seal

Contract Discovery & Analytics

# LEVERAGING SEAL TECHNOLOGY FOR LIVING WILL PROJECTS

## How Contract Discovery and Analytics Technology by Seal Software Can Help Financial Institutions face Dodd-Frank's Resolution and Recovery Planning Requirements

**Abstract:**
**8of9, a regulatory solutions company, has reviewed Seal Software relative to its value in meeting the Resolution and Recovery Planning requirements of the Dodd-Frank Act.**


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# Leveraging Seal Technology For Living Will Projects

A Living Will is a document produced by large financial institutions, giving regulators a roadmap of how to unwind or recover their businesses in a stressed economic scenario. In order to perform this analysis effectively, banks must have real-time awareness of all of their legal relationships with one another (easier said than done). The information gathering process is highly manual, complex, and overwhelming.

Seal Software, headquartered in San Francisco, has developed cutting edge technology in contract discovery and analytics that accelerates access to critical contract information buried within unstructured contractual documents. This has enabled organizations to uncover key terms that could dramatically impact their business, empowering them to take informed action or respond to time-sensitive (regulatory) requests. 8of9 has reviewed Seal's technology with respect to financial derivative contracts as a whole, but has recently considered the value proposition of using Seal technology on Living Wills projects to identify where and how using Seal can make the process more efficient.

## Background on Resolution and Recovery Plans ("Living Wills")

The 2008 financial crisis and ensuing civic criticism of Wall Street stirred regulators to reflect on the causes of the economic turmoil and develop ways to stabilize immense financial institutions to safeguard the world's economy. The demise of Lehman Brothers in particular proved the potentially hazardous entanglement amongst financial institutions. Regulators and lawmakers determined that one of the largest obstacles to preventing the collapse was the inability of regulators and bankruptcy courts to wind-down banks in the event of economic turmoil without significantly impacting Main Street.

These events prompted the Financial Stability Board (FSB) of the G-20 to declare in September of 2009 that "all systemically important financial firms should develop internationally-consistent firm-specific contingency and resolution plans to help mitigate the disruption of financial institution failures and reduce moral hazard. US Lawmakers responded in the 2010 Dodd-Frank Act by requiring each systemically important financial institution ("SIFI") to create and submit to regulators a Resolution and Recovery Plan ("RRP"), colloquially dubbed a "Living Will." Section 165 of Dodd-Frank obliges covered companies to submit an annual RRP to the Federal Reserve Board ("FRB"), the Federal Deposit Insurance Corporation ("FDIC"), and the Financial Stability Oversight Committee ("FSOC", and together with the FRB and FDIC, the "Agencies").

The goal of a Living Will is to facilitate the rapid and orderly resolution of each institution in the event of a material financial distress or failure. In other words, financial institutions need to have a plan in place should another Lehman-type bankruptcy crisis ensue.

