About LegalShield

#1 Provider of subscription-based legal plans to households

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

46+ 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.
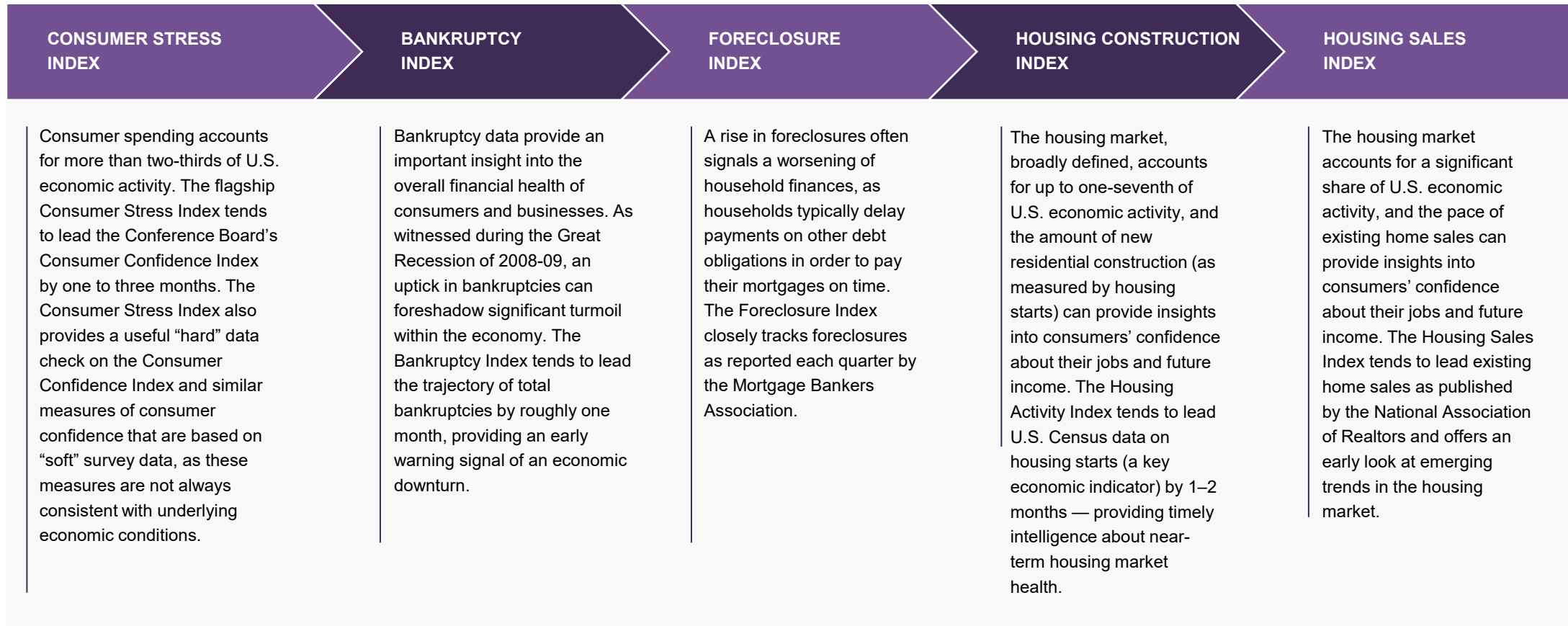
✓ **HIGH-FREQUENCY**
The LegalShield Economic Stress Index is based on data collected on a near real-time basis, and can be refreshed on a weekly, monthly, or quarterly basis depending on the user's needs.

✓ **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 remained low in March and is well below year-ago levels. The recent relief legislation is likely to keep consumer stress subdued for the time being.

The LegalShield Consumer Stress Index eased (improved) 1.1 points in March to 63.0. Meanwhile, the Conference Board's Consumer Confidence Index surged by 19.3 points to 109.7 in March, the highest level since the pandemic began.

The $1.9 trillion American Rescue Plan has played a significant role in keeping consumer stress low by providing relief measures including direct payments, expanded unemployment benefits, and a refreshed PPP program aimed at stemming job loss at small companies most affected by the downturn. These measures have improved the finances of both middle-income and low-income beneficiaries. For example, Morning Consult reports that the share of middle-income consumers with savings to cover 5 months of expenses rose to its highest level since the survey began in May 2020. Meanwhile, data from Opportunity Insights shows that in recent weeks, spending by low-income consumers was more than 10% above pre-pandemic levels.

Additionally, a recovering labor market has been supporting the economic rebound. The latest employment report revealed that the economy added a robust 916,000 jobs in March (well above expectations) and revised January and February employment gains upward significantly. While there still are roughly 8 million fewer Americans employed compared to February 2020, the ramp-up in vaccination rates and easing of restrictions on businesses across the country should lead to several more months of strong job growth this year.

Still, the economy is not out of the woods yet: according to a survey by Alignable, 45% of small businesses fear closure by the end of June, with services sector firms (e.g., salons, caterers) reporting substantially higher rates of financial duress. Consumers also continue to benefit from foreclosure and eviction moratoria and other extraordinary assistance programs that will likely expire later this year; for some, financial stress could rise quickly when these measures are no longer available.
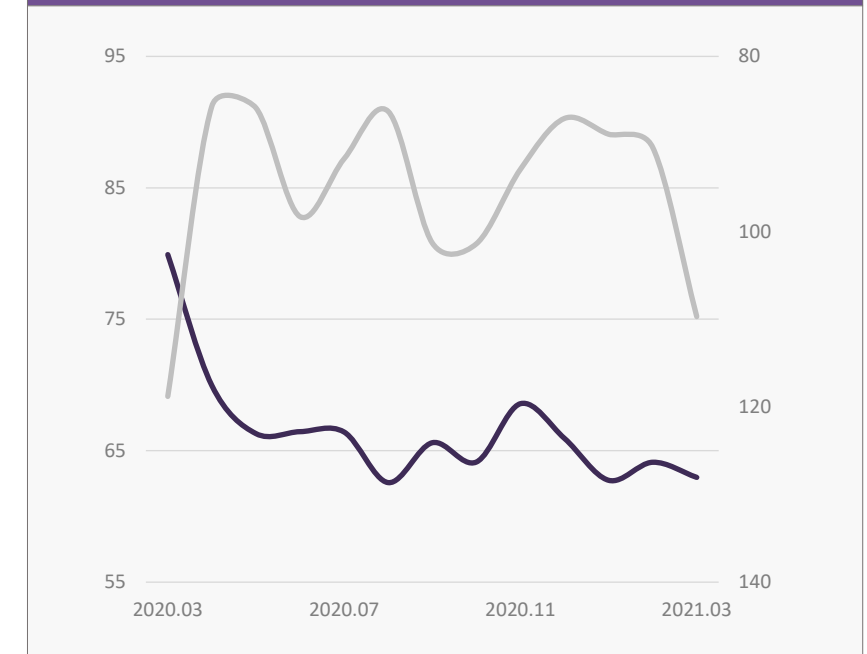
In the near term, however, consumer financial stress should remain low thanks to the massive relief and stimulus bills, and LegalShield data support this outlook.

