IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

SAP AMERICA, INC.,	§	
	§	
Plaintiff,	§	
	§	CIVIL ACTION NO.
v.	§	3:16-CV-02689-K
	§	
INVESTPIC, LLC,	§	
	§	
Defendant.	§	

MEMORANDUM OPINION AND ORDER

Before the Court is SAP America, Inc.'s Motion for Judgment on the Pleadings (Doc. No. 57). After careful consideration of the motion, the response, the reply, the notice of supplemental authority, the supporting appendices, the applicable law, and any relevant portions of the record, the Court **GRANTS** Plaintiff's motion.

1. Background

Plaintiff SAP, America, Inc. ("SAP") filed this suit against Defendant Investpic, LLC ("Investpic"). In its complaint, SAP seeks a declaratory judgment from the Court that its products do not infringe the claims of a patent owned by Investpic and that the claims of that patent are invalid. On October, 18, 2016, Investpic answered and asserted patent infringement counterclaims against SAP. On November 8, 2016, SAP answered the factual allegations of Investpic's counterclaims and then subsequently amended its answer regarding these factual allegations on November 29, 2016. SAP

filed the instant motion on February 23, 2017. SAP then filed a second amended answer to Investpic's counterclaims on February 28, 2017.

In its motion, SAP argues that all of the claims of the patent-in-suit are invalid because the claims address subject matter that is not eligible for patent protection under 35 U.S.C. § 101 and *Alice Corp. Pty v. CLS Bank Int'l,* 134 S. Ct. 2347 (2014) and *Mayo Collaborative Servs. V. Prometheus Labs, Inc.*, 132 S. Ct. 1289 (2012) because the claims are directed toward abstract ideas. Investpic responds that the claims are valid because they are not directed toward abstract ideas and, even if they are, the claims incorporate inventive concepts beyond the abstract ideas that result in the claims addressing patentable subject matter.

2. Applicable Law

a. Judgment on the Pleadings

A motion for judgment on the pleadings under Federal Rule of Civil Procedure 12(c) should be granted if the complaint lacks a cognizable legal theory. *Doe v. MySpace, Inc.*, 528 F.3d 413, 418 (5th Cir. 2008). The central issue in a motion for judgment on the pleadings under Rule 12(c) is "whether, in the light most favorable to the plaintiff, the complaint states a valid claim for relief." *Id.* Judgment on the pleadings is appropriate only if there are no disputed issues of facts and only questions of law remain. *Hughes v. Tobacco Inst., Inc.*, 278 F.3d 417, 420 (5th Cir. 2001).

Patent subject-matter eligibility under 35 U.S.C. § 101 is a question of law particularly suitable for resolution at the pleading stage of a patent litigation matter.

See Content Extraction and Transmission LLC v. Wells Fargo Bank, NA, 776 F.3d 1343, 1349 (Fed. Cir. 2014). The focus of a 35 U.S.C. § 101 inquiry, even at the pleading stage, is on the claims. *Dealertrack Inc. v. Huber*, 674 F.3d 1315, 1334 (Fed. Cir. 2012). Claim construction is not required to conduct a 35 U.S.C. § 101 analysis. *Content Extraction*, 776 F.3d at 1349. Since the focus in a 35 U.S.C. § 101 inquiry is on the claims and claim construction is not necessary for the analysis, subject matter eligibility analysis of the claims may be done at the pleading stage. *Id.*

b. Subject Matter Eligibility Under 35 U.S.C. §101.

A patent may be obtained for a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, …" 35 U.S.C. § 101. So generally, processes, machines, manufactures, and compositions of matter are eligible subject matter for patent protection. *Alice*, 134 S. Ct. at 2354.

But, this subject matter eligibility is subject to three judicially created exceptions that prevent patents on pure concepts. *Id.; Ass'n for Molecular Pathology v. Myriad Genetics, Inc.* 133 S. Ct. 2107, 2116 (2013). The three judicially created exceptions to patent subject matter eligibility are laws of nature, natural phenomena, and abstract ideas. *Id.* A patent claim may not be obtained for an invention that claims a law of nature, natural phenomena, or an abstract idea, even if the claim satisfies the literal requirements of 35 U.S.C. § 101. *Id.* The judicial exceptions are not patentable because they are "the basic tools of scientific and technological work" and without the

exceptions "there would be considerable danger that the grant of patents would tie up the use of such tools and thereby inhibit future innovation." *Id*.

