
Homeownership and Asset Allocation

Cleveland Fed
June 10, 2010

Motivation

- Most investors own their homes
 - which forces them into an illiquid, risky, and undiversified portfolio
- No natural way to hedge homeownership risk
- Cauley, Pavlov, and Schwartz (JREFE, 2006)

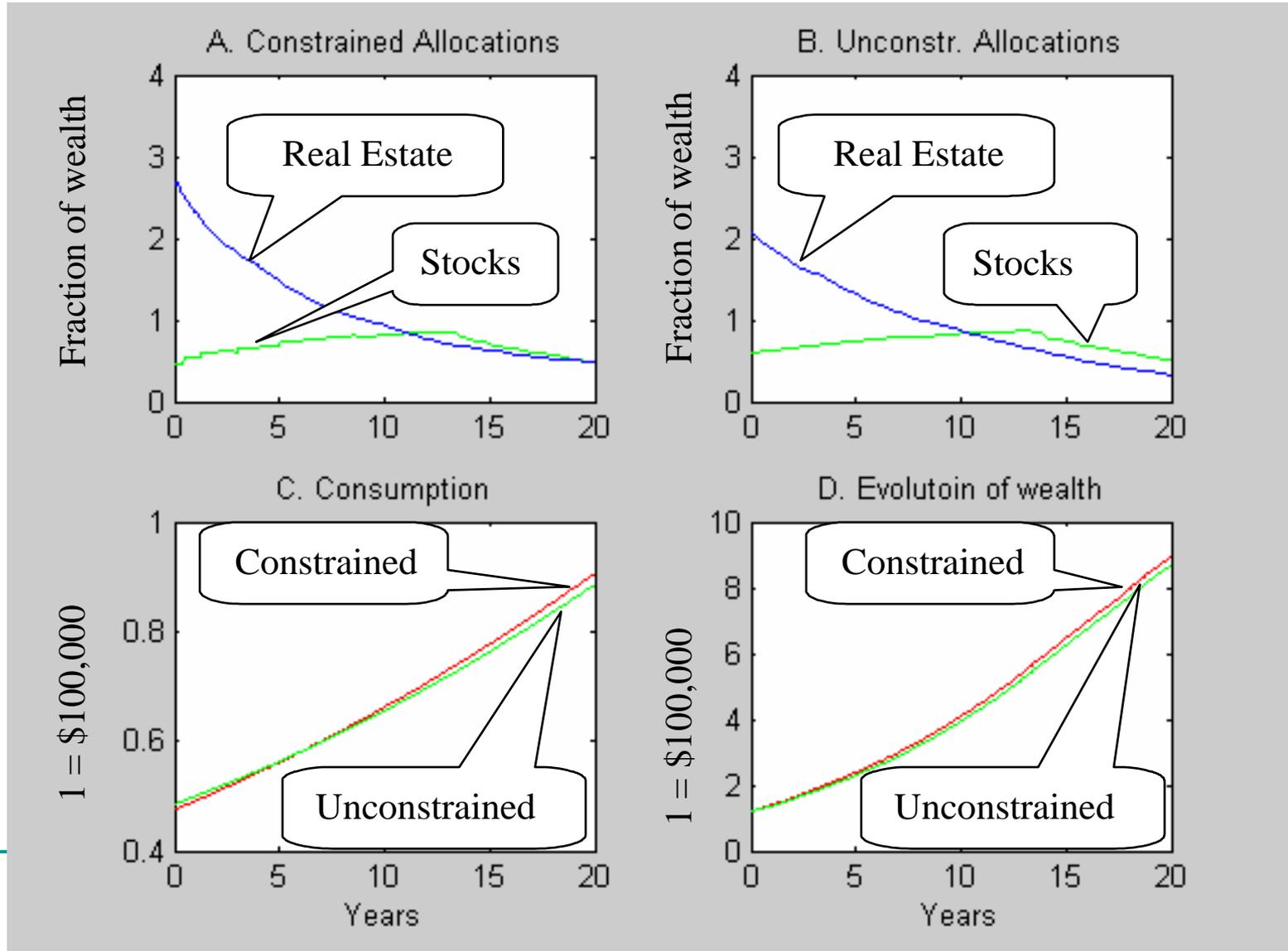
Unconstrained and Constrained Cases

- **Homeownership constraint:**
 - the agent owns a house as an investment asset and to satisfy housing demand
- **Unconstrained case:**
 - a “thought experiment” where the agent can separate the investment from the housing demand
 - we assume the existence of a hypothetical market where the homeowner can sell a fractional interest in their home (and pay rent on the part they do not own)

