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An appeals court is expected to reconsider the State Street Bank case on business method patents. Patent reforms are needed but stalled.

Managing the Risks of Patents: Changes on the Horizon for Business Method Patents

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The risk management industry and other sectors of the financial services industry have been plagued during the past 10 years by so-called "business method patents." Love them or hate them, such patents have been a risk to the business of risk management itself. Significant changes are on the imminent horizon for business method patents and their effect on the financial services and other industries. This article provides a brief overview of business method patents that affect risk management businesses, looks at the changes that will occur during the next few months and years, and provides some practical suggestions on how to manage the risk of dealing with such patents.

Patents Controversial in the Risk Management Industry

Business method patents are now, and have always been, controversial. They represent a mandate under the U.S. Constitution for the promotion of "science and useful arts" by providing authors and inventors the exclusive right to their respective "writings and discoveries" for limited time periods.[1] Although there are several good reasons to own patents,[2] the real advantage for many patent holders lies in the power to extract damages or royalty payments from an infringer and, in certain cases, obtain a court order (injunction) prohibiting the infringing activity.

According to a recent study by PricewaterhouseCoopers (PwC), patent holders continue to assert their patented innovations before the federal courts at a significant and increasing clip.[3] The number of patent infringement actions filed was 2,896 in 2007, lower than the 3,075 cases in 2004, but with a compound average growth rate (CAGR) of 5.8 percent since 1991. Meanwhile, the number of patents granted has also risen, with a CAGR of 3.8 percent since 1991. The year 2007 witnessed an increase in the number of patents granted (from 182,687 in 2006 to 183,831 in 2007), as shown in Exhibit 1.

Aside from the ultimate risk of damages and injunctions, defense of a patent infringement suit can cost millions in attorneys' fees. Defense costs are incurred in most cases whether you win or lose. The risk dynamics to patent owners of bringing a patent infringement lawsuit is affected by the increasing presence and notable success of contingent fee plaintiff's lawyers[4] — a phenomenon well known to the insurance industry.

In other words, a patent can significantly affect the cost equation of providing goods or services and can actually shut a business out of a market.

Patent Case Success Is High Enough to Be a Significant Risk

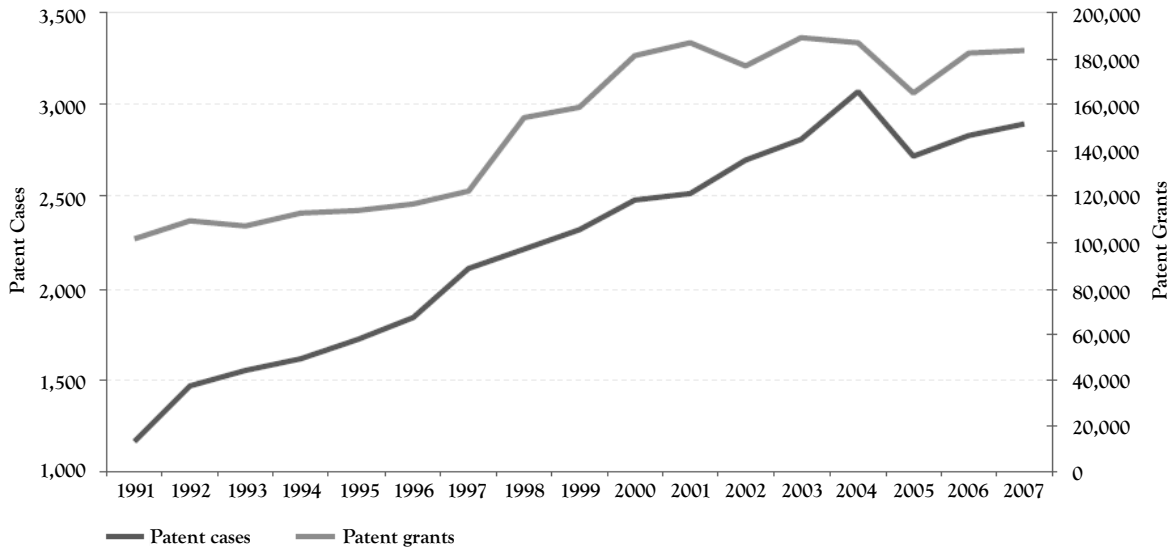
The risks are not insignificant. In the PwC study, patent holders during the years 1995–2007 were successful 37 percent of the time in court overall, with a 19 percent success rate in summary judgments and a 57 percent win rate at trial.[5] The success rate improved to 40 percent during the last seven years of the study, compared with 32 percent over the first six years.[6] This success rate, while not overwhelmingly in favor of patent holders, is sufficiently high and steady enough to provide a gauge of overall patent risk to companies in many economic sectors — including the risk management sector.

Patents: Love Them or Hate Them

Necessarily, some people will love patents because of the competitive advantages that quality patents can bring, such as royalties, pressure on competitors,

Exhibit 1

Patent Case Filings and Grants



Years are based on September year-end.

Source: U.S. Patent and Trademark Office: Performance and Accountability Report and *U.S. Courts: Judicial Facts and Figures*

increased financial risk to others from infringing, etc. And also necessarily, some people will hate patents because they are on the receiving end of a lawsuit, find that profitability has been eroded due to payment of royalties, or are forced to adopt business practices that are less profitable due to patent infringement risks.