Consumer Stress Index

Historical Trend Over Past 16 Years

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

Consumer Confidence, Inverted
(Right Axis; 1985 = 100)
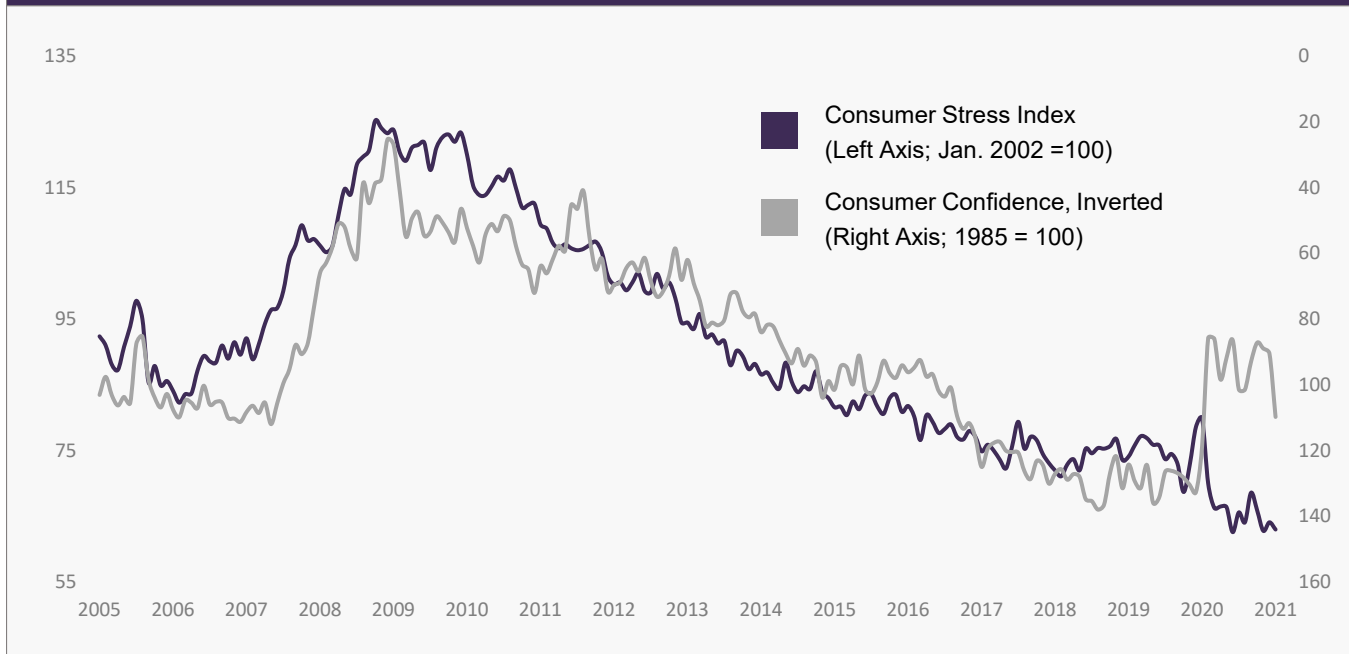
Movement Over Past 12 Months

Bankruptcy Index

The LegalShield Bankruptcy Index was mostly unchanged in March and remains near historical lows. Bankruptcies will likely stay subdued in the near term as long as federal relief measures are in place, though stress may build if these provisions expire.

The LegalShield Bankruptcy Index edged up (worsened) 1.1 points to 28.4 in March. In March, total seasonally adjusted bankruptcies fell 6.5% to 27,434. March bankruptcies were more than 31% below year-ago levels.

Bankruptcies have remained low throughout the pandemic due to stimulus payments, new and expanded unemployment insurance programs, and federal moratoria on evictions and student loan payments. For example, data from Epiq reveals that the number of bankruptcy filings by consumers under Chapter 8 was down 22% Y/Y in 2020 and individual filings under Chapter 13 fell by 46%. Additionally, consumers continue to exhibit fiscal prudence: a Bank of America survey from the end of February showed that across income groups, 30% of respondents said they would use stimulus money to pay off debts and one-quarter reported they would save it. Lenders' portfolios have outperformed as well, due to a combination of federal relief measures and a more cautious posture toward lending. Per Bankrate, the average credit limit for credit cards was down about 20% Y/Y 2020, and the credit score threshold to qualify for most credit cards was raised from about 670 in 2019 to around 720 in 2020.
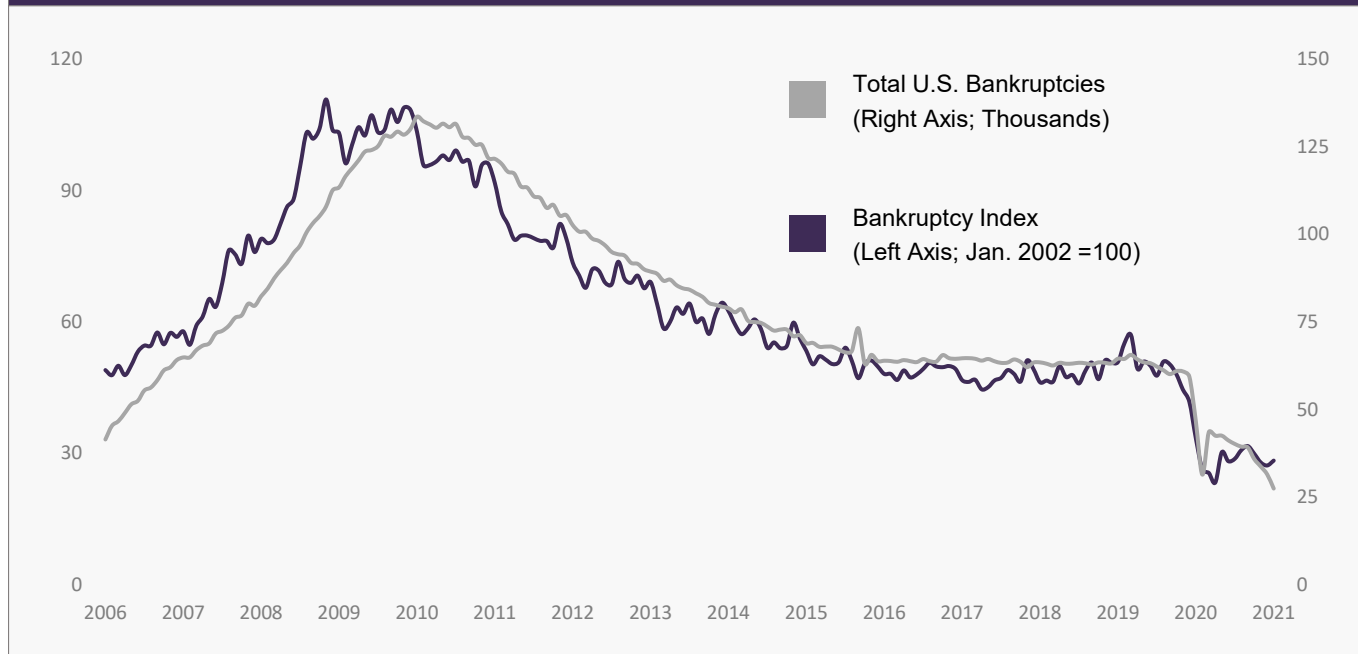
Importantly, federal protections may still be masking significant underlying financial stress. For example:

- 44% of respondents to a Yahoo survey said they had not made a student loan payment during the pandemic.

- An increasing share of borrowers with low credit scores are falling behind on car payments.

