About LegalShield

#1 Provider of subscription-based legal plans to households

1.8 million+ memberships paying monthly via credit card/ debit card/payroll deduction
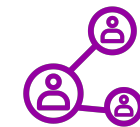
49 year history and counting

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

The LegalShield Consumer Stress Index was roughly unchanged in September and remains near its lowest ever reading. Consumers have built substantial savings during the pandemic that are helping keep financial stress low, even as federal protections expire.

The LegalShield Consumer Stress Index inched up (worsened) 0.5 point in September to 59.6. Meanwhile, the Conference Board's Consumer Confidence Index dropped 5.9 points in September to 109.3, its lowest level since February.

Consumers have taken advantage of pandemic relief programs and foregone spending to create a financial cushion that is keeping stress low as even certain government provisions come to an end. Economists estimate that consumers have amassed substantial savings thanks to above-trend income and below-trend spending during the pandemic. Indeed, the Census Bureau estimates that the poverty rate fell to 9.1% in 2020 — the lowest rate on record — after accounting for government aid. For homeowners and those with investment portfolios, a strong housing market and gains from the stock market have added to this financial cushion.

While the Delta variant has weighed on consumer confidence and mobility, consumers are thus far showing resilience in their spending. In August, retail sales beat expectations and rose by 0.7%, while overall consumer spending rose by 0.8%. It is important to note, however, that while online and grocery spending increased, spending at restaurants and bars fell, suggesting that spending could have been even higher absent fears stemming from the Delta variant. Another significant concern weighing on consumer decisions is rising inflation. Per the New York Fed, inflation expectations hit a new high of 5.2% in August, roughly double the rate seen at the onset of the pandemic. Meanwhile, Salesforce estimates that consumers will see a 20% increase in prices during the upcoming holiday season.
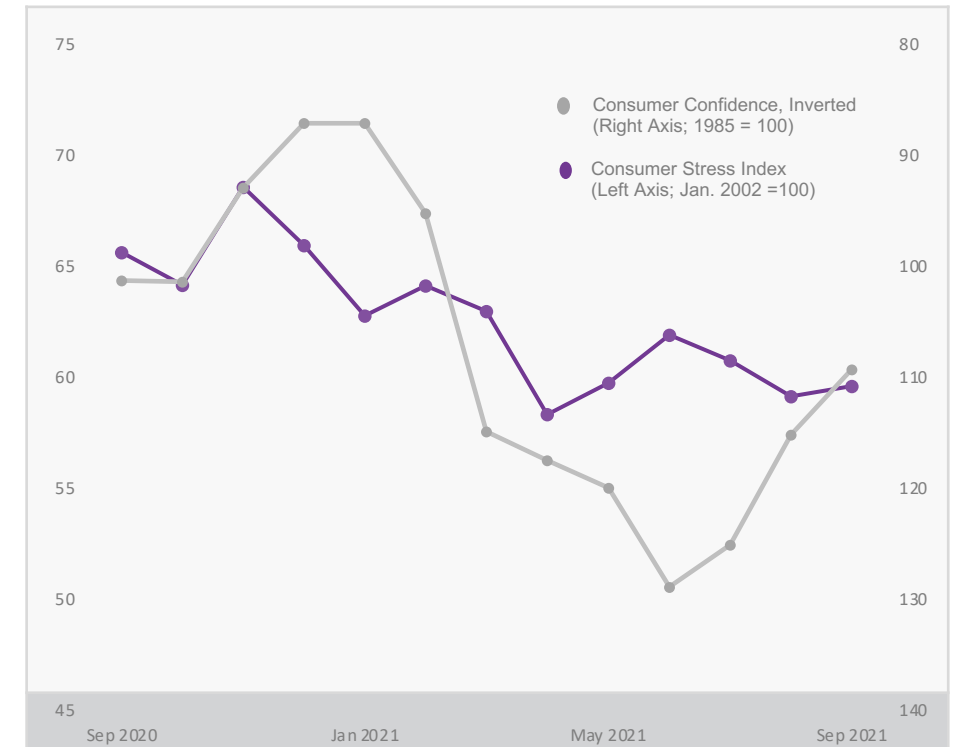
Overall, consumers are exhibiting low levels of financial stress even as government support measures like expanded unemployment benefits and the eviction moratorium expire. While the Delta variant and rising prices are current headwinds faced by consumers, financial stress is expected to remain low for the next few months, an outlook supported by LegalShield data.

Consumer Stress Index

Historical Trend Over Past 16 Years

Consumer Confidence, Inverted
(Right Axis; 1985 = 100)

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

Movement Over Past 12 Months

Consumer Confidence, Inverted
(Right Axis; 1985 = 100)

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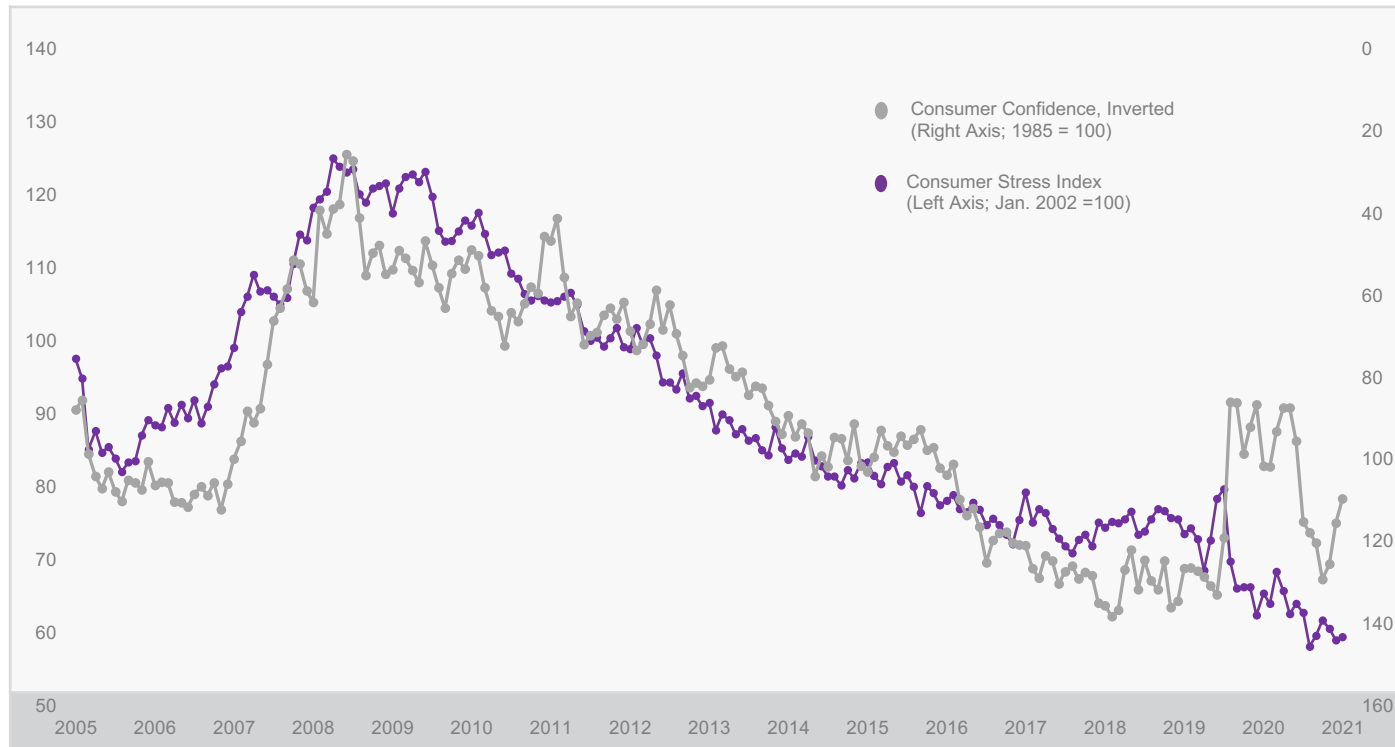
Bankruptcy Index

The LegalShield Bankruptcy Index was mostly unchanged at its lowest ever level in September. Bankruptcies are expected to remain low in the immediate future, although the expiration of government protections may mean that financial pressures could begin taking their toll on consumers in 2022.

