




The Frontier of Retirement Income

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Main Point...


- Retirement is more than a date, period or stage of life. It also defines a structural change in financial **risk exposure**.
- There is a growing opportunity in the **longevity insurance** space to help manage unique challenges towards the end of the lifecycle.

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Retirement Pensions...

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Fidelity to end employee pension plan The Boston Globe

Change reflects push for 401(k)s

By Ross Kerber, Globe Staff | March 29, 2007

Fidelity Investments is eliminating its traditional pension

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Frozen Plans

Avaya (09/2003) ~~Verizon~~ (11/2005)
Aon (10/2004) ~~Verizon~~ (12/2005)
NCR (5/2004) ~~Verizon~~ (01/2006)
Circuit City (10/2004) ~~IBM~~ (01/2006)
Motorola (12/2004) ~~Verizon~~ (01/2006)
GM (03/2005) ~~Wendy's~~ (02/2006)
Sears (04/2005) ~~Verizon~~ (03/2006)
HP (07/2005) ~~Verizon~~ (06/2006)
Lockheed (10/2005) ~~Verizon~~ (11/2006)

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What about Canada?

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30% of Canadian firms expect to terminate their DB plan...

Globe and Mail, October 14, 2006

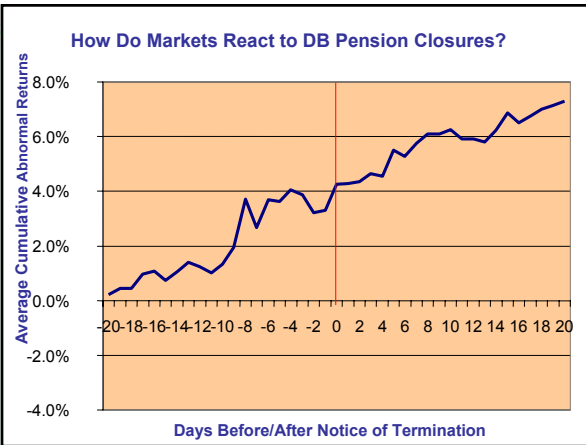
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Pensions Plans in Canada: The Trend is Clear...

% of Total Plans	Yr 2000	Yr 2007
Defined Benefit	53%	30%
Defined Contribution	22%	40%
Hybrid, Flex & other...	25%	30%

Source: Towers Perrin Benefits Data Bank (BDB)

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Markets Like Frozen DBs: Announcement Impact on Stock Price

Return	20 Day Window	Annualized Equivalent
Holding Period	5.19%	32.4%
Adjusted for Risk (CAR)	3.78%	23.6%

Source: Milevsky and Song (2008)

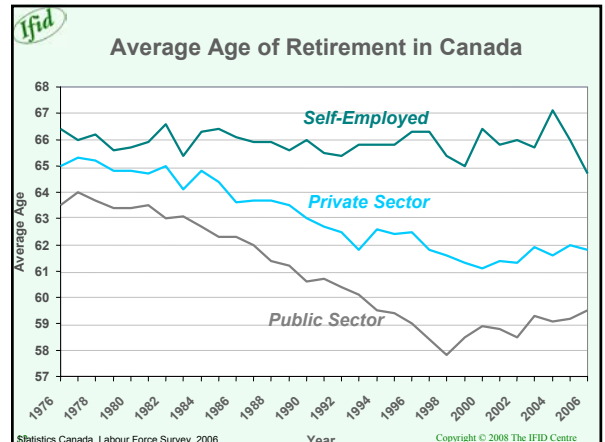
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Retirees vs. Active Workers

Company	Retirees per 100 Workers:
Toyota:	2
Honda:	5
Nissan:	11
Chrysler:	153
Ford:	163
GM:	320

Sources: Eduardo Porter, *Makers Put Health and Pension Burdens Squarely on the Workers*, New York Times, May 19, 2006; GM letter to stockholders, 2005; "GM, UAW Deal May Presage 'New U.S. Auto Industry,'" Detroit Free Press, 2007; IFID Centre Calculations

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Aging and Longevity...

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The Canadian Median Age Years 1956 - 2006

Year	Median Age
'56	27.2
'61	26.3
'66	25.4
'71	26.2
'76	27.8
'81	29.6
'86	31.6
'91	33.5
'96	35.3
'01	37.6
'06	39.5

Source: The Globe and Mail, July 18, 2007 (Data: Statistics Canada) Copyright © 2008 The IFID Centre

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Percentage of Population Over 65 Years of Age

Country	Percentage
New Zealand	12
United States	12
Australia	13
Canada	13.7
Russia	14
France	16
United Kingdom	16
Portugal	17
Spain	17
Germany	19
Italy	19
Japan	20

Source: The Globe and Mail, July 18, 2007 (2006 World Population Data Sheet, Statistics Canada) © 2008 The IFID Centre

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Life Expectancy?

