LegalShield™ | Economic Stress Index™

About LegalShield

#1 Provider of subscription-based legal plans to households

1.8 million+ memberships paying monthly via credit card/ debit card/payroll deduction

49 year history and counting

47,000 small business accounts

6,900 broker & agency clients served by our dedicated B2B division

39 law firms in 50 states, Canada and the United Kingdom with a total of 900 lawyers, and a referral network of 4,600 lawyers, with average of 22 years experience

About the LegalShield Economic Stress Index

✓ The LegalShield Economic Stress Index is a suite of leading indicators of the economic and financial status of U.S. households and small businesses.

✓ The LegalShield Economic Stress Index is comprised of five sub-indices that are constructed from LegalShield's proprietary data, which reflect the demand for various legal services over the past 15+ years. Each time a LegalShield provider law firm receives a request from a LegalShield customer, the request is logged as an "intake" in one of roughly 70 unique areas of law (e.g., real estate) depending on the nature of the request.

✓ Each sub-index reflects the number of intakes in an area of law as a share of total intakes across all areas of law in a given quarter. In some instances, individual indices across multiple areas of law (e.g., bankruptcy, foreclosure, consumer/finance) are combined to produce a composite index (e.g., consumer financial stress).

✓ The sub-indices that comprise the LegalShield Economic Stress Index were selected because they tend to lead an existing economic indicator that sheds light on the health of the U.S. economy (i.e., the target economic indicator). In this way, the LegalShield Economic Stress Index provides actionable intelligence about the direction of the U.S. economy in the near term.

Advantages of the LegalShield Economic Stress Index

✓ **UNIQUE**
The LegalShield Economic Stress Index is based on inquiries into specific legal services each month. To the best of our knowledge, there is no comparable data on the market.

✓ **PROPRIETARY**
The LegalShield Economic Stress index is based on data collected through LegalShield's provider law firms in all 50 states, thereby offering information that is not accessible to the general public.
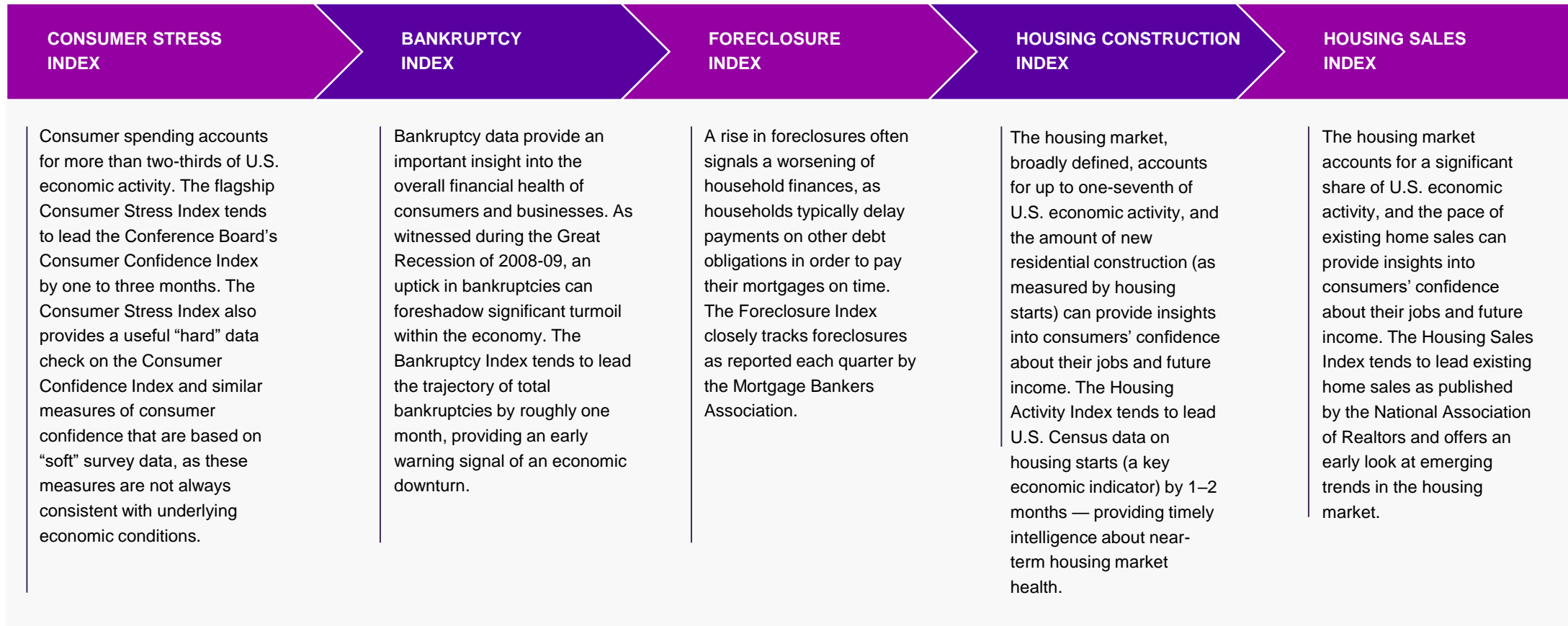
✓ **HIGH-FREQUENCY**
The LegalShield Economic Stress Index is based on data collected on a near real-time basis, and can be refreshed on a weekly, monthly, or quarterly basis depending on the user's needs.

✓ **ROBUST**
The LegalShield Economic Stress Index is based on intakes for more than 1.8 million memberships (including individuals and small businesses), providing a window into the experiences of families and businesses across the country at any given point in time.

Interpreting Each Component of the LegalShield Economic Stress Index

CONSUMER STRESS INDEX	BANKRUPTCY INDEX	FORECLOSURE INDEX	HOUSING CONSTRUCTION INDEX	HOUSING SALES INDEX
Consumer spending accounts for more than two-thirds of U.S. economic activity. The flagship Consumer Stress Index tends to lead the Conference Board's Consumer Confidence Index by one to three months. The Consumer Stress Index also provides a useful "hard" data check on the Consumer Confidence Index and similar measures of consumer confidence that are based on "soft" survey data, as these measures are not always consistent with underlying economic conditions.	Bankruptcy data provide an important insight into the overall financial health of consumers and businesses. As witnessed during the Great Recession of 2008-09, an uptick in bankruptcies can foreshadow significant turmoil within the economy. The Bankruptcy Index tends to lead the trajectory of total bankruptcies by roughly one month, providing an early warning signal of an economic downturn.	A rise in foreclosures often signals a worsening of household finances, as households typically delay payments on other debt obligations in order to pay their mortgages on time. The Foreclosure Index closely tracks foreclosures as reported each quarter by the Mortgage Bankers Association.	The housing market, broadly defined, accounts for up to one-seventh of U.S. economic activity, and the amount of new residential construction (as measured by housing starts) can provide insights into consumers' confidence about their jobs and future income. The Housing Activity Index tends to lead U.S. Census data on housing starts (a key economic indicator) by 1–2 months — providing timely intelligence about near-term housing market health.	The housing market accounts for a significant share of U.S. economic activity, and the pace of existing home sales can provide insights into consumers' confidence about their jobs and future income. The Housing Sales Index tends to lead existing home sales as published by the National Association of Realtors and offers an early look at emerging trends in the housing market.

Consumer Stress Index

Bottom Line: The LegalShield Consumer Stress Index edged up in October for the second consecutive month. Rising interest rates and persistent inflation remain strong headwinds for consumers continues to put upward pressure on consumer stress. However, the labor market remains strong, and consumers appear equipped to handle these headwinds for now.

Latest Reading: In October, the LegalShield Consumer Stress Index increased (worsened) 1.3 points to 62.7 and is now up more than 11% on the year. However, the current reading is still low by historical standards. Meanwhile, the Conference Board's Consumer Confidence Index worsened 5.3 points to 102.5 after improving the prior two months.

Economic Context: Inflation continues to chip away at consumer purchasing power as prices rise faster than wages. Average hourly earnings decelerated for the third consecutive month in October to 4.7% Y/Y — a pace that would normally be considered strong growth, but which is well below the current rate of inflation (7.7% Y/Y). Fortunately, the economy may have turned a corner with respect to price growth, as both headline inflation and core inflation (which excludes food and energy prices) eased in October. Nevertheless, there are signs that consumers are dipping into savings, looking for more work, or cutting back on spending in order to make ends meet:

- The personal savings rate has been below 4% since March and fell to 3.1% in September. (Note: in the 10 years leading up to the pandemic, the rate generally hovered between 5 – 9%.)

- Per Qualtrics, over half of American workers are looking or planning to look for a second job to afford rising prices.

- December spending is expected to slow this year, with holiday spending estimated to grow 6–8%, roughly in line with inflation.

Despite these early signs of stress, jobs remain plentiful despite rising interest rates. In October, employers added 261,000 jobs to the economy, the number of open jobs available remains near an all-time high, and employer surveys continue to suggest strong demand for workers. As such, most consumers remain well-positioned to handle increased financial stress as it continues to build, and LegalShield does not anticipate a sharp increase in financial stress over the next 1 – 3 months.