- Per TransUnion data, 28% of consumers said their income continues to be negatively impacted by the pandemic and 22% of respondents to a survey said they are unsure their finances will recover.
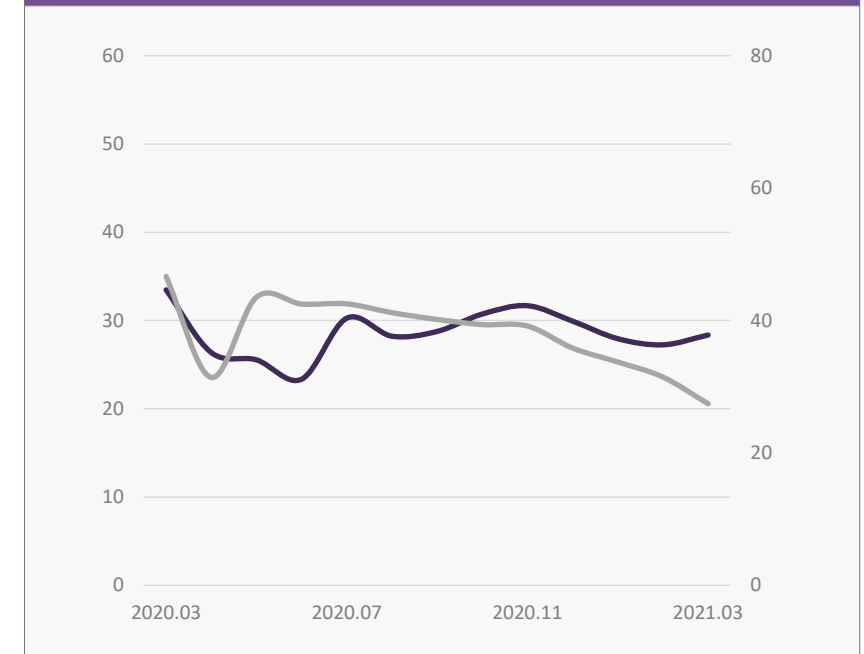
Though these financial pressures are still an issue for many Americans, relief measures and stimulus spending should help keep bankruptcies low this quarter.

Bankruptcy Index

Historical Trend Over Past 16 Years

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

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

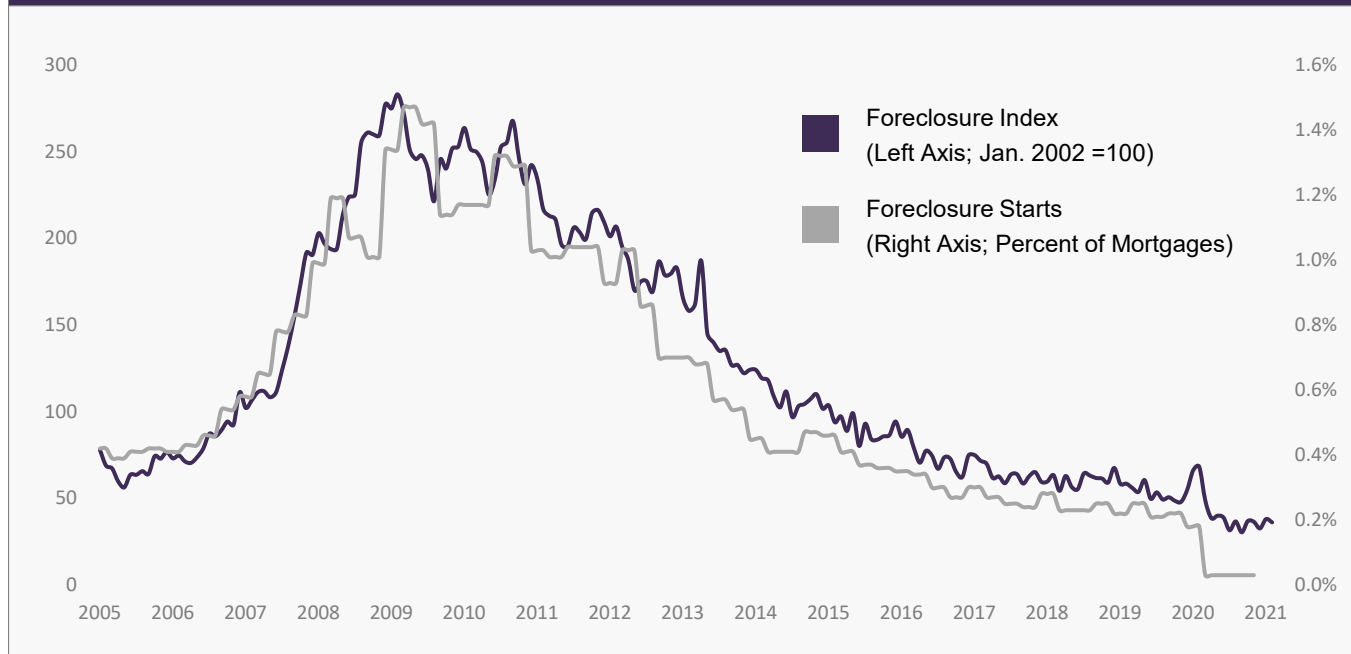## Movement Over Past 12 Months

Foreclosure Index

The LegalShield Foreclosure Index eased in March and remains well below pre-pandemic levels. The extension of federal eviction and foreclosure moratoria should keep foreclosures muted in the near term.

The LegalShield Foreclosure Index decreased (improved) 2.0 points to 36.1 in March. Meanwhile, Attom reports that there were 11,281 properties with foreclosure filings in February, up 16% from January but down 77% compared to a year ago. About 8% of U.S. mortgage borrowers (or 7 million people) entered forbearance during the pandemic, per research from the Philadelphia Fed. Of the borrowers in forbearance, the researchers estimate that about half were not making payments as of January 2021, leaving about 2.8 million mortgages worth $600 billion still in forbearance by the end of 2020. Delinquencies among mortgage borrowers appears to be increasing; Black Knight's national mortgage delinquency rate rose to 6.0% in February after eight consecutive months of improvement, driven by an increase in early-stage delinquencies. As forbearance periods end, organizations like the Consumer Financial Protection Bureau are already releasing guidance to avoid a potential "tidal wave of distressed homeowners."

Overall, the LegalShield Foreclosure Index suggests that foreclosures will remain low in the coming months, especially while the federal eviction and foreclosure moratoria remain in place. However, foreclosures may rise during the latter half of the year once moratoria are finally lifted, particularly among the long-term unemployed.

Foreclosure Index

Historical Trend Over Past 16 Years

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

Foreclosure Starts
(Right Axis; Percent of Mortgages)

Movement Over Past 12 Months
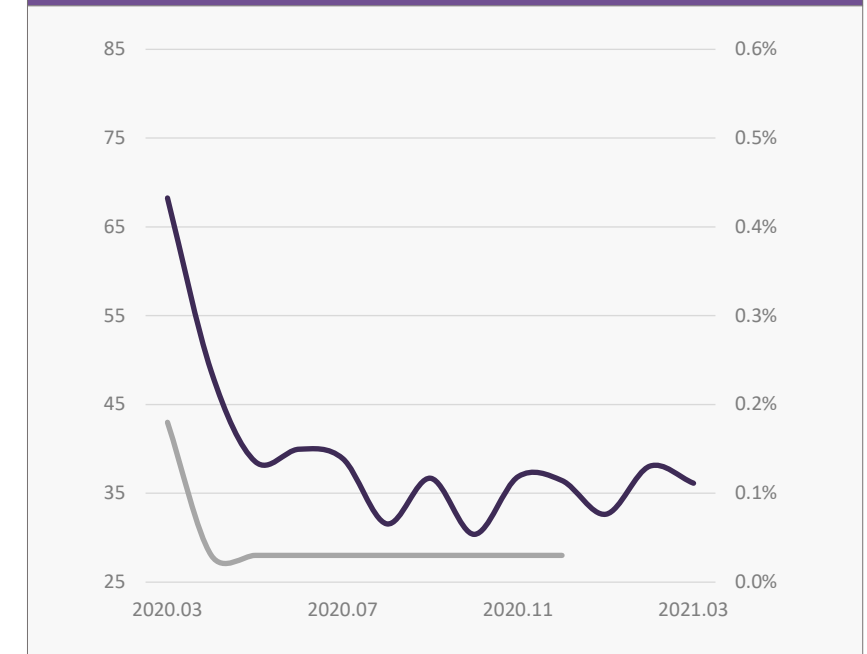
Housing Construction Index

The LegalShield Housing Construction Index increased in March after dipping in February and remains well above pre-pandemic levels. Housing construction is expected to remain strong in the near term, despite rising input costs and mortgage rates.

