Touchdown (or Not): Consumption Smoothing Among Professional Football Players

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California Institute of Technology
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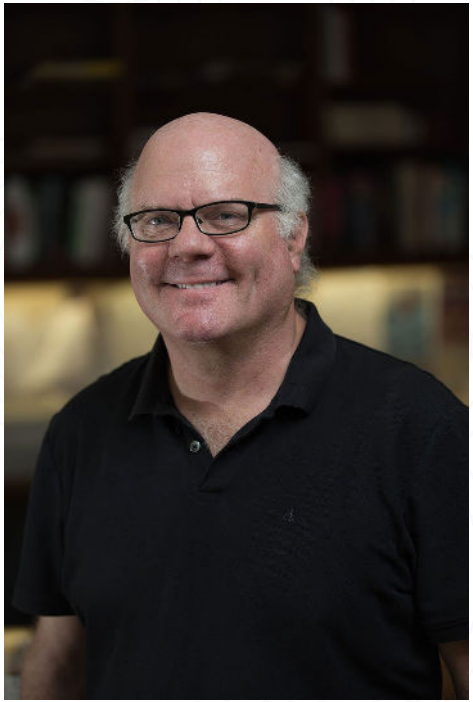
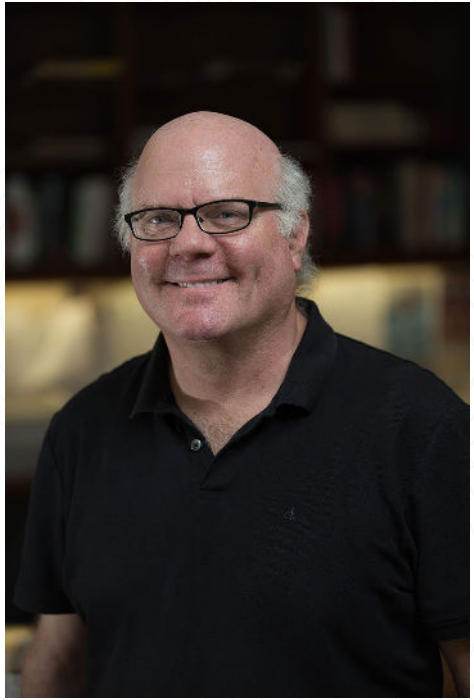
A big reunion

- I met Colin at the behavioral economics bootcamp he organized at Berkeley
- Very impressive ..
- ..and fun!



Colin’s work and approach

- Interdisciplinary
- Challenging notions of *homo economicus*
- Creativity and genius



Our project published in the American Economic Review P&P, 2015

We study NFL Players

Bankruptcy Rates among NFL Players with Short-Lived Income Spikes†

By Kyle Carlson, Joshua Kim, Annamaria Lusardi, and Colin F. Camerer*

One of the central predictions of the life-cycle hypothesis is that individuals smooth consumption over their economic life cycle; thus, they save when income is high to provide for when income is likely to be low, such as after retirement.

We test for consumption smoothing in a group of people whose income profile does not just gradually rise then fall, as it does for most workers, but rather has a very large spike lasting only a few years. These people are players in the National Football League (NFL). A career lasting six years (the median length) will provide an NFL player with more earnings than an average college graduate will get in an entire lifetime, plus a modest pension (Figure 1). However, earnings are risky because an injury can cut a player's career short. Even healthy players' careers usually end by their mid-30s. Players' typical post-retirement income is much lower than the income they earn while playing, and NFL retirement benefits are modest (Weir, Jackson, and Sonnega 2009). These features of income level and uncertainty are presumably known to players. To maintain a smooth level of consumption after the predictable post-NFL income drop, a rational, patient player should therefore save a large portion of his NFL earnings and enter retirement with a high net worth.

It is difficult to measure the ups and downs of the consumption and wealth of NFL players. Therefore, to test whether NFL players have adequate savings we measure how many retired NFL players file for bankruptcy.

In simulations not reported here, benchmark forecasts of optimally-saving individuals with income spikes, calibrated to what the NFL players actually earn, yield essentially no simulated bankruptcies (based on Livshits, MacGee, and Tertilt 2007). However, NFL players may not save enough because of optimism about career length, poor financial decisions, or social pressures to spend (factors we will consider in ongoing work).

Indeed, we find that initial bankruptcy filings begin to occur very soon after retirement and continue at a substantial rate through at least the first 12 years of retirement.