## How Financial Institutions Can Leverage Seal's Contract Discovery and Analytics Solution to Face Living Will Projects

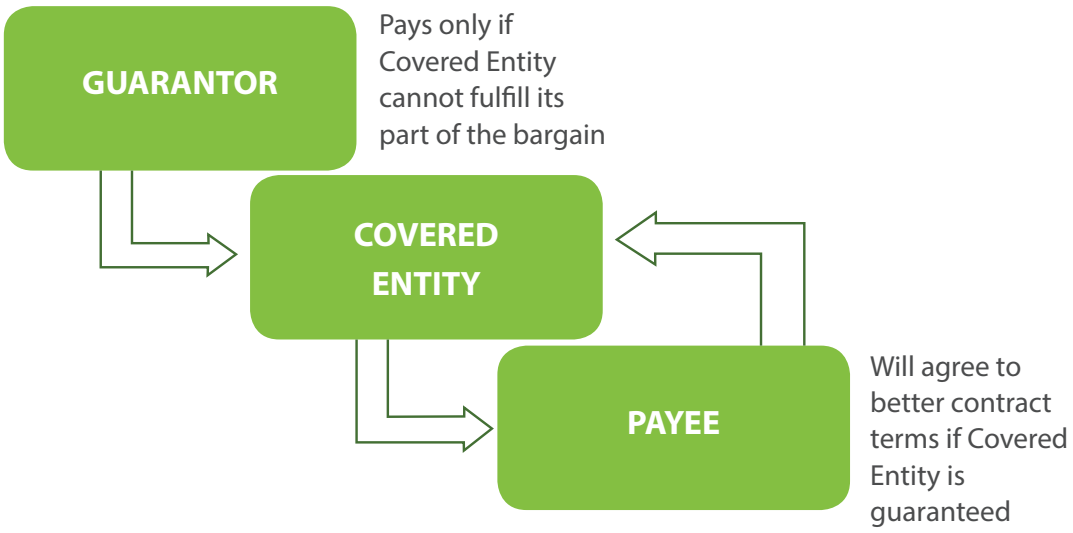
8of9 has had extensive experience in developing Living Will plans, some of which are over 4,000 pages long. It is our view that regulators have a valid concern that banks do not have internal systems capable of producing information that would be crucial in a bankruptcy. Mercifully for SIFIs, modern technology can help manage this substantial undertaking. Contract discovery and analytics software like the kind Seal has to offer can help track contract provisions that will be vital to Living Will analysis, while allowing human capital to focus on creating the narrative rather than manually gathering information.

In evaluating Seal, we found the technology particularly valuable for gathering data in the following critical areas:

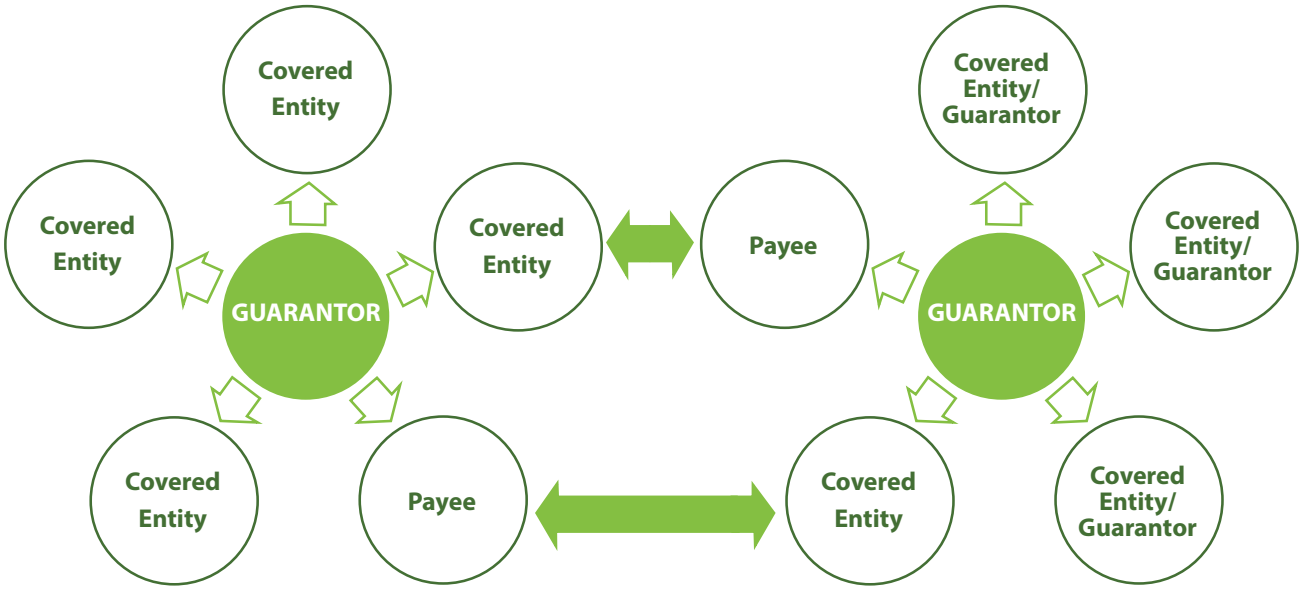
1. Guaranties
2. Cross-Default and Cross-Acceleration
3. Termination Events
    - Automatic Early Termination
    - Additional Termination Events
4. Collateral Management
    - Haircuts
    - Capital Requirements
    - Collateral Optimization
5. Service Level Agreements & Financial Market Utilities

