



Understanding the Economics of Innovation – An Introduction to the World's First Financial Exchange with an IP Focus

I want to thank you all for being here today to learn about the Intellectual Property Exchange International, or as we call it IPXI, the world's first financial exchange with an IP focus. This is an interesting time to be creating a new exchange, as public confidence in free markets has been shaken and instead of looking to the future, governments, banks, companies, investors, traders, regulators, politicians, even hockey moms and plumbers, are focused on the now. What should I do, now? How will I get through this, now? Sell, sell, sell, and do it now!

But in every epic crisis, as the one we are experiencing now, opportunity presents itself. And those who are prepared to act at the appropriate time are handsomely rewarded when the crisis ends. As a prudent businessman running a start-up company, I have put off, for the time being, ordering our corporate jet with the packets of M&Ms that say IPXI on them.

But with all due respect to those who fear the now, I think now is a great time to start a new exchange.

I speak with some authority about these matters. As an active trader for twenty-six years, I have seen and put my capital at risk in umpteen crises: the crash of '87, the crash of '89, the Gulf War in '91, breaking the Bank of England in '92, the market meltdown in the Pacific Rim in '97, the collapse of Long Term Capital Management in '98, the burst dot com bubble in 2000, 9/11, and today's sub-prime disaster.

As this list of ignominious events implies, the market is in a perpetual state of boom or bust. Consider the following quote from Business Week: "For 5 years at least, American

business has been in the grip of an apocalyptic holy-rolling exaltation over the unparalleled prosperity of the 'new era' upon which we have entered." These words were written, not last week, but in 1929.

But the good news is, things will get better. They always do. It may take time and we may be chastened by this experience, hopefully we are chastened, but eventually, banks will lend, companies will borrow, investors will invest, traders will trade, hockey moms will put on lipstick, and plumbers will plumb. And when the situation has improved, I admit I won't be buying a corporate jet because that's crazy talk, but the people at the M&M factory are going to be working overtime to get me my handsome reward.

In that spirit and as an introduction to why an IP exchange is necessary, I'd like to begin my remarks not with a Power Point presentation, but by reading you a poem called *Soybeans*, by Thomas Alan Orr. The poet is neither an economist nor trader, he is a soybean farmer, and yet in my long career in the financial services industry, I don't think I've ever read a more profound statement about markets.

Soybeans by Thomas Alan Orr:

The October air was warm and musky, blowing
Over brown fields, heavy with the fragrance
Of freshly combined beans, the breath of harvest.

He was pulling a truckload onto the scales
At the elevator near the rail siding north of town
When a big Cadillac drove up. A man stepped out,
Wearing a three-piece suit and a gold pinky ring.
The man said he had just invested a hundred grand
In soybeans and wanted to see what they looked like.

The farmer stared at the man and was quiet, reaching

For the tobacco in the rear pocket of his jeans,
Where he wore *his* only ring, a threadbare circle rubbed
By working cans of dip and long hours on the backside
Of a hundred acre run. He scooped up a handful
Of small white beans, the pearls of the prairie, saying:

Soybeans look like a foot of water on the field in April
When you're ready to plant and can't get in;
Like three kids at the kitchen table
Eating macaroni and cheese five nights in a row;
Or like a broken part on the combine when
Your credit with the implement dealer is nearly tapped.

Soybeans look like prayers bouncing off the ceiling
When prices on the Chicago grain market start to drop;
Or like your old man's tears when you tell him
How much the land might bring for subdivisions.
Soybeans look like the first good night of sleep in weeks
When you unload at the elevator and the kids get Christmas

He spat a little juice on the tire of the Cadillac,
Laughing despite himself and saying to the man:
Now maybe you can tell me what a hundred grand looks like.

Every time I read this poem, it reminds me that when a trader makes a transaction he or she is not trading widgets; that there are real-world consequences to every trading decision, and that every single individual on the planet is connected through the markets. We hear a lot these days about the differences between Wall Street and Main Street, usually by those who decry the use of taxpayer monies to bail out companies that are too big to fail. But if this debate were a herring it would be redder than the ink on the balance sheets of those companies. Wall Street and Main Street are one; always have been, always will be.

