Maine Bureau of Alcoholic Beverages and Lottery Operations

Market Evaluation Analysis of a Potential Discount Liquor Store in Calais, Maine

January 31, 1998

Stafford Business Advisors

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ALCOHOLIC BEVERAGES
AND LOTTERY OPERATIONS

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Executive Summary

A discount liquor store at Calais, Maine, would be located – like the state's current Kittery discount liquor store – on Maine's border with another jurisdiction, with which there exist significant differentials in retail spirits prices. The purpose of siting a discount store at a border location is to capture trans-border sales. However, the market impacts of the two stores would be essentially different. The Kittery store is designed to sell spirits to Maine residents (and visitors), thus recapturing sales from another jurisdiction. A Calais store would be designed to sell to non-residents, i.e. to increase sales to Canadian residents that are currently made in Canada. The Kittery location could be said to be a defensive marketing strategy on the part of the state of Maine, while the Calais location could be said to be an offensive strategy to bring new business to Maine. Moreover cross-border liquor transactions at Kittery are still within the U.S., and are not subject to international customs regulations, duties, and law-enforcement efforts as they would be at Calais.

While a discount store in Calais would undoubtedly be profitable in itself, its net effect on revenues to the State of Maine depend on the balance between the reduced profitability of current sales within Maine and the capture of new sales not currently made within Maine. ? Forecasts of the store's ability to capture sales to New Brunswick that would be illegal under Canadian law are necessarily somewhat speculative. To the extent that the store succeeded in capturing New Brunswick-destined purchases from New Hampshire, and induced additional Canadian residents' purchases for personal consumption, a discount store could generate significant new revenue for Maine. The extent of this would partly depend on factors beyond the state's ability to control, such as the response of Canadian law enforcement, currency exchange rates, and competitive responses from the New Brunswick Liquor Corporation.

It is easier to forecast that a discount store would have a major regional impact on existing retail spirits sales. Existing, full-price sales from both state liquor stores and agency stores in Eastern Maine would be diverted to Calais. The effect of this diversion would be to reduce revenues to the Bureau of Alcoholic Beverages and Lottery Operations (BABLO). On the other hand, extra revenue would be generated from additional sales captured from New Hampshire and especially New Brunswick. In the light of our understanding of current trends in the New Brunswick liquor market, we believe that the incremental margins from such sales could not be guaranteed to offset the loss of margin on existing sales within Maine.

We believe that only a moderate level of incremental trans-border sales would be achieved:

- Legal sales to Canadian visitors (sales within the permitted 40-oz. Canadian duty-free allowance) would be affected minimally as 40 oz. sizes are prohibited by Federal regulation. Maine would find it hard to compete with the border duty-free stores, either on price (especially with 750 ml. or 1 liter bottles) or on convenience, given these stores' locations at the border crossings.
- Sales for personal consumption in violation of Canadian law could see significant increases. However, the willingness of Canadians to import for personal use at any levels of price difference is governed more by perceptions of risk, i.e. the level of enforcement action, than by the relatively small level of savings to be obtained. Existing sales of this type in Maine would, of course, see reduced margins to the state if a discount store were opened.

- Smuggling operations can be broadly divided into two categories:
  1. Large-scale smuggling by professionals, typically by truck at legal border crossings or via tribal reservations straddling the New York – Québec border. The smuggled goods – including cigarettes, beer and wine, drugs and other items as well as spirits – are typically sourced from major U.S. urban areas, where liquor is purchased at non-controlled wholesale prices. It is unlikely that this traffic would be diverted to Calais, both because of the unlikelihood of secrecy and because of the availability of cheaper prices further south. To the extent that this traffic crosses Maine, it goes (for example) from Boston directly to Halifax; it is not likely to be affected by pricing in Calais.
  2. Small-scale, traditional or "informal" smuggling at uncontrolled border points, by small vehicle, snowmobile, boat, etc.: this is the principal smuggling market served by local entrepreneurs in the border region. Such shipments are currently sourced from some mix of New Hampshire, Kittery, and full-price Maine retail outlets. Data showing total Canadian purchases from New Hampshire suggest that even a high capture rate from New Hampshire would not by itself show revenue gains in this category sufficient to offset margin losses in Maine.

It is important to recognize that cross-border traffic in liquor, as in other commodities, shifts from region to region (and commodity to commodity) in response to Canadian federal and provincial law enforcement activities. The establishment of a store perceived to be targeted at Canadian law-breakers would be expected to attract significant law enforcement attention. This need not be an expensive undertaking for the Canadian authorities. As has occurred in the past during strike-related closures of the New Brunswick Liquor Corporation's stores, the occasional, discreetly advertised presence of a Canadian law-enforcement official in a vehicle parked outside a Maine store, whether in a marked or an unmarked car, in uniform or not, officially "on duty" or not, is enough of a deterrent to eliminate Canadian sales for an extended period.

Canadian responses will be critical to the financial success or otherwise of a Calais discount store. One potential response would be the same strategy adopted by Maine in Kittery: local discount pricing in St. Stephen, N.B. Equally, increased law enforcement actions to intercept or to deter cross-border traffic in the Calais region could reduce or eliminate any gains from cross-border sales. We believe that in the absence of Canadian competitive or law enforcement responses, a discount store established in Calais would generate between \$ 2.1 and \$ 2.6 million of annual retail sales, compared to \$ 350,000 at present. For comparison, the Kittery store achieved \$3.5 million in FY 1997 sales prior to its recent relocation. Between 45% and 65% of the projected sales, depending on the scenario chosen, will be diverted from existing Maine full-margin sales. A mid-point between our "optimistic" and "pessimistic" cases suggests an expected initial net loss to the state of \$ 50,000 of combined net profit and sales tax. For the store to show positive returns to the state would require the realization of a number of "optimistic" outcomes in different market segments.

We also find that a Calais discount store would impair the financial health of a number of existing agency liquor stores, notably in Washington County, to the degree that the number of job losses from such stores could offset the estimated 3 additional jobs likely to be created by the enlargement of the Calais store. Most other economic effects are neutral from a state perspective: to the extent that shoppers are encouraged to buy visit Calais and buy other goods there, this represents revenue diverted from other Maine locations. The economic development argument is not, therefore, adequate to support a Calais discount liquor store.

Introduction

Members of the Maine Legislature representing Calais, Maine, have asked for consideration of the replacement of the existing retail State Liquor Store in Calais by an enlarged store, featuring spirits being sold at a price discounted below the current state price. A precedent for this is the existing State Liquor Store in Kittery, Maine, which sells spirits at retail prices designed to compete with those prevailing in the adjacent state of New Hampshire, where spirits sold by that state's Liquor Stores typically are priced around 20% lower than in Maine. This store has successfully recouped a proportion of liquor sales to Maine residents and visitors that were formerly captured by New Hampshire state liquor stores. Existing legislation permits the Bureau of Alcoholic Beverages and Lottery Operations to operate a second discount-price store.

Arguments for a Calais Discount Liquor Store include the following:

- A possible increase in total state liquor sales revenues, and in profits remitted to the state General Fund, based on the capture of significant additional sales;
- Economic development, specifically job creation in a very economically depressed part of the state of Maine;
- Equity with southern Maine residents, who have an opportunity to purchase spirits at Kittery with significant savings over residents of other sections of the state.

This study is limited to discussing the first of these arguments. The study does not address the equity issue, nor issues of public health, public safety, and law enforcement that are related to the volume of spirits sales. We assume that changes in local spirits prices do not in the long term influence the volume of spirits consumption, but that they do influence the point of purchase.

The key economic issue to the state of Maine is whether with a Calais discount store, the state's General Fund would receive revenues greater than are generated today by sales through the current system of retail stores. The principal argument for the Discount Store is that increased sales would offset any losses of margin on existing sales at Calais and at other Maine stores. These increased sales would be expected to be generated by capturing existing sales from New Brunswick and from New Hampshire. We assume that there would be no substitution of spirits for other beverages or other non-beverage purchases.