I. Data Sources

We collected data on all players drafted by NFL teams from 1996 to 2003 ($N = 2{,}016$).[1] NFL players are public figures so information about them is available from many sources. We used pro-football-reference.com and NFL.com to obtain basic information, including full name, career length, date of birth, hometown, and college. Annual NFL salary information

The team working on the project

Authors

Colin F. Camerer
MacArthur Fellow, Neuroeconomist, and Robert Kirby Professor of Behavioral Economics, CalTech

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Academic Director
GFLEC

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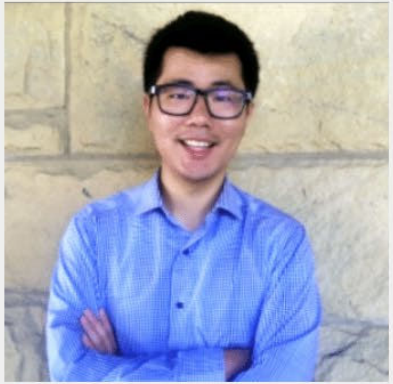

Joshua Kim
Economics PhD Student
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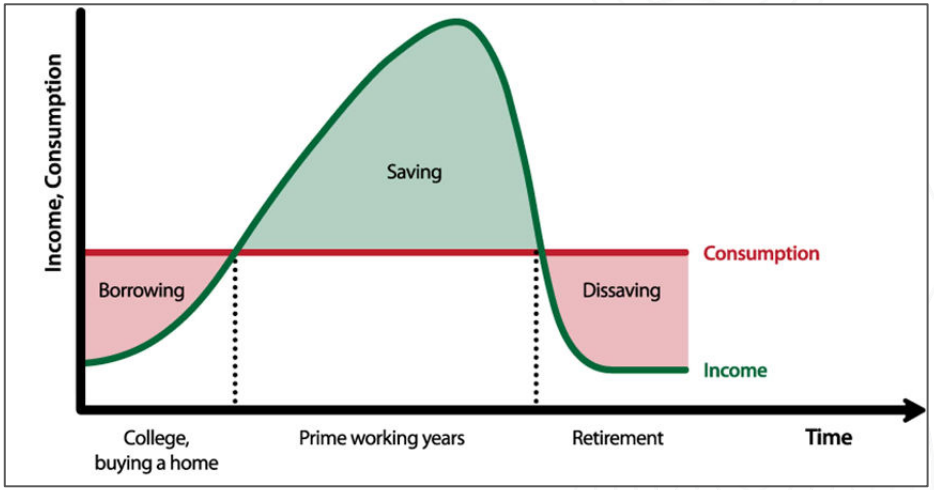
A classical theory of saving: the life cycle model

- Individuals prefer smooth consumption to variable consumption
- Thus, people save during high-earnings times and borrow from savings during low-earnings times
- This theory has been tested a million times



Spiky incomes

- Careers lasting 6 six years (median length) will provide an NFL player more earnings than an average college graduate gets in a lifetime
- Pension benefits are modest for NFL players
- Earnings after playing are normally much lower than when players play in the NFL

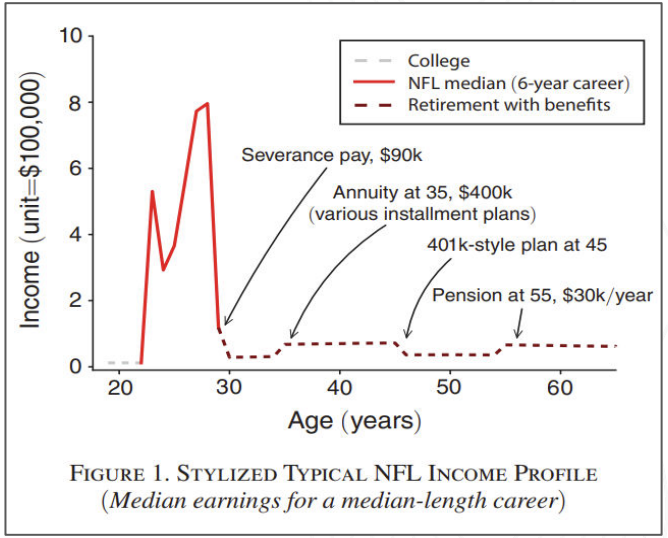


FIGURE 1. STYLIZED TYPICAL NFL INCOME PROFILE
(Median earnings for a median-length career)

Data collection

- We collected data on all players drafted by NFL teams from 1993 to 2006
- Salary data from USAToday and Spotrac, beginning in 2000
- We follow players into retirement (data up to 2013)
- Bankruptcy data was collected from a commercial background check service

Some stats

- The median level of earning across all players is about $3.2 million (in 2000 dollars)
- Careers are not long (median length is 6 years), Ray Lewis or Tom Brady are not the rule!
- There is little/no bankruptcy in our data before players retire