The Supreme Court has set down a two part test to determine if a patent claim is unpatentable due to one of the three judicial exceptions. *Alice*, 134 S. Ct. at 2355. First, a court must determine if the claim is directed to a law of nature, natural phenomenon, or abstract idea. *Id.* If the claim is not directed to one of these three exceptions, then the claim is not subject to a judicial exception and is patentable subject matter, so long as it meets the requirements of 35 U.S.C. § 101. *Id.* If the claim is directed to a judicial exception, then a court must consider the second part of the test. *Id.* In the second part of the test, a court must determine if the claim contains something else, besides the judicially created exception. This must be something else that adds to the claim so that it does not assert a claim over the law of nature, natural phenomena, or abstract idea. *Id.* The requirement for something else ensures that the inventor does not obtain a patent claim over a law of nature, natural phenomena, or abstract idea, which would suppress innovation. *Id*. The "something else" required is an "inventive concept" or an element or combination of elements that is sufficient to ensure the claim amounts to significantly more than a claim upon the ineligible concept itself. *Id*.

3. Application of Law to Claims of Patent-In-Suit

In the motion, SAP moves the Court to grant judgment on the pleadings and argues that all claims of the patent-in-suit in this matter are invalid because the claims do not address subject matter that is eligible for patent protection under 35 U.S.C. § 101.

a. The Patent-In-Suit

The patent-in-suit is U.S. Patent 6,349,291 (the '291 Patent"), which was issued on February 19, 2002, and is titled "Method and System for Analysis, Display and Dissemination of Financial Information Using Resampled Statistical Methods." Investpic is the current owner of all right, title, and interest in the '291 Patent.

The '291 Patent discloses the invention of a method and system for statistical analysis, display, and dissemination of financial data over a network. '291 Patent at Abstract. The patent discloses, what it asserts, is a novel method to analyze financial markets. *Id.* at 1:60-2:4. Among other functions, the invention can be used for predicting financial market trends. *Id.* The patent asserts that older methods of doing this are not as useful as the method of this invention because older methods rely on assumptions that do not accurately reflect the way financial markets behave. *Id.* The invention addresses this problem by using a resampled statistical method, which, according to the patent, more accurately reflects financial markets. *Id.* The invention also includes the features of performing the resampled statistical method over a network and with parallel processors. *Id.* at 2:4-37.

Modeling prediction uses a probability distribution function to model the possible outcomes of a particular situation. *Id.* at 1:15-69. According to the patent, the prior art uses a Gaussian distribution as the probability distribution function. *Id.* A Gaussian distribution is a normal probability distribution function, with a peak at the most common occurrence in a data set and symmetrical tails on each side of the peak representing less likely occurrences. *Id.* The further away a point is from the center of a normal distribution, the less likely it is that that occurrence will happen. *Id.* So, the tail portions of a normal distribution are much less likely to occur than the center peak. *Id.*

According to the patent, the use of a Gaussian distribution as a probability distribution function fails to account for the reality of financial markets because financial markets are more prone to experience extreme occurrences than is reflected in a normal distribution. *Id.* In a normal distribution, the probability of these extreme occurrences is represented by the tails of the distribution, where it is unlikely that the occurrences will actually happen. *Id.* According to the inventor, this does not reflect the true nature of financial markets. *Id.* The inventor claims that relying on the underlying assumptions of Gaussian distribution results in poor prediction of financial markets. *Id.*

The inventor claims that the invention of the patent solved this problem by using a different method to generate a probability distribution function, instead of applying a Gaussian curve to the original data set used for the modeling, the invention uses

resampling to generate the sample set for the statistical analysis. *Id.* at 1:60-3:29. In general, resampling involves generating a data subset from the source data. *Id.* at 15:34-16:21. The resampled data set can be generated in a number of manners including random selection of the subset or a biased selection the subset. *Id.* The '291 Patent claims methods and systems that create resampled data sets using a bias parameter. *Id.* at 16:34-18:65. The bias parameter is used to insert bias into the resampled data set, so that the resampled data set can be used in statistical analysis to mimic certain financial market conditions, such as a bias toward a strong or weak market. *Id.* at 15:34-16:21.