### 1. Guaranties

A guaranty is essentially a promise to pay a debt or meet an obligation on behalf of another if the other cannot perform. Large financial institutions often have intra-firm guaranties in place to ensure that debts and obligations will be paid or met. For example, the holding company of a bank may provide guaranties to its subsidiaries for certain contracts; if a subsidiary (covered entity) fails to pay its debts or meet its obligations, the holding company (guarantor) becomes responsible. Often, only certain transactions under a contract are guaranteed.




The problem with guaranties in a situation of extreme systemic risk is that if a SIFI guaranties payments for a bankrupt organization, the SIFI could find itself in an unfortunate situation of having to pay out an exorbitant amount, which could cause it to tip into bankruptcy.




Many of these large financial institutions – because of years of mergers and acquisitions during the financial crisis – made guaranties of subsidiaries and occasionally of other parties without properly tracking such details.

As seen with Lehman and later MF Global, the resources required for a timely resolution and evaluation include armies of lawyers, accountants and consultants, manually calculating all of these figures.

### How Seal Can Help by Extracting Guarantors and Covered Entities

Seal Contract Discovery rapidly locates the existing contractual documents wherever they may reside across the enterprise, automatically extracting key contractual terms and clauses, rendering them for easy review, and populating other corporate solutions.

This technology could enable Living Will teams to search for and discover guaranties within various document storage facilities. The data in these guaranties can then be extracted and fed to downstream systems for purposes of calculating exposure relative to a given counterparty.

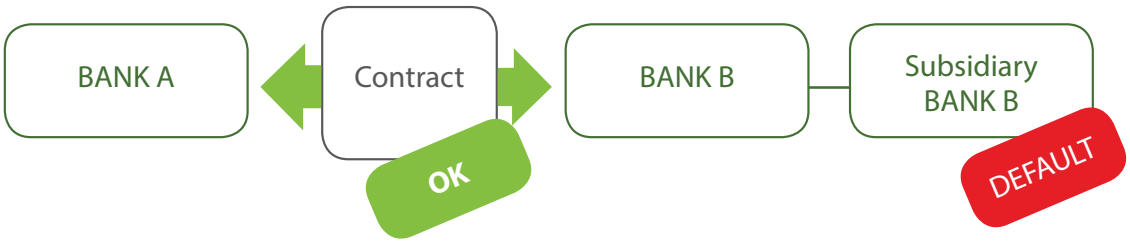
Should a Payee call on the guaranty, the Guarantor could look through all its contracts to determine if the Covered Entity is impacted elsewhere.

Regulators would appreciate the transparency, speed and accuracy of a Seal's solution rather than relying on manual searches.

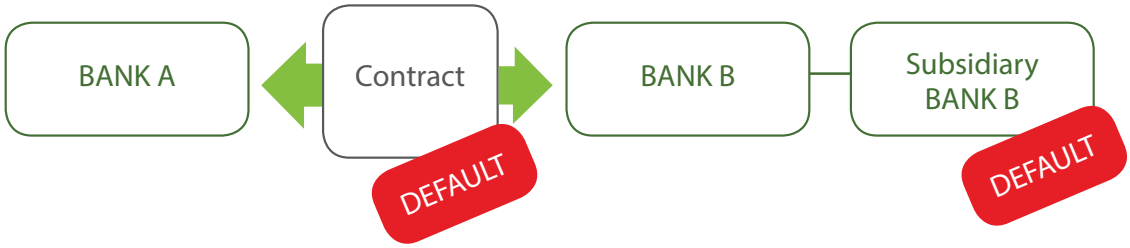
## 2. Cross-Default and Cross-Acceleration

When it comes to systemic risk, Cross-Default and Cross-Acceleration are two of the most dangerous clauses that appear in financial contracts everywhere. To default on a contract means a party has failed to meet its obligation and the contract will then be closed. However, when Cross-Default applies, it means that if the party or its affiliates default on a contract, then the contract will be considered closed.