Number of Canadians...

Age	Number	% Female
> 90	177,925	73%
> 100	4,635	83%

Source: Statistics Canada, 2006 Census of Population, Statistics Canada catalogue no. 97-551-XCB2006011 Copyright © 2008 The IFID Centre

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Range of Life Expectancy at Birth for Both Sexes in the Canadian Provinces: 1921-1997

Year	Highest Province (years)	Lowest Province (years)
1926	64	54
1931	65	57
1936	65	59
1941	67	62
1946	69	65
1951	71	67
1956	72	69
1961	73	70
1966	73	71
1971	74	72
1976	74	73
1981	76	74
1986	77	75
1991	78	76
1997	79	77

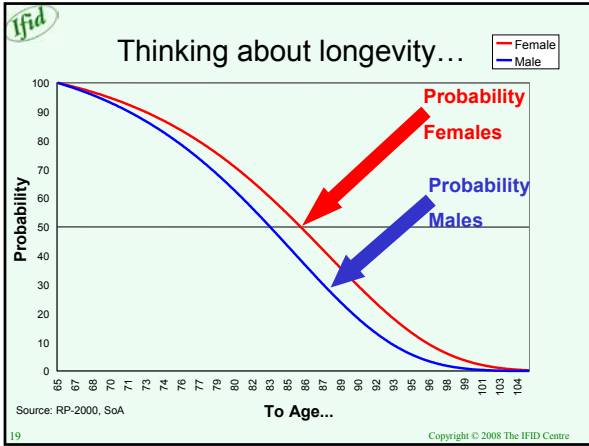
Data Sources: Institute for Clinical Evaluative Sciences; Atlas Reports, The Health of Ontarians Organization for Economic Cooperation and Development Health Data 1998 Copyright © 2008 The IFID Centre

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Probability a member of a 65 year-old Canadian Couple will Live to Age...

Age	Joint
70	99.34%
75	96.07%
80	87.07%
85	68.46%
90	41.11%
95	15.85%

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5-Year Relative Survival Rates

Year	All Cancers	Prostate Cancer	Female Breast Cancer
1977	50.0%	70.0%	75.2%
1987	55.6%	81.1%	83.3%
1997	64.7%	99.7%	88.4%

Source SEER Program, National Cancer Institute; Reported in National Underwriter, July 31, 2006

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- Best-practice female life expectancy...has risen during the last 160 years at a steady pace of almost **3 months per year**...
 - One reasonable scenario would be that this trend will continue...life expectancy will reach **100 in about six decades**.
- "Broken Limits to Life Expectancy"**
J. Oeppen and J.W. Vaupel
SCIENCE, Vol. 296, 10 May 2002
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Breaking News

Helping Women Face Longevity Risk

BY JIM CONNOLLY
NU Online News Service, Nov. 17, 2006, 11:35 p.m. EST

The well-known fact that wives tend to outlive their husbands could hit

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What Reduces Your Retirement Mortality Rates (Beyond the Obvious)?

