

**2007 PROGRAM DIRECTOR'S CONFERENCE  
SEPTEMBER 7-8 2007  
WASHINGTON STATE CONVENTION AND TRADE CENTER  
SEATTLE, WASHINGTON**

**SESSION: #977505**                      **TECHNICAL CONTENT ON RETIREMENT INCOME**

FRIDAY, SEPTEMBER 7, 2007  
11:00 AM – 11:50 AM

**PRESENTER:**                      Mr. David Littell, JD  
The American College  
270 South Bryn Mawr Avenue  
Bryn Mawr, PA 19010

David A. Littell, JD, is a professor of taxation at The American College. In this position he is responsible for course and textbook development for HS 326 Planning for Retirement Needs; HS 336 Financial Decision Making at Retirement; and HS 341 Selected Retirement Plan Topics. He also speaks regularly to financial advisers and benefits professionals on pensions and retirement planning.

Prior to joining the College, he was an attorney with the Philadelphia law firm of Saul, Ewing, Remick & Saul. In addition, from 1983 to 1989, he was senior staff attorney with Paul Tanker & Associates, a Philadelphia-based pension consulting and actuarial firm.

Active in the field of adult education, Professor Littell has been an instructor at the Philadelphia Institute, teaching various employee benefit topics and legal research, and has taught courses that are part of the Certified Employee Benefits Specialist program.

Professor Littell has also co-authored several books associated with American College courses: Planning for Retirement Needs, Financial Decision Making at Retirement, and The Practitioner's Guide to Advanced Pension Topics. He has published numerous articles for such periodicals as the Journal of Financial Service Professionals (formerly the Journal of the American Society of CLU & ChFC), FOCUS, Compensation and Benefits Management, and Benefits Quarterly. In 1997, Professor Littell won an Article Award from the Certified Financial Planner Board of Standards. He also has served on an Item Writing committee for the Board of Examiners of the CFP Board.

A native of Chicago, Professor Littell holds a BA degree in psychology from Northwestern University and earned his JD at the Boston University School of Law. He is a member of the Delaware County Bar Association and the Society of Financial Service Professionals, and has served as a board member of the ASPA Benefits Council of Delaware Valley.

Professor Littell, who resides in Ardmore, PA, is also actively involved in the sport of fencing and was a member of the 1988 U.S. Olympic Fencing Team. He currently is involved in coaching junior fencers.

**PRESENTER:**                      Dr. Walt Woerheide, CFP<sup>®</sup>, Ph.D.  
The American College  
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Walt Woerheide, CFP<sup>®</sup>, Ph.D., is VP of Academics and Dean at The American College. He also serves as the Frank Engle Distinguished Chair in Economic Security Research and Professor of Investments. He has held appointments as a professor of finance at the Univ. of Illinois at Chicago, the Univ. of Michigan - Flint, and Rochester Institute of Technology, as well as Visiting Scholar at the Federal Home Loan Bank Board. He has served as President of the Academy of Financial Services and the Midwest Finance Association. His books include Introducing Personal Finance, published by John Wiley & Sons, and Investments, 4<sup>th</sup> edition, published

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by The American College. His most recent publications include multiple articles in the Financial Counseling and Planning, Journal of Financial Service Professionals, the Financial Services Review, and the Journal of Financial Planning. He has been a judge for the Financial Frontiers Awards and the Kenneth Black, Jr., Journal Author Award Program given by the *Journal of Financial Service Professionals*. He also serves as an Associate Editor for the *Journal of Financial Service Professionals* and serves on the Editorial Board of the *Financial Services Review* and on the Editorial Review Board of *the Journal of Financial Planning*.

## Retirement Income

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Walt Woerheide, Ph.D., CFP®  
Frank M. Engle Distinguished Chair in Economic  
Security Research  
Professor of Investments  
The American College  
September 7, 2007

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## Traditional Investment Framework

- Capital Market Line & CAPM
  - Portfolio Risk defined by standard deviation or beta
- Goal is growth in the value of the portfolio

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## A New Risk-Return Paradigm

- Return = Cash withdrawn from the portfolio
- Risk = Probability of Portfolio Failure
  - Cash withdrawn is NOT the same as Portfolio Income or Return on Portfolio

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## Withdrawal Rate

- Defined as the amount withdrawn during the first year of retirement as a percentage of the value of the portfolio at the time of retirement
- Subsequent withdrawals depend on withdrawal strategy

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## Withdrawal Strategies

- 3 Basic Strategies
  - Flat annuity
  - Inflation-adjusted annuity
  - Performance-based annuity
- Naturally, there are multiple permutations that can be constructed

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## How Much Risk Exposure?

“Experts” say:

- Any risk is permissible, as long as there is full disclosure.
- A maximum probability in the 5 to 35 percent range.
- No more than one or two percent.

