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CHAPTER 7. THE FIGHT AGAINST LAUNDERING AND ORGANIZED CRIME

INTRODUCTION

The fight against organized crime and money laundering is a special form of repressive policy for drug traffic that has been the subject of impassioned discussions for decades. Numerous excellent police films popularized the idea that it was not in the interest of organized crime to have a visible explosion of criminality which would end in a wave of police repression. Thus the image of organized crime assuming a type of police within the criminal world has often been touched on in public debates on organized crime. The movies also popularized the idea that laundering is the Achilles heel of drug trafficking. Therefore, to concentrate repression on this link of drug trafficking would seem to be an effective means of dissuading traffickers. No doubt because these questions return us directly to the notion of public policy efficiency, economists have actively besieged them. The result of a quick review of the actual theses produces a contrasting impression. No doubt economic theory has amply permitted discussion in enriching terms of effectiveness in the fight against laundering. It is in this area that the results are most pronounced: it appears fairly clearly that the policies implemented come up against several obstacles but, without it being a real consolation, the theories put forward really do make thinking progress. In matters of organized crime, we remain more skeptical about the range of the pattern of thought undertaken. At the price of hypotheses that we do not consider very realistic, various authors have illustrated that the presence of organized crime is not necessarily more nocuous to collective well-being than its absence. On the condition however that we consider organized crime 's only effect on society is via the quantity of criminal goods and services offered to the public. By not taking the fact that organized crime engenders strong externalities into account, that they erode the very base of our societies, economic analysis proceeds with a shortcut that is too striking. The challenge presented to economic analysis by organized crime reminds us of the quadrature of the circle. Either we exclude the intrinsically harmful character of organized crime from the hypotheses and we miss its particularity, or we include it, which means taking for hypothesis that which we are trying to illustrate.

1. MONEY LAUNDERING STRATEGIES

The laundering of the money earned is the last link in the strategic chain of drug trafficking. Drug trafficking generates significant amounts of income, at least for some players. In

order to benefit from the criminal proceeds of trafficking, the traffickers must launder these sums, that is, conceal their criminal origin.

1.1. A too sensitive subject

In 1997, the ONDCP (Office of National Drug Control Policy) held that drug trafficking yielded \$350-450 billion annually. In 1989, the FATF (Financial Action Task Force on Money Laundering) proposed a lower estimate limited to \$125 billion and deduced that \$85 billion of that was laundered annually. IMF President Camdessus, for his part, stated during an address delivered in 1989, without identifying his sources, that around 5-10 % of international GDP was laundered, or between \$590 and \$1,500 billion. The press, for its part, sometimes cites a figure said to come from the United Nations according to which \$200 billion is laundered each year.

Calculating the demand for money laundering, when it claims a scientific basis, relies on an estimation of profits drawn from criminal activities, profits that are themselves calculated on the basis of an estimate of the sales turnover of criminal enterprises. Generally, the only criminal income taken into account is that generated by drug trafficking. This almost exclusive attention to drug trafficking results from the fact that FATF operations were calibrated to combat criminal money laundering arising from drug trafficking. It was therefore logical to concentrate on the latter. The fact that data already existed on the prevalence of drug consumption in the United States facilitated the calculation. Similarly, observations on the ground or by satellite provided an approximation of the extent of the cultivation. From a technical standpoint, drug production appeared to be easier to assess than racketeering or smuggling. Politically, the accent was placed on drugs, so it was normal for the assessment to focus on money laundering resulting from drugs.

This focus on drug money is not without a certain basis, since drug trafficking remains the activity par excellence that brings in large revenues and requires international movements of capital. Since burglars, pimps, and other petty criminals launder their proceeds by simple methods, the enforcement system seemed rather complete. It is the sudden emergence of drug money that pointed out the existence of a “vacuum” into which criminal organizations rushed.

Not only did the drug profits seem unfathomable, but the techniques of money laundering also attributed to international traffickers seemed to utilize mysteries of the international banking and financial system on a scale never before seen. The essence of the technical literature devoted to money laundering thus focused on the most complex methods of

laundering, notably those using the most sophisticated instruments offered by the international banking and finance system.

Little or no attention was accorded to the more rudimentary methods of money laundering. Yet the simple fact of consuming the product of a criminal activity constitutes the most elementary and most common form of laundering. Similarly, a large portion of criminal proceeds is simply stored in safes, deposited in one or several accounts or used for real estate purchases.

It is in this way that a striking oversimplification has been carried out. On one hand, an extremely high estimate of criminal money, tied to drugs and subject to being laundered, has begun to circulate insistently among the different international agencies. On the other hand, attention is focused on the most sophisticated modes of money laundering. Thus is born the illusion that this was actually the sum that the international banking and finance system was contributing to money laundering. Last but not least, a dramatic touch was added to this tableau: behind this gigantic sum of money was discovered the hand of “organized crime.” The circle was complete. Since one must combat the most sophisticated forms of money laundering, those that utilize the most modern channels of the banking and finance system and are the exclusive prerogative of large criminal organizations, it was necessary that the numbers fit this image.

1.2. Overestimated data

There are few precedents in scientific literature for a situation in which figures so manifestly erroneous circulated for ten years without the FATF at any time being eager to correct them publicly.¹ We will quickly show that the quantitative studies of the magnitude of money laundering have systematically led to absurd results through the use of totally inappropriate techniques.

The overestimation of drug trafficking sales turnover

The FATF (1990) estimates, in 1990, the turnover of drugs sold retail during the 1980s at \$108 billion in the United States and \$16.3 billion in Europe, that is, a total of \$124.3 billion.

Table 7.1. Estimate by the FATF of turnover of retail drug sales (Europe and United States)

¹ , FATF decided to convene a commission that concluded the impossibility of quickly assessing the amount laundered (2001).

This estimate of annual drug sales turnover is rather questionable and no doubt somewhat overestimated for the 1980s, because several uncertainties² hang over the details of the calculation.

Even if the turnover were \$125 billion, however, international drug trade does not exceed \$20-\$25 billion. This is the case because one can consider that the retail price of drugs is roughly 6 times higher than the wholesale price.

From turn over to profits

Now it is necessary to shift from retail drug sales turnover to the share of profits destined to be laundered. Proceeding from international drug trafficking turnover misguidedly confused with retail drug sales turnover, and thus very much overestimated, the FATF assesses the amount of money coming from drug trafficking and subject to being laundered each year at between \$61 billion and \$85 billion. Now, it appears once again that the calculation allowing the transition from sales turnover to amounts for laundering is open to criticism.

For example, in the case of cocaine in the United States, we have seen in the preceding table that the turnover by retail dealers was estimated at \$28.8 billion. The calculation of the profits consists of subtracting from this turnover the cost of purchases, or \$5.1 billion, yielding \$23.7 billion. The dealers' net profit is obtained by subtracting the famous 10% that is supposed to correspond to customs seizures. That leaves \$21.33 billion. The net profit of the wholesalers, for their part, is estimated at \$4.88 billion. The total net profit of cocaine trafficking (dealers + wholesalers) thus amounts to \$26.21 billion.

The report then allows for some uncertainty to persist as to the meaning of this figure. A serious ambiguity remains, allowing this result to be interpreted as the amount of cocaine trafficking money that is ready to be laundered. Such an interpretation is obviously incorrect, since it amounts to considering that small-scale dealers and wholesalers launder all of their profits. The FATF thus considers that 50-70% of the drug sales turnover is available for laundering. With a turnover in the order of \$122 billion for the United States and Europe, between \$61 billion and \$85 billion would thus be available for laundering.

² Regarding the calculations on heroin, P. Van Duyne (1992) rightly pointed out that it is impossible to know what street sales price figure is used to arrive at the \$12 billion figure. For cocaine, the result of \$28.8 billion is obtained by using the highest amounts in the bracket (price: \$80-\$190 and quantity: 100-150 tons). P. Van Duyne (1992)

It is not logical to treat the profits of small dealers and of wholesalers the same. way By definition, the entire profit is used, therefore laundered, more or less effectively in the event of monitoring. A sum of \$122 billion is thus “laundered” as long as its holders have no worry, on the other hand, that they will be the object of the somewhat elaborate banking and finance manipulations aimed at seriously muddying the waters for only a fraction of the wholesalers profits and for those alone.

From profit to money laundering

By way of a very rough approximation, one can consider that it is a portion of the \$20-25 billion of wholesale international trafficking that can be subjected to sophisticated laundering. The amount of money constituting a more or less centralized resource in a position to corrupt the world economy thus does not exceed \$20 billion.

Note that this figure must be clearly understood. We do not suggest reassessing at \$20 billion the amount of money that may be a candidate for laundering but to make a distinction between the sums that may be in the hands of criminal organizations and those that pass through the hands of small dealers and are dispersed into the legal economy, notably through bank deposits.

This idea of dispersal of the proceeds can be clarified by a “rule of thumb” calculation. The 5 million regular U.S. consumers of cocaine require about 500,000 dealers (1 dealer for every 10 consumers), yielding a turnover of \$40,000 per dealer. Deducting the purchasing costs leaves roughly \$20,000 (P. Reuter, M. Kleiman, 1986). It is still necessary to deduct consumption of drugs and staples, leading to the realization that, at this stage of drug distribution, sophisticated laundering does not exist. It is all played out among the several thousand cocaine wholesalers who, according to the FATF, share among themselves a profit of \$5 billion and will launder a portion of it by setting up rather complex banking logistics.

Money laundering constitutes a constant preoccupation of criminal organizations, in particular those implicated in drug trafficking. We will show that contrary to images that often circulate, laundering based on utilization of the most sophisticated channels of the banking and finance system turns out to be a sufficiently costly operation that criminals, including criminal organizations, often prefer rather primitive forms of laundering.

1.3. Different techniques of laundering

Traditionally, a money laundering operation is considered as having three successive stages. During the “placement,” the money is introduced into the financial system. The

“layering” phase consists of accumulating a number of transactions to reduce the traceability of the funds, which renders possible their final “integration” in the form of investments in various sectors.

We propose to review the different techniques used (Blum et al., 1998) at any given stage, listing them in order of growing complexity. The governing idea here is to take a look at the techniques of piling up layers of transactions that allow the criminal proceeds to be separated from their origins, and those that permit an explanation of the origin of the enrichment. All these different procedures are classified in order of increasing cost, in particular transaction cost, that is, the cost of implementing the strategy.

Laundering on the territory of the crime

The simplest techniques take advantage of gambling laws. Casinos permit the laundering of small sums by disguising them as winnings, and the winning lottery and race tickets are repurchased with a bonus to their holders.

The stock exchange can also be used by buying a call and a placement simultaneously. Only the profitable transaction is registered and the broker is reimbursed. The money to be laundered appears as a capital gain.

Purchases and sales of property are another possibility. A piece of property is purchased at a lower-than-market price and a portion is paid under the table. The property is resold at the market price and the added value justifies the origin of the money.

Laundering outside the territory of the crime

Using the informal banking system. The principle is that of multiple transfers.³ Two banking systems of two countries are utilized and one intermediary, a veritable banker of the informal sector, ensures the simultaneous action and the successful conclusion of the transactions on both sides. This can function even better if there exist far-reaching diasporas of an ethnic group in several countries. Smuggling traffic or immigrants wages, especially of illegals, also offer cover for the transfer of criminal funds.

³ The basis framework is the following. Suppose that individual A, located in country 1, owes a sum \$X to individual B located in country 2 and that B owes \$X to C located in country 1. A sends \$X to B and B sends \$X to C. That makes two international transfers and four operations of withdrawal and deposit. To settle different debts, everything functions as if A in country 1 settles the debt of B to C in country 1. There are only two bank transactions between A and B and no international transfer.