The LegalShield Housing Construction Index increased from 131.7 to 134.8 in March. Meanwhile, housing starts worsened 10.3% in February and were down 9.3% from a year ago, largely due to winter storms in key homebuilding states. Single-family starts decreased by 8.5% and multifamily-starts declined by 15%. Though winter weather played an outsize role in February's decline, rising input costs also appear to be tamping down homebuilding activity. The NAHB/Wells Fargo Housing Market Index fell by 2 points in March (though it remains elevated by historical standards), and rising costs were a factor in the decline. Lumber shortages have pushed lumber prices up by 180% since the onset of the pandemic and added $24,000 to the price of a typical new home. Due to the cost and availability of materials, permitted-but-not-started single-family homes have jumped 36% over the last twelve months.

Despite surging prices and building delays, buyers continue to show strong housing demand and the construction sector is ramping up employment to meet it. Residential construction employment increased by 37k in March and is one of the few industries already to have surpassed pre-pandemic employment levels. Given the inventory of homes for sale is near an all-time low, construction activity should remain strong as long as building materials and labor are available, even as mortgage rates creep higher — an outlook consistent with the LegalShield Housing Construction Index.

Housing Construction Index

Historical Trend Over Past 16 Years

Housing Starts
(Right Axis; Thousands)

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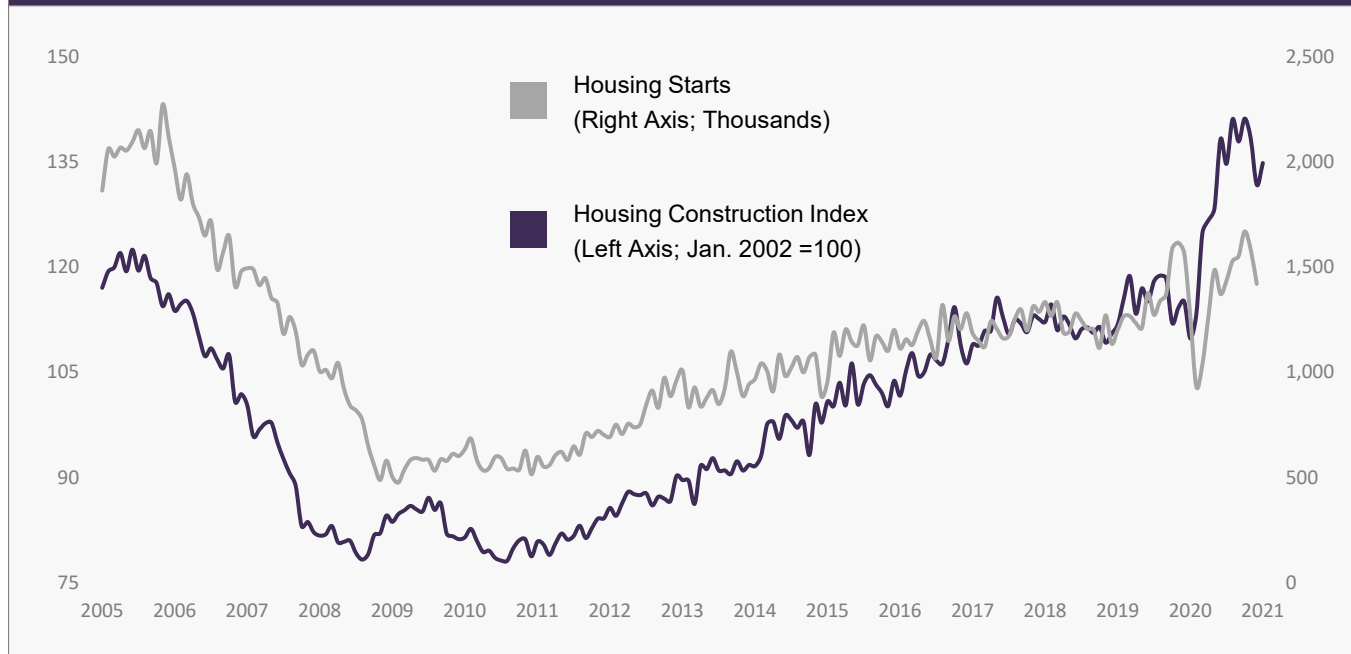
Movement Over Past 12 Months
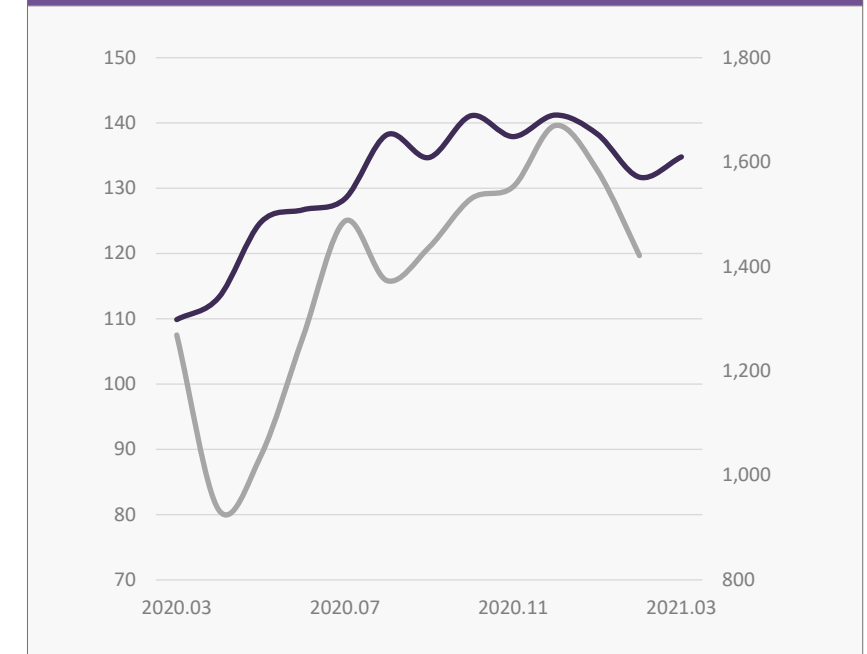
Housing Sales Index

The LegalShield Housing Sales Index edged up in March and remains elevated by historical standards, indicating that existing home sales should remain healthy over the next three to six months, though rising interest rates are beginning to weigh on sales activity.