b. The Independent Method Claims of the '291 Patent

The '291 Patent has two independent claim methods, Claim 1 and Claim 11. Claim 1 reads as follows:

> A method for calculating, analyzing and displaying investment data comprising the steps of:
> (a) selecting a sample space, wherein the sample space includes at least one investment data sample;
> (b) generating a distribution function using a re-sampled statistical method and a bias parameter, wherein the bias parameter determines a degree of randomness in a resampling process; and
> (c) generating a plot of the distribution function.

'291 Patent 16:34-42.

Claim 11 reads as follows:

> A method for providing statistical analysis of investment data over an information network, comprising the steps of:
> (a) storing investment data pertaining to at least one investment;

(b) receiving a statistical analysis request corresponding to a selected investment;

(c) receiving a bias parameter, wherein the bias parameter determines a degree of randomness in a resampling process; and,

(d) based upon investment data pertaining to the selected investment, performing a resampled statistical analysis to generate a resample distribution.

'291 Patent at 17:17-29.

So, while the dependent method claims vary in some respects, both include obtaining a sample of investment data, obtaining a bias parameter, and performing a statistical analysis on a resampled set of data that was selected based upon selection by the bias parameter.

SAP argues that these claims amount to nothing more than the execution of an abstract idea with no inventive concept, so the claims are not patentable subject matter. SAP asserts that the claims only perform mathematical functions and pre- and post-solution activities; that mathematical calculations are abstract ideas; and that the pre- and post-solution activities do not make these claims patentable subject matter. According to SAP, the claims are invalid.

Investpic argues that the claims are not directed toward an abstract idea. Instead, according to Investpic, the claims address an invention that solves technical problems in the field of data science. Investpic assets that because this solves a technical problem the claims are not an abstract idea, so they pass the first part of the *Alice* test. Investpic further asserts that since the claims address an innovative technical solution under 35 U.S.C. §§ 102 and 103, the claims also have the inventive concept required by the

second step of the *Alice* test. For these reasons, Investpic argues that the claims address patentable subject matter.

Under the test set out in *Alice*, the Court must first turn to the language of the claims to determine if the claims are directed toward an abstract idea. Both Claims 1 and 11 involve a data set and a bias parameter. The data set is resampled using the bias parameter and a statistical analysis is performed on the resampled data set. Claim 1 then generates a plot of the distribution function generated by the statistical method. Claim 11 generates a resampled distribution from the statistical analysis.

Both dependent claims are directed toward performing statistical analysis. Statistical analysis of this data is a mathematical calculation, which is made clear through examples of possible statistical analyses given in the patent specification. According to a described embodiment, the system version of the invention stores various functions related to the statistical analysis. '291 Patent at 9:1-59. These functions are the mathematical formulas used in performing resampled statistical analysis of the financial data. *Id.* The specification goes on to provide various examples of possible functions that may be used for the statistical analysis. *Id.* These include functions for determining gross rate of return, maximum drawdown, and a monitor function. *Id.* For each of these, the specification provides an example mathematic formula used to perform the statistical analysis. *Id.* The specification of the '291 Patent makes it clear that the "statistical analysis" of the claims refers to mathematical calculations, like the ones described in the specification. Mathematical calculations

and formulas are abstract ideas. *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972). Since mathematical calculations are abstract ideas and all that these limitations require is performance of mathematical calculations, the Court concludes this portion of these claims is directed toward an abstract idea.