Using the banking system. The use of numbered accounts permits the launderer to take advantage of banking secrecy. The utilization of an “offshore” company and a numbered account adds commercial secrecy to banking secrecy. The inclusion of lawyers on the board of the company offers a third layer of protection: judicial secrecy. This mechanism can be infinitely complicated by taking advantage of fictional addresses and front men. Let us point out that the more complicated the mechanism, the more costly it is to control and the greater the risks of betrayal. The funds can be repatriated by debiting a credit card issued abroad. The bills can be settled directly by a foreign bank.

Using commercial transactions. Debts in the source countries are paid by an offshore company. Fees can be paid by the offshore company to fictitious consultants in the source country. The criminal sells the real estate that he has in his possession to an offshore company at an elevated price and the money is deposited to the account of the real estate agency. A similar transaction can take place for raw materials or stocks. The capital can also be repatriated in the form of loans granted by the offshore company (this is becoming a very important trend).

The different techniques listed above do not require equal levels of competence or the same networks. They are not used for the same amounts of money and do not have the same cost.

1.4. The cost of Money Laundering

This question of the cost of money laundering turns out to be decisive to understanding what procedure the trafficker will choose. Whatever technique he uses, the total cost of laundering⁴ for the criminal is composed of two elements: the margin paid to intermediaries, which is often in the order of 10-15%, and the costs that must be covered for the laundering operation to take place, that is, the transactions costs.

In concrete terms, a trafficker must not only pay a margin to intermediaries, but he also must take care of various costs such as payment of lawyers, transfer fees, various legal fees, fixed costs, rights of entry into the criminal milieu, etc. Using a complex financial network carries a certain risk that also represents an expected cost (for the criminal). The transaction costs linked to a money laundering operation can be grouped into two categories: the cost of implementing the strategy and the cost of the risk.

⁴ The total cost of money laundering corresponds to the margin paid to intermediaries added to the transaction costs (i.e. the cost of implementing the strategy and the cost of risk).

Table 7.2 The cost of money laundering

$$\begin{aligned}
& \text{TOTAL COST OF MONEY LAUNDERING} \\
& = \\
& \text{MARGINS DEDUCTED BY INTERMEDIARIES} \\
& + \\
& \text{TRANSACTION COSTS} \\
& \text{cost of implementing the strategy} \\
& + \\
& \text{cost generated by risk} \\
& \text{(enforcement + internal defections)}
\end{aligned}$$

Margins deducted by intermediaries. It appears legitimate to consider that the money laundering market functions in a sufficiently competitive manner that the margins paid are more or less identical from one intermediary to another. We unfortunately do not have data on the amount of the margin that is generally considered, without more reliable information, to be between 10% and 15% of the amount laundered, while the indices would tend to show that the requirements of intermediaries have increased with the intensification of anti-laundering actions. It is reasonable to imagine, however, that the search for the lowest margin does not play a strong incentive role in the choice of laundering technique.

The cost of implementing the strategy. It consists of the expenses of operating inherent to the chosen laundering strategy. Laundering money by buying back winning lottery tickets or mounting an offshore enterprise does not generate the same type of cost of information gathering, transfer, legal counsel and other fixed operating costs. The amount and frequency of the sums to be laundered must justify recourse to sophisticated schemes. The criminal organization only implements a complex money-laundering scheme if it is in a position to predict the flow of its revenues and if it considers that the paths that allow the plan to be set up are stable. An individual criminal does not have a well-enough established strategy to adhere to a costly laundering scheme.

Costs engendered by risk. The risk is of two types: risk that enforcement poses to the money to be laundered and the risk of internal defections. The risk tied to enforcement lies in the fact that laundering is an activity that is monitored but also that a criminal may be under surveillance for other reasons and lead the police to the money-laundering channels. The risk of betrayal results from the fact that the criminal complicity necessary to put the laundering pipeline into place may be tempted to betray the organization. By widening its base, the criminal organization increases its costs of coordination in illegality and increases the risks of opportunism.

The logical economic behavior of criminals, or of a criminal organization, is to try to use the least costly money laundering technique. It must therefore take into account the three

preceding components of cost. An optimal money laundering strategy thus requires that the expected profit from laundering will at least cover its costs, consisting of the sum of the margin taken by intermediaries, the cost of access to the market, and the cost of risk.

We have represented on the following chart (graph 1.4) the link between the laundering techniques and the total cost of laundering.

Table 7.3 : The total cost of money laundering

The left part of the chart describes the different techniques used to conceal the criminal origin of a sum (layering). The different layers of protection that can be used are located horizontally, and the total cost generated by the operation (integration) is represented vertically.

The right section of the chart shows the different possibilities for using the money, again classified as a function of transaction costs. This part of the graph describes the techniques of “integration,” that is, the implementation of measures that permit a justification of the origin of the laundered funds. On the abscissa are located the different layers of secrets that can be used; on the ordinate is the transaction costs of the operation.

The chart sheds light on the total cost generated by the chosen combination between a technique of layering and a method of integration. It appears clear that the total cost of implementing money-laundering strategy can become exorbitant. Considerations of cost can thus conflict with the use of sophisticated laundering techniques.

To the extent that consistency obliges concealing the origin of the funds (left section) and using laundered money (right section) according to the methods located at almost the same level on the graph, that is, that generate a similar level of transaction costs, the total cost of laundering can increase quite rapidly.

2. CRIMINAL STRATEGIC MANAGEMENT

Recourse by a criminal organization to rather simple laundering techniques can often be explained by the cost of setting up a complex money-laundering system and the risks that it poses to the one who sets it up.

Having recourse to sophisticated money laundering techniques by mobilizing the international banking system can only be done by criminal organizations that carry substantial weight, whether because of the number of countries that they cover or because they belong to a well-established Mafia family.

2.1. Optimization of money laundering techniques

When a criminal organization belongs to a solid core of organized criminality (Chinese triads, Colombian cartels, Camorra, etc.), it will use the international banking system to launder its proceeds. Such a practice presupposes that the hierarchical positions in the organization are sufficiently stable that access to the laundered sums will not constitute a source of subsequent discord. Such stability of relations is rarely achieved. Consequently, money laundering does not serve the purpose of putting significant sums that belong to the organization as such out of sight of the justice system on a long-term basis. Indeed, the concept of “sum belonging to the organization” is too unstable to be operational. In general, criminal organizations will choose to use the international banking system to cut the money off from its origin and reinvest it in the legal economy. Front men will carry the title to the property and a portion of the income from the transactions conducted this way will be legally paid to members of the organization. Such a system is sufficiently flexible. When a member of the organization dies, sometimes in a manner that is anticipated, it suffices to change the consignee of the payment. The front men are not able to sell their share, since they cannot do so without alerting the other shareholders. They prefer thus to collect a bonus rather than to expose themselves to risk. Such a laundering technique subscribes to fundamental rules of preservation of inherited property peculiar to criminal organizations. The way the property is kept must therefore discourage potential betrayals and be flexible enough to change with modifications of the balance of power within the organization.

It seems to us equally important to distinguish money-laundering practices put in place by the members of the organizations on an individual basis as well as strategies implemented collectively for the organization and for its leading elite. When the members of a criminal organization, if it is very large, launder their proceeds, they use strategies that are rather primitive and common to the criminal group as a whole (purchase of real estate, use of front men, cash deposits and foreign accounts).

Recourse to a complex laundering scheme only makes economic sense in certain very limited cases. When a criminal organization is old enough and the evolution of the positions of the members in the internal hierarchy is relatively well regulated, the organization can have a view that is sufficiently long-term to envisage a money-laundering strategy in the service of the group. This is the case notably when the combined pressure of police and tax authorities on the known leaders of the criminal organizations is such that they can for all practical purposes no longer enjoy their benefits without being immediately charged with tax fraud. This was the case for example of the Italian-American Mafia chiefs

on the East Coast of the United States in the late 1960s. It was then essential that they put in place a rather sophisticated money-laundering scheme.

Criminal organizations also follow a sort of “life cycle” that can lead them to try to implement strategies of redeployment into the legal economy. De facto, this is not a matter of dislodging and recycling the entire the organization toward legal activities, but of permitting the leaders, accompanied by a limited number of indispensable close associates, to buy participation in legal activities. This particular form of “gentrification” is also aimed at furthering the transfer of fortunes to the families of members of the organization. From the time the concern to organize the future emerges, that is, when the horizon of economic rationality goes beyond the person of the criminal alone and embraces a family group whose future becomes a subject of anxiety, setting up complex money laundering schemes becomes indispensable. Such an observation explains why a criminal organization where the family plays a strong symbolic role (Italian-American family on the East Coast of the United States) will set up techniques that are more complex to perpetuate inheritance than will a motorcycle gang.

Using the sophisticated mechanisms of the international banking and finance system to launder the money is not experienced the same way by all criminal organizations. A current trend consists of mixing up the transfer of funds and laundering strategy. Colombian traffickers in the 1980s essentially repatriated their proceeds to Colombia and reinvested them without any particular precautions. The majority of the funds were repatriated in cash, by transfers, or by means of exchange establishments and covered the need for dollars tied to exchange monitoring. The need for sophisticated techniques arises only when the country where the funds must be used conducts an active policy of combating drug trafficking or when the fiscal officers have strong authority at their disposal. Thus, Pakistani heroin traffickers do not use a complex money-laundering strategy. In view of the situation in the country, their problem does not exceed that of the logistics necessary to transport the funds and divide them up. Laundering has not yet emerged as a problem in itself, so that recourse to the banking and finance system is limited and confined, essentially, to transfer operations.

Laundering a sum of money assumes that the ownership of the sum in question is clearly established. As long as a sum of money is retained in cash, its distribution can be held in abeyance. The rules of confidence governing a common stockpile of cash shared by a group of associated criminals are not very complex. Alarms quickly go off if one of the associates tries to seize the sum alone. From the time the money is laundered in a foreign account,

and even if several associates have authorization, the risk of betrayal becomes even greater in that the bank's mission is precisely never to contact its foreign clients.

The act of laundering a sum of money thus assumes that the distribution rules are clearly set among the associates and therefore multiplies the risk of betrayal by distancing the holder of the sum from them. The absence of authorization over the accounts makes the holder take the risk of not having access to it in case of incarceration. Accounts with multiple holders engender a risk of betrayal. The act of initiating a money-laundering procedure generates a certain irreversibility in the allocation of funds that often delays the decision to have recourse to it.

Setting up complex money laundering strategies thus requires that prior relations of confidence and clear rules of dividing up the proceeds be established among the associates. As long as there are no correctly defined property rights and relations devoid of opportunism among the criminals, there will be a strong reluctance to turn to money laundering.

2.2. Money laundering and intergenerational altruism

Laundering money serves the purpose of depositing savings and thus assumes that the criminal entrepreneur or criminal organization is planning for the future. But the economic choices of criminals are often characterized by a very low actualization rate. By sharply devaluing the future, criminals are not very tempted to agree to incur expenses today for the uncertain chance of profits tomorrow from inheritance thus constituted. This law of psychology seems to us plausible and is probably accompanied by a second behavior specific to the criminal: a low degree of intergenerational altruism. Assuming that criminals are less disposed than the rest of the population to make an effort to deposit a portion of their proceeds in the form of savings to be available for their descendents, they have one motivation less to launder their money. To be sure, the inheritance behavior of criminals has not been the subject of specific studies. A number of anecdotes, however, in particular relating to the Medellin trafficking group, leads us to believe that the majority of them are not concerned with the fate of their descendents. Only a close circle, among the most powerful, will try to shelter their families, in a broad sense. These strategies generally have something of the nature of a symbolic demonstration of power. By leaving the poverty of the extended family, the criminal demonstrates his power and facilitates his insertion into "good" society by cutting ties with an often destitute origin. Consequently, the inheritance strategy of criminals consists most often of purchasing real estate in the name of those close to them, using the latter, moreover, as front men. This type of strategy is limited both by the number of criminals who have recourse to it and by the amount of sums

required. Such money-laundering strategies mobilize quite primitive laundering techniques such as investment in real estate. The only major risk incurred is generally of a fiscal nature. How, indeed, can relatives of traffickers justify their enrichment? But the tax authorities are often more easily corruptible than the judicial authorities, and consequently close their eyes.