I remember when I began trading on the floor of the Chicago Mercantile Exchange straight out of college. I lost money almost every day for months, and was getting desperate. So I decided to seek out the advice of other floor traders who, unlike me, seemed to know what they were doing. I was not very discriminating either; in fact, any fellow exchange member who did not live in their parent's basement, as I did at that time, was fair game. One decent guy who stood next to me in the Japanese Yen pit took mercy on me, and over breakfast one day offered a tired bromide "if you want to make money in the market," he said, "you've got to see the forest, not just the trees."

Well, as the years have gone by, I have come to realize that my well-meaning mentor got it wrong. He was wrong, because it is not nearly enough to see the forest. The best traders see the blue jay nesting in a treetop feeding a worm to her baby chick, they hear the sound of a steep waterfall around the bend of a lazy stream, they can smell the smoke of a lightning strike a mile away, when the leaves on the forest floor are dry and ready to catch fire.

And though I am relatively new to the world of IP, it was immediately clear to me when I took the job of building IPXI into a viable exchange in January, that making money in intellectual property requires a similar sort of prescience, a similar sort of vision. If you own IP, you need to understand what the coming trends are going to be in your industry. If you want to acquire IP, you need to know how much to pay. If you are investing shareholder or taxpayer monies in IP, you had better be sure that you do so wisely.

As one who believes in the unadulterated power of free markets to create wealth not only for trading professionals but for everyone on the planet, I'm excited about the opportunity to build a central, global marketplace around IP. This is an audacious, grandiose plan. But creating any great market demands audacity, demands a grand vision.

If I've learned anything about markets in my career, it's that you need two fundamental building blocks to create an important marketplace:

Building block 1: *huge size*; building block 2: *huge inefficiency*. Imagine my glee, as an exchange executive, when I discovered that both these qualities are abundantly present in the world of IP.

As you probably know, IP is the biggest asset class on the planet, worth an estimated \$5.5 trillion, in the U.S. alone. That's bigger than the GDP of any country. Incredibly, this vast market has grown without all of the things that financial services professionals take for granted: cheap and efficient transaction services, risk sharing and reduction, price discovery, and most important of all, liquidity.

Most traders will tell you liquidity is like pornography, they know it when they see it. But I prefer a definition offered by the late Merton Miller, the 1990 Nobel Prize winner in Economics and a former colleague of mine on the Chicago Mercantile Exchange board of directors. Merton said, "liquidity is the ability to buy or sell an asset whenever you want, at a reasonable price." What is a reasonable price, I once asked him, thinking I could outsmart a Nobel Prize winner who did not know what it was like to trade in real-world markets. Expecting him to give me an esoteric answer or scribble some incomprehensible equation on a napkin, he disarmed me by responding simply "One not too far away from the previous price."

To an active trader, to anyone exposed to the current market gyrations, this probably sounds about right. Moreover, for anyone who has tried to monetize or invest in an IP asset, and come up against the challenges of doing so without a central marketplace where buyers and sellers can engage in open and transparent price discovery, Merton's simple statement should also resonate.

Therefore, as a business proposition, IP looks to me like other huge markets that were hugely inefficient before the development of their own central marketplaces; among these, foreign exchange and interest rate futures in the early 1970s, energy and stock index futures in the early 1980s, and carbon trading at the start of this decade. IP is the quintessential ground floor exchange opportunity.

On the one hand, my excitement derives from the fact that by building this marketplace, IPXI and its investors will one day own an extraordinarily valuable enterprise, and that envious financial services companies, private equity funds, investment banks, and private investors will line up to talk to us about how they can be a part of what we have created. I look forward to this immensely and will be publishing a list on the IPXI website of expensive restaurants where I will be happy to have these conversations.

