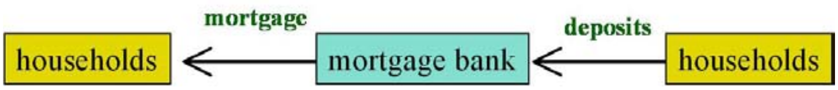
Figure 2
Short intermediation chain



securities will end up losing money, the financial intermediaries that have issued the securities are in danger of larger losses. Since the intermediaries are leveraged, they are in danger of having their equity wiped out, as some have found to their cost.

Indeed, Greenlaw et al (2008) report that of the approximately 1.4 trillion dollar total exposure to subprime mortgages, around half of the potential losses were borne by US leveraged financial institutions, such as commercial banks, securities firms and hedge funds. When foreign leveraged institutions are included, the total exposure of leveraged financial institutions rises to two thirds (see Figure 1). Far from passing on the bad loans to the greater fool next in the chain, the most sophisticated financial institutions amassed the largest exposures to the bad assets.

A characteristic feature of financial intermediation based on the US-style securitization system is the long chains financial intermediaries involved in channeling funds from the ultimate creditors to the ultimate borrowers. The difference can be illustrated in figures 2 and 3. Figure 2, depicts a traditional deposit-taking bank that collects deposits and holds mortgage assets against household borrowers. Until around 1990, the bulk of home mortgage assets in the United States were held by savings intitutions and commercial banks (see Adrian and Shin (2008)).

In recent years, however, the proportion of home mortgages held in government sponsored enterprise (GSE) mortgage pools have become the dominant holders. The chain of financial intermediation has become correspondingly much longer and more heavily dependent on overall capital market conditions. Figure 3 illustrates one possible chain of lending relationships whereby credit flows from the ultimate creditors (household savers) to the ultimate debtors (households who obtain a mortgage to buy a house).In this illustration, the mortgage asset is held in a mortgage pool - a passive firm whose sole role is to hold mortgage assets and issue liabilities (mortgage-backed securities, MBSs) against those assets. The mortgage-backed securities might then be owned by an asset-backed security (ABS) issuer who pools and tranches the MBSs into another layer of claims, such as collateralized debt obligations (CDOs). Then, a securities firm (a Wall Street investment bank, say) might hold CDOs on their own books for their yield, but finances such assets by collateralized borrowing through repurchase agreements (repos) with a larger commercial bank. In turn, the commercial bank would fund its lending to the securities firm by issuing short term liabilities, such as financial commercial paper. Money market mutual funds would be natural buyers of such short-term paper, and ultimately

Figure 3
Long intermediation chain