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THE PAPER AVALANCHE -

WHAT C.D.S. PLANS TO DO ABOUT IT

Mr. President, honored guests, ladies and gentlemen:

First may I thank you for your very kind introduction etc.

I want to begin my talk today on the Canadian Depository for Securities by pointing out some of the major advances of the financial community in the last two decades. After some months of declining security prices and low trading volume your reaction may be a trifle wry when I say that we have in Canada one of the finest systems in the world for gathering the savings of the people into pools of capital and for facilitating the transfer of ownership of that capital in the market place.

And yet the very fact that our national rate of savings and the rate of fixed capital investment in Canada is exceeded by practically no country (Japan is an exception) and equalled by very few, speaks for itself. Consider the record.

The banking system is a world model of stability with flexibility. No Canadian life company has defaulted on its obligations within living memory. The rise of the trustee pension plan has placed great new responsibilities on the trust companies which they have met successfully. The growth record of the mutual fund industry speaks for itself.

In the securities industry itself the advances have been phenomenal. The professional training required before a man can get a securities license is rigorous. He's not a customer's man any more; he's a registered representative.. The level of industry self regulation and government supervision is much higher. The restrictions on insider trading and the heightened responsibilities of directors are a couple of examples out of many.

Communications have been vastly improved. A man in Fredericton, N.B. can get a quotation on a stock listed on the Montreal Stock Exchange just as fast as a Montrealer. A Calgary client can place an order for a stock listed in Toronto, have it executed and get a report back just as fast as a Torontonionian - sometimes faster.

Securities firms make extensive use of advertising - newspapers, magazines, radio and television, as well as sales promotion campaigns - to increase their penetration into the market. The investment in highly trained people in research and new issue underwriting has increased enormously.

In fact the competition for the savings dollar in Canada is fierce. Unlike many countries, we don't wait for the citizen to have a little spare money and then hunt around for a safe place for it. We not only go after his savings dollars, we actually encourage him to accumulate them. Think of all the insurance salesmen, stock brokers, mutual fund salesmen, savings account institutions and so on that you've met in your adult lifetime and you'll see what I mean.

I want to give you just two figures to indicate the magnitude of growth of the securities industry of Canada. In 1950 the dollar value of securities traded on the Toronto Stock Exchange was \$902 million. In 1969 it was \$5,700 million. The Canadian financial community has developed one of the most efficient capital gathering, investing and trading systems in the world, and we can justly be proud of it.

Well - so if we're that great, why am I here?

This remarkably good system which I've sketched has a weak link. Most of the improvements in the industry have been in what you might call the front office - the place where the client is contacted and the deal is arranged. In other words the emphasis has been on merchandising, but not on delivering the merchandise. The back office, where the client's transaction is handled after it has been executed, is still using an instrument nearly two hundred years old - the certificate.

Let's consider the certificate for a moment and see what it is and what it does. Essentially it has three functions; it is legal evidence of title, it is a valid instrument for transfer of ownership, and it serves as a memorandum for input into one type or another of record.

Now I am not one who believes that because a thing is old it is no good, and so one could still say "What's wrong with the system?" It works, we are all familiar with it, the public is accustomed to it and has confidence in it, and besides when they send all that money in to their brokers they like to get a nicely engraved certificate. It gives them a feeling of confidence.

The answer to this question is that the present system works, but it does not work very well and it is becoming increasingly creaky as time goes on. The main problem is one of volume. I mentioned briefly the historic growth in volume in Canada. In 1965 the New York Stock Exchange instituted a study of anticipated trading volume over the succeeding 10 years and exhorted their members to get ready for it. They forecast 20 million share days by 1975, and when they actually got it in 1968 the entire industry was caught with its pants down. All of you will recall that the exchanges in the United States had to go on short trading hours. It is not as generally known that during this period some financial houses were required by the exchanges of which they were members to curtail their activities. One prominent American house, for example, closed 10 branches and fired more than 200 salesmen, along with all the management and support staff employed in those branches.

Nothing quite that drastic happened in Canada, but that's not to say that we didn't have problems. Plenty of systems designed to handle, say, 2,500 transactions a day had to try to cope with over 3,300. Any data processing man who has had the experience of wiping out a disc file because it was overloaded, or any office manager who has suddenly been confronted with a 35 percent increased in workload, can imagine the chaos in the back office.

So can any client who waited weeks for delivery of his purchases. The rate of aged fails to deliver and unresolved differences rose sharply. Naturally interest charges on uncompleted transactions as a percent of gross profit also rose. Today the number of transactions at the TSE uncomplete after more than 30 days is under 1,000. In the summer of 1968 it was more than 2,300.