Many Industries Affected by Patents

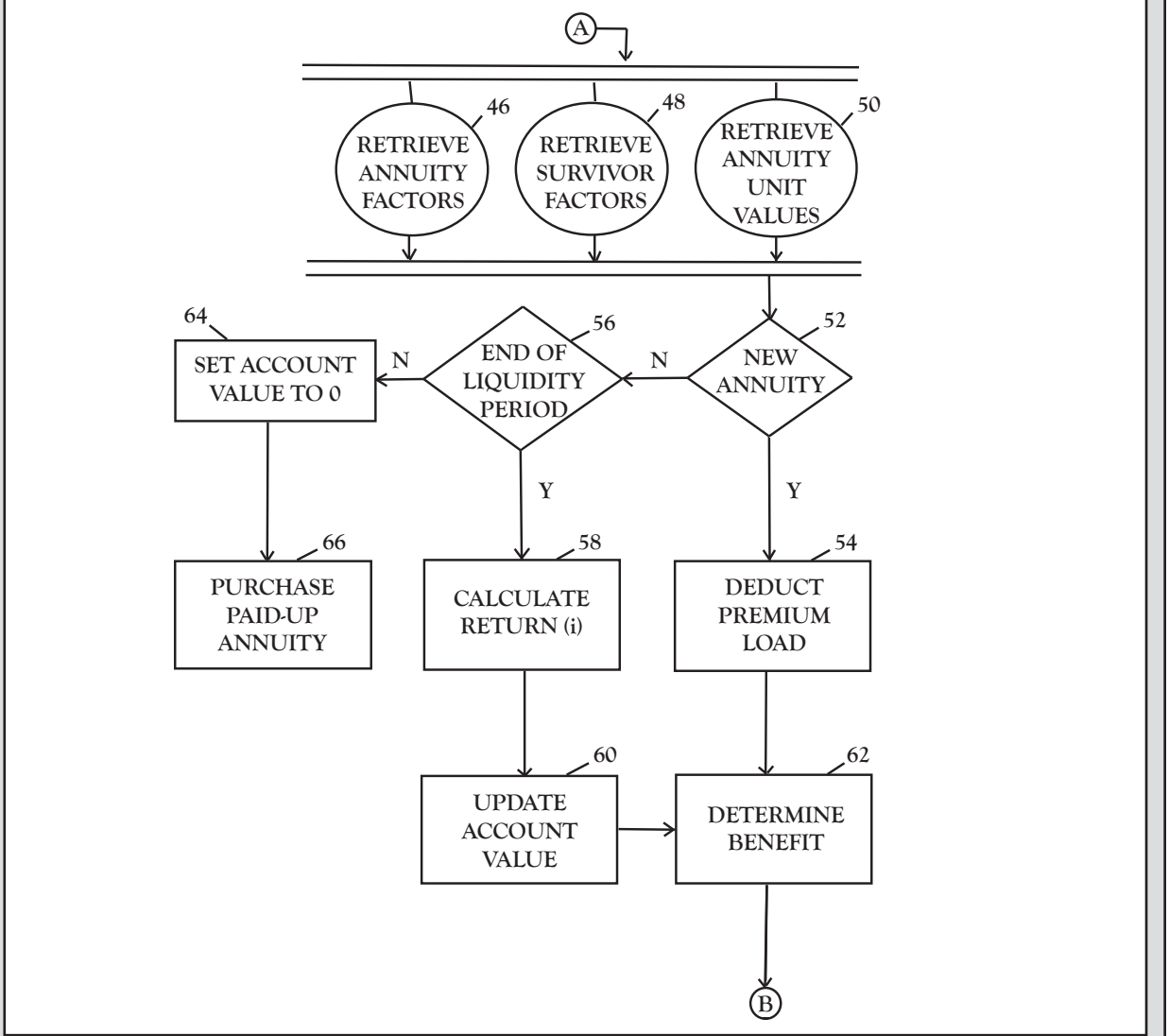
The financial services industry is far from the only industry affected by patents. Even seemingly basic technologies such as electric lighting, telephones, "one click" ordering of products on the Internet, and customer service representative (CSR) call center systems have been the subject of bitter and protracted patent battles.[7]

Is a Business Method an "Invention"?

Business method patents seem to be particularly controversial. "Business methods" do not intuitively seem to fit the customary notion of an "invention." Many people think of an "invention" as a kind of mechanical or electronic gadget. But the U.S. patent laws do not limit patents to only mechanical or electronic devices. Any "new and useful process,

Exhibit 2

Part of Application for Patent No. 7,376,708, issued May 20, 2008



machine, manufacture, or composition of matter, or any new and useful improvement thereof" is considered patentable subject matter.[8] Further, the U.S. Supreme Court has said that "anything under the sun that is made by man" was intended by Congress to be patentable subject matter.[9] Many patented business methods are process-type patents that often involve the use of computers to carry out parts of a business process. The more controversial business method patents do not necessarily require use of computer or communication networks, but simply describe steps of a business process that can be carried out by a human being.

Some Examples of Patents Affecting the Risk Management Industry

A wide variety of patents can affect the insurance, financial asset, and risk management industries. How does one find patents that might be applicable in this industry? One place to start is in the classification system of the U.S. Patent and Trademark Office (USPTO). Traditionally, so-called business method patents have been assigned to Class 705, which bears the name "Data Processing: Financial, Business Practice, Management, or Cost/Price Determination."[10] Within the main Class 705, there are about 100 different subclasses, which are arranged in a nested hierarchy. Many of these subclasses can contain patents relevant to the risk management industry.

Of particular interest is Subclass 4, "Insurance (e.g., computer-implemented system or method for writing insurance policy, processing insurance claim, etc.)." Subclass 4 is itself a subsidiary subclass of Subclass 1, "Automated Electrical Financial or Business Practice or Management Arrangement." As of May 26, 2008, Subclass 4 contained 369 patents (some of which have expired). But Class 705/4 is not the only place to look for patents that can affect insurance and other risk-management related businesses. Patents in a higher step or category in the hierarchy can also be of concern, e.g., Subclass 1 had 1,721 patents, many of which could be relevant. Class 705/35 relates to "Finance (e.g., banking, investment or credit)" and Class 705/36R, a subsidiary to 705/35, relates to "Portfolio selection, planning or analysis." Financial products such as annuities, common in the insurance industry, can sometimes be the subject of a patent.

Patented Method of Providing Benefits: Lincoln National Life

One example of a patent in Class 705/36R (and cross-referenced to 705/35) is U.S. Patent No. 7,376,608, which relates to a method and system for providing retirement income benefits. This patent was issued on Tuesday, May 20, 2008 (patents are always issued on Tuesdays), to Lincoln National Life Insurance Company. It took over seven years for the USPTO to examine and approve the patent. Exhibit 2 is a drawing from that patent.

Many patented business methods are process-type patents that often involve the use of computers to carry out parts of a business process.

Lincoln National v. Transamerica

On the same day the '608 patent was issued, Lincoln National filed a patent infringement suit against Transamerica Financial Life Insurance Co.[11] Here is the main claim from the Lincoln National '608 patent:

1. A computerized method of administering an annuity product having a withdrawal feature and a guarantee comprising the steps of:

   a) establishing an annuity account having an owner and a unitized account value the investment performance of which accrues to the benefit of the account owner and from which withdrawals can be made;

   b) inputting data relating to the annuity account, including data relating to at least one of the account owners, the account value, and a specified withdrawal rate for a given withdrawal frequency;

   c) allowing the account owner to make withdrawals from the annuity account;

   wherein if the amount of the withdrawal is less

than or equal to the specified withdrawal rate there is a guarantee that, even if the entire account value is exhausted before the end of a specified time period, amounts up to the specified withdrawal rate will continue to be paid for at least said specified time period;

wherein said specified time period is determined when the account is established to be at least one of a lifetime period, a period of a certain number of months or years, and a period required for cumulative withdrawals to at least equal a specified percentage of one of the account value as of a specified date and a highest account value achieved as of a specified date following establishment of the annuity account; and

if the amount of the withdrawal is greater than the specified withdrawal rate, up to and including the entire account value, there is no guarantee that amounts up to the specified withdrawal rate will continue to be paid for that specified time period.[12]

Investment-type and life insurance-type processes have been the subjects of litigation in the insurance industry.