The LegalShield Housing Sales Index increased 1.8 points in March to 112.2. Meanwhile, existing home sales declined 6.6% M/M in February but were up 9.1% compared to a year ago.
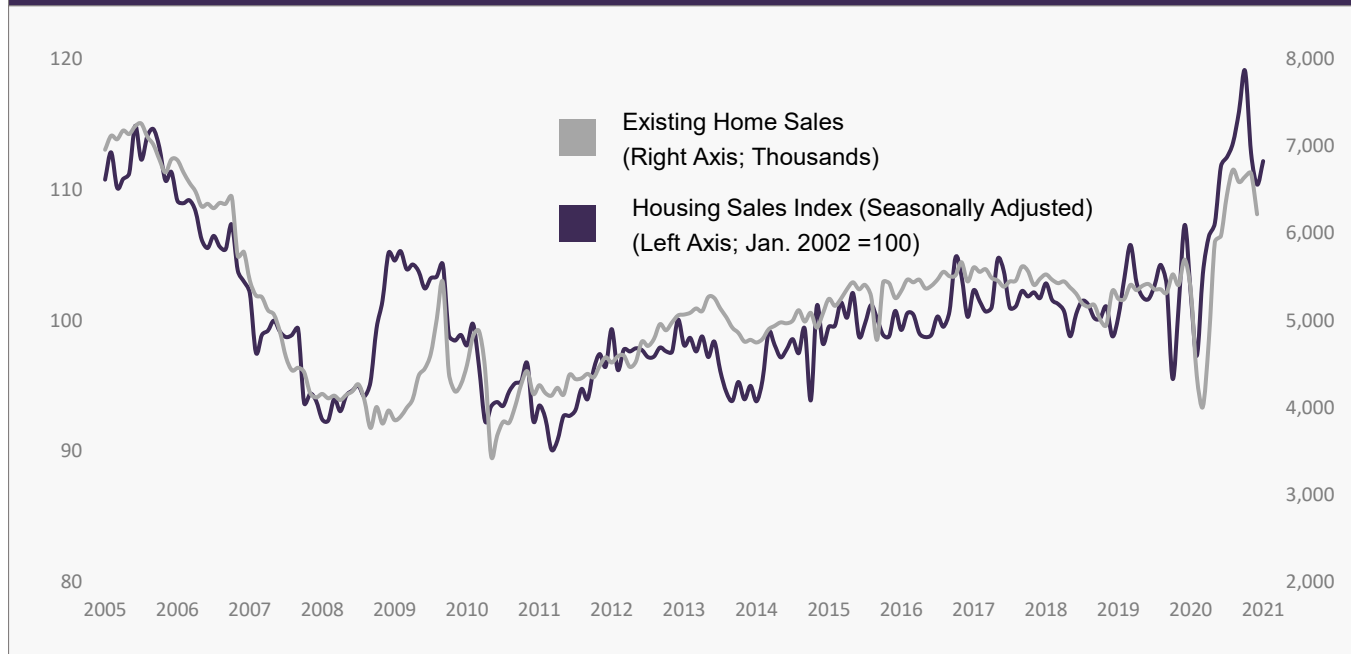
Supply shortages, high prices, and rising mortgage rates are beginning to emerge as headwinds for existing home sales, even as pandemic-induced demand shifts and increased homebuying by millennials provide tailwinds. For example, the 30-year fixed-rate mortgage reached 3.27% in early April, the highest level in over nine months. This could significant implications for affordability, as a recent study by the National Association of Home Builders estimated that mortgage rates rising from 2.75% to 3% would price out 1.3 million households from the market for a median priced home. Indeed, data from the Mortgage Bankers Association shows that U.S. mortgage applications declined for four consecutive weeks in early March as interest rates rose. Further, Fannie Mae expects mortgage companies to originate 13% fewer home loans compared to last year. Rising rates are exacerbating affordability concerns, particularly among first-time homebuyers.

Although prospective buyers are being priced out of the market at lower price points, higher-income consumers with accumulated pandemic-era savings are propping up demand at the upper end of the market: sales of homes in the $500-750K, $750K-1M, and $1M+ ranges were up 50%, 66%, and 81% Y/Y respectively in February, according to the National Association of Realtors.

Despite headwinds at the lower end of the market, high consumer confidence and pandemic-driven market trends suggest that housing sales should remain healthy in the near term, an outlook supported by the LegalShield Housing Sales Index.

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
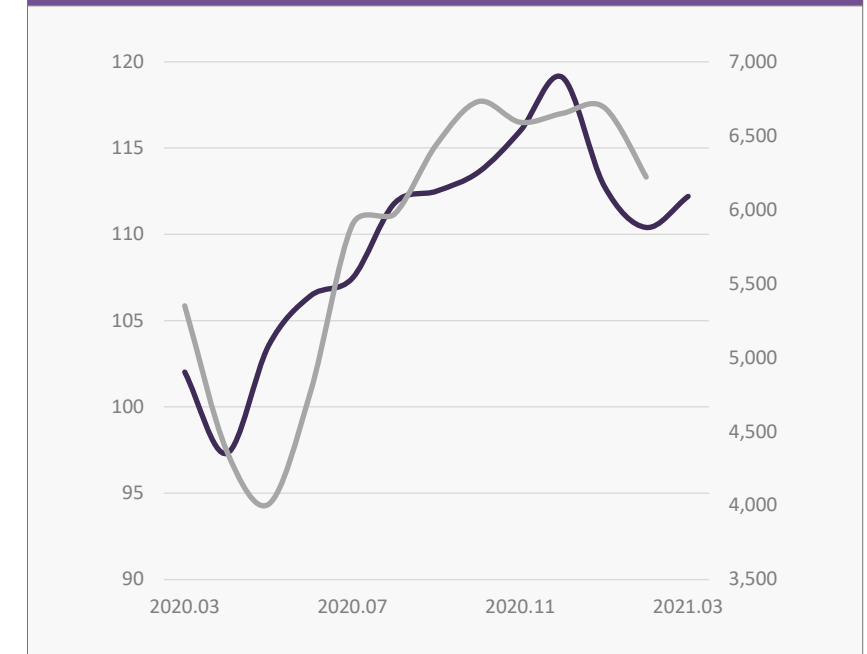
Technical Appendix

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.
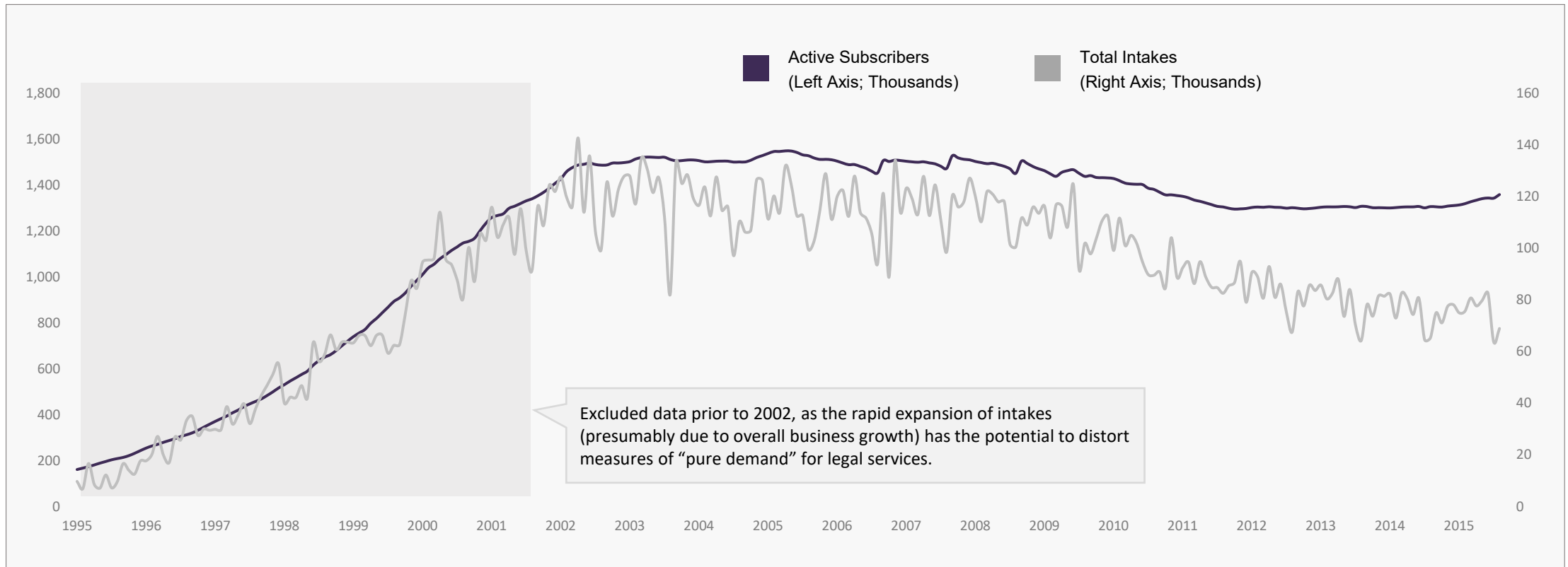
Analytical Scope

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.