Why did this happen? It was because the back-office people, or the operations staff as we prefer to call them now, were swamped under an avalanche of paper that they could no longer cope with. They were working nights to an extent which was affecting their health or their willingness to continue in this line of employment. Work in the back office of a financial house is highly skilled if unglamorous, so that a firm could not solve such a problem by hiring additional people; there was no floating supply of trained personnel in the labour market.

The problem of volume was serious enough, and during this period one could read articles on the subject in the Financial Post, Business Week and other financial journals. It was not the only problem - so unlikely a magazine as True published an article in the January 1969 edition titled "The Boom that could cause a Bust".

It forecast dire peril for the entire stock ownership system because of the infiltration of criminal elements into the industry, combined with the massive backlog of uncompleted transactions.

In October of 1969 the Chief of Police of the City of Montreal announced to the press that theft of securities was running at an annual rate of \$50 million. The Chief did not identify whether he meant in the United States, Canada or both, but the January 1970 edition of "Banking" reported that theft from New York Stock Exchange member houses was up from \$11 million in 1967 to \$23 million in 1969, and added that \$20 million had been stolen from New York banks in the past 12 weeks. If anything \$50 million is conservative, because there's no record of mail thefts, to say nothing of theft from other institutions and private citizens.

Before I took up my present duties I was a stockbroker responsible, among other things, to my firm for the administration of compliance with regulations. I had some contact with that stolen \$50 million. A small part of it, about \$15 thousand worth, was marketed through my firm unknown to us. When this was discovered by the RCMP about 6 months later the rightful owner, a New York Stock Exchange firm, still did not know that the certificates were gone.

How can things like this happen? The sad truth is that it is distressingly easy. The paper certificate is legal evidence of title and once it has been endorsed for transfer it becomes in effect negotiable by the bearer. They move in and out of vaults, around offices and out on the street. A dishonest employee can simply put one in his pocket. Its loss might be discovered in a matter of hours as in the case of Morgan Guaranty Trust Company, who accounted for \$13 million of the \$20 million and who got it back after it was recaptured in Germany. It might not be discovered for many months as in the case of the broker I mentioned. I can assure you that this extremely weak link in the present system causes partners in brokerage houses, banks and regulatory authorities much worry. It has caused some insurance companies to withdraw completely from the brokers blanket bond business, and others to raise the premium substantially.

Not only can a certificate be stolen, it can be lost or destroyed, in which case the rightful owner goes through a lengthy procedure involving a bond of indemnity before he can get it replaced. That's because it might have been stolen.

Furthermore, it can be altered, or even forged. The West case of a few years back is an example which occurred right here in Canada. West was a stockbroker - an exchange member.

Part of the capital employed in his business was borrowed from his bank against the security of blue chip stock certificates. He operated in this manner for more than 20 years. When dividends were declared he always paid the money into his bank account. That was just part of the cost of capital. After his death, when his estate was being settled, it was discovered that he had had a fascinating method of raising capital. He added zeroes to stock certificates, thus increasing their collateral value by a factor of ten.

As legal evidence of title, then, the paper certificate does an extremely poor job. It is difficult to process when ownership is being transferred, and the degree of protection it affords to the owner is rather minimal.

There is however, the other function which the certificate performs. It is a memorandum of record which can be used as the source of input to one type or another of accounting system. Even here, though, it does not do its job well.

It is printed on high quality rag content paper which is too rough for optical character readers. A magnetic ink character reader could cope with the paper, but the engraving would have to be completely redesigned.

It would certainly be rejected promptly by a punched card reader; it's the wrong size. It last performed its record input function well in the age of manual bookkeeping.

So there's the villain - this beautiful product of the engravers' and the printers' art. The engraving and the security are on the front - the transfer information is on the back.

Now, let's diverge from the main theme for a moment or two and ask a couple of questions. Do you ever go to the bank and ask to see your dollars? If you own a house you received a title deed from your lawyer. Did you know that if you sell it, you do not have to give the title deed back? I threw out four the other day and I only own one house. All that really matters is that your ownership of these dollars or that house is registered in an accurate record with somebody who has the legal power to record your ownership. That is what the Canadian Depository for Securities is all about. For the financial street we are going to record the ownership of securities in an accurate accounting system. We are going to stop shuffling paper around the street and continuous processing and issuing and re-issuing of certificates.

I am not telling you that we are going to put the trust companies in their capacity as transfer agents or paying agents out of business. We still use dollar bills, we still get title deeds, and anyone who wants it will still get a certificate. Many people - doubtless including foreign investors - will wish to. But for the financial street - the dealers, brokers, banks and other financial institutions where volume is a major factor in operations, modern data processing techniques of information storing and processing offer benefits which are at once desirable and essential.

Before I go on to tell you about CDS. I want to spend a little time on developments in other countries, because it will enable me to illustrate better the unique features of a genuine Canadian first.