Although this patent claim from the '608 patent recites a "computerized method" of administering an annuity product, and although a computer is a convenient tool for making the required calculations for the "guarantee" that amounts can be withdrawn, there is little in this patent claim that really hits home as an "invention" in the normally understood sense of the term. Most of the claim relates to the fact that a guarantee of payments attaches to an annuity account as long as the account owner does not exceed a certain rate of withdrawal. Indeed, the "computerized" aspect of this patent claim seems to appear only in the aspects of establishing an annuity account and "inputting data" relating to the annuity account.

Lincoln National v. Allfinanz, Inc., et al.

The *Transamerica* case is not the first time that a Lincoln National entity has filed a lawsuit relating to patents. In 2000, Lincoln National Risk Management, Inc., (LNRM) filed a lawsuit against three related parties (FMS House, FMS, and Allfinanz, Inc.) for infringement of a "risk assessment patent."[13] This patent, "Method and Apparatus for Evaluating a Potentially Insurable Risk," was issued in 1990 as U.S. Patent No. 4,975,840. The patent supposedly related to a knowledge-based automated life insurance underwriting software product, i.e., the Lincoln Underwriting System and the LincUs suite of underwriting system products. According to Lawrence T. Rowland, president and chief executive officer of Lincoln Re at the time, "Lincoln Re was granted this patent because we were the first to recognize the power of technology in delivering mortality risk management knowledge and tools to our customers. Our ability to do this through software using our own intellectual property is key to our success."

This suit was settled in 2001. Allfinanz, as a result of the settlement, was granted a license under U.S. Patent No. 4,975,840, issued Dec. 4, 1990. The agreement also involved the creation of a strategic alliance between Lincoln and Allfinanz to deliver a totally outsourced solution for underwriting and issuing life insurance policies online.[14]

In addition to the risk management patent, LNRM also holds a patent on a decision-making process, U.S. Patent No. 5,732,397, titled "Automated Decision Making Arrangement."

Bancorp Services v. Hartford Life

Other investment-type and life insurance-type processes have been the subjects of litigation in the insurance industry. In 2004, a federal appeals court issued a ruling on a patent-infringement claim asserted against Hartford Life Insurance Company.[15] Bancorp Services, L.L.C., the owner of U.S. Patent No. 5,926,792, "System for Managing a Stable Value Protected Investment Plan" (the '792 patent), asserted this patent against Hartford in 2000, and the suit was defended on various grounds, including that the patent was invalid for "indefiniteness."[16]

The '792 patent describes a system for administering and tracking the value of life insurance policies in separate accounts. The kinds of life insurance policies that are subject to the system claimed by the patent

include separate account policies issued pursuant to Corporate Owned Life Insurance (COLI) and Bank Owned Life Insurance (BOLI) plans. Under separate account BOLI and COLI plans, the policyowner pays a higher premium than is needed to fund the death benefit. The extra money can then be invested in a variety of financial assets. Under federal tax law, the death benefit is not taxed, and the gains from the investment assets are tax-deferred even if the policy is ultimately surrendered. Banks and corporations have purchased such policies on the lives of their employees to help fund, on a tax-advantaged basis, future postretirement benefits for the group of insured employees.

After considering the meaning of the terms used in the patent and how the terms were used in the claims, the appeals court decided that the claims were not indefinite and remanded the case to the lower court for further proceedings on other issues of patent validity and infringement. Reportedly, Bancorp and Hartford settled the case for $80 million.[17]

Metropolitan Life Insurance Co. v. Bancorp Services, LLC and Benefit Finance Partners, LLC

Hartford was not the only target of Bancorp, and the story has still not ended. On June 2, 2008, the Court of Appeals for the Federal Circuit (CAFC) gave new life to a protracted patent dispute between Metropolitan Life Insurance Co. (Metlife) and Bancorp relating to the '792 patent, vacating a lower court's summary judgment of noninfringement and remanding the suit to a lower court for further action.[18]

Bancorp accused Metropolitan Life Insurance Company of infringing the '792 patent, and in February 2000, Metlife filed a court action seeking a declaratory judgment of noninfringement and invalidity of the '792 patent. This action was stayed, pending the outcome of the Hartford case. After a series of court battles, in February 2007, a lower court granted Metlife's motion for summary judgment of noninfringement, and Bancorp appealed. In the June 2008 appellate decision, the CAFC agreed with the lower court's interpretation of a disputed term, SVPIC (surrender value protected investment credits), and also found that Bancorp had not been afforded a reasonable opportunity to conduct discovery during the various court battles. The case was remanded to the district court to allow discovery by Bancorp on certain issues of infringement.

This case is a good illustration of how a computer-implemented risk management method can be the subject of a patent and how such a patent can be used to pressure competitors: "The '792 patent provides a computerized means for tracking the book value and market value of the policies and calculating the credits representing the amount the stable value protected writer must guarantee and pay should the policy be paid out prematurely."[19] This litigation thus exemplifies other types of risks faced by risk managers, aside from the expected risk of the underwriting.

The European patent system is known to be hostile to the granting or enforcement of business process-type patents and software patents.

Patents Affecting the Risk Management Industry in Other Countries

Business method patents have attracted the most attention within the United States. However, other countries have not been immune to efforts to obtain patents on business processes. The European patent system (as managed by the European Patent Office [EPO]), in the United Kingdom in particular, is known to be hostile to the granting or enforcement of business process-type patents and software patents.

An exemplary case involved an application by an Australian inventor (Neal Macrossan) for a patent for an automated method of acquiring the documents necessary to incorporate a company.[20] The claim of the patent application was viewed as merely involving a user sitting at a computer and communicating with a remote server and answering questions.

Exclusions From Patent Protection

The U.K. appeals court in the *Macrossan* case was very clear that patents that relate to "schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers" are expressly excluded in the European community from patent protection under Article 52 of the European Patent Convention.[21] Methods for

doing business are lumped together with computer programs, as if the subject matter is the same and should be treated the same. Complicating the issue in Europe is the notion of "technical effect" or "technical contribution," something arguably easier to find in a computer program.