These few observations underscore the importance of curbs that limit recourse to the most sophisticated money-laundering techniques.⁵ Criminal organizations are anxious to use only those money-laundering techniques that are adapted to their organizational configuration. Their spontaneous hostility to excessively complicated techniques that exceed the ingenuity of their members conveys precisely the existence of transaction costs that can turn out to be exorbitant. Only a few organizations will use the most complex

⁵ The thesis that organized criminals do not massively have recourse to the most sophisticated money-laundering techniques seems to be supported on a number of empirical grounds. Some studies (rare, it is true) give indications that point in this direction. All the qualitative studies (Reuter, 1983; Zaitch, 1998) show that setting up complex money-laundering strategies only arises in a limited number of instances of drug trafficking of some importance in the market. It is worth underscoring the curbs on such strategies.. Zaitch (1998) notes the systematic exaggeration of figures relating to drug production. For the latter, the exaggeration is not solely quantitative, but also pertains to methods attributed to traffickers. To be sure, some operations can be very complex and well planned. It seems, however, according to Zaitch, who conducted an ethno-sociological study of Colombian traffickers in Amsterdam, that the number of these cases is considerably exaggerated by the media and by certain official reports. The majority of Colombian traffickers he was able to observe are content to send their profits to Colombia through the bank or exchange bureaus. Zaitch confides being constantly on the lookout for a real money- laundering professional in Amsterdam in the milieu of Colombian cocaine traffickers. In questioning the contacts on the simplistic nature of their method of money laundering, he always hears the same response given: “These methods are enough if one does not make stupid mistakes.” For this author it is thus clear that briefcases full of cash and bank transfers remain by far the methods adopted by the great majority of traffickers. The image of ultra-sophisticated money-laundering techniques refers to the fantasy of very centralized cartels organized like a multinational. Zaitch notes that his interlocutors recall with humor how this milieu is inclined to transform the isolated purchase of a quantity of drugs from organization X into a membership in said organization. In the same way, simple conveyers of funds present themselves as “money managers” without having any specific expertise. Even B. Margens, who has often been presented as an intermediary between the “Colombian cartels” and the “Italian Mafia,” whose role was brought to light on the occasion of operation “green ice” and who played nearly every role in cocaine trafficking, did not, as far as money laundering was concerned, go beyond escorting valises of cash in the direction of Gibraltar. For Zaitch, the case of F. Jurado demonstrates that, even in this dossier where the money-laundering techniques used were very sophisticated and correspond to the archetypical case of money laundering directly put in place by a large criminal organization (the Cali cartel), some of the Colombians arrested held more than 100 bank accounts in over 15 countries, which proves that the sophisticated methods are always coupled with more primitive techniques.

techniques. The bulk of the money laundering will continue to make use of simplified channels.

2.3. Common errors

From an analytical point of view, the simple fact of taking an interest in the overall cost of money laundering, and not just in the margin deducted by intermediaries, leads to a radical reevaluation of the cost of laundering, which explains why the great majority of criminals avoid having recourse to it. As a rule, only criminal organizations know how to profit from and have an interest in using the resources of a financial system to disguise the criminal origin of their income.

The more sophisticated the money-laundering operation, the more it requires time and expertise. The greater the number of persons associated with the operation, the greater is the risk of betrayal. The more frequently it is repeated in an identical way, the greater is its risk of being exposed. Because criminal organizations are well informed about these dangers, they calculate carefully whether it is in their interest to undertake a complex money-laundering operation.

The tendency to overestimate the degree of coordination of criminal organizations constitutes one explanation of the difficulty in restoring to the phenomenon of sophisticated money laundering its true dimension. Criminal organizations, with a few exceptions, are loosely centralized, the hierarchy is unstable, and the relationships of internal forces are fluid. In such circumstances, laundering assumes separating the money from members of the group who aspire to use it and who believe that they own it in common without the rules of distribution necessarily being clear. Now, it is precisely because the logic of individuals takes precedence over that of the organization that these individuals will be generally hostile to seeing their gains grow distant and enter a financial circuit over which they have little control.

Criminals and criminal organizations will therefore generally try to defer having recourse to sophisticated money laundering because they are aware of the costs and risks of destabilization inherent in using complex schemes in the context of rather crude management.

It is interesting to note that our various observations on both criminal organizations and money laundering strategy have in common a certain skepticism as to the all-powerful nature of organized crime. Criminal organizations are subject to assumptions analogous to those of legal businesses: their survival depends on their efficiency and even their mode of grouping together imposes constraints on them that render their organizations not

particularly adaptive. The systematic introduction of the importance of transaction costs constitutes the key that allows us to explain the difficulties and the sources of fragility of criminal organizations. The difference from previous approaches that neglected to focus their attention on the black box that the enterprise constitutes – even if it is criminal – lies in the fact that from the time that one no longer likens the enterprise to a simple production function, one is in a position to understand the internal dynamics more profoundly indeed.

3. MONEY LAUNDERING : INCENTIVE AND SANCTION

In 1931, in Chicago, Al Capone was condemned to seven years in prison. For what crime? Racketeering, manslaughter? No. Al Capone «tumbled» for tax evasion. His case illustrates that in the struggle against organized crime, indirect action based on repression of crime and violations induced by criminal activity may appear to be more efficient than direct action! Rather than attacking infractions which contribute to the constitution of criminal revenue head on, it can thus be preferable, because less costly and more effective, to latch on to limiting the criminals' possibilities of enjoying their revenue, in other words to intensify the fight against laundering. Developed countries seem to be orienting criminal policies in this direction since the middle of the 90's, with reinforcement of the severity of penalties to suppress money laundering.

There are two aspects involved in the implementation of an effective policy as far as money laundering is concerned: one is repressive and the other preventive. The first concerns the mechanisms to detect and sanction those persons or companies who transgress the law. This most often concerns criminals and, more rarely, banks having been created by a criminal organization that attempts to whitewash its criminal revenue in order to be able to spend it sheltered from all threat of discovery. The public policy maker attributes a budget to those public agents who are most likely to arrest criminals of a certain level and then vary the severity of the sanction in order to obtain effective repression. In the case of laundering, the fact that infractions can be committed with the complicity of bank personnel who hide behind «professional breach of confidence», makes a second aspect necessary in order to complete criminal policy; prevention. This aspect consists of implementing a system of «moralization» of the banking and financial sectors that is destined to encourage the banks to increase their vigilance and in particular to give them the possibility of detecting dubious clients and denouncing them to the competent authorities.

Repressive aspect: countries that fight criminal laundering have in common policies that try to dissuade individuals who are likely to participate in laundering of criminal revenue. They alter the parameters of the economic calculation by modifying the severity of the sanctions and increasing the probability of arrest. This direct repression of the authors of infractions in cases of laundering comes up against numerous difficulties, notably the fact that the repressive authority is incapable of untangling the financial transactions that are knotted under shelter of the banks' « breach of confidence » clause.

The preventive aspect is characterized by a marked opposition between the American model, which is designed around a system of regulatory authority based on the bank's criminal liability, and the continental model where the evolution of the banks' behavior depends upon its voluntary adhesion to a standard. The American model is intended to force the bank to efficiently monitor its personnel and clients by extensively engaging its legal liability. Thus the banks can be condemned for infractions committed by their employees or their clients, even if they themselves do not benefit, providing it is ascertained that they did not implement an adequate private monitoring system. On the other hand, continental criminal policy, France's, accords only limited importance to the bank's legal responsibility. This can only be engaged if the representatives of the banking establishments commit infractions in the name, and in the interest of, the company. Also if the bank does not respect the FATF standards it only runs the risk of administrative sanctions (and these have never yet been applied) and not penal sanctions.

The stakes involved in this chapter are to examine, still from the point of view of economic efficiency, the form taken by criminal policy when it tries to prevent money laundering. In order to provide a contextual presentation we use microeconomic models to illustrate the different aspects of public policy. Discussions debating the efficiency of laundering are generally very confused. From an empirical point of view, statistics are rare and we never know whether the data reflects the efficiency of the policy or the agencies' repressive activity, especially when we don't know the total amount of money laundered in a given country. Briefly, beginning from the facts does not seem to be the easiest path forward to forge an opinion about the effectiveness of anti-laundering measures. We will therefore use our usual method of reasoning from simple theoretical models, even simplifiers, but with which we will show that they really do improve our knowledge.

3.1. Drug dealers: To Launder or Not To Launder

Repression of the laundering of criminal revenue which results from drug trafficking was presented at the beginning of the 90's as a new technique, particularly effective and

permitting to stop the traffic, by attacking the personal assets of the dealers. The idea put forward was simple: the stronger the repression the less the dealers could enjoy their gain. Thus they would be discouraged from continuing their criminal action. However, this innovation in repressive technique runs up against several obstacles. We notice that on the one hand, the dealers re-bill the increase in risk to the consumer and furthermore they arrange their insolvency. It is thus not likely that repression seriously places their personal assets in danger. Consequently we remain fairly dubious about the effectiveness of repression when it is presented as a decisive weapon in the fight against drug traffic. In practice, it is fairly rare that dealers are charged with laundering without also being charged for trafficking. From our rapid examination it appears that the fight against laundering more closely resembles a method of dealing out heavier sentences to traffickers who are arrested for trafficking than a system for arresting more of those who would otherwise pass through the holes in the net.

Evaluation of the efficiency of policies for the repression of laundering involves a clear understanding of the behavioral hypothesis on which this action is based. The confusion which characterizes the economist's examination of criminal laundering policy is due to the fact that laundering infractions cover a continuum of situations which run from tax evasion to organized crime. If economic literature has some difficulty realizing the stakes involved in creating laundering repression policies, it is no doubt because most authors have reduced laundering to a particular kind of tax evasion. For example, Usher (1986), Kaplow (1990), Cowell (1990) Cramer and Gahavari (1994) use the structure of the canonical model of Allingham and Sandmo (1972) and content themselves with adding a cost that describes the dissimulating activity of the criminal origin of sums involved in tax evasion. These authors only consider the fiscal infraction and reduce laundering to a strategy that permits reduction of the probability of the fraud being discovered. But the defrauder does not commit one but two infractions: the first by defrauding and the second by using illegal means to dissimulate the fraud. The initiative of implicitly treating laundering as a specific infraction is attributed to Yaniv (1999). In his model, the defrauder decides on the amount of revenue he wishes to declare, then the amount he will attempt to launder, knowing that each of these infractions engenders a cost. On their side, public authorities allocate distinct sums, a part for direct repression of tax evasion and a part for laundering repression. Following the example of Slemrod and Ytzhakis (1987), Yaniv concludes that the public policy maker must stop increasing the amount of repressive spending when the marginal benefit becomes inferior to the marginal cost of its implementation. But the originality of his contribution is that he illustrates that the return on investment from the fight against laundering is often superior to that of the fight against tax evasion. In any case, the

strategy of individuals who wish to launder legally earned sums in order to escape taxes differs from that aimed at dissimulating revenue of purely criminal origin. We can reasonably represent the choice of a doctor deciding whether or not to evade tax, as the result of the comparison between the hoped for benefit per laundered franc and the cost of the sanction involved. On the other hand, the criminal is confronted with a very different choice: there is no way he can declare his criminal revenue to the tax authorities. He must therefore either conserve the money issuing from his criminal activity in cash or try to launder it⁶

Let us examine the average case of an individual trying to launder his criminal revenue by following Yaniv's (1997) indications. Once the activity that produces revenue is illegal, it is impossible for the holder to declare it to the tax authorities. A criminal may then choose to keep his illegal revenue Y^c in cash, in which case the usefulness of the sum is minimized by a factor β (avec $0 < \beta < 1$) which reflects the fact that cash cannot be used for all of the transactions that the criminal would like to make, for example the purchase of an apartment or business⁷. The criminal may also decide to launder his revenue. In order to do this he must pay intermediaries. The cost of laundering Z is assumed proportional to the sum to be laundered, $Z = z.Y^c$. If the laundering is detected, with a probability σ , the criminal risks a sentence of which the monetary cost is worth λ . The levels of utility attained by the criminal in the different possible situations are⁸

$$U(Y^l) = Y^c - \beta Y^c \text{ if he doesn't launder his revenue,}$$

$$U(Y^s) = Y^c - zY^c \text{ if he launders his revenue and is not arrested,}$$

$$U(Y^e) = Y^c - zY^c - f \text{ if he launders his revenue and is arrested}^9$$

The expected utility of laundering is thus written: $E[U(Y)] = (1 - \sigma)U(Y^s) + \sigma U(Y^e)$

⁶ We can in passing ask ourselves about the exact field of application of the models issuing from tax evasion repression in the case of laundering. Effectively, the anti-laundering laws following different recommendations from the FATF, generally apply only to serious infractions linked to drug trafficking, terrorism or organized crime. The problematic of the defrauding doctor is not covered, according to most of the actual legislation, by anti-laundering laws but by tax evasion laws.