But IPXI has the opportunity to become more than simply a successful commercial enterprise. Our marketplace will help companies bring significantly more IP to market, enhance economic growth, stimulate job creation, help bring world-changing technologies to the public.

A couple of months ago, I visited a U.S. governmental agency, that is responsible for bringing to market a large pool of IP in a wide variety of technology spaces. The purpose of the visit was to tell them about ways that IPXI can help the institution monetize their IP. The agency director listened carefully to the well-practiced pitch and my confident assurances that IPXI could significantly enhance the return on investment, but her response surprised me. She said that the agency was certainly interested in producing more revenue, but that was not their primary objective. Their main goal is to get IP out of the lab or off the shelf and into the hands of people who could derive a benefit from government-funded innovation. Looking into the earnest eyes of this government official, I was impressed by the burden of responsibility she feels; to the inventors who have entrusted their ideas to her and to the public, whose lives could be improved in countless ways, if only it were easier to bring innovative ideas to market.

I won't soon forget this experience and recognize the burden of responsibility upon IPXI in creating an IP market. As much as I am looking forward to investment bankers buying me dinner at Nobu, it will be equally satisfying knowing that IPXI is going to play a role in promoting the economics of innovation.

And with that optimistic observation, I'll jump into my discussion about IPXI products.

At the center of the IPXI business model, is research done by Ned Davis, that you see on the slide behind me. Many of you have seen this slide before as the message contained herein is also at the center of the Ocean Tomo business model. Nevertheless, for those of you who have not seen the slide before, what it tells us is that during the last 35 years, there has been a fundamental transformation in where the value of our most important companies resides. In 1975, only about 17% of the value of S&P 500 companies was found in intangibles, which are defined as patents, copyrights, trademarks, and trade secrets. About 83% of the value was in stuff; factories, machines, land. Today, by contrast, over 80% of the value of these companies is found in intangibles.

I suppose there are a lot of conclusions about the world of IP that an IP professional might draw from this study, but coming from another world entirely, I view the data as a trader, looking for a trading edge. When I first processed this information, it occurred to me that I have traded countless shares of technology stocks in my career, but until last year when I met the people at Ocean Tomo, I never considered the importance of IP as it relates to a company's valuation.

To make my trading decisions, I looked at moving averages, the company balance sheet, insider transactions, took the TV on my trading desk off mute whenever Maria interviewed Jeff Immelt, Jack Welch, or Steve Ballmer. But I never considered, for example:

- how many patents a company like Microsoft owns

- what technologies those patents cover
- the average age of those patents relative to MSFT's competitors
- how many new patents they are bringing through the pipeline
- how many patents they are abandoning
- the effect of interest rates on Microsoft's R&D budget
- or the effect of M&A activity on the value of Microsoft's patent portfolio.

And yet, if somehow you could snap your fingers, and snatch away all of Microsoft's IP, what would the company be worth? It wouldn't be the current \$22/share, that's for sure. One way to look at it, is that based on the Ned Davis research the shares would be worth at least 80% less. But in reality, without its IP, Microsoft or any other company similarly stripped of its most important assets, would be trading on the pink sheets.

And every time I look at this slide, I have the awful feeling that I've wasted 26 years of my life looking for an edge in all the wrong places. The 200-day moving average, the SEC filings, insider transactions were all various degrees of separation away from a real understanding of where the value in a company resides; with its' IP. If Steve Ballmer is buying MSFT, chances are he knows that their IP portfolio is strong. And though I have never met the man, I am reasonably sure that he does not consult the 200-day moving average prior to purchasing his shares.

And this is the important lesson for traders who want to understand valuation and capitalize on that understanding. If you understand IP, you will have an edge against your competitors. And that edge will make you rich.

And now, finally, our first product line, which is called a Unit License Right or ULR and it acts very much like an IPO in the capital markets.