It is important to note at the outset that there is a fundamental difference (from a state of Maine perspective) between the Discount Liquor Store in Kittery and the proposal for a Discount Liquor Store in Calais. At the risk of stating the obvious, the adjoining jurisdiction to Kittery has significantly lower prevailing prices to those in Maine. In Calais, the adjoining jurisdiction has similar or *higher* prevailing prices for much of the product range. The economic purpose of a discount store must therefore be to capture sales in the foreign jurisdiction, rather than recapture sales to Maine residents. The profitability of a Calais store to BABLO depends on whether this can be done to an extent that would offset the loss of revenue from reduced profits on existing sales in Maine. We analyze the potential gains from cross-border sales, but caution that data on (illegal) cross-border transfers are necessarily less certain than data showing likely losses of revenue from existing sales in Maine.

Retail spirits jurisdictions

Overview: Liquor Sales in Maine, New Brunswick and New Hampshire

Maine and its neighbors to the East and West, the state of New Hampshire and the province of New Brunswick, are all jurisdictions in which the state or province holds a monopoly of legal distribution of distilled beverages or "spirits". In the United States, the term applied to such jurisdictions is "control states", the number of which has been slowly falling with liberalization of the industry but of which there are still 18 (plus Montgomery County, Maryland) in 1998. In Canada, every province except Alberta maintains a monopoly on distilled spirits distribution.

Within the "control states" and provinces, there is a variety of models of distribution of alcoholic beverages. Thus Maine, New Brunswick and New Hampshire each have somewhat different systems of retail distribution. Key characteristics of each are as follows:

TABLE 1. Liquor sales regimes by jurisdiction

	Maine	New Hampshire	New Brunswick
State/provincial agency:	Maine Bureau of Alcoholic Beverages and Lottery Operations	New Hampshire Liquor Commission	New Brunswick Liquor Corporation
Agency monopoly covers:			
Beer	No	No	Yes
Wine	No (1)	Yes	Yes
Spirits	Yes (1)	Yes	Yes
Off-premise retail sales from:			
State/province owned stores	28	72	51
Private agency outlets	192	2	69
Agency sets uniform pricing:	Yes (2)	Yes	Yes
Sales to on-premise licensees:	At retail	At retail	Discounted
Legal age to purchase alcohol:	21	21	19

NOTE:

(1) Maine allows the sale of fortified wines at both liquor stores and at beer and wine retailers. This is the only overlap between categories in any of the three jurisdictions.

(2) Maine's uniform pricing rule has one exception, the Kittery discount liquor store. The Commission is permitted to reduce the retail price in two state liquor stores below the uniform price level (28-A M.R.S.A. 403(1)(1990 and Supp. 1993); despite attempts to have a second discount store designated in Saco, this has not been implemented. From Sept. 1995 to July 1997, agency liquor stores (but not state liquor stores) were permitted to increase (but not decrease) their retail prices above the BABLO-determined price.

In each of the three jurisdictions, the state or provincial agency determines what spirits may be sold and at what price. Also in each case, the agency profits, based on markup less operating costs, are contributed to the state or province's general revenue funds. In Maine, the average markup (at stores other than Kittery) was until 1996 governed by a state law requiring an average markup of at least 65% over the state's wholesale cost. Subsequently, overall pricing has been governed by a budgetary requirement for a certain level of return to the state's general fund; this has allowed BABLO greater flexibility in pricing, but overall average markups have not significantly changed.

In addition to agency markups, Maine and New Brunswick both collect sales taxes at the point of sale, while Maine also adds a bottle deposit of 15 cents on spirits containers. Maine collects a sales tax of 6%, while New Brunswick collects a Harmonized Sales Tax (HST) combining the Provincial Sales Tax (PST) and the Canadian federal Goods and Services Tax (GST) totaling 15% on spirits, divided between a federal share of 7% and a provincial share of 8%. The Maine tax is added to the display price of the liquor at all stores except Kittery, where it is included within the display price. The New Brunswick HST is included within the display price of liquor in that province. New Hampshire levies no sales tax.

The effects of different state and provincial policies regarding the sale of alcohol, and different strategies for raising revenue from alcohol sales, have led to dramatic retail price differentials between the three jurisdictions. Examples of these price differentials are shown in Tables 2 and 3 on the following page. The examples chosen reflect taste differences on either side of the Maine – New Brunswick border. Thus Canadian whiskeys are the largest-selling brands in New Brunswick, while vodka and coffee brandy are the largest sellers in Maine. The tables show how price differentials between Maine and New Brunswick depend on the origin of the brand. Canadian spirits, not surprisingly, are slightly cheaper in Canada than in Maine (once Maine's 6% sales tax is taken into account). Conversely, U.S. brands are significantly more expensive – though some U.S. brands (notably low-priced brands) are not available. Perhaps more surprising is that many offshore imports, especially premium European brands, are significantly cheaper in New Brunswick than in Maine. These differentials reflect Canadian and U.S. import tariffs, as well as freight and distribution channel costs.

Two elements in New Brunswick's pricing policy are important to consider in making cross-border comparisons. First, New Brunswick's pricing policy does not pass on significant per-ounce savings to purchasers of larger bottles, and indeed 1.14 liters (not 1.75 l. as in Maine) is the largest size stocked for most brands. This makes Maine relatively cheaper for larger sizes. Secondly, New Brunswick has a higher price "floor" for low-end brands; thus, for example, non-premium or "bar brand" whiskeys are priced at less than a dollar a liter below premium or nationally advertised brands. The price differential between Maine and New Brunswick, therefore, is greatest in large sizes of low-price liquor of U.S. origin.

There is an additional, non-governmental, legal channel for retail sales of spirits in the region, that of duty-free sales at the U.S. – Canadian border. At the St. Croix river bridge crossing between Calais, Maine, and St. Stephen, N.B., for example, there are duty-free stores on both sides of the border which retail liquor to persons crossing the border. On the Canadian side, the store selling to travelers entering Maine offers a range of premium-brand spirits priced at approximately 10% below the price levels in New Hampshire, or 30% to 35% below Maine retail prices. On the U.S. side, the Ammex store selling to travelers entering Canada sells a similar range of premium-brand spirits priced at levels geared to prevailing prices in New Brunswick, typically at prices ranging from 55% to 65% of New Brunswick prices. Duty-free spirits prices per ounce are similar to or slightly below New Hampshire and Kittery 1.75 liter prices, but the border stores sell exclusively in 40-ounce (one imperial quart) sizes. These meet the legal Canadian allowance of 40 oz. per traveler returning after a 48-hour or longer stay in the U.S.. This size, equal to 1.14 liters, is not a permitted container size for domestic sale in the U.S. under Bureau of Alcohol, Tobacco and Firearms regulations.

Other than dedicated sizes of spirits bottles, the Calais duty-free store benefits from:

- Convenience, adjacent to the border crossing;
- Legality, and the consequent expectation of Canadian customs officers (by anecdotal report) that qualified travelers will stop at the store and then show their purchases to Canadian customs;
- The availability of a full range of high-duty commodities, from wines to chocolates, as well as sprits.

The duty-free operator in Calais, Ammex, operates over 20 duty-free stores along the U.S.-Canadian border from Maine to Washington State. Its parent company, Duty Free International Inc., was acquired in 1997 by BAA PLC, formerly the British Airports Authority, the world's largest duty-free sales operator. Trade publications and the profitability of Duty Free International prior to its acquisition suggest that the duty-free operations could afford to lower their prices significantly in the event of direct competition from within Maine.

TABLE 2. Price comparisons between retail sales stores, January 1998.
Basis: one 750 ml. (25.4 oz.) bottle ('one fifth') of representative brands.
[NOTE: for comparison purposes, Ammex Duty Free 1.14 liter bottles have been converted on an equivalent per-ounce basis to show a price per 750 milliliters.]