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
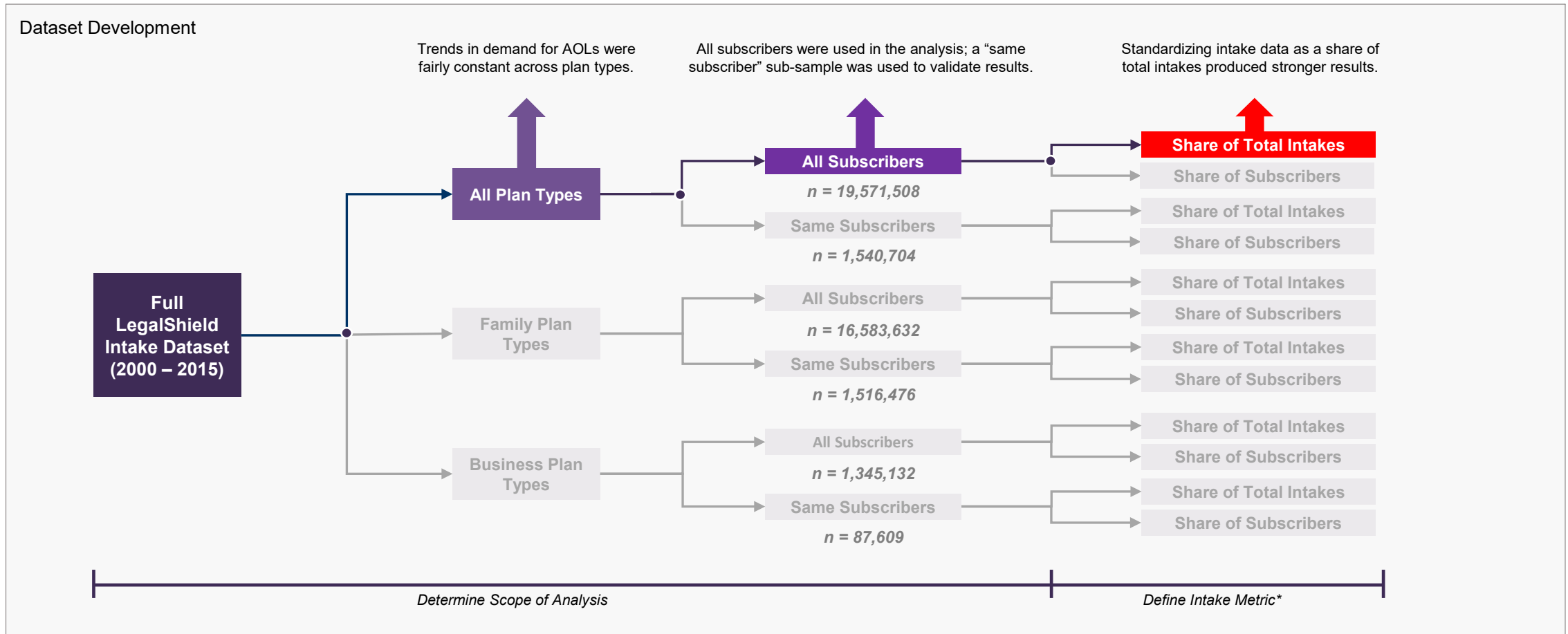
Share of Subscribers

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.

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.
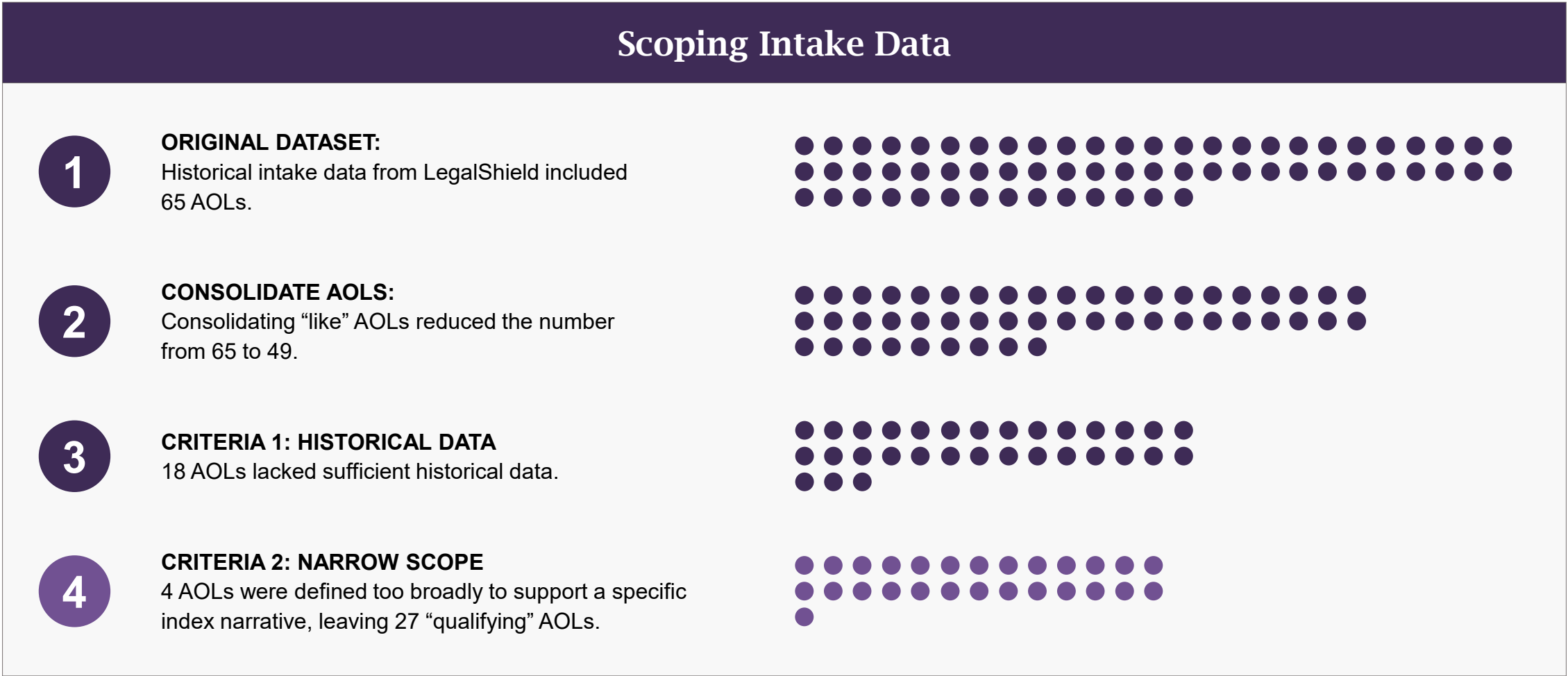
Filter AOL