Consumer Stress Index

Historical Trend Over Past 16 Years
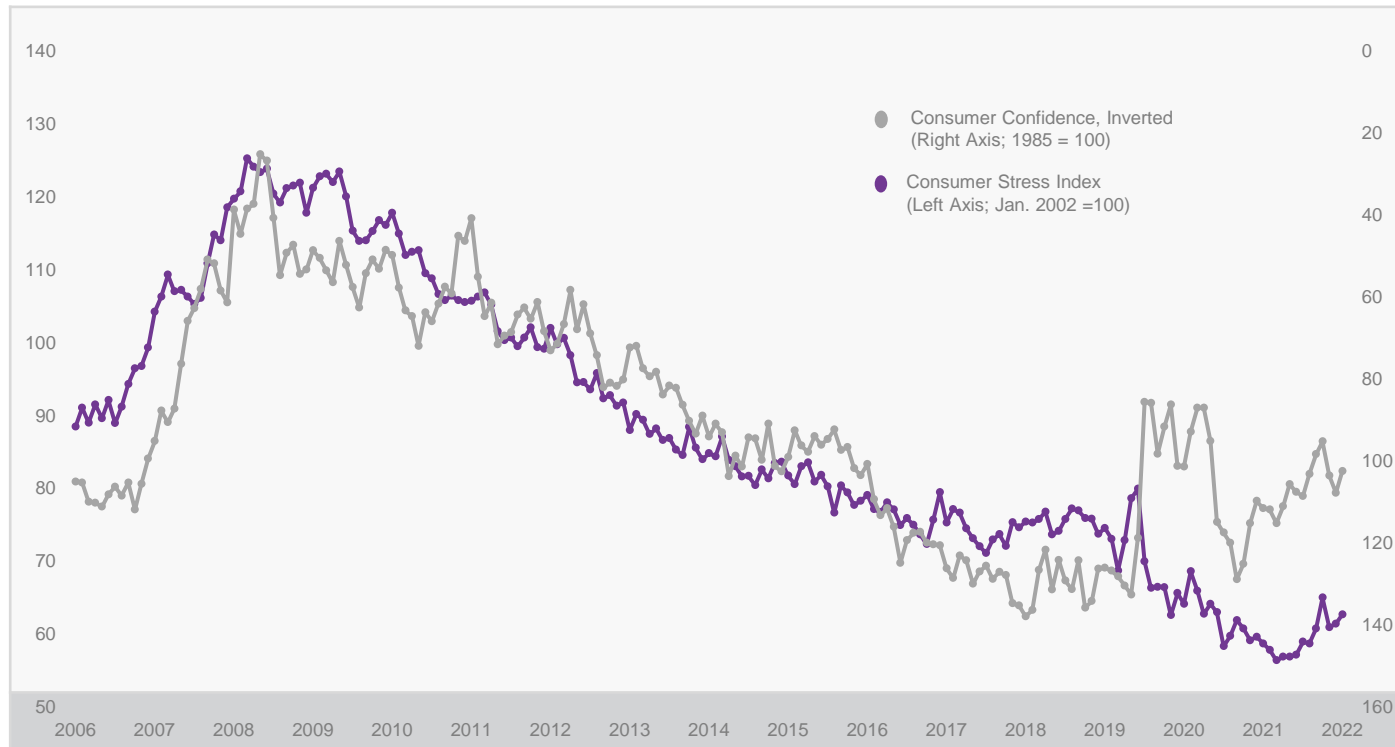
Movement Over Past 12 Months
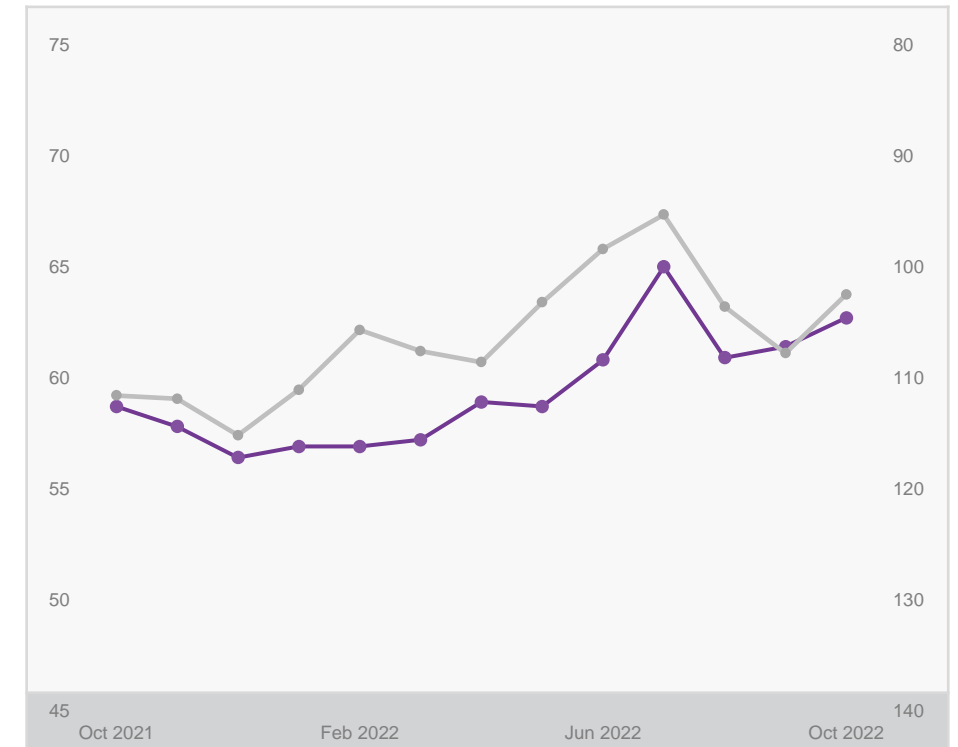
Bankruptcy Index

Bottom Line: In October, the LegalShield Bankruptcy Index worsened after improving the prior month. Given that the index remains at roughly half its pre-pandemic level, bankruptcies are likely to remain subdued in the fourth quarter.

Latest Reading: The LegalShield Bankruptcy Index increased (worsened) 5.2 points in October to 25.2, its highest reading of the year. In September, total seasonally adjusted bankruptcy filings worsened 2.0% to 32,322, up 4.5% from the year prior.

Economic Context: After plummeting during the pandemic, bankruptcies remain well below normal levels, and given the strong labor market and low debt delinquencies it is unlikely that they will rise substantially in the near term. Still, with economic headwinds continuing to build, there are signs that debt delinquencies could increase in the coming months, which could lead to a subsequent increase in bankruptcies over the next year. For example:

- Credit card debt is on the rise. Nominal credit card debt in the U.S. has reached $887 billion (up 13% Y/Y), and high inflation is likely part of the reason why consumers are relying more on their credit cards to meet spending needs. Further, the Federal Reserve's efforts to tame inflation by raising interest rates will also drive credit card APRs higher, causing debt to accumulate faster.

- More than half of respondents relying on credit cards to make household payments are struggling to pay expenses, according to the U.S. Census Bureau. This measure has risen more than 11 percentage points over the last year.

- Auto delinquencies continue to climb. In the third quarter, the share of auto loans that are 60+ days delinquent hit 1.65%, the highest rate in more than a decade (CNBC).
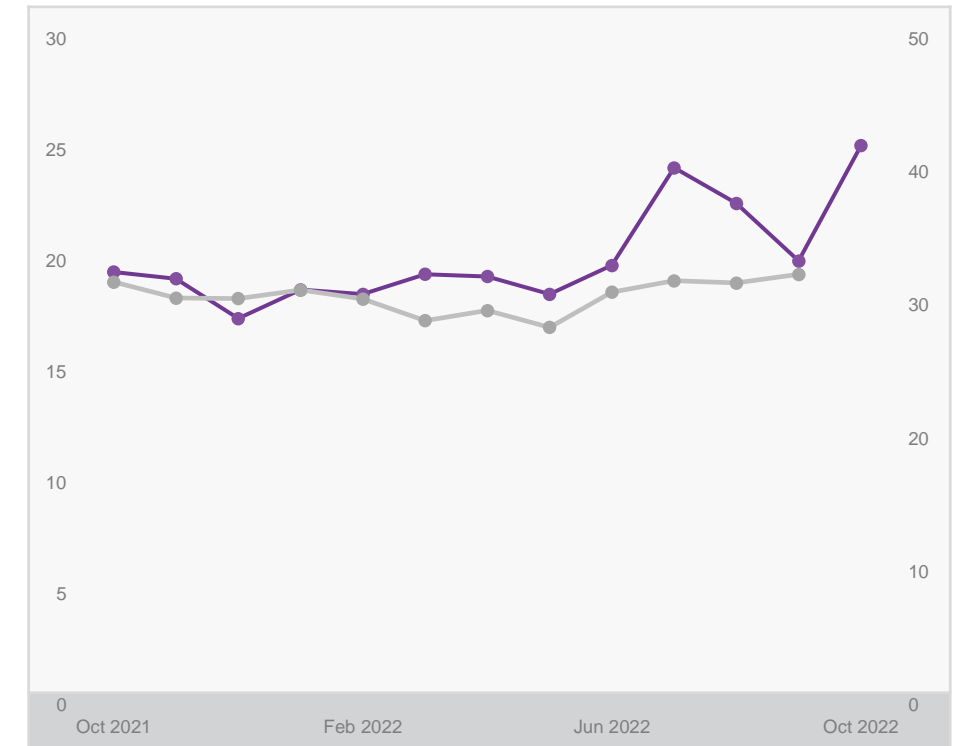
However, overall delinquency rates remain historically low. Given that consumers appear to be well positioned to handle their debt, it is unlikely that bankruptcies will rise dramatically in the coming months, an outlook supported by LegalShield data.

Bankruptcy Index
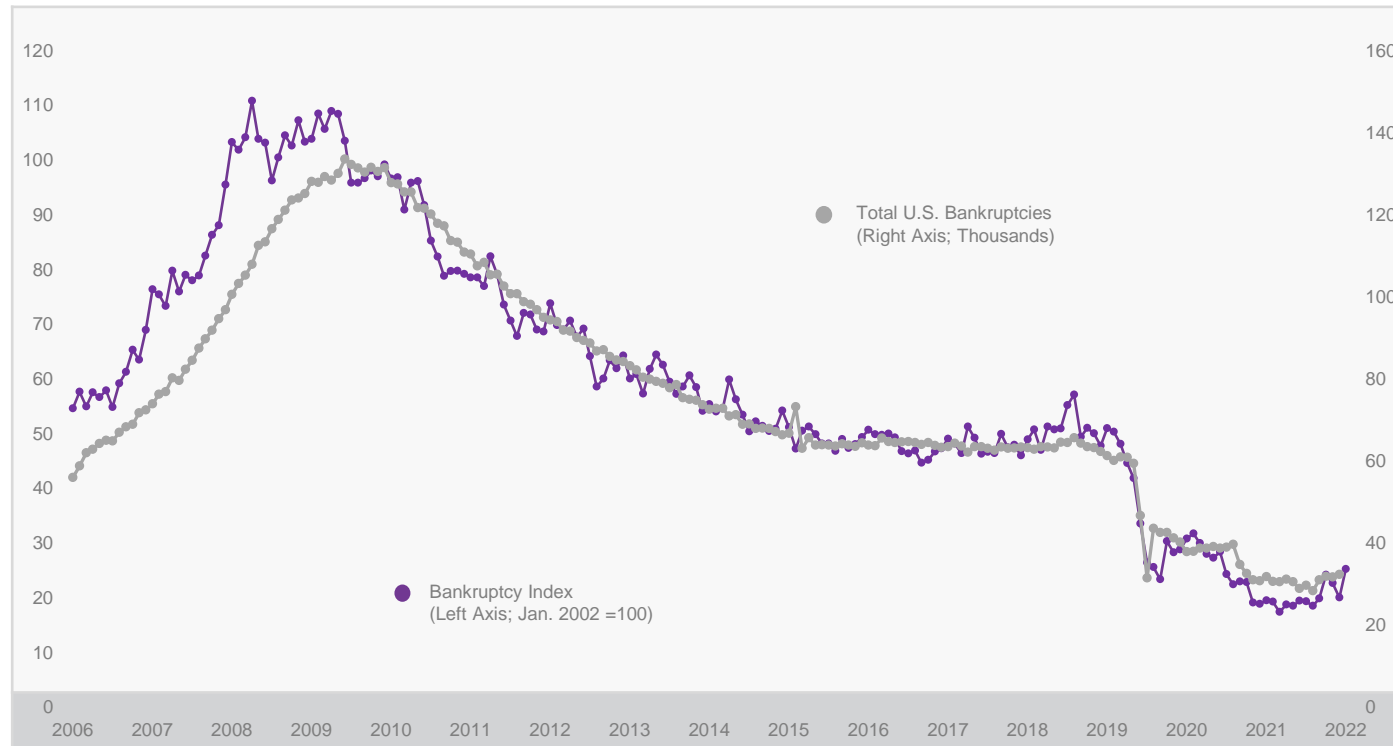
Foreclosure Index

Bottom Line: The LegalShield Foreclosure Index improved in October after increasing slightly the prior month. The index remains well below its pre-COVID level, though activity has been gradually increasing since the pandemic-era foreclosure moratorium expired. A gradual normalization in foreclosure starts is expected in the months ahead.