**Cross-Default Does NOT Apply**




**Cross-Default DOES Apply**




Regulators are particularly concerned with Cross-Default and Cross-Acceleration because of the wide scale impact they could have in a financial emergency. SIFIs are equally concerned because they want to control their risk profile when facing counterparties in peril.

Imagine large SIFIs with 5,000+ legal entities entering contracts with one another. Should it happen that the European branch of Bank B was defaulting on a contract, it could trigger all branches of Bank B to be defaulting on their contracts.

Despite advances in modern technology, the process for gathering data on Cross-Default and Cross-Acceleration is still highly manual. Consultants are hired to double-click on files that may or may not contain a relevant contract and scroll down to see if Cross-Default or Cross-Acceleration applies. They then update whatever computer system or Excel spreadsheet is being used to track the data.
What makes much more practical and economic sense is to leverage technology to find the actual language, which would allow lawyers, accountants and consultants to use the data to prepare a real-time response to Cross-Default or Cross-Acceleration scenarios. Since the language is so straightforward, this is one of the easiest data points to allow technology to discover.

## How Seal Can Help Determine When Cross Default and Cross Acceleration Apply

Seal Contract Discovery can locate multiple types of financial contracts stored in disparate locations and bring them into one location. The software can then be "taught" to search for specific clauses such as Cross-Default and Cross-Acceleration.

This technology could enable Living Will teams to search for and discover all the different iterations of Cross-Default and Cross-Acceleration language across hundreds of thousands of financial contracts, such as ISDAs, GMRAs, GMSLAs, MSFTAs, Futures, and many more. Project Teams could then spend their time responding to accurate data rather than gathering it.

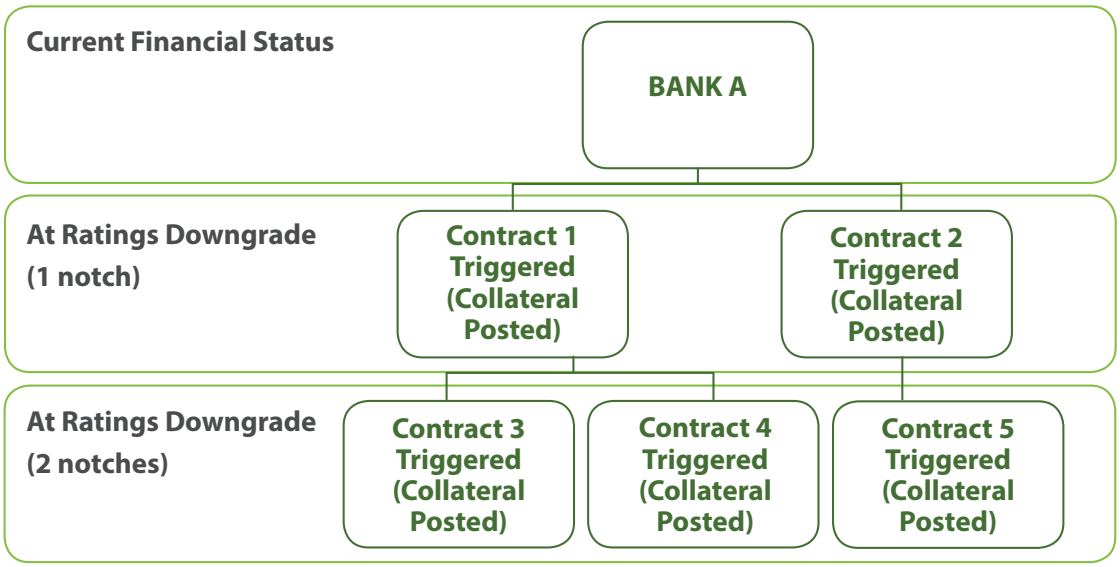
Regulators would appreciate the more robust and credible information so the actual systemic risk posed by Cross-Default and Cross-Acceleration could be identified.