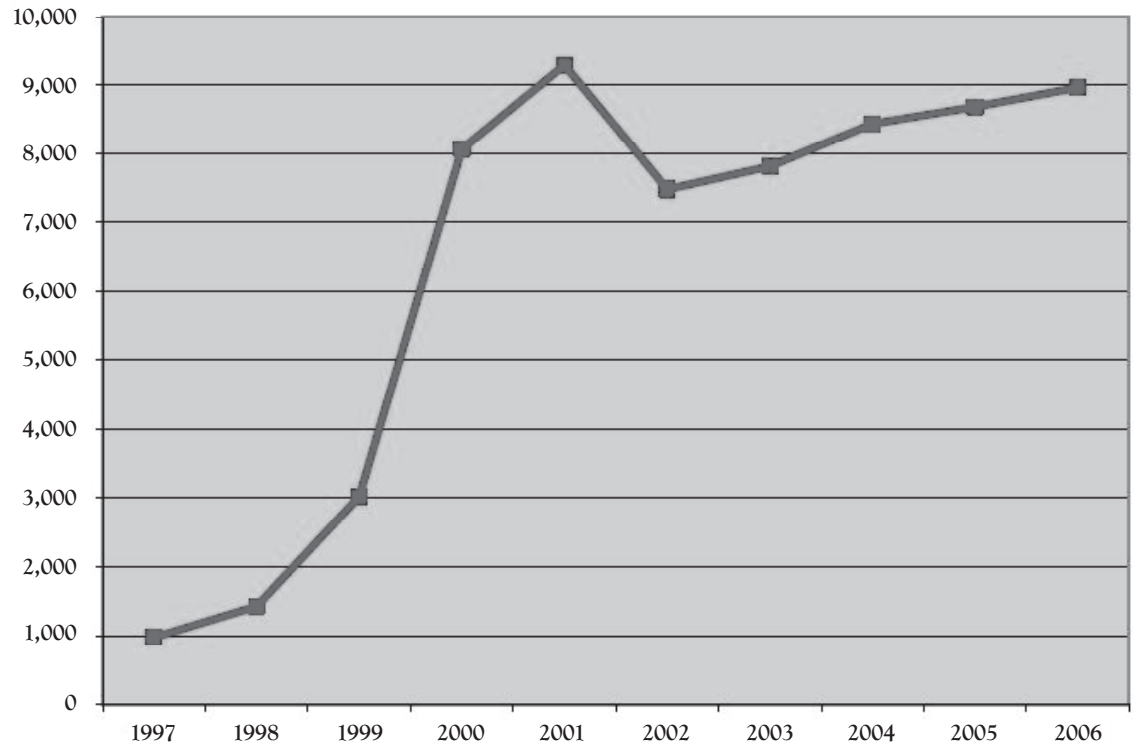
Exception to the Exclusions: Technical Contributions

Computer programs might be patentable in the EPO to the extent that they provide a technical contribution to the prior art.[22] According to certain case law of the EPO Boards of Appeal, a technical contribution typically means a "further technical effect" that goes beyond the normal physical interaction between the program and the computer. This is one of those instances where a term is seemingly used to define itself, a logical absurdity. Nonetheless, the practice of the EPO is fairly consistent regarding the treatment of the different elements of Article 52(2). A mathematical method is not patentable, but an electrical filter designed according to the mathematical method would not necessarily be excluded from patentability by Article 52. For example, a technical effect provided by a computer program can be a reduced memory access time, a better control of a robotic arm, or an improved reception and/or decoding of a radio signal.

In practice, however, the notion of a "technical effect" is not sufficiently well defined to provide practical guidance as to when something — be it a computer program or a business method that either

Exhibit 3

Applications for Business Method Patents*



*Counts by fiscal year.

Source: Robert M. Hunt, "Working Paper No. 07-21: Business Method Patents for U.S. Financial Services," Research Dept. of Federal Reserve Bank of Philadelphia, FIG. 2, page 25, with attribution of source to U.S. Patent & Trademark Office.

calls for or does not call for a computer program — is truly a patentable subject matter.

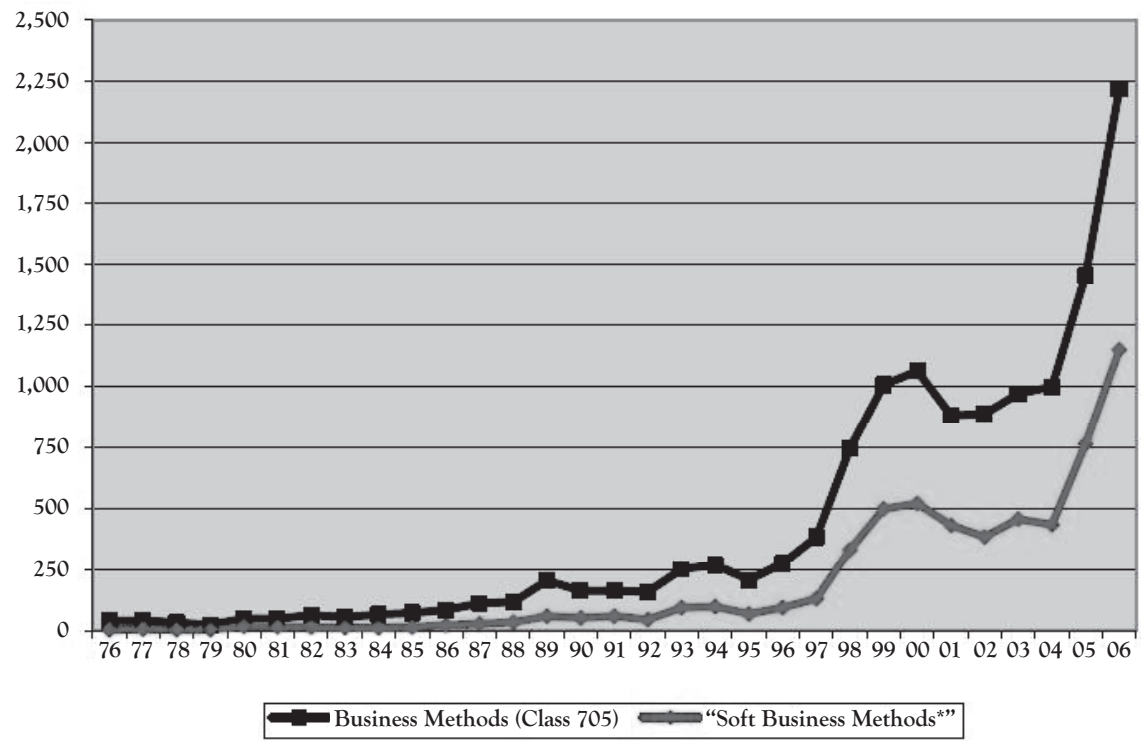
Technical Aspects Combined With Business Process

Patents that have a significant "technical" aspect (however that is defined) combined with a business process may fare better than the more abstract notions of a business method. One example, from a few years ago, was the notion of "telematic auto insurance." This concept was patented in the United States by Progressive Casualty Insurance Company in 1998,[23] and it also was the subject of an EPO filing by another person.[24] The basic idea of telematic auto insurance is that a driver's behavior is monitored directly while he or she drives and the information is transmitted to the insurer. The insurer uses the information to assess the likelihood that a driver will have an accident and adjusts premiums accordingly. A driver who drives great distances at high speeds, for example, might be charged a different rate than a driver who drives short distances at low speeds.