The LegalShield Bankruptcy Index decreased (improved) 0.2 point to 18.9 in September, a new all-time low. Meanwhile, total seasonally adjusted bankruptcy filings fell by 4.6% to 30,993 in August and were down 22% compared to a year ago. Increased savings during the pandemic — thanks to government protections like stimulus checks and expanded unemployment benefits, various moratoria, and reduced spending — have kept most consumers in good financial health. The Federal Reserve reports that net private savings grew at a seasonally adjusted annual rate of $2.9 trillion in Q2, substantially higher than pre-pandemic levels.
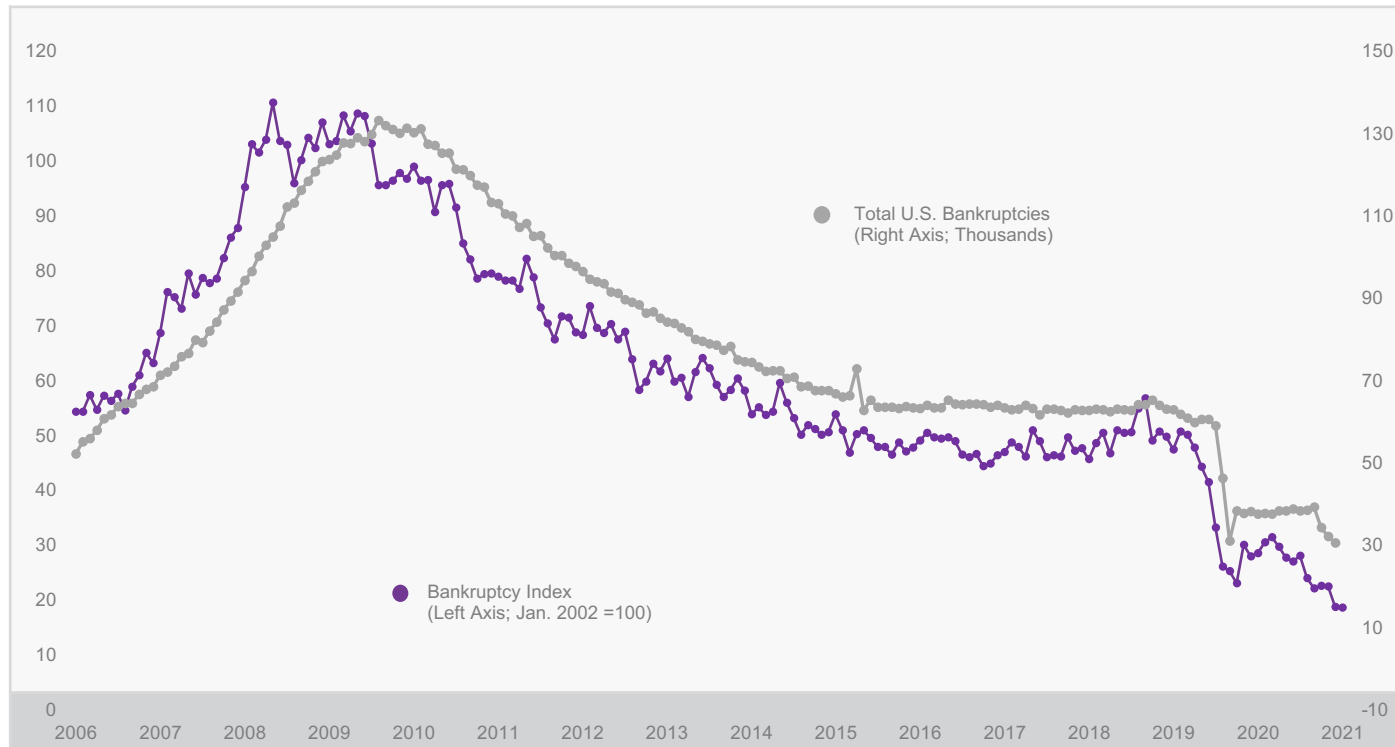
After showing signs of normalizing earlier in the year, consumer borrowing has been stifled by uncertainty brought on by the Delta variant (e.g., total consumer credit grew at a lower rate than expected in July). Meanwhile, banks like JPMorgan and Wells Fargo estimate that loan demand will not revert to pre-pandemic levels until 2022.

Another factor to watch in coming months is rising financial pressure reported by lower-income consumers. Per the New York Fed, debt delinquency expectations have been increasing for respondents earning less than $50,000, while delinquency expectations for higher-income consumers has been on a downward trend for nearly a year. These pressures may grow as consumers wrestle with rising costs of large monthly expenses. For example, Zillow reports that rent rose by 12% Y/Y in August.

As financial pressures begin taking their toll on consumers and the impacts of expiring government protections materialize, bankruptcies may increase in 2022. For the time being, however, bankruptcies are expected to stay low.

Bankruptcy Index

Historical Trend Over Past 16 Years

Movement Over Past 12 Months

Total U.S. Bankruptcies
(Right Axis; Thousands)

Bankruptcy Index
(Left Axis; Jan. 2002 =100)
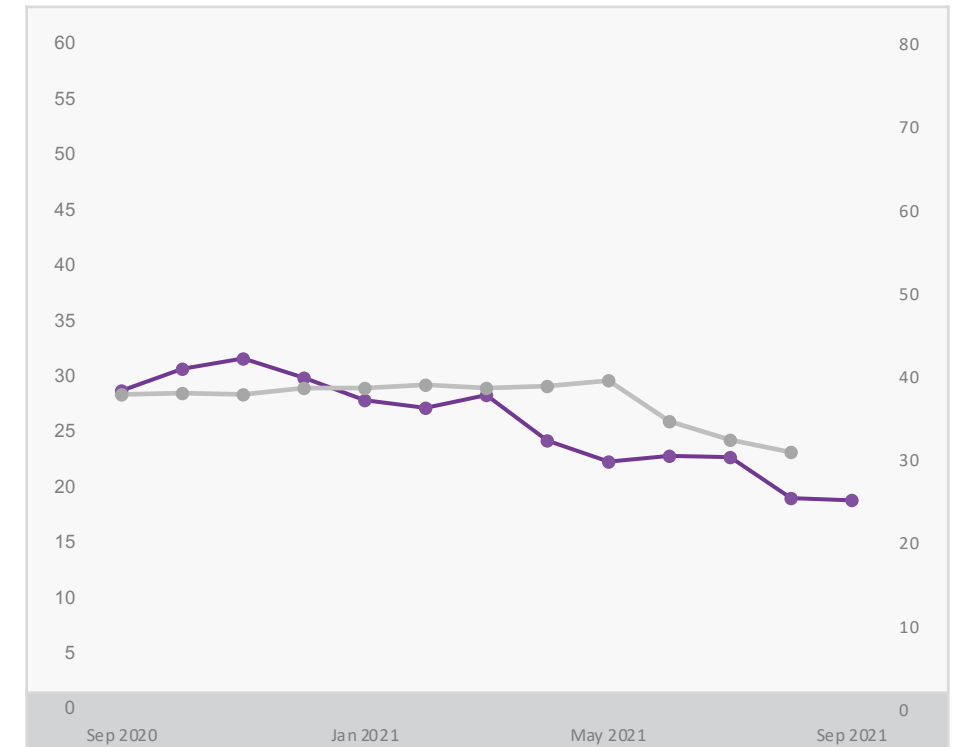
Foreclosure Index

The LegalShield Foreclosure Index was largely unchanged in September near a historically low level. While foreclosure activity has increased following the expiration of the foreclosure moratorium, it has yet to reach pre-pandemic levels and is not expected to surge to levels seen after the Great Recession.