### 3. Termination Events

Termination Events are clauses placed in financial contracts that identify scenarios that will trigger the end of the contract. There are two basic types: Automatic Early Termination ("AET") and Additional Termination Events ("ATEs"). AET is a fairly straightforward clause that determines whether a contract is terminated immediately upon triggering the default or whether the party has discretion to call the default.

ATEs, in contrast, are not always straightforward. They are specially written "triggers" that cause the termination of a contract. The challenge with tracking ATEs is that they are as creative as human beings have the capacity to dream up.

Sometimes ATEs have multiple layers of triggers that also need to be tracked. In a highly complex contract, for example, a Moody's, S&P or Fitch Rating can be used to change the financial terms of the contract to reduce the risk of one party facing another. Oftentimes, these downgrade provisions allow the party to "cure" the problem by posting collateral. This will save the contract from being terminated.
Regulators are particularly concerned with tracking these ratings because if a party is downgraded by a rating agency, they may have thousands of contracts where collateral must be posted. If a SIFI fails to monitor the contracts in which they agree to such terms, they may find themselves in the unfortunate situation of having to post so much collateral that it impacts their ability to pay out on other contracts.




As with other clauses, Termination Events are often tracked manually and haphazardly. Computer systems built in the past to collect data may have included the ability to track certain common clauses, but were certainly not configurable enough to add new types on the fly.

Using the latest solutions in contract analytics, however, it is possible to "teach" a system to review contracts for specific terms. So where a specific Termination Event is at issue, the contracts can be searched again and again as needed, so SIFIs (and Regulators) have a better understanding of the real time risk associated with financial contracts.

## How Seal Can Help in Stress Testing Scenarios

Once Seal has discovered the financial contracts within an institution, the software can be "taught" to search for new clauses. This technology could enable Living Will teams to predict their liquidity in stress scenarios more accurately. In addition to identifying what ratings and triggers apply to a given contract, the relevant calculations for exposure and collateral posting can be extracted and reviewed for their impact.

## 4. Collateral Management/Haircuts

In addition to being a key area of regulatory concern, an efficient collateral management system is a new frontier for profitability in this day of complex financial regulation.

If a firm can accurately and effectively manage the assets it has on hand, it has the ability to reduce capital charges associated with each type of product, for each jurisdiction. This is because financial contracts often include "haircuts" for certain types of collateral being used.

Step one in this analysis is to review financial contracts for the Eligible Collateral – the collateral allowed to be used by each party. The next step is to calculate the most advantageous "haircut" and pay out on the contract with whatever collateral a SIFI is trying to reduce from its balance sheet and avoid capital charges. To use a theoretical and overly-simplified example, say a contract allows a counterparty to pay in cash or gold. Since cash is already in a liquid form, it most likely has no haircut. Gold, in contrast, requires operational expenses associated with storage and movement. To limit the use of gold, contracting parties may want to place a 5% haircut on gold so that more gold must be provided to make it worth the while.

(ii) ***Eligible Collateral.*** The following items will qualify as *"Eligible Collateral"* for the party specified:

| | | Party A | Party B | Valuation Percentage |
|---|---|---|---|---|
| (A) | Cash | Yes | Yes | 100% |
| (B) | negotiable debt obligations issued by the Government of the United States having a residual maturity of not more than one year | Yes | Yes | 98% |
| (C) | negotiable debt obligations issued by the Government of the United States having a residual maturity of more than one year but less than five years | Yes | Yes | 98% |
| (D) | negotiable debt obligations issued by the Government of the United States having a residual maturity of five years and over | No | Yes | 98% |

It is also possible that the US capital requirements regime has a higher capital charge relative to certain collateral types than the EU capital requirements regime (or vice versa). Thus, a SIFI may want to strategically pay out all US contracts with a certain type of collateral, while simultaneously trying to attract that collateral into European contracts.