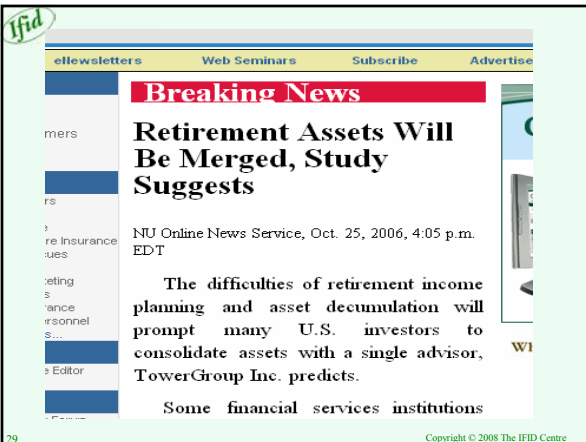
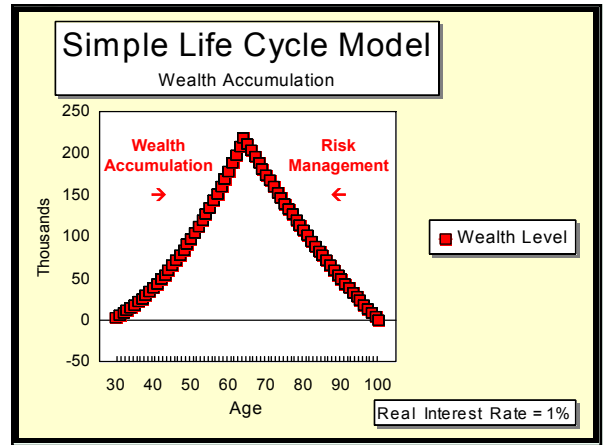
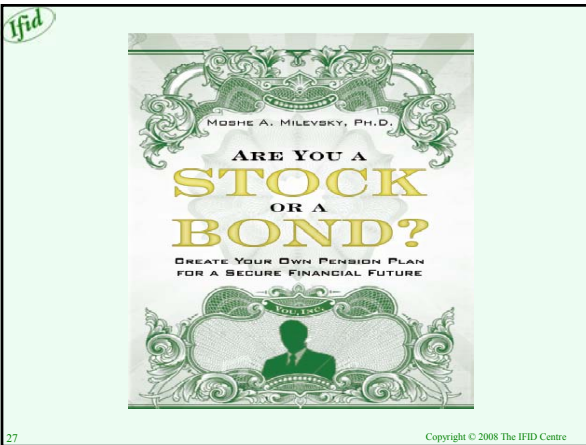
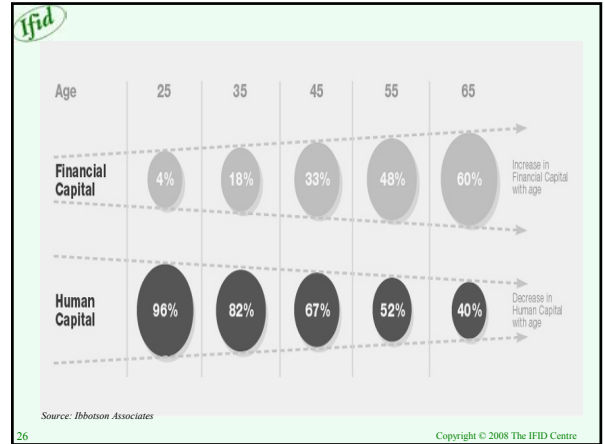
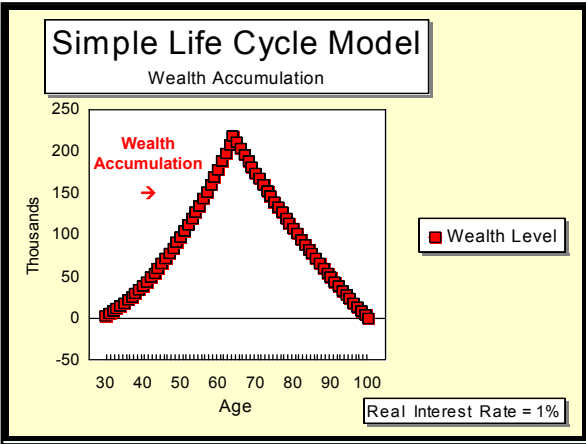
All Genders	- Parents Lived Beyond Age 75 - Mentally Active During Retirement
Male Only	- Being Married
Female Only	- Being Single or Divorced

Source: Max Planck Institute for Demographic Research

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Portfolio Management

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Retirement in Canada (2005)

Number of Canadians Above Age 55:	7.4 Million
% of 55+ Group Who are Retired:	63.7%
Retired: Completed Required Years...	19.6%
Retired: For Family Responsibilities...	23.7%
Retired: Due to Personal Health...	22.8%
Retired: Sufficient Financial Security...	17.2%
Retired: Because Laid-off from Work...	8.4%

Numbers don't add to 100%. Multiple reasons can be given.

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March 17, 2008 | **Risk management is key to distribution planning**

Alpha is king during accumulation, but not for retirees, says expert

By Doris Merrado

Financial advisers and clients can be their own worst enemies when chafing plans for retirement income. Making common – but critical – errors that can tip distribution plans, according to an essential guideline.

“The main reason the retirement industry has been about accumulating, and the main objective has been

“The Bureau of Labor Statistics created a CPI-U for elderly people, why not a CPI-R for a CPI-R?” Mr. Milevsky asked.

“The cost of living increased,” he said. “Your inflation has to meet your distribution rate, not your CPI.”

Mr. Milevsky cited the regulatory and regulatory risk as another key factor. “The survival rate for all causes has risen dramatically over the past two decades and that means people are needing their 100% benefits.”

He noted that 45 percent of all jobs has a 25 to 35 percent chance of being lost, and the main objective has been

Advisers reported that clients often can be their own worst enemy when they come to the counseling.

