintain financial equilibrium after entry. By contrast, Crew and Kleindorfer (2005) and D'Alcantara and Amerlynck (2004) develop models which indicate that a graveyard spiral is possible in the absence of a subsidy or significant relaxation of the USO.

In this paper we examine the prospects for a graveyard spiral in the UK, focusing on the case where the USO remains unchanged so that the key issues involve the second of Crew and Kleindorfer's uncertainties, namely the extent and implications of entry. In this we use Royal Mail data and apply it to a model of competitive entry. We follow a similar approach to that adopted by Cohen et al (2004) and calculate the scale of price increases necessary to offset losses in contribution due to entry where entrants do not react to changes in Royal Mail's prices and the definition of universal service is unaltered. Clearly, there are other ways to try to recover the losses in contribution arising from competitive entry, most notably through improvements in the underlying efficiency and cost level of Royal Mail, and although these are not considered further in the paper they impact on the prospect or otherwise of a graveyard spiral. Royal Mail's prices are subject to price controls on their overall level and at product level through sub-caps. However, the UK regulator's primary duty is to ensure the provision of a universal postal service so we report results in the paper which allow prices to change to required levels irrespective of the terms of the current price control.

The paper is structured as follows. Section 2 outlines our approach and results are reported in section 3. In a final section we draw conclusions and implications from our results regarding the requirements for financial equilibrium of USPs in a liberalized postal market. An appendix sets out a brief statement of the model used to evaluate the prospects for a graveyard spiral.

## **2. OUTLINE OF APPROACH**

With an unchanged USO, liberalization and ensuing entry are likely to lead to a loss of contribution by a USP which is required to meet the fixed costs of universal service provision. How significant this loss of contribution is likely to be is an empirical question. In terms of a forward-looking assessment of whether such a loss is likely to lead to a graveyard spiral, it is necessary as a minimum to formulate and calibrate a quantitative model of