The LegalShield Foreclosure Index ticked up (worsened) 0.6 point to 33.2 in September. Meanwhile, data from ATTOM reveals the impact of the expiration of the foreclosure moratorium: 15,838 properties had foreclosure filings in August, up 27% M/M and 60% higher than year-ago levels. Further, another 8,348 properties had foreclosure proceedings start in August, also up 27% on the month. While this represents an increase in foreclosure activity, it remains exceedingly low compared to pre-pandemic levels: there were nearly 28K foreclosure starts in August 2019, over three times this August's figure.

There is general agreement amongst economists that the expiration of mortgage-related government support is unlikely to cause a wave of foreclosures as was seen in the aftermath of the 2008 housing market crash. One major reason for this outlook is the skyrocketing of home values during the pandemic. Per Black Knight, just 7% of borrowers in forbearance programs have less than 10% of equity in their homes, making it easier to sell their homes in the current market and remain afloat. However, borrowers who can sell their homes to avoid foreclosure do not always end up doing so, which could be due to limited understanding of equity positions or the foreclosure process. While homeowners with lower equity in their homes were more likely to be referred to foreclosure in the early stages of the Great Recession, that difference narrowed in the 2010s.

Overall, foreclosure activity is expected to increase in coming months due to the expiration of federal support. However, a spike in foreclosures akin to the last housing crisis is unlikely, an outlook supported by LegalShield data.

Foreclosure Index

Historical Trend Over Past 16 Years

Foreclosure Starts
(Right Axis; Percent of Mortgages)

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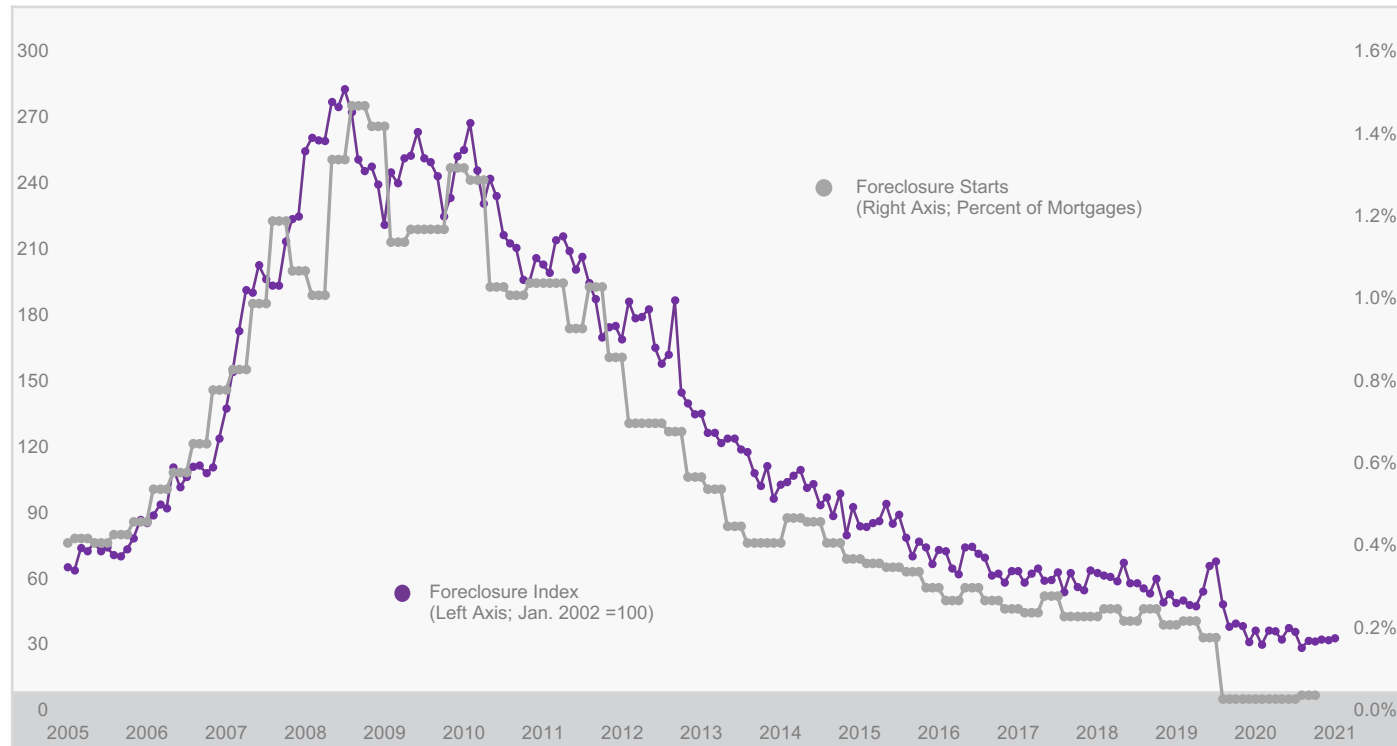
Movement Over Past 12 Months
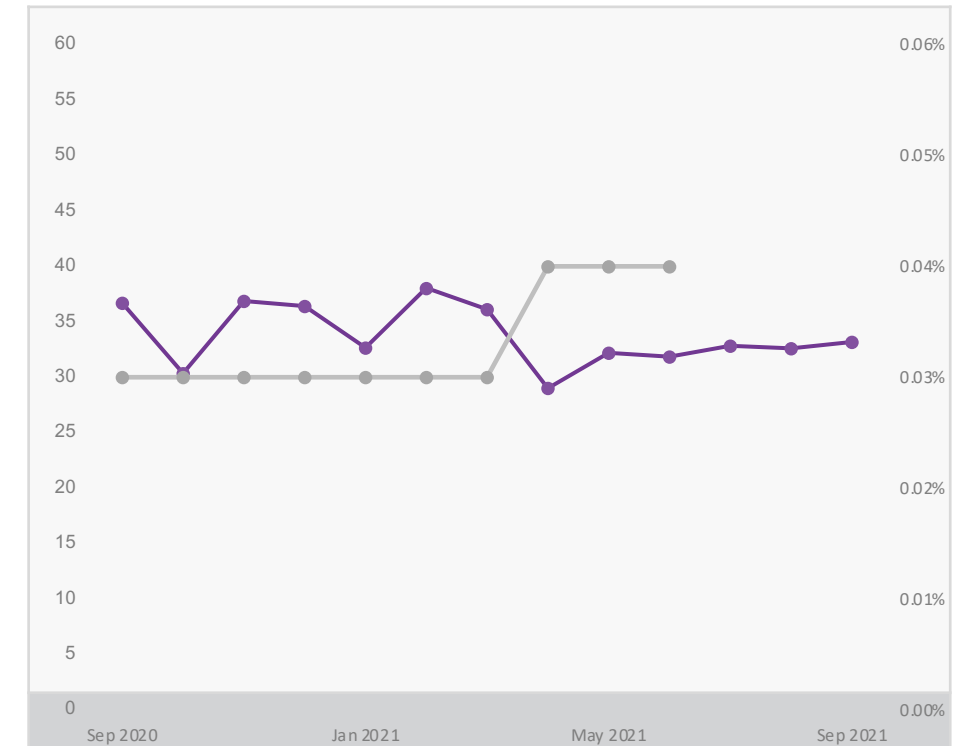
Housing Construction Index