⁷ Most countries ceiling the payments that can be made in cash.

⁸ In order to simplify, we consider that the criminal launders his illegal revenue and that when he is arrested his assets are not confiscated.

⁹ The sanction f describes both the sentences related to laundering and those for trafficking, in the case where the incrimination for laundering leads to a second incrimination for trafficking.

Supposing that the criminal knows the probability σ with which he will be arrested and the cost he must pay to launder z , he will only attempt a laundering strategy if the benefit b of this strategy is superior to its cost, or $b = Y^c(\beta - z) > \sigma f$. This schema can be adapted to cover more complex cases where the author of the laundering is not a person but a business, or where he is the accomplice of another criminal, without greatly altering the reasoning. Now that the reasons for which a dealer wants to launder his illegal revenue are elucidated, let's examine society's reaction.

3.2. optimal sanction

Let us suppose that the laundering inflicts harm on the collectivity h (without harm, there is no problem of public policy). The public policy maker must then calibrate the level of the legal sanction in such a way as to effectively dissuade potential criminals. This problem of public policy then obviously belongs to that treated by Becker (1968) and more generally by crime economics. From this point of view, laundering constitutes a crime like the others.

By following the path opened by Becker (see chapter), we can consider that the distribution of individuals, the level of profit expected being responsible for their decision whether or not to break the law, is given by the function of density $l(b, h)$ of the distribution function $L(b, h)$. The benefit to the criminal is situated in an interval of $[0, B]$ and the social cost h in $[0, H]$. The policy maker chooses a level of monetary sanction f and a level of public spending on repression c which permits crime detection with a probability σ , with $\sigma_c > 0$ and $\sigma_{cc} < 0$ in such a way that the collective well being W is maximized.

$$W = \int_0^H \int_{\sigma(c)f}^B (b - h)l(b, h)dbdh - c \quad (1)$$

A monetary sanction $f^* = \frac{h}{\sigma}$ thus effectively dissuades potential criminals without necessarily completely eradicating laundering, as the policy maker must stop allocating money to repress laundering when the marginal cost of the repression becomes superior to the reduction in social cost of laundering which it permits to attain (Polinsky and Shavell, 2000). This analytical framework which serves to measure the dissuasive effect of sanctions against individuals (authors or accomplices of infractions) can be extended to the rarer case, where a whole banking establishment is created in order to carry out a criminal activity (as in the affair BCCI). This is why, following the example for individuals, criminal

law includes a regime of reinforced sanctions for businesses that commit infractions of the law on laundering.

This dissuasive scheme, common to different criminal policies, still comes up against numerous problems.

Firstly, because laundering infractions are qualified around recycling of money issuing from drug trafficking, racketeering and organized crime, in many cases criminals are able to re-bill the final consumer the cost expected from a tightening up of criminal policy. For example, in the case of drug traffic, the commission demanded by intermediaries in laundering does not exceed 2% of the price of cocaine sold in the street, according to the estimate made by Caulkins and Reuter (1998). Even if, in reaction to criminal policy, the intermediaries who help the traffickers launder doubled their demands, the price of cocaine sold in the street would only increase by 2%. As the consumers of cocaine are practically insensitive to such an infinite price increase, the drug traffickers could re-bill the increase demanded by the intermediaries to the consumers without fear of seeing consumption decrease. The increase in intermediary margins caused by the repression does not therefore penalize the dealers' profit. So we cannot expect a marked effect on the amplitude of laundering (Kopp, 1995).

Secondly, it is frequent for criminals who launder money to have organized their insolvency, meaning they cannot pay the fine they receive. We should then substitute prison sentences for fines, relying on the fact that criminals will consider in their financial calculation, the inutility of incarceration time and eventually the opprobrium that accompanies it. In any case, the effectiveness of incarceration is very relative as its duration is short and its cost (negatively) affects collective well being

Thirdly, we collide with a serious problem of marginal dissuasion. When the sentences are not accumulative and those incurred for drug trafficking are usually superior to those linked to infractions of laundering laws, it is probable that these have no dissuasive effect when individuals cumulate the two activities. It seems therefore, for the reasons already mentioned, that the repressive policy's capacity to slow down laundering and above all the crimes which permit the offshore constitution of criminal revenue should not be over estimated.

Fourthly, we note that the compared costs of police inquiries in the strictly criminal area and in the domain of laundering infractions do not necessarily make the struggle against this a simple and less costly method of condemning criminals. In France, to our

knowledge, there is no case where a drug dealer has been condemned for laundering without having first been condemned for trafficking. Thus the information necessary to interrogate the authors of laundering proves costly to obtain, as the State cannot directly observe financial and banking transactions, these being protected by banking confidentiality.

It is this last observation that justifies the present interest in the banks' criminal liability. Recently introduced into the French penal code (1996), and some other E.U countries, and timidly used since, this disposition is however often mobilized on the other side of the Atlantic in order to incite the banks to monitor their personnel, and even their sub-contractors, as the State considers they are in a better position to do so than it is. Thus we will now study the financial operation of the preventive mechanism implemented in the American countries.

4. MORALIZATION OF THE BANKING SYSTEM: THE US MODEL OF CORPORATE LIABILITY

The American model is based upon the idea that banks are in a better position to monitor financial transactions than the State is. In as much as the State cannot observe the behavior of bank employees, it delegates this monitoring mission to the banks who choose to either directly observe their employees' behavior, or to implement a private control mechanism. If the banks are considered guilty of negligence under their legal responsibility they risk sanctions, the amount of which must permit the perfect internalization of the social cost of the laundering they could not prevent.

From an economic efficiency point of view, as the banks can dissuade their personnel from committing infractions at less cost than the State can, the State's delegation of monitoring to the banks finds its justification in the application of the principle of minimization of dissuasion cost 'least cost-enforcer'. If such a mechanism is beneficial for the collectivity, it consists of transferring the weight of monitoring, from the collectivity as a whole (public financing) to only the banks. It is then for the banks to exploit the possibilities offered by specific methods of payment of their personnel to try and incite them not to commit infractions, even ones that might be profitable to them, in order to reduce the frequency of condemnations for the establishment and the amount of fines paid.

The basis for the American economists interest in legal responsibility stems from the possibilities offered by the bank managers specific remuneration system. This consists of a fixed salary and a variable (bonus) which depends upon the valorization of the

establishment. This special form of remuneration should permit, according to economists, banks to control their personnel by making their remuneration dependent upon the effort they make to reduce the number of infractions they commit or facilitate. The State thus aligns the banks' objective function with its objective to minimize social cost for anti-laundering, with the implication of the banks' legal responsibility. The banks obtain adapted personnel behavior by implementing an incentive for remuneration which induces a level of effort on the portion of personnel susceptible to maximizing the bank's profit, once the amount of fines that they would have to pay for infractions they could not prevent is taken into account.

From this observation, it was of course tempting to apply the Principal-Agent model to forge an opinion of the efficiency of the technique used in the United States to moralize the banking system. The wealth of theoretical developments which follow must not make us lose from sight that a non-negligible part of the complicity that criminals benefit from in the banks does not necessarily stem from managers who are sufficiently highly placed to benefit from bonuses. The dissuasive range of the mechanism then depends crucially on the degree of generalization of incentive bonuses.

4.1. A principal agent model

The American mechanism for preventing laundering infractions may be treated with the help of an agency model where the government is the Principal, the bank the Supervisor and the bank managers, the Agents. The State is in a situation of moral risk, it cannot observe the behavior inside the bank: it therefore delegates the mission of personnel control (role of supervision) to the bank.

In the analysis that follows, we use the original corporate liability analysis (Arlen, 1994) and its model (Arlen and Kraakman, 1997) as well as the first transcription of the question in terms of Principal-Agent as proposed by Garoupa (2001) and partially inspired by Gans (2000).

The model considers that the social value of a bank depends on two types of activity: one being its normal activity m and another criminal activity n , which it shelters, voluntarily or not. For example, laundering that imposes a social cost h on the collectivity. The value of the portion of bank capital held by the managers is given by $\alpha G(m, n)$ where α represents the part of capital held by the managers and $G(\cdot)$ the value expected of the bank's capital. The value of capital is determined thusly: it is worth 1 with a probability $m + n$ and 0 with a probability $1 - m - n$. So the bank's expected value is $G(m, n) = m + n$. The private value

expected of criminal behaviour of management is given by $E(n)$, with $E'(n) > 0$ et $E''(n) < 0$. The fixed component of the managers' salary is w . The managers' effort is described by the cost $C(n, m)$ with $C'_n, C'_m > 0$ et $C''_n, C''_m < 0$. n which indicates the influence of managers' criminal behavior on the bank's value, u is a random variable of which the distribution function is $F(\cdot)$. n and u are considered to have additive effects. Crimes then appear only if $n + u > 0$. If crimes are committed by the managers, the State can detect them following a probability σ , and the guilty then suffer a sanction S_a and the bank S_p . We will successively examine these cases in perfect and imperfect information.

Perfect information

Suppose that contrary to the State (Principal), the bank (Agent) can observe the effort made by the managers for legal activity m and illegal activity n . Under these conditions of perfect information, the optimal contract content tying the managers to the bank is given by the resolution of a procedure maximizing the bank's expected profit under the restriction of participation of management n where k designates the value of utility of reserve of the agent.

The remuneration expected from management¹⁰ is:

$$U = \omega + \alpha(m + n) + E(n) - C(n, m) - P(n)\sigma S_a \quad (2)$$

The profit expected from the bank is written:

$$V = (1 - \alpha)(m + n) - \omega - P(n)\sigma S_p \quad (3)$$

The bank's problem is to find the levels of legal activity m and illegal n , solutions to the program:

$$\begin{cases} \max_{m,n} V \\ \text{sc } U \geq k \end{cases}$$

The values of optimal equilibrium of m and n are given by the solution of the conditions of first order of the problem:

$$V'_n = 1 + E'_n - C'_n - P'_n \sigma (S_a + S_p) = 0 \quad (4)$$

¹⁰ We suppose that the managers are neutral to risk.

$$V_m = 1 - C_m = 0 \quad (5)$$

When the second order conditions are satisfied, we deduce the optimal contract $(\widehat{m}, \widehat{n})$. We then easily show that laundering activity decreases with σ, S_a, S_p and productive effort increases following the same values as $C_{mn} > 0$. We define the function of collective well being of the State as the sum of the bank's benefit and that of the managers, minus the social cost of the criminal activity:

$$W = m + n + E(n) - C(m, n) - k - P(n)h \quad (6)$$

In the absence of sanctions, the difference between the State's objective function (to maximize collective well being) and the bank's (maximize profit) corresponds exactly to the social cost expected from the criminal activity σh , by arranging the level of sanction in such a way that the sum of sanctions imposed on managers and bank is equal to the social cost divided by the probability of being arrested or $S_a + S_p = \frac{h}{\sigma}$ the State can bring the objective function of the bank closer its own. The bank then behaves as the State would if it possessed the necessary information. It matters little who, the managers or the bank, is effectively punished. That $S_a = \frac{h}{\sigma}$ et $S_p = 0$ or the contrary has no consequence for the State. The State leaves the problem of negotiating between them the distribution of the sanctions to the bank and managers.