Latest Reading: The LegalShield Foreclosure Index improved (decreased) 4.1 points to 35.3 in October after worsening in September. Meanwhile, ATTOM reports that foreclosure starts decreased to 31,836 in September, down 8% M/M but up 62% Y/Y.

Economic Context: Foreclosures remain historically low, though there are some signs that suggest they may increase in the year ahead. Two such signs of increased foreclosure activity are serious mortgage delinquencies and pre-foreclosure properties (e.g., "zombie" properties) which have both increased in recent months:

- Serious mortgage delinquency rates returned to their pre-pandemic levels in August (Housing Wire). Notably, this could reflect a normalizing market and is not necessarily a cause for concern.
- So-called "zombie" properties, which are pre-foreclosure properties that have been abandoned by owners, increased in Q3 for the third consecutive quarter and are up roughly 4% from a year ago. (ATTOM)

Despite these warning signs, overall foreclosure starts and repossessions remain low. Low repossession volume in particular suggests that many borrowers in foreclosure have been able to sell their homes prior to auction, falling back on equity gained from higher home prices. As the housing market cools, however, it is less likely that homeowners will be able to sell their homes prior to auction, raising further concern that foreclosures may increase next year.
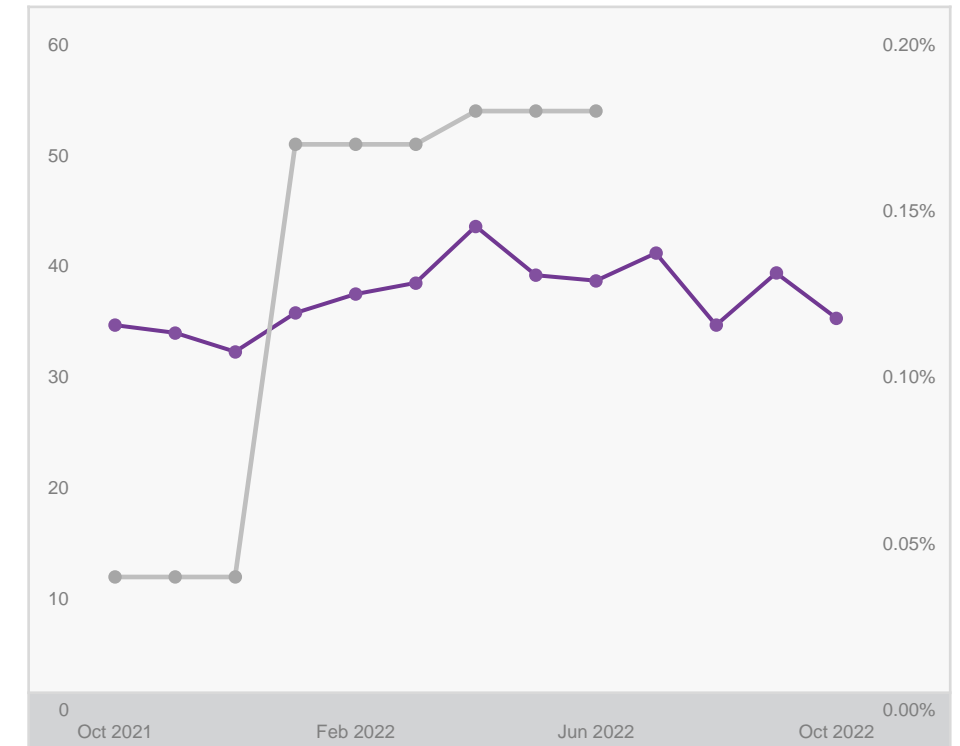
For now, however, LegalShield data suggest that foreclosure activity should remain low by historical standards for the remainder of the year and early 2023.

Foreclosure Index

Historical Trend Over Past 16 Years

Foreclosure Starts
(Right Axis; Percent of Mortgages)

Foreclosure Index
(Left Axis; Jan. 2002 =100)
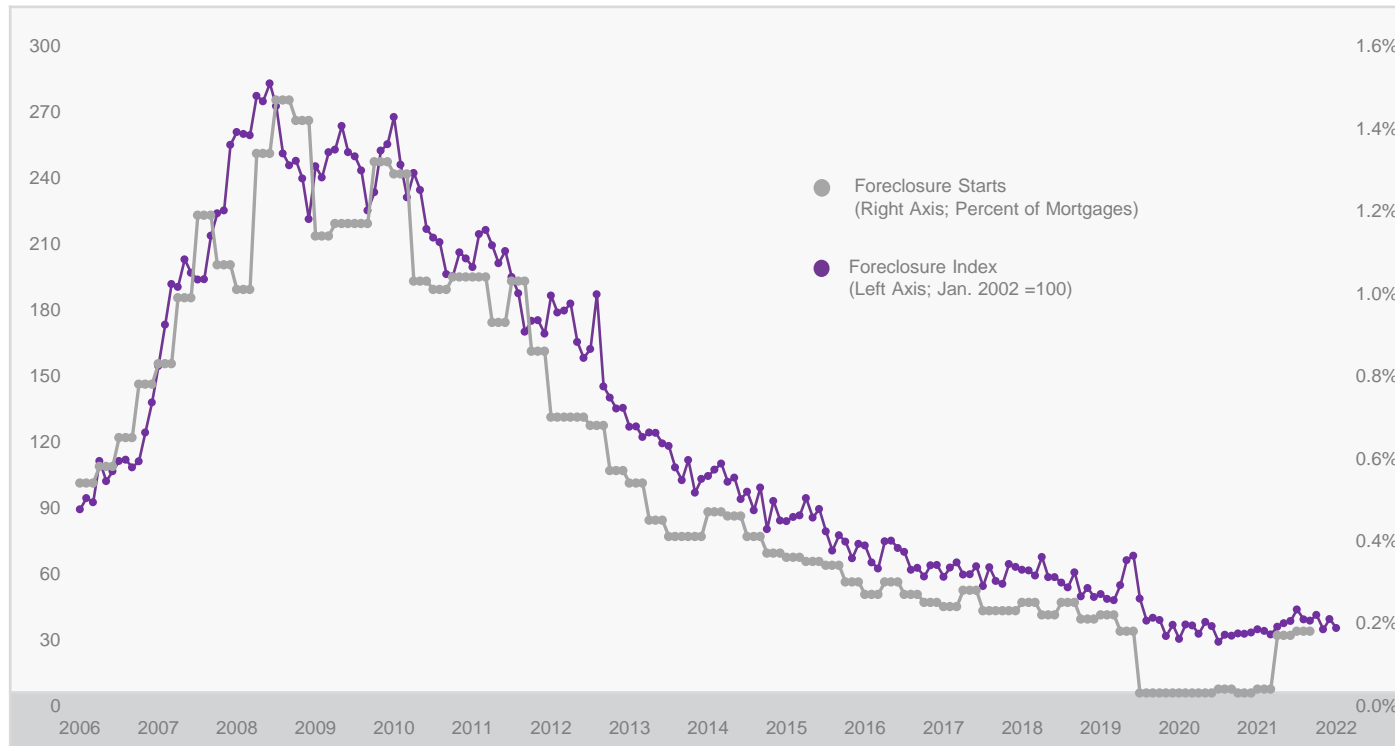
Movement Over Past 12 Months

Housing Construction Index

Bottom Line: The LegalShield Housing Construction Index worsened slightly in October to its lowest level since June 2020, though it remains above pre-pandemic levels. Rising interest rates, high costs of building materials, and high home prices continue to dampen homebuilding activity.

Latest Reading: The LegalShield Housing Construction Index decreased 0.1 point to 127.6 in October. Meanwhile, housing starts decreased 8.1% M/M in September, down 7.9% from the year prior.

Economic Context: Building activity has faced strong headwinds in recent months due to rising mortgage rates weakening demand, ongoing supply chain problems, and high building costs. As a result, home builders are growing increasingly pessimistic: NAHB's Builder Confidence Index fell for the tenth consecutive month in October to 38 (half the level it was six months ago), while the subindex measuring traffic of potential buyers fell six points to 25. Low builder sentiment also reflects high construction costs and falling selling prices. The producer price index for residential construction goods is up nearly 16% Y/Y, while selling prices have fallen with demand and shaved three percentage points off home-seller profits in Q3.