The LegalShield Housing Construction Index ticked up to a new record high in September. While strong housing demand has led to high levels of housing construction, homebuilders are facing headwinds in the form of high materials costs and labor shortages.
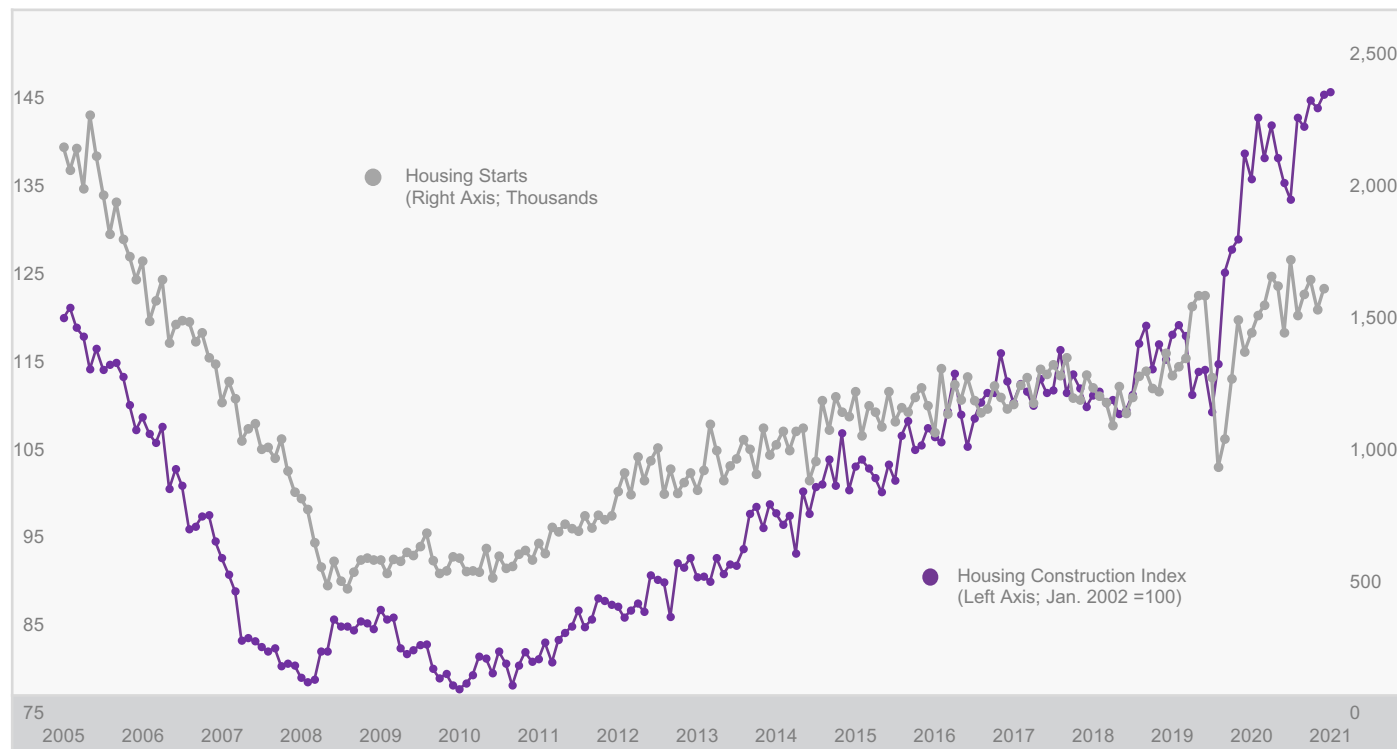
The LegalShield Housing Construction Index increased 0.3 point to 145.8 in September. Meanwhile, housing starts rose 5.0% in September and were up 17% compared to year-ago levels.

The pandemic brought increased demand for single-family homes in less-densely populated areas. This trend has persisted, as residential construction continued to increase in suburbs and more affordable markets and moved away from the most expensive areas in Q2. However, residential construction is slowing: single-family homes permitted for construction but not yet started are up a staggering 50% Y/Y. While housing demand remains strong, homebuilders have been hamstrung by labor shortages and high input costs. For example, the Bureau of Labor Statistics reports that the Producer Price Index of inputs to residential construction rose by 19% including energy and 12% when excluding energy in 2021. While the prices of some types of lumber have fallen recently, that decline has been offset by large increases in prices of other inputs including asphalt and steel mill products. Similarly, the construction industry continues to face a chronic shortage of skilled labor that is hampering the pace of homebuilding. Fannie Mae expects these headwinds to dampen the housing market into the new year.
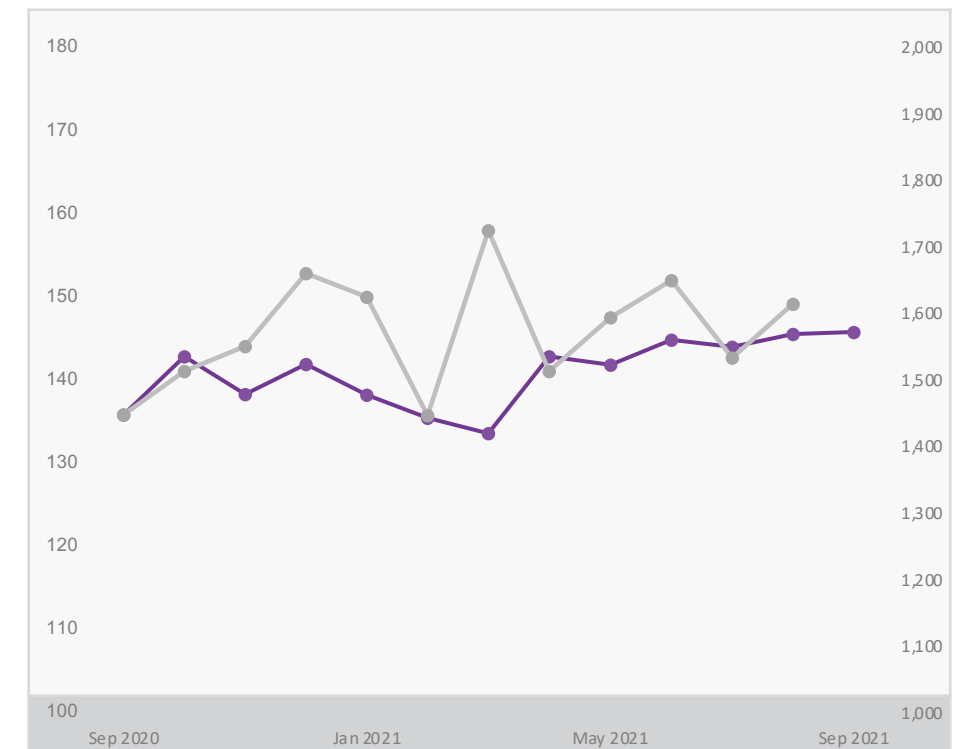
In all, strong demand is expected to keep housing construction healthy. However, high materials costs and labor shortages may hinder some construction activity.

