The left hand side of (35) is an increasing function of ψ and α, which we write as $\hat{B}(\psi, \alpha)$. Then, the function $B(\varepsilon, \varphi, \psi)$ in Proposition 4 is defined by substituting $\alpha = A(\varepsilon, \varphi)$ into $\hat{B}(\psi, \alpha)$. Thus,

$$B(\varepsilon, \varphi, \psi) \equiv \hat{B}(\psi, A(\varepsilon, \varphi)) - h \tag{36}$$

Any solution $(\varepsilon, \varphi, \psi)$ then satisfies $B(\varepsilon, \varphi, \psi) = 0$, which proves Proposition 4.

When ε increases, either due to an expected appreciation of the US dollar, or to an increase in fundamental risks in the world economy, then either global banks deleverage, or regional banks deleverage, or both.

The logic of our argument also applies in reverse. In our model, the size of the global banking system is constrained only by the contemporaneous fundamental risks encapsulated by ε. Thus, when ε declines - say, due to an expected depreciaton of the US dollar - the global banking system expands to use up the newly found slack in the banking system. This feature of our model is closely related to the discussion in Borio and Disyatat (2011) and Borio (2014) who have coined the term "excess elasticity" to denote the expansion of the financial system in the face of subdued fundamental risks.

2.4 Comparative Statics

In preparation for our empirical investigation, we explore some implications of our model. The expressions for total cross-border lending (34) can be expressed in long hand as

$$
\text{Total cross-border lending} = \frac{\text{Global and weighted regional bank capital}}{1 - \text{spread} \times \dfrac{\text{regional}}{\text{leverage}} \times \dfrac{\text{global}}{\text{leverage}}} \tag{37}
$$

Here, φ and ψ are interpreted as normalised leverage measures (regional and global) that lie in the unit interval $(0, 1)$.

An implication of our model is that both the *level* of bank leverage (which determines the rate at which one dollar's increase in bank capital is turned into lending) and the *change* in the leverage (which determines the lending based on *existing*, or *infra-marginal* bank capital) should enter as "supply push" determinants of banking flows. We will examine the evidence shortly.