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Working Party on Financial Statistics

EQUITY EXPOSURE OF THE U.S. HOUSEHOLD SECTOR

To be held on 29 November - 1 December 2010
OECD Conference Centre
Beginning at 2:15 p.m. on the first day

This document has been prepared by Susan Hume McIntosh (Federal Reserve, USA) and will be presented under item 4 of the draft agenda

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Equity Exposure of the U.S. Household Sector

Prepared by Susan Hume McIntosh
and Elizabeth Ball Holmquist

Working Party on Financial Statistics
November 30, 2010
OECD, Paris

First I would like to thank my colleague Elizabeth Ball Holmquist for her
assistance in preparing these slides.

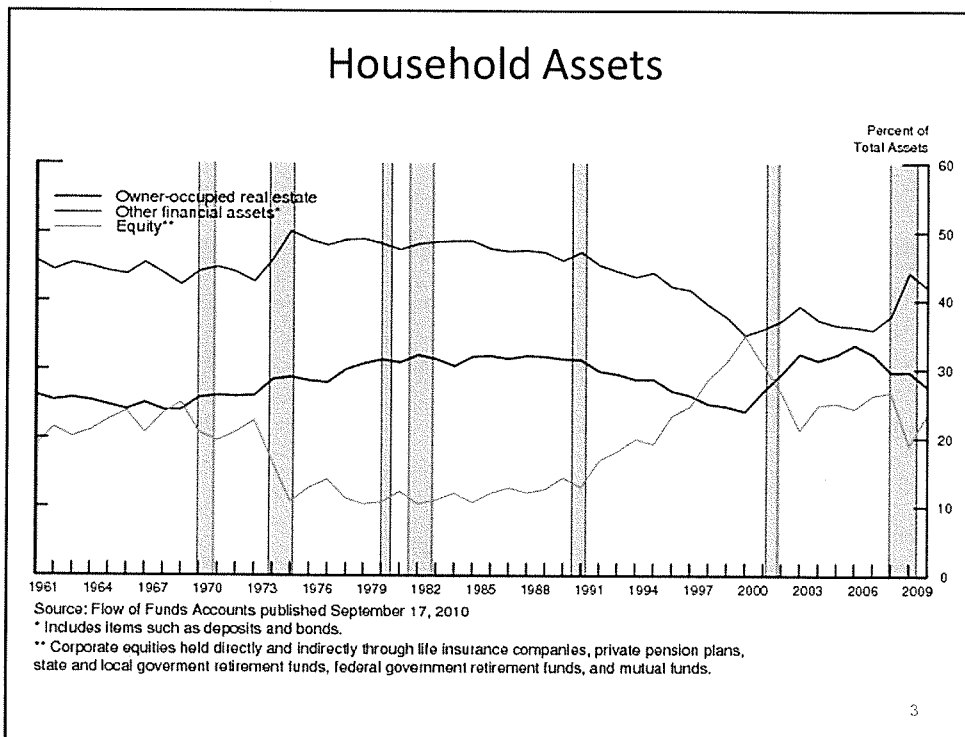
Main Points

- Show alternative way of looking at U.S. household balance sheets to highlight risks in portfolios due to stock market prices
- Equities held indirectly now larger than those held directly
- Table B.100.e introduced in June 1998 is the household balance sheet with equity detail

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The point of this presentation will be to show an alternative way of looking at the U.S. household balance sheet that better highlights the risks households face in their portfolios due to the volatility of stock market prices. It is no longer sufficient just to look at their direct holdings of corporate equities. Households now face more stock market risk through their investments in corporate equities through mutual funds, retirement plans, and life insurance companies than through direct holdings.

In June 1998, the U. S. introduced a new table B.100.e "Balance Sheet of Households and Nonprofit Organizations with Equity Detail" , which I will show you in a minute. It is our attempt to give you a better tool for assessing household balance sheet exposure to stock market volatility.