The Germans have managed to get along nicely without certificates since the thirties, when the banks stopped delivering them as a capital control measure. Their technique is not suited to North American circumstances, however, because the relationship of the German banks to the financial community is markedly different from ours. The Belgians have done some work in the field, and the French have an organization known as SICOVAM, for Societe Interprofessionnelle pour la Compensation des Valeurs Mobilieres.

(If any of you here speak French I apologize for my accent.) In English it means roughly Company for Custody of Securities for the Financial Community. They receive and store securities, issue certificates of deposit and operate a sort of guarantee fund. The Japanese are working to create a depository.

There has been no lack of awareness of the problem in the United States, especially since 1968. In 1966 the Stock Clearing Corporation of the New York Stock Exchange established the Central Certificate Service. C.C.S. handles stocks listed on the Big Board for NYSE clearing members. At the present time no other exchanges participate, nor do the banks in their capacity as lenders. Negotiations are proceeding in both directions, ^{and just recently two} ~~but so far only one~~ banks ~~has~~ joined the system experimentally in ^{their} ~~its~~ capacity as transfer agent rather than as bank.

Despite its limited field of operation C.C.S. has in the system some \$25 billion worth of securities, between 3 and 4 million certificates, processes roughly 35,000 deliveries a day and needs about 700 employees. It's not exactly a poor cousin.

A great deal of thought and work has gone into definition of the problem and recommendations for solution.

A committee of the American Bankers Association has developed a security numbering system known as CUSIP for Committee on Uniform Security Identification Procedures. CUSIP looks as if it has the best chance of becoming a universal North American numbering system, which is highly important to integrated data processing systems. I hope to see it adopted in both countries, but so far many people are on the edge of the pool and very few are swimming.

Another ABA committee known as SIP, recommended adoption of the 80 column card as the format for a stock certificate. It has several advantages; it can be made man readable, and machine readable in three modes - magnetic, optical, and punch. Its opponents point to a major weakness, however. What is to prevent little old ladies or disgruntled clients from punching extra holes, which would be the modern equivalent of Mr. West's adding extra zeroes?

The NYSE suggests a different solution; redesign the existing certificate with different paper and a broad white band on which machine readable characters can be printed. That leaves bulk and it leaves the security on the front and information on the back. They commissioned Arthur D. Little, who recommended this certificate form and development of C.C.S. into a Depository.

The American Stock Exchange got the North American Rockwell to do an overview study, and they recommended the ABA's 80 column card certificate and a depository concept so similar to ours that they could have been looking over our shoulders.

Then along came the accounting firm Lybrand, Ross Bros and Montgomery with a new report, and they said 'You're all wrong. The way to go is stick with the present certificate for the time being, develop C.C.S. into a true depository, and stay away from machine readable certificates because they can only delay the advent of the certificate^{ss} society and the locked in trade.'

Now the Rand Corporation is working on the problem. Rand helped NASA send a rocket to the moon, and no doubt will contribute materially to solution of the problems.

I do not wish to denigrate the work of the Americans by passing over it too lightly. Many of the people are personal or business friends, and their work has been of high quality.

I mention the diversity of their efforts to deal with the problem because it illustrates more vividly the Canadian approach, and why ours will be a world first.

The Canadian Depository for Securities is a child of the entire financial community and it will serve the community rather than just one or another segment of it. This is borne out by the sources of the funds to finance its development which include the banks, stock exchanges, Investment Dealers Association, trust companies, life insurance companies, mutual funds and business and industrial corporations. The Board of Directors consists of persons representing the Canadian Bankers Association, the Toronto, Montreal and Vancouver Stock Exchanges, the Investment Dealers Association, the Trust Companies Association of Canada, Canadian Life Insurance Association, The Mutual Funds Association, the security issuers, one represents the general public and I represent the Depository itself. The Chairman of the Board is Bob Wisener of the Toronto member house of Wisener and Partners Company Limited, who in 1967 gave up a governorship of the Toronto Stock Exchange in order to take on the project.

Wisener put together a Study Group of representatives of various commercial financial and industrial organizations. These companies subscribed sufficient money to finance a feasibility report by Woods, Gordon & Co. From the Study Group and the feasibility report arose the present trust fund which I have spoken of, with the trustees themselves forming the Provisional Board of Directors. This group set about forming a policy committee and choosing a Chief Executive Officer to establish and run the system. I am pleased and honored that the Board chose me as first Chief Executive Officer of the Canadian Depository for Securities.

An adjunct of the feasibility report was the creation of a critical path diagram, drawn up in the manner of an engineering development critical path. Within the 102 modules of the critical path there are 4 main sub paths, the legal and legislative, the system development and equipment selection, the personnel selection and training and the selection and development of sites. If we meet our critical path all the way we should go into operation in August 1972. Probably the least certain of the stages on the critical path is the legal and legislative work which must be accomplished prior to going into operation.