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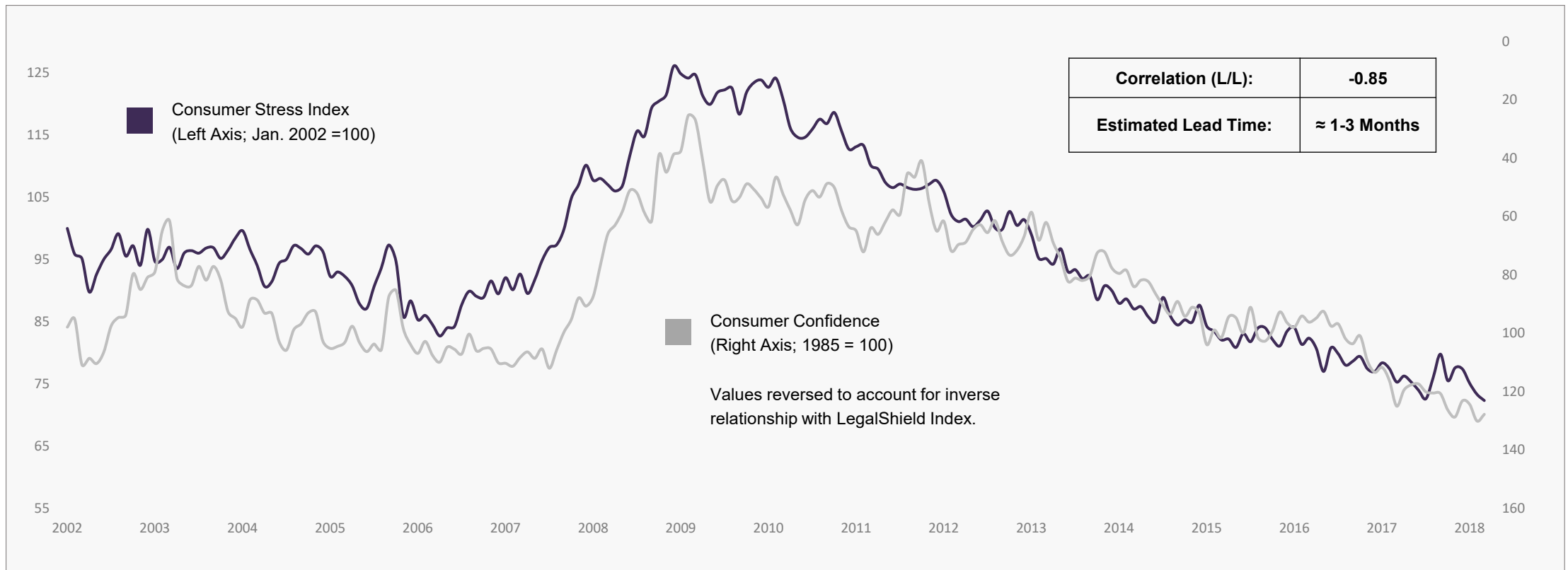
Test 2: Compared correlations between random samples of the data

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
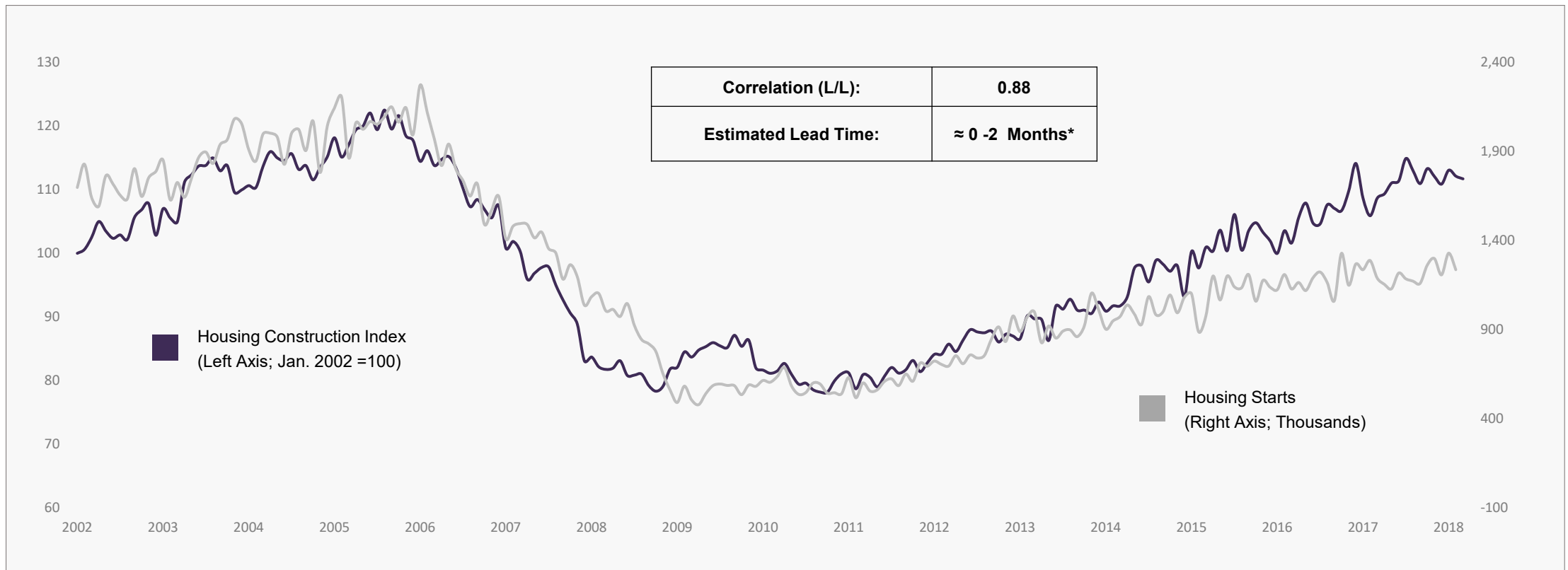
Composite Index: Consumer Stress