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

The LegalShield Housing Sales Index ticked up in September to another record high. While existing home sales are expected to grow in coming months, affordability constraints may begin weighing on the market over a longer time horizon.

The LegalShield Housing Sales Index increased by 0.8 point in September to 121.1. Meanwhile, existing home sales fell by 2.0% in August and were 1.5% below year-ago levels.
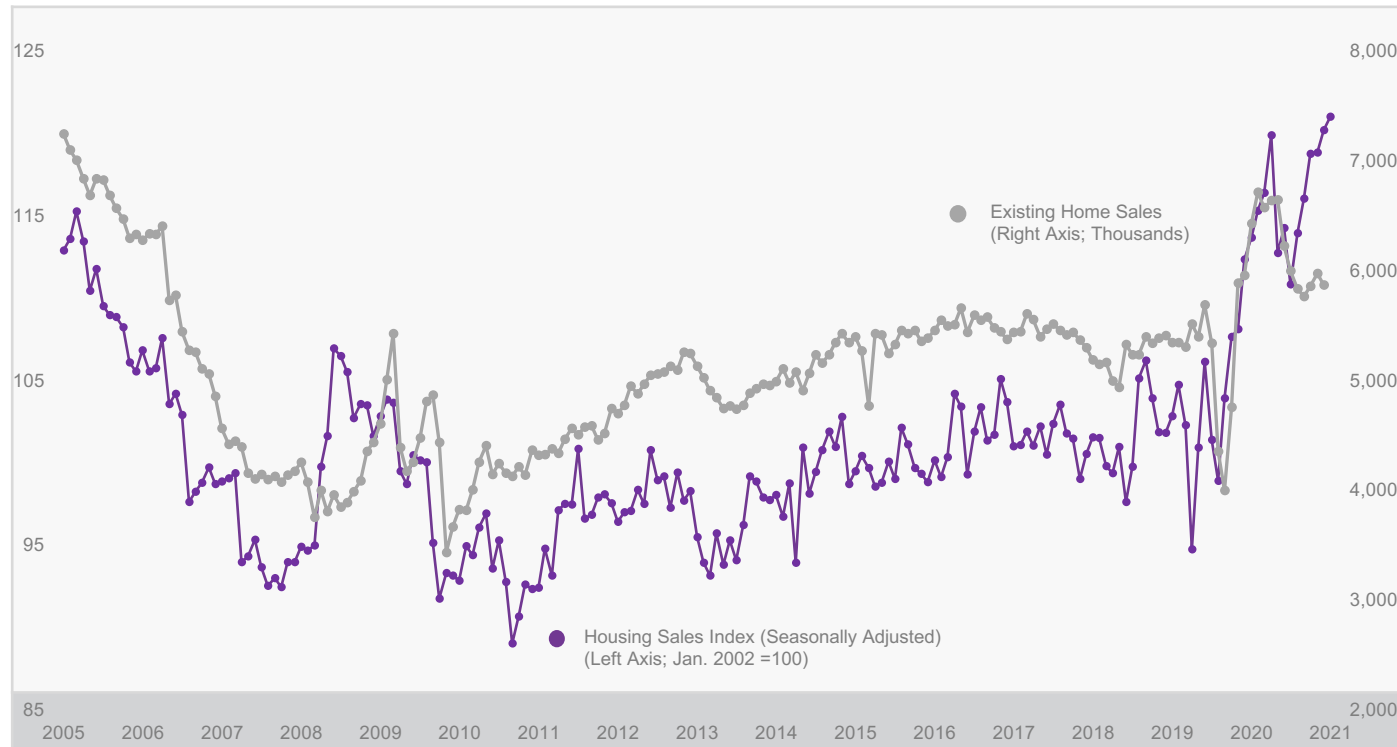
While housing supply seems to be improving after severe inventory shortages earlier this year, sky-high prices continue to deter prospective homeowners from buying homes. According to Realtor.com, there were 657K active home listings in September, up 2.4% from August but down 22% year-over-year. Similarly, while modest housing supply improvements and historically low mortgage rates bode well for buyers, they may not be enough to counteract the impact of surging home prices. CoreLogic's national home price was up 18.1% Y/Y in August, the fifth consecutive month of record-high price appreciation. As a result, the average monthly payment required on a 30-year fixed rate mortgage to buy an average-priced home has risen by nearly 20% in 2021, the highest level since 2007.

Accelerating home prices have far outpaced growth in wages, which means payments now represent a larger share of total income. Indeed, average monthly mortgage payments now make up 21.6% of the median household income. Perhaps unsurprisingly, these rising prices are putting downward pressure on consumer sentiment. According to the University of Michigan, the share of people that think now is a good time to buy a home has more than halved since the beginning of the pandemic and has fallen to the lowest level since 1982.

Looking ahead, while affordability concerns may weigh on purchasing decisions for some homeowners, overall housing sales are likely to remain elevated for the foreseeable future, an outlook supported by the LegalShield data.

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
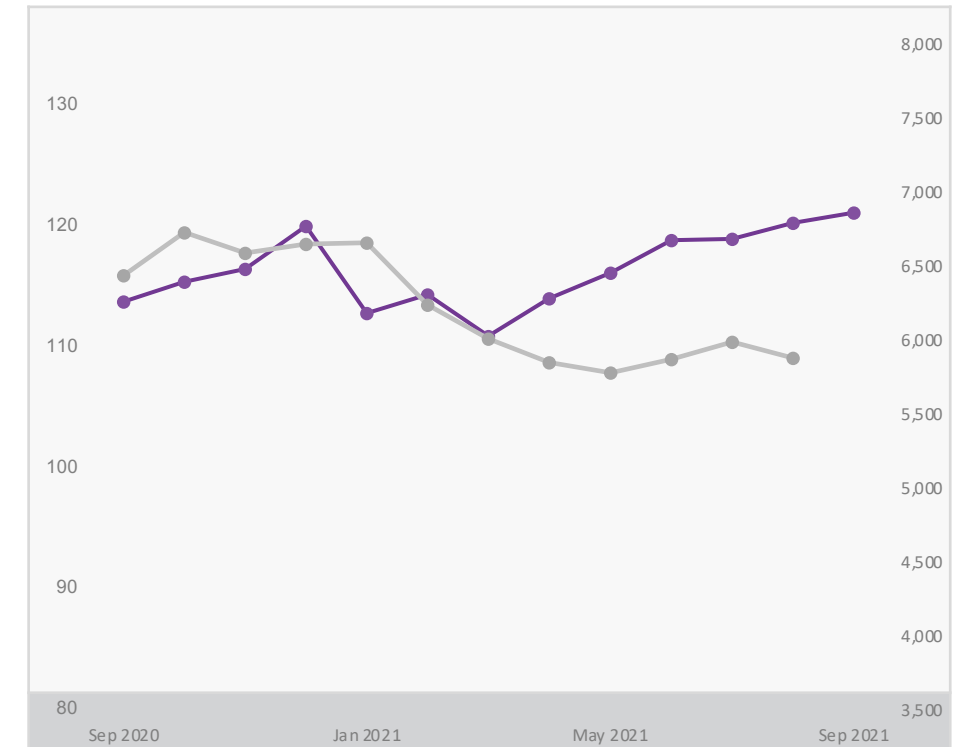
Technical Appendix

