Introduction[1]

The United States' recent financial crisis induced the Federal Reserve to make a number of unconventional policy interventions, many of which changed the Fed's financial risk profile. The Bank of England found itself in a similar situation. The ECB and the Eurosystem's national central banks were also faced with a string of financial crises, albeit of somewhat different origins. These central banks too have resorted to unconventional measures that are larger and financially riskier than any previously undertaken. And confronted by inflows of money seeking a safe haven, the Swiss National Bank has intervened heavily and repeatedly since 2009, with massive consequences for its balance sheet and the accompanying financial risks.

Even as these dramatic increases in the financial riskiness of leading central banks began, Willem Buiter was prompted to write a note asking: "Can central banks go broke?"[2] And after the Swiss central bank reported heavy losses in 2010 and the first half of 2011, Thomas Jordan was moved to give a speech enquiring rhetorically: "Does the Swiss National Bank need equity?"[3] While both provided relatively reassuring answers, they also suggested that challenges to the independent effectiveness of a central bank could result from financial weakness.

Such concerns are normally reserved for countries with underdeveloped financial systems and long histories of problems with economic governance. That they have now come up in connection with more advanced economies is part of the motivation for this paper. Changes in central banks' mandates, and the continuing use of non-standard policies during ongoing financial crises, are likely to affect central bank finances, especially if their financial buffers have not been reinforced for such a situation. How might that matter? Could policy objectives be threatened, and if so, how? What options might be available to limit unintended consequences for central banks' policy effectiveness, while preserving accountability? These are matters addressed in this paper.

The paper is structured as follows. Part A outlines the character and purpose of central banks and how they differ from commercial banks, and defines what is meant by finances and financial strength. Part B provides data on the financial strength of a representative sample of central banks. It illustrates the components of financial strength, and demonstrates large disparities across central banks. The reasons for these disparities are addressed in Part C, which allows us to explore the question of how much financial strength is required in specific circumstances. Part D presents a framework for assessing what degree of financial strength and capitalisation is appropriate.

Some data presented in Parts B and C are unavailable from public sources. In many cases, the institution has been anonymised; however, some non-public data are presented and attributed, with permission. Specific cases are discussed to illustrate points, but without intent to praise or criticise. As will become clear, there

[1] In grateful and fond memory of Andreas Keller (Swiss National Bank). A sincere thank you as well to numerous colleagues at central banks and at the BIS, for the wealth of ideas, information, patience and goodwill.

[2] Buiter (2008). Buiter was not first to address the issue of central bank finances (see Part A.2), but is mentioned here both because his note was prompted by the first round of extraordinary policy actions by central bank in the recent crises and because of the striking title.

[3] Jordan (2011).

are good reasons why there is no standard rulebook or practice for central bank financial management. The specific cases illustrate the reasons for this diversity.