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## Optimal Withdrawal Rate

- Can easily be established if know the following:
  - Exact date of death
  - Exact rate of return that would be achieved on the portfolio each year
  - Exact desired amount of cash needed each year
  - Desired value of the estate

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## Literature Review

- **Cooley, Hubbard, and Walz (1998)**
- **Cooley, Hubbard, and Walz (2003b)**
- **Guyton (2004)**

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## **Cooley, Hubbard, and Walz (1998) (1 of 3)**

- Most retirees would likely benefit from allocating at least 50% to common stocks.
- For retirees with significant fixed costs and for those who tend to spend less as they age, CPI-adjustments will likely cause a suboptimal exchange of present consumption for future consumption.

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**Cooley, Hubbard, and Walz**

**(1998)**

**(2 of 3)**

- For stock-dominated portfolios, withdrawal rates of 3% and 4% represent exceedingly conservative behavior. At these rates, retirees who wish to bequeath large estates to their heirs will likely be successful. Ironically even those retirees who adopt higher withdrawal rates and who have little or no desire to leave large estates may end up doing so if they act reasonably prudent in protecting themselves from prematurely exhausting their portfolios.

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**Cooley, Hubbard, and Walz**

**(1998)**

**(3 of 3)**

- For short payout periods (15 years or less), withdrawal rates of 8% or 9% from stock-dominated portfolios appear to be sustainable.

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**Cooley, Hubbard, and Walz**

**(2003b) (1 of 2)**

- Simulation and the overlapping periods methodology imply sustainability of a fixed annual 7% withdrawal rate for 30 years from portfolios with at least 50% stock. When withdrawals are adjusted for inflation, both methodologies imply sustainability of the 4% (plus) withdrawal rate for the 50% stock-50% bond portfolio over 30 years. These implications are drawn assuming that 75% is the lowest acceptable portfolio success rate.

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### Cooley, Hubbard, and Walz (2003b) (2 of 2)

- CHW also recommend to financial planners that when they are making recommendations using long withdrawal periods, they should probably use a simulation methodology. However, when making recommendations involving shorter withdrawal periods, the overlapping periods methodology might be better because it produces the same results as simulation, and it would be easier for clients to understand.

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### Guyton (2004)

- Finds that skipping inflation adjustments when the portfolio has declined in value, combined with limiting the nominal increase in inflation adjustments allows for substantially higher withdrawal rates

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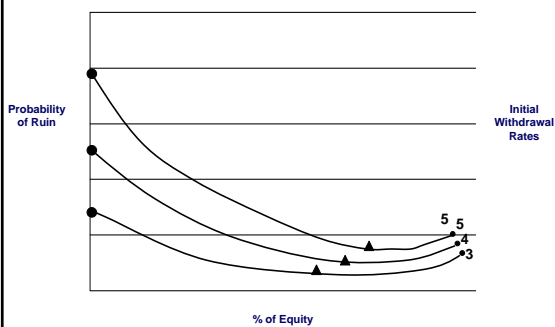
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Probability of Ruin, Portfolio Compounding, and Initial Withdrawal Rate



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### Most Research Overstates Probability of Portfolio Failure

- Underestimate flexibility of retirees to adjust to income reductions
- Omission of normal reduction in living expenses
- Omission of Bond Immunization

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### Why Research Also Understates Probability of Portfolio Failure

- Omission of Transaction Fees and Taxes
- Inability to Match the Performance of Indexes

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### Harvesting Sequence

- Makes sense only if both portfolios are invested in the same securities
- Consider 3 types of portfolios:
  - Tax Exempt (Roth IRA)
  - Tax Deferred (Traditional IRA)
  - Non-qualified
- Let's look at pair wise comparisons

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### **Tax-Exempt versus Tax-Deferred**

- Sequence does not matter, longevity will be the same
- The one exception is if the client's marginal tax rate expected to change. If so,
  - If fall, harvest tax-exempt first
  - If rise, harvest tax-deferred first

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### **Tax-Deferred versus Taxable**

- Harvest taxable first

### **Tax-Exempt versus Taxable**

- Harvest taxable first

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### **The American College**

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**Accumulating Retirement Assets  
Simple Solutions for a Tough Problem**

David Littell, JD  
Boettner Research Chair

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### Simple Saving Solutions

- Sole proprietors with no employees
  - SEP
  - Solo 401(k)
- Businesses with employees
  - Safe harbor
  - Enhanced match

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### Savings for Sole Proprietors

- Sole proprietors with no employees
  - Retired consultants/second job/board member
  - Usually unincorporated
- Could choose defined benefit
- Typically a defined contribution plan allows sufficient savings

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### Using a SEP (or PSP)

- Sole Proprietor with \$225,000\* or more in earnings can contribute \$45,000 (2007)
  - Sec. 415(c) maximum allocation per participant is the lesser of 100% of pay or \$45,000
  - Deduction limit is 25% of total compensation of all participants (20% for unincorporated entities -  $20\% \times \$225,000 = \$45,000$ )
- Sole proprietor with \$120,000\* in earnings can contribute \$24,000
  - 20% of \$120,000
- Owner of incorporated entity with \$180,000 or more in salary can contribute \$45,000
  - 25% of \$180,000 = \$45,000

\* Schedule C income less Social Security deduction

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### SEP Opportunities

- Sec. 415(c) and 25% deduction limits do not apply to unrelated employers\*
- Related employers means controlled group and affiliated service groups
- Example: Full time employment and self employment income (can shelter 20% of self employment income)
- Example: Director's fees

\*Except 415 aggregates non profits and businesses wholly owned by one person

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### Why 401(k) for the Sole Proprietor?