Technology will be critical here, especially since the mathematical calculations can be highly complex. The simple step of analyzing contracts to determine what collateral is eligible in a given contract could save plenty of time. The next step of analyzing what haircuts apply would further free up the armies of experts to focus on how best to utilize the data – rather than spending time gathering it.

While this practice of collateral optimization has profit potential, it is also a regulatory concern because SIFIs need to have a robust understanding of their real time collateral position in order to respond appropriately to a financial crisis. Regulators want to know the SIFIs collateral standing as is, but also where the SIFI has been downgraded by two notches by different rating agencies, which would trigger a sudden transfer of collateral to keep contracts from being terminated. Having a sound collateral management strategy is critical to any plan to face systemic shock.

## How Seal Can Help with Collateral Optimization

Eligible Collateral and Collateral Haircuts – easily understood with the human eye – prove to be a very challenging data point for automated systems to understand because of the spaces used to form the chart. While Seal's software does not fully automate the population of these systems, it has the capability to convert those charts into HTML which can then be copied into Excel spreadsheets to feed downstream, which is far more effective than transcribing it.

Additionally, Seal has the ability to analyze multiple clauses relative to each other. This is helpful because a Living Will team could do a search for problematic (or desirable) types of Eligible Collateral while simultaneously determining the timing to post in the event of a Ratings Trigger. Living Will teams could use this transparency to show regulators that they have the ability to respond much faster to systemic risk scenarios.

## 5. Service Level Agreements and Financial Market Utilities

Many firms have service level agreements that allow for the continued provision of certain services in the event of resolution. Given that SIFIs tend to have several thousand legal entities, these include intercompany agreements relative to financing, office space, employees, supplies, etc. Since the ultimate goal of creating a Living Will is to ensure orderly resolution, Service Level agreements must be vetted to ensure that they (1) exist and (2) ensure the services will still be available in a crisis or resolution scenario.

Similarly, firms have agreements in place with financial market utilities that may impact a firm's ability to operate safely. A financial market utility (FMU) is a facility that provides critical infrastructure for safe and effective flow of capital between multiple financial institutions. Many of these critical FMUs are still being named by regulators, but once named, SIFIs must be able to assess their risk relative to these organizations.

Should a large clearing entity go into bankruptcy, the SIFI should have a backup strategy to negotiate an alternative clearinghouse to send its business. Simultaneously, the SIFI should ensure that its own bankruptcy would not cause services to halt with other related entities. Again, with the rapid number of mergers and acquisitions that have taken place within SIFIs, the data relative to service level agreements can be lost in unstructured locations, such as hard drives of former employees.

### DESIGNATIED FINANCIAL MARKET UTILITIES*

*** As defined by the Board of Governors of the Federal Reserve**

1. **The Clearing House Payments Company, L.L.C., on the basis of its role as operator of the Clearing House Interbank Payments System**
2. **CLS Bank International**
3. **Chicago Mercantile Exchange, Inc.**
4. **The Depository Trust Company**
5. **Fixed Income Clearing Corporation**
6. **ICE Clear Credit L.L.C.**
7. **National Securities Clearing Corporation**
8. **The Options Clearing Corporation**

### How Seal Can Help Discover SLAs and FMU Contracts

As with guarantees and other document types, Seal can search and discover these contracts, so that they can be automatically distinguished from plain vanilla financial contracts. It can then analyze intercompany Service Level Agreements and Financial Market Utility agreements to discover where there are gaps that could inhibit the firm's ability to respond to market shocks in a rapid and orderly manner.

## Who has to produce a Living Will?

Since the goal of the regulators is to reduce systemic risk, the Living Will initially applied to the top 11 systemically important financial institutions, or SIFIs. These 11 first-wave filers submitted their initial plans in 2012.