Meanwhile, supply chain constraints and labor shortages continue to impede construction. This has pushed the backlog of homes under construction to new record highs, reaching 1.71 million in September. While the construction backlog may help to buoy construction activity in the near term, the broader trend reflects lower demand for new homes, and construction activity is unlikely to rebound anytime soon
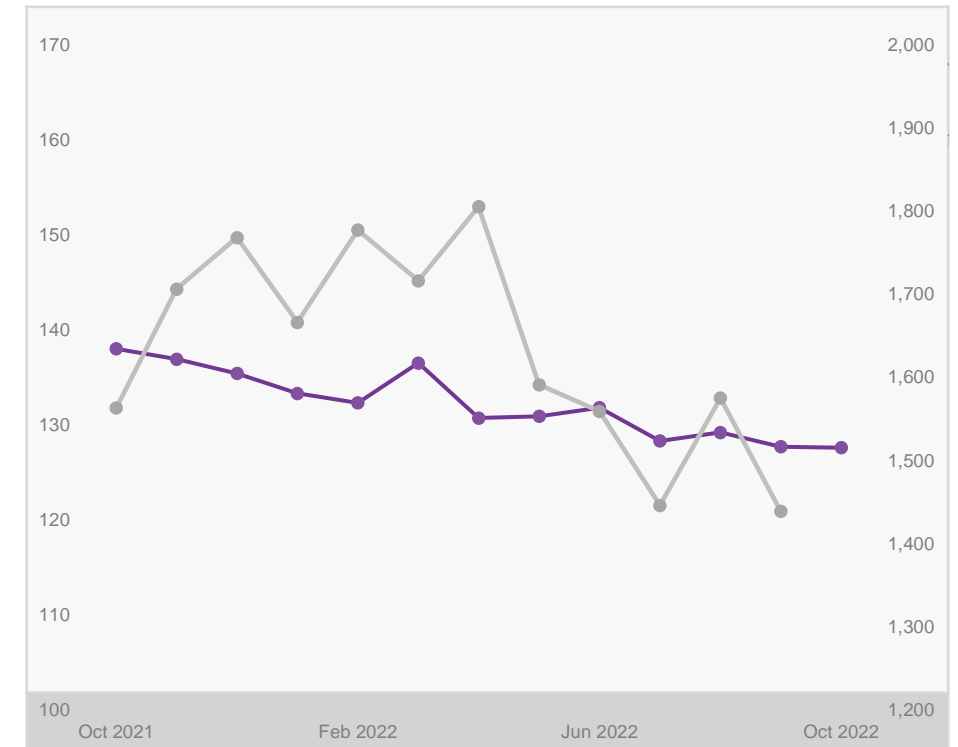
LegalShield data suggest that construction activity will ease further in the coming months, although the construction backlog may buoy housing construction activity for now.

Housing Construction Index

Historical Trend Over Past 16 Years

Housing Starts
(Right Axis; Thousands)

Housing Construction Index
(Left Axis; Jan. 2002 =100)
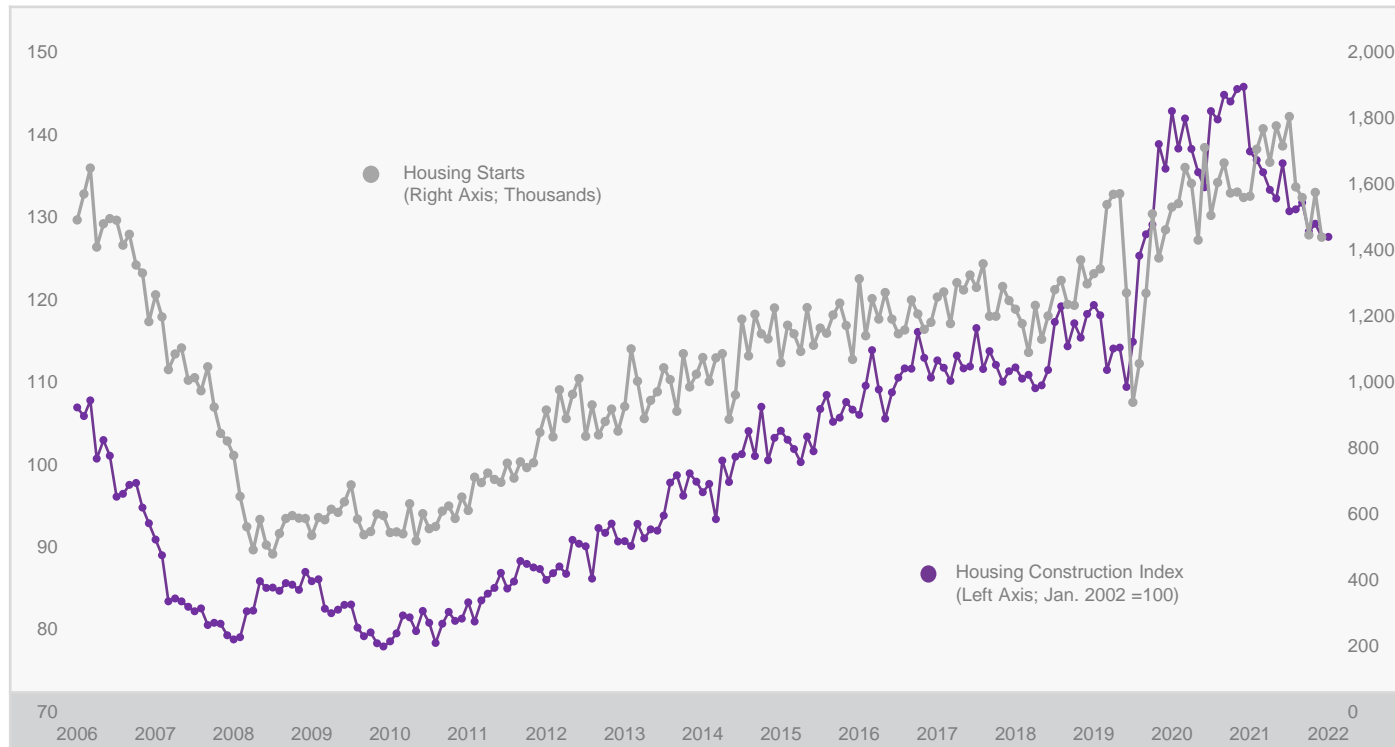
Movement Over Past 12 Months

Housing Sales Index

Bottom Line: In September, the LegalShield Housing Sales Index worsened to its lowest level since May 2020. The housing market has clearly softened, and LegalShield data suggest that existing home sales will weaken further over the remainder of the year.

Latest Reading: The LegalShield Housing Sales Index decreased 3.0 points to 104.1 in October after improving the prior month. Meanwhile, existing home sales decreased slightly in September and are down 23.8% Y/Y.
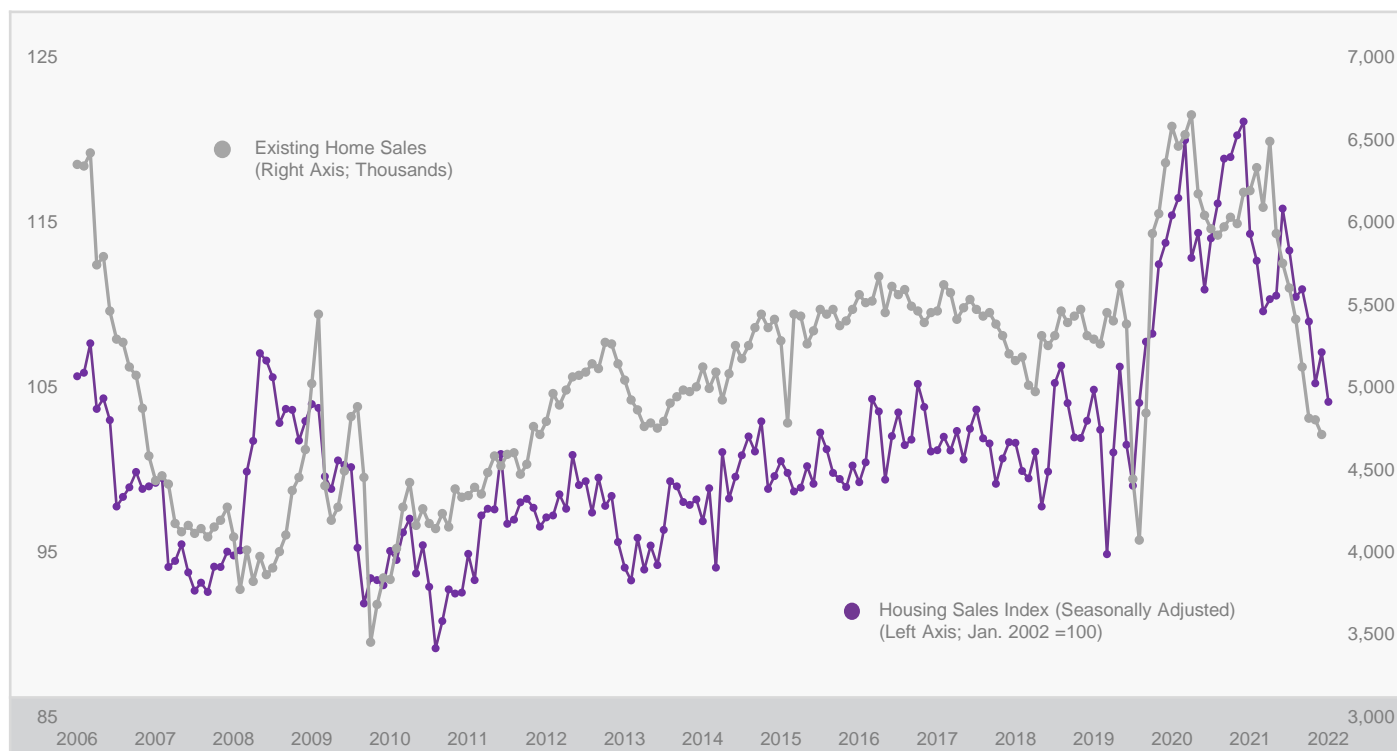
Economic Context: Home sales decreased for the eighth straight month in September, reflecting weakening buyer demand. Fed rate hikes have continued to hamper the red-hot housing market, driving up mortgage rates which have made home-buying increasingly unaffordable. Indeed, the average 30-year fixed-rate mortgage rate passed 7% in October and shows no sign of easing. As buyer demand has fallen, mortgage applications have plummeted and remain at their lowest level in 25 years. Housing inventories have recovered from record lows in January, and homes are staying on the market for longer periods of time.