	Maine wholesale cost	Maine retail store price (1)	Kittery, Me., and New Hampshire	Ammex Duty-Free, Calais, Me.	New Brunswick (at C$1 = US$0.70) (2)
CANADIAN BRANDS					
Canadian Club	$ 6.81	$ 13.34	$ 9.99	$ 8.06	$ 13.01
Seagrams VO	$ 7.01	$ 13.56	$ 9.99	$ 8.06	$ 13.01
U.S. AND PUERTO RICAN BRANDS					
Jim Beam	$ 5.62	$ 11.23	$ 8.99	$ 6.74	$ 13.24
Allen's Coffee Brandy	$ 4.73	$ 9.53	$ 6.99	Not sold	Not sold
Popov vodka	$ 3.19	$ 7.41	$ 4.99	Not sold	$ 12.57
Bacardi Gold rum	$ 5.31	$ 10.60	$ 7.99	$ 8.06	$ 12.54
PREMIUM IMPORT BRANDS					
Bailey's Irish Cream	$ 11.56	$ 23.31	$ 15.99	$ 12.66	$ 18.06
Absolut 80° vodka	$ 9.85	$ 18.01	$ 13.99	$ 9.84	$ 13.69
Beefeater gin	$ 8.54	$ 17.58	$ 12.99	$ 9.05	$ 13.16
Mount Gay rum	$ 8.56	$ 15.89	$ 12.99	$ 9.83	$ 14.21

(1) Maine retail price includes 6% sales tax but excludes the 15 cents/bottle deposit. At the Kittery discount store, both tax and deposit are rolled into the advertised price in order to compete directly with New Hampshire.
(2) New Brunswick posted price includes 15% HST.

TABLE 3.
JANUARY 1998 RETAIL PRICE INDEX
(Comparing per-ounce prices; Maine 750 ml. bottle = 100)

	Maine agents and stores		New Hampshire and Kittery stores		Calais Duty-Free store	New Brunswick stores
SIZE BASIS:	**750 ml.**	**1.75 l.**	**750 ml.**	**1.75 l.**	**1.14 liters**	**1.14 liters**
Canadian brands	100.00	72.58	74.30	55.06	60.00	96.73
U.S. brands	100.00	76.96	74.70	65.18	67.80	127.03
Import brands	100.00	75.17	74.82	60.15	55.33	79.05

Illegal trans-border shipments are encouraged where major price differentials exist between jurisdictions. This applies as much to sales within the United States as between the U.S. and Canada. Legally, Maine residents are permitted to bring 1 gallon of spirits into the state for personal consumption, following each visit to another state. In practice, the impossibility of effective enforcement was a major factor behind the opening of the Kittery discount liquor store in 1973.

By definition, illegal liquor sales and trans-border shipments are not reported and therefore statistics on them are at best estimates. However, using data from law enforcement agencies and from New Hampshire surveys of the zip codes of credit card purchasers, a partial picture of trans-border liquor traffic can be assembled. Estimates of trans-border liquor sourcing are calculated in the following sections on the New Brunswick and Maine liquor markets.

The general magnitude of cross-jurisdiction traffic is suggested by the comparative data on per-capita sales by jurisdiction in Table 3. While New Hampshire appears to have excessive "consumption" per capita, there is no evidence that spirits consumption differs greatly between that state and its neighbors (unlike certain jurisdictions with very high and very low percentages of tourists, such as Nevada or North Dakota). The reality is that New Hampshire's excess represents sales to residents of other jurisdictions, as confirmed by an analysis undertaken by New Hampshire in 1993-4 to collect zip codes of residence of customers. Massachusetts is the largest out-of-state market for New Hampshire sales, followed by Maine and Canada.

TABLE 4:
Reported distilled spirits sales per capita by jurisdiction, 1996

Jurisdiction	Total population	Spirits sales, gallons	Gallons per capita	Gallons per legal adult
U.S. TOTAL	259,000,000	326,105,000	1.26	1.78
MAINE	1,241,000	1,763,658	1.42	1.93
NEW HAMPSHIRE	1,148,000	4,181,484	3.64	5.07
VERMONT	587,000	756,812	1.29	1.80
NEW BRUNSWICK	738,000	(1) 744,460	1.01	1.30

(1) New Brunswick sales are for the year ending 3/97

New Hampshire sales to out-of-state customers were estimated by the 1993-94 study to be between 46% and 59% of total New Hampshire retail store sales, depending on seasonal factors. The estimate was also affected by the fact that almost 10% of customers would not divulge their zip code, although it is assumed that a high percentage of these were non-New Hampshire residents.

New Brunswick sales must be adjusted for a number of factors in order to fairly compare the province's consumption with New England states.

- Alcohol can legally be purchased at age 19 in New Brunswick. The 19 to 21 age group has a high consumption rate of all types of alcoholic beverage.
- Price differentials compared to the New England states are highest at the low-price end of the spirits market. Per capita New Brunswick incomes are lower than Maine incomes, suggesting greater low-price brand sales, but provincial policy upholds a higher 'floor' level of pricing and compresses the price ratio between "standard" and "premium" brands. As an example: the price ratio between 750 ml. bottles of Popov and Absolut 80° vodka is 1: 1.09 in New Brunswick compared to 1: 2.43 in Maine. New Brunswick pricing in effect penalizes low-price brands.
- Smuggling is estimated by the Association of Canadian Distillers to capture around 25% of total spirits consumption in the Atlantic Provinces overall, and a higher rate in New Brunswick – estimated at up to 30% of legal sales. Smuggling is assumed to focus on the low-price end of the product range, given the comparative advantage of premium brands in New Brunswick.
- New Brunswick's border location also facilitates purchases in Maine by Canadian residents for personal use (not for re-sale), which may be either legal (a 40-oz. allowance after 48 hours in the U.S., usually purchased from border duty-free stores) or illegal.

Adding estimated illegal and duty-free consumption to the New Brunswick total produces a per capita consumption level of approaching 1.5 gallons. Adjustments to Maine or Vermont sales data for presumed cross-border transfers suggest similar levels of total consumption. Note that this regional level of consumption is somewhat higher than the U.S. national average, though it is consistent with other northern states. Consistency of consumption implies that reduced pricing on spirits in a part of the region is not likely to affect actual consumption levels, but simply to change the point of purchase.

The Spirits Market in Eastern Maine

Maine has been a "control state" since the repeal of prohibition in Maine in 1934. Initially, Maine established a state monopoly on wine and spirits sales but allowed regulated private distribution of beer. Subsequent developments have included the transfer of table wine from the state to private beer and wine distributors, and the closure of significant numbers of state liquor stores (and their replacement by agency stores) in 1992 and 1994. Maine has largely retained uniform spirits pricing across state and agency stores, despite an experiment in 1995-97 when agency stores were briefly permitted to increase prices above the state price 'floor'. The major exception to this has been a discount state liquor store in Kittery, first opened (at Dansk Square) in 1973. This store was relocated further away from the Maine Turnpike in 1988, with a negative impact on its sales; and relocated back to Dansk Square (within sight of the Turnpike) in September 1997. The law providing for discount liquor stores requires that sales to on-premise licensees from a discount store must be at the non-discounted uniform price; there is therefore no incentive other than convenience for a licensee to shop at the Kittery store.

The population of eastern Maine is small and scattered by the standards of the southern and central parts of the state. We consider that a discount liquor store in Calais, with similar pricing discounts to the store at Kittery, would have some appeal to Maine customers within a 100-mile radius, based on evidence from New Hampshire and Kittery. There are a number of differences between Calais and Kittery, though, that should be noted.