Both Dependent Claims 1 and 11 also have limitations that require bias parameters that are used to resample a given data set before performing the statistical analysis. The bias parameter is used to resample a data set, to create a new data set. '291 Patent at 10:1-11:12. In general terms, a resampled data set is generated by selecting various data points from the original data set. *Id.* The bias parameter is used to input a bias into the resampled set. *Id.*

For example, as described by the specification and Figure 14 of the '291 Patent, the bias parameter can be used to insert bias into the resampled data set so that the data set more accurately reflects market conditions, such as strong or weak markets, by biasing the number of strong days and weak days that are used in the resampled analysis. '291 Patent at 10:1-11:12. and Fig. 14. Figure 14 and the corresponding specification language provide an example of how biasing for strong or weak market conditions would occur. '291 Patent at 16:9-21. According to the specification, a bias parameter is first selected. The bias parameter is a number between 0 and 1, with 1 representing the most favorable market and 0 representing the least favorable market. *Id.* The numbers in between 0 and 1 represent various degrees of market conditions between the two extremes. *Id.* After selection of the bias parameter, the system

randomly generates another number. *Id.* This number is determined to be lesser or greater than the bias parameter. *Id.* If it is lesser, a good day is randomly selected from the original data set. *Id.* If it is greater, a bad day is randomly selected from the original data set. *Id.* This process is repeated a predetermined number of times to generate a new data set, also referred to as the resampled data set, which, according to the inventor, more accurately represents market conditions than the normal distribution of the original data set. *Id.* By varying the bias parameter, the method can be used to, for example, generate resampled data sets that are more or less biased toward good or poor market conditions. According to the '291 Patent, this example is one of the possible ways to generate a resampled data set and is an example of one of the possible types of biases that can be introduced through resampling of the data set. *Id*.

The Court finds that this step of the method claims is also directed toward an abstract idea. This resampling procedure is nothing more than data manipulation to create a new data set from an existing data set. The bias parameter and resampling procedure represents the abstract idea of making a data set biased through the use of a bias parameter and, more generally, the abstract idea of manipulating data.

The Court is not persuaded by the multiple arguments Investpic asserts to support its conclusion that these claims are not directed toward an abstract idea. Investpic contends, for example, that the claims are directed toward solving a particular technical problem in data science; that the claims focus on an invention that is new and useful; and that the claimed invention is particularly innovative.

Regarding Investpic's assertion that the claim is new, useful, and particularly inventive, Investpic argues that the invention combines two types of thinking in the field of statistical analysis and probability. According to Investpic, these two types of thinking are "frequentist" and "Bayesian" paradigms. Prior to the claimed invention, Investpic argues that the conventional belief was that the "frequentist" and "Bayesian" statistical analyses were incompatible with each other and could not be combined to provide useful results. Investpic goes on to argue that because of the inventor's unique background, the inventor was not hampered by this bias prevalent in the prior art, so the inventor was able to combine frequentist and Bayesian thinking to create the invention claimed.

Assuming without deciding that this contention is even true, the Court is not persuaded by this argument and would still find this is directed toward an abstract idea. The novelty of an invention is not a factor used to determine if a claim is directed to a judicial exception. *Parker v. Flook*, 437 U.S. 584, 591 (1978). For example, the Pythagorean Theorem could not have been patented at the time it was discovered, no matter how novel it was, because it is a mathematical concept, which is an abstract idea. *Id.* at 590. While it may be true that the claimed invention was novel, unexpected, and unconventional, this is not relevant to the determination of whether or not the claim is directed toward an abstract idea. *Id.*

Investpic also argues that the claims are not abstract concepts because they address a specific means or method that improves the relevant technology rather than a result

or effect that itself is the abstract idea which merely invokes generic processes and machinery. Investpic compares the claims of the '291 Patent to those in *DDR Holdings, LLC v. Hotels.com LP*, 773 F.3d 1245 (Fed. Cir. 2014), *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), and *McRO, Inc. v. Bandai Namco Games Am, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). *DDR* involved a patent related to the website advertising methods. *DDR*, 773 F.3d at 1248. *McRO* involved a patent related to algorithms used by a computer to animate characters faces in computer programs. *McRO*, 837 F.3d at 1303. *Enfish* involved a patent related to the structure of computerized databases. *Enfish*, 837 F.3d at 1338. The patents in each of these cases involved the use of computer hardware to perform the claimed inventions. *DDR*, 773 F.3d at 1248; *McRO*, 837 F.3d at 1303; *Enfish* 837 F.3d at 1338. These patents were all challenged as being unpatentable because they encompassed abstract ideas performed by generic computer hardware. *DDR*, 773 F.3d at 1255-59; *McRO*, 837 F.3d at 1311-16; *Enfish* 837 F.3d at 1335-40. In each of these cases, the Federal Circuit rejected this argument and concluded that the claims of these patents were directed toward inventions that addressed specific methods to improve the functioning of the computers themselves, and that was patentable subject matter. *DDR*, 773 F.3d at 1255-59; *McRO*, 837 F.3d at 1311-16; *Enfish* 837 F.3d at 1335-40. These cases stand for the proposition that claims focusing on a specific means or method that improves the relevant technology may be patentable if they contain sufficient limitations so that they are not directed toward an abstract idea. *McRO* at 1314. And conversely, claims that are directed to a