Perhaps, the telematic auto insurance scheme is a patent that possessed a "technical effect" that would entitle it to receive an enforceable patent. The technical contribution seemed to be satisfied by the inclusion of a monitoring device coupled to the automobile that sensed arguably technical

Exhibit 4

Patents on Computer-Implemented Methods of Doing Business in the United States (by calendar grant year)



*"Soft Business Methods" counts only patents in the subclasses of 705 that are most closely associated with financial services and that contain a smaller share of patents on mechanical inventions.

Source: Robert M. Hunt, "Working Paper No. 07-21: Business Method Patents for U.S. Financial Services," Research Dept. of Federal Reserve Bank of Philadelphia, FIG. 1, page 24, with attribution of source to U.S. Patent & Trademark Office.

parameters such as speed, acceleration, time of day, day of the month, duration of journey, and, perhaps, other related data such as speed limits, traffic hazards, or road conditions. Attempting to find similar technical parameters in an insurance product, in an underwriting arrangement, in a claims-processing protocol, or in an annuity payout arrangement may be more difficult.

Merely because applications for business method patents skyrocketed did not automatically mean that these kinds of patents were routinely granted.

Philosophical and Semantic Differences

But really, what is the philosophical and semantic difference between measuring speed or acceleration with a physical device and measuring the change in the amount of money in an account that results from some external phenomenon? These distinctions are indisputably susceptible to *policy determinations* by lawmakers, but not readily distinguishable at a fundamental philosophical level by most members of the legal and business community. Having patent laws that require some kind of imprecisely defined "technical effect" in order to receive a patent seems full of opportunity for gamesmanship.

Although the hostility to patenting business methods (and computer programs) in Europe and other countries is well known, the situation with computer programs especially, and with business methods to some degree, is much more fluid in the United States.

Impact of Business Method Patents on the Risk Management Industry Since 1998

In the United States, a few business method patents had made news from time to time before 1998. Such patents were not widespread, but they were not a new creation. In 1982, Merrill Lynch received a patent on its "Cash Management Account" (CMA).[25] Merrill Lynch had successfully fended off a challenge by competing brokerage house Paine, Webber, Jackson and Curtis, Inc. (Paine Webber) to have the patent declared invalid. Paine Webber had challenged the patent on ground that "methods of doing business" were not patentable. A district court disagreed and denied Paine Webber's motion for summary judgment.[26]

The *State Street Bank* Case

But the big impact came in 1998 with the *State Street Bank* case.[27] That case is widely credited (or discredited, depending on one's point of view) as having "jump started" the business method patent filing craze, which reached its peak in the year 2001, declined briefly, but in 2006 nearly reached the same level as in 2001. After this case was decided, patent applications for so-called business methods skyrocketed.[28] See Exhibit 2.

Merely because applications for business method patents skyrocketed did not automatically mean that these kinds of patents were routinely granted. But researchers have determined that the actual number of "computer-implemented methods of doing business" has in fact also significantly increased, after a notable decline during the years 2000 to 2004.[29] See Exhibit 3.

"If they can patent that …"

What was so compelling about the *State Street Bank* case that caused the financial services industry to jump whole hog into patent filing? In short, it was the widespread feeling that "if they can patent *that*, then we can patent what we are doing … or somebody else might patent it and sue us!" This feeling was based on a number of misconceptions about the patent system.

The patent in question in the *State Street Bank* case was U.S. Patent No. 5,193,056 (the '056 patent), titled "Data Processing System for Hub and Spoke Financial Services Configuration." The '056 patent was generally directed to a *data-processing system* for implementing an investment structure that was developed for use in Signature Bank's business as an administrator and accounting agent for mutual funds. The data-processing system facilitated a structure where mutual funds pool their assets into an investment portfolio organized as a partnership, providing the administrator of the mutual fund with the combination of economies of scale in administering investments and the tax advantages of a partnership.

Patent Not for a "Pure" Business Method

But of particular significance was the fact that the patent was not of a "pure" business method — it involved a data-processing system with specific programmed features. Although there is no recognized legal distinction between a "business method patent" and a "computer-implemented business method patent," the '056 patent arguably had significant "technical" aspects because its claim related to a data-processing system, expressed as a combination of means and not just steps for accomplishing an abstract business process.[30]

State Street Bank brought a declaratory judgment action in court asserting invalidity, unenforceability, and noninfringement of Signature Bank's patent. It then filed a motion for partial summary judgment of patent invalidity for failure to claim subject matter for which a patent could be granted.[31] The motion was granted because the district court concluded that the claimed subject matter fell into one of two alternative judicially created exceptions to statutory subject matter, the "mathematical algorithm" exception or the "business method" exception.

Business Methods Not Automatically Unpatentable

But on appeal, the CAFC reversed the district court's ruling and took the opportunity to explain that there was no good reason to find inventions unpatentable merely because the claims recited what amounted to a "business method":

> As an alternative ground for invalidating the '056 patent under § 101, the court relied on the judicially-created, so-called 'business method' exception to statutory subject matter. We take this opportunity to lay this ill-conceived exception to rest. Since its inception, the 'business method' exception has merely represented the application of some general, but no longer applicable legal principle, perhaps arising out of the 'requirement for invention' — which was eliminated by § 103. Since the 1952 Patent Act, business methods have been, and should have been, subject to the same legal requirements for patentability as applied to any other process or method. (Emphasis added.)[32]

In other words, the CAFC saw no reason to distinguish "business method" patents from any other kind of patents. As the court said, as long as the invention provided a "concrete, useful, and tangible result," it should be considered eligible (patentable) subject matter. The "invention" in that patent was, in fact, merely a programmed machine (a data-processing system) that carried out the processing of mutual funds accounts. The real test for whether a patent should be granted is that which applies to every other kind of invention: Is the invention novel and unobvious to a person skilled in the art? That is the primary test, then and now.

"Novel and Unobvious" Test

But that test — whether an invention is novel and unobvious — is, in practice, very difficult to apply consistently and fairly across different kinds of technologies and inventions. Judges, juries, and patent examiners have great difficulty in applying, especially, the test of nonobviousness to different kinds of technologies. What is novel and unobvious to one person might be just plain apparent to another. And the novelty and nonobviousness test is not applied by just anyone — the "invention" must be novel and nonobvious to a person "skilled in the art." The determination is complicated by the notions of incremental or "ordinary innovation" — how much innovation is required to find something unobvious and therefore entitled to receive a patent? This particular issue — whether "ordinary innovation" should be considered patentable — was cursorily answered in the negative in 2007 by the U.S. Supreme Court in the case of *KSR v. Teleflex*.[33] But many, many patents are granted, and probably justifiably so, for innovations that do not amount to the paradigm-affecting significance of inventions such as the laser, a cure for cancer, television, or the Internet.