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

LegalShield "Housing Construction" Index

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

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

✓ **Target Indicator:** Consumer Confidence

✓ **Target Indicator:** Housing Starts

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

✓ **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.
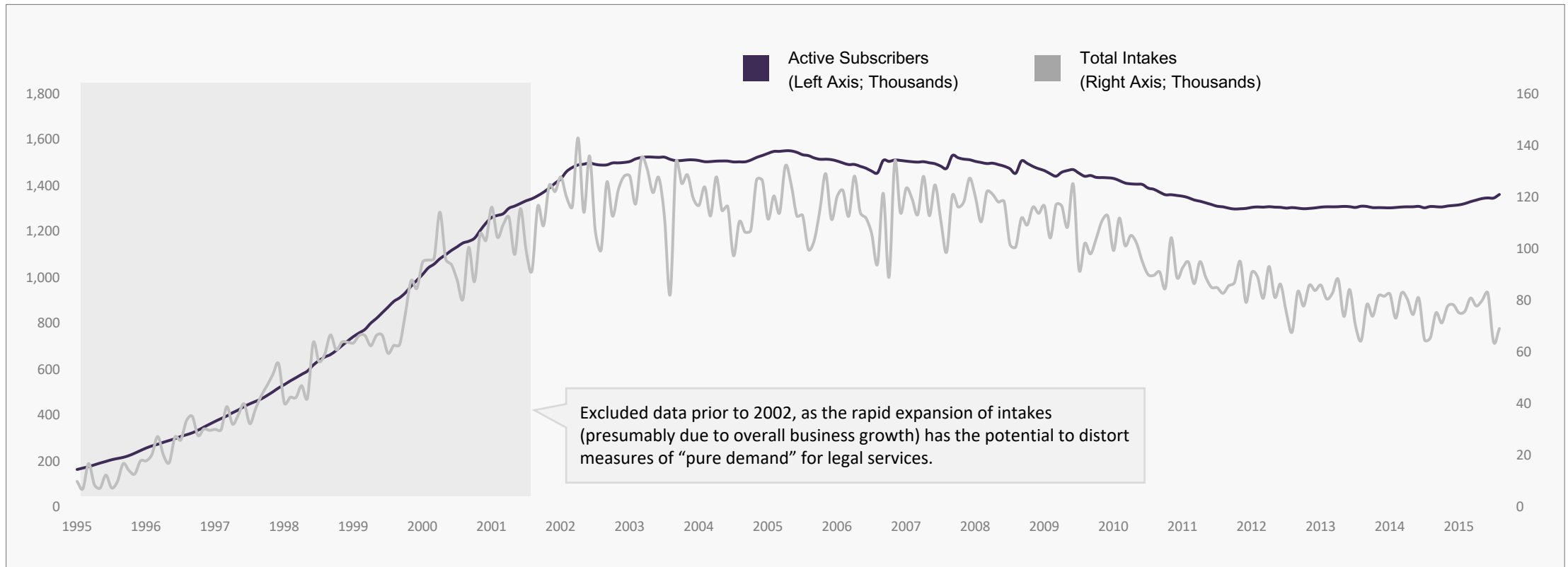
Analytical Scope

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.

All Plan Types

All Subscribers
n = 19,571,508

Same Subscribers
n = 1,540,704

Share of Total Intakes
Share of Subscribers
Share of Total Intakes
Share of Subscribers

Full LegalShield Intake Dataset (2000 – 2015)

Family Plan Types

All Subscribers
n = 16,583,632

Same Subscribers
n = 1,516,476

Share of Total Intakes
Share of Subscribers
Share of Total Intakes
Share of Subscribers

Business Plan Types

All Subscribers
n = 1,345,132

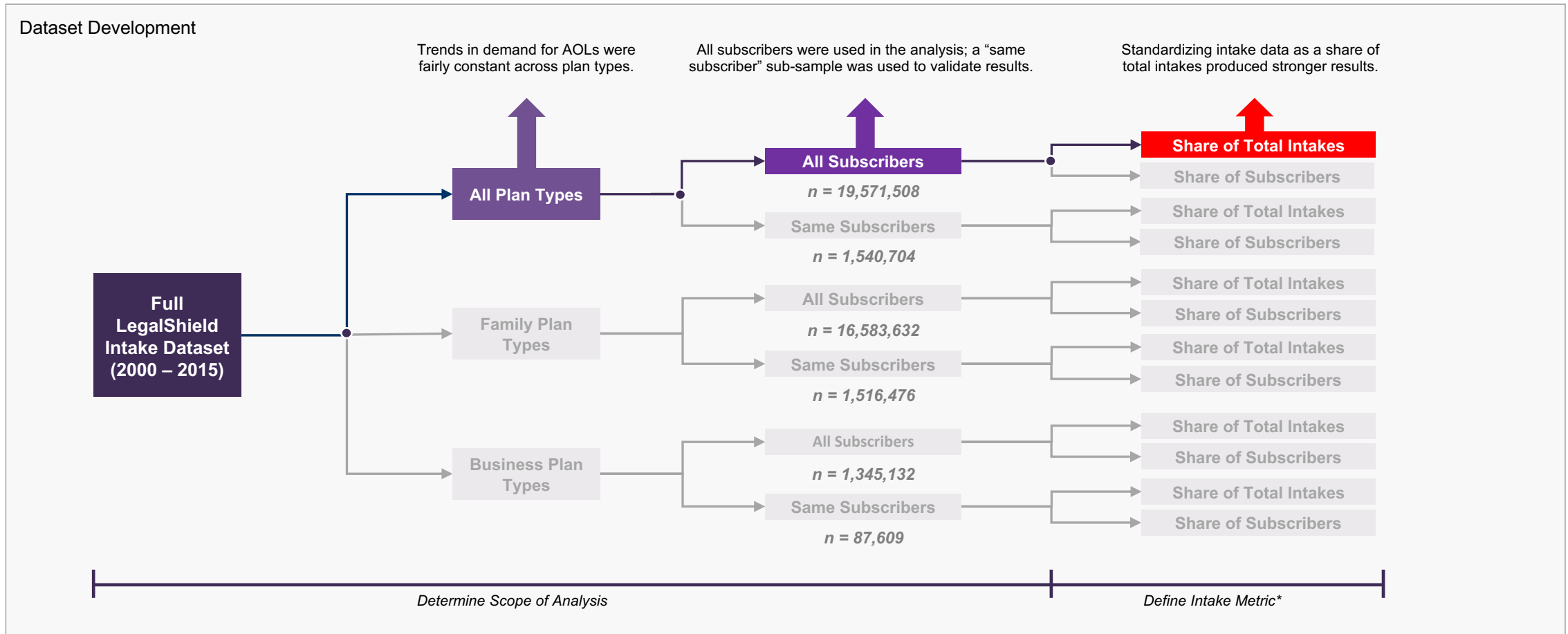Same Subscribers
n = 87,609

Share of Total Intakes
Share of Subscribers
Share of Total Intakes
Share of Subscribers

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.