- The Maine Turnpike acts as the principal artery for communication between all of Maine and the rest of the United States. The average annual daily traffic (A.A.D.T.) along I-95 at Kittery is in excess of 60,000 vehicles. Kittery is therefore a convenient stop for a large numbers of Maine residents daily. This compares with a count on U.S. Route 1 on the west side of Calais, adjacent to the current state liquor store, of 9,060 in 1994. A more relevant count of through traffic may be one also taken in 1994 east of the junction of U.S. 1 and Route 191 in Baring, of 8,140, which would exclude local traffic within the town of Calais although it would still include commuters to the Woodland mill. The 1994 count at the international bridge in Calais was 3,330.
- Secondly, the Kittery area has evolved as a major "factory outlet" retail center, acting as a destination for shoppers from distant parts of Maine (as well as from other states) who can then take advantage of the state liquor store. Calais has no comparable attractions to bring visitors from other parts of Maine, so that the store would be expected to be the principal or sole purpose of a trip for many Maine buyers.
- The local population served by the Kittery store, defined as the population in Maine towns within 15 miles of the store, is approximately 49,000 (1990 Census) and growing, compared to a Calais regional population of approximately 8,000 (and falling).
- On the other hand, a discount liquor store at Calais would have no competition nearby comparable to New Hampshire outlets on I-95 close to the Kittery store. Consumers determined to purchase cheaper spirits would have no economic alternative to a Calais store.
- Calais has undergone major changes in its retail environment in the last five years with the opening of a Wal-Mart store, the decline of its traditional main street shops, and fluctuations in cross-border shopping for such items as clothing and hardware, as the value of the Canadian dollar and Canadian sales taxes have changed. In 1996, Calais taxable sales were only $69 million, compared with a 1991 high of $99 million.

Based on experience with the opening of the Kittery discount liquor store in 1973-74, a Calais store could be expected to see an initially high rate of in-state sales capture, in response to intense publicity and public curiosity (not to mention large initial "stock-up" purchases). Kittery's sales went from less than $500,000 to $6.5 million in its first year, but then slowly declined. Kittery sales in FY 1997 were only $3.5 million, although these are expected to recover in FY 1998 with the move in September 1997 closer to the Maine Turnpike.

Calais is approximately 300 miles from Kittery, with the mid-point in travel time being around Belfast on U.S Route 1 or around Newport on I-95. Assuming that Calais and Kittery had similar pricing, we nevertheless believe that the Kittery store would have a much greater radius of attraction. Because of the lack of Maine-resident through travelers and the lack of other shopping attractions at Calais, we believe that very few customers from, for example, the Bangor area would make a special trip to Calais (a round trip of 200 miles or nearly 4 hours) to buy spirits. If strict economic logic were to be applied to such a trip (although bargain hunters rarely apply such logic), a spirits purchase of at least $200 would have to be made for the price savings to offset the trip cost, even not including the value of the time involved. On the other hand a Bangor customer, even if not traveling to Boston or other points beyond Maine, could combine a shopping trip to the Kittery store with stops en route at, for instance, the Maine Mall, Freeport, or Kittery outlets.

We conclude that the major displacement of existing Maine liquor purchases to Calais would therefore come from areas east of Bangor, in Washington County and that part of Hancock County from Ellsworth east. The first-year sales impacts on state stores and are detailed in Table 4; these store locations are also shown on Map 2, "Area of capture of existing sales". In Hancock County, we consider that only stores in Ellsworth and further east would be significantly impacted. Ellsworth sales will be impacted, in part, because of that town's role as a shopping hub for Washington County. However nearly 40% of the region's total sales come from south-east of Ellsworth, in Trenton and on Mount Desert island, where we estimate that a small impact – just 5% of sales - will be felt. This might come from the capture of occasional large-scale purchases (for parties, to stock summer homes, etc.). In Washington County, we would expect these sales transfers to result in job losses of between 3 and 4 full-time positions, at the agency stores in the immediate Calais area. It is unlikely that other agency stores would see permanent job losses, but their overall revenues and profits would be expected to fall in proportion to the loss of spirits sales.

Note that we assume that initial rates of capture may be higher than in subsequent years, as the novelty effect, curiosity and the free publicity from widespread Maine media attention draw customers who may subsequently make more conservative calculations about the costs and benefits of a trip to Calais.

TABLE 5.
OFF-PREMISES SPIRITS SALES IN HANCOCK AND WASHINGTON COUNTIES

Locations expected to be impacted by Calais proposal:	Miles from Calais	12 months, July 1996 to June 1997		6 months, July 1997 to Dec. 1997	
		Bottles	Dollars	Bottles	Dollars
HANCOCK COUNTY- east					
Ellsworth State Liquor Store	115	61,306	$ 635,134	50,134	$ 350,940
Shop'n'Save, Ellsworth	115	52,380	$ 578,918	26,238	$ 301,047
Dunbarn's, W. Sullivan	108	15,520	$ 120,466	6,506	$ 53,219
Chipman's, Gouldsboro	97	10,343	$ 88,191	5,106	$ 45,217
Trenton and Mt Desert Island	120+	182,756	$ 2,090,578	97,155	$ 1,166,879
WASHINGTON COUNTY					
Calais State Liquor Store	0	40,762	$ 328,546	26,615	$ 183,789
Irving, Calais	0	33,877	$ 248,717	14,777	$ 113,960
Foodliner, Woodland	8	20,549	$ 186,981	8,668	$ 80,361
R & M IGA, Eastport	29	14,141	$ 118,247	6,269	$ 55,757
Jones Store, Lubec	53	26,707	$ 181,936	1,029	$ 7,551
Triangle AG Store, Pembroke	28	16,156	$ 124,457	8,872	$ 72,759
A&A Causeway, Machias	58	23,009	$ 164,197	353	$ 2,367
Gay's SNS, Machias	58	22,176	$ 225,358	17,802	$ 178,545
Delia's Grocery, Columbia	73	26,634	$ 194,514	14,883	$ 119,639
Sweeney's, Milbridge	87	6,269	$ 57,475	2,867	$ 26,733
Milbridge Mkt., Milbridge	87	16,708	$ 109,798	7,595	$ 54,841
Stewart's Grocery, Jonesport	77	14,974	$ 98,388	7,104	$ 47,679
Daggett's, Topsfield	34	3,517	$ 28,928	1,449	$ 12,947
SUBTOTAL FOR COUNTY		265,479	$ 2,067,542	118,283	$ 956,928
TOTAL: WASHINGTON plus EASTERN HANCOCK		587,784	$ 5,580,829	303,422	$ 2,874,229

NOTE: (1) Calais and Ellsworth state store numbers are retail only, excluding licensee and agency sales. Agency store sales shown do include some licensee sales; however typical eastern Maine agency sales to licensees are small because of limited product line selection.

The off-premises spirits market from Ellsworth east is approximately an $5.5 million annual market. If a discount liquor store is opened in Calais, we estimate that in the first year this would capture around $ 1.4 million of sales or 25% of this market, comprised as follows:

1. 100% of the spirits sales currently done at the existing Calais state store, the Irving agency store (which is within sight of the state store), and the Woodland agency. This amounts to around $765,000 of annual sales.
2. We further assume that a price differential similar to that between Kittery and other stores will see the store attract 50% of the total sales volume of three agencies in that part of Washington County for which Calais is the primary shopping center, roughly from Eastport to Topsfield. This area is shown on Map 2 as the 'Calais Primary Retail Market'. Capture in this area amounts to $ 140,000 of annual sales.
3. We estimate a 25% rate of capture from stores in the area including Lubec and Machias, which are within the market radius of the Calais Wal-Mart store and the employment radius of the Woodland mill. Captured sales from this area amount to $ 140,000.
4. Further west, towards Ellsworth, we estimate a 15% capture rate from agency stores. Sales in Ellsworth itself will be impacted by its role as a shopping hub for areas further east, and

we expect a 10% capture rate from the Ellsworth state liquor store. Captured sales from these stores amounts to around $240,000. These areas with lower rates of impact are shown on Map 2 as the 'Calais Secondary Market'.