This mechanism however blocks on the constraint of managers' solvency: they cannot pay more than they possess. It is possible to move this constraint by substituting prison sentences for fines. But as incarceration is costly, it is preferable for the State to introduce some form of legal responsibility of businesses, conforming to the logic of « Deep Pocket », which consists of making businesses pay the fines rather than the managers. As the constraint of managers' wealth is given by $\overline{\omega}$, it is sufficient to distribute the amount of the optimal sanction in such a way that $S_a = \overline{\omega}$ to obtain effective dissuasion.

Thus, in good theory, when the bank can observe the managers' behaviour, the introduction of corporate liability is necessary to compensate for management insolvency and improve social well being of the collectivity by substituting effective private spending for inoperative repressive public spending. This mechanism however constitutes a supplementary load for the banks.

Imperfect Information

In fact it is more realistic to assume that the bank cannot observe one hundred percent of the criminal behaviour of its managers. In a situation of symmetrical information, the bank can only observe the legal activity m and illegal activity n of the managers. Managers choosing the level of effort $(\widehat{m}, \widehat{n})$ maximize their expected remuneration (situation of moral risk). The State for its part institutes bank criminal liability in order to compensate for the problem of manager insolvency and sets the sanction at optimal level $S_p = \frac{h}{\sigma} - \bar{\omega}$ which allows total internalization of the cost of laundering.

With this method, the State leads the bank to behave as it would under the same conditions. The idea is then to analyze the behavior induced by this situation which is optimal for the bank to adopt. The bank must then resolve the problem of the following program in order to find the coefficient of the remuneration variable α that constitutes the optimal contract for maximizing the bank's profit under constraint of the managers participation ($U \geq k$) and the constraint of compatibility of incentives $(\widehat{m}, \widehat{n})$.

$$\begin{cases} \max_{\alpha} V \\ sc: \\ \max_{m,n} U \\ U \geq k \end{cases}$$

Thus, even when the bank cannot monitor its personnel one hundred per cent, it remains theoretically efficient, from the State's point of view, to delegate the monitoring of bank personnel to the banks by installing the banks' criminal liability. To compensate for the effects of criminal liability, the bank offers an incentive contract to its managers and maximizes its profit by bringing the number of infractions to their optimal level. This situation is expensive however as it continues to be condemned for the residual infractions that are still committed by its executives and which are sometimes discovered by the State.

4.2 The us tropism for private monitoring

In this environment of imperfect information (moral risk), when the banks are liable for management behavior, they are encouraged to introduce a private personnel-monitoring mechanism in order to decrease the prevalence of infraction and try to obtain greater profit than in the preceding case (without private monitoring).

Corporate profit and monitoring

This idea, introduced in 1994 by Arlen, consists of considering that when the managers are the subjects of monitoring, their criminal activity would be detected following probability ρ by the bank and will always be reported to the State. If the bank does not detect the managers' criminal behavior, it can still be detected by the State following a probability σ . The sanction the manager's risk is S_a . The sanction imposed by the bank is S_q if the bank discovers the fraud and S_p if it is the State that discovers it.

As the bank (Supervisor) cannot observe the effort that the managers invest in legal activity m and illegal activity n , it is they who choose the level of effort $(\widehat{m}, \widehat{n})$, which allows them to maximize expected revenue. The bank must then maximize its profit V using $(\widehat{m}, \widehat{n})$ as given data

To maximize collective well being, the State must determine the sanction level in such a way as to align the objective function of the bank with its own using legal responsibility. It suffices to establish the sanction expected equal to the social cost of laundering, for the objective function of the bank to become identical to its own, at cost close to the private monitoring mechanism. Using legal sanctions, the State aligns the objective function of the bank with its own. To maximize profit, the bank must then propose an optimal contract to the managers, establishing on the one hand, the descriptive parameter of the managers' remuneration variable a , and on the other, the effort of private monitoring ρ , under constraint of management participation $U \geq k$ and the constraint of accounting of incentives $(\widehat{m}, \widehat{n})$, or the solution to the following program:

$$\left\{ \begin{array}{l} \max_{\alpha, \rho} V \\ sc: \\ \max_{m, n} U \\ U \geq k \end{array} \right.$$

The Perverse Effect of Private Monitoring

The introduction of a private monitoring system creates perverse effects identified by J H Arlen (1994) and elaborated by J H Arlen and R Kraakman (1997). The more effort the banks make to monitor their personnel, the more they detect infractions that they must report and thus increase their exposure to legal sanctions. If the bank implements an

efficient monitoring system, on one hand the number of management infractions committed decreases, but on the other hand, each of those remaining involves a sanction against the firm. In presence of the “Arlen effect” it is not in the bank’s interest to implement just any private control in order to avoid being condemned for the infractions it will discover. In all other cases, the bank will implement what is a sub-optimal level of monitoring from the State’s point of view. That which is referred to as the “Arlen effect” may be interpreted as a bias in the alignment of the objective function of the State (Principle) and the bank (Supervisor).

In order to compensate for this problem, American law explores the possibility, which does not exist in continental law; of dosing the sanctions pro rata to the monitoring effort effectively engaged by the banks. The difference between S_a and S_p thus corresponds to a new form of responsibility “mitigation liability” which should encourage the banks to adopt a monitoring mechanism for surveying their employees. This bias is due to the ambiguous effects of the private employee monitoring mechanism, and is susceptible to distance the bank’s behaviour from that which the State wants it to adopt in areas of private personnel monitoring; the limited responsibility is then a means of reducing this bias and forcing the banks to adopt an optimal level of private employee monitoring.

To conclude this rapid examination of the American model, observe that the criminal policy is based on the extensive use of the criminal qualification, as much in areas of personnel monitoring as that of clients. This approach is reputed to permit compensation for the asymmetry of the State’s information, while it is precisely because of information problems that the main criticisms of this system emerge. We can thus question whether or not the informational advantage that was the basis for founding this delegation to the banks of the State’s monitoring role was not greatly overestimated.

Firstly, what is the operational range of such a mechanism? Only the low percentage of bank personnel who effectively benefit from incentive bonuses is effectively sensitive to the conjugated variations of their two sources of income. The optimal incentive contract that is the lever of extensive application of business’ legal responsibility can then be offered to only a small minority, which limits the banks’ capacity to modify personnel behavior. Secondly, when the banks must monitor their personnel, they have the choice of whether or not to implement a private monitoring system as, in certain cases, this can negatively influence their profit. They are therefore led to not systematically exploit their strategic advantage that would permit, with the help of a private monitoring mechanism, them to be more

performant than State assured monitoring. The imperative of profit maximization can then drive them to voluntarily maintain a type of rational ignorance of their internal operations.

Thirdly, judicial inquiries in cases of firms' criminal liability becomes particularly lengthy and costly and contributes considerably to encumbering the judicial system in an area where the burden of proof of the incriminated bank's negligence is particularly complex. The State must then assume the weight of an unexpected cost when it has precisely transferred its monitoring role onto the banks to limit spending. Of course, each of these objections has a solution: extension of bonus remuneration, implementation of proportional responsibility, simplification of procedures. In any case, the risk exists, as in any regulatory system based on the introduction of a standard using legal dissuasion and a delegation of monitoring, to see savings in informational costs obtained by the delegation counterbalanced by an increase of cost in applying the law. The probability of aligning banks' behavior by using incentives, with that of the State using a system of business' legal responsibility thus seems fairly complex to implement. Failing a virtuous modification in the agents' behavior, we risk seeing the banks being forced to take the responsibility for internalizing social cost of laundering and trying to slow down this process by paralyzing the legal machinery when their legal responsibility is involved.

5 SELF REGULATION: THE CONTINENTAL SYSTEM FOR MORALIZATION

In contrast to the US, the majority of continental European countries do not wish to use the threat of criminal law to create the desired transformation in the morality of the banking system. For example, French law has introduced an obligation of cooperation with public authorities onto the whole of the banking sector¹¹, but does not sanction an eventual non-respect of this obligation except by disciplinary sanctions that are only slightly restrictive.¹² The continental mechanism counts on a flexible self-regulation of the banking system based on the progressive and voluntary adhesion to a standard of behaviour. This schema does not require a great deal of implication on the part of the regulator, but its major inconvenience is that it offers an easy way out to the banking establishments who continue to participate in laundering activities by erecting their « negligence » as an alibi.

¹¹ The law of 12 July 1990 introduced the obligation of monitoring of clients and denunciation of suspicion to the TRACFIN agency, attached to the Ministry of Finance. TRACFIN can decide to transmit information to the public prosecutor if the conditions of article 5 of the anti-laundering law are met or if the information received brings to light proof of a crime or a misdemeanor linked notably to organized delinquency.

¹² The banking commission may decide upon administrative sanctions and these run from warnings of withdrawal of approval to obligatory resignation of directors. These sanctions have not yet been imposed.

From an analytical point of view, this form of self regulation of the banking system does not directly adhere to the cases of spontaneous emergence of a private standard, a type of resurgence of the old *lex mercatoria* which gave rise to abundant recent literature¹³ The classical schema of *lex mercatoria* is that of the emergence of professional practices which are spontaneously imposed on members of the corporation and are generally the object of a codification much later. This codification intervenes when the cost of information necessary for self-regulation becomes exorbitant due to the size of the system. The obligation to minimize the costs operates in favor of externalization of the regulation towards the judicial system.

In the case of laundering, neither the banks, nor the financial system were initiators of particularly virtuous behaviour any more than they took the initiative in favor of the law to which, on the contrary, they were initially vigorously opposed. We are therefore confronted with a particular case where the standard of behavior is proposed to the actors in the sector without including very restrictive sanctions. It seems however that this step could be crowned with success and give rise to a noticeable change in the actors' behavior in the banking and financial sectors. For example, in France, after the adoption of the law of 1990 on laundering, French banks found themselves faced with a dilemma: collectively, the « moralization » of the system was in their interest, but individually, their best interest was to perpetuate their old practices as no sanction was foreseen. Instructed to adopt a standard that belonged to a collective property, the banks were subject to the pernicious action of the prisoners' dilemma.

5.1. The logic of collective action

The fear of damaging their reputation and modest State intervention could be at the origin of a favorable conclusion. It is possible to adapt to our specific case Olson's (1966) initially advanced proposition, which was retained by Cooter (1995) illustrating the existence of conditions, which permitted, in certain cases, to escape from the prisoners' dilemma. In this type of model - called « de seuil » - developed around the case of collective manifestations such as strikes, the cost of entry into collective action diminishes with the number of participants while each individual is characterized by a different cost threshold, from which he decides to participate in collective action. We then observe a type of chain reaction where the increase in number of participants in the collective action decreases the cost of adhesion and activates more rallying.

¹³ This *lex mercatoria* or "*merchant law*" defined a number of obligations which the members of corporations and guilds must satisfy (Greif, Milgrom and Weingast, 1994).

In the case of banks, each time a bank adopts the new standard, it contributes to lowering the cost of future adhesion for those who haven't yet done so. In effect, the fewer the number of banks who continue to participate in criminal laundering, the easier it is for them to use the argument with their clients that it becomes impossible to continue being the lone ranger. Let us illustrate with the following chart by tracing the curve $C(E)$ that describes the bank's cost to implement the law in function of the number of establishments who adopt this new attitude. This curve is waning: the more numerous the banks who respect the law, the less costly it is to respect it, as to renounce laundering becomes a dominant attitude. The curve $E(C)$ describes the distribution of percentage of banks that are ready to adopt the law in function of the cost of its implementation.