Significance of State Street Bank *Case*

The *State Street Bank* case had a significant effect on the law of subject matter eligible for a patent. First, the case made the utility requirement more lenient — it is easier to find computer-enabled inventions useful (i.e., possessing utility for some purpose). Second, *State Street Bank* puts an end to the business method exception, at least for the time being. The utility requirement maintains that certain types of mathematical subject matter or algorithms,

standing alone, represent nothing more than abstract ideas. Once this subject matter is reduced to some type of practical application — such as a computer-implemented mutual fund account management system — it becomes patentable. At least, it did according to the CAFC in 1998.

Many different financial services types, such as insurance claims processing, underwriting, and asset investment, were considered eligible for patent filing.

No "Technological Arts" Requirement in the United States

Attempts have also been made to impose a "technological arts" requirement in the U.S. patent system. Such a requirement, while expressly set forth in the European Patent Convention (see above), is not found in the U.S. patent statute. In one case in particular (*In re Lundgren*), the USPTO Board of Patent Appeals and Interferences (BPAI) held that "technological arts" is not a separate and distinct test for statutory subject matter.[34]

Tremendous Upsurge in Patent Filings

The net result was the tremendous upsurge in patent filings that affected the financial services industry. The mutual funds and pure account services businesses were not the only ones affected. Many different financial services types, such as insurance claims processing, underwriting, and asset investment, were considered eligible for patent filing. Companies decided that if they did not file for patents, competitors might file for patents and use those patents to change the cost structure and operations of the industry.

All of this might be about to change.

Big Changes Expected After *In re Bilski*

Since the *State Street Bank* case, many people have talked about business method patents, but no truly significant cases have changed the landscape.[35] As reflected in the exhibits, if anything, more and more business method patents have been filed and are continuing to be issued. But a case now working its way through the appeals system may remarkably change everything about business method patents.

***Bilski* Case Involves "Mental Method"**

The *Bilski* case involves the refusal of the USPTO to grant a patent to a method of managing the risk of bad weather through commodities trading.[36] The claims were not tied to any particular form of technology and were not set forth as a computer-implemented method. In some quarters, a process that lacks such a technological tie-in is termed a "mental method" and, thus, is even more problematic as prospective patentable subject matter.

After the USPTO examiner denied the patent, Bilski and his co-inventor appealed to the Board of Patent Appeals and Interferences, which upheld the examiner in denying the patent as not being directed to patentable subject matter.[37] One of the issues exhaustively considered by the BPAI was the question whether there was or should be a separate "technological arts" test for patentability.[38] The *In re Lundgren* case — which had said there *was no such test* — was thus called back into question.

The applicants then appealed to the CAFC. After an initial hearing, the CAFC apparently decided, on its own without prompting (*sua sponte*), to rehear the case *in banc*, which means before the entire CAFC and not just a regular three-judge panel.

The Bilski *Issues: Patent Eligibility*

The CAFC asked the parties (the applicants and the USPTO) to file briefs and make arguments meant to help resolve the following five issues:

1. whether claim 1 of the patent application claims patent-eligible subject matter under 35 U.S.C. § 101;

2. what standard should govern in determining whether a process is patent-eligible subject matter under section 101;

3. whether the claimed subject matter is not patent-eligible because it constitutes an abstract idea or mental process; when does a claim that

contains both mental and physical steps create patent-eligible subject matter?;

4. whether a method or process must result in a physical transformation of an article or be tied to a machine to be patent-eligible subject matter under section 101; and

5. whether it is appropriate to reconsider *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999), in this case and, if so, whether those cases should be overruled in any respect. (Emphasis added.)[39]

Implications of Bilski

The case provides a complete and comprehensive opportunity for the CAFC to change its mind from its 1998 ruling and to overrule the *State Street Bank* case in a number of respects. It is a perfect test case for completely eliminating business method patents. Of particular interest is the suggestion that the court is considering that patent protection might be appropriate only for processes that are "machine-implemented" or that "transform an article to a different state or thing." Such a limitation could threaten the future of U.S. innovation and its competitiveness in a global economy, particularly at a time when the economy has become significantly driven by services and information.

On May 8, 2008, the CAFC heard oral arguments in the case of *In re Bilski*. A decision may not occur until fall 2008.

Possible Outcomes of the Bilski *Case*

There are several potential outcomes from the *In re Bilski* decision, whenever it comes down. (At the time this article went to press, no decision had been issued.)

One outcome, which seems as likely as any, is that the CAFC will uphold the rejection and continue to deny the patent. The court could take the opportunity to suggest that had the claim included more "computer-implemented" type steps and, thus, had more of a "technical" character (even though such a character may not be required by statute), the court might have been more inclined to allow the patent to be issued.

Another outcome, which seems unlikely to this author given the current climate of the patent system, is that the CAFC will overrule the BPAI and order that the USPTO issue the patent. This does not seem likely for the main reason that the five questions seem to suggest discomfort with the current state of the law. The USPTO would then have to decide whether to appeal to the Supreme Court, which seems unlikely since the CAFC *in banc* already would have spoken and, thus, have absolved the Patent Office from further responsibility, at least in this particular case.

When does a claim that contains both mental and physical steps create patent-eligible subject matter?

A third possible outcome is that the CAFC will deny the patent, but go to lengths to explain that it (a court) should not be deciding such policy-laden issues. In effect, such a decision would tell the business community that Congress should consider the issue. Given the recent problems in passing patent reform legislation in the U.S. Senate,[40] it does not seem highly probable that punting the issue to Congress will satisfy anyone. But this is probably the right course in the long run. Congress is the appropriate body, under the U.S. system of government, to take on debates of a policy nature. Clearly, the extent to which patents are granted, what subject matter is permitted, and what makes patents valid or invalid can have long-term implications for the U.S. economy, in particular, and indirectly for much of the world's economy. Given that the last major conceptual overhaul of the patent system occurred in the 1950s, and much has changed since then, it is high time for a thorough, well-studied, and thoughtful effort to improve the system.

Should a Court Make Policy Decisions?

Although the CAFC might elect to issue a ruling that eliminates, or severely limits, business method patents, is it appropriate for a court — not Congress — to make this kind of policy determination? A lot of people, including legal scholars, would say *no*. To make things even more complicated, there is a distinct possibility that the case will go to the U.S.

Supreme Court, which showed a propensity in 2007 to consider patent cases. Again, is it appropriate for a court, even the Supreme Court, to be making such widely affective policy determinations through court cases? Again, many would say no.