result or effect that itself is the abstract idea do not pass the first part of the *Alice* test because they are directed toward abstract ideas. *Id.*

Investpic argues that the claims of the '291 Patent, like the claims in *DDR, Enfish*, and *McRO*, are claims for a specific method that improves data science technology and, because of this, the claims address patentable subject matter. The Court disagrees with Investpic's argument that the claims of the '291 Patent are these types of claims. Investpic's analysis fails to account for an important distinction between the claims of the cited cases and the claims of the '291 Patent. In the *DDR, Enfish*, and *McRO* cases relied on by Investpic, the Federal Circuit found additional claim elements and limitations that either sufficiently removed the claims from being directed toward an abstract idea because they improved the functionality of the relevant technology. *DDR*, 773 F.3d at 1255-59; *McRO*, 837 F.3d at 1311-16; *Enfish* 837 F.3d at 1335-40.

In *McRO*, the claims were directed toward algorithms used to animate faces in software. *McRO*, 837 F.3d at 1303. The invention in *McRO* automated animation of images of computer generated faces to provide improved lip synchronization and facial expressions of the animated characters. *Id.* at 1307. This was done by application of a set of rules, which would be applied to a particular situation and processed by a computer, to determine the appropriate changes to be made to the animated face. *Id.* While the specification of the patent provided some exemplary rules, the claims in issue did not require any particular rule to be applied. *Id.* at 1307-08. The Federal Circuit disagreed with the district court's finding that the claims were directed toward the

abstract idea of automation of facial animations using rules, and concluded they were not directed toward an abstract idea. *Id.* at 1313. The Federal Circuit concluded that the district court failed to recognize that the claims must not be oversimplified in a search for an abstract idea and that a court must look to the claims as an ordered combination without ignoring the requirements of individual steps. *Id*. The Federal Circuit went on to point out that the claims at issue contained multiple other limitations and that not all rules were claimed, but only those within a particular genus. *Id.* The Federal Circuit concluded that in combination, all of these considerations resulted in the claims being directed toward a specific invention that did not monopolize the abstract idea. *Id.* The Federal Circuit reached similar conclusions in *DDR* and *Enfish*. *DDR*, 773 F.3d at 1255-59; *Enfish* 837 F.3d at 1335-40.

That is not the case presented by the claims of the '291 Patent. The claims of the '291 Patent do not contain any substantial limitations besides those that recite the abstract idea at issue, which is mathematical calculations. Because of this lack of any substantive limitations, the claims of the '291 Patent fall into the other side of the equation. They are claims directed toward the result or effect of the abstract idea itself. The claims of the '291 Patent are much more like the claims at issue in *Parker v. Flook*, 437 U.S. 584 (1978), than they are like the claims at issue in *DDR*, *Enfish*, and *McRO*.

In *Flook*, the patent claims in issue involved the use of a mathematical calculation to determine an updated alarm limit for a chemical process. *Flook*, 437 U.S. at 585-86. The alarm limit in the process claimed was used to determine if abnormal conditions

were present during the process so that an operator could intervene before something went wrong with the process. *Id.* The use of alarm limits was known in the prior art of *Flook*. *Id.* But, the invention claimed in *Flook* used a mathematical equation to calculate an updated alarm limit based on current operating conditions of the chemical process. *Id.* The step involving calculation of the updated alarm limit was the only feature of the claims that was novel. *Id.* Considering this, the Supreme Court determined that the claim did not present patentable subject matter and that allowing the claims would have resulted in a patent on the effect or result of using the mathematical formula. *Id.* at 594-95. The Supreme Court compared this to a patent that claimed use of the formula $2\pi r$ to calculate the circumference of a circle. *Id.* at 595. Such a claim would be unpatentable because alone, it encompassed the effect or result of the mathematical calculation. *Id.* at 595.