Only small amounts of additional diversion will occur further away from Calais. This might include:

5. In the Trenton-Bar harbor area south of Ellsworth, we forecast a 5% capture rate, based on the assumption that irregular but major purchases, for example for parties or to stock a summer cottage or camp for the season, would warrant a trip to Calais. This amounts to around $105,000 of annual sales.
6. Some existing, small-scale smuggling operations in northern Maine might be expected to buy in Calais rather than locally in Aroostook. The round-trip to Calais would be economic where a round-trip to Kittery or New Hampshire would not. We assume a diversion of another $100,000 of sales from Aroostook County locations, especially Houlton (90 miles from Calais).
7. Sales to Maine residents of other regions of the state are only likely to be made to people who have other reasons to travel through or near Calais. We estimate such sales "captured" from all other full-price locations to be only around $100,000 annually.
8. Other sales captured by the store would unquestionably include some by eastern Maine residents who currently buy in Kittery while traveling south. Such captures, which we estimate at $50,000 annually, we assume would have no revenue impact on the system – the same revenue to the state would occur from a sale at Calais or at Kittery.

The total capture from within Maine, then, is likely to be exceed $1.4 million per year, of which 90% would be currently full-price sales. The effect on net revenue of this level of capture is shown in Table 5.

The rates of average net profit are based on FY 1997 net profits earned by BABLO. All discount store sales are assumed to have an average list selling price 20% below full retail price, with 6% sales tax and 15 cents per container bottle deposit absorbed into the list selling price as at Kittery today. The net profit percentage shown for the state stores in Calais and Ellsworth, 34% as opposed to those stores' reported FY 1997 net profit percentages of 29.86% and 32.73% respectively, is an attempt to offset the depressing effect on margins of those stores' discounted wholesale sales, which greatly exceed the retail sales at these locations today. The presumed 20% net profit from retail sales at a Calais discount store compares with 19.34% net profit at Kittery in FY 1997, where wholesale sales are relatively small.

This analysis of off-premise retail sales 'capture' suggests a net loss of revenue to the state of $376,470, of which $ 358,050 is reduced BABLO net profit and $18,420 is reduced sales tax receipts. Thus on the assumption of similar discounted pricing to that of the Kittery store, a Calais discount store produces a dramatic loss of revenue from sales diverted from full-price outlets in Maine. Sales captured from Kittery are assumed to be revenue-neutral to the state.

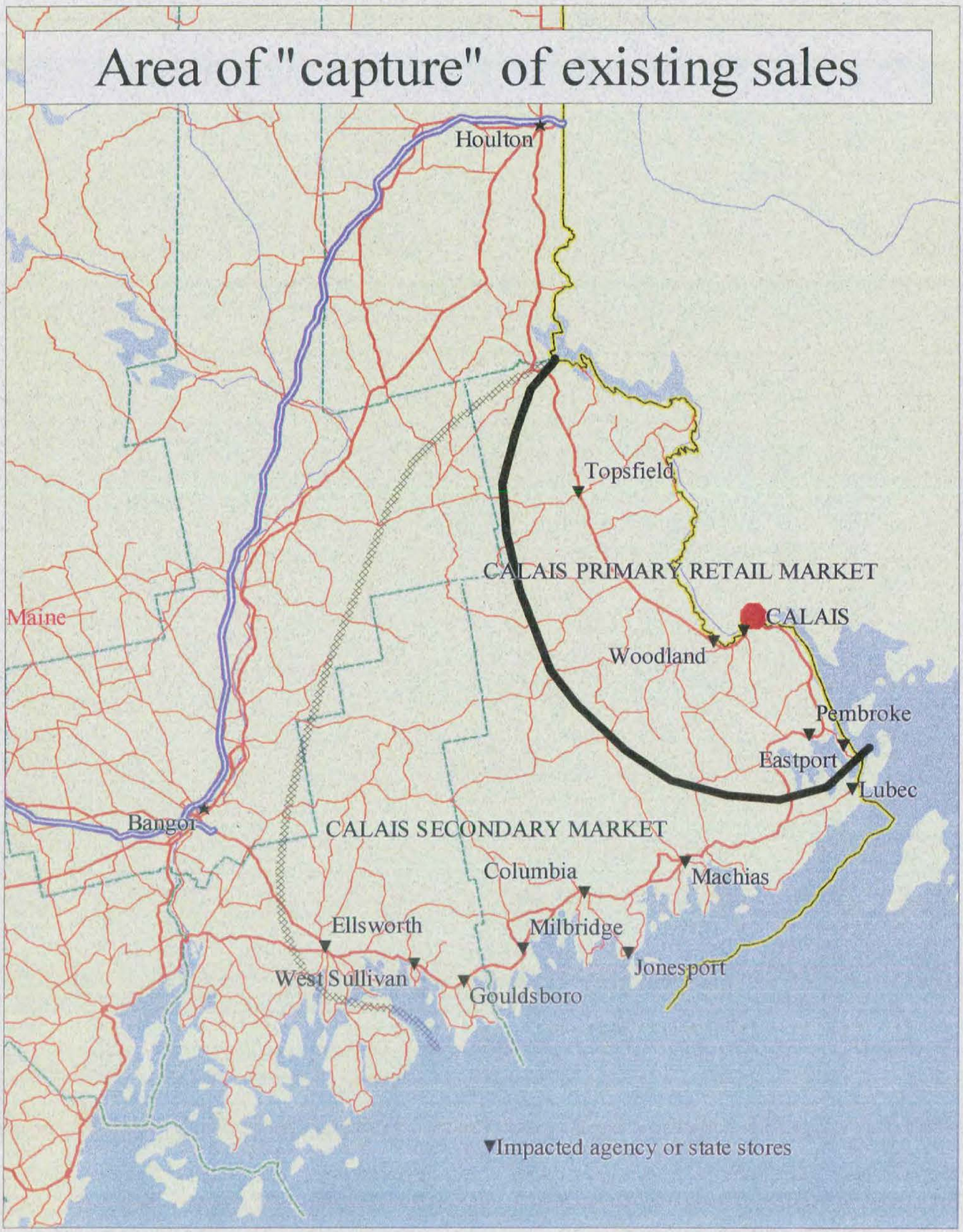
Area of "capture" of existing sales
Houlton
Topsfield
CALAIS PRIMARY RETAIL MARKET
Maine
CALAIS
Woodland
Pembroke
Eastport
Lubec
Bangor
CALAIS SECONDARY MARKET
Columbia
Machias
Ellsworth
Milbridge
Jonesport
West Sullivan
Gouldsboro
▼Impacted agency or state stores

TABLE 6.
IMPACT OF A CALAIS DISCOUNT STORE ON EXISTING MAINE SPIRITS SALES
(First 12 months of discount store operation)

Off-premise retail spirits sales captured	Estimated annual sales $ captured	Current average Maine net profit %	Current Maine net profit $	Current Maine Sales Tax at 6%	Expected Calais sales at discount price, year 1	Expected Calais Net Profit at 20% of sales (1)	Expected Maine Sales Tax at 6% (1)
CURRENT FULL PRICE SALES							
100% of Calais state store retail	$ 350,000	34%	$ 115,500	$ 21,000	$ 280,000	$ 56,000	$ 16,800
100% of Calais/Woodland agency	$ 410,000	41%	$ 168,100	$ 24,000	$ 328,000	$ 65,600	$ 19,680
50% of other Calais retail market	$ 140,000	41%	$ 57,400	$ 8,400	$ 112,000	$ 22,400	$ 6,720
25% of Lubec and Machias sales	$ 140,000	41%	$ 57,400	$ 8,400	$ 112,000	$ 22,400	$ 6,720
15% between Machias and Ellsworth	$ 180,000	41%	$ 73,800	$ 10,800	$ 144,000	$ 28,800	$ 8,640
10% of Ellsworth state store retail	$ 60,000	34%	$ 20,400	$ 3,600	$ 48,000	$ 9,600	$ 2,880
5% of Trenton/Bar harbor region	$ 105,000	41%	$ 43,050	$ 6,300	$ 84,000	$ 16,800	$ 5,040
Aroostook County sales	$ 100,000	(2) 38%	$ 38,000	$ 6,000	$ 80,000	$ 16,000	$ 4,800
All other Maine full-price sales	$ 100,000	(2) 38%	$ 38,000	$ 6,000	$ 80,000	$ 16,000	$ 4,800
SUBTOTAL:	**$ 1,585,000**		**$ 611,650**	**$ 94,500**	**$ 1,268,000**	**$ 253,600**	**$ 76,080**
- of which: for consumption in Me.	*$ 1385,000*		*$ 534,650*	*$ 82,500*	*$ 1,108,000*	*$ 221,600*	*$ 66,480*
for consumption in N.B.	*$ 200,000*		*$ 77,000*	*$ 12,000*	*$ 160,000*	*$ 32,000*	*$ 9,600*
CURRENT DISCOUNT SALES							
Kittery store sales to E. Maine	$ 50,000	20%	$ 10,000	$ 3,000	$ 50,000	$ 10,000	$ 3,000
Kittery store sales to New Brunswick	$ 100,000	20%	$ 20,000	$ 6,000	$ 100,000	$ 20,000	$ 6,000
COMBINED TOTAL	**$1,735,000**		**$ 641,650**	**$103,500**	**$ 1,418,000**	**$ 283,600**	**$ 85,080**
Combined state revenues			$ 745,150			$ 368,680	