The extent to which patents are granted, what subject matter is permitted, and what makes patents valid or invalid can have long-term implications.

Practical Suggestions for the Risk Management Industry

There is no clear direction for the risk management industry until the *Bilski* decision comes down, and likely not even then. It is unlikely that it will be "game over" for business method patents, no matter which way the *Bilski* case goes. The issue of business method patents and patentable subject matter should be taken up by the Congress, not the courts.

Given that none of the probable outcomes of the *Bilski* case are likely to bring clarity and certainty to the problem of business method patents, should companies in the financial services and risk management industries do anything differently going forward? If anything, companies should continue to be watchful of developments. Legislation and case law decisions can have a short-term effect and a potential long-term effect if there is no political will to change the patent system. With wars in Iraq and Afghanistan, uncertainty regarding countries like North Korea and Iran, competitive pressures from China and Europe, and a declining dollar, it seems unlikely that the United States can muster the political will to take on a subject as esoteric and complicated as reforming the patent system. It is not that the subject is unimportant, it is just that the subject requires deep study of complicated laws and cases and does not have the immediate impact of health-care reform or measures to deal with gasoline prices in the realm of $4.00 to $5.00 a gallon.

Focus on "Technology"

Companies that want to protect their financial services inventions, if the *Bilski* case seems to require "technological" inventions or "transforming" steps, should attempt to identify significant innovations. Furthermore, companies need to make sure that their patent applications are written to include and highlight the real innovation and the technological and transforming aspects. Identify and emphasize as many inventive aspects or features in the patent application as possible — so that you have options for coverage later during the prosecution stage and in litigation.

Focus on Quality

If anything, companies should continue to focus on the notion of quality.

- Seek patents for truly innovative developments. Perhaps consider patent-blocking maneuvers such as publications to keep competitors from patenting new but marginally innovative products and services. If the overall market value and risk for a new product or service, even if marginally innovative, is large enough, companies will still want to consider filing patent applications on their business methods.

- Improve the chances for obtaining a meaningful patent by conducting thorough prior art searches and have patent counsel prepare comprehensive and high-quality patent disclosures.

- Attempt, when at all possible, to make the innovation "computer-implemented," and add as much of a "technical character" as possible to the system and to the patent application itself.

None of these approaches necessarily means that a patent can be obtained or, even if obtained, will prove valid, but the overall chances of obtaining a valid, enforceable, and valuable patent are significantly enhanced by building quality into the claims, into the disclosure, and into the product offering itself.

Endnotes

1. U.S. Constitution, Article 1, Section 8.
2. Among other things, patents are considered intangible

property that can be bought or sold or encumbered with debt, are a legal vehicle that allows extraction of and represents ownership of an invention, can form part of a "thicket" of protection around a technology, provide a legal/technical document that can be useful for explaining complexity to interested third parties, and can be used to counter the patents of competitors who might assert them against a company.

3. Levko, Aron, Vincent Torres, and Joseph Teelucksingh, "A Closer Look: 2008 Patent Litigation Study: Damages awards, success rates and time-to-trial," PricewaterhouseCoopers, Advisory Services, available at http://www.pwc.com/extweb/pwcpublications.nsf/docid/ebc144cf6220c1e-785257424005f9a2b.
4. E.g., see Hosteny, Joseph N., "Litigators Corner: Are Alternative Fee Arrangements Better for the Plaintiff Than Contingent Fee Litigation?" *Intellectual Property Today* (August 2006): 8–9.
5. Levko, ibid. at page 8.
6. Id.
7. See, e.g., respectively, Thomas A. Edison, U.S. Patent No. 212631, "Design for an Incandescent Electric Lamp" (1880); Alexander Graham Bell, U.S. Patent No. 174,465, "Telegraphy" (1876); Hartman et al., U.S. Patent No. 5,960,411, "Method and System for Placing a Purchase Order via a Communication Network" (1999); Ronald A. Katz, U.S. Patent No. 5,073,929, "Voice-data Telephonic Control System" (1991).
8. 35 U.S.C. § 101.
9. *Diamond v. Chakrabarty*, 447 U.S. 303 (1980) (case dealing with whether genetically modified micro-organisms can be patented).
10. See USPTO classification manual, found online at http://www.uspto.gov/web/patents/classification/uspc705/sched705.htm.
11. *Lincoln National Life Insurance Company v. Transamerica Financial Life Insurance Company et al.*, Indiana Northern District Court, Case no. 1:2008cv00135 (May 20, 2008).
12. Id.
13. "Lincoln National Risk Management Files Suit to Protect Intellectual Property," *Business Wire* (March 15, 2000), reprinted at http://findarticles.com/p/articles/mi_m0EIN/is_2000_March_15/ai_60100723.
14. "Lincoln National Risk Management of U.S. and Allfinanz Inc. Settle Patent Dispute, Announce Alliance," *The Free Library* (March 9, 2001), available at http://www.thefreelibrary.com/Lincoln+National+Risk+Management+of+U.S.+and+Allfinanz+Inc.+Settle...-a071402375.
15. *Bancorp Services, L.L.C. v. Hartford Life Insurance Co.*, 359 F.3d 1367 (Fed. Cir. 2005).
16. U.S. patent laws require that a patent have claims "particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, second paragraph. Claims that are "indefinite" fail to meet this legal requirement.
17. See "Met Life and Bancorp Fight Over Insurance-Related Patents," InsureReinsure.com (August 20, 2007), reported at http://www.insurereinsure.com/BlogHome.aspx?entry=139.
18. *Metropolitan Life Insurance Co. v. Bancorp Services, LLC and Benefit Finance Partners, LLC*, Case No. 2007-1312 (Fed. Cir., June 2, 2007).
19. Id. at p. 3, referencing *Bancorp Services, L.L.C. v. Hartford Life Insurance Co.*, 359 F.3d 1367, 1369 (Fed. Cir. 2005).
20. *In the Matter of Patent Application GB 0314464.9 in the Name of Neal William Macrossan*, Case No: A3/2006/1007 and A3/2006/1067, in the Supreme Court of Judicature Court of Appeal (Civil Division) on Appeal from the High Court of Justice, Chancery Division (Patents Court) (October 10, 2006), found online at http://www.ipo.gov.uk/2006ewcaciv1371.pdf.
21. European Patent Convention (EPC) Article 52, which reads as follows:
    (1) European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step.
    (2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:
        (a) discoveries, scientific theories and mathematical methods;
        (b) aesthetic creations;
        (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;
        (d) presentations of information.
22. See *Macrossan* appeal, supra note 20, paragraph 27: "Ask whether the invention as defined in the claim makes a technical contribution to the known art — if no, Art. 52(2) applies. A possible clarification (at least by way of exclusion) of this approach is to add the rider that novel or inventive purely excluded matter does not count as a 'technical contribution'. This is the approach (with the rider) adopted by this Court in *Merrill Lynch*. It has been followed in the subsequent decisions of this Court, *Gale* and *Fujitsu*. The approach (without the rider as an express caution) was that first adopted by the EPO Boards of Appeal, see *Vicom, IBM/Text processing and IBM/Data processor network*." (Citations to other cases omitted.)