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)
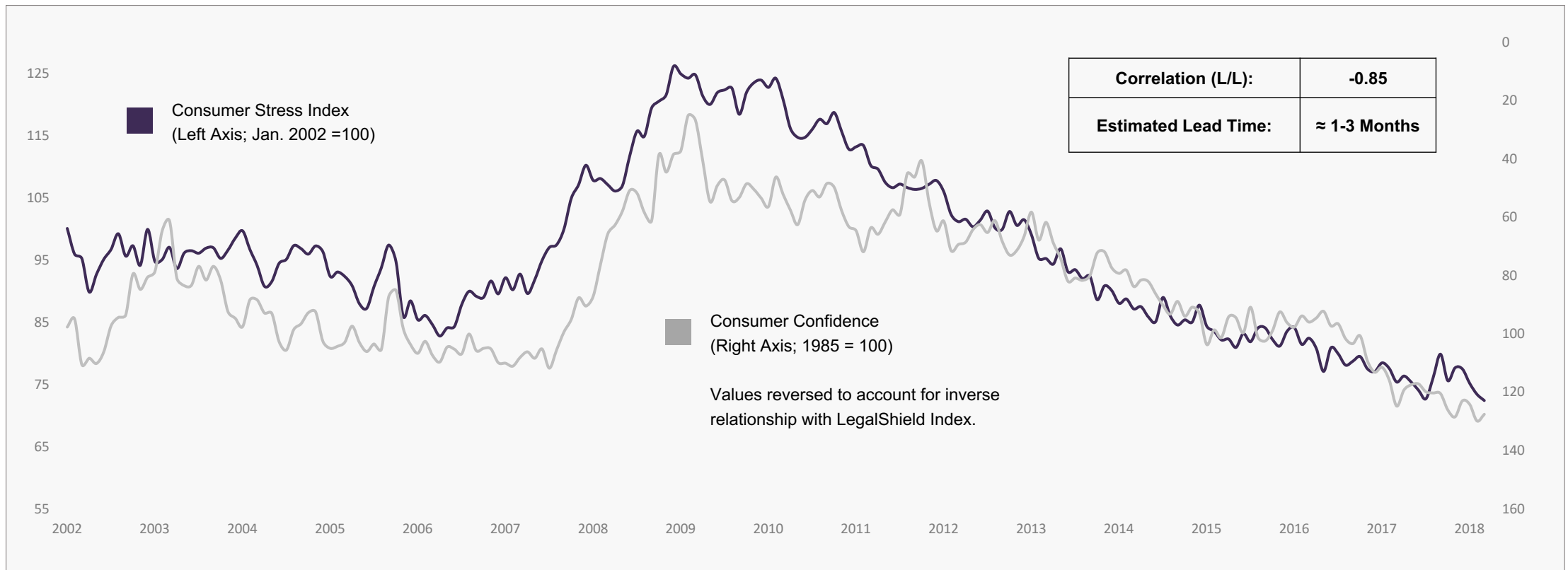Test 2: Compared correlations between random samples of the data
Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)
Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data
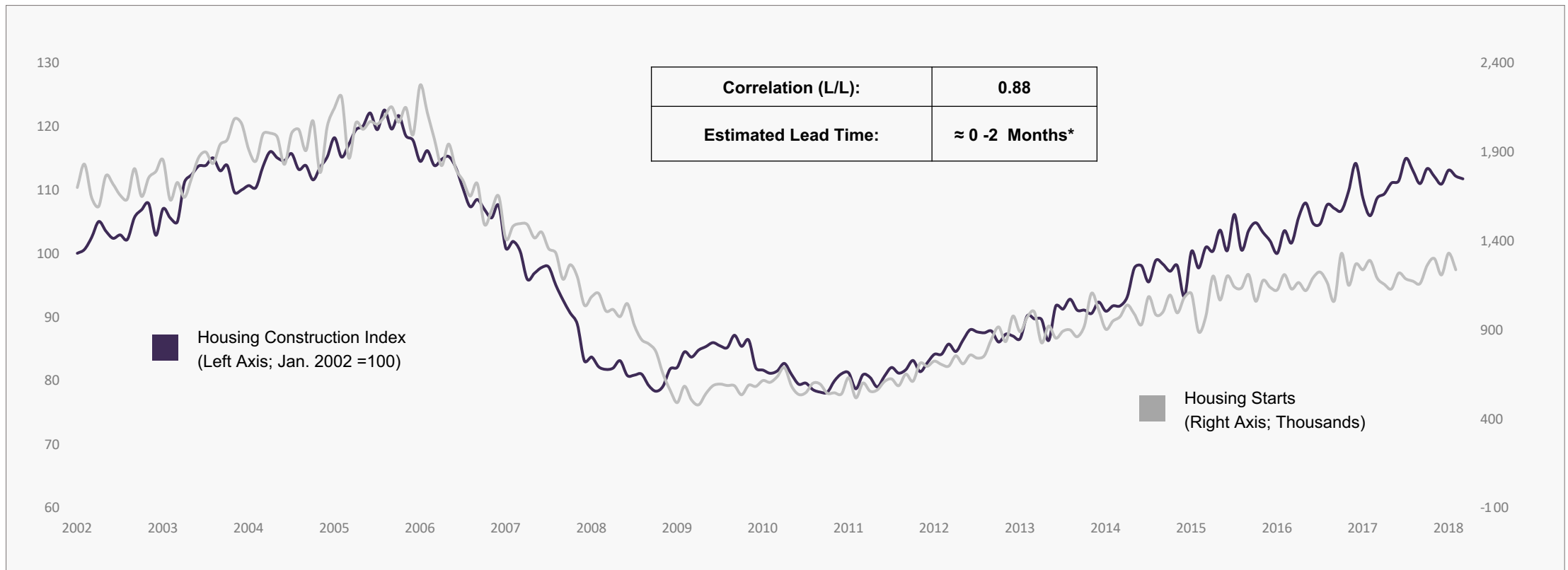
Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance

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

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

■ Consumer Confidence
(Right Axis; 1985 = 100)

Values reversed to account for inverse
relationship with LegalShield Index.

Composite Index: Housing Construction Index

AOLs: Foreclosure; Real Estate*

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

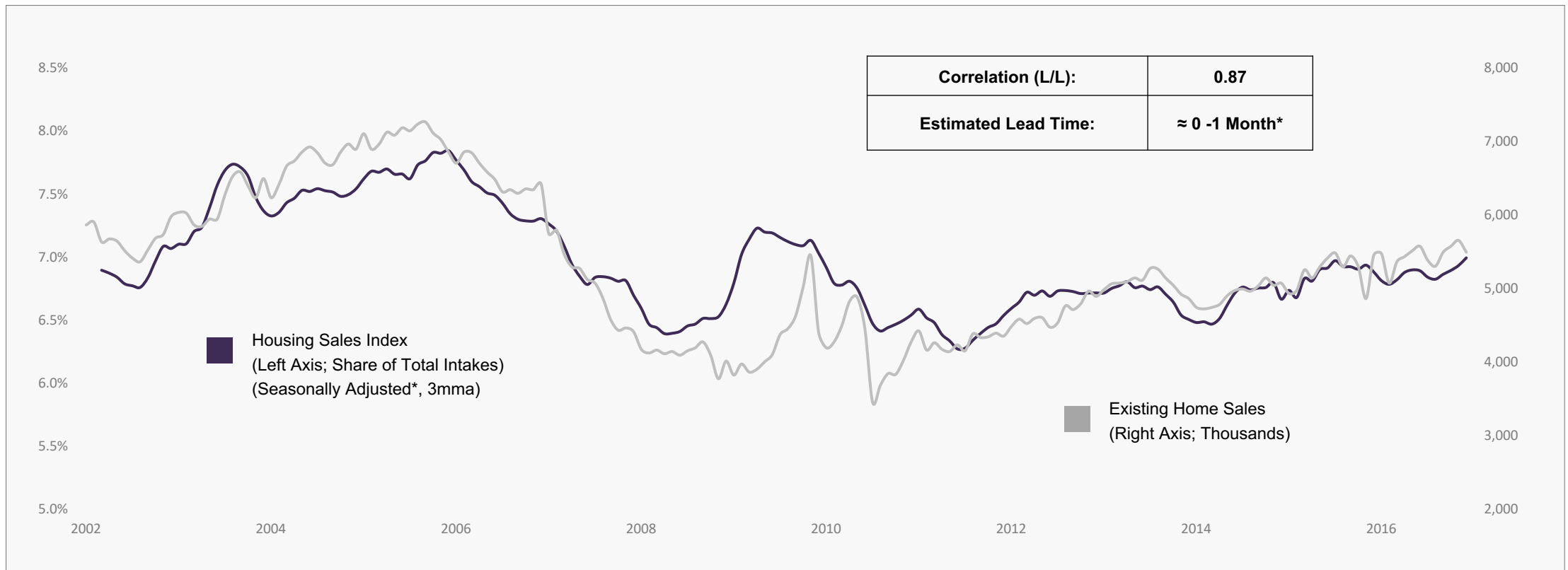Housing Construction Index
(Left Axis; Jan. 2002 =100)