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*

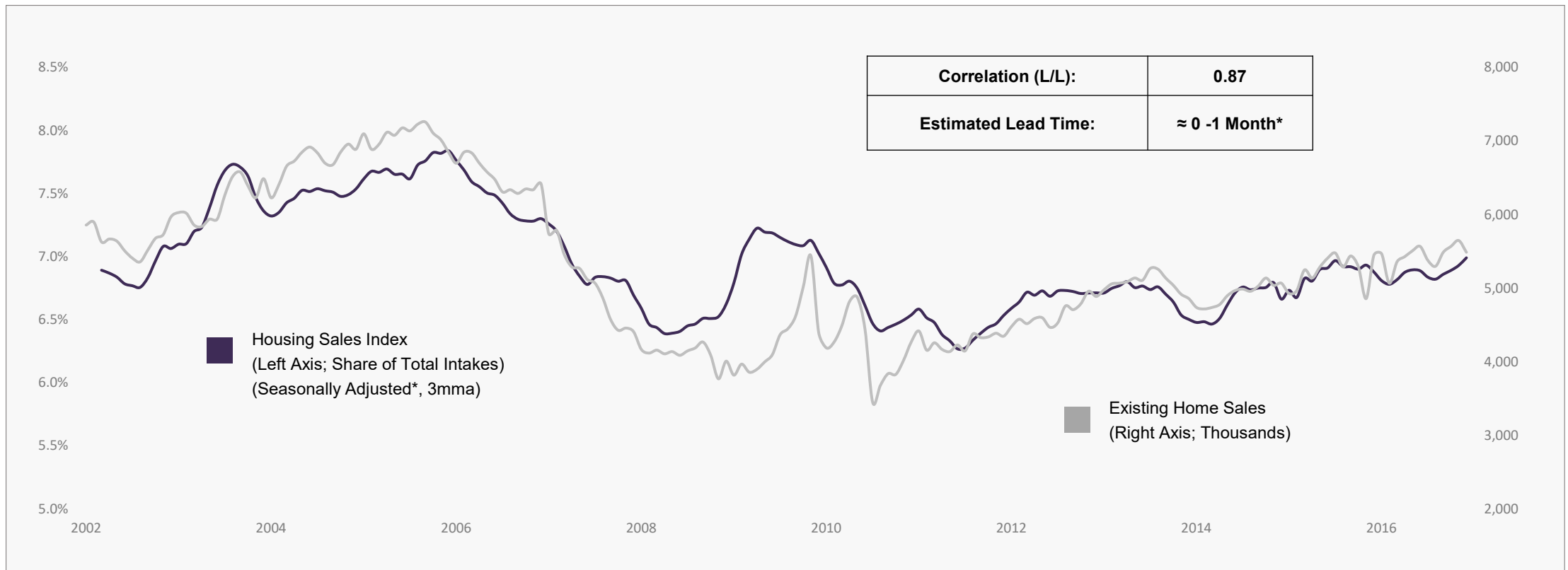Housing Construction Index
(Left Axis; Jan. 2002 =100)

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.
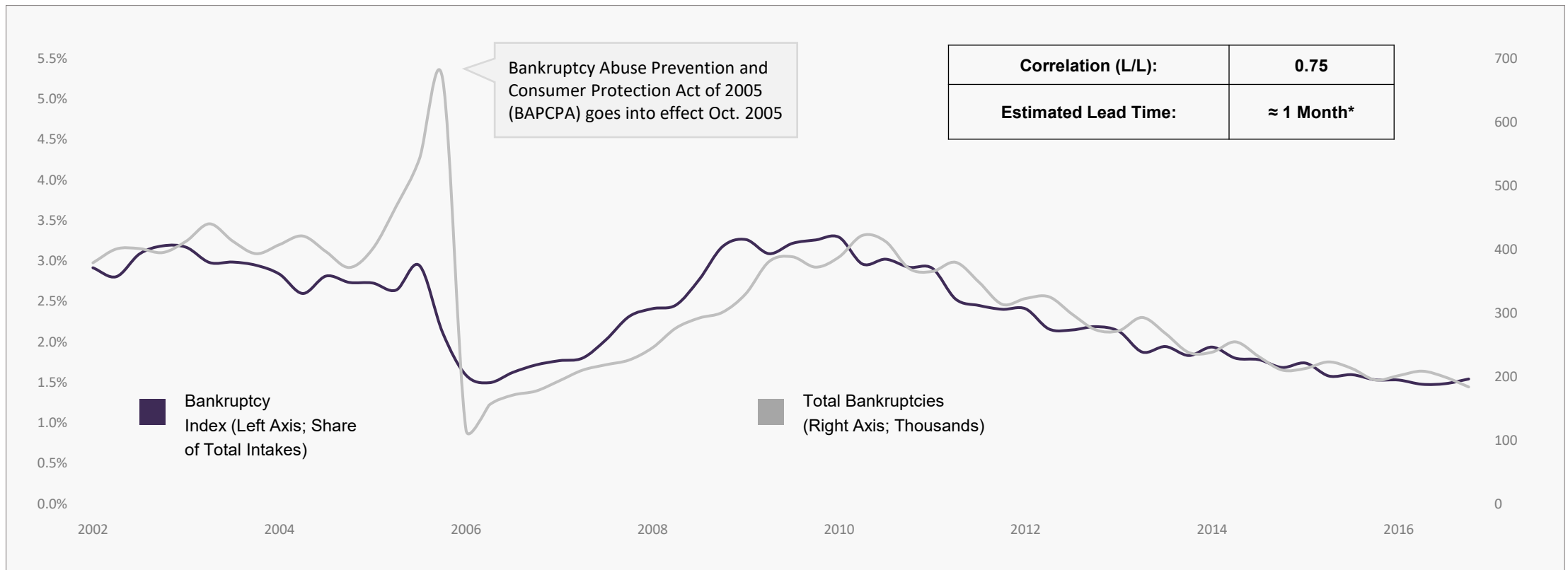
AOL: Real Estate

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.
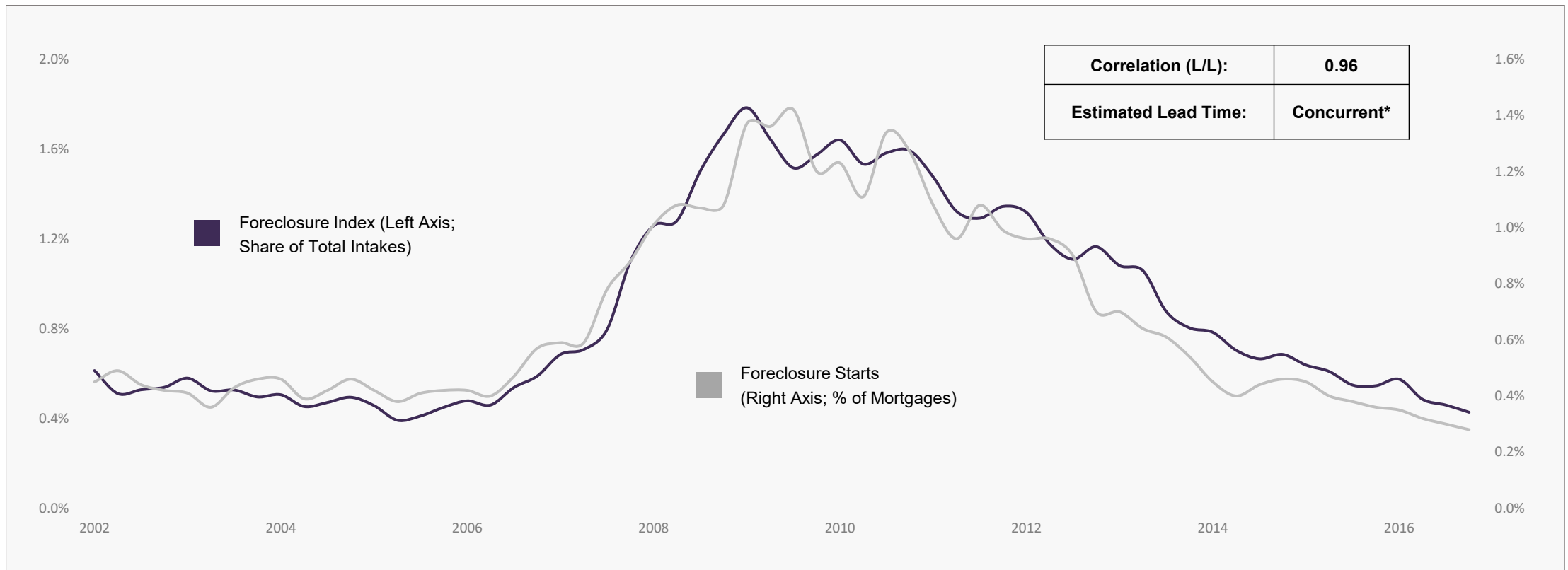
AOL: Bankruptcy

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.*	✓

Thank you!