NOTES:
(1) Discount store net profit reflects selling price reduced by 20% versus full-price stores (not versus Kittery and New Hampshire). Sales tax (based on price discounted by an average 20%) and 15 cents/bottle deposit are absorbed into discounted selling price. Calais net margins are assumed to be similar to Kittery's, i.e. 20%.
(2) Blended average of state store and agency margins.

It is possible that, once the initial "curiosity" effect passes, in-state sales capture rates may decline from the levels suggested above. We would expect a decline to between 70% and 90% of the initial year's capture rate over the subsequent two years, followed by a leveling out. The decline would primarily be in the secondary sales region further away from Calais – i.e. from Machias to Ellsworth. This decline might be lower if other retail sales 'magnets' open in Calais in proximity to a discount liquor store and in response to its opening, thus giving more distant customers additional reasons to justify a trip. However, whether or not the initial capture rate falls, the loss of full-margin sales represents a major negative impact to the state of Maine.

The ability of the state to offset this loss of revenue depends on the ability of a Calais store to capture new purchases currently made outside Maine – specifically, from New Hampshire and Canada. The next section of this report addresses sales to Canada. Regarding New Hampshire, the published 1993-94 New Hampshire revenue studies reported that Hancock County represented 3%, and Washington County 1%, of New Hampshire sales to Maine residents. If all New Hampshire sales to Maine residents were of spirits (and included no wine whatsoever), and if all of the 4% sold to the two counties were captured, this represents maximum annual sales of $280,000. We think that a realistic estimate of the New Hampshire capture effect, correcting for wine and for some continuing "curiosity" and habit visits to New Hampshire stores, is in a range from $100,000 (low case) to $200,000 (high). At the latter level, over 70% of such annual sales to eastern Maine residents would be captured.

The Spirits Market in the Maritime Provinces and Cross-Border Traffic

The four Provinces of Atlantic Canada – New Brunswick, Prince Edward Island, Nova Scotia and Newfoundland – have a combined population of approximately 2,333,764 (1996 census), of which 738,133 live in Maine's neighbor, New Brunswick. The city of Saint John, the largest city in the province with a population of 125,705, is only 66 miles from Calais, and the capital Fredericton (the third-largest city at 78,950) is only 78 miles from Calais, compared to Bangor's distance of 98 miles (and smaller population). Within a 100-mile radius of Calais, there are approximately 380,000 people in New Brunswick, compared with approximately 115,000 people in Maine – nearly half of whom are in the greater Bangor area. This relative proximity of Canadian cities and populations exerts a major magnetic pull on the economy of eastern Maine.

Each of the Maritime Provinces operates a liquor monopoly which controls the wholesale distribution of beer, wines and spirits. In New Brunswick, the New Brunswick Liquor Corporation (NBLC) is managed as a private corporation but is charged by its shareholder, the province, to maximize revenue to the province's general fund, consistent with provincial policies on health and safety aspects of alcohol consumption.

The New Brunswick Liquor Corporation's revenue in the financial year ended March 31, 1997, was C$ 235 million (US $ 164.5 million), of which 28% (US $ 43 million) was from spirits sales, compared to 62% from beer sales and the balance from wine and "other beverages" (primarily coolers). The NBLC returned a net profit of C$ 85 million (US $ 59 million) to the Province in FY 1997, plus collecting C$18 million in Provincial Sales Tax and C$12 million in federal General Sales Tax (note that this was prior to the adoption of Harmonized Sales Tax or HST). The NBLC's on- and off-premise spirits sales amounted to 2.818 million liters, or 744,000 U.S. gallons.

Nationally in Canada, liquor smuggling is a major problem. The 1997 report of the federal Auditor-General suggested that, while revenue collected from distilled alcohol amounted to C$366 million in 1996, liquor equivalent to between $150 and $200 million of revenue was sold on the black market, or between 30% and 36% of all spirits sales. Law enforcement, both of cross-border smuggling and internal compliance with liquor regulations in New Brunswick, falls heavily upon the Royal Canadian Mounted Police (RCMP) in the absence of a provincial police force in New Brunswick. While a number of New Brunswick cities have their own police forces, other major cities (such as the province's second city, Moncton) have followed the example of the province itself and closed down their independent police force in favor of protection by the federal RCMP. The RCMP and Canada Customs are therefore the agencies primarily responsible for liquor law enforcement. Neither publish details of their rates of confiscation or their estimates of total illegal liquor traffic.

Discussions with the NBLC and with the Association of Canadian Distillers (ACD) suggest that they are aware of no publicly available, detailed study of smuggling in the Maritimes that has been done in the last decade. Nationwide, Canadian studies have focused on the large markets – Ontario, Québec and British Columbia – and especially on the problem of smuggling through the Mohawk reservation straddling the New York – Ontario – Québec border region, in which the RCMP has no jurisdiction. The ACD suggests that as much as 90% of all Ontario and Québec smuggled alcohol is channeled through this reservation, and that the illegal distribution network extends beyond Ontario and Québec to every province.

The size of the illegal market varies from province to province in Canada, from around 15% in British Columbia to almost 50% in Québec. Ontario estimates range around 32% of total consumption. In the Maritimes as a whole, the Association of Canadian Distillers suggests, smuggling accounts for between 20% and 25% of the market, not including the illegal importation of liquor for personal use only. Smuggling into the Maritimes uses five channels:

- directly overland or by water from the U.S.;
- overland from Québec, especially from the U.S.-border tribal reservations;
- diversion of exports from the port of Halifax – for example, U.S. distillers' products destined for shipment overseas by container through Halifax;
- container imports through the ports of Halifax and Saint John;
- imports via small boat from the French islands of St. Pierre and Miquelon, a tax-free territory between Newfoundland and Nova Scotia.

Given that New Brunswick directly adjoins both Maine and Québec, it is reasonable to assume that it is at the high end of the range for the Maritimes. We estimate 30% of spirits sales in New Brunswick are from illegal sources. The highest rates of illegal consumption are not necessarily in border areas, but are likely to be in major cities, which are supplied by large-scale, professional long-distance smuggling operations.

If illegally distributed spirits do indeed account for as much as 30% of the New Brunswick market, or over 300,000 gallons, this does not mean that all of this "market" is available to Maine to capture. At present, the best estimates of the legitimate liquor distribution industry in New Brunswick are that the greatest part of this supply – at least 80% - comes in large-scale, container-load or truck-load shipments. Regardless of the route taken into New Brunswick, these are generally purchased from wholesalers in non-controlled states such as New York or Massachusetts, where prices are lower than the retail level in New Hampshire. Some container-load traffic also enters the province, via ports such as Saint John, Montréal or Halifax.