Home prices are falling with sales. The S&P/Case-Shiller National Home Price index eased in July and August, decreasing for the first time since January 2019. Further, the share of active listings with price drops is steadily increasing, rising to 7.9% at the end of October, the highest share reported by Redfin since before 2019.
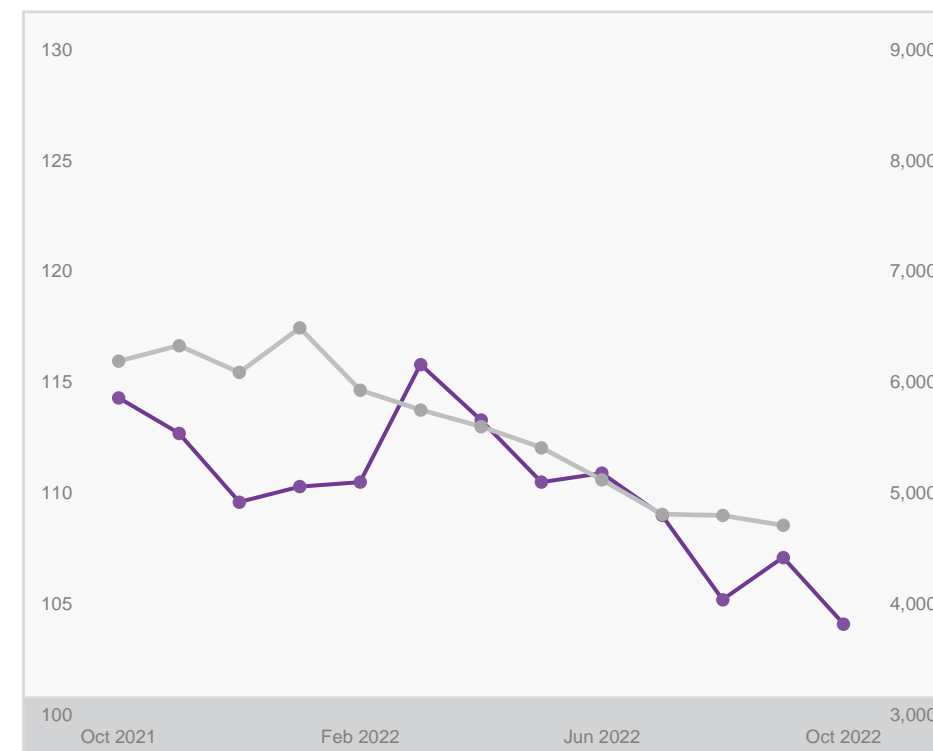
LegalShield data do not suggest that a turnaround in home sales activity is likely to occur any time soon — particularly if the Fed continues to raise interest rates.

Housing Sales Index

Historical Trend Over Past 16 Years

Existing Home Sales
(Right Axis; Thousands)

Housing Sales Index (Seasonally Adjusted)
(Left Axis; Jan. 2002 =100)

Movement Over Past 12 Months

Technical Appendix

Key Findings

Three individual AOLs demonstrated strong correlation and leading properties against five target macroeconomic indicators.

Summary Of Results							
LEGALSHIELD AREA OF LAW	**TARGET MACRO INDICATOR(S)**	**CORRELATION (LEVEL)**	**CORRELATION (Y/Y)**	**CORRELATION (Q/Q)**	**TRACKS HISTORICAL TREND?**	**ESTIMATED LEAD**	**ROBUST OVER TIME?**
Bankruptcy	Bankruptcies	0.75	0.74	0.22	✓	≈ 1 mo.	✓+
Foreclosure	Foreclosures	0.96	0.88	0.47	✓	Coincident*	✓+
Real Estate	Existing Home Sales	0.87	0.65	0.46	✓	≈ 0-1 mo.*	✓

*These indices have a timing advantage over their target indicators due to the release schedule of the target series.

Composite Indices

We developed two composite indexes that are strongly correlated with and tend to lead economic indicators of interest.

LegalShield "Consumer Stress" Index

✓ **Component AOLs:** (1) Bankruptcy;
(2) Consumer/Finance; (3) Foreclosure

✓ **Target Indicator:** Consumer Confidence

✓ **Performance:** -0.85 Correlation;
1-3 Month Lead

LegalShield "Housing Construction" Index

✓ **Component AOLs:** (1) Real Estate;
(2) Foreclosure

✓ **Target Indicator:** Housing Starts

✓ **Performance:** 0.91 Correlation;
0-2 Month Lead*

*In addition to its statistical lead time, the Index also has a timing advantage over housing starts of roughly one week due to release schedules.

Methodology:

Individual Index Development

Methodology

A six-step process was used to convert LegalShield intake data into potential indices.

1 **CONSTRUCT DATASET:**
Conduct preliminary data cleaning, processing, and formatting.

2 **DETERMINE SCOPE OF ANALYSIS:**
Examine differences across plan types and subscriber samples to determine the optimal "subscriber universe" for index development.

3 **DEFINE INTAKE METRIC:**
Test competing approaches for normalizing intake data.

4 **FILTER AOLS:**
Evaluate and scope the original list of 65 areas of law (AOLs) to identify the best candidates for index development.

5 **TEST:**
Run the scoped AOLs through a series of transformations and statistical tests to identify quantitative relationships with key macroeconomic indicators.
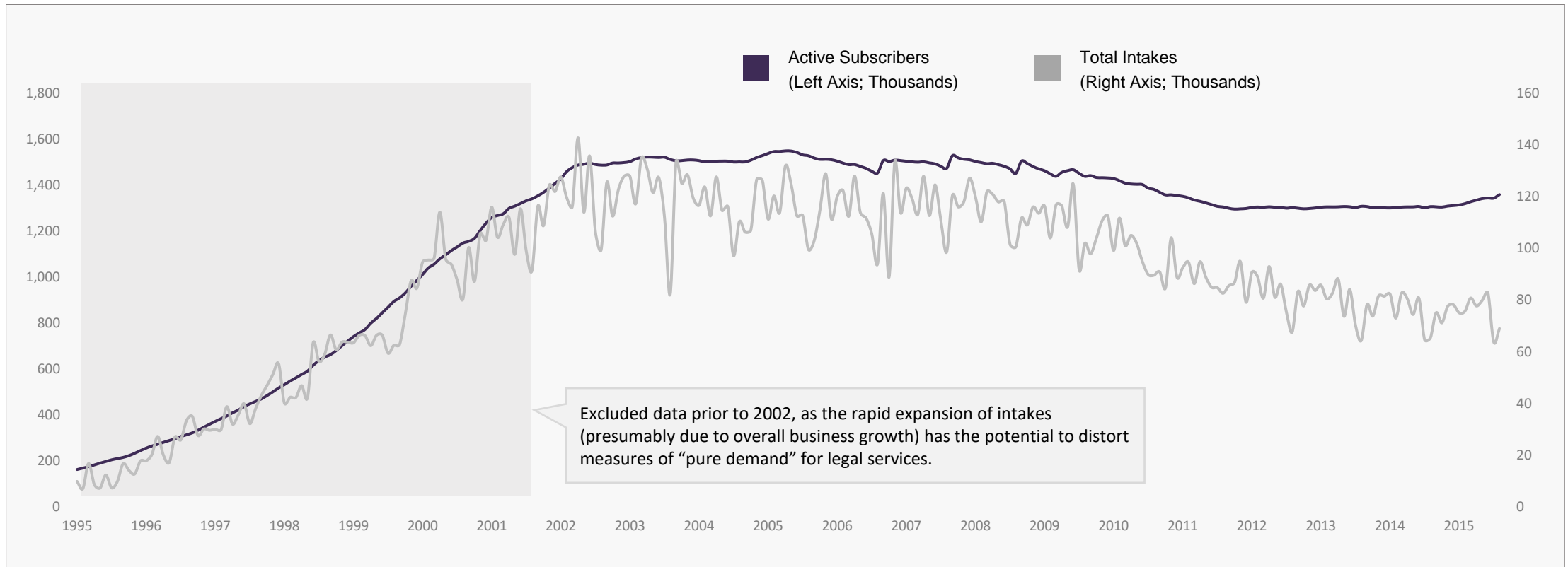
6 **DEVELOP INDEXES:**
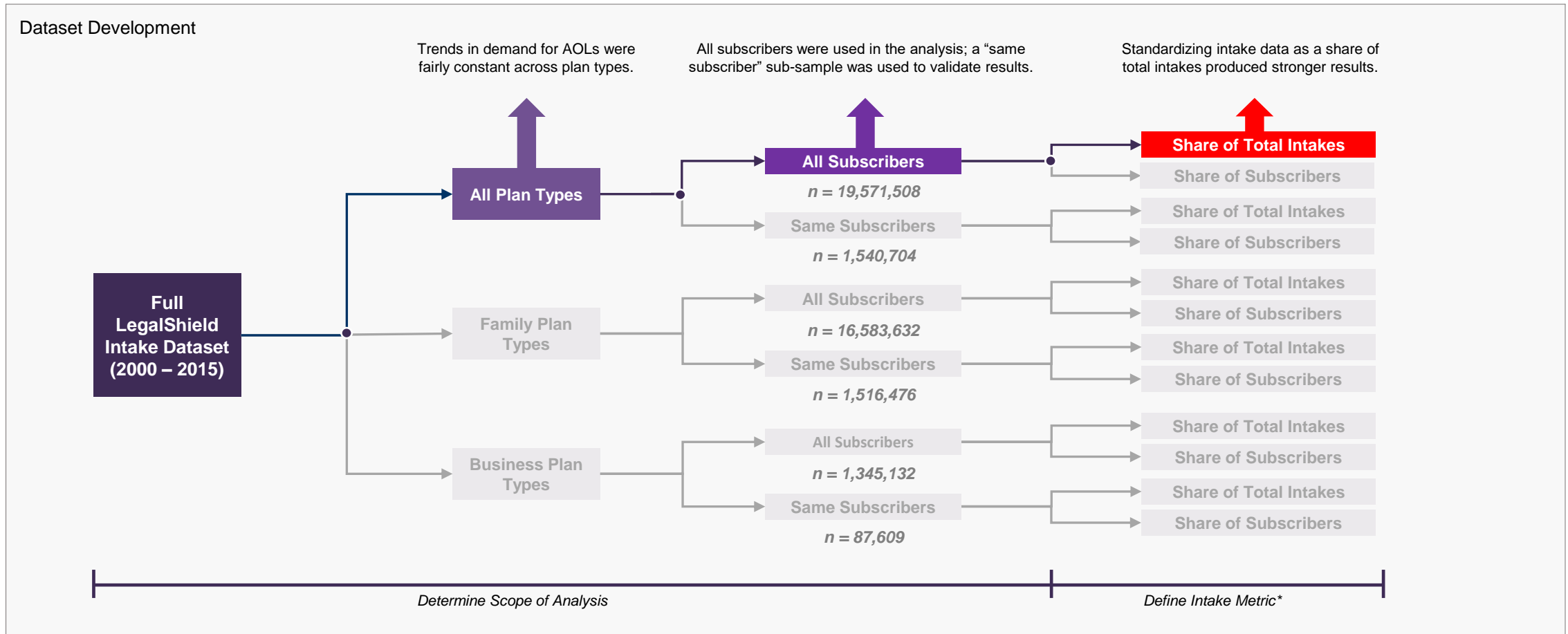Combine specific AOLs into composite indexes and test relationships with key macroeconomic indicators.

Data Construction & Cleaning

Monthly subscriber and intake data was trimmed to improve the stability of the dataset over time.