Let's say that an automobile company owns a patent on a valve you can stick in any engine and it helps the engine function better when using ethanol. Since this is not a core asset, the company may wish to license this technology to 25 other automobile makers. There are problems associated with such a transaction. They have to negotiate with each company separately. It can take many months or longer, during which time the technology may be supplanted, so there is risk. The group of 26 counterparties will generate huge legal fees, certainly a few million dollars. What's more there is no guarantee the IP owner will be able to speak to everyone who might have an interest in getting in on the deal. The IP owner may be constrained from talking to certain parties for business reasons or they may not know if a particular company is interested, so the buy side may not be complete.

But there are two even bigger problems. First, because there is no central marketplace where buyers and sellers can bid and offer in an open and transparent forum, there is no meaningful price discovery in IP. In our case, the licensor may say the licenses should be a dollar a unit and the potential licensee may counter with 17 cents. It is frustrating and inefficient for both buyer and seller to set a price in a vacuum.

However, the biggest problem of all is that IP owners invest umpteen zillions in research and development and even if they go to the trouble and take the risk of negotiating these licensing agreements, they have no assurance of achieving a return on investment unless and until the licensee chooses to execute the license. And even then, the payments typically come over a period of time, discounting the value.

But, what if there were a world where an IP owner could bring a patent to market like a company issues shares in an IPO? IPXI is creating such a world. In my example, the IP owner would retain IPXI to act as an intermediary bringing the IP to market. In discussions with IPXI, the IP owner would decide, for example, to bring 25 million licenses to market at a price of \$1/unit. IPXI would then publish a prospectus-like document, disseminate the document to the

market in an open and transparent manner, establish through a road show-like event that the demand exists to bring the IP to market for a dollar per unit, retain underwriters to take down ULR supply, and on a short timetable of no more than 90 days, bring the IP to market. On the date of the issue, the owner of the IP will experience a liquidity event, just like a company going public. IPXI, for its involvement will be paid a portion of the proceeds of the sale.

In addition to the initial offering, IPXI will host a secondary market. To the extent that anyone needs to buy or sell after the initial offering, they must do so in the IPXI sponsored venue. No private transactions will be allowed.

But there are two more vital elements to the ULR product line. First, IPXI will take upon itself the responsibility of auditing usage of the license rights. For example, if an entity buys 1 million rights in the initial offering and proceeds to build 1.1 million automobiles with the valve, it is IPXI's responsibility to spot the infringement.

Second, IPXI will take upon itself the responsibility for enforcing against the infringer. And settlement will take the following form. IPXI will send a letter demanding that the infringer buy the appropriate number of ULRs in the secondary market. There will be no other discussions, no other settlement options. Buy at the market price or we will take you to court. We fully expect that our resolve will be tested. However, we are committed to protecting the integrity of the ULR product line and willing to devote significant resources to imposing discipline upon market participants.

How big is this market for ULRs? Non-exclusive licensing in the U.S. amounts to approximately \$500 billion annually. IPXI will concentrate on deals sized between \$25-100 million, on which we will charge fees of 20% of the deal size. We won't get every deal, of course. But as this methodology becomes an established way to monetize IP, we are confident we will

attract a large supply of willing IP-owners who choose to outsource this function to IPXI. The benefits are compelling:

- Transparency;
- Price discovery;
- Substantially lower legal fees, due to ULR standardized agreements and streamlined process;
- Issuers can outsource "non-core" patents to IPXI that might otherwise be abandoned;
- Issuers obtain capital quickly and efficiently; it should take no more than 120 days to bring a ULR to market
- Buyers avoid potential infringement and secure freedom to operate easily and cost-efficiently;
- Market participants can monitor prevailing licensing rates globally for improved business intelligence;
- ULR-issuers can recognize revenue instead of being compelled into royalty-free cross license deals; and
- ULR-issuers can rely on IPXI to audit ULR-consumption and enforce against infringers.

Our goal is to bring the first ULRs to market in the second quarter of 2009, and we are presently in discussions with a number of IP owners who are eager to provide us with supply. Among these entities are publicly traded companies, private companies, universities, and government agencies. Among the technologies their IP covers are, telecomm, alternative energy sources, bio-tech, semiconductors, and food products.