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.
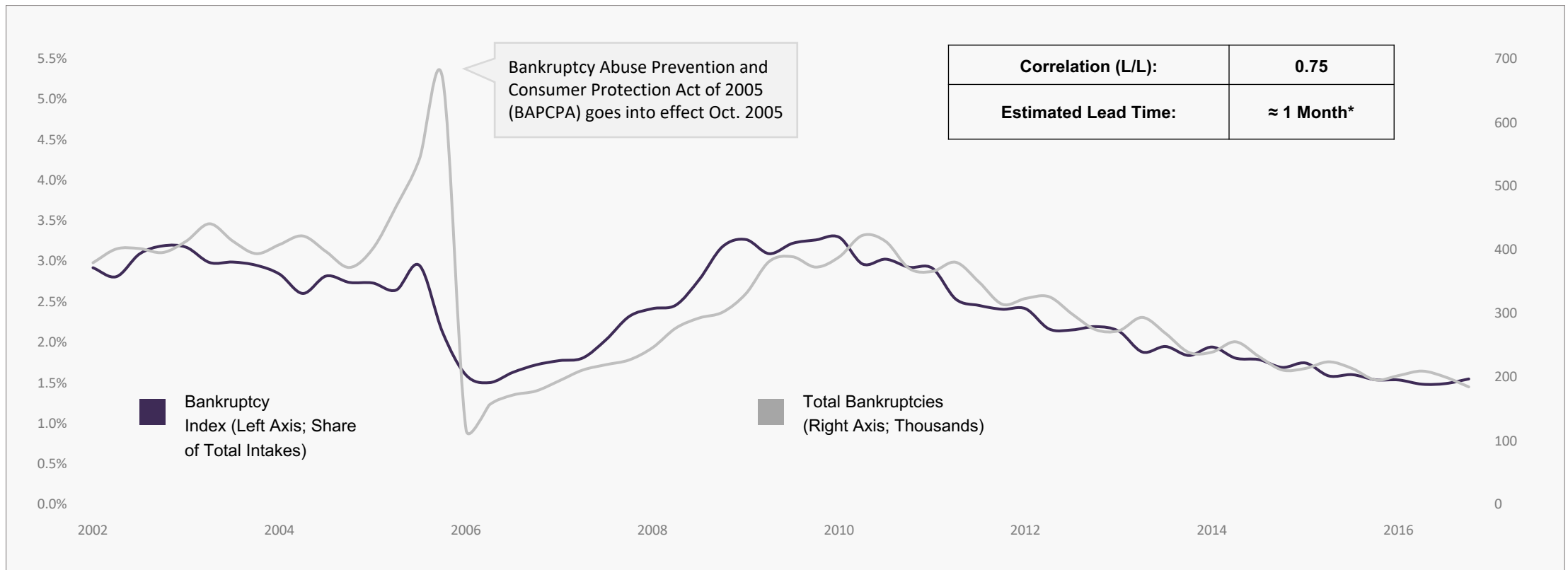
AOL: Real Estate

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.
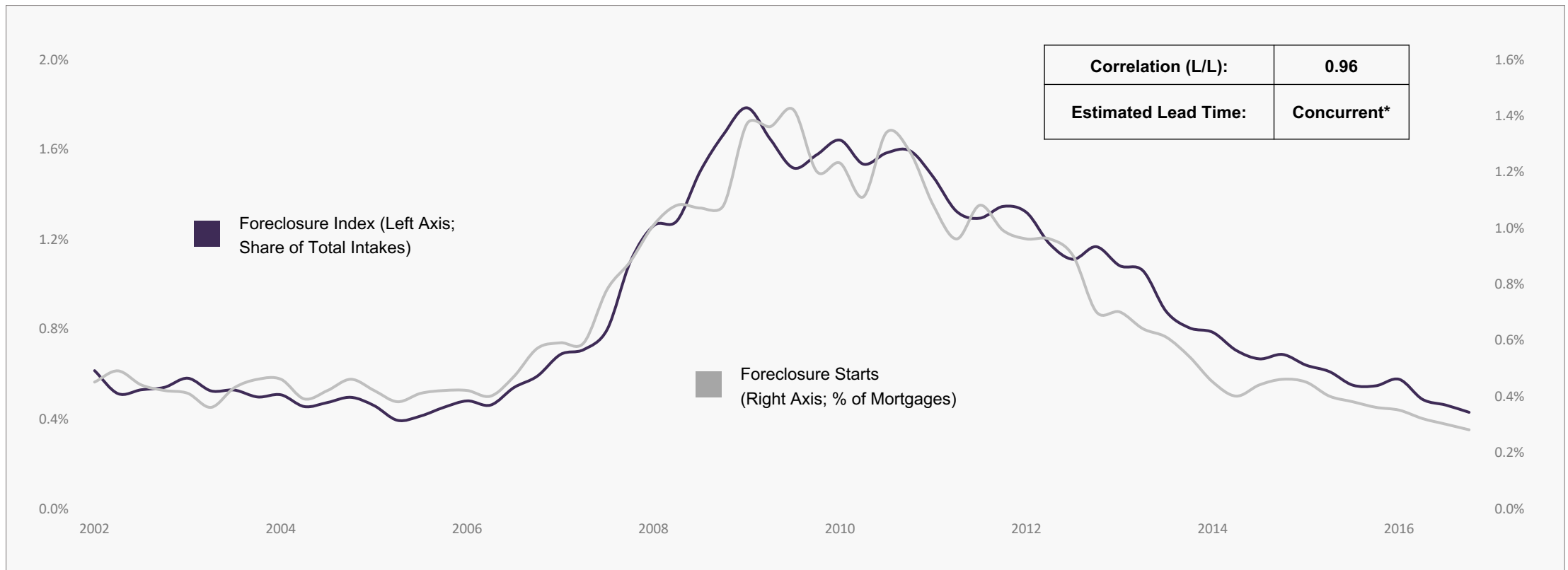
AOL: Bankruptcy

Target Series: Consumer Bankruptcies

Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA) goes into effect Oct. 2005

Correlation (L/L):	0.75
Estimated Lead Time:	≈ 1 Month*

Bankruptcy Index (Left Axis; Share of Total Intakes)

Total Bankruptcies (Right Axis; Thousands)

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.*	✓