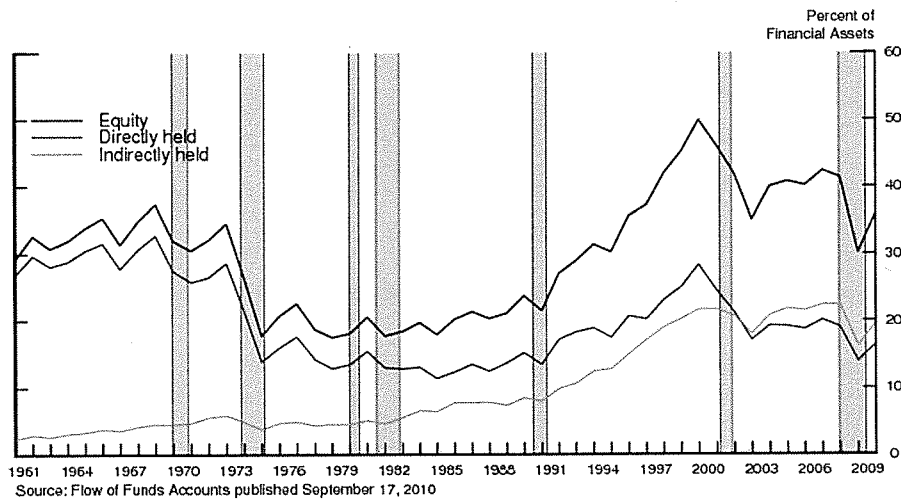


This chart shows the shifting role of owner-occupied real estate, directly and indirectly held equity, and other financial assets, such as deposits and bonds, as a percent of total assets. **Owner-occupied real estate** as a percent of total assets (black line) was fairly stable from 1960 to 1990, averaging around 28 percent. However, there was a downward drift during the 1990s to a low of about 24 percent. As housing prices rose in the first half of the past decade, the percentage of total assets attributable to owner-occupied housing climbed to around 33 percent. The housing bust associated with the recent financial crisis caused the ratio to retreat to below 30 percent again.

Directly and indirectly held equity as a percent of total assets (blue line) has been more volatile. Stock market prices dropped during most recessions, shown as shaded bars on the chart, causing this ratio to decline also. Throughout the 1960s and early 1970s the ratio stayed around 20 percent. However, with the recession in the mid-seventies the ratio dropped in half to around 10 percent and stayed low during the 1980s. This period was followed by a boom in tech stocks in the 1990s, with the ratio shooting up to 35 percent by 1999. The collapse of the tech stocks caused the ratio to shrink back down to 21 percent, similar to the 1960s period. The ratio edged up slightly before declining again with the stock market collapse during the recent financial crisis. Most recently, the ratio is around 23 percent.

The red line represents mainly **fixed-income type assets** and as a percent of total assets has remained fairly stable at around 46 percent until the mid-1990s. At that point investors shifted out of fixed income assets into stocks to take advantage of the rapidly rising stock market, causing the ratio to drop to a low of 35 percent in 1999. The ratio retraced itself to a high of 44 percent during the recent financial crisis reflecting a flight to safety.

Corporate Equity Shares Held by Households (Market Value)



This next slide dissects corporate equity shares at market value as a percent of total financial assets (black line) into directly held and indirectly held shares. Directly held shares (red line) accounted for about 90 percent of total equity until the mid- 1970s when mutual funds and individual retirement funds became more popular. The growth of indirectly held equities (blue line) began to take off in the 1980s, and by 2001 households were equally exposed to the stock market through indirectly held corporate equities as directly held shares. Household exposure to the volatility of the stock market through mutual funds, pension funds, and life insurance companies is now greater than through directly held shares of equity.

B.100.e Balance Sheet of Households and Nonprofit Organizations with Equity Detail (1)
 Billions of dollars; quarterly figures are seasonally adjusted annual rates