As excited as we are about ULRs, we are equally excited about a very different type of product line: tradable patent indexes that fall into two categories. The first is called a Single Corporation Intellectual Property Index or SCIPI, and the second is called a Tradable Technology Basket, or TTB.

In order to understand how these indexes are constructed, as many of you know, OT has a proprietary, patented, patent valuation model called OT PatentRatings. PatentRatings allows us to put a score on any of the 7-million U.S. issued patents based on number of metrics that we believe are critical in valuing the worth of patents.

So for example, we can create a Single Corporation Intellectual Property Index, or SCIPI, based on all of MSFT's 8,000+ patents. As MSFT abandons patents, brings new patents into the pipeline, is involved in litigation, as it pursues M&A activity, as interest rates change, as benchmark stock indexes like the S&P 500 or NASDAQ 100 fluctuate, so too will the MSFT SCIPI trading product fluctuate.

And we are not limited to publicly traded companies. We could create an index based on the patents owned by any private company, say Cargill, Chrysler or Bechtel. We could create an index based on all of the patents owned by MIT, Stanford, Columbia, or Cal Tech. We could create an index based on all the patents owned by government agencies like NASA, National Institute of Health, the Department of Defense. We could create an index around all of the patents owned by companies that Kleiner Perkins or Sequoia have invested in.

TTBs are a different type of index. Using PatentRatings we can reach into the vast pool of U.S. issued patents, identify any group of patents, put a fence around them and create an index on just that class of technology. So, for example, we can create an index around the patents covering MPEG technology, lithium ion batteries, or anti-cancer drugs. Think of the implications of this. Right now, if you like your iPod and want to invest in MPEG technology, unless you know someone who has MPEG patents they are looking to monetize, about all you can do is buy shares of a company such as Apple. But, are you really buying MPEG technology? In reality, you're buying everything associated with Apple when you buy the company's shares. And on the day that Apple's earnings fall a penny short of analyst's expectations and the stock

loses 15% in an instant you'll get dragged along, when all you wanted was a pure-play in MPEG. Now, with the IPXI MPEG TTB, you'll have that pure-play opportunity.

Consider some of the areas in which we may offer TTBs:

- Traditional energy - oil extraction, pipelines, drill-bits;
- Alternative energy - solar power, wind turbines, hybrid electric vehicles;
- Commodities - sugar, starch, carbohydrates, food and beverages;
- Consumer goods - apparel, consumer electronics, household products;
- Basic materials - chemicals, paper and forestry;
- Industrials - aerospace, defense and railways; and
- Health care - biotechnology, medical devices and equipment, pharmaceuticals

Let's examine how a TTB might be used in the real world, not by an investor or someone looking for a trading opportunity, but by an entity with exposure to the MPEG space.

The scenario is as follows: you get a patent on a new innovation in MPEG technology. You write a business plan that says in order to exploit the technology, you must first invest \$20 million. You need to build a factory, hire employees, print up stationery.

Today, in the absence of an MPEG TTB, what are your options? You can take \$20 million out of your pocket or try to finance it. Good luck with that, by the way. Or, you can try to get that guy who used to date Drew Barrymore from the PC/Mac commercials on his iPhone to see if Apple might be willing to buy or license your technology. But that's not much of an option either.

But with an MPEG TTB you can hedge your exposure in one of two ways. Go to your rich uncle and borrow that \$20 million and tell him that he doesn't have to worry about being long

the patent because you are going to put on a short hedge of \$20 million worth of IPXI's MPEG TTB index. Tell him that even if MPEG technology is supplanted by some other technology and the long patent position loses the entire \$20 million, there will be an equivalent gain on the short side and the business loss will be mitigated.

Alternatively, if you love the MPEG space, but do not have a rich uncle or do not think you can compete against Apple, you can do a long hedge. Buy \$20 million worth of the index, which can be secured with substantially less than \$20 million depending on how much leverage you are willing to use.