Graph 7.3: Conditions for generalization of the new standard of good conduct

By following the position of $E(C)$, we observe that the number of banks adopting the new law increases while the cost of implementation is inferior to their inclination to pay for changing their behaviour. If the two curves are convex (graph 1.a), the position of x on the ordered axis indicates that there are no more banking establishments for whom the cost of implementation of the law is inferior to its willingness to pay to be up to standard, the percentage of banks who adopt the standard cannot be greater than percentage x . Once x per cent of banks adopt the new standard, the minimal cost of this implementation never falls below C' . The equilibrium intervenes for a percentage E^* of establishments when there are no more establishments whose willingness to pay is superior to the corresponding cost C^* . If the public policy maker considers that this level of moralization of the banking system is insufficient, he can intervene to accentuate the cost for the banks to not play the game of standardization and thus decrease their adaptation cost and force the move toward another more favorable equilibrium.

5.2 Multiple equilibrium

To move toward an equilibrium is more complex when the curve $E(C)$ is concave (graph 1.b), which describes a fairly realistic situation where the cost of adaptation for the banks decreases more slowly when few banks follow the movement, then, more rapidly, when the standard becomes generalized¹⁴. The banking system finds itself in a situation characterized by multiple equilibrium. The majority of banks adopt the standard when the

¹⁴ On graph 1;b at the point of abscise C^* a slight decrease in the cost of respecting the law engenders a slight increase of the number of virtuous banks, the number of honest banks and is thus very inelastic of the cost of respecting the law. At the point corresponding to C^{**} a slight reduction

cost of respecting the law is inferior to their willingness to pay for this change. Once the curve $E(C)$ is situated above $E(C)$, the number of banks respecting the law ceases to increase. Once the curves cross each other again in C^{**} the cost of respecting the law becomes superior to the banks' willingness to pay, while the number of banks respecting the law moves toward zero. The two balances are unstable. As long as the system has not found its equilibrium, the public policy maker hopes of course to see the system converge towards optimal balance (C^*, E^*) but must be aware of the risk of seeing a local improvement lead to a sub optimal equilibrium (C^{**}, E^{**})

The public policy maker may influence the localization of the equilibrium. It suffices that he manifest a renewed desire to see the standard of « moralization » respected for the cost, in terms of reputation, of the non-respect of the standard to increase. Inversely, the cost of creating conformity decreases, the number of banks whose willingness to pay is superior to the cost then increases. The policy maker can thus drive the banking and financial systems towards a virtuous equilibrium by playing on the threat of lost reputation that moves the various banks' threshold of participation in the collective action.

The continental system is attractive, as it does not require complex intervention by the State that needs only a little information in order to play its role. The risk of seeing more and more complex rules on liability pile up and counter measures destined to compensate the perverse effects, which is typical of the US system is absent. On the other hand, the system is fairly lax, as it does not foresee real sanctions for the establishments who do not conform to the desires expressed by the policy maker. This mechanism is also fairly easy to manipulate, as the handling of the threat of ruining the reputation of a banking establishment is very political. The filing of a legal procedure and its follow up provide all sorts of opportunities for ruining an establishment's reputation which can easily be oriented by politics. Lastly, this type of regulation is devoid of exemplarity of application of the law and contributes to maintaining a certain opacity about the operating of banking establishments which could be damaging to respect of the law, in general, and to the overall reputation of the system. The opposition between the US system centered on banks' criminal liability and the continental model of regulation based on adhesion to a standard of behavior is stimulating. It permits notably a better understanding of why the US has a fairly large number of legal proceedings where the legal responsibility of the bank is in question (for example in the resounding case of the charges against the Bank of New York) while in Europe, procedures are rarely filed directly against financial establishments in

in cost of respecting the law creates a strong movement of adoption of the law, the number of

matters of laundering, only, and very rarely, against their directors. The American system, in order to moralize its financial and banking systems counts on the legal treatment of laundering and the dissuasive effect that the sentences pronounced should have. The continental system relies on the self-discipline of the establishments and considers that the costs of legal treatment would be superior to the benefits expressed in terms of dissuasion.

5.3. Is the law enforced?

Examination of the effectiveness of criminal policy in the struggle against laundering provides an opportunity to observe a special case of articulation between, on one side, the choice of rules of law, and on another the methods of attribution (public or private) of the job of implementing the law. It appears from study of the situation in the countries under American law, that in the absence of a very special type of responsibility (proportional to the monitoring effort), we cannot conclude effectiveness of delegating the mission of monitoring personnel to the private sector. We should therefore consider with great care the possibility of transporting into French law the extensive use of the legal responsibility of businesses when we know what heresy is represented by the idea of proportionality between effort and monitoring and sanction. From its side of the Atlantic, the continental system of monitoring delegation to the private sector rests on the hope of a progressive adoption of the new standard. This hope is certainly founded, but the problem of mobilizing personnel around this objective when the revenue is not indexed on the reputation of the bank remains whole.

Thus, the possibility for the private sector to exploit its informational advantage that would justify delegating the responsibility for the monitoring function remains largely hypothetical. The need for direct intervention of the public regulator in the area of monitoring comes out reinforced from this brief examination of the present systems. Our report, by inspiration rather than theory, supports the observation of concrete difficulties in the struggle against laundering. We note in fact that both models run up against common difficulties. In the USA, as in Europe, the preventive strategy rests on the hypothesis that the banks can identify undesirable clients and make them flee. It is more than probable that the criminals would quickly learn how to dissimulate their company name from their partners in the banking system. This is why the « declaration of suspicion » will soon be an antiquity in the panoply of the struggle against laundering. The public authority will then need to find new regulations and implement an ad hoc mechanism. Aside from the multiplication of direct regulations (declarations of transfer,

honest banks is thus very elastic to the cost of respecting the law.

ban on cash payments over a certain amount, etc.) is the prelude to this probably inevitable tendency towards re-regulation. Anyway, when the law progresses in the countries of the FATF zone, other States can seize the opportunity thus created to make themselves a place off shore, the re-absorption of which is a burning theme which underlines the limits of purely national criminal policies. Here again, delegation of monitoring is not a substitute for direct international intervention destined to ban (which constitutes a form of regulation) the principle activity of fiscal paradises: the possibility of carrying out transactions anonymously. Lastly, the struggle against laundering requires, as in the majority of cases of financial and economic delinquency, a strong international cooperation of the repressive agencies. These last still come up against the disparity in the laws and procedures in the different countries concerned. The extension of the number of countries adhering to the rules promoted by the FATF certainly constitutes a positive advance, but must not hide the often-insurmountable difficulties of coordination of inquiries, including those in the heart of the European Union. Here again, the public policy maker should intervene and devote resources to the satisfactory execution of transnational inquiries. Finally, the implementation of an effective mechanism to fight financial crime in general and laundering in particular will require the implementation of original forms of coordination between public and private bodies. No doubt this theme will mobilize law economists.

6. THE VIRTUES OF ORGANIZED CRIME

The fight against organized crime constitutes the second natural area of extension of study on drug repressive policies. In effect, wholesale of drugs is often the activity of a criminal organization, which we have already discussed (see chapter). As in the debates on laundering, the economic discussion about the fight against organized crime concerns the respective places of public and private action. The Chicago school of economists has in fact defended the idea that public spending in crime fighting could be reduced, while at the same increasing collective well-being. When organized crime dominated the crime market, part of its activity, via private spending, was in fact devoted to protecting its monopoly. By racketeering small delinquents and by blocking access to certain criminal professions, organized crime would reduce, at a less expense for the State, the quantity of criminal goods and services circulating. It is therefore, as in the case of laundering, the distribution of roles between public and private (in this case the Mafia) which constitutes the heart of the discussion.

6.1. Organized crime versus competition among the criminals

The thesis defended by the supporters of Chicago economics (Buchanan, 1973; Posner 1998) considers that the competition amongst criminals is less efficient than a monopoly as optimal criminal production is greater in competition than in monopoly. Let's assume that the demand (D) describes the demand for "evil" i.e. vice, sin or illegal drugs and (S), the supply. On the following graph, we can observe that the intersection of demand (D) and the marginal revenue curves (MC), (which is the same as the supply curve (S)) determines the price (P_c) and the output (Q_c) under competitive conditions. The intersection of the marginal revenue curve (MR) and the marginal cost curve (MC) determines the monopoly level of production (Q_m). The monopoly price is (P_m). Thus, one of the obvious distinctions between competition and monopoly is that the price of criminal goods will tend to be higher and output lower under monopoly conditions than under competitive conditions. Another important distinction lies in the impact on consumer and producer surplus. Under competitive conditions, the consumer surplus is equal to the area of triangle P_cAC . Under monopoly conditions on the market of criminal goods, consumer surplus is equal to the area P_mAE . Consumer surplus is, therefore, less under monopoly conditions.

Graph. 7.4. Equilibrium with organized crime

The critical question is: what has happened to the portion of consumer surplus that is no longer enjoyed by consumer? First, the monopolist (the Mafia) captures a portion of it in the form of producer surplus. In other words, under competitive conditions, the producer surplus is equal to area P_cCG . Under monopoly, this is expanded to P_mGHE . Part of this new expanded producer surplus, area P_mP_cEF was originally part of consumer surplus and has now been transferred to producers. Another portion of what was consumer surplus, the area EFC , is not captured by the monopolist. This is called the welfare loss. Consequently, the presence of a criminal organization diminishes the quantity of criminal merchandise, increases the price which limits the access and transfers a portion of consumer surplus to the producer, which is the price to be paid so that the "honest" population is kept as far as possible from the criminal merchandise. We can of course object that this analysis does not take into account the negative externalities created by the presence of a criminal organization as it doesn't question the existence of those linked to consumption of illegal goods such as drugs. A complete treatment of the question involves verification of the social cost engendered by the presence of a criminal organization which is superior to the reduction of lowered social cost linked to the consumption of drugs due to monopolization of the market by organized crime. A partial treatment of the question leads to a dangerous

analysis that gives the impression to public policy makers that economists could be recommending a type of 'soft method' in the struggle against organized crime.

Among Chicago economists, Grosman (1995) developed certain ideas of Buchanan's model but in a slightly different manner. He in any case also underlines some positive effects of crime monopoly. The Mafia is analyzed as an alternative to the State in the production of collective goods. His model illustrates that as long as taxation permits it, the competition between the Mafia and the State increases the offer of collective goods and the producer's net profit. This is why the honest producer must accommodate the Mafia. The Mafia is thus considered to be a sort of producer of collective goods, destined for the private sector, an alternative to the State. The effectiveness of its competitive offer depends upon compared advantages of pairs composed of the quantity of collective goods and the level of taxes respectively proposed by the two suppliers, State and Mafia. As per Grosman, the presence of the Mafia can be beneficial when it leads to moderation of government cleptocracies.

The thesis inspired by Chicago economics therefore generally tends to upgrade the Mafia's role as a regulator of the bureaucratic tendencies of the State or as a spontaneous regulator of the criminal world. We observe fairly rapidly that the solidarity of these approaches is dependent upon the crucial manner of hypothesis made as to the absence of externalities necessary to the existence of a criminal organization. If we do not understand the Mafia's economic role other than through its production activity of criminal goods and services, it is then probable that it is preferable to an unbridled criminality. The conclusions change when we introduce the idea that criminal organization engenders negative externalities, in other words, that it constitutes an evil. 'per se'.

6.2. Organized crime and petty criminals: a vertical integration model

We have seen that the economic analysis of the Chicago school examined comparisons of social well being according to whether criminal production is monopolized by organized crime, or in oligopoly or in competition. Garoupa (2000), while writing in an analogue analytical perspective, explores a new path by investigating a vertical integration configuration where the dominant firm (the Mafia) extracts a surplus from small criminals. Such a criminal organization possesses a vertically integrated structure where the agents are individual criminal firms. Expressed in terms of Principal-Agent model, the Mafia is the Principal and will discipline the small criminals by introducing a constraint incentive. This constraint is more or less credible in function of the threat the Principal applies on the

agents. Garoupa finishes with an analogue result to that of Buchanan: public policies must not necessarily be centered on the fight against organized crime.