The remaining 20% of smuggled-for-sale liquor is distributed on a less professional basis, typically by part-time smugglers in small quantities. Most of this 20% crosses the New Brunswick border or shore in the hands of small-scale operators, largely working from Maine. Although this segment represents the popular, almost romantic image of border smuggling, it has seen a sharp decline in the last few years. The share of the New Brunswick liquor market held by this segment is thought to have been halved in the last five years, to perhaps at a record low, due to a number of factors that have led to the decline of small-scale smuggling and the growth of long-distance, large-scale professional smuggling:

- Increased enforcement activity at the border, ranging from a "zero-tolerance" policy on personal-use smuggling to the introduction of US-style confiscation of property purchased with suspected smuggling earnings. Liquor smuggling has in effect been given equal priority with drug smuggling as a Canadian law-enforcement target. The increased risks and increased penalties deter the small-scale operator.
- Improved local intelligence by law enforcement, and some degree of increased public support for enforcement, as the issue of revenue losses has become a national political question in Canada. Small-scale operations, characterized by bragging and gossip, depend on the silent protection of local communities.
- Aggressive actions by professional, large-scale smugglers, to enter and dominate the activity, moving spirits alongside other commodities such as cigarettes.

TABLE 7:
ESTIMATED NEW BRUNSWICK SPIRITS CONSUMPTION, 1996

	Liters	U.S. Gallons
NBLC sales, year ending 3/31/97	2,818,000	744,460
Personal legal duty-free or inter-provincial imports	130,000	34,340
Evasion of border controls for personal use	260,000	68,680
Professional, long-distance smuggling shipments	960,000	253,440
Informal smuggling from Maine and New Hampshire	240,000	63,360
TOTAL CONSUMPTION:	4,408,000	1,164,280

We suggest that the markets which a Calais store might attract are the "informal" (or small-scale) smuggling and the "personal evasion" sectors, with combined annual sales of around 130,000 gallons. (Note: we consider such estimates to be subject to a margin of error of +/- 25%.) We believe that a Calais store would not attract the large-volume professional smuggler for two major reasons:

- A Calais discount store would still be priced above the wholesale prices available to large-scale Canadian smugglers in non-controlled states.
- It would be impossible to maintain secrecy of operations at a location so close to the border and so obvious a target for Canadian law enforcement.

The prospects for Maine revenue enhancement from the "informal smuggling" and "personal evasion" market segments depend on the growth potential of these markets and on the diversion impact on existing sources of spirits carried from Maine to New Brunswick.

TABLE 8:
POTENTIAL IMPACTS ON MAINE REVENUES
OF CHANGES IN CROSS-BORDER LIQUOR SOURCING
ON OPENING A CALAIS DISCOUNT STORE

Type of sourcing shift	**Positive/negative revenue impact**	**Impact size on Maine revenues**
Diversion from Maine full-price stores	Negative	Small to moderate.
Diversion from Kittery	Neutral	None.
Capture from New Hampshire	Positive	Moderate to large.
Increased evasion for personal use	Positive	Moderate to large.
Increased "informal" smuggling	Positive	Small. Sector increasingly dominated by long-distance, large-scale smuggling.

The Kittery store has not conducted a survey of its customers' origins as has New Hampshire. Anecdotal evidence from BABLO staff suggests that the store may do as much as 5% of its taxable business with Canadian buyers or Maine buyers for smuggling to Canada. This sounds high, though it compares with New Hampshire 1993-94 data estimating around 8% of sales to Canada. However like New Hampshire, we would expect a high proportion of Kittery's 'Canadian' sales to be to Québec residents and vacationers. We do not consider in detail the possible transfer of Kittery 'Canadian' sales here because such a transfer would be revenue-neutral to the Maine system.

Diversion of current sales to Canada from full-price Maine stores will undoubtedly take place, although this has already been considered in our assessment of Maine revenues lost to a new Discount Store. Such losses could be offset by gains from either (a) capture of liquor currently purchased in New Hampshire; or (b) increasing the total volume of illegal shipments.

For the "informal smuggling" sector, as opposed to large-scale, long-distance shipments, purchases collected in Maine-registered vehicles are relatively easy to conceal from observation or tracking, and a Calais store would appear to be an attractive alternative to a 600-mile round-trip to Kittery or Portsmouth. However for both the "informal smuggling" and the "personal evasion" segments, there is little hard data on the sourcing of such liquor – from Maine full-price stores, from Kittery, or from New Hampshire or beyond.

New Hampshire sales to Canada were reported in the 1993-94 studies to average 8% of sales, or around $ 11 million. This varied seasonally from as much as 12% in midsummer to a low of 5%, suggesting that much of these sales were to vacationing Canadians, partly for personal consumption during their stay in the U.S.. No published data exists on the percentage of Canadian sales to Québec residents as opposed to Maritimes residents, though given the proximity and relative size of the Québec market it is likely that this represents a high proportion of Canadian purchases. The 7 million Québec residents are a lot closer to New Hampshire than the 2 million Maritime residents. It would not appear likely that more than 1% of New Hampshire sales were to Maritimes residents.

Assuming 1% of total New Hampshire sales were destined to the Canadian Maritimes, this would represent a market of over $1.25 million annual sales. Only a part of this market is available to Maine to capture at Kittery or Calais, however, because:

- New Hampshire sales include beer and especially wine.
- Maritimes residents vacationing in the New Hampshire area would be likely to continue to purchase in New Hampshire.

If these sales were easily capturable by Maine, perhaps a portion would have been captured by now at Kittery. Calais, however, benefits from the shorter travel distance to the border for the Maritimes resident specifically and solely intent on purchasing liquor – the "informal smuggler". We therefore consider it possible that Calais could capture between 25% and 50% of the present New Hampshire sales to the Maritimes, or between $ 312,500 and $ 625,000 of sales. At a 20% margin, plus 6% sales tax, this would net between $ 81,250 and $ 162,500 to Maine. These captured sales are, of course, in addition to the sales captured from New Hampshire to Maine residents, shown above in Table 6.

The other major potential area for revenue growth would be sales captured from the legal New Brunswick Liquor Corporation system. This could include both increased "informal" smuggling, if it increased its market share at the expense of either legal sales or the large-scale smuggling sector, and increased casual purchases for personal consumption.

For "informal" smugglers, the potentially increased returns resulting from either reduced travel costs to Kittery or simply reduced liquor costs (versus full-price purchases) could suggest greater smuggling activity. On the other hand, such activity is reported to have fallen dramatically over the last five years, and is still in decline. Traditional pickup-truck, snowmobile or small-boat smuggling from Maine is thought to be at half the rate of only five years ago. We therefore think that the most likely effect may be to slow or halt decline rather than increase this activity. In the review of existing sales captured from within Maine or New Hampshire, we noted a potential

$100,000 of cross-border sales diverted from Aroostook County locations; an additional $100,000 of cross-border sales are presumed to be hidden in the sales captured from other locations. We do not think it wise to count on future, offsetting growth in this segment.

Personal evasion, however, is another matter. The increased savings on small-scale personal purchases might also attract increased spirits purchases, when (for example) Canadian residents cross to the U.S. to shop for fuel, clothing, or other items influenced by changing exchange rates and excise taxes. Unfortunately, no reliable published studies appear to exist that calculate the price-sensitivity of such activity.

A Canadian Customs published estimate is that one in five of all Canadian residents returning home brings undeclared goods for personal use in excess of the strict legal allowance. (This includes, presumably, air and sea passengers as well as daily commuters, of whom there are a number at the Calais – Woodland crossings.) Not all of these "evaders" are carrying spirits, with cigarettes and gasoline being reportedly the most common purchases in the U.S. at present. Given current price ratios, the threat of penalties, and the attractiveness of legal duty-free prices, we doubt that a significant percentage of Canadian residents currently take spirits into New Brunswick from Maine. Nevertheless if a discount store increases the relative attraction of spirits, the following shows a possible "optimistic" scenario for sales capture in this area.