The claims of the '291 Patent are difficult to distinguish from the claims in *Flook* and from the Supreme Court's example of a claim that calculated the circumference of a circle. The claims of the '291 Patent are likewise directed toward an abstract idea because the claims attempt to encompass the result or effect of a mathematical formula, which in this case is the use of statistical analysis formulas to calculate financial data models. The independent method claims of the '291 Patent are not directed toward a specific means or method that improves the relevant technology, but they are directed toward the result or effect of the abstract idea. This is true whether the claim elements

are viewed individually or as an ordered combination. Either way, the claims are ultimately directed toward the result of the mathematical calculations.

Since the claims are directed toward the abstract ideas of mathematical calculations and data manipulation, the claims fail the first part of the *Alice* test. Because of this, the Court must further look to the claims to determine if there is something else, such as an inventive concept, that prevents these claims from claiming the abstract idea itself.

Dependent Claims 1 and 11 include other limitations, besides the abstract statistical analysis, bias parameter, and resampled data set requirements. These other limitations include selecting a sample space, generating a plot of results, storing data, receiving requests, and receiving a bias parameter. These other limitations all represent insignificant pre and post solution activity. They do not add any substance to the claims except for reciting the necessary steps to obtain and store data and to report results of the data manipulation. These types of insignificant pre and post solution activities are insufficient to add an inventive concept to what is otherwise a claim to an abstract idea.

Claim 11's preamble also states that the method is to be performed over an information network. Assuming, that this preamble language is limiting, this network requirement, also, does not add an inventive concept to save this claim. If this preamble language is limiting, then this would require the additional limitation that the method be performed over a network. But, using standard computer hardware to execute an

abstract idea is not an inventive concept. *Alice,* 134 S. Ct. at 2357. An abstract idea cannot simply be made patentable by reciting the abstract idea and then requiring that a generic computer execute the abstract idea. *Id.* Claims that recite computer requirements may add an inventive concept if the claim is directed toward a particular improvement in the functioning of the computer. *Enfish*, 822 F.3d at 1336. But, this is not the case for claims where a computer limitation is merely a tool for executing the abstract idea. *Id.* In Claim 11 of the patent-in-suit, even if the network requirement is a limitation of the claim, this would not save the claim by adding an inventive concept. This would merely be using a network as a tool to carry out the abstract idea.

Because independent Claims 1 and 11 are directed toward the abstract idea of mathematical calculations and data manipulation with no additional inventive concept, the Court finds that Claims 1 and 11 are not directed toward patentable subject matter and are invalid.

c. The Dependent Method Claims of the '291 Patent

The '291 Patent also contains a number of dependent method claims that depend upon independent Claims 1 and 11. Claims 2, 3, 4, 5, 6, 7, 8, 9, and 10 are ultimately dependent on Claim 1. Claims 12, 13, 14, 15, 16, 17, 18, 19, 20, and 21 are ultimately dependent on Claim 11.

Because the Court has already determined Claims 1 and 11 are directed toward abstract ideas, these dependent claims are all also directed toward the same abstract ideas. They fail the first part of the *Alice* test. But, the Court must still analyze them

under the second portion of the *Alice* test to determine if additional limitations of the dependent claims could add an inventive concept so that they address patentable subject matter. *Alice*, 134 S. Ct. at 2355.

Claims 2, 3, 4, 5, 6, 7, and 10 all add limitations to Claim 1 related to the resampled statistical method, which requires the resampling method to be a bootstrap method. '291 Patent at 16:43-17:16. Claim 2 adds this limitation and the other listed dependent claims add further detailed limitations as to the bootstrap method. *Id.* Claims 8 and 9 add limitations that the statistical method is a jackknife method and a cross validation method, respectively. *Id.* Bootstrap, jackknife, and cross validation are all particular methods of resampling. *Id.*

These additional limitations of Claims 2, 8, and 9, which are the ones specifying the bootstrap, jack knife, and cross validation methods, respectively, do not add any inventive concept to the abstract ideas of Claim 1. In the analysis of the independent method claims, the Court has already determined that the statistical analysis limitation of the independent claims is directed toward the abstract idea of mathematical calculations. The dependent claims only specifically identify what particular resampling method is applied to the data. The fact remains that these methods are still abstract ideas involving mathematical calculations and data manipulation. There is little difference to the analysis between a generically specified resampling analysis and a specific resampling analysis. Either way, the claim is directed toward mathematical calculations and data manipulation. The Court finds this does not add any inventive

concept to the claims which would result in the claims being directed toward patentable subject matter.

