

# Case Study

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## Jim & John - The Tale of Two HECM's

This case study compares the fortunes of two retirees who start retirement with identical securities portfolios, receive identical amounts of retirement income throughout a 30-year retirement and live in identical homes. The study illustrates how a securities portfolio (such as a 401(k) account or a rollover IRA) that provides retirement income can be substantially helped by a reverse mortgage credit line. More specifically, when the credit line is used in coordination with the portfolio, instead of as a last resort, it prolongs the life of the portfolio and greatly increases the net worth (and the legacy) of the retiree.

In this case study, “John” has used the “last resort” strategy; he has exhausted his portfolio in his 24th year of a 30-year retirement and has built up a debt of nearly \$539,000 against his home by the end of that 30-year retirement. By contrast, “Jim” has used the coordinated strategy; he has a portfolio with more than \$1 million at the end of a 30-year retirement and a debt of about \$692,000 against his home. Thus at the end of the 30-year retirement, Jim has a net worth that is more than \$900,000 greater than John has, even though both retirees started in identical financial situations and received identical amounts of retirement income.

The coordinated strategy is very simple: In each year directly following a year of negative investment returns in the portfolio, the portfolio is not drawn upon. Instead, the reverse mortgage credit line is drawn upon for the retiree’s income. In this strategy, the reverse mortgage credit line is used to offset the “adverse sequence of returns.”

The investment returns used in the study are those of a real balanced portfolio, specified in widely distributed publicity materials by a nationally known investment management and financial planning firm. The constant purchasing power draw

rate is, at the outset, 5.5% of the initial portfolio value. (The assumed inflation rate is a constant 3.5%.) The 5.5% draw rate is well above the so-called “4% rule;” therefore, without the reverse mortgage credit line, there was a greater than 40% likelihood that the portfolio would be exhausted in 30 years, and approximately a 30% likelihood that the portfolio would be exhausted in 25 years.

Although this case study is only one example, we can produce (and have produced) thousands of other examples, using Monte Carlo simulation. In the overwhelming majority of the examples produced by the simulation, the results are similar to those of this case study. That is, the coordinated strategy results in a far greater probability of cash flow survival throughout a 30-year retirement, and a high probability of a far greater net worth (or legacy) at the end of that retirement, than does the “last resort” strategy. ■

*The numbers assume the following for both portfolios: \$500,000 initial investment prior to withdrawals invested 50% in the S&P 500 and 50% in the Barclays U.S. Aggregate Bond Index; with income taken each year, adjusted for a fixed, hypothetical 3.5% inflation and hypothetical 2% investment fee.*

*Note: The bond portion of the portfolio from 1973 through 1975 is represented by: 25% Citigroup Long-term High Grade Corporate Bond Index and 25% U.S. Government Bond File since the Barclays Aggregate Bond Index did not start until 1976. It is not possible to invest directly in an index. Standard & Poor's 500 Index (S&P 500) is comprised of 500 stocks representing major U.S. industrial sectors. Performance figures are inclusive of dividends reinvested. S&P 500 is a registered service mark of the McGraw-Hill Companies, Inc. Barclays Aggregate Bond Index is a market value-weighted index of investment-grade fixed-rate debt issues, including government, corporate, asset-backed and mortgage securities, with maturities of one year or more.*

**CASE STUDY - PROTECT AGAINST SEQUENCE-OF-RETURN AND REVERSE DOLLAR-COST AVERAGING**



drawn from Reverse Mortgage Line of Credit (LOC)  
drawn from Portfolio

\* Draws beginning Year 1 @ 5.5%  
\*\* Inflation @ 3.5%  
\*\*\* Principal & Interest & Mortgage Insurance Premium