Bankruptcy rates over time

- Before retirement, bankruptcy rates hover near zero
- At the beginning of retirement, we see an increase in the hazard rate
- The hazard rate picks up as players move into retirement, it increases steadily up to 15.7% at 12 years of retirement
- Our estimates suggest a bankruptcy rate between 15% and 40% by 25 years after retirement

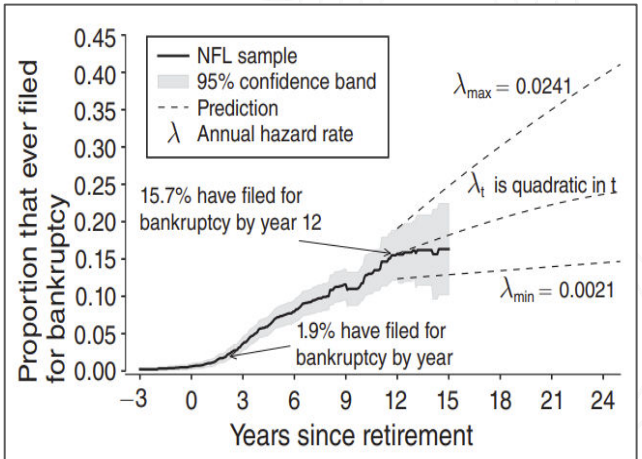


FIGURE 3. EVOLUTION OF BANKRUPTCY RATES DURING RETIREMENT

Source: Authors' calculations (see data description for details).

Estimates of bankruptcy hazard rates

- Having higher income does not much affect going bankrupt
- The length of the career is also not predictive of hazard rates
- Being retired raises the risk of bankruptcy from nearly zero to a substantial level

TABLE 1—EFFECTS OF CAREER LENGTH, EARNINGS, AND RETIREMENT ON THE BANKRUPTCY HAZARD RATE

		Effect of . . .	
Model #	Career variable in the model	Career variable	Being retired
(1)	None		1.123*** (0.092)
(2)	Career length	−0.017 (0.027)	1.200*** (0.155)
(3)	Career earnings	−0.003 (0.018)	1.090*** (0.164)
(4)	log earnings	0.075 (0.090)	1.052*** (0.145)
(5)	Quad. earnings	0.012 (0.034)	1.057*** (0.175)
(6)	Draft round	0.042 (0.047)	0.939*** (0.219)

Notes: Estimates are effects on the annual hazard rate multiplied by 100. Standard errors, in parentheses, are clustered by individual. The quadratic earnings effect is the average marginal effect.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

How does this compare to the general population?

- Looking at those who have declared bankruptcy in the same age group (Sullivan, Thorne, and Warren (2001)), they tend to have lower incomes than the NFL players

- National Longitudinal Survey of Youth 1997 (similar time period as our sample): Bankruptcy rate among NLSY men in the same age cohort as the NFL sample is much lower than the NFL players' rate

Summary: When the touchdowns stop

- NFL players have their lifetime earnings concentrated in the first decade of their life.
- Despite having such high earnings, NFL players tend to declare bankruptcy relatively soon after retirement
- Total earnings and career length do not influence bankruptcy rates

Implications for policy and programs

- Raise awareness
- Influence National Football League Players Association (NFLPA)
- Financial education program for athletes and professional football players
- Personal finance courses in college

WSJ article and tons of interviews

- Colin and I wrote about our work in the WSJ
- So many interviews over time
- Think about it at the next Super Bowl!

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EXPERTS BLOG

The Sad Financial Future That Awaits Many NFL Players

By Annamaria Lusardi and Colin Camerer

Feb. 5, 2016 6:30 am ET

Built a dedicated webpage

- Posted the interviews that describe our work
- Explain our work in simple ways
- A Big Idea video

Extending to NBA players

New Research Projects: NBA Players

GFLEC is now working on collecting data on NBA players and looks forward to extending its research to other sports in collaboration with board member and former WNBA player Rushia Brown. Through conducting research pertaining to the NFL, NBA, and other professional sports leagues, GFLEC aims to both highlight the issue of professional athletes' financial illiteracy and create solutions that lead to professional athletes' long-term financial success.