Dependent Claims 3, 4, 5, 6, 7, and 10 all add additional limitations to Dependent Claim 2, the one that specifies that the statistical method to be used is a bootstrap method. *Id.* The additional limitations to the bootstrap method also do not add any inventive concept to the claims. Instead, each adds limitations that specify what parameters are used in the bootstrap calculations or add additional mathematical manipulation to the bootstrap data. *Id.* In each of these claims, the additional limitations still do not take these claims beyond the abstract idea of performing mathematical calculations. The limitations just provide more particulars of the parameters used in those mathematical calculations, which also does not add any inventive concept to these claims.

The claims that are ultimately dependent on Claim 11 also do not contain any inventive concept beyond the abstract idea of Claim 11. Dependent Claim 14 adds the limitation that a bootstrap sample is generated as part of the statistical analysis. *Id.* at 17:37-45. Dependent Claims 15, 16, 17, 18, 19, and 21 all add additional limitations to Dependent Claim 14. *Id.* at 17:46-18:13. The limitations of these claims, like the analogous dependent claims of Claim 1, specify the particular parameters to be used in the mathematical calculations and statistical analysis. *Id.* Like Claim 1's dependent claims, these dependent claims simply specify what particular math is to be performed under the methods. The Court finds that these limitations do not add an inventive

concept to the abstract idea of Claim 11 that would result in these claims being directed toward patentable subject matter.

Claims 12, 13, and 20 are also dependent on Claim 11. *Id.* at 17:30-36; 18:9-10. Claim 12 adds a step that involves generating a plot based on the resampled distribution. *Id.* Claim 13 adds details to Claim 12 regarding the statistical analysis request, including that the request include an investment identifier, a periods parameter, a function parameter, a replications parameter, and a plot parameter. *Id.* Claim 20 adds a limitation that requires the information network to be the internet. *Id.*

The Court finds that none of these additional limitations add an inventive concept that results in the claims being directed toward patent eligible subject matter. The additional limitations of Claims 12 and 13 represent insignificant pre and post solution activity, which is not an inventive concept. The internet limitation of Claim 20 merely requires use of the internet in a generic manner, which also does not add an inventive concept to the claim. The Court finds Dependent Claims 12, 13, and 20 are also invalid because they do not claim patent eligible subject matter.

d. The Independent System Claims of the '291 Patent

The '291 Patent also contains system claims for the disclosed invention. The independent system claims are Claims 22 and 29. Claim 22 reads as follows:

> A system for providing statistical analysis of investment information over an information network comprising:
> a financial data base for storing investment data;

a client database;

a plurality of processors collectively arranged to perform a parallel processing computation, wherein the plurality of processors is adapted to:

receive a statistical analysis request corresponding to a selected investment;

based upon investment data pertaining to the selected investment, perform a resampled statistical analysis to generate a resampled distribution; and

provide a report of the resampled distribution.

'291 Patent at 18:14-27.

Claim 29 reads as follows:

A system for providing statistical analysis of investment information over an information network comprising:

a financial data database for storing investment data;

a front end subsystem for receiving a statistical analysis request;

a parallel processor, wherein the parallel processor includes:

at least one processor for performing resampled statistical analysis.

'291 Patent at 18:51-59.

The system claims are simply claims for systems that would be used to perform the steps of the method claims. The system claims include components that: (1) store the information needed for performing the statistical analysis; (2) receive inputs needed for the statistical analysis; (3) perform the statistical analysis; and (4) provide the results of the statistical analysis. Just like the method claims, the Court finds the system claims are also directed to patent ineligible subject matter.