	2007	2008	2009				2010		
			Q1	Q2	Q3	Q4	Q1	Q2	
1 Assets	78608.7	65693.1	62947.0	64647.6	67140.0	67710.1	68967.8	67412.8	1
2 Tangible assets	27946.0	24261.7	23126.9	23236.8	23421.3	23449.9	23526.4	23675.2	2
3 Financial assets	50662.8	41431.4	39820.2	41410.8	43718.7	44260.2	45441.3	43737.6	3
4 Deposits	7406.6	7925.6	7902.8	7794.6	7634.2	7742.6	7667.9	7559.1	4
5 Credit market instruments	4066.7	3956.4	4386.7	4079.0	4153.0	4054.0	4257.1	4329.6	5
6 Equity shares at market value	20939.0	12473.5	10935.1	13060.8	15321.9	15873.8	16750.0	14867.8	6
7 Directly held	9626.1	5776.3	4989.8	6017.8	7098.7	7247.4	7680.0	6767.9	7
8 Indirectly held	11312.9	6697.2	5945.3	7043.0	8223.2	8626.4	9069.9	8100.0	8
9 Life insurance companies	1466.8	956.9	887.9	1037.7	1210.5	1268.1	1340.2	1365.8	9
10 Private pension funds	4260.5	2471.9	2158.5	2527.7	2926.7	3055.6	3209.9	2867.6	10
11 Defined benefit plans	1660.7	903.5	757.6	847.8	952.6	975.2	999.0	862.6	11
12 Defined contribution plans	2599.8	1568.5	1400.9	1679.9	1974.1	2080.3	2210.8	2005.0	12
13 State and local govt. retirement funds	2221.0	1338.3	1191.8	1391.6	1622.0	1702.6	1796.2	1572.9	13
14 Federal government retirement funds	149.1	85.6	74.7	92.5	110.4	119.4	127.8	112.6	14
15 Mutual funds	3215.5	1844.4	1632.5	1993.4	2353.6	2480.7	2595.8	2281.1	15
16 Other	18250.4	17076.0	16595.6	16476.4	16609.8	16589.8	16766.5	16981.0	16
17 Liabilities	14366.8	14266.2	14151.4	14117.9	14107.5	14068.5	13946.6	13912.7	17
18 Net worth	64242.0	51426.9	48785.6	50529.7	53032.5	53641.6	55021.2	53500.1	18
Memo:									
19 Equity shares excluding defined benefit plans (line 6 minus lines 11, 13 and part of line 14)	17035.9	10219.3	8975.1	10809.2	12733.4	13181.8	13940.0	12419.6	19
Equity shares (line 6) as a percent of									
20 Total assets (line 1)	26.6	19.0	17.4	20.2	22.8	23.4	24.3	22.1	20
21 Financial assets (line 3)	41.3	30.1	27.5	31.5	35.0	35.9	36.9	34.0	21

(1) Estimates of equity shares (lines 7 through 15) could differ from other sources owing to alternative definitions of ownership of equity by households. Prior to 1985, all pension assets are assumed to have been in defined benefit plans.

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Because of the growth in indirectly held equity and the great volatility of the stock market in the 1990s, Chairman Greenspan requested that we look at the exposure of households to the stock market through all types of instruments they hold. In June 1998, we released the first version of the table shown on this slide --I realize it is a little hard to read--to help our users understand this shifting trend. This is supplemental table B.100.e in our Z.1 release and is called "Balance Sheet of Households and Nonprofit Organizations with Equity Detail".

Line 7 is the level of directly held equity and line 8 is the indirectly held equity. Lines 9-15 show equity indirectly held by sector. These sectors include life insurance companies, private defined benefit pension plans, private defined contribution pension plans, state and local government retirement funds, federal government retirement funds, and mutual funds.

Line 19 is the total value of equity shares excluding those held indirectly through defined benefit plans, an alternative way to look at exposure since households don't typically control the investment strategy of these retirement plans. And lines 20 and 21 are ratios of total equity shares, including direct and indirect, as a percent of total assets and of total financial assets, respectively.

Household Indirectly Held Shares Through Private Defined Benefit Pension Plans (in billions of dollars for 2009Q:4)

