The Housing recovery is here!
Should you buy a house?

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IAP
1). Why there will be a recovery.
   - Household Formation unusually low
   - But construction is also
   - Both have to increase
2). What kind of recovery (tenure).
   - Permanent shift to renting?
   - Multi versus Single family construction.
3). Where.
   - Boom states (CANFLAZ)?
   - The keys to appreciation:
     - supply elasticities,
     - LT demand growth
   - current prices relative to trend
The Outlook for Population, jobs and Households: Aging = more HH/pop, fewer Jobs/pop

Cyclic recovery
In HH formation?
1a). The recovery in Household Formation.
- 2000-2007 Household formation: 1,285,000 yearly
- Then 950,000 in 2008, 750,000 in 2009, 600,000 in 2010.
- In 2011 it recovered to 730 and up to 960,000 in 2012. But dropped back to 850,000 in 2013 (est.)
- It has to return to 1,200,000 range plus make up for lost formation of 2m during the downturn!

1b). Could there be a permanent shift in HH formation (headship rate). What determines formation?
- Rising Rents (-)
- Mediocre Job prospects (-)
- Divorce (+), marriage(-)
- Aging (+, headship)
1c). Some additional sources of housing unit “demand”

- Annual demolitions average between 75,000 and 100,000, but there are “episodes”: urban redevelopment in the 1960’s, Failed developments today?
- 2nd home demand. The Census identifies homes that are vacant and for sale or rent, vacant and uninhabitable, and then homes that are “seasonal, usual residence elsewhere,…”
- This latter category has grown from 8% of the stock in 1970 to 16% of the stock in 2010. Annual average growth is about 200,000.
Forecast: still excess demand for new units during the next 5 years – even if construction recovers to 1.4m!

Historic Equilibrium: 280,000 excess units (=demolitions + 2nd homes)

Sources: Bureau of the Census, Moody’s Economy.com, Torto Wheaton Research.
In the aggregate Residential Construction must recover: When it does - watch GDP growth

Housing starts increase from 781 ths in 2012 to 1,500 ths in 2017
2a). Will there be a recovery in the ownership rate?
- Homeownership driven to unsustainable levels by easy credit – 69-70%. Underwriting or rates?
- Foreclosures have dropped ownership to 65.3%.
- Base case: economic recovery prevents further foreclosures due to job losses. Price recovery encourages underwater owners to hang in there.
- Ownership still desired, result: ownership stabilizes at 65%

- Recent evidence of widespread underwater loans
- Great resistance by Banks to principal reductions
- Massive walking defaults? Ownership drops to 62-63% (later)
Scenarios for unwinding Home Ownership

(+): Economic Recovery, mortgage modification

(-): Strategic Defaults
Mortgage Delinquency dropping: transition to foreclosure is also (All Loans)

Delinquency Rate
Transition to foreclosure

Source: Mortgage Bankers Association
Rent-Own carrying costs

*A once-in-a-lifetime opportunity! Why isn’t everyone buying? Credit rationing must be back*

Sources: BLS, FHFA, CBRE EA.
Base Case:
Ownership: 65% HH formation 1.2m
Owners: 800k yearly
Renters: 400k
Multi Single-Family Linkages: Supply

- Virtually all new Single Family housing is built for ownership.
- Between 70% and 90% of multifamily construction is for built rental occupancy.
- Historically single family construction exceeds owner household growth.
- Historically multi-family construction is less than renter household growth.
- All of this is possible because of steady flow unit conversions.
- The main type of unit converted is older single family.
- “Filtering” single family units constitute an enormous source of net rental supply. A “buffer” for changes in ownership.
Base Case:
SF construction
1.1m
MF construction
.3m
Gaps: conversions
And demolitions
Conversions responsible for most of $\Delta$ rental Stock (Investors: 1998-2005 vs. 2006-2011)
Supply keeps prices moving with rents (their “fundamental”) – except for 2001-2006. Back moving together in the last 3-4 years

1975=100 Constant $2011
Sales Duration (inventory/sales) recovers:
Prices set to rise significantly
Base Price Recovery: homeownership stabilizes at 65%
Geographic Imbalance

CANFLAZ homeownership rose/fell 2x US!

Homeownership rate, %

- **US**
- **CANFLAZ (simple average)**
CANFLAZ purchase of 2nd or Investment (speculative) homes
2x US average (Condos excluded)

Source: Loan Performance, Torto Wheaton Research
The result: Housing price “bubble” in CANFLAZ: 2x rest of the US
MSA level Forecasts

• For 68 MSA, take FHA price data, quarterly from 1980:1 – 2012:2, deflate into constant $.
• For 68 MSA, sum total units constructed, quarterly, into housing stock.
• Estimate Error Correction Model predicting price given housing stock for each MSA.
• Estimate Vector Error Correction Model jointly predicting both prices and stock for each MSA
• Forecast from 2012:3 to 2022:2
With ECM forecast *assume* that MSA stock growth will be 20% lower than historic, due to demographic aging and slow recovery in headship rates from great recession.

• Price and Stock forecasts in left graph

• With VECM (right graph) both variables are forecast. Generally stock and price growth are slightly higher than with ECM.
Two fundamental forecast questions

• For each MSA, if you purchased in 2012:3 how much appreciation are you likely to experience over the next decade? What will be the “user cost” of owning a house: \((1-t_y) i - \Delta p/p\)

• For each MSA if you purchased a house near the peak (i.e. 2007) when or will you recover your equity. When will nominal prices return to their 2007 value?

• Forecasts done in real prices. 2007-2012 CPI inflation 9%, assume 2012-2022 is 20%
Chicago

ECM stock-price forecast

VECM stock-price forecast
New York

ECM stock-price forecast

VECM stock-price forecast
San Francisco

ECM stock-price forecast

VECM stock-price forecast
Dallas

ECM stock-price forecast

VECM stock-price forecast
Miami

ECM stock-price forecast

VECM stock-price forecast

STKV  RHI

STK  RHI
Full Paper:

Error Correction Models of MSA Housing

“Supply” Elasticities:
Implications for Price Recovery

Available at:
http://economics.mit.edu/faculty/wheaton/working
Price Appreciation versus Recovery

1). Price appreciation 2012-2022 will be greatest where prices have fallen the most (Atlanta, Detroit, Vegas, Miami Phoenix) and/or where there are strong upward trends (NY, Boston, Seattle, Chicago).

2). User Cost in such areas: \(0.7 \times 0.05 - 0.06 = -0.025\)!

3). In current dollars prices recover in all areas by 2022 but: West Palm, Phoenix, Orlando, Fort Lauderdale, Charlotte, Vegas, Riverside.
Conclusions

• Housing construction is already beginning to recover but has a lot of ground to make up.
• Going from 800,000 to 1.4m units yearly adds .7% to GDP growth over the next 2-3 years.
• There has not been any permanent “return to renting” and in fact buying a home today looks like a lifetime opportunity. Similar to 1980s. Many areas will experience cumulative real appreciation of 30% over the next decade, 50% in current dollars.
• Serious Underwater homes (those purchased or refinanced near the peak) will refloat in most areas by 2022. The exceptions are the severely cyclic “sand states.