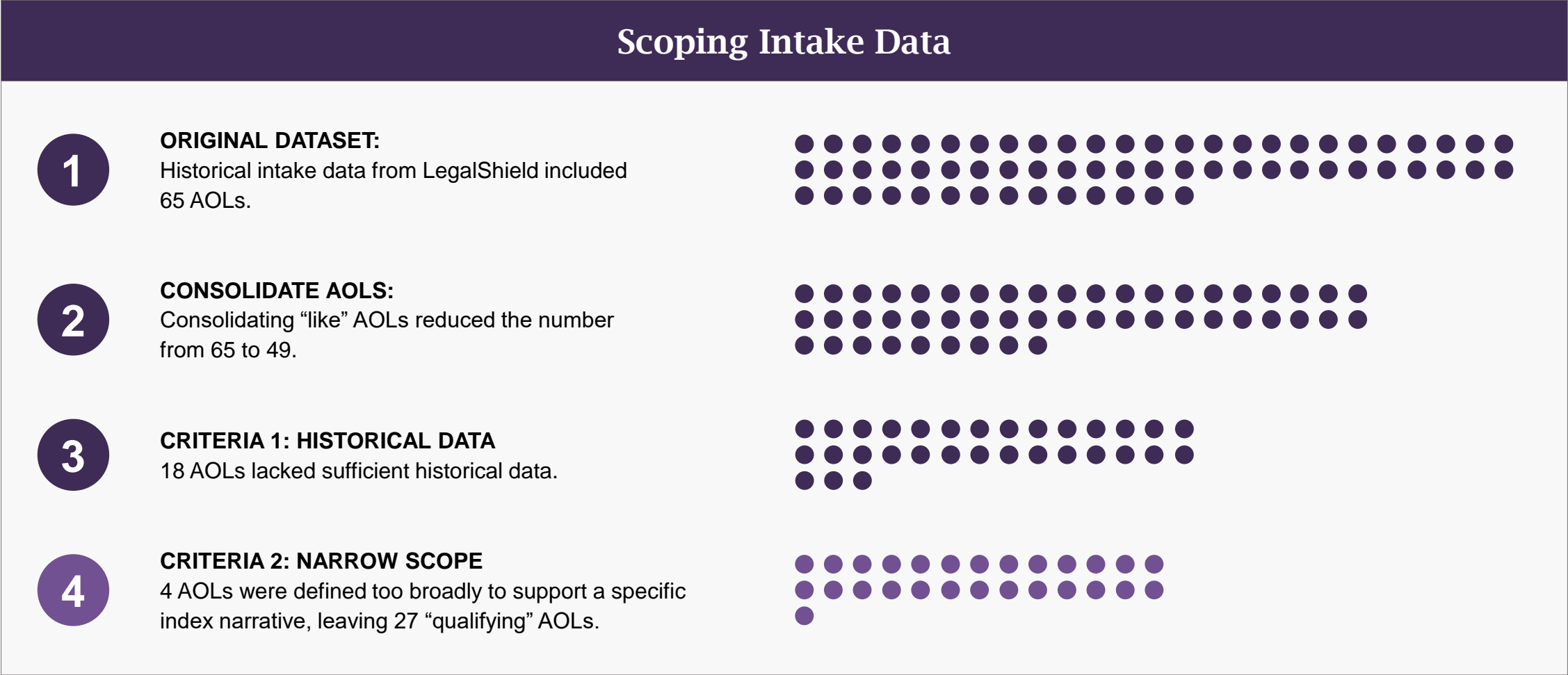Active Subscribers (Left Axis; Thousands)

Total Intakes (Right Axis; Thousands)

Excluded data prior to 2002, as the rapid expansion of intakes (presumably due to overall business growth) has the potential to distort measures of "pure demand" for legal services.

Analytical Scope

Testing and index development used intake data from all subscribers across all plan types, standardized by total intakes.

Dataset Development

Trends in demand for AOLs were fairly constant across plan types.

All subscribers were used in the analysis; a "same subscriber" sub-sample was used to validate results.

Standardizing intake data as a share of total intakes produced stronger results.

Full LegalShield Intake Dataset (2000 – 2015)

All Plan Types

All Subscribers
n = 19,571,508

Same Subscribers
n = 1,540,704

Family Plan Types

All Subscribers
n = 16,583,632

Same Subscribers
n = 1,516,476

Business Plan Types

All Subscribers
n = 1,345,132

Same Subscribers
n = 87,609

Share of Total Intakes

Share of Subscribers

Share of Total Intakes

Share of Subscribers

Share of Total Intakes

Share of Subscribers

Share of Total Intakes

Share of Subscribers

Share of Total Intakes

Share of Subscribers

Share of Total Intakes

Share of Subscribers

Determine Scope of Analysis

Define Intake Metric*

*Standardizing intake data as a share of active subscribers controls for the change in the size of the subscriber base over time. Standardizing intake data as a share of total intakes controls for shifts in the relative demand for different AOLs over time.

22

Filter AOLs

Out of 65 AOLs in the original intake data, a three-step filtering process identified 27 as suitable candidates for index development.

Scoping Intake Data

1

ORIGINAL DATASET:
Historical intake data from LegalShield included 65 AOLs.

2

CONSOLIDATE AOLS:
Consolidating "like" AOLs reduced the number from 65 to 49.

3

CRITERIA 1: HISTORICAL DATA
18 AOLs lacked sufficient historical data.

4

CRITERIA 2: NARROW SCOPE
4 AOLs were defined too broadly to support a specific index narrative, leaving 27 "qualifying" AOLs.

Filter AOL

Detailed Inclusion Filter Results (1/2)

ID	LEGALSHIELD AREA OF LAW	ASSOCIATED WITH +/- LIFE EVENT	HISTORICAL DATA	NARROW SCOPE	INCLUDE IN DATASET
1	Administrative Law	Ambiguous		✓	
2	Automobile Accident	-	✓	✓	✓
3	Banking	Ambiguous	✓		
4	Bankruptcy	-	✓	✓	✓
5	Business License, Fees, etc.	Ambiguous	✓	✓	✓
6	Civil Litigation	-	✓	✓	✓
7	Collection	-	✓	✓	✓
8	Consumer/Finance	Ambiguous	✓	✓	✓
9	Contract	Ambiguous	✓	✓	✓
10	Corporate	+	✓	✓	✓
11	Criminal	-	✓	✓	✓
12	Divorce	-		✓	
13	Divorce Uncontested	-		✓	
14	Education	-	✓	✓	✓
15	Elder Law	-	✓	✓	✓
16	Employment	Ambiguous	✓	✓	✓
17	Entertainment	Ambiguous		✓	
18	Estate Planning	Ambiguous	✓	✓	✓
19	Family Law	Ambiguous	✓	✓	✓
20	Firearm	Ambiguous		✓	
21	Foreclosure	-	✓	✓	✓
22	Franchise Law	Ambiguous		✓	
23	General Law	Ambiguous	✓		
24	Identity Theft	-		✓	
25	Immigration	Ambiguous	✓	✓	✓

Filter AOL

Detailed Inclusion Filter Results (2/2)

ID	LEGALSHIELD AREA OF LAW	ASSOCIATED WITH +/- LIFE EVENT	HISTORICAL DATA	NARROW SCOPE	INCLUDE IN DATASET
26	Insurance	-	✓	✓	✓
27	Labor Law	-		✓	
28	Landlord Tenant	-	✓	✓	✓
29	Legal Malpractice	-		✓	
30	Loan Modification	Ambiguous		✓	
31	Medical Malpractice	-	✓	✓	✓
32	Military Law/Security Clearance	Ambiguous		✓	
33	Other	Ambiguous	✓		
34	Patents Combined	+	✓	✓	✓
35	Personal Injury	-	✓	✓	✓
36	Probate	-	✓	✓	✓
37	Product Liability	-		✓	
38	Public Service	Ambiguous		✓	
39	Real Estate	+	✓	✓	✓
40	Request for Service	Ambiguous			
41	Small Claims	-	✓	✓	✓
42	Social Security	-	✓	✓	✓
43	Tax	Ambiguous	✓		
44	Trademarks	+		✓	
45	Traffic	-	✓	✓	✓
46	Veteran's Affairs	Ambiguous		✓	
47	Will Workshop	Ambiguous		✓	
48	Workman's Compensation	-	✓	✓	✓
49	Wrongful Death	-		✓	
	TOTAL		31	44	27

Testing

Intake data from the 27 "qualifying" AOLs was then tested against 15 economic indicators of interest to assess potential predictive value.

MACROECONOMIC INDICATORS:
1. Conduct preliminary data cleaning, processing, and formatting.
2. Examine differences across plan types and subscriber samples to determine the optimal "subscriber universe" for index development
3. Test competing approaches for normalizing intake data.

HOUSING INDICATORS:
4. Housing Starts
5. Existing Home Sales (NAR)
6. Residential Construction Permits
7. Small Business Optimism Index (NFIB)

FINANCIAL HEALTH INDICATORS:
8. Total Bankruptcies (Total Filings; Epiq)
9. Delinquencies (All Loans & Leases; St. Louis Fed)
10. Foreclosures (All Mortgage Foreclosures Started; Mortgage Bankers Association)
11. Consumer Credit (Total; Revolving; Non-Revolving)
12. S&P 500 Index
13. Wilshire 5000 Index

CONFIDENCE INDICATORS:
14. Consumer Confidence Index (Conference Board)
15. Small Business Optimism Index (NFIB)

Testing

Three out of the final 27 AOLs demonstrated a strong statistical relationship to a handful of economic indicators.

Scoping Intake Data

1   **27 SCOPED AOLS:** 27 AOLs were subjected to several rounds of statistical testing.

2   **STATISTICAL RELATIONSHIP:** Test for correlation across various transformations.

3   **TRACKING HISTORICAL TREND:** Visually assess AOL to determine how closely it tracks its target indicator.

4   **LEADING PROPERTIES:** Test for leading / concurrent properties.

5   **ROBUST ACROSS TIME:** Confirm that relationships hold across various out-of-sample time periods.

Testing

Testing included computing various correlations, assessing historical trends and leading properties, and evaluating stability over time.