The formal definition of SIFIs include: (1) bank holding companies, including foreign banks with US operations, with $50B or more in total assets (e.g., Deutsche Bank, Goldman Sachs), and (2) nonbank financial companies designated by FSOC for enhanced supervision by the FRB (i.e., AIG, GE Capital, and Prudential).

These are the world's largest and most complex financial institutions, so if one were to go the way of Lehman, thousands of other financial institutions would be impacted.

These firms must include in their plans a strategic analysis showing how to accomplish rapid and orderly resolution in a manner that mitigates serious adverse effects on financial stability. To perform this strategic analysis, SIFIs identify and analyze topics such as core business lines, critical operations, legal entity structure, funding and liquidity needs, interconnectedness and interdependencies, financial statements (pro-forma) and projections, and details about all counterparty contracts.

### FINANCIAL INSTITUTIONS REQUIRED TO FILE LIVING WILLS

**The first-wave filers are:**

1. **Bank of America**
2. **Bank of New York Mellon**
3. **Barclays**
4. **Citigroup**
5. **Credit Suisse**
6. **Deutsche Bank**
7. **Goldman Sachs**
8. **JPMorgan Chase**
9. **Morgan Stanley**
10. **State Street Corp**
11. **UBS**

**The second-wave filers are:**

12. **Wells Fargo**
13. **BNP Paribas**
14. **HSBC**
15. **RBS**

**The third-wave filers include approximately 115 firms, the large majority of which are foreign financial firms doing business in the United States.**

This undertaking is a firm-wide and often expensive exercise, but it forces firms to assess their strategies for systemic financial shocks as well as provide a blueprint to regulators, who may be able to facilitate clearer and more effective rules for resolution and bankruptcy.

## Regulatory Smackdown!

In August 2014, the Agencies sent letters to each of the first-wave filers regarding their 2013 submissions. The Agencies noted shortcomings in each Plan and required stricter assumptions and more comprehensive analyses on certain topics for each bank's 2015 submission.

To the shock of many, the FDIC deemed the Living Wills "not credible" and considered certain claims and assumptions as overly sanguine or inadequately supported. Banks must certainly take this feedback seriously: if the Agencies determine a plan is not credible or would not lead to an orderly resolution, more stringent prudential requirements and ultimately restructuring may be imposed.

This leaves SIFIs with an arduous task ahead: building a credible Living Will that is based on real- time data. Unfortunately, many banks do not have systems that can provide this data on-demand.

## Conclusion

Given the urgency of the situation, SIFIs should strongly consider investing in a technology like Seal. Many institutions have spent years attempting to catalogue all derivatives contracts, but from our experience, these technologies are more useful on a going forward basis. The value of a solution like Seal is its ability to rapidly find and analyze legacy contracts.

It also appears that the regulatory demand has no end in sight, so the sooner a firm invests in contract discovery and analytics software, the more it can be leveraged for additional requests.

One major plus on Seal's side is the fact that it can be plugged into practically any documentation repository. From Sharepoints to hard drives to email attachments, Seal can search and discover through hundreds of thousands of files, pulling only the ones that match relevant search criteria. In one success story, Seal was able to analyze 41,000 contracts and put it in an easily searchable format in six days. The South African media company who benefited from this estimated a full time employee would have taken 7.5 years to complete the assignment.

When it comes to SIFIs and Living Will, however, the scale is far greater with more at stake than ever before. The gross market value of derivatives (before netting) is $25 trillion (Source: McKinsey; ISDA). The total notional outstanding for the entire OTC market is estimated to be around $693 trillion (Source: ISDA), and that is only derivatives. That does not include guarantees or FMU contracts, which pose their own systemic risks.

Financial institutions are great at finance, but they have not proven themselves to be great technologists when it comes to contract analytics and discovery. It is time for the industry to face the reality that it is time to ask for help from solutions like Seal when it comes to Living Will projects.