When a method claim is invalid because it claims an abstract idea, an analogous system claim, which simply performs the abstract idea without additional inventive concept, is also not eligible for patent protection. *Alice*, 134 S. Ct. at 2360; *Bancorp Servs. v. Sun Life Assur. Co. of Canada*, 687 F.3d 1266, 1277 (Fed. Cir. 2012). This is the situation presented by the claims of the '291 Patent. Because the method claims are directed toward abstract ideas and the system claims are analogous to the method claims, the system claims are also directed toward an abstract idea and do not pass the first part of the *Alice* test.

Like the dependent method claims, the dependent system claims also fail the second part of the *Alice* test because they fail to add any inventive concept that takes these claims beyond the abstract ideas. The system claims recite a number of limitations, but all of these limitations are either pre or post solution activity or are generic computer components, neither of which adds an inventive concept to the claims. Like the method claims, the system claims have limitations related to the storing, inputting, retrieving, and displaying of information. These are pre and post solution activities. The system claims also require processors for performing the statistical analysis. But, these are merely generic computer components that do not add anything inventive to the claims or relate to some improvement in the way a computer operates. Instead the generic computer components are used as tools to implement the abstract idea. This also fails to add some inventive concept to the claims. These claims do not contain any other limitations. Since the dependent claims consist only of limitations that recite

the abstract ideas, limitations that are pre and post solution activity, and limitations that are generic computer components, the Court finds these claims are directed toward abstract ideas and are invalid because they do not have any inventive concept.

e. The Dependent System Claims of the '291 Patent

The '291 Patent also has a number of dependent system claims that depend on the independent system claims, Claims 22 and 29. The Court has already determined the independent claims do not pass the first part of the *Alice* test because they are directed toward an abstract idea. The Court must now determine if the additional limitations of these dependent claims adds an inventive concept to the claims. *Alice,* 134 S. Ct. at 2355.

The dependent system claims are Claims 23, 24, 25, 26, 27, 28, 30, and 31. '291 Patent at 18:27-65. Many of the limitations that these claims add are analogous to the limitations of the dependent method claims, which did not add an inventive concept to those claims. Claim 23 adds a limitation where the report of Claim 22 is a distribution plot. *Id.* at 18:28-29. Claim 24 adds additional details to the content of the statistical analysis request of Claim 22. *Id.* at 18:30-33. Claim 25 adds limitations specifying that the processors can perform a bootstrap calculation. *Id.* at 18:34-44. Claims 26, 27, and 28 add an alert rule database used to alert a person if a certain condition is determined; hardware capable of alerting a client; and alerts provided by email. *Id.* at 18:41-49. Claim 30 specifies that the front-end system is a web server.

Id. at 18:60-61. Claim 31 provides additional parallel processing to perform the statistical analysis. *Id.* at 18:62-65.

As with the Court's previous findings, these additional limitations of the dependent system claims do not add any inventive concepts because the claim limitations are pre and post solution activity, add generic computing hardware, or simply specify what type of mathematical calculations are to be performed. The additional limitations of Claims 23, 24, 26, 27, and 28 all directed toward pre and post solution activities regarding which parameters are used for the statistical analysis and what happens based on the results of the statistical analysis. These are not inventive concepts. Claims 30 and 31, which relate to a web server and parallel processors, are recitations of generic computing hardware used as a tool to implement the statistical analysis. These also do not add any inventive concept. And, Claim 25, which specifies that the processor performs a boot strap analysis, also does not add an inventive concept because this limitation just specifies the particular math that is to be performed by generic computer hardware. Because the dependent system claims are directed toward abstract ideas and they fail to add any inventive concept, the Court finds these claims do not pass either step of the *Alice* test and are invalid because they are directed toward ineligible patent subject matter.

4. Conclusion

In conclusion, the Court finds that all of the claims of the '291 Patent are **invalid** because they are directed toward the abstract ideas of mathematical calculations and

data manipulation, and they do not contain any inventive concept that results in the claims addressing patentable subject matter. For these reasons, the Court **grants** SAP's Motion for Judgment on the Pleadings.

SO ORDERED.

Signed May 18th, 2017.

Ed Kinkeade
ED KINKEADE
UNITED STATES DISTRICT JUDGE