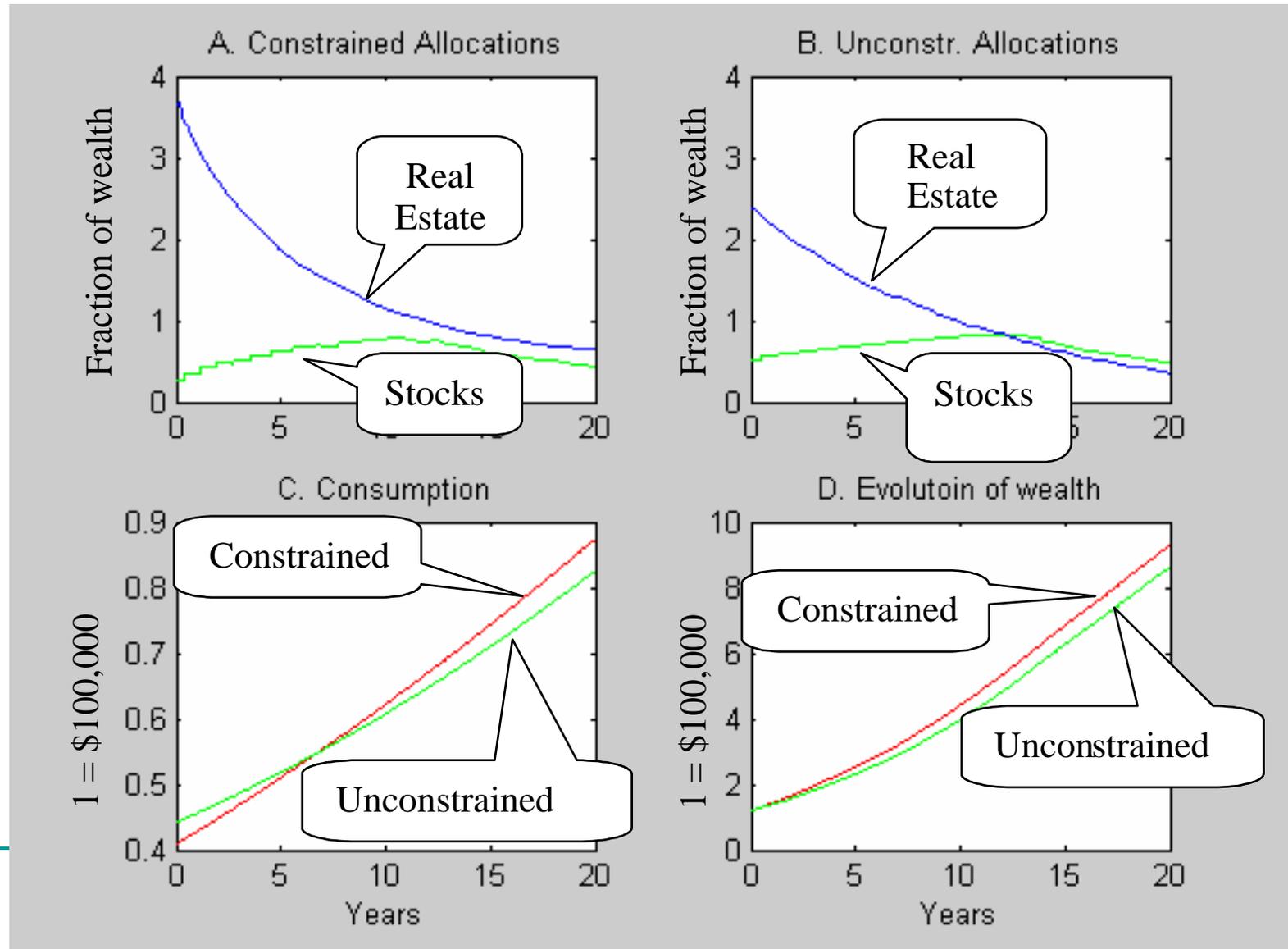
Model Calibration

- “Typical” home (Cauley and Pavlov (2002))
- Mid-career individual who just purchased a home
- Initial family income \$100,000
- Home value \$320,000
- 80% mortgage financing (\$256,000)