23. U.S. Patent No. 5,797,134 to McMillan et al., "Motor Vehicle Monitoring System for Determining a Cost of Insurance."
24. European Patent No. EP0700009, Minguijon Perez Salavador (Spain) for "Individual Evaluation System for Motorcar Risk," published March 6, 1996.
25. U.S. Patent No. 4,346,442 to Musmanno, "Securities Brokerage-Cash Management System."
26. *Paine, Webber, Jackson & Curtis, Inc. v. Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Dean Witter Reynolds, Inc.*, 564 F.Supp. 1358, 218 USPQ 212 (D. Del. 1983).
27. *State Street Bank & Trust Co. v. Signature Financial Group*, 149 F.3d 1368 (Fed. Cir., Jul. 23, 1998).
28. Hunt, Robert M., "Working Paper No. 07-21: Business Method Patents for U.S. Financial Services," Research Dept. of Federal Reserve Bank of Philadelphia, Fig. 2, page 25, with attribution of source to U.S. Patent & Trademark Office (September 2007).
29. Hunt, supra note 28, Fig. 1, page 24, with attribution to U.S. Patent & Trademark Office and author's calculations.
30. Claim 1 of the '056 patent reads as follows:
    1. A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:
        (a) computer processor means for processing data;
        (b) storage means for storing data on a storage medium;
        (c) first means for initializing the storage medium;
        (d) second means for processing data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds, assets and for allocating the percentage share that each fund holds in the portfolio;
        (e) third means for processing data regarding daily incremental income, expenses, and net realized gain or loss for the portfolio and for allocating such data among each fund;
        (f) fourth means for processing data regarding daily net unrealized gain or loss for the portfolio and for allocating such data among each fund; and
        (g) fifth means for processing data regarding aggregate year-end income, expenses, and capital gain or loss for the portfolio and each of the funds.
31. 35 U.S.C. § 101: Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
32. *State Street Bank & Trust Co. v. Signature Financial Group*, ibid. at page 1375 (emphasis supplied).
33. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. ___, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007), at page 24 (with emphasis supplied): "[A]s progress beginning from higher levels of achievement is expected in the normal course, the results of ordinary innovation are not the subject of exclusive rights under the patent laws. Were it otherwise patents might stifle, rather than promote, the progress of useful arts." (Emphasis added.) But no definition of "ordinary innovation" was provided, nor did the Court attempt to explain how to tell the difference between real, substantial, and significant innovation, for which a patent should be granted, and "ordinary innovation."
34. *Ex parte Lundgren*, 76 USPQ2d 1385, 1393-1429 (Bd. Pat. App. & Int. 2005).
35. A related case decided shortly after the *State Street Bank* case was the case of *AT&T Corp. v. Excel Communications Inc.*, 172 F.3d 1352 (Fed. Cir. 1999), where the CAFC held that a physical transformation was not necessarily required for a process to be considered patentable subject matter. Excel had argued that AT&T's method claims containing mathematical algorithms were patentable subject matter only if there is a "physical transformation" or conversion of subject matter from one state into another. The physical transformation language appears in the U.S. Supreme Court case of *Diamond v. Diehr*, 450 U.S. at 184 (1980) ("That respondents' claims involve the transformation of an article, in this case raw, uncured synthetic rubber, into a different state or thing cannot be disputed."), and has been echoed by the CAFC in the *Schrader* case, 22 F.3d at 294, 30 USPQ2d at 1458 ("Therefore, we do not find in the claim any kind of data transformation."). "The notion of 'physical transformation' can be misunderstood. In the first place, it is not an invariable requirement, but merely one example of how a mathematical algorithm may bring about a useful application. As the Supreme Court itself noted, 'when [a claimed invention] is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of 101.'" *Diehr*, 450 U.S. at 192. The "e.g." signal denotes an example, not an exclusive requirement.
36. The patent application at issue was filed by Bernard A. Bilski and Rand A. Warsaw on April 10, 1997, as U.S. Patent Application No. 08/833,892, titled "Energy Risk Management Method." Claim 1 from that application, which notably does not recite any kind of computer or program or other arguably "technical" means, reads as follows:

1. A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:
   (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;
   (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
   (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

37. *Ex parte Bernard A. Bilski and Rand A. Warsaw*, Appeal No. 2002-2257 (BPAI, Sept. 26, 2006).
38. According to the *Ex parte Bilski* BPAI decision, id., the BPAI held in *Lundgren* that the technological arts test is not a separate and distinct test for statutory subject matter. Although some commentators have read this as eliminating a "technology" requirement for patents, this is not what was stated or intended. As APJ Barrett explained in Lundgren, "[t]he 'technology' requirement implied by 'technological arts' is contained within the definitions of the statutory classes." All "machines, manufactures, or [man-made] compositions of matter" are things made by man and involve technology. Methods that define a transformation of physical subject matter from one state or thing to another involve technology and qualify as a statutory "process" under § 101. The definitions of the statutory classes and application of the exclusions are the proper tests. A process may involve technology because it meets the transformation of physical subject matter definition of a "process" under § 101, even though it does not require performance by a machine. The "technological arts" is not a useful, objective test because it was never defined as anything except a more modern term for the "useful arts." The use of such a test would result in conclusory rejections, which are unreviewable, just as many claims in the past were rejected as "business methods" because they involved some business aspect (e.g., accounting).
39. *In re Bilski et al.*, Case No. 2007-1130, U.S. Patent Application No. 08/833,892 (Fed. Cir., Feb. 15, 2008).
40. Timmer, John, "Patent Reform Act suffers serious setback, stalled in Senate," *ars technica*, May 5, 2008, http://arstechnica.com/news.ars/post/20080505-patent-reform-act-suffers-serious-setback-stalled-in-senate.html. The U.S. Senate had been considering major changes to the U.S. patent system, based on a similar bill that passed the U.S. House of Representatives in the fall of 2007. Opposition to some provisions in the complex legislation apparently derailed the effort, at least temporarily. The Senate version of the Patent Reform Act (S.1145) was taken off the schedule, meaning it likely will not be considered by the full Senate any time in the near future, most likely not until after the November 2008 elections. The bill has drawn significant opposition at nearly every step of the way — for many good reasons — so its passage in its current form is unlikely.

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