To demonstrate, Garoupa uses literature devoted to « Corporate crime » already mentioned previously under the laundering of money and particularly Shavell's (1997) contribution. Note that Shavell defends the idea that the mechanism of law implementation (enforcement design) must be such that the Principal behaves in an optimal manner in controlling its agents. In any case, the precise distribution of sanctions between the Principal and the Agent, according to Shavell, is not very important, as the Principal and the agent(s) can reallocate the sanctions between them, via their internal contracts. The post contractual sanction is thus independent from the pre contractual division of sanctions. This rule however only applies when one of the parties is incapable of paying the fine (for example when the Mafia escapes from certain sanctions as its employees have limited wealth) or when the Principal cannot force the Agent to behave in an optimal manner (for example if the threat of Mafia reprisal is not credible). In these circumstances Shavell considers the sanctions of imprisonment and implementation of personal criminal responsibility of Mafia agents is necessary to compensate the inoperable effects of the constraint of agent solvency.

Pure competition

Let's rapidly examine the functioning of Garoupa's model. The individuals are neutral to risk and decide to commit criminal acts, which procures a benefit b for them and inflicts a damage h on the collectivity. We propose that $h > 1$ implies that crimes have a social cost. The public policy maker does not know the benefit b of the criminals, but he knows the distribution of individuals by type that is given by a distribution function which is uniform over the interval $[0, 1]$ and a cumulative distribution b . The policy maker chooses a sanction f and a probability of detection p . The public spending necessary to reach a probability p is given by cp where c is a positive cost parameter. The objective function that must be maximized by the policy maker is the sum of the individual benefits less the damage caused by the crime and the cost of repression. The maximum sanction is F that describes the constraint of wealth of the individuals. The sanction has no application cost.

An individual who is neutral to risk commits a crime when $b \geq pf$. Collective well being is thus given by:

$$W = \int_{pf}^1 (b - h) db - cp \quad (7)$$

The public policy maker maximizes this function in f (severity of sentence) and p (probability of being punished) under the condition that $0 \leq f \leq F$.: At the end of the calculation, we find Becker's classic result: « the optimal fine is the maximum fine » The optimal probability of detection and punishment satisfied $p^*F = h - c / F$, a dose of sub-detection is necessary¹⁵. The number of criminals present on the market is thus given by cutting the expression of this condition to 100% of the population, or to the value 1, or: $1 - (h - c / F)$ We represent this equilibrium of pure competition on the following chart (1) point C.

Cournot and Stackelberg equilibrium

Individuals are supposed neutral to risk and choose to commit an infraction knowing that they will have to pay y to a monopolizing Mafia in order to enjoy the benefits from their criminal activity, b . We consider thus that the criminals must buy a license from the Mafia. To simplify, we consider that the Mafia maximizes its profit and that the government cannot punish it. Public action is exercised then against criminals and not against the

¹⁵ The policy maker's program is:

$$\begin{cases} \max W = \int_{pf}^1 (b - h) db - cp \\ \text{sc. } 0 \leq f \leq F \end{cases}$$

We write the lagrangien:

$$\begin{aligned} L_{\lambda, f, p} &= W + \lambda(F - f) \\ &= \int_{pf}^1 (b - h) db - cp + \lambda(F - f) \\ &= \left[\frac{b^2}{2} - bh \right]_{pf}^1 - cp + \lambda(F - f) \end{aligned}$$

We derive the lagrangien in relation to f et p :

$$\frac{\partial L}{\partial f} = -p^2 f + ph - \lambda = p(h - pf) - \lambda = 0 \quad \frac{\partial L}{\partial p} = -pf^2 + hf - c = f(h - pf) - c = 0$$

Suppose that the optimal fine is not the maximum fine. With the first derivative, we obtain $h = p^* f^*$. In any case, with the second we know that this is impossible. So the optimal solution must be $f^* = F$ avec $\lambda^* > 0$.

The second derivative indicates the interior solution:

$$p^* F = h - \frac{c}{F} \Rightarrow p^* F < h$$

Mafia. The individuals commit misdemeanors when $b \geq pf + y$ ¹⁶ The Mafia's profit π depends then on the number of individuals who commit crimes:

$$\pi = \int_{pf+y}^1 y db, \quad (8)$$

The Mafia maximizes its profit under the usual first order condition.¹⁷

$$\frac{\partial \pi}{\partial y} = 0 \Rightarrow 1 - pf - 2y = 0 \quad (9)$$

The pair pf, y that satisfies this condition are solutions. We can then calculate the reactive function of the Mafia to the public policy, meaning the set of prices of criminal licenses, y^{RF} in function of the levels of sanction expected pf . We must successively examine the two classical equilibrium configurations: Nash-Cournot, where the government and Mafia decisions are simultaneously made and Stackelberg, when one of the actors is leader and the second follower. Let's first examine Cournot's equilibrium. The government and the Mafia¹⁸ make their decisions simultaneously.

The objective function of the policy maker is:

$$W = \int_{pf+y}^1 (b-h) db - cp \quad (10)$$

We calculate the reactive functions¹⁹ :

¹⁶ The benefit b is distributed between 0 and 1, but we only consider the case where: $b \geq pf + y \Rightarrow b \in [pf + y, 1]$ as we are only interested in the criminal population.

$$\underset{y}{Max} \pi = \underset{y}{Max} \int_{pf+y}^1 y db$$

$$= \underset{y}{Max} [yb]_{pf+y}^1$$

¹⁷ We carry out the following calculations :

$$= \underset{y}{Max} y - (pfy + y^2)$$

$$= \underset{y}{Max} y - pfy - y^2$$

¹⁸ And not the criminals who observe the probability of being punished and the level of Mafia extortion before making their decision.

¹⁹ The public policy maker maximizes the collective well being by choosing f and p under the condition $0 \leq f \leq F$

We define the lagrangian : $L_{f,p,\lambda} = W + \lambda(F - f)$.

The first order conditions of maximisation of collective well being are :

The function of the government's reaction is written: $p^{RF}F = 2(h - \frac{c}{F}) - 1$ (11)

The function of Mafia reaction is written: $y^{NC} = 1 - (h - \frac{c}{F})$ (12)

The equilibrium intervenes at the intersection of the two right angles. We then proceed with the same type of calculation in the two cases of Stakelberg's equilibrium: the first when the government is the leader and the Mafia the follower and the second when the government is the follower and the Mafia the leader.

6.3. More about equilibrium

The following chart (graph 1.) allows us to situate all the equilibrium in relation one to the other. In abscise, we represent the sanction hope (pf). Ordered, we represent the price of criminal licenses delivered by the Mafia. (y). The curve $P(y)$ describes the reactive function of government and the curve $y(p)$ the reactive function of the Mafia. The reactive functions are read as follows: let us take Cournot's example. From a given level of pf , we find the optimal value of y , then for this y , the optimal value of pf , and so on. We arrive at an

$$\frac{\partial L}{\partial f} = p(h - pf - y) - \lambda = 0$$

$$\frac{\partial L}{\partial p} = f(h - pf - y) - c = 0$$

We know that the equilibrium $\lambda(F - f) = 0$ with $\lambda \neq 0$ thus $f^* = F$

We rewrite then the second condition replacing f by F :

$$F(h - pf - y) - c = 0$$

$$Fh - pF^2 - yF - c = 0$$

$$h - pF - y - \frac{c}{F} = 0$$

We then obtain the reactive function of government p^{RF} to the Mafia reaction.

$$p^{RF}F = h - y - \frac{c}{F}$$

Then we calculate the reactive function of the Mafia. We replace in the second condition y by

$$1 - \frac{pf}{2} \text{ and } f \text{ by } F.$$

We obtain:

$$pF = 2(h - \frac{c}{p}) - 1$$

equilibrium Nash Cournot for the pair (pF^*, y^*) situated at the intersection of the two reactive functions. We notice that the number of criminals is the same in pure occurrence and under a Cournot equilibrium, or $1 - (h - c/F)$. We thus find Buchanan's (1973) conclusion in demanding a criminal payment, meaning graphically, in passing from C to C_n , or the equilibrium of competition of Cournot's equilibrium, the Mafia decreases the cost effectiveness of small criminal activity, the dissuasion increases and public repressive spending can then decrease.

Graph 7.5. Vertical integration between Mafia and small criminals

The values taken by the probabilities of detection of crimes and by the price of criminal licenses can thus be classed: ²⁰

$$0 < p^{st2} < p^{st1} < p^{cn} < p^*$$

$$0 < y^* < y^{cn} < y^{st1} < y^{st2}$$

So, when the prices y of criminal licenses is low, misdemeanors become attractive for delinquents, in the case where the cost of entry onto the criminal market decreases. There are then more criminals present on the market. The government must then increase the probability of detection and sanction. The well being increases as for a constant number of crimes, public spending goes down. By extortion of an entry fee imposed by the Mafia to all delinquents the Mafia makes infractions less attractive and the probability of detection can decrease. Lastly, the Stackelberg game where the Mafia is leader is an extreme case where the presence of the Mafia permits the policy maker to reduce his public spending to zero. The public sector (the State) delegates the totality of its function to the private sector: the Mafia. The Mafia's role is then that of a regulator who makes the spending go down increasing the cost of entry onto the criminal market. Mafia presence permits an increase in well-being.

7. IS ORGANIZED CRIME REALLY A GOOD THING?

It seems shocking to see economists' contributions converge on the idea that the Mafia is finally a positive crime regulation factor. Some consider that the fear of seeing an argument

We replace the second condition pf by $2(h - \frac{c}{p}) - 1$, and obtain the Mafia's reactive function to the public action in a Nash-Cournot game: $y^{NC} = 1 - (h - \frac{c}{F})$

in organized crime in favor of public intervention explains this attitude. Somehow the defense of economic liberalism arrives at a revalorization of private regulation, even if it is Mafia. It seems that over and above quarrels about doctrines, the range of the Chicago models is limited by retained restrictive hypotheses. It is then a too hasty vulgarization of the conclusions of these models that should be the object of criticism rather than the theories themselves.

7.1. Mafia is an evil« per se »

Several remarks justify a certain relativity of the influence of the theses outlining the benefits of Mafia presence. Firstly, it is possible that criminals can re-bill the « honest » population the increase in cost of Mafia extortion, either by increasing their criminal activity, or by making it more efficient. Everything would depend then on the elasticity of the offer of crime and the offer of public policies. If the consequence of Mafia presence is that criminals must be more efficient and public policy reacts more slowly to the citizens' demand for security than the criminals, the Mafia pressure, the well-being will be undermined. Secondly, the Mafia imposes an intrinsic social cost on the collectivity that is not taken into account by the different models we have examined. Suppose, H , this cost, which corresponds to the fact that, even in accepting the hypothesis following which the Mafia only carries out reprehensible acts against criminals, its simple existence constitutes a real unpleasantness for the collectivity.

We can then rewrite the function of social well being, supposing that H is a type of fixed cost, independent of the volume of Mafia activity:

$$W = \int_{pf}^1 (b - h)db - H - cp \quad (13)$$

During the different maximizations that permit the calculation of the different equilibrium, this value H will not intervene, as it disappears with the derivations..²⁰ The optimal fine F does not change, nor do the optimal possibilities of detection. What changes are the conclusions on the eventual well being engendered by the Mafia? In Garoupa's article, the comparison between the levels of well being in competition (note W^*) and in Cournot situation (W^{CN}) is trivial: we integrate the function of collective well being on the same

²⁰ The exponents $St2, St1, CN, *$ refer respectively to the following equilibriums : Stackelberg or the Mafia is leader, Stackelberg or the Mafia is follower, Cournot, competition.