- Total wealth \$120,000

Evolution of Asset Allocation, Consumption and Wealth ($H_0 = \$3.2$ and $W_0 = \$1.2$)



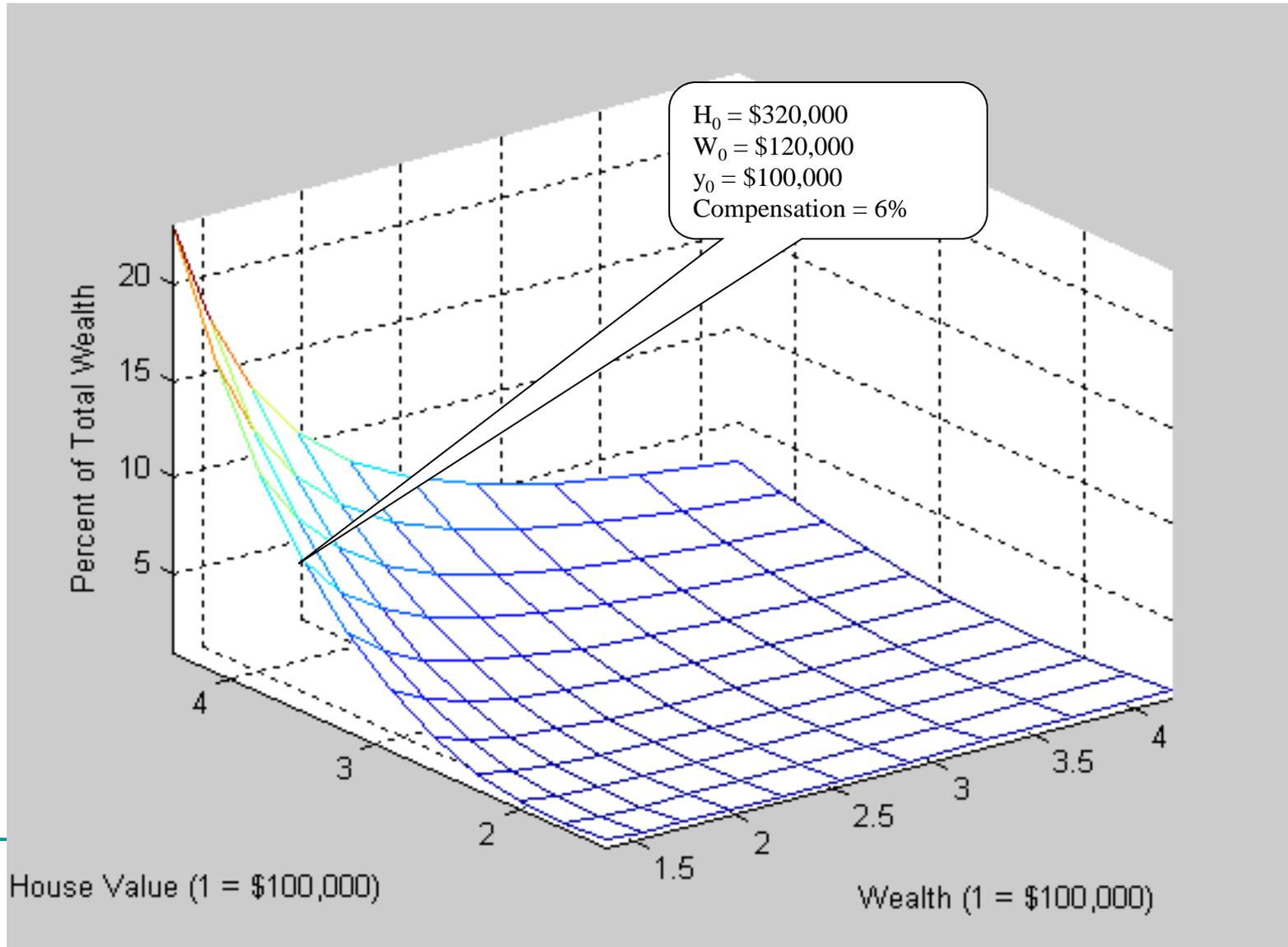
Evolution of Asset Allocation, Consumption and Wealth ($H_0=\$4.5$ and $W_0=\$1.2$)