Preliminary Findings:

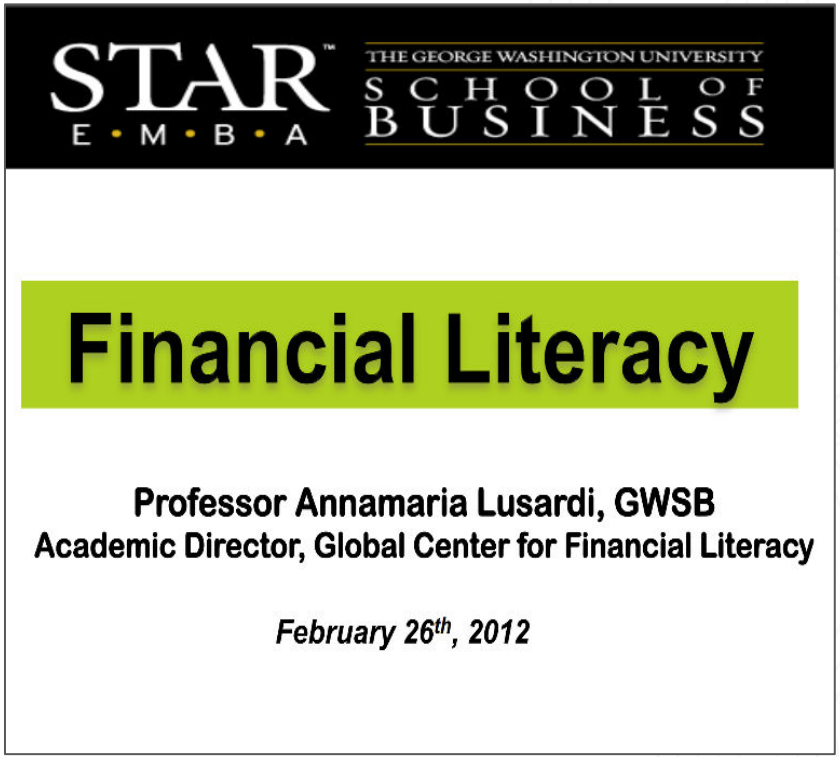
- On average, NBA players who declare bankruptcy will do so within 7.3 years after retirement
- 6.1% of all NBA players will go bankrupt within 15 years of retirement
- The median career earnings of NBA players are $12.67 million

GFLEC is currently developing a new research project on NBA players.

John Rogers Jr. Chair, President's Advisory Council on Financial Capability for Young Americans; Rushia Brown, Former WNBA player and Alumna of STAR EMBA; Arne Duncan, then U.S. Secretary of Education; Kristen Burnell, Executive Director of GFLEC

STAR EMBA at the George Washington School of Business

- EMBA program for athletes at GWSB
- I taught the personal finance part of the program
- Lasted several years and other business schools (ex Tuck at Dartmouth) did a similar program



Need to start in college

- We started Personal Finance courses for master students at GWSB
- Undergraduate courses added soon after
- It is now also offered by the Econ dept
- Courses are very popular

Personal finance (Econ 43) at Stanford University

- When the course first opened in 2020, 362 students signed up. It is one of the most popular courses in Economics
- Last academic year, we taught 3 courses on Personal Finance targeting different students, including during the summer term
- At Stanford we have a lot of student athletes
- Many football players attended the summer course

Measuring up to football players

Annual Teaching Personal Finance Conference

Stanford | Institute for Economic Policy Research (SIEPR)
Stanford | Department of Economics, School of Humanities and Sciences
Stanford Business, School of
GFLEC, Global Financial Literacy Excellence Center

Initiative for Financial Decision-Making

Collaboration among:

Stanford | Institute for Economic Policy Research (SIEPR)

STANFORD GRADUATE SCHOOL OF BUSINESS

Stanford | Department of Economics
SCHOOL OF HUMANITIES AND SCIENCES

Our aim is to transform personal finance education. We are open to collaboration and offer short visits as well

A meta-analysis of the effects of financial education

Journal of Financial Economics
Available online 3 October 2021
In Press, Corrected Proof

Financial education affects financial knowledge and downstream behaviors

Tim Kaiser [a], Annamaria Lusardi [b], Lukas Menkhoff [c], Carly Urban [d]

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https://doi.org/10.1016/j.jfineco.2021.09.022

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Abstract

We study the rapidly growing literature on the causal effects of financial education programs in a meta-analysis of 76 randomized experiments with a total sample size of over 160,000 individuals. Many of these experiments are published in top economics and finance journals. The evidence shows that financial education programs have, on average, positive causal treatment effects on financial knowledge and downstream financial behaviors. Treatment effects are economically meaningful in size, similar to those realized by educational interventions in other domains, and robust to accounting for publication bias in the literature. We also discuss the cost-effectiveness of financial education interventions.

- Look at the most rigorous evaluation of financial education programs (RTCs studies) in as many as 33 countries
- Financial education affects a variety of behaviors
- It not only works but it is also cost effective
- It is effective both among the young and the old

Final remarks

- I have learned a lot from Colin
- His papers have influenced academics, policy, and programs
- He is very creative
- He is very fun to work with