²¹ The derivative of a constant is equal to zero.

number of criminals, only the probability and thus the cost in spending on security varies:

$$W^* = \int_{p^*F}^1 (b-h)db - cp^* = \int_{h-\frac{c}{F}}^1 (b-h)db - cp^*$$

$$W^{NC} = \int_{y^{NC} + p^{NC}F}^1 (b-h)db - cp^{NC} = \int_{h-\frac{c}{F}}^1 (b-h)db - cp^{NC}$$

or, as :

$$p^* \geq p^{NC} \Rightarrow W^{NC} \geq W^*$$

If we integrate the intrinsic damage due to the presence of the H , we must write W^{NC} in the following manner:

$$W^{NC} = \int_{h-\frac{c}{F}}^1 (b-h)db - cp^{NC} - H$$

Then:

$$W^{NC} - W^* = c(p^* - p^{NC}) - H$$

(14)

It is then no longer evident that W^{NC} is superior to W^* : it depends on the relation between H and $c(p^* - p^{NC})$. If H is sufficiently weak ($H < c(p^* - p^{NC})$), we could continue to consider that a situation with Mafia (in Cournot equilibrium) is preferable to a situation without Mafia, as $W^{NC} > W^*$, keeping in mind that this is a situation with non costly extraction, without violence or political corruption...). If H is high, $H > c(p^* - p^{NC})$, the situation with Mafia will be less favorable than that which reigns without Mafia even without violence or corruption. The favorable conclusions to the presence of the Mafia are then seriously in question by the introduction of an intrinsic cost linked to Mafia activity. We find here an example of the difficulties, recurrent in economic modelisation, of generalizing the conclusions dependent on restrictive hypotheses.

7.2. Competition among criminals is not very efficient

It is understood that organized crime is fed by exploitation of illegal markets (drugs, prostitution) It is then tempting to consider that the legalization of certain « vices » would deprive organized crime of resources. De- penalization of victimless crime such as prostitution and bookmaking should. reduce the demand for organized criminal-supplied input and lead to increased self-supply among individual criminal enterprises. But

disorganized and organized crime do not have the same incentive to internalize external costs associated with crime, such as violence, and will tend to over supply “social nuisances” (such as prostitution and gambling). Dick (1998) recalls the example cited by Schelling (1967) of an individual criminal who might be tempted to kill a witness. The Mafia firm might be more reluctant because it will consider the likelihood that its action would increase future cost of doing business by prompting general public outrage and heightened police scrutiny. While an individual criminal’s action could prompt the same outrage and scrutiny, these effects would be spread over the entire criminal population and therefore would not be internalized to the same degree by the actual perpetrator. Because of these differing incentives for the internalization of violence, decriminalization of victimless trade might inadvertently increase the total amount of violence and “social evils” by substituting supply away from organized and towards disorganized crime. On the other hand, because disorganized criminals will usually be less well positioned to exploit economics of scale and scope in undertaking crimes, the pervasiveness and range of victimless crimes might decrease when the involvement of organized crime is reduced. The loss of organized criminal firm’s superior enforcement services, compared to disorganized criminals, could also tend to reduce the aggregate level of crime. As Dick (1998) concludes wisely, whether in the balance decriminalization would increase or decrease criminal activity, is an empirical question. More often, transactional cost theory highlights how policies that are designed to increase business costs within criminal firms may simply alter crime’s organizational structure while having an ambiguous impact on its net supply.

CONCLUSION

Resorting to the use of economic analysis to fight organized crime certainly proves to be fascinating intellectually, but may be somewhat disappointing from an operational point of view. In contrast, in the area of the fight against laundering, intellectual stimulation and help in the decision making go hand in hand. And yet the fabric of the question is the same: how to dose the part of public and private intervention in the fight against a particular form of criminality. This assertion immediately suggests an interrogation: why the private fraction of the contribution to the fight against organized crime was reduced to the action of the Mafia, when the least we can say is that it does not constitute one of the more classic forms of private. It is therefore probable that future economic discussions are oriented around the efficiency of the forms of methods of private action and notably the role of codes of good conduct or auto-regulation of professions at risk by the intermediaries themselves.

Table 7.1. Estimate by the FATF of turnover of retail drug sales (Europe and United States) (Billions of dollars)

Illegal drugs	turnover of retail drug sales
Cannabis	74.7 (United States: 67.2) (Europe: 7.5)
Heroin	12
Cocaine	28,8
Total	124,3 (United States: 106) (Europe: 16,3)

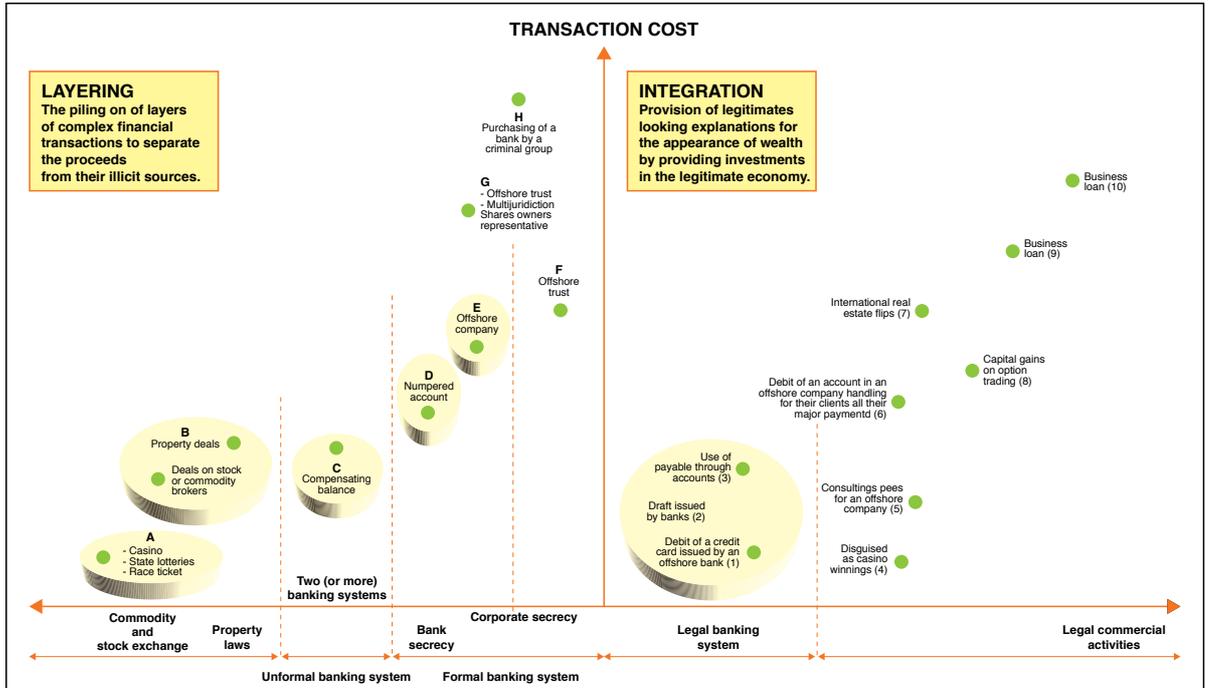
Source: FATF Working Group on Statistics and Methods, Narcotics Money Laundering - Assessment of the Scale of the Problem, 1989. Financial Action Task Force on Money Laundering, report (February 7, 1990).

Table 7.2 The cost of money laundering

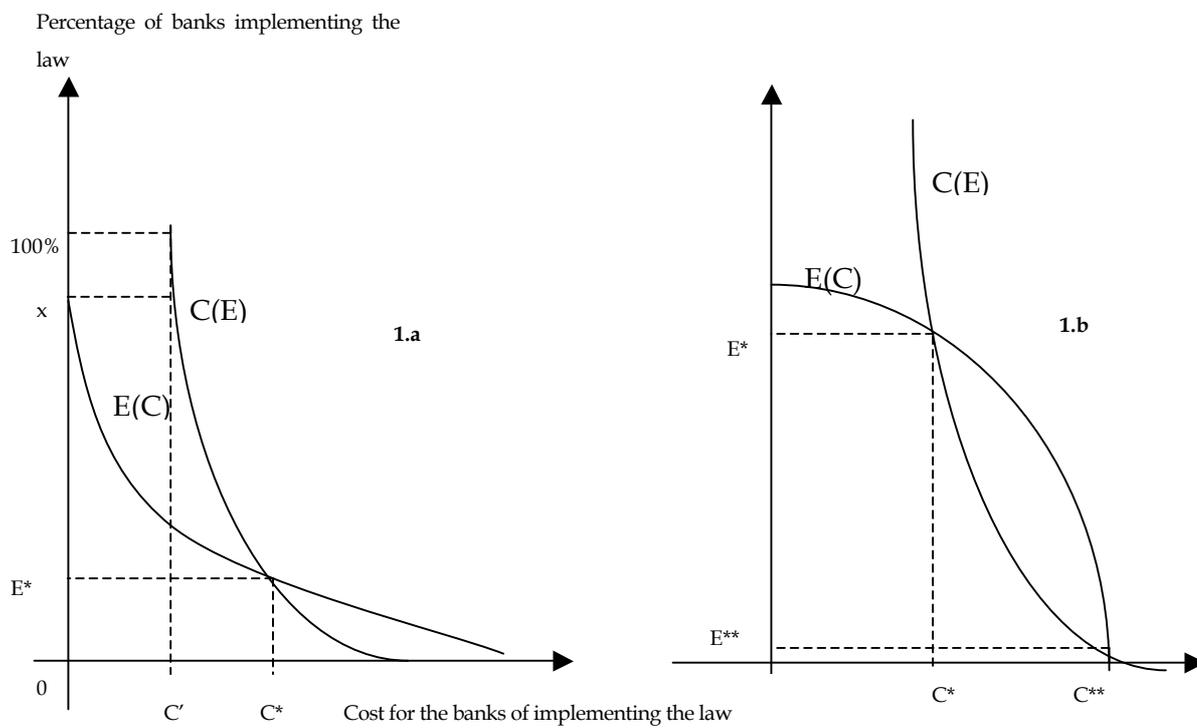
$$\begin{aligned} & \text{TOTAL COST OF MONEY LAUNDERING} \\ & = \\ & \text{MARGINS DEDUCTED BY INTERMEDIARIES} \\ & + \\ & \text{TRANSACTION COSTS} \\ & \text{cost of implementing the strategy} \\ & + \\ & \text{cost generated by risk} \end{aligned}$$

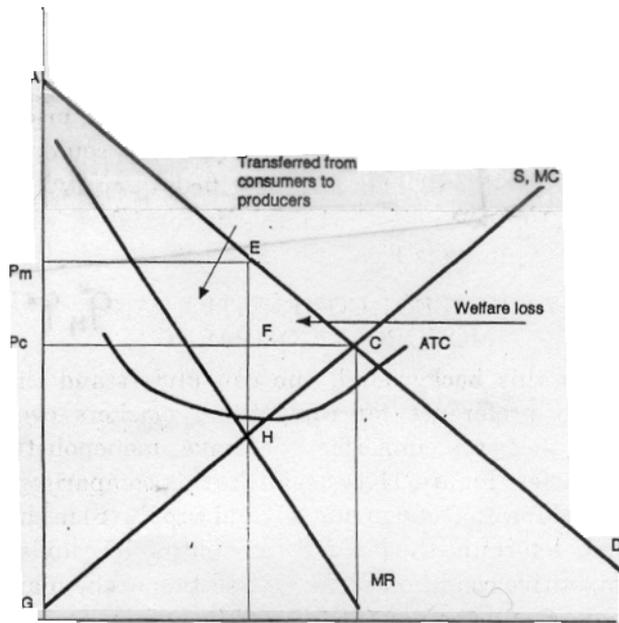
Table 7.3 : The total cost of money laundering

THE TOTAL COST OF MONEY LAUNDERING



Graph 7.4: Conditions for generalization of the standard of good conduct



Graph 7.5: Monopoly versus competition

Graph 7.6. Mafia and individual criminals: a case of vertical integration