What I've described here is Futures Trading 101. Nothing revolutionary, nothing that a million hedgers haven't done a million times before. The subject matter is new, but the transaction type is well-established within the trading community.

SCIPs and TTBs are big concepts. Not only have we found a way to extract the IP from the company that owns it, allowing you to achieve a pure-play hedge or pure-play investment or trading opportunity, but we can create a proxy for you to hedge or trade in instruments you would otherwise have no access to: the private company, the university, the government agency, the closed venture capital fund.

Now, building liquidity in these products will take time. But, we have a lot of things going for us. First, the blueprint for liquidity-building has been implemented countless times by exchanges all over the world. I personally have a great deal of experience in this area. As a member of the board of directors of the CME, I often solicited market participants to deploy their capital to trade CME products. And in my own trading businesses, I've been solicited countless times by many exchanges to trade their new markets.

The marketing process begins by identifying the most likely potential users of the product. Typically, the exchange looks first to entice one or more deep-pocketed marketmakers to commit to supporting the new product. What I mean when I use the term marketmaker, is an entity that is willing to deploy its trading capital to continually provide a bid and ask to markettakers. What is a markettaker? Simply put, any market participant who is not a marketmaker.

The marketmaker is interested in making lots of transactions at extremely low cost, generally does not have a bias to the long or short side, and may not even care very much about the nature of the product in which he or she is making markets. Many marketmakers trade foreign exchange, interest rates, equities and commodities with the same trading strategies and risk management guidelines. Our challenge is to convince the marketmaker community that IPXI indexes can be seamlessly incorporated into the portfolio of instruments they are already trading and that by providing liquidity, the return on the capital they deploy will be sufficiently large to justify the opportunity cost and risk associated with trading in a new market.

The good news is that there is no shortage of potential IPXI market participants. The bad news is that when you are building a global marketplace, your customers live everywhere, so it is costly and time consuming to win them over. And it's not simply the cost of flying, hotels, wining, and dining. You need to be prepared to educate your customers and that requires massive attention to detail, hiring staff with very specialized knowledge of arcane and complex trading ideas. You need to be willing to forego trading commissions at the outset to entice participants to try out your products. In some cases, for the best potential customers, you may offer them soft dollar inducements, say, if they trade a certain number of contracts they will receive shares in the exchange. In the most extreme cases, exchanges have paid cash to certain premier market participants in order to defray their costs and some of the risk of providing liquidity.

I have a very clear idea of what I think will work best for IPXI and we have already begun the process of recruiting potential market users in anticipation of introducing our first index products in the fourth quarter of 2009.

The next thing we have going for us as we build our indexes is that we expect to bring our first ULR deals to market by the end of the second quarter of 2009. This will provide a significant revenue stream, part of which can be used to develop our index products.

The third thing we have going for us, is that we are not only first-movers in this space, but the barriers to entry for the competition are extremely high. No one has anything to rival OT PatentRatings for purposes of creating indexes like these. Best of all, is that when established exchanges see what we're doing and try to replicate it, they will have to come to us, because PatentRatings is patent-protected.

A competitor could no more replicate our indexes without infringing, than a CME competitor could create a look-alike for the S&P 500 or Dow Jones futures.

As I near the end of this overview of IPXI's prospects, I want to impress upon you that we are talking about building a global business. We view IPXI as a chair with 3 legs. Across the top is IPXI. The first leg is IPXI Americas. We are actively constructing that leg now. Leg number 2 is IPXI Europe, Leg 3 IPXI Asia.

As IPXI moves into foreign venues, it will be especially important to create strategic relationships with well-established financial services companies that understand and know how to deal with the parochial business issues particular to their country or region. IPXI has commenced the process of finding partners in Europe and also commenced the process of finding partners in Asia, in six jurisdictions: Japan, China, Taiwan, Korea, Australia, and India. OT and IPXI have

wide networks of contacts in both the IP and financial services arenas in all of these places, which will accelerate the deal-making process.