Initial Compensation and Allocations for Different Starting Points

Starting Values (\$000)			Constrained Allocations (% of wealth)				Unconstrained Allocations (% of wealth)				Comp.
W	H	y	Stocks	House	Money Market	C	Stocks	House	Money Market	C	
\$120	\$320	\$100	0.47	2.67	-2.13	\$47	0.59	2.06	-1.64	\$48	5.97%
\$120	\$320	\$100	0.47	2.67	-2.13	\$47	0.59	2.06	-1.64	\$48	5.97%
\$200	\$320	\$100	0.68	1.60	-1.28	\$53	0.71	1.43	-1.15	\$54	2.78%
\$300	\$320	\$100	0.79	1.07	-0.86	\$61	0.78	1.08	-0.86	\$61	1.58%
\$120	\$200	\$100	0.67	1.67	-1.33	\$52	0.67	1.64	-1.31	\$53	1.29%
\$120	\$320	\$100	0.47	2.67	-2.13	\$47	0.59	2.06	-1.64	\$48	5.97%
\$120	\$450	\$100	0.25	3.75	-3.00	\$39	0.52	2.41	-1.93	\$43	25.79%
\$120	\$320	\$100	0.47	2.67	-2.13	\$47	0.59	2.06	-1.64	\$48	5.97%
\$120	\$320	\$120	0.47	2.67	-2.13	\$54	0.58	2.10	-1.68	\$56	4.22%
\$120	\$320	\$140	0.47	2.67	-2.13	\$66	0.60	2.02	-1.61	\$67	2.29%

Compensation for the Constraint: Percent of TOTAL Wealth



Main Findings

- Homeownership constraint shifts asset allocation away from equities.
- Constrained homeownership results in
 - lower initial consumption
 - higher post-retirement wealth.
- Homeowners would pay up to 25% of total wealth to relax the constraint
- Less affordable housing
 - Magnifies the above findings

Mitigating the Constraint Impact

- Mortgage products that limit the downside risk for homeowners
 - Non-recourse lending
 - Mortgage insurance for the homeowner
- Lower transaction costs
 - Encourage more competition in the brokerage industry
- Limit the maximum Debt-to-income ratio
 - To discourage potential homeowners from over-extending themselves

Aggressive loans make the constraint worse

- Subprime, interest only, pay option and other aggressive lending instruments
 - Allow homeowners to increase their home value to total net worth ratio
 - Thus making the constraint even more binding
 - And increasing the welfare loss from unbalanced asset allocation