1   **BASIC COORELATIONS:**
- Examined the correlation between AOL and target macro indicator using different transformations

Less Rigorous ←——→ *More Rigorous*

Level/Level   *Year/Year*   *6 Month/Month*   *3 Month/Month*   *1 Month/Month*

2   **HISTORICAL TREND & LEADING PROPERTIES:**
- Produced charts of transformed AOL and select economic indicators to confirm/reject if AOL tracks indicator's historical trend
- Examined AOLs on both a concurrent and leading basis

3   **STABILITY TESTS:**
- Performed testing to confirm that relationship between AOL and macro indicator was not driven solely by a specific time period within the dataset and ensure that the relationship holds across time
- Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)
- Test 2: Compared correlations between random samples of the data
- Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)
- Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data

Testing

Statistical Relationship Testing, Select Results

Correlation Results (2002 – 2017)				
LEGALSHIELD AREA OF LAW	TARGET INDICATOR	CORRELATION (LEVEL)	CORRELATION (Y/Y)	CORRELATION (Q/Q)
Bankruptcy	Bankruptcies	0.76	0.67	0.20
Foreclosure	Foreclosures	0.96	0.87	0.49
Real Estate	Existing Home Sales	0.85	0.58	0.36

Testing

Historical Trend & Leading Properties Testing, Select Results

Historical Trend & Leading Properties Results (2002 – 2016)				
LEGALSHIELD AREA OF LAW	TARGET INDICATOR	TRACKS HISTORICAL TREND?	LEADING PROPERTIES	APPROXIMATE LEAD TIME
Bankruptcy	Bankruptcies	✓	✓	≈ 1 mo.
Foreclosure	Foreclosures	✓	r	Coincident*
Real Estate	Existing Home Sales	✓	✓	≈ 1 mo.*

* These indices have a practice lead time of varying length due to the release schedule of the target series.

Testing

Intertemporal Stability Testing, Select Results

Stability Test Results (2000 – 2015)							
LEGALSHIELD AREA OF LAW	TARGET MACRO INDICATOR(S)	TEST 1*	TEST 2*	TEST 3*	TEST 4*	OVERALL SCORE	KEY TAKEAWAYS
Bankruptcy	Bankruptcies	✓	✓	✓	✓	✓+	Performed well across all tests
Foreclosure	Foreclosures	✓	✓	✓	✓	✓+	Performed well across all tests
Real Estate	Existing Home Sales	r	✓	✓	✓	✓	Performed well on all but one test

* Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)

* Test 2: Compared correlations between random samples of the data

* Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)

* Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data

Methodology:

Composite Index Development

Methodology

A five-step process was used to convert LegalShield data into composite indices.

1 **SELECT AOLS:** Select individual AOLs to be included in the composite index, based on results of statistical tests and desired index "narrative" (e.g., consumer stress).

2 **TRANSFORM AOLS:** Compute the month-on-month percent change for each AOL.

3 **STANDARDIZE:** Create a standardization factor for each AOL, based on its standard deviation. Multiply each transformed AOL by the standardization factor to produce an "adjusted monthly contribution" for each AOL.

4 **SUM COMPONENTS:** Sum the adjusted monthly contribution across each AOL to produce a monthly index growth rate.

5 **REBASE TO 100:** Rebase the monthly index growth rate to a given month (January 2000 = 100) and to produce a monthly composite index.

Testing

Historical Trend & Leading Properties Test Results

Historical Trend & Leading Properties Results (2002 – 2016)				
COMPOSITE INDEX	**TARGET INDICATOR**	**TRACKS HISTORICAL TREND?**	**LEADING PROPERTIES**	**APPROXIMATE LEAD TIME**
Consumer Stress	Consumer Confidence	✓	✓	1 - 3 mo.
Housing Construction	Housing Starts	✓	✓	0 – 2 mo.*

*In addition to its statistical lead time, the Index also has a timing advantage over housing starts of roughly a week due to release schedules.

Testing

Statistical Relationship Test Results

Correlation Results (2002 – 2017)				
COMPOSITE INDEX	TARGET INDICATOR	CORRELATION (INDEX)	CORRELATION (Y/Y)	CORRELATION (Q/Q)
Consumer Stress	Consumer Confidence	-0.85	-0.58	-0.33
Housing Construction	Housing Starts	0.88	0.55	0.23

Testing

Intertemporal Stability Tests

Stability Test Results (2000 – 2015)							
COMPOSITE INDEX	TARGET INDICATOR	TEST 1*	TEST 2*	TEST 3*	TEST 4*	OVERALL SCORE	KEY TAKEAWAYS
Consumer Stress	Consumer Confidence	r	✓	✓	✓	✓	Performed well on all but one test
Housing Construction	Housing Starts	r	✓	✓	✓	✓	Performed well on all but one test

Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)
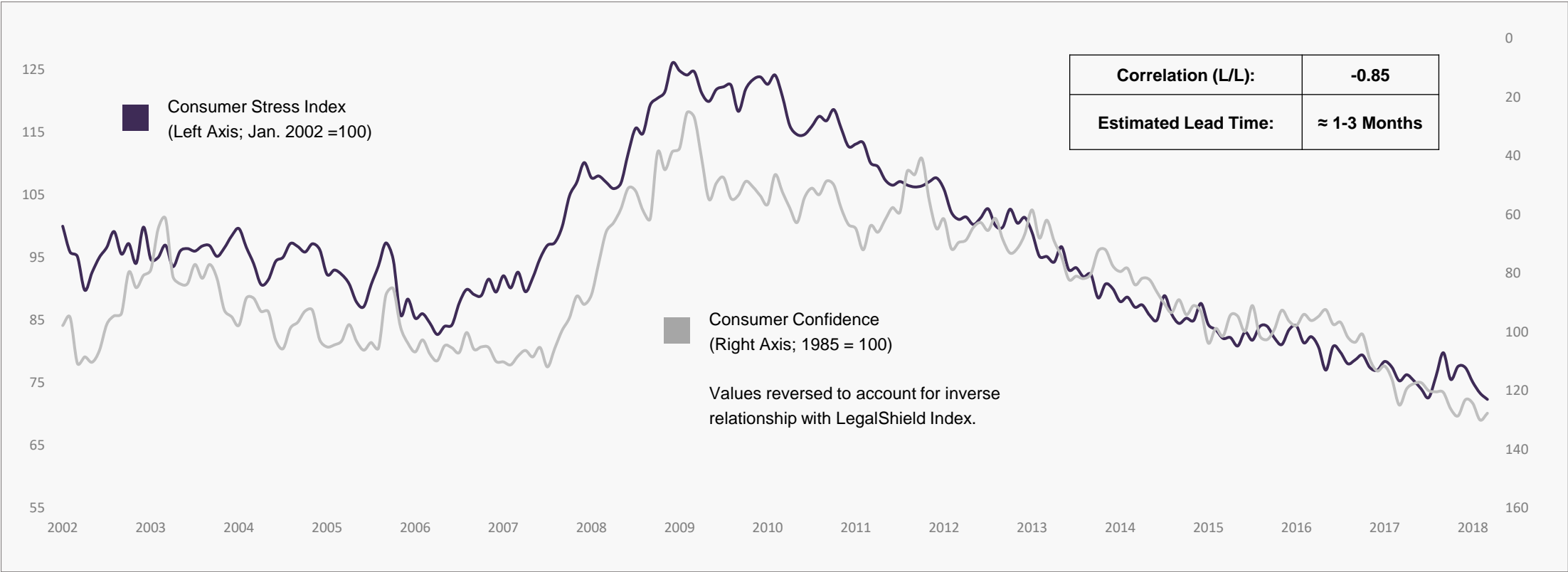
Test 2: Compared correlations between random samples of the data

Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)

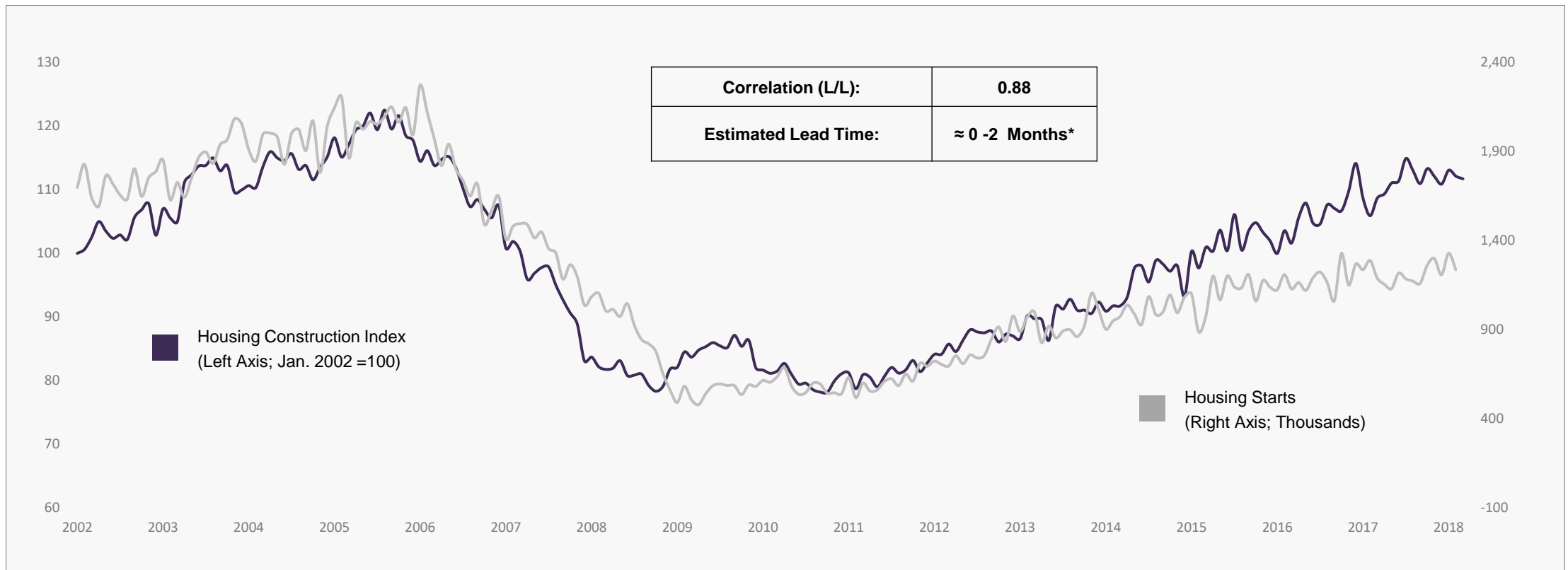Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data

Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance

■ Consumer Stress Index
(Left Axis; Jan. 2002 =100)

■ Consumer Confidence
(Right Axis; 1985 = 100)

Values reversed to account for inverse relationship with LegalShield Index.