			Conventional i.e. Last Resort Method "John" (draw from Reverse Mortgage LOC after Portfolio is drained)				
Year	Year	Age	Amount in portfolio at beginning of year (before draw)	Historical Investment Performance	Draws* (at beginning of year) Adjusted for Inflation**	Amount in portfolio at end of year	RM P&I&MIP*** @ Year 30 (5% APR)
1	1973	65	\$500,000	-9.28%	\$27,500	\$428,652	
2	1974	66	\$428,652	-15.51%	\$28,463	\$338,120	
3	1975	67	\$338,120	22.30%	\$29,459	\$377,493	
4	1976	68	\$377,493	17.87%	\$30,490	\$409,013	
5	1977	69	\$409,013	-4.12%	\$31,557	\$361,905	
6	1978	70	\$361,905	2.22%	\$32,661	\$336,552	
7	1979	71	\$336,552	8.01%	\$33,805	\$326,998	
8	1980	72	\$326,998	15.41%	\$34,988	\$337,009	
9	1981	73	\$337,009	-1.36%	\$36,212	\$296,706	
10	1982	74	\$296,706	25.24%	\$37,480	\$324,655	
11	1983	75	\$324,655	13.32%	\$38,791	\$323,941	
12	1984	76	\$323,941	8.86%	\$40,149	\$308,935	
13	1985	77	\$308,935	25.19%	\$41,554	\$334,734	
14	1986	78	\$334,734	15.20%	\$43,009	\$336,068	
15	1987	79	\$336,068	3.41%	\$44,514	\$301,496	
16	1988	80	\$301,496	10.33%	\$46,072	\$281,809	
17	1989	81	\$281,809	20.94%	\$47,685	\$283,150	
18	1990	82	\$283,150	0.98%	\$49,354	\$236,087	
19	1991	83	\$236,087	21.36%	\$51,081	\$224,524	
20	1992	84	\$224,524	5.60%	\$52,869	\$181,268	
21	1993	85	\$181,268	7.91%	\$54,719	\$136,559	
22	1994	86	\$136,559	-2.76%	\$56,634	\$77,718	
23	1995	87	\$77,718	25.68%	\$58,617	\$24,007	
24	1996	88	\$24,007	11.07%	24,007 + 36,661 = 60,668	\$0	\$51,586
25	1997	89	\$0	19.25%	\$62,791	\$0	\$84,146
26	1998	90	\$0	16.99%	\$64,989	\$0	\$82,944
27	1999	91	\$0	7.79%	\$67,264	\$0	\$81,759
28	2000	92	\$0	-0.92%	\$69,618	\$0	\$80,591
29	2001	93	\$0	-3.68%	\$72,055	\$0	\$79,440
30	2002	94	\$0	-8.60%	\$74,576	\$0	\$78,305
					<b>\$447,954</b>	<b>\$0</b>	<b>\$538,773</b>
					Reverse Mortgage draws	Amount Remaining in Portfolio @ Years 25-30	Total RM Loan Balance @ Year 30 (P&I&MIP)***
							<b>-\$538,773</b>
							<b>Net</b>

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New Wisdom Method "Jim" (draw from Reverse Mortgage LOC following down market)				
Amount in portfolio at beginning of year (before draw)	Historical Investment Performance	Draws* (at beginning of year) Adjusted for Inflation**	Amount in portfolio at end of year	RM P&I&MIP*** @ Year 30 (5% APR)
\$500,000	-9.28%	\$27,500	\$428,652	
\$428,652	-15.51%	\$28,463	\$362,168	\$117,156
\$362,168	22.30%	\$29,459	\$442,932	\$115,482
\$442,932	17.87%	\$30,490	\$486,145	
\$486,145	-4.12%	\$31,557	\$435,859	
\$435,859	2.22%	\$32,661	\$445,535	\$110,603
\$445,535	8.01%	\$33,805	\$444,710	
\$444,710	15.41%	\$34,988	\$472,861	
\$472,861	-1.36%	\$36,212	\$430,710	
\$430,710	25.24%	\$37,480	\$539,422	\$104,417
\$539,422	13.32%	\$38,791	\$567,314	
\$567,314	8.86%	\$40,149	\$573,872	
\$573,872	25.19%	\$41,554	\$666,408	
\$666,408	15.20%	\$43,009	\$718,156	
\$718,156	3.41%	\$44,514	\$696,613	
\$696,613	10.33%	\$46,072	\$717,742	
\$717,742	20.94%	\$47,685	\$810,367	
\$810,367	0.98%	\$49,354	\$768,472	
\$768,472	21.36%	\$51,081	\$870,625	
\$870,625	5.60%	\$52,869	\$863,551	
\$863,551	7.91%	\$54,719	\$872,810	
\$872,810	-2.76%	\$56,634	\$793,650	
\$793,650	25.68%	\$58,617	\$997,459	\$86,603
\$997,459	11.07%	\$60,668	\$1,040,493	
\$1,040,493	19.25%	\$62,792	\$1,165,909	
\$1,165,909	16.99%	\$64,989	\$1,287,967	
\$1,287,967	7.79%	\$67,264	\$1,315,795	
\$1,315,795	-0.92%	\$69,618	\$1,234,712	
\$1,234,712	-3.68%	\$72,055	\$1,189,275	\$79,440
\$1,189,275	-8.60%	\$74,577	\$1,086,997	\$78,305
			<b>Amount Remaining in Portfolio @ Year 30</b>	<b>\$692,007</b>
		<b>\$333,310</b>		<b>Total RM Loan Balance @ Year 30 (P&amp;I&amp;MIP)***</b>
		<b>Reverse Mortgage draws</b>		

**Summary:**  
John runs out of money after 24 years while Jim takes income for 30 years and still has remaining assets. You can see how negative market returns early in retirement can substantially impact your portfolio.

Created By: Equity Access Corporation

\$394,991  
Net

\$933,764  
Estate is in a better position with the Reverse Mortgage