Even if we do our own homework on time there is absolutely no way of being certain that what is of great importance to us will seem equally important to the 11 legislative bodies who must pass enabling legislation and amend certain acts now in force. There are probably more than 100 of them. To some extent the problem can be solved by omnibus bill affecting a number of different Acts at the same time. On the Provincial level we can hope for some degree of uniformity in the amendments required by the various jurisdictions. Nevertheless, the legal and legislative job to be done is a major task.

We are now in the process of building up the systems development group who, along with consultants, will design the system, select the equipment, install it, and oversee the training of its operators. Even allowing for the fact that after the equipment is selected it will take a year to get delivered, I believe that sufficient time has been allowed to accomplish the job.

Site selection comes later; at present our need is only for comparatively small temporary space.

So much for the background, I shall now discuss the Potential Scope for the Depository and then its functions and procedures.

There are in this country 9 chartered banks, 16 insurance companies, 16 trust companies, 17 investment companies, 43 mutual funds and 215 stock exchange and IDA members for a total of 316 not including a number of smaller organizations.

Practically all brokers and dealers have several banking accounts for loan purposes, however, some, whose operations are decentralized, may have as many as 25 accounts. For example a broker who operates margin accounts for his clients may upon their instructions keep the securities in a number of different locations across the country, for situs reasons. Each such location would require a separate hypothecation account with the broker's bank or banks and would therefore look to the machine like an entirely different account. Similarly each bank will have several branches operating in the securities field. Thus, it is evident that the number of user accounts will be numbered in the thousands rather than in the hundreds.

In the early stages of operations the Depository will process stocks listed on Canadian exchanges, which is a comparatively small number (1,737). An additional 1,300 foreign and unlisted equities and some 1,200 debt instruments would represent the bulk of Canadian trading.

Since the Depository is to act as a warehouse for its institutional and broker members, however, it must be prepared to handle the extremely varied portfolios and inventories of these bodies. We shall be processing some 4,200 different issues, but in the warehousing function we shall undoubtedly be handling eventually more like 40,000 issues - or at least have the capability of so doing.

Now I don't want to go too deeply into system, because I think that would get tedious at a luncheon meeting, but for illustration we can trace one or two transactions through.

Securities coming into the Depository will be in street form, accompanied by appropriate instruction documents. The deposit order may be in machine readable form or it may not depending on the capability of the depositor.

Copies of the deposit order will serve the depositor as receipt, and other copies of the same order may well serve other purposes, such as originating a transaction record at the depositor's own computing centre, or the Service Centre.

The Depository will transfer securities so received to its own name. Ideally it will hold only one certificate for each security, the number of shares represented by the certificate changing daily as shares move in and out. This ideal will doubtless be modified, in some cases because transfer facilities are unavailable, in other cases to reflect the special interest of certain user members and also because geographic separation may be necessary.

Once processed, the Depository will record the possession of the security for the account of the depositor until it receives new instructions.

Each depositing broker will have several accounts with the Depository, coming under the main headings of box, segregated and hypothecated, and the last may be divided among a number of banks.

A broker wishing to hypothecate a security with his bank will deliver an instruction form which may or may not be with a deposit order. The security will be processed into the blocked account in favour of the bank and the bank will be checked as to acceptability, probably by teletype. If it disapproves the security it will be withdrawn from the blocked account in the same manner as if the bank had released it instead of refusing it. Once accepted by the bank, the security may be withdrawn only with the permission of the bank.

A security held free by a user may upon his order be transferred to another user member within the Depository and without changing the overall holding. Probably the most usual such order will arise from Clearing House, where brokers will make settlements and deliver transfer instructions to the Depository, which will be validated by advice from Clearing House.

A depositor may withdraw a certificate at any Depository window where transfer facilities are available. For example, if a depositor wishes to withdraw in Vancouver securities deposited in Montreal, the Depository will arrange for the transfer of the relevant number of shares to the Vancouver office of the transfer agent.

The Depository in Vancouver will pass on instructions of the broker to the transfer agent in Vancouver as to form of registration and make the new certificate available to the depositor's Vancouver office.

I don't want to overdo the point, but you will notice that in these examples from the time the certificate is transferred to Depository name until it is withdrawn in Vancouver it is immobile. It doesn't move and it doesn't change the registered ownership. It won't be an altered or forged certificate because we'll put it in for transfer the day we get it, and we'll keep it in non negotiable form so it won't be worth stealing. We can change ownership or move it across the country overnight.

And so there, ladies and gentlemen, is the Canadian Depository for Securities - a great new Canadian financial institution to be.

I thank you.

An address by -

C. Ivor Murray

President,

The Canadian Depository for Securities

to

The Canadian Club of Toronto -

Monday, March 2, 1970.