Correlation (L/L):	-0.85
Estimated Lead Time:	≈ 1-3 Months

Composite Index: Housing Construction Index

AOLs: Foreclosure; Real Estate*

Correlation (L/L):	0.88
Estimated Lead Time:	≈ 0 -2 Months*

Housing Construction Index
(Left Axis; Jan. 2002 =100)

Housing Starts
(Right Axis; Thousands)
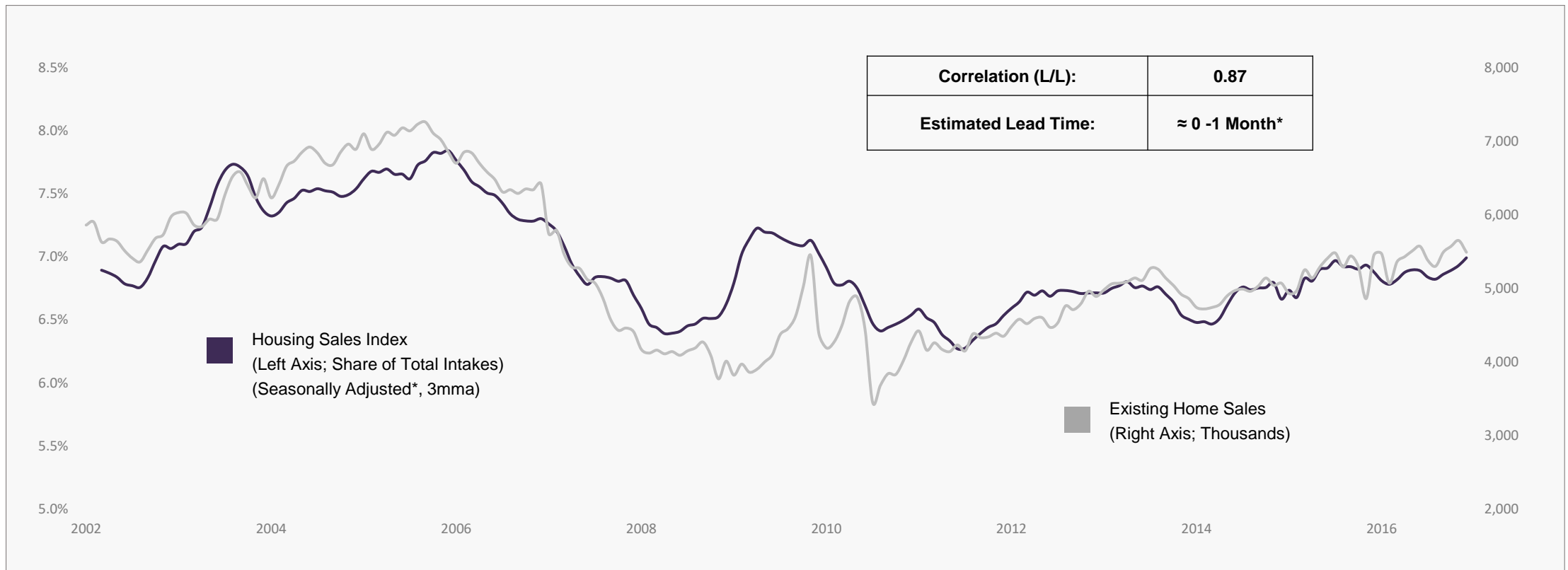
*The Housing Construction Index component of the Housing Activity Index was seasonally adjusted using the Census Bureau's X-13 ARIMA-SEATS Seasonal Adjustment Program. In addition to its statistical lead time, the Index has a timing advantage over housing starts of roughly a week due to release schedules.
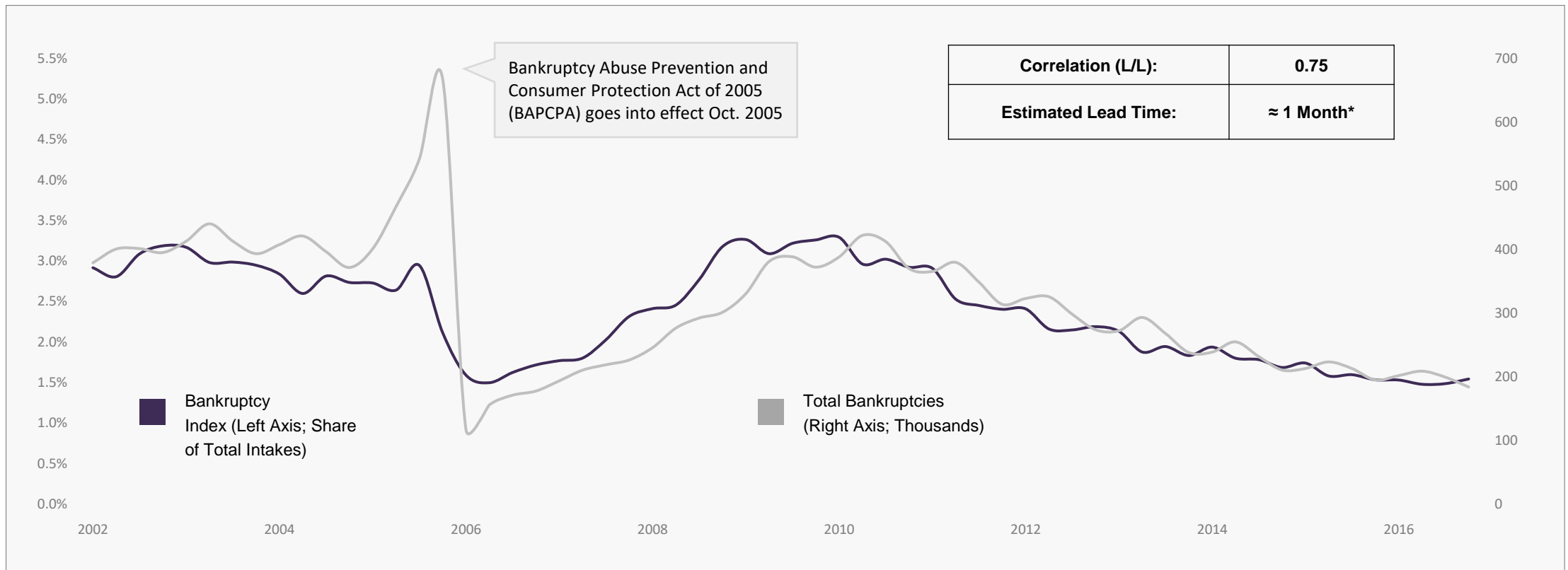
AOL: Real Estate

Target Series: Real Estate*

Correlation (L/L):	0.87
Estimated Lead Time:	≈ 0 -1 Month*

Housing Sales Index
(Left Axis; Share of Total Intakes)
(Seasonally Adjusted*, 3mma)

Existing Home Sales
(Right Axis; Thousands)

*The Housing Sales Index was seasonally adjusted using the Census Bureau's X-13 ARIMA-SEATS Seasonal Adjustment Program. In addition to its statistical lead time, the Index has a timing advantage of roughly two weeks over existing home sales due to release schedules.
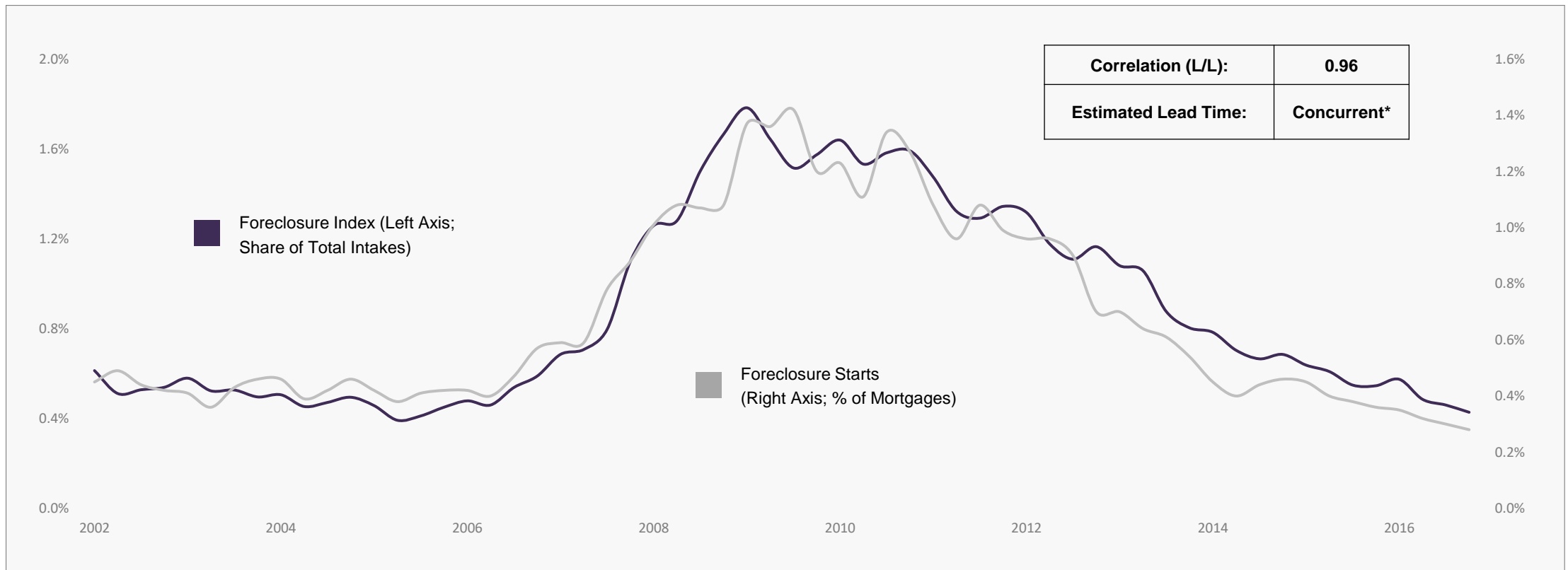
AOL: Bankruptcy

Target Series: Consumer Bankruptcies

AOL: Foreclosure

Target Series: Foreclosure Starts

Correlation (L/L):	0.96
Estimated Lead Time:	Concurrent*

Foreclosure Index (Left Axis; Share of Total Intakes)

Foreclosure Starts (Right Axis; % of Mortgages)

*Foreclosures starts are statistically coincident with the LegalShield Foreclosure Index, but the Index has a significant timing advantage time due to its monthly release (compared to the quarterly release of foreclosure starts).

Results

Summary of Key Findings

Summary of Results						
LEGALSHIELD LAW Index	**TARGET SERIES**	**CORRELATION (LEVEL)**	**CORRELATION (Y/Y)**	**CORRELATION (Q/Q)**	**APPROXIMATE LEAD TIME**	**ROBUST ACROSS TIME**
Bankruptcy	Bankruptcies	0.76	0.67	0.20	≈ 1 mo.	✓+
Foreclosure	Foreclosures	0.96	0.87	0.49	Coincident*	✓+
Housing Sales	Existing Home Sales	0.85	0.58	0.36	≈ 0-1 mo.*	✓
Consumer Stress	Consumer Confidence	-0.85	-0.58	-0.33	≈ 1-3 mo.	✓
Housing Construction	Housing Starts	0.88	0.55	0.23	≈ 0-2 mo.*	✓