“The biggest thing I see into are retiring clients who are aggressive and want to play that way. Then there are others who have very much to cash and find themselves in a bind,” he said.

Advisers noted out of consulting for the income in another meeting in the private-client group at B.F. Lafferty & Co. Inc. in New York.

“When clients decide to work with me, they are charged with the task of getting out of their way and staying out of my way,” he said.

“What clients are experiencing on

the ground level often differs from what they are seeing on the news or reading about in the papers,” Mr. Goldman said.

“It’s baffling to them when they hear the inflation isn’t that bad,” he said. “They think about how much they pay for milk and gas.”

Showing clients their own calculations during the year, along with creating a budget plan for health care, has been helpful for Mr. Hickey, he said.

“Other problems coming about include projecting accounts will it come in 20 years,” he added.

“How is that a long enough time to make the distribution?” Mr. Hickey asked. “We don’t know the volatility – what will trigger between now and when the clients die?”

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Living with Volatility

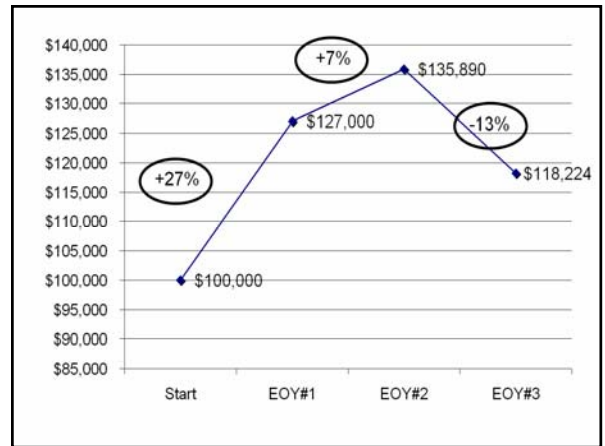
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Sequence of Returns: Do Clients Understand?

- Accumulation: invest \$100,000 in fund earning:
 - +27% in year #1;
 - +7% in year #2;
 - 13% in year #3.
- Question: Are you ahead after 3 years?

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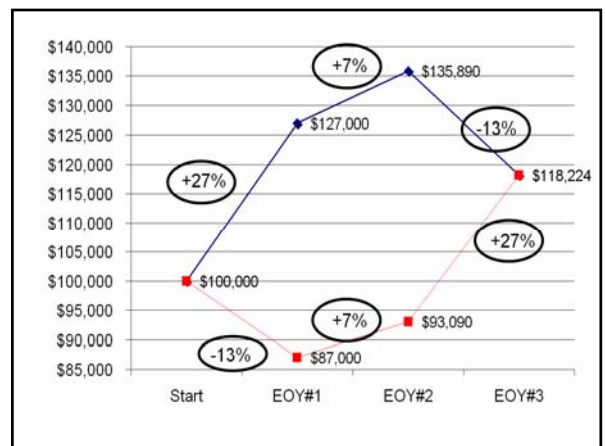


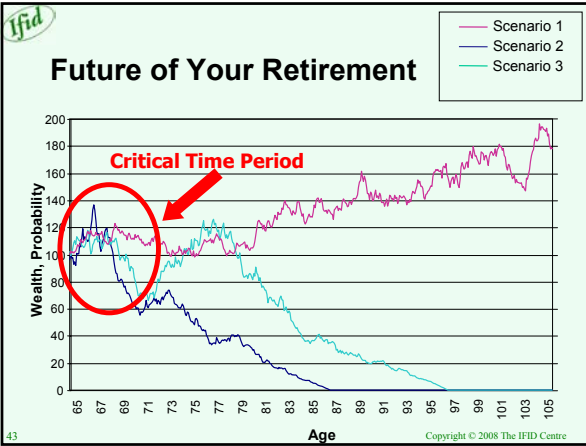
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Now Change the Order...

- What if I reverse the **sequence of returns** and earn (-13%) during the first year, then (+7%) in the second year and then (+27%) in the final year?
- Starting with the same \$100,000 investment, do I end-up with more or less than the above mentioned **\$118,224**?

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Retirement Ruin Probability
Who (and When) is to Blame?

	Correlation of Return with Probability of Ruin
1 st Decade	-83%
2 nd Decade	-29%
3 rd Decade	-13%

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- Final Takeaway Points**
- In the accumulation phase we convert **human capital** into **financial capital**.
 - At retirement this process ceases and you are responsible for creating **sustainable income**.
 - Capitalize on opportunities to efficiently manage your clients **longevity risk**.
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