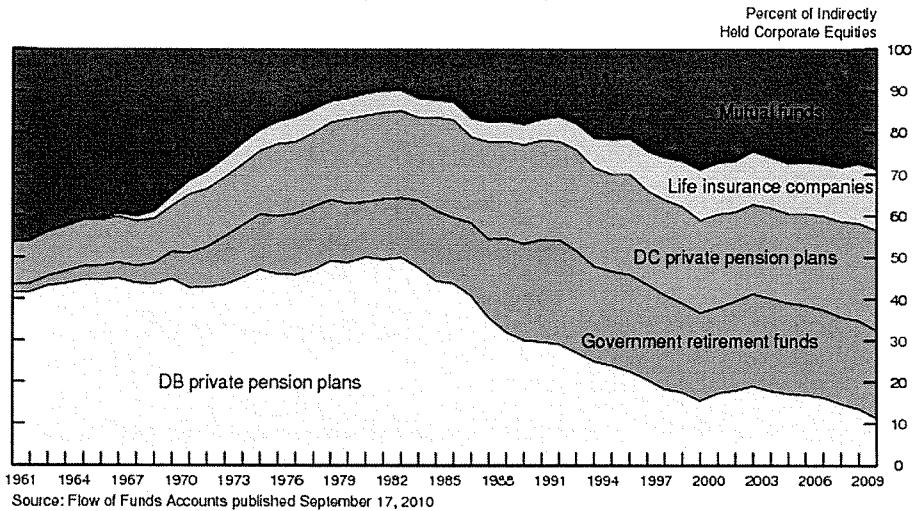
1. DB directly held stocks: \$805.2
2. DB mutual fund shares (mf): \$286.3
3. % stocks for all mf: $\$4136.2/\$6961.6 = 59.4\%$
4. % stocks for DB mf: $59.4\% * \$286.3 = \170.1
5. HH equity exposure through DB pension plans: $\$805.2 + \$170.1 = \$975.3$

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This slide gives an example of how we calculate household equity exposure through private defined benefit pension plans for 2009:Q4. All of these pension plans are held by households. Thus, all directly held stock in private defined benefit pension plans, \$805.2 billion, is held indirectly by households (line 1). These plans also hold mutual fund shares amounting to \$286.3 billion (line 2). We calculate the proportion of all mutual funds that are invested in equity, 59.4 percent, (line 3) and assume that private defined benefit pension plans' mutual fund holdings are invested in stocks at the same proportion, equaling the \$170.1 billion calculated on line 4. Thus, household equity exposure through private defined benefit pension plans (line 5) is the sum of these plans' directly held stock (\$805.2 billion) and equity exposure through their mutual fund shares (\$170.1 billion).

We do similar calculations for the other retirement fund sectors. For mutual funds, we calculate the proportion of mutual fund shares directly held by households multiplied by the equities held in mutual funds. For life insurance companies, we make an estimate of equities held in separate accounts from our source data and assume all of these are held by households.

Corporate Equity Shares Held Indirectly by Households (Market Value)



This slide illustrates the relative importance of each of the sectors through which households hold equities indirectly. However, it is important to keep in mind that in addition to the shift in the type of investment vehicle shown here, interest rates and stock market prices will affect the type of investment within each of those vehicles, that is bonds or equities. This chart shows only households' equity investments over time.

Defined benefit private pension plans (light blue area) were the main source of retirement funds fifty years ago. Their share has since declined as many corporations no longer offer these plans or offer less generous benefits. They have, in part, been replaced by defined contribution pension plans (green area). Federal and state and local governments (darker blue area) have held on to their defined benefit plans in much greater numbers, but have also introduced defined contribution plans such as the federal government's Thrift Saving Plan. With the shift away from defined benefit plans and more favorable tax treatment of individual retirement saving vehicles, the number of defined contribution private pension plans offered has grown over time. Life insurance (yellow area) annuities have also become more attractive. In addition, households have found that mutual funds (red area) provide a much easier way to invest and to shift portfolio allocations rather than by directly purchasing individual stocks and bonds.

Conclusion

- To measure the effect of a volatile stock market on household net worth you must look at both direct and indirect equity exposure
- Table B.100.e gives an alternative way to present households' equity exposure
- Important in looking at the adequacy of retirement income

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To summarize, in order to measure the effect of changing stock market prices on household net worth, you must look both at household's directly held stock portfolio as well as the stocks they hold indirectly through mutual funds, life insurance companies, and retirement funds. The stock exposure through these other investment vehicles has become just as significant to their portfolios as the stocks they hold directly.

Table B.100.e in the U. S. Flow of Funds Accounts gives an alternative presentation of household balance sheets, allowing you to see the complete picture of their equity exposure. Going forward, this alternative presentation can be helpful in answering questions such as whether households will have adequate retirement income.