Daily average crossings at Calais:	3,330 vehicles
Daily crossings into Canada (50% of total)	1,665 vehicles
Percentage of crossings by Canadian residents:	60%
Daily average Canadian resident crossings:	1,000
Percentage carrying undeclared spirits:	10%
Daily average number of vehicles carrying spirits:	100 vehicles/day
Average estimated spirits purchases per evader:	1.75 liters

This produces an estimate of increased sales to Canadian residents for personal consumption of 63,875 liters [100 vehicles/day extra, 365 days/year, 1.75 liters average]. At $10.00 a liter this would add $ 638,750 of sales, a major boost to a Calais store and to Maine revenues.

Given that at present, total "personal evasion" consumption in New Brunswick amounts to an estimated 260,000 liters, or around 5% of total consumption, such a jump in personal purchases from just one border crossing seems optimistic but not impossible. A more conservative "low case" might be for a gain of half this amount ($319,375) in purchases for personal consumption.

Offsetting the prospect of gains in purchases for personal consumption is the likely law enforcement response from New Brunswick. One successful tactic used, for example, during strike closures of the NBLC, has been for the RCMP to post officers in unmarked cars outside the Calais state liquor store – sometimes prominently as a deterrent, sometimes discreetly to identify Canadian vehicles for interdiction at the border. We would not want to speculate on the potential for Maine counter-measures or for cross-border tension between law enforcement agencies.

In summary, there are two large but highly uncertain areas in which Maine could see significant revenue gains from sales to Canadian residents: sales captured from New Hampshire, and sales for personal consumption captured from New Brunswick liquor stores. Because of the speculative nature of such gains, we have given "high" and "low" estimates. Only if the "high" estimates were to come true for both these scenarios would the Calais store would show positive net revenue gains to the state of Maine.

Summary of Impacts on Revenue from a Discount Liquor Store at Calais

The net effects of increased sales to New Brunswick and the capture of existing Maine and New Hampshire sales are shown in table 8. The range of possible outcomes is a combination of two quite different elements which should be understood clearly:

- For sales to Maine consumers, "high net revenue" means *low* capture rates of existing sales. We have indicated our belief that capture rates may decline after an initial burst of publicity, curiosity, and large personal purchases. The pessimistic (low net revenue) case for a Calais store's sales within Maine is therefore based on the expected first-year sales surge, as the new store benefits from free publicity. The optimistic (high net revenue) case for is based on the expectation of a decline in initial capture to a level of 80% of the initial year's capture rate. This 80% rate is applied to all sales to Maine customers in the "optimistic" case.
- It is easier to forecast the impact of a discount store on existing sales, than about hypothetical gains in Maine's "market share" in New Brunswick. Consequently we suggest a range of values for the gains in sales to Canada, giving a high-end "optimistic case" and a low-end "conservative case." The pessimistic outcome in this case is simply 50% of the optimistic outcome, reflecting the wide range of uncertainty.

TABLE 9:
RANGE OF POTENTIAL REVENUE GAINS AND LOSSES

Current source of projected Calais sales:		**Best case (highest net revenue): Low Maine sales, high N.B. sales**			**Worst case (lowest net revenue): High Maine sales, low N.B. sales**		
Current point of sale	Point of consumption	Sales (at 20% discount)	Change in net margin	Change in sales tax	Sales (at 20% discount)	Change in net margin	Change in sales tax
Maine	Maine	886,400	-250,440	-12,816	1,108,000	-313,050	-16,020
Maine	Canada	120,000	-35,200	-1,920	160,000	-44,000	-2,400
Kittery	Maine	40,000	0	0	50,000	0	0
Kittery	Canada	100,000	0	0	100,000	0	0
Total net capture effects on existing Maine spirits sales		*1,146,400*	*-285,640*	*-14,736*	*1,418,000*	*-357,050*	*-18,420*
N. H.	Maine	200,000	+40,000	+12,000	100,000	+20,000	+ 6,000
N. H.	Canada	625,000	+125,000	+37,500	312,500	+62,500	+18,750
Canada	Canada	638,750	+127,750	+38,325	319,375	+63,875	+19,162
Total Maine gains from other jurisdictions		*1,463,750*	*+292,750*	*+87,825*	*731,875*	*+146,375*	*+43,912*
NET REVENUE EFFECTS		2,610,150	+7,110	+73,089	2,149,875	-210,675	+25,492

Table 8 shows that in the most optimistic case, a Calais store with retail sales in excess of $2.6 million, 56% of which are destined for Canadian consumption, the state of Maine would see an increase in its general fund revenue of around $80,000 from combined BABLO profits and sales tax collection. In the low-net-revenue case, a Calais store with retail sales of over $2.1 million, 58% destined for consumption within Maine, would see a net loss of revenue to the state of Maine of around $185,000.

A mid-point between the high and low cases shows a net loss in state revenue of a little over $50,000. This outcome assumes no Canadian law enforcement or competitive response.

Conclusions

In the absence of a competitive or a major law enforcement response from Canadian authorities, a Calais discount liquor store could achieve between $ 2 million and $ 3 million of taxable retail sales per annum. Between $ 1 and $ 1.25 million of annual sales would be diverted from existing, full-margin Maine sales (including existing Calais retail sales). The balance would be captured from New Hampshire and New Brunswick. This compares with $ 3.5 million at the Kittery discount store in FY 1997.

This level of sales can also be compared with the current (FY 1997) Calais total sales of $ 1.35 million, of which $328,000 were retail sales, $ 179,000 were to licensees, and $850,000 (net of discounts) of wholesale sales to agency stores. Given the capture rate of a discount store from regional agency stores, we assume that these wholesale sales will fall by as much as 60%, but that licensee sales – which must be at the state's full list price, even from a discount store – will be unchanged.

A Calais store with a total throughput in excess of $ 3 million could, in the opinion of BABLO, be housed in the existing Calais store building, thus reducing investment and relocation expense. The increased total throughput – more than double the current volume – would require additional space and staff, although these need not be in direct proportion to the increased throughput. The current store's leased space includes an extensive and under-utilized storage warehouse space at the rear of the current retail store. We assume that this could be remodeled, to approximately double the current retail floor space. The existing store has three employees, and BABLO suggest that an additional three employees would be sufficient to handle the increased throughput. Additional parking space may need to be leased at the present store site, but the store's landlord is understood to own a vacant lot immediately adjacent to the store which could be made available for parking.

We have not estimated detailed operating costs of a discount store in this market analysis, but have assumed that margins similar to those at the (similarly sized) Kittery store in FY 1997 would be applicable in Calais. This may or may not hold up in practice, as the Kittery store appears to have a relatively high cost of operations. If the state's net margin from discount store sales at Calais were, for example, 22% instead of Kittery's 20%, the store's expected net returns would increase by around $50,000 per year – enough to bring the mid-point of our scenarios to break-even to the state, but not to profit.

For a discount store in Calais to generate positive overall returns to the state of Maine requires fulfillment of the most optimistic scenarios about capture of sales, including:

- Minimum capture rates of existing sales in eastern Maine.
- The most optimistic rates of capture of additional market share within Canada.
- No effective Canadian law-enforcement or market response.

We are not confident, especially given the wide range of possible competitive and law-enforcement responses, that these optimistic scenarios would be realized in practice.

References:

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Published reference material used included:

- Annual reports, Maine Bureau of Alcoholic Beverages and Lottery Operations; New Brunswick Liquor Corporation; Duty Free International Incorporated.
- Customer Origination Study, New Hampshire State Liquor Commission, 1993 – 1994, by Rebecca Lucy, Marketing Research Consultant; submitted by the Maine Retail Grocers Association. Also the Retail Grocers' submission to the Maine Legislature, "The Case Against the Saco Discount Liquor Store".
- Price lists and financial reports of the New Hampshire State Liquor Commission, available from NHSLC's web site.
- Canadian Institute of Chartered Accountants, "The Operation of the GST and Provincial Sales Tax Systems" and other reports on their web site.
- Report of the Auditor General of Canada, 1996, especially estimates of revenue loss from evasion of taxes and duties by commodity.
- Hansard Society of Canada, Proceedings of the New Brunswick Legislative Assembly (on line).

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