- Allows maximum \$50,000 contribution
  - \$5,000 catch-up salary deferral is in addition to the \$45,000 limit
- Allows larger contributions at lower income levels
- Age 50 with \$120,000 in income
  - \$15,500 salary deferral
  - \$5,000 catch up deferral
  - \$24,000 profit sharing (20% of \$120,000)
  - Total \$44,500
- Income of \$147,500 supports \$50,000
- Note that salary deferral limits aggregate salary deferrals to even unrelated employers (\$20,500 is the max.)

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### Adding Family Members

- Add spouse/child who is performing services
- With SEP can shelter additional 20/25%
- With 401(k) total contributions can equal 100% of income

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## Plan Designs for the Small Business

- Objective
  - Instead of starting with the question “What is the maximum contribution for the owners?”
  - Ask the question “What is the largest contribution for the owners—using a 401(k) plan using a simple design?”

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## Safe Harbor 401(k)

- What is the cost of the owner’s making maximum salary deferrals without ADP/ACP testing?
- 3% Non-Elective
  - All eligible employees
  - Fully vested
- \$1.00 match on first 3% / 50¢ next 2%
  - Max exposure is 4% of compensation
  - Fully vested

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### 3% Non- Elective Safe Harbor

STEPHEN H. ROSEN  
ASSOCIATES, INC.

Employee-(Age)	Comp.	Deferrals	3% Non- Elective	Total Allocation
HCE-(60)	\$220,000	\$15,000	\$6,600	\$21,600
HCE-(50)	220,000	15,000	6,600	21,600
NHCE-(40)	50,000	2,400	1,500	3,900
NHCE-(30)	35,000	2,000	1,050	3,050
NHCE-(25)	30,000	0	900	900
NHCE-(25)	20,000	0	600	600
NHCE-(23)	20,000	800	600	1,400
NHCE-(23)	19,000	0	570	570
NHCE-(28)	30,000	0	900	900
NHCE-(27)	18,000	0	540	540
	<b>\$662,000</b>	<b>\$35,200</b>	<b>\$19,860</b>	<b>\$55,060</b>
HCE-ADP	6.82%			
NHCE-ADP	1.81%			
		Cost Benefit Analysis		
				% of Total
	HCE-ER Total	\$43,200		86.64%
	NHCE-ER Total	\$6,660		13.36%
	Total	\$49,860		100.00%

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## Safe Harbor 401(k)

- Enhanced Match (w/o testing)
  - Added to safe harbor match or 3% safe harbor non-elective contribution as an additional discretionary match
  - Can only match up to first 6% of pay deferred
  - Maximum contribution of 4% of compensation
  - Must be same rate for HCE/NHCE
  - Optimal rate is 66.67% of first 6% deferred

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### Enhanced Match

Employee	Comp.	Deferrals	Safe Harbor Match <sup>1</sup>	Enhanced Match <sup>2</sup>	Catch-Up	Total Allocation
HCE-(60)	\$220,000	\$15,000	\$8,800	\$8,800	\$5,000	\$37,600
HCE-(50)	220,000	15,000	8,800	8,800	5,000	37,600
NHCE-(40)	50,000	2,400	1,950	1,600		5,950
NHCE-(30)	35,000	2,000	1,400	1,333		4,733
NHCE-(25)	30,000	0	0	0		0
NHCE-(25)	20,000	0	0	0		0
NHCE-(23)	20,000	800	700	533		2,033
NHCE-(23)	15,000	0	0	0		0
NHCE-(28)	30,000	0	0	0		0
NHCE-(27)	18,000	0	0	0		0
	<b>\$662,000</b>	<b>\$35,200</b>	<b>\$21,650</b>	<b>\$21,066</b>		<b>\$87,916</b>

HCE-ADP	6.82%					
NHCE-ADP	1.39%					

<u>Cost Benefit Analysis</u>						
					<u>% of Total</u>	
HCE-ACP	4.00%			HCE-ER Total	\$75,200	85.51%
NHCE-ACP	1.07%			NHCE-ER Total	\$7,516	8.51%
				<b>Total</b>	<b>\$82,716</b>	<b>94.02%</b>

<sup>1</sup> Safe Harbor Match is 100% of the first 3% of comp deferred plus 50% of the next 2% of comp. deferred  
<sup>2</sup> Enhanced Match is 66.67% of the first 6% of comp deferred.

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