Back in the U.S., IPXI has entered into discussions with seven U.S.-based exchanges about creating a formal partnership for IPXI Americas. Some of these discussions are promising and discussions are ongoing.

I want to finish up this long talk with a story. In 1979, I spent a year in Israel as a student at the Hebrew University of Jerusalem. At that time, inflation in Israel was running over 1000% annually and the Israeli government, unwilling to admit how weak the currency truly was, fixed its value at an unrealistically high rate relative to the dollar, and tried to forestall a devaluation by the implementation of currency controls; prohibiting Israeli citizens from selling their increasingly worthless native currency to buy dollars. So, with five hundred bucks spending money, an amount I initially feared would barely last through the first semester, I found myself becoming wealthier with each passing day, as my dollar nest egg appreciated in value. As an example of the incredible purchasing power of the greenback, the annual cost for room and board at the university was 4,200 Israeli pounds—the name of the currency was later changed to shekels—an amount that, when I arrived in Israel at the start of the school year, equated to about \$100/month. I did not, however, pay the bill until year end, at which point I was able to purchase 4,200 devalued Pounds for about \$100, and settle my account for 1/12th of what it would have cost me had I paid upfront. This was a pretty significant lesson for a budding foreign exchange trader, though at 19, more interested in the beautiful Israeli women that seemed to be everywhere than my economics courses, I was clueless that my future professional destiny was right there before me.

Because Israeli banks were prohibited from exchanging pounds at other than the official rate, in order to take advantage of the arbitrage opportunity—although I didn't actually know that what I was doing had a name—it became necessary for me to transact business in the thriving

black market for dollars, a market the Israeli government allowed to operate practically unfettered. The black market was as close as your next door neighbor. I frequently sold dollars to mine, a nice man named Avi. But the black market was open for business virtually anywhere and at any time. In fact, at various points during the year, I exchanged dollars with a stranger at a bus stop, the proprietor of the neighborhood grocery store, and, incredibly, while waiting in line at the bank to pay an electric bill. With such a transaction, both I and my counterparty were pushing the limits of official tolerance, but the black market was so ubiquitous it was hard to think of it as illicit; with 1000% inflation and a currency that was not permitted to float and, therefore, could only sink, the underground economy was as much a state of mind as an actual marketplace.

In most cases, however, when I wanted to change money I would make my way to the Old City of Jerusalem. There, in the teeming Arab *souk* just inside the Damascus Gate, mustachioed money changers smoking hand-rolled cigarettes paid the highest rates for dollars, ushering prospective customers into their cramped booths like honored guests, sealing transactions with hot mint tea served in unwashed glasses. For me these trips were not merely about making a profit, but experiencing the sights, sounds, and smells of the bustling marketplace; the butcher shop with whole lamb carcasses hanging from hooks in the open air, the sharp crack of backgammon dice against olivewood, the plaintive cry of the *muezzin* calling the faithful to mid-day prayer. I can still smell the aroma of grilled meats, exotic spices, and a thousand other scents—some familiar, others unidentifiable—that mixed together in what can best be described as the pungent odor of commerce. Being there was exhilarating, as well as a bit frightening, not so much different, I would think a few years later, than standing in the pits on the floor of the CME.

As I became accustomed to doing business in the *souk*, rushing up and down the alleyways from moneychanger to moneychanger, first to Hamid, then to Abdullah, across to Naghib, and then back to Hamid to get his final, best rate, a trader was born. And while I could

not know what my future would bring, I knew that nothing was more exhilarating than the feeling of closing a trade.

What IPXI is doing, by contrast, is entirely different. We are creating a marketplace, where none currently exists. Our efforts will lead to price discovery, transparency, lower capital costs, greater innovation, the reduction of company and systemic risk, and most importantly economic growth. Because, ultimately, marketplaces aren't about exchanges, they're about unloading your soybeans at the elevator and making sure the kids get Christmas.